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BIBLIOGRAPHY
OF
NORTH AMERICAN GEOLOGY,
1944 and 1945

BY
EMMA MERTINS THOM



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BIBLIOGRAPHY OF NORTH AMERICAN GEOLOGY

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INTRODUCTION

The bibliography of North American geology, including paleontology, petrology, and mineralogy, for the years 1944 and 1945, lists publications on the geology of the Continent of North America and adjacent islands and on Panama, the Hawaiian Islands, and the Island of Guam. It includes textbooks and papers of a general character by American authors, but not papers by foreign authors, except those that appear in American publications.

The papers, with full title and medium of publication, are listed under the names of their authors, which are arranged in alphabetic order. The author list is followed by an index to the literature cited.

The bibliography of North American geology to the end of 1943 is contained in the following bulletins of the United States Geological Survey: 746 and 747 (1785-1918) and 823 (1919-28), by John M. Nickles; 937 (1929-39), 938 (1940-41), and 949 (1942-43) by Emma Mertins Thom.

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ABBREVIATIONS

A. A. A. S.....	American Association for the Advancement of Science	Bull.....	Bulletin
A. I. M. E.....	American Institute of Mining and Metallur- gical Engineers	Bur.....	Bureau
Aardrijksk.....	Aardrijkskundig	Camb.....	Cambrian
aarg.....	aargang	Carb.....	Carboniferous
Abh.....	Abhandlung	Cat.....	Catalog
Abt.....	Abteilung	cent.....	central
Acad.....	Academy, etc.	Centralbl.....	Centralblatt
Accad.....	Accademia	cf.....	compare with
Adm.....	Administration	Chap.....	Chapter
ads.....	advertisements	Chem.....	Chemical, etc.
Adv.....	Advancement	chim.....	chimique
Afd.....	Afdeeling, Afdeling	Cienc.....	Ciencia, Ciencias
Afl.....	Aflevering	cient.....	cientifica
Agr.....	Agricultural, Agricul- ture	Circ.....	Circular
Akad.....	Akademie	Cl.....	Classe
allg.....	allgemeine	classn.....	classification
Am.....	American	Co.....	Company, County
Anal.....	Analytic, etc.	Coll.....	Collections
angew.....	angewandte	Comm.....	Committee
Ann.....	Annual	Commun.....	Communications
anorg.....	anorganisch, etc.	Comp.....	Comparative
Anthropol.....	Anthropological, etc.	con.....	consolidated
Anz.....	Anzeiger	Conf.....	Conference
App.....	Appendix	Cong.....	Congress, etc.
appl.....	applique	conglom.....	conglomerate
approx.....	approximately	Conserv.....	Conservation
Apr.....	April	Contr.....	Contributions
Arb.....	Arbeiten	Coop.....	Cooperative
Årb.....	Årbok	correl.....	correlation
Archeol.....	Archeological, etc.	Coun.....	Council
Årg.....	Årgang	Cret.....	Cretaceous
Årssk.....	Årsskrift	Dec.....	December
art.....	article	Denkschr.....	Denkschrift
Assoc.....	Association	Dept.....	Department, etc.
Astron.....	Astronomical, etc.	Dev.....	Devonian
Aug.....	August	devel.....	development
Auth.....	Authority	diagr.....	diagram
Av.....	Avancement	Direc.....	Dirección
Avd.....	Avdelningen	Dissert.....	Dissertation
Bd.....	Board	dist.....	district
Beitr.....	Beitrag, etc.	distrib.....	distribution
Ber.....	Bericht, etc.	Div.....	Division
Bibl.....	Bibliographic, etc.	Doc.....	Doctoral, Document
Bienn.....	Biennial	Doc. Dissert.....	Doctoral Dissertation
Biog.....	Biographic, etc.	dol.....	dolomite
Biol.....	Biologic, etc.	E.....	East
Bldg.....	Building	Ecol.....	Ecological, etc.
Bol.....	Boletim, Boletín	Econ.....	Economic
Boll.....	Bollettino	ed.....	edition
Bot.....	Botanic, etc.	Educ.....	Education, Educational
Br.....	Branch	Elec.....	Electric, etc.
		Eng.....	Engineering, Engineers
		Entomol.....	Entomological, etc.
		equiv.....	equivalent
		Erläut.....	Erläuterungen

ex.....	except	Irr.....	Irrigation
exam.....	examination	Is.....	Island, Islands
Exper.....	Experiment, Experi- mental	Ist.....	Istituto
expl.....	explanation, explana- tory	Izv.....	Izvestiya
explor.....	exploration, etc.	Jaarb.....	Jaarboek
extr.....	extract, extracted	Jaarg.....	Jaargang
Fac.....	Faculty	Jahrb.....	Jahrbuch
facsim.....	facsimile	Jahresber.....	Jahresbericht
fasc.....	fascicle	Jahresh.....	Jahresheft
Feb.....	February	Jahresvers.....	Jahresversammlung
fig.....	figure	Jahrg.....	Jahrgang
fm.....	formation	Jan.....	January
Fören.....	Förening	Jour.....	Journal
Förh.....	Förhandlingar	Juras.....	Jurassic
Fortschr.....	Fortschritte	K.....	Kaiserlich, Königlich, etc.
franc.....	français	Kl.....	Klasse
front.....	frontispiece	Lab.....	Laboratory
Ft.....	Fort	Lief.....	Lieferung
fysiog.....	fysiografiska	Lit.....	Literary, Literature
g.....	geologic	livr.....	livraison
G. S.....	Geological Survey	ls.....	limestone
G. Soc.....	Geological Society	loc.....	locality
Gazz.....	Gazzetta	lvs.....	leaves
Gen.....	General	Mag.....	Magazine
gén.....	générale	Mar.....	March
Geneesk.....	Geneeskunde	Math.....	Mathematical, etc.
Geochem.....	Geochemical, etc.	mbr.....	member
Geod.....	Geodetic	Mech.....	Mechanical, etc.
géod.....	géodétique	Med.....	Medical
Geog.....	Geographic, etc.	Medd.....	Meddelanden
géog.....	géographique	Meddel.....	Meddelelser
Geol.....	Geologic, etc.	Mededeel.....	Mededeelingen
géol.....	géologique	Mem.....	Memoir, Memoria
Geophys.....	Geophysical, etc.	Mém.....	Mémoire
géophys.....	géophysique	Memo.....	Memorandum
Gesell.....	Gesellschaft	Met.....	Metallurgical, etc.
Gior.....	Giornale	metam.....	metamorphic, meta- morphosed
Govt.....	Government	Meteorol.....	Meteorological, etc.
Grad.....	Graduate	micr.....	microscopic, etc.
Handl.....	Handlingar	Mimeo.....	Mimeographed
hist.....	historic, etc.	Min.....	Mineral, Mining
hüttenm.....	hüttenmannisch	min. res.....	mineral resources
Hydrog.....	Hydrographic, etc.	Mineralog.....	Mineralogic, etc.
Hydrol.....	Hydrologic, etc.	Misc.....	Miscellaneous
ig.....	igneous	Missn.....	Mississippian
illus.....	illustrated, illustration, illustrations	Mitt.....	Mitteilungen
Imp.....	Imperial	Mon.....	Monograph, etc.
Inc.....	Incorporated	Monatsber.....	Monatsbericht
incl.....	including	Monatsh.....	Monatsheft
Indust.....	Industrial	Monatsschr.....	Monatsschrift
Inf.....	Information	ms.....	manuscript
Ing.....	Ingenieros, Ingenieurs	Mt.....	Mount
Inst.....	Institute, Institution, etc.	Mtg.....	Meeting
internac.....	internacional	Mtn.....	Mountain
Internat.....	International, etc.	Mts.....	Mountains
intro.....	introduction	Mus.....	Museo, Museum, etc.
intrus.....	intrusive	n.....	new
Inv.....	Investigation, Investi- gations	N.....	north
		N. Am.....	North America
		n. d.....	no date

n. s.-----	new series	Rap-----	Rapport
nac-----	nacional	Rec-----	Record, Records, Re- cueil
Nachr-----	Nachrichten	reconn-----	reconnaissance
Nat-----	National, Natural	Rend-----	Rendiconti
naturf-----	naturforscher, natur- forschende	Rept-----	Report
naturh-----	naturhistorisch	Res-----	Resources
naturwiss-----	naturwissenschaftlich	Rev-----	Review, Revista, Revue
natuurk-----	natuurkundig	Riv-----	Rivista
NE-----	northeast	Ry-----	Railway
no-----	number	s-----	series
nos-----	numbers	S-----	south, Survey
nouv-----	nouveau, etc.	Sällsk-----	Sällskapets
Nov-----	November	Schr-----	Schrift
Nr-----	Nummer	schweizer-----	schweizerisch
NW-----	northwest	Sci-----	Science, Sciences, Sci- entific
Occ-----	Occasional	SE-----	southeast
Oct-----	October	Sec-----	Section
Ord-----	Ordovician	Sed-----	Sedimentary
p-----	page, pages	Seismog-----	Seismographic, etc.
palaeont-----	palaeontologisch	Seismol-----	Seismologic, etc.
Paleoecol-----	Paleoecological, etc.	séismol-----	séismologique
Paleogeog-----	Paleogeographic, etc.	Selsk-----	Selskab
Paleont-----	Paleontologic, etc.	Sept-----	September
Pamph-----	Pamphlet	ser-----	series
Pan-Am-----	Pan-American	Serv-----	Service
Penin-----	Peninsula	Sess-----	Session
Penn-----	Pennsylvanian	sh-----	shale
Perm-----	Permian	Sil-----	Silurian
Petrog-----	Petrographic, etc.	Sitzungsber-----	Sitzungsbericht
Petrol-----	Petrologic, etc.	Skr-----	Skrift
Philos-----	Philosophical, etc.	Soc-----	Société, Society
photo-----	photograph	sp-----	species
photog-----	photographic	Spec-----	Special
Phys-----	Physical, etc.	ss-----	sandstone
physikal-----	Physikalisch	St-----	Saint
Physiog-----	Physiographic, etc.	Sta-----	Station
Pk-----	Peak	Ste-----	Sainte
pl-----	plate	Strat-----	Stratigraphic, etc., Stratigraphy
Plann-----	Planning	Summ-----	Summaries, Summa- rized, Summary
Pleist-----	Pleistocene	Supp-----	Supplement, Supple- mentary
pls-----	plates	SW-----	southwest
Polytech-----	Polytechnic, etc.	syn-----	synonym
Pop-----	Popular	TVA-----	Tennessee Valley Au- thority
port-----	portrait	tab-----	table
ports-----	portraits	Tech-----	Technical, etc.
poss-----	possibility, possibilities	Technol-----	Technological, etc.
prakt-----	praktisch	temp-----	temporary
pre-Camb-----	pre-Cambrian	Terr-----	Territory, Territories, Territorial
Prelim-----	Preliminary	Tert-----	Tertiary
Proc-----	Proceedings	Tidskr-----	Tidsskrift
Prof-----	Professional	Tidsskr-----	Tidsskrift
Prog-----	Progress	Tijdschr-----	Tijdschrift
Proj-----	Project	Topog-----	Topographic, etc.
prosp-----	prospecting	Tp-----	Township
Prov-----	Province	Tps-----	Townships
Pt-----	Part, Point	Trans-----	Transactions
Pts-----	Parts	transl-----	translate, translation
Pub-----	Publication, Publications, published	transp-----	transportation
quad-----	quadrangle	Trav-----	Travaux
Quart-----	Quarterly		
Quat-----	Quaternary		
R-----	Reale		
R. R-----	Railroad		

Trias-----	Triassic	Vidensk-----	Videnskabernes, Viden-
U. S.-----	United States	skaps	
uncon-----	unconformity, etc.	vol-----	volume
undet-----	undetermined	vs-----	versus
Univ-----	University	W-----	west
veg-----	vegetation	Wetensch-----	Wetenschappen
Ver-----	Verein	Wiss-----	Wissenschaft
Verh-----	Verhandlungen, Ver-	Wochenschr---	Wochenschrift
	handlung, etc.	Zeitschr-----	Zeitschrift
Vers-----	Versammlung	Zentralb-----	Zentralblatt
Vetensk-----	Vetenskaps	Zhur-----	Zhurnal
Vetenskaps-		Zool-----	Zoological, etc.
akad-----	Vetenskapsakademiens		

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 Alaska Highway, N. Am., prog. rept.: Howell, J. V., 1.

Alberta.

- Research Council 24th-25th Ann. repts., 1943-44: Newton, R., 1.

Areas described.

- Alexo area: Crombie, G. P., 1, 2.

Economic geology.

- Alexo area: Crombie, G. P., 1, 2.
 Athabaska-Barrhead area: Feniak, N. W., 1.
 Bituminous sands: Clark, K. A., 1.
 Coal: Irwin, J. L., 1.
 Cowley area: Hage, C. O., 1.
 Drinnan to Brûlé Lake: Lang, A. H., 1.
 Dyson Creek area: Hage, C. O., 2.
 Entrance area: Lang, A. H., 2.
 Fall Creek area: Henderson, J. F., 2.
 Geology, eng., ground water: Allan, J. A., 3.
 Gravimeter prosp., Foothills belt: Hastings, W. K., 1.

- Jumpingpound area oil field: Beach, F. K., 1.

- Limestone reservoirs, Turner Valley oil field: Goodman, A. J., 1.
 Natural gas res.: Beach, F. K., 2.

- Pedley area: Irish, E. J. W., 1.

- Petroleum levels: Storm, L. W., 2.
 Red Deer, Rosebud area: Allan, J. A., 1, 2.

- Salt: Irwin, J. L., 1.

- Saunders map area: Erdman, O. A., 1.

- Seismic surveys and oil, Wainwright field: Hume, G. S., 5.

- Structure drilling oil explor.: Furnival, G. S., 1.

- Structure, foothills, adjacent mts.: Rutherford, R. L., 1.

- Tay River W. of 5th meridian: Canada G. S., 1.

Matanuska Valley geology.

- Alexo area: Crombie, G. P., 1, 2.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Bassano area, geol. map: Canada G. S., 1.
 Cowley area: Canada G. S., 1; Hage, C. O., 1.

Alberta—Continued.

Historical geology—Continued.

- Cretaceous, Vermilion area: Nauss, A. W., 1.
 Drinnan to Brûlé Lake: Lang, A. H., 1.
 Dyson Creek area: Hage, C. O., 2.
 Entrance area: Lang, A. H., 2.
 Fall Creek area: Henderson, J. F., 2.
 Foothills, cent. Alberta: MacKay, B. R., 1.
 Geology, eng., ground water: Allan, J. A., 3.
 Jumpingpound area oil field: Beach, F. K., 1.
 Limestone reservoirs, Turner Valley oil field: Goodman, A. J., 1.
 Morley area, geol. map: Canada G. S., 1.
 Pedley area: Irish, E. J. W., 1.
 West of 5th meridian: Canada G. S., 1.
 Red Deer, Rosebud area: Allan, A. J., 1, 2; Sanderson, J. O. G., 1.
 Saunders map area: Erdman, O. A., 1.
 Seismic surveys and oil, Wainwright field: Hume, G. S., 5.
 Stimson Creek area: Hume, G. S., 1.
 Structure-drilling oil explor.: Furnival, G. M., 1.
 Tay River area: Henderson, J. F., 1.
 West of 5th meridian: Canada G. S., 1.
 Wawa Creek area: MacKay, B. R., 2.

Mineralogy.

- Bituminous sands: Clark, K. A., 1.
 Drinnan to Brûlé Lake: Lang, A. H., 1.

Paleontology.

- Alexo area: Crombie, G. P., 1.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Drinnan to Brûlé Lake: Lang, A. H., 1.
 Fossil cones: Anonymous, 45.
 Pedley area: Irish, E. J. W., 1.
 Red Deer, Rosebud area: Allan, J. A., 1; Sanderson, J. O. G., 1.
 Stegoceras, dome-headed dinosaur, Oldman fm.: Sternberg, C. M., 2.

Petrology.

- Alexo area: Crombie, G. P., 1, 2.
 Cowley area: Hage, C. O., 1.
 Drinnan to Brûlé Lake: Lang, A. H., 1.
 Dyson Creek area: Hage, C. O., 2.
 Fall Creek area: Henderson, J. F., 2.
 Limestone reservoirs, Turner Valley oil field: Goodman, A. J., 1.
 Saunders map area: Erdman, O. A., 1.
 Seismic surveys and oil, Wainwright field: Hume, G. S., 5.
 Stimson Creek area: Hume, G. S., 1.
 Tay River area: Henderson, J. F., 1.
 West of 5th meridian: Canada G. S., 1.

Physical geology.

- Alexo area: Crombie, G. P., 1, 2.
 Cowley area: Hage, C. O., 1.
 Cretaceous, Vermilion area: Nauss, A. W., 1.

Alberta—Continued.

Physical geology—Continued.

- Drinnan to Brûlé Lake: Lang, A. H., 1.
 Dyson Creek area: Hage, C. O., 2.
 Entrance area: Lang, A. H., 2.
 Fall Creek area: Henderson, J. F., 2.
 Pedley area: Irish, E. J. W., 1.
 Petroleum dévls.: Storm, L. W., 2.
 Red Deer, Rosebud area: Allan, J. A., 1, 2.
 Saunders map area: Erdman, O. A., 1.
 Stimson Creek area: Hume, G. S., 1.
 Structure-drilling oil explor.: Furnival, G. M., 1.
 Tay River area: Henderson, J. F., 1.
 West of 5th meridian: Canada G. S., 1.
 Wawa Creek area: MacKay, B. R., 2.

Physiographic geology.

- Alexo area: Crombie, G. P., 1, 2.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Cowley area: Hage, C. O., 1.
 Drainage pattern: Warren, P. S., 2.
 Drinnan to Brûlé: Lang, A. H., 1.
 Entrance area: Lang, A. H., 2.
 Geology, eng., ground water: Allan, J. A., 3.
 Pedley area: Irish, E. J. W., 1.
 West of 5th meridian: Canada G. S., 1.
 Red Deer, Rosebud area: Allan, J. A., 1, 2.
 Structure, foothills, adjacent mts.: Rutherford, R. L., 1.
 Structure-drilling, oil explor.: Furnival, G. M., 1.
 Wawa Creek area: MacKay, B. R., 2.

Underground water.

- Geology, eng., ground water: Allan, J. A., 3.
 Albertite, Gaspé, oil residual, volcanic rocks: Alcock, F. J., 7.
 Aldrich oil field, Ness Co., Kans.: Carpenter, E. G., 1.
 Aleutian Trench submarine mts.: Murray, H. W., 1.

Algae.

- Algal-Bryozoa consortia, Paleozoic: Elias, M. K., 6.
 Bryozoan appendages: Elias, M. K., 8.
 Calcareous, useful micro-fossils: Johnson, J. H., 6.
 Cambrian, early Upper, Mont.: Lochman, C., 1.
 Colorado, Sawatch Range area: Johnson, J. H., 3.
 Cryptozoon, Ord., Minn.: Stauffer, C. R., 4.
 Georgia, Coastal Plain: Cooke, C. W., 1.
 Kansas, lime-secreting, Penn., Perm.: Johnson, J. H., 10.
 Leadville ls. flora, Colo.: Johnson, J. H., 8.
 Mississippi: McGlothlin, T., 1.
 North America, calcareous: Johnson, J. H., 1.
 Pennsylvania, cent., Ord.: Kay, G. M., 2.

Algae—Continued.

- Quebec: Dresser, J. A., 1.
 Stromatolite gymnosolen, not salinity index: Cloud, P. E., Jr., 2.
 Texas, algal reefs, Cret. Austin chalk, Brewster Co.: Johnson, J. H., 2.
 United States, Llano Estacado, Ogallala fm., Price, W. A., 5.

Aliso Canyon oil field, Calif.: Hodges, F. C., 1.

Alkaline rocks, Daly's hypothesis status: Shand, S. J., 4.

Origin, differentiation: Bowen, N. L., 2; Shand, S. J., 4.

Alumina.

Clays, high-alumina, fm.: Allen, V. T., 4.
 Oregon, Hobart Butte, Lane Co.: Iverson, H. G., 1.

Washington Co.: Libbey, F. W., 1.
 Pennsylvania: Foote, R. M., 2.

Triassic diabase derivatives: Tomlinson, W. H., 3.

United States, W.: Wimmeler, N. L., 1.

Aluminum.

Arkansas: Buhlis, R., 1.
 Clays, high-alumina, fm.: Allen, V. T., 4.
 Greenland cryolite deposits: Shaw, V., 5.
 Quebec, econ. minerals: Quebec Bur. Mines, 1.

United States min. reserves: Joralemon, I. B., 1.

Alunite, San Francisco dist., Utah: Reiser, A. R., 1.

Amazon stone, House Range Mts., Utah: Crawford, A. L., 1.

Amblygonite, Yellowknife-Beaulieu area, Northwest Territories: Jolliffe, A. W., 1.

Amesite, Mass.: Gruner, J. W., 4.

Amethyst.

Georgia: Furcron, A. S., 3.
 New Hampshire locs.: Verron, H. J., 1.
 United States, S. Atlantic, gems: Barclay, G. C., 1.

Ammonium hypophosphite metal test: Wahlstrom, E. E., 1.

Ammonoidea. See also Cephalopoda.

Alaska, Wide Bay anticline area: Kelum, L. B., 4.

British Columbia, Liard River Lower Trias, fauna: McLearn, F. H., 7.
 California, Knoxville ser. faunas: Anderson, F. M., 1.

Santa Lucia Range: Taliaferro, N. L., 1.

Canada, Dunvegan Cret. fm. faunas: McLearn, F. H., 3.

Rockies Trias. faunas: Warren, P. S., 3.

Cretaceous, Gulf Coastal Plain: U. S. G. S., 2.

Index fossils: McLearn, F. H., 3.

Mexico, Nuevo León: Mullerried, 8.

Mortonoceras vespertinum (Morton), genoholotype: Adkins, W. S., 1.

Ammonoidea—Continued.

Texas, Permian: Miller, A. K., 5.

Strawn group Penn.: Scott, G., 2.

Word Perm. fm., fauna and strat. correls.: Clifton, R. L., 3.

United States, W. interior, index fossils: Imlay, R. W., 5.

Waagenoceras, Perm., Mex.: Miller, A. K., 6.

Amphibia.

Buettneria, restoration, Tex., Trias.: Sawin, H. J., 1.

Edops, Carb. Tex.: Romer, A. S., 1.

Eumeces, Pleist., Frankstown Cave, Pa.: Hoffstetter, R., 1.

Kansas, SW., Pleist.: Hibbard, C. W., 2.
 Texas, Howard Co., Dockum Trias, fm.: Sawin, H. J., 2.

Amphibole.

North Dakota, Fox Hills-Hell Creek-Cannonball fms.: Lindberg, M. L. L., 2.

Rhode Island beach mins.: Hyneman, J. R., 1.

South Dakota, Beecher Rock Basin: Gwynne, C. S., 2.

Variations, calciferous: Winchell, A. N., 1.

Amphibolite, Quebec, Bourlamaque Tp.: Norman, G. W. H., 1.

Amphineura, Oligocene, NW. Wash.: Durham, J. W. 1.

Amplifier, narrow-band resistance-coupled: Cowles, L. G., 1.

Amygdaloids, Mikanagan Lake area, Manitoba: Bateman, J. D., 1.

Amygdules, British Columbia Coast: Gunning, H. C. 2.

Anahuac field, Chambers Co., Tex.: Carpenter, C. B., 1.

Ancestorless man: Gillette, J. M., 1.

Andalusite, sillimanite group of minerals: Jeffrey, J. A., 1.

Andesine, New York, E. Adirondack area: Balk, R., 1.

Andesite.

Arizona, Superior mining area: Short, M. N., 1.

California, Santa Catalina Is. marine sed.: Clements, T. D., 2.

Costa Rica, remineralization poss.: Döndoll, C., 4.

Manitoba, Island Lake area: McMurphy, R. C., 1.

Mexico, El Estado de Morelos: N. de Parrés, F., 1.

Nevada, Currant Creek dist.: Faust, G. T., 1.

Ontario, Stover Tp.: Horwood, H. C., 1.

Oregon, volcanoes of Three Sisters area: Williams, H., 1.

Quebec, Bourlamaque Tp.: Norman, G. W. H., 1.

Utah, Iron Peak area: Crawford, A. L., 2.

- Andradite, Nev., Rye Patch area: Vitaliano, C. J., 1.
- Angles of repose and sliding friction: Van Burkalow, A., 1.
- Anhydrite.
- Canada, Canol invs., Mackenzie River area: Hume, G. S., 8.
- Illinois, surrounding states, Dev.: Weller, J. M., 2.
- Iowa, Dev.: Stainbrook, M. A., 1.
- Mexico, quicksilver-antimony deposits, Huitzuc, Guerrero: McAllister, J. F., 1.
- Texas, Peace River Perm. group: Roth, R. I., 1.
- Sand Flat field, Smith Co.: Bartell, L. D., 1.
- Texas-New Mexico, Delaware Basin, Perm.: Adams, J. E., 2.
- United States, Gulf Coast salt domes: Hanna, M. A., 1.
- Gulf Coastal Plain, structure from gravimetric data: Barton, D. C., 5.
- Ankerite.
- Nova Scotia, Bridgeville area: Messervey, J. P., 2.
- Londonderry deposits: Weeks, L. J., 1.
- Annelida.
- Florida, Pleist. faunas, Palm Beach Co.: Smith, E. R., 1.
- Maryland, Skolithos, Diplocraterion, Sabellidites, Antietam Camb. ss.: Howells, B. F., 7-a.
- Mesabi iron range fauna, Minn.: Bergquist, H. R., 1.
- New Jersey, Upper Camb. faunas: Howell, B. F., 7.
- Quebec faunas: Dresser, J. A., 1.
- Washington, NW., Oligocene: Durham, J. E., 1.
- Anomalies, deep elec., measurement: West, T. S., 1.
- Anorthite, system $\text{NaAlSiO}_3\text{--CaSiO}_3\text{--Na}_2\text{SiO}_3$: Špivak, J., 2.
- Anorthosite.
- Canada, St. Urbain area, route 56: Faessler, C., 7.
- New York, E. Adirondack area: Balk, R., 1.
- Land Sanford area: Stephenson, R. C., 1.
- Ontario, SE.: Harrison, J. M., 2.
- Quebec, lower Romaine River area: Retty, J. A., 1.
- St. Urbain area, Canada, route 56: Faessler, C., 7.
- Wyoming, Laramie Range structure: Newhouse, W. H., 1.
- Anthozoa.
- Alberta, Alexo area: Crombie, G. P., 1.
- Amplexoids, Chester, U. S.: Easton, W. H., 7.
- Arkansas, Batesville area, Carb. fauna: Gordon, M., Jr., 1.
- Lower Penn.: Moore, R. C., 6.
- Anthozoa—Continued.
- Auloporidae: Elias, M. K., 1.
- Bermuda: Livingston, W., 1.
- Bioherms, other reefs: Ladd, H. S., 3, 4.
- British Columbia, Tyaughton Lake area: Cairnes, C. E., 1.
- Campophyllum, revision, N. Am.: Easton, W. H., 1.
- Canada, Mackenzie River Basin, Dev.: Smith, S., 1.
- Colorado, Sawatch Range area: Johnson, J. H., 3.
- Paleozoic faunas: Johnson, J. H., 7.
- West-central, NW. fms., Paleozoic faunas: Brill, K. G., Jr., 1.
- Coral reefs, antecedent-platform origin theory: Hoffmeister, J. E., 1.
- Detroit River ls., Ohio faunas: Stumm, E. C., 2.
- Fauna, Barberton ls. mine, Ohio: Stauffer, C. R., 1.
- Bone beds, Dev., Ohio: Wells, J. W., 3.
- Clifty Falls State Park, Ind.: Freeman, O. W., 2.
- Genessee group, N. Y.: Grossman, W. L., 1.
- Middle Ord., cent. Pa.: Kny, G. M., 2.
- Florida, Pleist. faunas, Palm Beach Co.: Smith, E. R., 1.
- Georgia, Coastal Plain: Cooke, C. W., 1.
- Gymnophyllum, Penn. paleocyclid, Okla.: Howell, B. F., 6.
- Halysites, Ord., Manitoba: Leith, E. I., 1.
- Illinois: Workman, L. E., 1.
- Centralia-Salem, Dev.: Caylor, G. W., 1.
- Devonian fms.: Cooper, G. A., 2.
- Kinkaid Missn.: Easton, W. H., 5.
- Thomas A. Green Silurian fossils: Graen, K. F., 1.
- Indiana, Dev.: Freeman, O. W., 2; Sutton, A. H., 1.
- Iowa, Dev.: Stainbrook, M. A., 1.
- Kentucky, W., Dev.: Freeman, L. B., 1.
- Leadville ls., Colo., fauna: Johnson, J. H., 8.
- Louisville ls., Mo., fauna: Williams, J. S., 1.
- Maine, Sil., Ripogenus Dam fauna: Willard, B., 1.
- Mexico, Nueva León: Mullerried, 8.
- Mississippi Valley, Carb.: Easton, W. H., 3.
- Missouri, NE., Dev.: Branson, E. B., 2.
- Southeast: Cronels, C. G., 1.
- Mollusca, Pleist., Cuba: Pérez Farfante, I., 1.
- Montana, NW., Dev. fauna: U. S. G. S., 2.
- Mississippian fauna: U. S. G. S., 2.
- Otter Missn. fauna: Easton, W. H., 6.
- Post-Osage Missn.: Sloss, L. L., 1.
- New Mexico, Dev. faunas: Stevenson, F. V., 1.
- Lower Penn.: Moore, R. C., 6.

Anthozoa—Continued.

- New York, Cossackie quad. faunas: Goldring, W., 3.
 Faunas, Catskill quad.: Ruedemann, R., 5, 6.
 Oklahoma, Lower Penn.: Moore, R. C., 6.
 Parafavosites, Sil., Arctic Am.: Bassler, R. S., 2.
 Quebec faunas: Dresser, J. A., 1.
 Reefs and bioherms: Ladd, H. S., 4.
 Ripogenus Dam fauna, Sil., Maine: Willard, B., 1.
 Tennessee, W.-cent.: Born, K. E., 21.
 Tetracorolla, Dev., revision: Stumm, E. C., 1.
 Texas, Anahuac Oligocene fm.: Ellisor, A. C., 1.
 Buda ls., Cret.: Wells, J. W., 1.
 Lower Penn.: Moore, R. C., 6;
 Plummer, F. B., 6-a.
 North Comanchean fauna: Lozo, F. E., Jr., 1.
 Tabulate, Penn.: Wells, J. W., 5.
 Tumey ss. fauna, Calif.: Zimmerman, J. J., 1.
 Turbinola, Tert., U. S. Gulf Coast: Monsour, E., 1.
 United States, Midcontinent, rugose Penn.: Jeffords, R. M., 3.
 Utah, Dry Lake area, Brazer-Lower Wells sec.: Williams, J. Stewart, 2.
 Washington, NW., Oligocene: Durham, J. W., 1.
 West Indies, Eocene, Miocene: Wells, J. W., 7.
 West Virginia, rocks, fossils, minerals, soils: Martens, J. H. C., 1.
 Anthraconite, Norwood area, Mich.: Wulfman, C. E., 1.
 Antimony.
 Alaska: Joesting, H. R., 1.
 British Columbia, Alaska Highway area min. poss.: Thomas, L. C., 1.
 Trafton Lake area: Cairnes, C. E., 1.
 Canada, W., sphalerites: Warren, H. V., 5.
 Mexico, Huizuco, Guerrero area: McAllister, J. F., 1.
 General: White, D. E., 2.
 Oregon: Wagner, N. S., 1.
 Quebec, econ. minerals: Quebec Bur. Mines, 1.
 Yukon, Upper McQuesten River area: Bostock, H. S., 1.
 Whitehorse dist.: Cockfield, W. E., 1.
 Apache oil field, Caddo Co., Okla.: Scott, V. C., 1.
 Apatite.
 Gold, host minerals: Schwartz, G. M., 2.
 Maine, Mt. Waldo batholith: Trefethen, J. M., 1.
 Massachusetts, Chelmsford granite-migmatite: Keevil, N. B., 3.

Apatite—Continued.

- Quebec: Dufresne, A. O., 1.
 Utah, Twin Peaks deposits: Crawford, A. L., 4.
 Aplite.
 Arizona, Dorian dist. and Aquarius Range: Hobbs, S. W., 1.
 Nevada, Rye Patch area: Vitaliano, C. J., 1.
 New Hampshire, Oliverian magma ser., Mt. Washington: Chapman, C. A., 1.
 Oregon, replace breccia, Cornucopia: Goodspeed, G. E., 2.
 Pennsylvania, Trias. diabase derivatives: Tomlinson, W. H., 3.
 Wyoming, vermiculite deposits: Hagner, A. F., 1.
 Appalachian area, U. S.: Gulley, M. G., 2.
 Application of hydrocarbon reserves: Carter, D. V., 2.
 Applied geophysics: Bazzoni, C. B., 1.
 Aquamarine, S. Atlantic U. S., gems: Barclay, G. C., 1.
 Arachnida.
 Calcitro, Cenozoic, Ariz.: Petrunkevitch, A., 1.
 Eurypterid, Deepkill sh., N. Y.: Flower, R. H., 6.
 Faunas, early Upper Camb., Mont.: Lochman, C., 1.
 Limuloid Trias. trails, Ariz. Petrified Forest: Caster, K. E., 1.
 Merostome, Ord., Tenn.: Caster, K. E., 5.
 Xiphosurans, Carb., Perm., N. Am.: Raymond, P. E., 2.
 Aragonite, Kans., gem minerals: Graffham, A. A., 1.
 Arctic America.
 Arctic Canada, E., explor., research: Baird, P. D., 1.
 Latest glaciation boundary: Hobbs, W. H., 6.
Economic geology.
 Mineral res.: Griffin, H., 1.
 Placer mining, sub-Arctic: Patty, E. N., 1.
Mineralogy.
 Mineral res.: Griffin, H., 1.
 Placer mining, sub-Arctic: Patty, E. N., 1.
Paleontology.
 Parafavosites, other tabulate corals: Bassler, R. S., 2.
 Silliman fossil mount: Shaw, V., 2.
Physical geology.
 Placer mining, sub-Arctic: Patty, E. N., 1.
 Arctic Canada, E., explor., research: Baird, P. D., 1.
 Latest glaciation boundary: Hobbs, W. H., 6.
 Arctic Inst., N. Am.: FIML, B. T. 1.
 Argentite, gold, host minerals: Schwartz, G. M., 2.

Argillite.

- British Columbia, Emerald tungsten project : Mason, E. E., 1.
- Greenwood-Phoenix area : McNaughton, D. A., 1.
- California, Glenn Co. : Rynearson, G. A., 1.
- Manitoba, Island Lake area : McMurchy, R. C., 1.
- Pennsylvania, Point Pleasant area : McLaughlin, D. B., 1.
- United States, Stockton, Lockatong fms. type secs. : McLaughlin, D. B., 2.

Arizona.

Areas described.

- Superior mining area : Short, M. N., 1.

Economic geology.

- Apache vanadium mine, Gila Co. : Keithley, H. S., 1.
- Castle Dome copper deposit, hydrothermal alteration : Peterson, N. P., 1.
- Manganese Pliocene deposits, Artillery Mts. : Lasky, S. G., 1.
- Paleozoic, cent., NE. : U. S. G. S., 2.
- Salt River Valley, oil, gas prospects : Lupd, P. H., 1.
- Superior mining area : Short, M. N., 1.
- Tungsten, Borianna dist. and Aquarius Range : Hobbs, S. W., 1.

Historical geology.

- Cochise culture stages, age : Antevs, E. V., 2.
- Colorado River, age : Longwell, C. R., 10.
- East Kaibab monocline : Babenroth, D. L., 1.
- Grand Canyon area : Strahler, A. N., 1.
- Grand Canyon of the Colorado : Cueto Rui-Díaz, E., 1.
- Manganese Pliocene deposits, Artillery Mts. : Lasky, S. G., 1.
- Moenkopi fm. study : Anonymous, 101.
- Oak Creek Canyon : McKee, E. D., 3.
- Paleozoic, cent., NE. : U. S. G. S., 2.
- Permian Kaibab fm. : Nicol, D., 2.
- Porphyry, Uncle Sam, Tombstone dist. : Gilluly, J., 2.
- Salt River Valley : Lund, P. H., 1.
- Superior mining area : Short, M. N., 1.
- Thermal gradients and climatic changes : Lovering, T. S., 2.
- Tungsten, Borianna dist., and Aquarius Range : Hobbs, S. W., 1.
- Uinkaret Plateau : Koons, E. D., 1.

Mineralogy.

- Apache vanadium mine, Gila Co. : Keithley, H. S., 1.
- Calcite, fluorescent : Anonymous, 91.
- Hydrothermal alteration, San Manuel copper deposit : Schwartz, G. M., 3.
- Olivine : Anonymous, 41.
- Serpentine : Anonymous, 64.
- Superior mining area : Short, M. N., 1.
- Thermal gradients and climatic changes : Lovering, T. S., 2.

Arizona—Continued.

Mineralogy—Continued.

- Tucson meteorite, history : McGough, P. J., 1.
- Tungsten, Borianna dist. and Aquarius Range : Hobbs, S. W., 1.

Paleontology.

- Bicorbula, Perm. Bryozoa : Condra, G. E., 5.
- Calcitro, Cenezoic arachnid : Petrunkovitch, A., 1.
- Cochise culture : Sayles, E. B., 1.
- Stages, age : Antevs, E. V., 2.
- Fossil weather, ripple marks, rain prints : Laudermilk, J. D., 5.
- Limuloid trails, Upper Trias., Petrified Forest : Caster, K. E., 1.
- Moenkopi fm. study : Anonymous, 101.
- Permian Kaibab fm. faunas : Nicol, D., 2.
- Petrified Forest Nat. Monument : Anonymous, 96.
- Shark, Perm., Grand Canyon : David, L. R., 1.
- Tracks, Conconino ss., Grand Canyon : McKee, E. D., 1.
- Trilobita, Kaibab Mid. Perm. fm. : Snow, J. I., 1.

Petrology.

- Canyon. Diablo crater soll : Buddhue, J. D., 3.
- Coconino ss., small-scale structures : McKee, E. D., 2.
- East Kaibab monocline : Babenroth, D. L., 1.
- Hydrothermal alteration, San Manuel copper deposit : Schwartz, G. M., 3.
- Oak Creek Canyon : McKee, E. D., 3.
- Paleozoic, cent., NE. : U. S. G. S., 2.
- Porphyry, Uncle Sam, Tombstone dist. : Gilluly, J., 2.
- Superior mining area : Short, M. N., 1.
- Tungsten, Borianna dist. and Aquarius Range : Hobbs, S. W., 1.
- Uinkaret Plateau : Koons, E. D., 1.

Physical geology.

- Castle Dome copper deposit, hydrothermal alteration : Peterson, N. P., 1.
- East Kaibab monocline : Babenroth, D. L., 1.
- Grand Canyon area : Strahler, A. N., 1.
- Grand Canyon of the Colorado : Cueto Rui-Díaz, E., 1.
- Hydrothermal alteration, San Manuel copper deposit : Schwartz, G. M., 3.
- Kaibab, Coconino Plateaus : Strahler, A. N., 6.
- Karst features, Petrified Forest Nat. Park : Malott, C. A., 3.
- Oak Creek Canyon : McKee, E. D., 3.
- Porphyry, Uncle Sam, Tombstone dist. : Gilluly, J., 2.
- Salt River Valley : Lund, P. H., 1.
- Sunset Craters Nat. Monument : Cotton, H. S., 1 ; Nichols, T., 1.

Arizona—Continued.

Physical geology—Continued.

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 Tungsten, Borianna dist., and Aquarius
 Range: Hobbs, S. W., 1.
 Uinkaret Plateau: Koons, E. D., 1.
 Valleys, parks, Kaibab, Coconino
 Plateau: Strahler, A. N., 4.

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 McKee, E. D., 2.
 Crater Mound vs. Meteor Crater: Dar-
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 A. N., 6.
 Karst features, Petrified Forest Nat.
 Park: Malott, C. A., 3.
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 eaus: Strahler, A. N., 2, 4.
 Wind markings, Coconino ss.: Decker,
 B. L., 1.

Underground water.

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 A. N., 6.
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 Bauxite area: Pringle, L. B., 1; Tho-
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 M. C., 1.
 Calhoun field, Columbia Co.: Stein,
 F. B., 1.
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 M. C., 1.
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 Devonian: Miser, H. D., 1.
 Magnet Cove min. area: Shockley,
 W. G., 1.
 Ozark uplift, Lower Ord.: Cullison, J.
 S., 1.
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 Cooper, C. L., 6.

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 crystals: Buhlis, R., 2.
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 G., 1.
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 best, L. G., 1.
 Rutile, geol. occurrence: Ross, C. S., 3.

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 R. W., 4.
 Batesville dist. Missn.: U. S. G. S., 1.
 Corals, amplexoid, Chester: Easton, W.
 H., 7.
 Lower Penn.: Moore, R. C., 5.
 Devonian: Miser, H. D., 1.
 Foraminifera, Cret. Marlbrook marl:
 Cushman, J. A., 6.
 Moorefield fm., Ruddell sh., Batesville
 area: Gordon, M., Jr., 1.
 Ozark uplift, Lower Ord.: Cullison, J.
 S., 1.
 Turtles, thalassemyd, Cret.: Schmidt,
 K. P., 1.

Petrology.

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 Moorefield fm., Ruddell sh., Batesville
 area: Gordon, M., Jr., 1.
 Oölites nuclei, Fayetteville area: Hen-
 best, L. G., 1.
 Ozark uplift, Lower Ord.: Cullison, J.
 S., 1.
 Ring-dike complex, Magnet Cove: Bis-
 sell, H. J., 1.

Physical geology.

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 Bauxite area: Thoenen, J. R., 1.
 Devonian: Miser, H. D., 1.
 Magnet Cove min. dist.: Shockley, W.
 G., 1.
 Moorefield fm., Ruddell sh., Batesville
 area: Gordon, M., Jr., 1.
 Ring-dike complex, Magnet Cove: Bis-
 sell, H. J., 1.

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 S., 1.

Arkite, Magnet Cove, Ark., ring-dike com-
 plex: Bissell, H. J., 1.

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 L., 1.
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 Lupton, R. L., 1.

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- British Columbia, Hazelton, Cassiar dist.: Armstrong, J. E., 3.
- Canada, W., sphalerites: Warren, H. V., 5.
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- Polaris-Taku mine: MacPherson, F. H., 1.
- Gold, host minerals: Schwartz, G. M., 2.
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- Coastal area: Cooper, H. H., Jr., 2.
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- Carolina Bays, N. Car.-S. Car. : Cooke, C. W., 2.
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 G. H., 1.

United States, Pacific Coast area : Han-
 sen, H. P., 2.

Washington, E., post-glacial veg. : Han-
 sen, H. P., 3.

Wisconsin, pollen analysis, Vilas Co. :
 Potzger, J. E., 1.

Bombs, Parícutin volcano, Mex. : Flores,
 T., 3.

Borax, Death Valley, Calif. : Bagg, R. M., 3.

Borings.

Alabama, Black Belt, water-well drill-
 ing : Carlston, C. W., 2.

Borings—Continued.

- Bermuda : Livingston, W., 1.
 Lake filling and bog fm.: Potzger, J. E., 4.
 Mississippi, Camp Shelby area : Brown, G. F., 1.
 New Jersey, Brandywine Lighthouse Miocene diatoms : Patrick, R. M., 1.
 Macrofossils : Richards, H. G., 2.
 Bornite, Superior mining area, Ariz. : Short, M. N., 1.
 Borosilicates, Lambertville, N. J. : Tomlinson, W. H., 1.
 Boulangerite.
 British Columbia, antimony minerals : Warren, H. V., 7.
 Sullivan mine area : Swanson, C. O., 1.

Boulders.

- California, Puente, San Jose Hills : U. S. G. S., 1.
 Granite, veneered, SE. U. S. : White, W. A., 2.
 Mexico : Blasquez Lopez, L., 1.
 Montana, East Boulder Plateau, Bear-tooth Mts. : Bevan, A. C., 7.
 Oklahoma, Arbuckle Mts. : Lehman, R. P., 1.
 Pavement-boulders as interglacial evidence : Holmes, C. D., 3.
 Quebec, Hincks Tp. : Tanton, T. L., 1.
 Texas, Lower Rio Grande Valley : Wynd, F. L., 2.
 Trans-Pecos, crown-polished, by Indians : Adams, J. E., 4.
 Virginia, Waynesboro area sink holes : McGill, W. M., 1.
 Bourbon High oil field, Mo. : Cullison, J. S., 2.

Brachiopoda.

- Alberta, Alexo area : Crombie, G. P., 1.
 Red Deer, Rosebud area, faunas : Allan, J. A., 1 ; Sanderson, J. O. G., 1.
 Arkansas, Batesville area, Carb. fauna : Gordon, M., Jr., 1.
 Devonian : Miser, H. D., 1.
 British Columbia, Dunlevy-Portage Mtn. area fauna : Beach, H. H., 1.

California, Santa Lucia Range : Taliaferro, N. L., 1.

Knoxville ser. faunas : Anderson, F. M., 1.

Colorado, Mesolobus evolution : Elias, M. K., 7.

Paleozoic faunas : Stevenson, F. V., 1.

Sawatch Range area : Johnson, J. H., 3.

Detroit River ls., Ohio faunas : Stumm, E. C., 2.

Fauna, Barbeton ls. mine, Ohio : Stauffer, C. R., 1.

Clifty Falls State Park, Ind. : Freeman, O. W., 2.

Flint Hills : Kennedy, M., 2.

Genesee group, N. Y. : Grossman, W. L., 1.

Brachiopoda—Continued.

Fauna—Continued.

- Kaibab Perm. fm., Ariz. : Nicol, D., 2.
 Marginal marine Perm. strata, U. S. : Clifton, R. L., 1.
 Mesabi iron range, Minn. : Bergquist, H. R., 1.
 Middle Ordovician, cent. Pa. : Kay, G. M., 2.
 Permian, area NW. of Las Delicias, Mex. : King, R. E., 1.
 San Diego area, Calif. : Hertlein, L. G., 1.
 Sillery Camb. group, Quebec : Rasetti, F., 3.
 Upper Camb., Mont. : Lochman, C., 1.
 Illinois : Workman, L. E., 1.
 Centralia-Salem, Dev. : Caylor, G. W., 1.
 Devonian fms. : Cooper, G. A., 2, 3.
 Thomas A. Green Silurian fossils : Greacen, K. F., 1.
 Indiana, Dev. : Sutton, A. H., 1.
 Glen Dean ls. fauna : Haas, O., 3.
 Iowa, Dev. : Stainbrook, M. A., 1.
 Independence sh. fauna : Stainbrook, M. A., 3.
 Leadville ls., Colo., fauna : Johnson, J. H., 8.
 Lingula clarkae for L. elliptica : Flower, R. H., 2.
 Mclearnites for Mclearnia : Caster, K. E., 4.
 Maine, Sil., Ripogenus Dam fauna : Willard, B., 1.
 Meristella, Dev., N. Y., color patterns : Reimann, I. G., 1, 2.
 Mexico, Cacahuamilpa area faunas : Mullerried, 7.
 Permian NW. of Las Delicias : Cloud, P. E., Jr., 1.
 Missouri faunas : Branson, E. B., 3.
 Devonian : Cooper, G. A., 3.
 Northeast, Dev. : Branson, E. B., 2.
 Southeast : Croncis, C. G., 1.
 Montana, NW., Dev. fauna : U. S. G. S., 2.
 New Jersey, Upper Camb. faunas : Howell, B. F., 7.
 New Mexico, Dev. faunas : Stevenson, F. V., 1.
 Sandia fm. fauna : Northrop, S. A., 1.
 New York, Cossackie quad. faunas : Goldring, W., 3.
 Faunas, Catskill quad. : Ruedemann, R., 5, 6.
 North America : Cooper, G. A., 1.
 Western, Cenozoic : Hertlein, L. G., 2.
 Ontario, Quebec, Ord. Lingulid : Sinclair, G. W., 5.
 Ozark uplift, Ark.-Mo., faunas : Cullison, J. S., 1.
 Pennsylvania, Huntingdon area Sil., Dev. : Willard, B., 2.
 Oil City quad. : Dickey, P. A., 1.

Brachiopoda—Continued.

- Quebec : Dresser, J. A., 1; Sinclair, G. W., 5.
 Sillery fm. Camb. faunas : Rasetti, F., 4.
 Rafinesquina, Opikina, Opikinella, Ord., Ontario : Wilson, A. E., 1.
 Ripogenus Dam fauna, Sil., Maine : Willard, B., 1.
 Schizophoria, Penn., N. Mex. : Northrop, S. A., 1.
 Sowerbyella, Ord. N. Am. : Sinclair, G. W., 4.
 Strophomena, Trigrammaria, Microtrypa, Ord., Ontario : Wilson, A. E., 2.
 Tennessee, Douglas Dam area : Laurence, R. A., 1.
 West central : Born, K. E., 21.
 Texas, Word Perm fm., fauna and strat. correlates : Clifton, R. L., 3.
 Utah, Dry Lake area : Williams, J. Stewart, 2.
 Washington, NW., Oligocene : Durham, J. W., 1.
 West Virginia, rocks, fossils, minerals soils : Martens, J. H. C., 1.
 Brachiopoda, Quebec faunas : Dresser, J. A., 1.

Braunite.

- Colorado Snowmass, Pitkin Co. : Rogers, A. F., 3.
 Costa Rica : Roberts, R. J., 1.

Bravoite.

- Canada, nickel sulphide oxidation : Michener, C. E., 1.
 Nickel sulphide oxidation : Buddington, A. F., 1.

Breccias.

- Alaska, explosion-breccia, Wrangell dist. : Gault, H. R., 5.
 Moose Creek dist., Matanuska coal fields : Apell, G. A., 1.
 Arizona, Tombstone dist., Uncle Sam porphyry : Gilluly, J., 2.
 Arkansas, Dev. : Miser H. D., 1.
 British Columbia Ainsworth area : Rice, H. M. A., 1.
 China Creek area : Stevenson, J. S., 4.
 California, Big Pine volcanic field : Mayo, E. B., 1.
 Blairsden area : Durrell, C. 1.
 Canada Cape Tourmente : Lavallée, J., 1.
 Colorado, Maxwell reef area, Boulder Co. : MacCornack, R. J., 1.
 Colorado, Specimen Mtn. : Wahlstrom, E. E., 2.
 Cuba, Isla de Pinos tungsten deposits : Page, L. R., 1.
 Matahambre copper : Pennebaker, E. N., 1.
 Idaho, Latah Co. : Tullis, E. L., 1.
 Illinois, NW., zinc-lead deposits : Willman, H. B., 1.
 Kansas, McLouth gas and oil field : Lee, W., 1.

Breccias—Continued.

- Manitoba, Flin Flon area : Bateman, J. D., 3.
 Mexico, El Estado de Morelos : N. de Parrés, F., 1.
 El Oro y Tlalpujehua mining camp : Bracho V. F., 1.
 Quicksilver-antimony deposits, Huitzuco, Guerrero : McAllister, J. F., 1.
 Michigan, Menominee iron range : Lamme, C. A., 1.
 Michigan Basin, Salina, Bass Is. rocks : U. S. G. S., 1.
 Montana, N. Big Belt Range : Lyons, J. B., 1.
 Nevada, Sloan Hill, Las Vegas area : Deiss, C. F., 1.
 New Mexico, Boston Hill area : Entwistle, L. P., 2.
 Silver City area : Entwistle, L. P., 1.
 Tertiary iron in collapsed ls. : Kelley, V. C., 1.
 Northwest Territories, Mackenzie River Valley : Stewart, J. S., 2.
 Nova Scotia, Gabarus area : Douglas, G. V., 3.
 Manchester mine : Douglas, G. V., 2.
 Ontario, Bigwater Lake area : Berry, L. G., 1.
 Central Patricia mine : Hicks, H. B., 1.
 Cunningham-Garnet area : Meen, V. B., 2.
 Fort Hope area : Prest. V. K., 1, 2.
 Grimsthorpe-Barrie area : Meen, V. B., 1.
 Leeds Co. : Harrison, J. M., 1.
 Ross mine, Ramore area : Jones, W. A., 1.
 Sudbury area : Fairbairn, H. W., 3.
 Oregon, replacement aplite, Cornucopia : Goodspeed, G. E., 2.
 Pennsylvania, Point Pleasant area : McLaughlin, D. B., 1.
 Quebec, Beattie mine : Davidson, S. C., 1.
 Tennessee, Douglas Dam area : Laurence, R. A., 1.
 Greene Co. : Snyder, F. G., 1.
 Mississippian ls. : Frink, J. W., 1.
 Vermont, W., N. end Taconic thrust sheet : Kaiser, E. P., 1.
 Virginia, Lick Mtn. dist. : Stead, F. W., 1.
 Washington, Blewett-Cle Elum fm. : Lupher, R. L., 1.
 Morton Cinnabar dist. : Mackin, J. H., 1.
 Wyoming, Willwood, Tatman fms. : Van Houten, F. B., 1.
 Yukon, Dublin Gulch : Thompson, R. M., 1.

Brines.

- California, Searles Lake, San Bernardino Co. : Anonymous, 76.
 Lithium from Searles Lake : Gale, W. A., 1.
 Florida petroleum poss. : Gunter, H., 1.

Brines—Continued.

- Kansas, Arbuckle ls.: Amstutz, P. T., Jr., 1.
 Louisiana, Natchitoches area: Maher, J. C., 1.
 Michigan: Martin, H. M. M., 3.
 Bay City, Sil.: Case, L. C., 1.
 Rapid River well: Bagg, R. M., 2.
 Ohio, min. res.: Ohio Devel. Pub. Com., 1.
 Sulphates, reduction in oil-field salt water: Plummer, F. B., 9.
 Texas, Luling oil field water: Plummer, F. B., 1.
 Waters from Frio fm., Gulf Coast: Jessen, F. W., 1.
 Woodbine sand waters: Horton, C. W., 2.
 Texas-New Mexico, Delaware Basin, Perm.: Adams, J. E., 2.
 United States, oil-field waters: Berger, W. R., Jr., 1.
 Rocky Mtn. area: Crawford, J. G., 1.
 South Permian Basin: Adams, J. E., 3.
 Utah, Salt Valley: Dyer, B. W., 1.

British Columbia.

Department of Mines work: Sargent, T. E. H., 2.

Areas described.

- China Creek area, Vancouver Is.: Stevenson, J. S., 4.
 Fort Nelson area: Kindle, E. D., 1.
 Fort Nelson-Watson Lake area: Williams, M. Y., 3.
 Tuya-Teslin area: Watson, K. D., 1.
Economic geology.

Ainsworth area: Rice, H. M. A., 1.
 Alaska Highway area, min. res.: Thomas, L. O., 1.

Ft. St. John-Ft. Nelson: Hage, C. O., 3.

Batholith, Coast Range, Bridge River-Whitesail Lake: Joubin, F. R., 1.
 Bralorne mines: Gibson, S., 1.

Britannia mine No. 8 ore bodies: Irvine, W. T., 1.

China Creek area, Vancouver Is.: Stevenson, J. S., 4.

Coal, Peace River Foothills: McLearn, F. H., 2.

Cobalt: Warren, H. V., 4.

Contact metamorphism, Nickel Plate Mtn. area: Dolmage, V., 1.

Dunlevy-Portage Mtn. area: Beach, H. H., 1.

Emerald tungsten project: Mason, E. E., 1.

Fort Nelson-Watson Lake area: Williams, M. Y., 3.

Gold, minor elements in: Warren, H. V., 2.

Greenwood-Phoenix area: McNaughton, D. A., 1.

Hasler Creek coal area: Spivak, J., 1.

Hazelton, Cassiar dist.: Armstrong, J. E., 3.

British Columbia—Continued.

Economic geology—Continued.

Island Mtn. mine, Wells: Benedict, P. C., 1.

Little Billie mine, Texada Is.: Stevenson, J. S., 5.

Lode gold deposits: Hedley, M. S., 1;
 Holland, S. S., 1; Mathews, W. H., 2; Stevenson, J. S., 1.

Vancouver Island: Stevenson, J. S., 2.

Lone Mtn. area: McLearn, F. H., 1.

Manganese, gold, depth relation: Warren, H. V., 3.

Manson Creek area: Armstrong, J. E., 5, 7.

Nicola area: Cockfield, W. E., 2.

Omineca mining dist.: Armstrong, J. E., 4.

Ore deposit controls, Premier mine: Langille, E. G., 1.

Pinchi Lake mercury belt: Armstrong, J. E., 1.

Polaris-Taku gold mine: MacPherson, F. H., 1.

Princeton area: Rice, H. M. A., 2.

Sand, molding: Smith, W., 1.

Smithers area: Armstrong, J. E., 2.

Specimens and samples, treatment and use: Sargent, T. E. H., 1.

Sullivan mine area: Swanson, C. O., 1.

Takla, Cassiar dist. geol. map: Armstrong, J. E., 6.

Turner Valley area oil fields: Hume, G. S., 6.

Tuya-Teslin area: Watson, K. D., 1.

Twin "J" Mine: Stevenson, J. S., 3.

Tyaughton Lake area: Cairnes, C. E., 1.
 Vanadium, west coast: Gunning, H. C., 2.

Whitesail Lake gold area: Holland, S. S., 2, 3.

Historical geology.

Ainsworth area: Rice, H. M. A., 1.

Alaska Highway area: Thomas, L. O., 1.
 Ft. St. John-Ft. Nelson: Hage, C. O., 3.

Batholith, Coast Range, Bridge River-Whitesail Lake: Joubin, F. R., 1.

Bralorne mines: Gibson, S., 1.

Britannia mine, No. 8 orebodies: Irvine, W. T., 1.

China Creek area, Vancouver Is.: Stevenson, J. S., 4.

Contact metamorphism, Nickel Plate Mtn. area: Dolmage, V., 1.

Dunlevy-Portage Mtn. area: Beach, H. H., 1.

Fort Nelson area: Kindle, E. D., 1.

Greenwood-Phoenix area: McNaughton, D. A., 1.

Hasler Creek coal area: Spivak, J., 1.

Hazelton, Cassiar dist.: Armstrong, J. E., 3.

Island Mtn. mine, Wells: Benedict, P. C., 1.

Liard River area, Trias.: McLearn, F. H., 7.

British Columbia—Continued.

Historical geology—Continued.

Little Billie mine, Texada Is.: Stevenson, J. S., 5.

Lode-gold deposits, cent.-sou.: Hendley, M. S., 1.

Lone Mtn. area: McLearn, F. H., 1.

Manson Creek area: Armstrong, J. E., 7.

Mt. Hulcross-Commotion Creek area: Wickenden, R. T. D., 1; Williams, M. Y., 2.

Nicola area: Cockfield, W. E., 2.

Omineca mining dist.: Armstrong, J. E., 4.

Ore deposit controls, Premier mine: Langille, E. G., 1.

Peace River Foothills: McLearn, F. H., 2.

Princeton area: Rice, H. M. A., 2.

Smithers area: Armstrong, J. E., 2.

Sullivan mine area: Swanston, C. O., 1.

Takla, Cassiar dist. geol. maps: Armstrong, J. E., 6.

Taku River, Cassiar dist. geol. map: Keer, F. A., 1.

Turner Valley oil fields: Hume, G. S., 6.

Tuya-Teslin area: Watson, K. D., 1.

Twin "J" Mine: Stevenson, J. S., 3.

Tyaughton Lake area: Cairnes, C. E., 1. Vanadium, west coast: Gunning, H. C., 2.

Western British Columbia: McCabe, T. T., 1.

Mineralogy.

Ainsworth area: Rice, H. M. A., 1.

Alaska Highway area min. res.: Thomas, L. O., 1.

Antimony minerals: Warren, H. V., 7.

Bralorne mines: Gibson, S., 1.

Britannia mine, No. 8, ore bodies: Irvine, W. T., 1.

China Creek area, Vancouver Is.: Stevenson, J. S., 4.

Cobalt: Warren, H. V., 4.

Emerald tungsten project: Mason, E. E., 1.

Hedleyite, bismuth-telluride: Warren, H. V., 6.

Island Mtn. mine, Wells: Benedict, P. C., 1.

Lode gold deposits: Hedley, M. S., 1; Holland, S. S., 1; Mathews, W. H., 2; Stevenson, J. S., 1.

Vancouver Island: Stevenson, J. S., 2.

Manganese, gold, depth relation: Warren, H. V., 3.

Manson Creek area: Armstrong, J. E., 5, 7.

Nicola area: Cockfield, W. E., 2.

Omineca mining dist.: Armstrong, J. E., 4.

Ore deposit controls, Premier mine: Langille, E. G., 1.

Pinchi Lake mercury belt: Armstrong, J. E., 1.

Polaris-Taku gold mine: MacPherson, F. H., 1.

British Columbia—Continued.

Mineralogy—Continued.

Princeton area: Rice, H. M. A., 2.

Sand, molding: Smith, W., 1.

Silver, mercurian: Nuffield, E. W., 2.

Smithers area: Armstrong, J. E., 2.

Sullivan mine area: Swanston, C. O., 1.

Takla, Cassiar dist.: Armstrong, J. E., 6.

Tuya-Teslin area: Watson, K. D., 1.

Twin "J" Mine: Stevenson, J. S., 3.

Tyaughton Lake area: Cairnes, C. E., 1.

Vanadium, west coast: Gunning, H. C., 2.

Whitesail Lake gold area: Holland, S. S., 2, 3.

Paleontology.

Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.

Dunlevy-Portage Mtn. area: Beach, H. H., 1.

Hazelton, Cassiar dist.: Armstrong, J. E., 3.

Liard River area, Trias.: McLearn, F. H., 7.

Lone Mtn. area: McLearn, F. H., 1.

Mt. Hulcross-Commotion Creek area: Wickenden, R. T. D., 1.

Smithers area: Armstrong, J. E., 2.

Petrology.

Ainsworth area: Rice, H. M. A., 1.

Alaska Highway, Ft. St. John-Ft. Nelson, Hage, C. O., 3.

Batholith, Coast Range, Bridge River-Whitesail Lake: Joubin, F. R., 1.

Bralorne mines: Gibson, S., 1.

Britannia mine, No. 8 orebodies: Irvine, W. T., 1.

China Creek area, Vancouver Is.: Stevenson, J. S., 4.

Contract metamorphism, Nickel Plate Mtn. area: Dolmage, V., 1.

Dunlevy-Portage Mtn. area: Beach, H. H., 1.

Gem stones: Marshall, J. S., 1.

Hazelton, Cassiar dist.: Armstrong, J. E., 3.

Little Billie mine, Texada Is.: Stevenson, J. S., 5.

Lode-gold deposits, cent.-sou.: Hedley, M. S., 1.

Lone Mtn. area: McLearn, F. H., 1.

Manson Creek area: Armstrong, J. E., 7.

Mt. Hulcross-Commotion Creek area: Wickenden, R. T. D., 1.

Nicola area: Cockfield, W. E., 2.

Ore deposit controls, Premier mine: Langille, E. G., 1.

Peace River Foothills: McLearn, F. H., 2.

Pinchi Lake mercury belt: Armstrong, J. E., 1.

Smithers area: Armstrong, J. E., 2.

Sullivan mine area: Swanston, C. O., 1.

Tuya-Teslin area: Watson, K. D., 1.

Twin "J" Mine: Stevenson, J. S., 3.

Vanadium, west coast: Gunning, H. C., 2.

British Columbia—Continued.

Physical geology.

- Ainsworth area : Rice, H. M. A., 1.
 Alaska Highway area : Thomas, L. O., 1.
 Ft. St. John-Ft. Nelson : Hage, C. O., 3.
 Batholith, Coast Range, Bridge River-White sail Lake : Joubin, F. R., 1.
 Bralorne mines : Gibson, S., 1.
 Britannia mine, No. 8 orebodies : Irvine, W. T., 1.
 China Creek area, Vancouver Is. : Stevenson, J. S., 4.
 Constant metamorphism, Nickel Plate Mtn. area : Dolmage, V., 1.
 Dunlevy-Portage Mtn. area : Beach, H. H., 1.
 Emerald tungsten project : Mason, E. E., 1.
 Fort Nelson area : Kindle, E. D., 1.
 Fort Nelson-Watson Lake area : Williams, M. Y., 3.
 Greenwood-Phoenix area : McNaughton, D. A., 1.
 Hasler Creek coal area : Spivak, J., 1.
 Hazelton, Cassiar dist. : Armstrong, J. E., 3.
 Island Mtn. mine, Wells : Benedict, P. C., 1.
 Little Billie mine, Texada Is. : Stevenson, J. S., 5.
 Lode gold deposits, cent.-sou. : Hedley, M. S., 1.
 Lone Mtn. area : McLearn, F. H., 1.
 Manson Creek area : Armstrong, J. E., 5, 7.
 Mt. Hulcross-Commotion Creek area : Wickenden, R. T. D., 1; Williams, M. Y., 2.
 Nicola area : Cockfield, W. E., 2.
 Omineca mining dist. : Armstrong, J. E., 4.
 Ore deposit controls, Premier mine : Langille, E. G., 1.
 Peace River Foothills : McLearn, F. H., 2.
 Polaris-Taku gold mine : MacPherson, F. H., 1.
 Princeton area : Rice, H. M. A., 2.
 Pinchi Lake mercury belt : Armstrong, J. E., 1.
 Smithers area : Armstrong, J. E., 2.
 Sullivan mine area : Swanson, C. O., 1.
 Takla, Cassiar dist. geol. map : Armstrong, J. E., 6.
 Turner Valley oil fields : Hume, G. S., 6.
 Tuya-Teslin area : Watson, K. D., 1.
 Twin "J" Mine : Stevenson, J. S., 3.
 Tyaughton Lake area : Cairnes, C. O., 1.
 Vanadium, west coast : Gunning, H. C., 2.
 Whitesail Lake area : Holland, S. S., 3.

Physiographic geology.

- Alaska Highway, Dawson Creek-Whitehorse : Denny, C. S., 1.
 Ft. St. John-Ft. Nelson : Hage, C. O., 3.

British Columbia—Continued.

Physiographic geology—Continued.

- Dunlevy-Portage Mtn. area : Beach, H. H., 1.
 Fort Nelson area : Kindle, E. D., 1.
 Fort Nelson-Watson Lake area : Williams, M. Y., 3.
 Glaciation, 4 phases : Davis, N. F. G., 1.
 Greenwood-Phoenix area : McNaughton, D. A., 1.
 Hasler Creek coal area : Spivak, J., 1.
 Hazelton, Cassiar dist. : Armstrong, J. E., 3.
 Manson Creek area : Armstrong, J. E., 5.
 Mt. Hulcross-Commotion Creek area : Wickenden, R. T. D., 1.
 Nicola area : Cockfield, W. E., 2.
 Princeton area : Rice, H. M. A., 2.
 Smithers area : Armstrong, J. E., 2.
 Takla, Cassiar dist. geol. map : Armstrong, J. E., 6.
 Taku River, Cassiar dist. geol. map : Keer, F. A., 1.
 Tuya-Teslin area : Watson, K. D., 1.
 Western British Columbia : McCabe, T. T., 1.

Underground water.

- Fort Nelson-Watson Lake area : Williams, M. Y., 3.
 Bromine, Grand Co., Utah : Lindberg, M. L., 3.
 Brookhaven oil field, Miss. : Hughes, U. B., 1; Miss. G. Soc., 1; Morse, W. C., 5; Anonymous, 38.
 Brookite, Ind., Mansfield ss. minerals : Gault, H. R., 1.
 Brown Mtn., N. C., light, origin : Mansfield, G. R., 1.

Brucite.

- Alaska, nemalite, Kobuk River Valley : Fackler, W. C., 1.
 Differentiation, magnesite from dolomite in crushed materials : Faust, G. T., 2.

Nevada, non-metallics : York, B., 1.

Ontario, Rutherglen dist. : Keith, M. L., 1.

- Brush fires and rock exfoliation : Emery, K. O., 2.

Bryozoa.

- Alberta, Alexo area : Crombie, G. P., 1.
 Red Deer, Rosebud areas fauna : Allan, J. A., 1; Sanderson, J. O. G., 1.
 Algal-Bryozoa consortia, Paleozoic : Elias, M. K., 6.
 Appendages, Carb., Perm. : Elias, M. K., 8.
 Archimedes (Hall) revision : Condra, G. E., 1; Easton, W. H., 4.
 Arkansas, Batesville area, Carb. fauna : Gordon, M., Jr., 1.
 Bicornbula, Perm., Ariz. : Condra, G. E., 5.
 Biscorbis arizonica for Bicornbula arizonica : Condra, G. E., 6.
 Chester, Ill., Ky. : McFarlan, A. C., 1.

Bryozoa—Continued.

- Colorado, Morrison fm., Colo. Plateau area : Stokes, W. L., 1.
 Paleozoic faunas : Johnson, J. H., 7.
 Paleozoic, west-cent., NW. fms. : Brill, K. G., Jr., 1.
 Ctenostomata, Carb., Perm., U. S. : Condra, G. E., 3.
 Escharopora hogbeni Fritz, distrib. N. Am. : Kay, G. M., 3.
 Escharopora, Ord., Quebec : Fritz, M. A., 2.
 Fauna, Eocene Santee ls., N. Car. : Harbison, A., 1.
 Mesabi iron range, Minn. : Bergquist, H. R., 1.
 Ordovician, cent. Pa. : Kay, G. M., 2.
 Permian, marginal marine strata, U. S. : Clifton, R. L., 1.
 Florida, Pleist. faunas, Palm Beach Co. : Smith, E. R., 1.
 Georgia, Coastal Plain : Cooke, C. W., 1.
 Hederella, Corynotrypa, Penn., U. S. : Condra, G. E., 4.
 Hederelloidea : Elias, M. K., 1.
 Illinois, Centralia-Salem, Dev. : Caylor, G. W., 1.
 Thomas A. Green Sil. fossils : Greacen, K. F., 1.
 Indiana, Clifty Falls State Park fauna : Freeman, O. W., 2.
 Glen Dean ls. faunas : Haas, O., 3.
 Harrodsburg ls. : Fix, G. F., 1.
 Leadville ls., Colo., fauna : Johnson, J. H., 8.
 Mexico, Nuevo León : Mullerried, 8.
 Missouri, faunas : Branson, E. B., 3.
 New Jersey, Brandywine Lighthouse boring fauna : Richards, H. G., 2.
 Cape May Canal Pleist. fauna : Richards, H. G., 3.
 New Mexico, Sandia fm. fauna : Northrop, S. A., 1.
 Devonian faunas : Fritz, M. A., 1 ; Stevenson, F. V., 1.
 New York, Coxsackie quad. faunas : Goldring, W., 3.
 Faunas, Catskill quad. : Ruedemann, R., 5, 6.
 Pennsylvania, Huntingdon area, Sil., Dev. : Willard, B., 2.
 Quebec, Gaspé Dev. ss. : Fritz, M. A., 4.
 Rhombotrypella, Penn., Utah : Condra, G. E., 2.
 Stigmatella, Ord., cent. Ontario : Armstrong, H. S., 2.
 Tennessee, W.-cent. : Born, K. E., 21.
 Texas, N. Comanchean fauna : Lozo, F. E., Jr., 1.
 Western Perm. : Condra, G. E., 7.
 Thamniscus, Perm., Penn., N. Am. : Condra, G. E., 8.
 United States, Cotton Valley beds, N. Gulf Coastal Plain : Swain, F. M., 1.
 Mid-continent, Penn., Perm. faunas : Moore, R. C., 5.

Bryozoa—Continued.

- Utah, Dry Lake area : Williams, J. Stewart, 2.
 Building stone. See also Granite ; Lime-stone ; Sandstone ; Stone.
 Canada, Manitoba dist. : Hutt, G. M., 15.
 Costa Rica : Dondoli, C., 1.
 Illinois, Chicago area dolomites : Willman, H. B., 1.
 Mexico, Baja Calif. : Antúnez Echegaray, F., 3.
 Mississippi Valley : Voskuil, W. H., 1.
 Missouri : Branson, E. B., 3.
 North Carolina : Anonymous, 9.
 Western : Money-maker, B. C., 2.
 Ohio, sandstones and conglomerates : Stout, W. E., 7.
 Pennsylvania : Ashley, G. H., 1.
 Quebec : Dufresne, A. O., 1.
 Economic mins. : Quebec Bur. Mines, 1.
 Matamec Lake area, Saguenay Co. : Greig, E. W., 1.
 Stanstead area, Brome and Stanstead Cos. : Ambrose, J. W., 2.
 South Carolina : Anonymous, 20.
 South Dakota : Rothrock, E. P., 1.
 Tennessee : Anonymous, 56.
 Texas : Sellards, E. H., 2.
 Bastrop Co. : Nickell, C. O., 2.
 Baylor Co. : Evans, G. L., 4.
 Burnet Co. : Barnes, V. E., 3.
 Collingsworth Co. : Baldwin, B. F., 1.
 Damon Mound Is. : Hurlbut, E. M., Jr., 1.
 Fayette Co. : Sedlmeyer, J. L., 1.
 Grimes Co. : Ramsey, G. D., 1.
 Houston Co. : Harrington, H., 1.
 Lee Co. : Harris, G. D., 1.
 Travis Co. : Nickell, C. O., 4.
 Virginia, Burkes Garden quad. : Cooper, B. N., 1.
 Buried valleys, Franklin Co., Ohio : Harker, D. H., 2.
 Burrows.
 Maryland, Skolithos, Diplocraterion, Sabellidites, Antietam Camb. ss. : Howell, B. F., 7-a.
 Pennsylvania, Skolithos, Camb. : Howell, B. F., 4.
 Cadmium, W. Canada, sphalerites : Warren, H. V., 5.
 Calcareous algae, useful microfossils : Johnson, J. D., 6.
 Calcite.
 Arizona, fluorescent : Anonymous, 91.
 Crystallography of, Lake Superior copper area : Palache, C., 2.
 Fluorochemistry : De Ment, J. A., 6.
 Gold, host minerals : Schwartz, G. M., 2.
 Indiana, Harrodsburg ls. mineralization : Fix, G. F., 1.
 Mexico, Taxco mining dist. : Fowler, G. M., 2.
 Michigan, anthraconite, Norwood area : Wulfman, C. E., 1.

Calcite—Continued.

- Nevada, Current Creek dist.: Faust, G. T., 1.
 Rye Patch area: Vitaliano, C. J., 1.
 New Jersey, Great North min. area: Zodac, P., 2.
 Ontario, Little Long Lac area: Armstrong, H. S., 1.
 Oregon, optical: Anonymous, 99.
 Tennessee, Buffalo Cove area: Kesler, T. L., 2.
 Greene Co.: Snyder, F. G., 1.
 Texas, Irving area concretions: Loving, G., 1.
 Mariposa mine: Duncan, F., 1.
 Utah, Iron Peak ores: Crawford, A. L., 2.
 West Virginia, 50 rocks, fossils, minerals, soils: Martens, J. H. C., 1.
 Calhoun oil and gas field, Ark.: Stein, F. B., 1.

Caliche.

- Kansas, W. cent., Pleist.: Frye, J. C., 1.
 New Mexico, Lea Co.: Nye, S. S., 1.
 Utah, SW., Post-Wasatch fms.: Gregory, H. E., 2.

California.

- Biennial rept. State Mineralogist: Bradley, W. W., 1.
 Salinas and dry lakes: Blackford, J. L., 1.
 Submarine photography off coast: Shepard, F. P., 1.

Areas described.

- Pliocene marine, San Diego area: Hertlein, L. G., 1.
 Subsidence, elevation, Los Angeles area: Grant, U. S., IV, 1.

Economic geology.

- Aliso Canyon oil field: Hodges, F. C., 1.
 Batholith gold, San Gabriel, Mts.: Lauder milk, J. D., 6.
 Bituminous ss., McKittrick, San Luis Obispo, Santa Cruz areas: U. S. G. S., 1.
 Borate minerals: Harriman, W. R., 1.
 Carbon dioxide gas, Mendocino, Sonora Cos.: Hubbard, H. G., 1.
 Casmalia area, Santa Barbara Co.: U. S. G. S., 1.
 Chowchilla gas field: Hodges, F. C., 2.
 Chromite, Glenn Co.: Rynearson, G. A., 1.
 San Luis Obispo Co.: Smith, C. T., 1.
 Cinnabar, colloidal deposition: Pollock, J. P., 1.
 Copper, iron mine, Copperopolis: Lisle, T. O., 5.
 Del Valle oil field: Hodges, F. C., 1.
 Developments, oil and gas, 1943-44: Gregersen, A. I., 2, 3.
 1944: Moody, G. B., 1.
 Discoveries, devels., oil and gas, 1944: Winterburn, R., 1.
 Edison oil field, schist production: Stockman, L. P., 2.

California—Continued.

Economic geology—Continued.

- Edwin clay, Ione area: Bates, T. F., 1.
 Elk Hills oil field: Bunch, E. S., 1.
 Reserve, extent: Stockman, L. P., 1.
 Fish faunas, bathypelagic oil fields: David, L. R., 5.
 Fresno Co.: U. S. G. S., 2.
 Inclined water tables, oil reservoirs: Johnston, N., 2.
 Kettleman Hills North Dome oil field, inclined water table: Van Couvering, M., 1.
 Lithium from Searles Lake brine: Gale, W. A., 1.
 Lost Hills oil field: Barton, D. C., 3.
 Merced Co.: U. S. G. S., 2.
 Midway-Sunset oil field, SE. part: U. S. G. S., 1.
 Mineral res., Riverside Co.: Tucker, W. B., 2.
 Minerals, Crestmore: Woodford, A. O., 1.
 Newhall-Potrero oil field: Hodges, F. C., 1.
 Oak Canyon oil field: Hodges, F. C., 1.
 Petroleum, deeper production: Gregersen, A. I., 1.
 1943 development: Wilhelm, V. H., 1.
 Puente, San Jose Hills poss.: U. S. G. S., 1.
 Salinas Valley poss.: U. S. G. S., 1.
 Playa del Rey oil field: Hodges, F. C., 3.
 Prospects for oil: Gregersen, A. I., 1.
 Quartz-crystal mines, Mokelumne area: Durrell, C., 2.
 Quicksilver: Lisle, T. O., 2.
 Knoxville dist.: Averitt, P., 1.
 San Benito, Fresno Cos.: Yates, R. G., 1.
 Reflection seismograph explor.: Salvatore, H., 1.
 Rio Vista gas field: Frame, R. G., 1.
 San Bernardino Co. min. res.: Tucker, W. B., 1.
 San Luis Obispo Co.: U. S. G. S., 1.
 San Miguelito oil field: Barnes, K. B., 2.
 Santa Ana Mts., NW., Paleocene, Eocene: U. S. G. S., 2.
 Santa Maria oil dist.: U. S. G. S., 1.
 Santa Rosa Hills-Purissima Hills dist.: U. S. G. S., 1.
 Searles Lake, San Bernardino Co.: Anonymous, 76.
 South Mtn. oil field: Bailey, W. C., 1.
 Stanislaus Co.: U. S. G. S., 2.
 Sutter (Marysville) Buttes gas field: Stalder, W., 1.
 Tar sand deposits: Page, B. M., 1.
 Time of oil and gas accumulation: Levorsen, A. I., 2.
 Under-ocean oil wells, Huntington Beach: Barnes, K. B., 3.
- Historical geology.*
 Aliso Canyon oil field: Hodges, F. C., 1.
 Andesite breccia dikes, Blairsdien: Durrell, C., 1.

California—Continued.

Historical geology—Continued.

- Barstow quad., San Bernardino Co.:
Miller, W. J., 2.
- Batholith, Cret., crystallization time:
Larsen, E. S., 2.
- Big Pine area: Mayo, E. B., 1.
- Bituminous deposits, McKittrick dist.:
U. S. G. S., 1.
- Sandstones, Santa Cruz area: U. S.
G. S., 1.
- Casmalia area, Santa Barbara Co.: U. S.
G. S., 1.
- Chromite deposits, San Luis Obispo Co.:
Smith, C. T., 1.
- Glenn Co.: Rynearson, G. A., 1.
- Coalinga anticline, Eocene fms. and fos-
sils: U. S. G. S., 2.
- Del Valle oil field: Hodges, F. C., 1.
- Edwin clay, Ione area: Bates, T. F., 1.
- Elk Hills oil field: Bunch, E. S., 1.
- Flora, Alturas Tert.: Axelrod, D. I., 7.
- Mulholland Tert.: Axelrod, D. I., 7.
- Pliocene: Chaney, R. W., 6.
- Fresno Co.: U. S. G. S., 2.
- Glycymeris *veatchii*, biostratigraphy:
Smith, C. T., 2.
- Ice age and Pleist.: Antevs, E. V., 4.
- Imperial Valley, west side: Tarbet,
L. A., 1.
- Jamesburg quad., Monterey Co.: Fied-
ler, W. M., 1.
- Knoxville Juras. ser.: Anderson, F. M.,
1.
- Lithology, sea-floor off coast: Emery,
K. O., 4.
- Lost Hills oil field: Barton, D. C., 3.
- Marine sediment, Santa Catalina Is.:
Clements, T. D., 2.
- Merced Co.: U. S. G. S., 2.
- Midway-Sunset oil field, SE. part: U. S.
G. S., 1.
- Minerals, Crestmore area: Woodford,
A. O., 1.
- Needles-Goffs area, San Bernardino Co.:
Miller, W. J., 3.
- Newhall-Potrero oil field: Hodges, F. C.,
1.
- Oak Canyon oil field: Hodges, F. C., 1.
- Pacific Coast, Point Arena-Fort Ross,
Cret., Tert.: Weaver, C. E., 3.
- Palm Springs-Blythe Strip, Riverside
Co.: Miller, W. J., 1.
- Petroleum, deeper production: Greger-
sen, A. I., 1.
- Playa del Rey oil field: Hodges, F. C., 3.
- Pleistocene Coast Range orogenesis:
Chamberlin, R. T., 3.
- Pliocene, marine, San Diego area: Hert-
lein, L. G., 1.
- Prospects for oil: Gregersen, A. I., 1.
- Puente, San Jose Hills: U. S. G. S., 1.
- Quartz-crystal mines, Mokelumne area:
Durrell, C., 2.

California—Continued.

Historical geology—Continued.

- Quicksilver deposits, Knoxville dist.:
Averitt, P., 1.
- San Benito, Fresno Cos.: Yates, R. G.,
1.
- Radiolaria, Upper Cret.: Campbell, A. S.,
2.
- Reflection seismograph explor.: Salva-
tori, H., 1.
- Salinas Valley: U. S. G. S., 1.
- San Juan Bautista quad.: Allen, J. E.,
2.
- San Luis Obispo Co.: U. S. G. S., 1.
- Santa Ana Mts., NW., Paleocene,
Eocene: U. S. G. S., 2.
- Santa Lucia Range, Cret., Paleocene:
Taliaferro, N. L., 1.
- Santa Maria oil dist.: U. S. G. S., 1.
- Santa Monica Mts.: Cotton, C. A., 1.
- Santa Rosa Hills-Purissima Hills dists.:
U. S. G. S., 1.
- South Mtn. oil field: Bailey, W. C., 1.
- Stanilaus Co.: U. S. G. S., 2.
- Subsidence, elevation, Los Angeles area:
Grant, U. S. IV., 1.
- Tertiary, marine: Keen, A. M., 2.
- Tumey fm., Fresno Co.: Cushman, J. A.,
3.
- Tertiary ss., Fresno Co.: Zimmerman,
J., Jr., 1.
- Under-ocean oil wells, Huntington
Beach: Barnes, K. B., 3.
- Upper Cret., Great Valley, strat. rela-
tions: Goudkoff, P. P., 1.
- Well, dry, 16,246 ft. deep: Cavins, O., 1.
- Mineralogy.*
- Agate-filled nodules, Chuckwalla Mts.:
Schweitzer, C. G., 1.
- Agates, Berkeley area, fractures: Bo-
lander, L. P., Jr., 2.
- Blue, nodules: Schweitzer, C. G., 2.
- Batholith gold, San Gabriel Mts.:
Laudermilk, J. D., 6.
- Bituminous ss., McKittrick, Santa Cruz
dists.: U. S. G. S., 1.
- Borate minerals: Harriman, W. E., 1.
- Cassiterite, contact metamorphosis: Page,
L. R., 2.
- Chromite, Glenn Co.: Rynearson, G.
A., 1.
- San Luis Obispo Co.: Smith, C. T., 1.
- Copper, iron mine, Copperopolis: Lisle,
T. O., 5.
- Curtisite, Skaggs Springs: Lisle, T. O.,
3.
- Death Valley: Bagg, R. M., 3.
- Dolomite, fluorescent, Guadalupe: Lisle,
T. O., 1.
- Eclogite, glaucophane schists: Switzer,
G., 1.
- Edwin clay, Ione area: Bates, T. F., 1.
- Garnets, pseudomorphism, zonal growth,
Garnet Hill: Trainer, J. N., 1.
- Geodes, S. desert: Hilton, J. W., 1.

California—Continued.

Mineralogy—Continued.

- Lithium from Searles Lake brine: Gale, W. A., 1.
 Mineral res., Riverside Co.: Tucker, W. B., 2.
 Minerals, Crestmore: Woodford, A. A., 1.
 Needles-Goffs area, San Bernardino Co.: Miller, W. J., 2.
 Opal, blue, Guadalupe: Lisle, T. O., 1.
 Palm Springs-Blythe strip, Riverside Co.: Miller, W. J., 1.
 Phosphorite, pellet, Carmel Valley: Rogers, A. F., 2.
 Probertite, Los Angeles Co.: Murdoch, J., 1.
 Quartz-crystal mines, Mokelumne area: Durrell, C., 2.
 Quicksilver deposits: Lisle, T. O., 2.
 Fresno, San Benito Cos.; Yates, R. G., 1.
 Knoxville dist.: Averitt, P., 1.
 San Bernardino Co. min. res.: Tucker, W. B., 1.
 Sand fulgurites enclosing lechatelierite: Rogers, A. F., 4.
 Searles Lake, San Bernardino Co.: Anonymous, 76.
 Tumey Tert. ss, Fresno Co.: Zimmerman, J., Jr., 1.
 Windmill Station same as Valley Wells aerolitic falls: Leonard, F. C., 6.

Paleontology.

- Acteocina, Quat., Salton Sink: Willett, G., 2.
 Arthropoda, Tert.: Pierce, W. D., 1.
 Aves, Tert., Quat.: Howard, H., 1.
 Baggina, Tert.: Cushman, J. A., 4.
 Bears, past, present: Stock, C., 2.
 Biometrical analysis, molluscan assemblages: Schenck, H. G., 2.
 Birds, ancient: Miller, L. H., 1.
 Casmalia area, Santa Barbara Co.: U. S. G. S., 1.
 Coalina anticline, Eocene fms., fossils: U. S. G. S., 2.
 Diatoms, Lower Klamath Lake: Conger, P. S., 1.
 Fish faunas, bathypelagic, oil fields: David, L. R., 5.
 Shallow-water Miocene: David, L. R., 6.
 Fish-scale assemblages: David, L. R., 2; Ladd, H. S., 3.
 Use in micropaleontology: David, L. R., 4.
 Floras, Alturas Tert.: Axelrod, D. I., 7.
 Black Hawk Ranch Tert.: Axelrod, D. I., 2.
 Pleistocene, McKittrick asphalt beds: Mason, H. L., 1.
 Pliocene: Chaney, R. W., 6.
 Sonoma Tert.: Axelrod, D. I., 4.
 Table Mtn.: Condit, C., 2.
 Tertiary, Oakdale: Axelrod, D. I., 3.
 Tertiary, Remington Hill: Condit, C., 1.

California—Continued.

Paleontology—Continued.

- Foraminifera, Tumey fm., Fresno Co.: Cushman, J. A., 3.
 Upper Cretaceous: Cushman, J. A., 4.
 Fossils, San Francisco area: Stanger, F. M., 1.
 Glycymeris veatchii, biostratigraphy: Smith, C. T., 2.
 Great Basin, N.: Cressman, L. S., 1.
 Imperial Valley, west side: Tarbet, L. A., 1.
 Insecta, Miocene, Puente Hills: Pierce, W. D., 1.
 Pleistocene, La Brea: Pierce, W. D., 1.
 Knoxville Juras, ser.: Anderson, F. M., 1.
 Mammalia, Pleist., San Francisco: Peabody, F. E., 1.
 Mammalian, avifaunas, Lower Klamath Lake: Cressman, L. S., 2.
 Miohierax, Miocene hawk: Howard, H., 2.
 Mollusca, biometrical analysis of assemblages: Schenck, H. G., 2.
 Lower Klamath Lake: Baker, F. C., 1.
 Tertiary, marine: Keen, A. M., 2.
 Ostracoda, ontogeny: LeRoy, L. W., 1.
 Pacific Coast, Point Arena-Fort Ross, Cret., Tert.: Weaver, C. E., 3.
 Peat, pollen, Lower Klamath Lake: Hansen, H. P., 1.
 Pelecypoda, Pleist.: Willett, G., 1.
 Petrified wood: Lauder milk, J. D., 1.
 Phosphorite, pellet, Carmel Valley: Rogers, A. F., 2.
 Pisces, cyprinodont, Death Valley: Miller, R. R., 1.
 Pliocene floras: Chaney, R. W., 2.
 Pliocene marine, San Diego area: Hertlein, L. G., 1.
 Pliocene sequence: Axelrod, D. I., 5.
 Puente, San Jose Hills: U. S. G. S., 1.
 Radiolaria, Kreyenhagen fm., Los Banos: Clark, B. L., 2.
 Miocene, S. Calif.: Campbell, A. S., 1.
 Upper Cretaceous: Campbell, A. S., 2.
 Radiolarian sh., Mount Diablo area, origin: Clark, B. L., 3.
 Rodents, ericetine, Pliocene Mulholland fauna: Hoffmeister, D. F., 1.
 Santa Lucia Range, Cret., Paleocene: Taliaferro, N. L., 1.
 Serraterithium, Paleocene, S. Calif.: Compton, R. R., 1.
 Stickelback, Tert., Ridge fm.: David, L. R., 3.
 Tapirus, Pleist.: Stock, C., 1.
 Teratornis, fossil vulture, locomotion: Fisher, H. I., 1.
 Tumey Tert. ss., Fresno Co.: Zimmerman, J., Jr., 1.
 Turkey tarsometatarsi, Pleist.: Howard, H., 3.
 Upper Cret., Great Valley, strat. relations: Goudkoff, P. P., 1.

California—Continued.

Petrology.

- Agate nodules, Berkeley area : Bolander, L. P., Jr., 1.
 Andesite breccia dikes, Blairsden : Durrell, C., 1.
 Barstow quad., San Bernardino Co. : Miller, W. J., 2.
 Basalt, Mojave Desert : Laudermilk, J. D., 3.
 Batholith gold, San Gabriel Mts. : Laudermilk, J. D., 6.
 Bituminous ss., McKittrick, Santa Cruz areas : U. S. G. S., 1.
 Chromite, Glenn Co. : Ryneanson, G. A., 1.
 San Luis Obispo Co. : Smith, C. T., 1.
 Dikes, foliated and pseudo-dikes : Miller, W. J., 4.
 Eclogite, glaucophane schists : Switzer, G., 1.
 Edwin clay, Ione area : Bates, T. F., 1.
 Franciscan radiolarian cherts : Bell, O. J., 2.
 Fresno Co. : U. S. G. S., 2.
 Imperial Valley, west side : Tarbet, L. A., 1.
 Jamesburg quad., Monterey Co. : Fiedler, W. M., 1.
 Lithology, sea-floor off coast : Emery, K. O., 4.
 Marine sediment, Santa Catalina Island : Clements, T. D., 2.
 Merced Co. : U. S. G. S., 2.
 Midway-Sunset oil field, SE. part : U. S. G. S., 1.
 Minerals, Crestmore : Woodford, A. O., 1.
 Needles-Goffs area, San Bernadino Co. : Miller, W. J., 3.
 Pacific Coast, Point Arena-Fort Ross, Cret., Tert. : Weaver, C. E., 3.
 Palm Springs-Blythe Strip, Riverside Co. : Miller, W. J., 1.
 Puente, San Jose Hills : U. S. G. S., 1.
 Radiolarian sh., Mount Diablo area, origin : Clark, B. L., 3.
 Rhyolite, Big Pine area : Mayo, E. B., 1.
 Salinas Valley : U. S. G. S., 1.
 Sand : Laudermilk, J. D., 2.
 San Juan Bautista quad. : Allen, J. E., 2.
 San Luis Obispo Co. : U. S. G. S., 1.
 Santa Ana Mts., NW., Paleocene, Eocene : U. S. G. S., 2.
 Santa Lucia Range, Cret., Paleocene : Taliaferro, N. L., 1.
 Santa Rosa Hills-Purisima Hills dists. : U. S. G. S., 1.
 Stanislaus Co. : U. S. G. S., 2.
 Tumey Tert. ss., Fresno Co. : Zimmerman, J., Jr., 1.

Physical geology.

- Andesite breccia dikes, Blairsden : Durrell, C., 1.
 Barstow quad., San Bernardino Co. : Miller, W. J., 2.
 Basalt, Mojave Desert : Laudermilk, J. D., 3.

California—Continued.

Physical geology—Continued.

- Batholith gold, San Gabriel Mts. : Laudermilk, J. D., 6.
 Bituminous ss., McKittrick, Santa Cruz areas : U. S. G. S., 1.
 Cassiterite, contact metamorphism : Page, L. R., 2.
 Casmalia area, Santa Barbara Co. : U. S. G. S., 1.
 Chowchilla gas field : Hodges, F. C., 2.
 Chromite beds, Glenn Co. : Ryneanson, G. A., 1.
 San Luis Obispo Co. : Smith, C. T., 1.
 Dikes, foliated, and pseudo-dikes : Miller, W. J., 4.
 Earthquakes, frequency : Gutenberg, B., 4.
 Southern Calif., reflected minor phases : Gutenberg, B., 3.
 Study of, 1944 : Gutenberg, B., 10.
 Edwin clay, Ione area : Bates, T. B., 1.
 Elk Hills oil field : Bunch, E. S., 1.
 Great Basin, N. : Gressman, L. S., 1.
 Ground vibrations : Garder, D. S., 1.
 Jamesburg quad., Monterey Co. : Fiedler, W. M., 1.
 Kettleman Hills North Dome oil field, inclined water table : Van Couvering, M., 1.
 Knoxville Juras, ser. : Anderson, F. M., 1.
 Long Beach ground subsidence : Anonymous, 100.
 Lost Hills oil field : Barton, D. C., 3.
 Marine sediment, Santa Catalina Is. : Clements, T. D., 2.
 Midway-Sunset oil field, SE. part : U. S. G. S., 1.
 Minerals, Crestmore : Woodford, A. O., 1.
 Needles-Goffs area, San Bernardino Co. : Miller, W. J., 3.
 Pacific Coast, Point Arena-Fort Ross, Cret., Tert. : Weaver, C. E., 3.
 Palm Springs-Blythe Strip, Riverside Co. : Miller, W. J., 1.
 Playa del Rey oil field : Hodges, F. C., 3.
 Pleistocene Coast Range orogenesis : Chamberlin, R. T., 3.
 Puente, San Jose Hills : U. S. G. S., 1.
 Quicksilver deposits, Knoxville dist. : Averitt, P., 1.
 San Benito, Fresno Cos. : Yates, R. G., 1.
 Rhyolite, Big Pine area : Mayo, E. B., 1.
 Rio Vista gas field : Frame, R. G., 1.
 Salinas Valley : U. S. G. S., 1.
 San Juan Bautista quad. : Allen, J. E., 2.
 San Luis Obispo Co. : U. S. G. S., 1.
 San Miguelito oil field : Barnes, K. B., 2.
 Santa Ana Mts., NW., Paleocene, Eocene : U. S. G. S., 2.
 Santa Cruz earthquake, Jan. 1840 : Louderback, G. D., 1.
 Santa Lucia Range, Cret., Paleocene : Taliaferro, N. L., 1.

California—Continued.

Physical geology—Continued.

- Santa Maria oil dist.: U. S. G. S., 1.
 Santa Monica Mts.: Cotton, C. A., 1.
 Santa Rosa Hills-Purisima Hills dists.:
 U. S. G. S., 1.
 Santa Susana trust, Los Angeles Co.:
 Hazzard, J. C., 1.
 Sierra Nevada, Mono Lake area: Put-
 nam, W. C., 1.
 South Mtn. oil field: Bailey, W. C., 1.
 Subsidence, elevation, Los Angeles area:
 Grant, U. S., IV, 1.
 Travel time, P and S phases of earth-
 quake shocks: Gutenberg, B., 1.
 Well, dry, 16,246 ft. deep. Cavins, O., 1.

Physiographic geology.

- Bituminous ss., Santa Cruz area: U. S.
 G. S., 1.
 Chromite deposits, San Luis Obispo Co.:
 Smith, C. T., 1.
 Coast Ranges, Pleist.: Chamberlin, R. T.,
 3.
 Death Valley: Bagg, R. M., 3.
 Glacial epochs, Santa Monica Mts.:
 Cotton, C. A., 1.
 Great Basin, N.: Cressman, L. S., 1.
 Ice age and Pleist.: Antevs, E. V., 4.
 Jamesburg quad., Monterey Co.: Fielder,
 W. M., 1.
 Pliocene, marine, San Diego area: Hert-
 lein, L. G., 1.
 Quartz-crystal mines, Mokelumne area:
 Durrell, C., 2.
 Santa Maria oil dist.: U. S. G. S., 1.
 Sierra Nevada, Mono Lake area: Put-
 nam, W. C., 1.
 Submarine photography off coast: Shep-
 ard, F. P., 1.
 Subsidence, elevation, Los Angeles area:
 Brant, U. S. IV., 1.

Underground water.

- Ground water, Los Angeles Basin, varia-
 tion: Poland, J. F., 1.
 1942 levels, San Jacinto, Antelope
 Valleys: Anonymous, 106.
 Kettleman Hills North Dome oil field,
 inclined water table: Van Couver-
 ing, M., 1.
 Mineral res., Riverside Co.: Tucker,
 W. B., 2.
 Subsidence, elevation, Los Angeles area:
 Grant, U. S. IV, 1.

Cambrian. See also Paleontology, Cambrian.

- Alabama, N. Paleozoic: Cloud, P. E., Jr.,
 4.
 Alabama-Mississippi Basin: Carroll,
 D. L., 1.
 Appalachian Valley, U. S.: Sharp, H. S.,
 1.
 Arizona, Grand Canyon, Colorado River:
 Cueto Rul-Diaz, E., 1.
 Paleozoic, cent., NE., U. S. G. S., 2.
 Superior mining area: Short, M. N., 1.
 Tombstone dist., Uncle Sam porphyry:
 Gilluly, J., 2.

Cambrian—Continued.

- Canada, Alaska Highway, Ft. Nelson-
 Watson Lake: Williams, M. Y., 1.
 Alaska Highway, Watson Lake-Teslin
 River: Lord, C. S., 1.
 Canadian Shield, NW.: Jolliffe, A. W.,
 6.
 Canol project: Landon, L. R., 1.
 Eastern Arctic: Robinson, J. L., 1.
 Lake Consolation area: Mathews,
 W. H., 1.
 Oil and gas fields: Hume, G. S., 2.
 Structure and relief: Bronillette, B.,
 1.
 Western, oil devel.: Hume, G. S., 9.
 Carolina Piedmont: Kester, T. L., 1.
 Colorado, NW.: U. S. G. S., 2.
 Paleozoics: Johnson, J. H., 7.
 Sawatch Range area: Johnson, J.
 H., 3.
 White River Plateau: MacQuown, W.
 C., Jr., 1.
 Fordham gneiss, New York City: Kindle,
 C. H., 5.
 Geologic calendar, periods, time,
 lengths: Elias, M. K., 5.
 Georgia, S. end of Blue Ridge: Furcron,
 A. S., 5.
 Grand Canyon, Ariz.: Merriam, J. C., 1.
 Illinois, NE.: Bays, C. A., 5.
 Petroleum poss.: Folk, S., 1.
 Water res.: Gerber, W. D., 1.
 Iowa: Gwynne, C. S., 1.
 Northeastern: Schuldt, W. C., 1.
 Kansas, Barton Co., buried hills: Wal-
 ters, R. F., 1.
 Carmi pool, Pratt Co.: Galley, J. E., 1.
 Cross-section, geol. subsurface, Ford
 Co.-Wallace Co.: Edson, F. C., 1.
 East, oil and gas fields: Jewett, J.
 M., 1.
 Rock fms.: Moore, R. C., 1.
 Maine, Mount Desert Is.: Chadwick,
 G. H., 1.
 Manhattan schist, New York City:
 Kindle, C. H., 5.
 Michigan, iron deposits: Martin, H. M.,
 2.
 Spruce River-Peshekee River areas:
 Seaman, W. A., 3.
 Michigan Basin, U. S., Trenton, Black
 River lss.: U. S. G. S., 2.
 Minnesota, S.: Thiel, F. A., 1.
 Mississippi, Monroe Co.: Vestal, F. E., 1.
 Missouri: Branson, E. B., 3.
 Bourbon High oil field: Cullison, J.
 S., 2.
 Fyrite deposits: Grawe, O. R., 1.
 Montana: U. S. G. S., 1.
 Little Rocky Mts. plains: U. S. G.
 S., 1.
 N. Big Belt Range: Lyons, J. B., 1.
 Ore bodies, strat. control: Perry, E.
 S., 3.
 Nebraska, W., pre-Penn. stratigraphy:
 Dillé, G. S., 1.

Cambrian—Continued.

- Nevada, Groom dist.; Lincoln Co.:
Humphrey, F., 1.
- New Brunswick, Sussex area: Alcock, F. J., 1.
- Musquash area: Alcock, F. J., 4.
- New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
- Silver City area: Entwistle, L. P., 1.
- New York, Catskill quad.: Ruedemann, R., 5, 6.
- Coxsackie quad.: Goldring, W., 3.
- Gouverneur talc dist.: U. S. Geol. Survey, 5.
- Hudson Valley area: Ruedemann, R., 3.
- New York City rocks, age: Kindle, C. H., 5.
- North America, Alaska Highway: Lord, C. S., 2.
- Foraminifera-formed lss.: Johnson, J. H., 9.
- Tectonic devel. E. edge of Pacific: Stille, H. W., 1.
- North Dakota, stratigraphy and structure: Laird, W. M., 2.
- Northwest Territories, Mackenzie River Valley: Stewart, J. S., 1, 2.
- Oil and gas poss.: Stewart, J. S., 1.
- Prosperous Lake area: Jolliffe, A. W., 4.
- Ohio: Stout, W. E., 8.
- Oklahoma, Arbuckle group: Ireland, H. A., 3.
- Black Knob Ridge area: U. S. G. S., 1.
- Bromide area: Ham, W. E., 2.
- Central Arbuckle Mts.: Ham, W. E., 3.
- Ground water: Dott, R. H., 4.
- Northeast: U. S. G. S., 2.
- Ontario, Leeds Co.: Harrison, J. M., 1.
- Pennsylvania, cent.-east.: Hersey, J. B., 1.
- Folded Appalachians, stream devel.: Strahler, A. N., 5.
- Hanover-York dist.: Stose, A. J., 1.
- Levis trough: Ashley, G. H., 8.
- Mineral resources areas: Ashley, G. H., 1.
- Quartz, Md., deformation: Anderson, J. L., 1.
- Quebec: Dresser, J. A., 1.
- Bourlamaque Tp.: Norman, G. W. H., 1.
- Châteauguay Co.: Morin, L. G., 1.
- Dudswell, Wolfe, Richmond, Compton Cos.: Cooke, H. C., 3.
- Orford area: Fortier, Y. O., 1.
- Sept-Iles area, N. bank St. Lawrence: Faessler, C., 1.
- Sillery group: Rasetti, F., 3.
- Stanstead area, Brome and Stanstead Cos.: Ambrose, J. W., 2.
- Sandstones, Ohio: Stout, W. E., 7.
- South Dakota: Rothrock, E. P., 1.
- Dewey, Corson Cos.: Morgan, R. E., 1.

Cambrian—Continued.

- Tennessee, Cumberland Plateau fields:
Born, K. E., 4.
- Douglas Dam area: Laurence, R. A., 1.
- East, zinc deposits: Crawford, J., 1;
- Kent, D. F., 1; Oder, C. R. L., 3.
- Folded Appalachians: King, P. B., 2.
- Greene Co.: Snyder, F. G., 1.
- Mascot-Jefferson City dist.: Oder, C. R. L., 1.
- Norris area: Hall, G. M., 1.
- Northeast: King, P. B., 4.
- Texas, Apache Mts., Culberson Co. well:
Maley, V. C., 1.
- Burnet Co.: Barnes, V. E., 3.
- Central, Upper Camb.: Crowley, A. J., 1.
- Ellenburger beds, N.-cent.: Crowley, A. J., 2.
- Mason Co.: McCammon, J. H., II, 1.
- Moore Co.: Fosshage, E. W., 1.
- Permian Basin oil fields: Osborne, P. F., 1.
- Sierra Diablo area: U. S. G. S., 1.
- Smoothingiron mass: Romberg, F., 1.
- Western, pre-Perm. axes of deposition:
Barton, J. M., 1.
- United States, Anadarko Basin: Gibbon, A., 1.
- Basin and Range Prov.: Longwell, C. R., 8.
- Great Basin area: Wheeler, H. E., 1.
- Green, White, Adirondack Mts.: Balk, R., 2.
- Michigan Basin: U. S. G. S., 2.
- Southeast, manganese, cobalt-bearing:
Pierce, W. G., 2.
- Southern Appalachians, Chilhowee group, Ocoee ser.: Stose, G. W., 1.
- Southwest, correl.: U. S. G. S., 2.
- Stockton, Lockatong fms. type secs:
McLaughlin, D. B., 2.
- Western, fluorspar: Gillson, J. L., 1.
- Western Paleozoics: Bass, N. W., 1.
- Utah, NE.: U. S. G. S., 2.
- Upta Basin: Walton, P. T., 1.
- Wasatch Mts.: Eardley, A. J., 1.
- Vermont, Taconic thrust sheet, N. end:
Kaiser, E. P., 1.
- West-central: Cady, W. M., 2.
- Virginia, bauxite area: Bevan, A. C., 5.
- Bland, Giles Cos.: Ladd, H. S., 2.
- Burkes Garden quad.: Cooper, B. N., 1.
- Dolomites, lss., New-Roanoke Rivers dist.: Cooper, B. N., 3.
- Glade Mtn. dist.: Miller, R. L., 1.
- Lick Mtn. dist.: Stead, F. W., 1.
- Rose Hill oil field: U. S. G. S., 1.
- Shenandoah Nat. Park: Rickard, H. L., 1.
- Washington, dolomite: Bennett, W. A. G., 1.
- Metaline fm. fauna: Howell, B. F., 11.
- Stevens Co.: Campbell, C. D., 1.

Cambrian—Continued.

- Wyoming : La Fleiche, P., 2.
 Geology and devel., oil and gas fields :
 La Fleiche, P., 1.
 Little Buffalo Basin field : U. S. G. S.,
 8.
 Wind River Mts., NW. end. U. S. G. S.,
 1.
 Yukon, Canol Road, Teslin River-Mac-
 millan Pass : Kindle, E. D., 2.
 Cameron gas field, Okla. : Knechtel, M. M., 1.
 Canada.

8th Ann. rept., Dept. Mines and Res.,
 1944 : Camsell, C., 1.

Elementary geology for Canada : Moore,
 E. S., 1.

Geologic Branch Ann. rept., 1943-44 :
 Timm, W. B., 1.

Mapping, Bur. Geology and Topogra-
 phy : Chipman, K. G., 1.

Areas described.

Alaska Highway, Ft. Nelson-Watson
 Lake : Williams, M. Y., 1.

Watson Lake-Teslin River, Yukon-
 British Columbia : Lord, C. S., 1.

Fort Nelson-Liard-Beaver Rivers area :
 Kindle, E. D., 1.

General : MacKay, B. R., 3.

Economic geology.

Airplane in prospecting : Oaks, H. A., 1.
 Alaska Highway, Ft. Nelson-Watson
 Lake : Williams, M. Y., 1.

Watson Lake-Teslin River : Lord,
 C. S., 1.

Arctic, eastern : Anonymous, 58.

Mineral res. : Robinson, J. L., 1.

Canol invs., Mackenzie River area :
 Hume, G. S., 8.

Canol project : Laudon, L. R., 1.

Ceramics, industrial minerals : Wor-
 cester, W. G., 1.

Clay, natural history : Hutt, G. M., 10.

Copper : McLaren, D. C., 1.

Cordillera area devel. : Kidd, D. F., 1.

Corundum poss. : Parks, R. D., 1.

Coupé-Peace River area : Crickmay,
 C. H., 1.

Dominion Atlantic Ry. area : Hutt,
 G. M., 16.

Engine sands : Hutt, G. M., 18.

Flin Flon-Sherridon-Herb Lake area :
 Stockwell, C. H., 2.

Fort Norman oil field : Anonymous, 7.

Gems, ornamental stones : Waite, G. G.,
 1.

Gold, Tweedsmuir Park : Anonymous,
 28.

Graphite mine, Black Donald : McLaren,
 D. C., 6.

Liard River reconnaissance : Hage, C. O.,
 5.

Lode gold deposits : Anonymous, 50.

Lytton to Vancouver : Hutt, G. M., 12.

Mackenzie River Basin oil poss. : Hume,
 G. S., 3.

Manitoba dist. : Hutt, G. M., 15.

Canada—Continued.

Economic geology—Continued.

Medicine Hat to Vancouver : Hutt,
 G. M., 14.

Mineral areas : Anonymous, 23.

Mineral industry : Moore, E. S., 4.

Mineral resources : Griffin, H., 1.

Minerals, non-metallics : Hutt, G. M., 7.

 Western Canada : Hutt, G. M., 4.

Nickel and sulphides : Michener, C. E., 1.

Petroleum and gas poss., E. Canada :
 Logan, L. J., 1.

Developments 1943-44 : Hume, G. S.,
 4.

Possibilities : Hume, G. S., 9 ; Ness
 J., 1.

Petroleum geology : Hume, G. S., 2.

Petroleum poss. : Cochrane, H. G., 1.

Port Arthur to Winnipeg : Hutt, G. M.,
 11.

Potential oil fields : Nickle, C. O., 1.

Pre-Cambrian mineral poss. : Hoffman,
 A., 1.

Quartz : Hutt, G. M., 3.

Sphalerites, W. : Warren, H. V., 5.

Steep Rock iron mines : Samuel, W., 1.

Tin, W. Canada : Warren, H. V., 1.

Winnipeg to Edmonton : Hutt, G. M., 13.

Historical geology.

Alaska Highway, Ft. Nelson-Watson
 Lake : Williams, M. Y., 1.

Watson Lake-Teslin River : Lord,
 C. S., 1.

Arctic, eastern : Robinson, J. L., 1.

Canadian Shield, NW. part : Jolliffe,
 A. W., 6.

Canol invs., Mackenzie River area :
 Hume, G. S., 8.

Canol project : Laudon, L. R., 1.

Consolation Lake Area : Mathews, W.,
 1.

Cordillera area devel. : Kidd, D. F., 1.

Coupé-Peace River area : Crickmay, C.,
 1.

Cretaceous fms. : Hume, G. S., 7.

Lower, W. interior : McLearn, F. H.,
 3, 4.

Dominion Atlantic Ry. area : Hutt, G.,
 16.

Dunvegan Cret. fm. : McLearn, F. H., 6.

Duparquet-Larder Lake-Rouyn area :
 Ambrose, J. W., 1.

Flin Flon-Sherridon-Herb Lake area :
 Stockwell, C. H., 2.

Floras, fossil, and stratigraphy : Bell,
 W. A., 3.

Fort Nelson-Liard-Beaver Rivers area :
 Kindle, E. D., 1.

Friponne River area : Laverdière, J. W.,
 2.

General : MacKay, B. R., 3 ; Sternberg,
 C. M., 1.

Geologic maps : Canada, G. S., 1.

1917-45 : Moran, P. J., 1.

Liard River reconnaissance : Hume, G.
 S., 5.

Canada—Continued.

Historical geology—Continued.

- Lytton to Vancouver : Hutt, G. M., 12.
 Mackenzie River Basin : Hume, G. S., 3.
 Manitoba dist. : Hutt, G. M., 15.
 Medicine Hat to Vancouver : Hutt, G. M., 14.
 Ottawa-Bonnchere graben and Lake Ontario homocline maps, correction : Kay, G. M., 5.
 Paleogeography, Lower Cret., W. : McLearn, F. H., 4.
 Petroleum, devel. and poss. : Hume, G. S., 9.
 Geology : Hume, G. S., 2.
 Plants, fossil, and E. coal geology : BeH, W. A., 3.
 Pleistocene artifact-bearing deposits, Manitoulin Is. : Stanley, G. M., 1.
 Port Arthur to Winnipeg : Hutt, G. M., 11.
 Sphaerospongia, Middle Dev. : Warren, P. S., 1.
 Structure and relief : Brouillette, B., 1.
 Stull Lake area : Spector, I. H., 1.
 Trans-Canada Highway, Hearst-Long Lac sec. : Evans, J. E. L., 2.
 Trenton Ord., St. Lawrence Valley : Sinclair, G. W., 6.
 Triassic, Rockies : Warren, P. S., 3.
 Winnipeg to Edmonton : Hutt, G. M., 13.

Mineralogy.

- Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Watson Lake-Teslin River : Lord, C. S., 1.
 Arctic, eastern : Anonymous, 58.
 Mineral resources : Robinson, J. L., 1.
 Ceramics, industrial minerals : Worcester, W. G., 1.
 Clay, natural history : Hutt, G. M., 10.
 Copper : McLaren, D. C., 1.
 Cordillera area devel. : Kidd, D. F., 1.
 Flin Flon-Sherridon-Herb Lake area : Stockwell, C. H., 2.
 Graphite mine, Black Donald : McLaren, D. C., 6.
 Lytton to Vancouver : Hutt, G. M., 12.
 Mineral resources : Griffin, H., 1.
 Minerals, non-metallics : Hutt, G. M., 7.
 Minerals, western Canada : Hutt, G. M., 4.
 Nickel sulphides : Michener, C. E., 1.
 Port Arthur to Winnipeg : Hutt, G. M., 11.
 Pre-Cambrian mineral poss. : Hoffman, A., 1.
 Sphalerites, W. : Warren, H. V., 5.
 Steep Rock iron mines : Samuel, W., 1.
 Tin, W. Canada : Warren, H. V., 1.

Paleontology.

- Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Canol invs., Mackenzie River area : Hume, G. S., 8.

Canada—Continued.

Paleontology—Continued.

- Corals, Upper Dev., Mackenzie River Basin : Smith, S., 1.
 Cretaceous, Lower, W. interior : McLearn, F. H., 3, 4.
 Dinosaurs : Sternberg, C. M., 1.
 Dunvegan Cret. fm. : McLearn, F. H., 6.
 Faunas, Trias, Rockies : Warren, P. S., 3.
 Fish, fossil, Scaumenac Bay : Laverdière, J. W., 3.
 Floras, fossil, and stratigraphy : Bell, W. A., 3.
 Fripionne River area : Laverdière, J. W., 2.
 Plants, fossil, and E. coal geology : Bell, W. A., 3.
 Pleistocene artifact-bearing deposits, Manitoulin Is. : Stanley, G. M., 1.
 Resins in coals : Selvig, W. A., 1.
 Sandalodus, Lower Carb. selachian : Sternberg, C. M., 3.
 Sphaerospongia, Middle Dev. : Warren, P. S., 1.
 Starfish, Cret., Peace River Valley : McLearn, F. H., 5.

Petrology.

- Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Watson Lake-Teslin River : Lord, C. S., 1.
 Canol invs., Mackenzie River area : Hume, G. S., 8.
 Cape Tourmente breccia : Lavallée, J., 1.
 Consolation Lake area : Mathews, W. H., 1.
 Dominion Atlantic Ry. area : Hutt, G. M., 16.
 Duparquet-Larder Lake-Rouyn area : Ambrose, J. W., 1.
 Fort Nelson-Liard-Beaver Rivers area : Kindle, E. D., 1.
 Granite, gneiss, feldspathic, Pine Hill : Faessler, C., 5.
 Liard River reconnaissance : Hage, C. O., 5.
 Lytton to Vancouver : Hutt, G. M., 12.
 Manitoba dist. : Hutt, G. M., 15.
 Medicine Hat to Vancouver : Hutt, G. M., 14.
 Port Arthur to Winnipeg : Hutt, G. M., 11.
 Sphalerites, W. : Warren, H. V., 5.
 Stull Lake area : Spector, I. H., 1.
 Tin, W. Canada : Warren, H. V., 1.
 Trans-Canada Highway, Hearst-Longlac sec. : Evans, J. E. L., 2.
 Winnipeg to Edmonton : Hutt, G. M., 13.

Physical geology.

- Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Watson Lake-Teslin River : Lord, C. S., 1.
 Arctic, reconnaissance flight : Bateman, J. D., 4.

Canada—Continued.

Physical geology—Continued.

- Canol invs., Mackenzie River area :
Hume, G. S., 9.
- Canol project : Laudon, L. R., 1.
- Consolation Lake area : Mathews, W. H., 1.
- Dominion Atlantic Ry. area : Hutt, G. M., 16.
- Duparquet-Larder Lake-Rouyn area :
Ambrose, J. W., 1.
- Earthquakes, E. Canada : Hodgson, E. A., 4.
- Flin Flon-Sherridon-Herb Lake area :
Stockwell, C. H., 2.
- Fort Nelson-Liard-Beaver Rivers area :
Kindle, E. D., 1.
- General : MacKay, B. R., 3.
- Golden to Sicamous : Hutt, G. M., 8.
- Gravity observations, maritime provs. :
Woollard, G. P., 2.
- Liard River reconnaissance : Hage, C. O., 5.
- Lode gold deposits : Anonymous, 50.
- Lytton to Vancouver : Hutt, G. M., 12.
- Manitoba dist. : Hutt, G. M., 15.
- Medicine Hat to Vancouver : Hutt, G. M., 14.
- Mineral industry : Moore, E. S., 4.
- Petroleum, geology : Hume, G. S., 2.
- Possibilities and devels. : Hume, G. S., 9.
- Pre-Cambrian Shield lineaments : Wilson, J. T., 2.
- St. Urbain area, Route 56 : Faessler, C., 7.
- Sicamous to Lytton : Hutt, G. M., 9.
- Structure and relief : Brouillette, B., 1.
- Stull Lake area : Spector, I. H., 1.
- Trans-Canada Highway, Hearst-Long-lac sec. : Evans, J. E. L., 2.
- Volcanoes : Jaggard, T. A., Jr., 2.

Physiographic geology.

- Alaska Highway, Dawson Creek-Whitehorse : Denny, C. S., 1.
- Ft. Nelson-Watson Lake : Williams, M. Y., 1.
- Watson Lake-Teslin River : Lord, C. S., 1.
- Arctic Canada, E., explor., research :
Baird, P. D., 1.
- Latest glaciation boundary : Hobbs, W. H., 6.
- Mineral resources : Robinson, J. L., 1.
- Reconnaissance flight : Bateman, J. D., 4.
- Calgary to Golden : Hutt, G. M., 6.
- Canadian Shield, NW. part : Jolliffe, A. W., 6.
- Champlain Sea, terraces : Morin, L. G., 3.
- Consolation Lake area : Mathews, W. H., 1.
- Coupé-Peace River area : Crickmay, C. H., 1.

Canada—Continued.

Physiographic geology—Continued.

- Dominion Atlantic Ry. area : Hutt, G. M., 16.
- Drift, N. of Great Slave Lake : Wilson, J. T., 1.
- Flin Flon-Sherridon-Herb Lake area :
Stockwell, C. H., 2.
- Fort Nelson-Liard-Beaver Rivers area :
Kindle, E. D., 1.
- General : MacKay, B. R., 3.
- Giant glacial grooves, NW. : Smith, H. T. U., 2.
- Glaciation, latest Arctic, boundary :
Hobbs, W. H., 6.
- Golden to Sicamous : Hutt, G. M., 8.
- James Bay area Pleist. moraines : Shaw, G., 1.
- Liard River reconnaissance : Hage, C. O., 5.
- Lytton to Vancouver : Hutt, G. M., 12.
- Manitoba dist. : Hutt, G. M., 15.
- Medicine Hat to Vancouver : Hutt, G. M., 14.
- Petroleum, devels., poss., and geology :
Hume, G. S., 2, 9.
- Port Arthur to Winnipeg : Hutt, G. M., 11.
- Pre-Cambrian Shield lineaments : Wilson, J. T., 2.
- St. Urbain area, Route 56 : Faessler, C., 7.
- Sicamous to Lytton : Hutt, G. M., 9.
- Structure and relief : Brouillette, B., 1.
- Stull Lake area : Spector, I. H., 1.
- Trans-Canada Highway, Hearst-Long-lac sec. : Evans, J. E. L., 2.
- Winnipeg to Calgary : Hutt, G. M., 5.
- Winnipeg to Edmonton : Hutt, G. M., 13.

Underground water.

- Coupé-Peace River area : Crickmay, C. H., 1.
- Ground-water resources : MacKay, B. R., 3.
- Medicine Hat to Vancouver : Hutt, G. M., 14.

- Cap rock, U. S., Gulf Coastal Plain, structure from gravimetric data : Barton, D. C., 5.

- Carbon isotopes in petroleum : West, S. S., 1.

Carboniferous.

- Alabama : Lloyd, S. J., 1, 2.
- Alabama-Mississippi Basin : Carroll, D. L., 1.
- Alaska, Cooper River : Moffit, F. H., 1.
- Nickel-copper deposits, Spirit Mtn. area : Kingston, J., 1.
- Alberta, Alexo area : Crombie, G. P., 1, 2.
- Central, Foothills : MacKay, B. R., 1.
- Drinnan to Brûlé Lake area : Lang, A. H., 1.
- Dyson Creek area : Hage, C. O., 2.
- Fall Creek area : Henderson, J. F., 2.
- Jumpingpound oil field : Beach, F. K., 1.

Carboniferous—Continued.

Alberta—Continued.

- Saunders map area : Erdman, O. A., 1.
 Southern structure-drilling for oil :
 Furnival, G. M., 1.
 Tay River area : Henderson, J. F., 1.
 West of 5th meridian : Canada C. S., 1.
 Turner Valley oil field ls. reservoirs :
 Goodman, A. J., 1.
 Wawa Creek area : MacKay, B. R., 2.
 Amsden fm.; Wyo.-Mont. is Penn. : Scott, H. W., 3.
 Arizona, N., Uinkaret Plateau : Koons, E. D., 1.
 Oak Creek Canyon : McKee, E. D., 3.
 Paleozoic, cent., NE. : U. S. G. S., 2.
 Salt River Valley : Lund, P. H., 1.
 Superior mining area : Short, M. N., 1.
 Tombstone dist., Uncle Sam porphyry :
 Gilluly, J., 2.
 Arkansas, Batesville dist. Missn. : U. S. G. S., 1.
 Fayetteville area oolites : Henbest, L. G., 1.
 Big Horn Basin oil and gas fields, Mont.-Wyo. : U. S. G. S., 1.
 British Columbia, Ainsworth area : Rice, H. M. A., 1.
 Alaska Highway, Ft. St. John-Ft. Nelson : Hage, C. O., 3.
 China Creek area : Stevenson, J. S., 4.
 Emerald tungsten project : Mason, E. E., 1.
 Fort Nelson area : Kindle, E. D., 1.
 Greenwood-Phoenix area : McNaughton, D. A., 1.
 Nicola area : Cockfield, W. E., 2.
 Princeton area : Rice, H. M. A., 2.
 Taku River, Cassiar dist. : Kerr, F. A., 1.
 California, Ione area : Rates, T. F., 1.
 Canada, Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Watson Lake-Teslin River : Lord, C. S., 1.
 Dominion Atlantic Ry. area : Hutt, G. M., 16.
 Eastern Arctic : Robinson, J. L., 1.
 Eastern coal fields : Bell, W. A., 3.
 Fort Nelson-Liard-Beaver Rivers area :
 Kindle, E. D., 1.
 Liard River area : Hage, C. O., 5.
 Lytton to Vancouver : Hutt, G. M., 12.
 Oil and gas fields : Hume, G. S., 2.
 Structure and relief : Brouillette, B., 1.
 Colorado, Elk Mtn. fault-zone, Penn. :
 Bassett, C. F., 1.
 Las Animas arch struc. devel. :
 Maher, J. C., 4.
 Leadville ls., calcareous algae : Johnson, J. H., 8.
 Northwest : U. S. G. S., 2.
 Paleozoics : Johnson, J. H., 7.

Carboniferous—Continued.

Colorado—Continued.

- Rangely field and Uinta Basin?
 Bench, B. M., 1.
 Red Creek area, Fremont Co. : Glockzin, A. R., 1.
 Rocky Mtn. Nat. Park : Wegemann, C. H., 1.
 Sawatch Range area : Johnson, J. H., 3.
 Selected well logs : Barb, C. F., 2.
 West-central, NW. fms. : Brill, K. G., Jr., 1.
 White River Plateau : MacQuown, W. C., Jr., 1.
 Elk Basin oil, gas field, Wyo.-Mont. :
 U. S. G. S., 4.
 Florida : Cooke, C. W., 3.
 Fusulinidae, evolution and correl. of
 Penn. rocks : Thompson, M. L., 5.
 Geologic calendar, periods, time,
 lengths : Elias, M. K., 5.
 Georgia : Peyton, G., 2.
 Prospecting for oil and gas : Peyton, G., 2.
 Greenland, East, between 74°-75°, and
 islands : Vischer, G. A., 1.
 Idaho, Birch Creek area : Anderson, A. L., 1.
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Porter oil field: Landes, K. K., 4.

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Montana, Gage dome oil field: Perry, E. S., 2.

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New Brunswick, Musquash area: Alcock, F. J., 4.

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New Hampshire, Mt. Washington area: Billings, K. S. F. L., 2.

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- Saskatchewan, oil and gas poss. : Ed-
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Aerial surveying and photo. interpretation: Abrams, T., 1.

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Chalcopyrite—Continued.

- Missouri, pyrite deposits: Grawe, O. R., 1.
- Ontario, Flack Lake area: Harding, W. D., 2.
- Quebec, Saguenay Co., poss.: Retty, J. A., 1.
- Chalcostibite.
 - Yukon, antimony minerals: Warren, H. V., 7.
- Chalicotheres as biol. type: Borissiak, A. A., 1.

Chalk.

- Alabama, SW.: SE. Geol. Soc., 1.
- West-central, Cret.: McGlamery, W., 1.
- Challenge to geology: Denison, A. R., 1.
- Champlain Sea, terraces: Morin, L. G., 3.
- Changes of level. See also Beaches; Shorelines; Terraces.
- Bermuda: Livingston, W., 1.
- California, Long Beach ground subsidence: Anonymous, 100.
- Los Angeles area, subsidence, elevation: Grant, U. S. IV, 1.
- San Diego marine Pliocene: Hertlein, L. G., 1.
- Santa Catalina Is. marine sed.: Clements, T. D., 2.
- Sierra Nevada, Mono Lake area: Putnam, W. C., 1.
- Canada, Dominion Atlantic Ry. area: Hutt, G. M., 16.
- Cuba: Palmer, R. H., 1.
- Pliocene, Pleist. terraces: Corral y Alemán, J. I. del, 1.
- Florida, Daytona Beach: Fineren, W. W., 1.
- General: Cooke, C. W., 3.
- Southern: Parker, G. G., 2.
- Pleistocene effects: Parker, G. G., 5.
- Kentucky Dam, solution channel: Moneymaker, B. C., 3.
- Massachusetts, Boston coast stability: Marmer, H. A., 1.
- Mississippi, coastal area: Brown, G. F., 3.
- North Carolina, Cape Fear Penin.: Wells, B. W., 1.
- Oregon, S. coast: Baldwin, E. M., 1.
- Pacific Basin, late geol. history: Stearns, H. T., 3.
- Pennsylvania, min. res. areas: Ashley, G. H., 1.
- Tennessee River, lower, geol. profiles: Fox, P. P., 1.
- Terraces, New England upland: Adams, G. F., 1.
- Texas, Quat. river system: Price, W. A., 3.
- United States, Gulf Coast: Storm, L. W., 1.
- Pleistocene Citronelle fm.: Fisk, H. N., 2.

Channeled scablands, Columbia intermontane prov. divs., U. S.: Freeman, O. W., 3.

- Charophyta, Miss.: McGlothlin, T., 1.
- Chelan Glacier, Wash.: Freeman, O. W., 1.
- Chelonia. See also Reptilia.
- Aspideretes, Eocene, Wyo.: Zangerl, R., 1.
- Echmatemys, Eocene, Wyo.: Gilmore, C. W., 3.
- Fauna, Burkeville Miocene, SE. Tex.: Stenzel, H. B., 2.
- Cochise culture area, Ariz.: Sayles, E. B., 1.
- Tatman fm., Wyo.: Van Houten, F. B., 1.
- Paleotryonx, Paleocene turtle, Colo.: Schmidt, K. P., 3.
- Testudo, Pliocene, Kans.: Hibbard, C. W., 3.
- Trilophosaurus, Trias., Tex.: Gregory, J. T., 1.
- Chemical analyses.
 - Determination, vanadium in chromite: Husted, J. R., 1.
 - Dolomites, Ohio: Stout, W. E., 8.
 - Greenland, igneous, metamorphic rocks: Munck, S., 1.
 - Igneous rocks: Swayne, W. H., 1.
 - Limestones, Ohio: Stout, W. E., 8.
 - Vanadium in chromite: Husted, J. R., 1.
 - Washington, Blewett-Cle Elum fm.: Broughton, W. A., 1.
- Chert. See also Flint.
 - Alberta, Tay River area: Henderson, J. F., 1.
 - Arkansas, Dev.: Miser, H. D., 1.
 - British Columbia coast: Gunning, H. C., 2.
 - Tyaughton Lake area: Cairnes, C. E., 1.
 - California, Franciscan radiolarian cherts: Bell, O. J., 2.
 - San Luis Obispo Co.: Smith, C. T., 1.
 - Illinois: Workman, L. E., 1.
 - Centralia-Salem Dev.: Caylor, G. W., 1.
 - Decorah, Galena fms.: Bieber, C. L., 1.
 - Devonian fms.: Cooper, G. A., 2.
 - Southern: Weller, J. M., 2.
 - Illinois and surrounding states, Dev.: Weller, J. M., 2.
 - Indiana, Mansfield ss. minerals: Gault, H. R., 1.
 - Kentucky Dam, solution channel: Moneymaker, B. C., 3.
 - Kentucky, W., Dev.: Freeman, L. B., 1.
 - Tuscaloosa silicified gravel: Fox, P. P., 3.
 - Michigan, SW., Traverse group, Dundee fm.: U. S. G. S., 2.
 - Missouri, Bourbon High oil field: Cullison, J. S., 2.
 - Southeastern: Croneis, C. G., 1.

Chert—Continued.

- North Carolina, Great Smoky quartzite fm.: Fox, P. P., 4.
 Oklahoma, Black Knob Ridge area: U. S. G. S., 1.
 Oklahoma, Dev.: Miser, H. D., 1.
 Ordovician bentonite beds, SE. U. S.: Fox, P. P., 2.
 Ozark uplift, Ark.-Mo.: Cullison, J. S., 1.
 Tennessee, W.-cent.: Born, K. E., 21.
 Texas, Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 United States, SE., manganese, cobalt-bearing: Pierce, W. G., 2.
 West Virginia: Martens, J. H. C., 1.
- Chlorite.**
 General: Gruner, J. W., 4.
 Gold, host minerals: Schwartz, G. M., 2.
 Indiana, Mansfield ss. minerals: Gault, H. R., 1.
 Manitoba, Island Lake area: McMurphy, R. C., 1.
 Ontario, Leeds Co.: Harrison, J. M., 1.
 Utah, Iron Peak ores: Crawford, A. L., 2.
- Chordata, Mesabi iron range fauna, Minn.:** Bergquist, H. R., 1.
- Chowchilla gas field, Calif.:** Hodges, F. C., 2.
- Chromite.**
 California, Glenn Co.: Rynearson, G. A., 1.
 San Luis Obispo Co.: Smith, C. T., 1.
 Canada, western: Hutt, G. M., 4.
 Correlated with containing rocks: Thayer, T. P., 1.
 Cuba, Camagney Prov.: Guild, P. W., 1.
 Gravimeter prosp. for: Hammer, S. I., 1.
 Determination, vanadium in chromite: Husted, J. E., 1.
 Manitoba poss.: McDiarmid, J. S., 1.
 Bird River: Bateman, J. D., 8.
 Maryland, Choate mine: Zodac, P., 4.
 Montana, Red Lodge deposits: Conwell, C. N., 1.
 Stillwater, Sweetgrass Cos.: Allman, P. T., 1.
 North America, composition: Stevens, R. E., 1.
 Pennsylvania, Foose, R. M., 2.
 Quebec, Eastern Tps.: Stockwell, C. H., 1.
- Economic minerals: Quebec Bur. Mines, 1.**
- Chromium.**
 British Columbia, Alaska Highway area: Thomas, L. C., 1.
 Taklar, Cassiar dist.: Armstrong, J. E., 6.
 Miccas: Whitmore, D. R. E., 1.
 Michigan, Marquette, Gobic ranges: Gruner, J. W., 1.
- Chrysoberyl, Wakefield area, N. H.:** Chayes, F., 1.
- Cinder cones, Big Pine volcanic field, Calif.:** Mayo, E. B., 1.

Cinnabar. See also Quicksilver.

- British Columbia, Pinchi Lake area: Armstrong, J. E., 1.
 California: Lisle, T. O., 2.
 Colloidal deposition: Pollock, J. P., 1.
 Nevada, quicksilver deposits: Bailey, E. H., 1.
- Cirques.** See also Glacial geology.
 Colorado, Rocky Mtn. Nat. Park: Jones, W. D., 1; Wegemann, C. H., 1.
 Mexico: Blasquez Lopez, L., 1.
 Michigan, NW.: Kelly, W. A., 1.
 Wyoming, Jackson Hole area: Fryxell, F. M., 3.
- Cirripedia.** See also Crustacea.
 Faunas, early Upper Camb., Mont.: Lochman, C., 1.
 New Jersey, Brandywine Lighthouse boring, fauna: Richards, H. G., 2.
 Washington, NW., Oligocene: Durham, J. W., 1.
- Clarks gas field, La.:** Blanpied, B. W., 3.
- Classification.**
 Auloporidae and Hederelloidea: Elias, M. K., 1.
 Bauxite, by ternary diagrams: Thoenen, J. R., 2.
 Beach cusps, revision: Evans, O. F., 5.
 Conodonts, composition: Ellison, S. P., Jr., 1.
 Dust storms, Great Plains, U. S.: Keith, B. S., Sr., 1.
 Geologic library: Morin, L. G., 4.
 Granite, gneiss, feldspathic, Pine Hill: Faessler, C., 5.
 Igneous rocks: Swayne, W. H., 1.
 Kansas Vertebrata: Lane, H. H., 1.
 Loess in classn. of soils: Thorp, J., 1.
 Magnetic, density contrast, and ig. rock classn.: Nettleton, L. L., 2.
 Mammalia: Simpson, G. G., 2.
 Meteorite falls: Leonard, F. C., 11.
 Meteorites: Leonard, F. C., 1.
 Mississippian, N. Am.: Cheney, M. G., 1.
- Nautiloidea, Dev., N. Am.:** Flower, R. H., 3.
- Neotypes: Simpson, G. G., 3.**
- New England mica deposits:** Cameron, E. N., 1.
- North American geosynclines:** Kay, C. M., 7.
- Pennsylvanian, N. Am.:** Cheney, M. G., 1.
- Principles of:** Simpson, G. G., 2.
- Petroleum reservoirs:** Wilhelm, O. G., 1.
- Quartz Mtn., Nev., siderite:** Leonard, F. C., 5.
- Quinn Canyon, Nev., siderite:** Leonard, F. C., 5.
- Reservoirs, genetic, morphologic:** Pirson, S. J., 2.
- Siderite, Quartz Mtn., Nev.:** Leonard, F. C., 5.
- Quinn Canyon, Nev.:** Leonard, F. C., 5.

Classification—Continued.

- Species concept in petrology: Shand, S. J., 1.
- Terminology, geol., in classn. oil and gas accumulation: Brod, I. O., 1.
- Classification for geologic library: Morin, L. G., 4.
- Clastic sediments, fine-grained, orientation analysis: Dapples, E. C., 1.
- Clay. See also Bleaching clay; Fire clay.
- Alabama, bentonites: Fox, P. P., 2.
- Mineral res.: Anonymous, 25.
- Southwest: SE. Geol. Soc., 1.
- Tertiary fms.: Toulmin, L. D., Jr., 1.
- West-central, Cret.: McGlamery, W., 1.
- Alberta, Cowley area: Hage, C. O., 1.
- Red Deer, Rosebud area: Allan, J. A., 1, 2.
- Bonding action: Grim, R. E., 3.
- British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.
- Dunlevy-Portage Mtn. area: Beach, H. H., 1.
- Fort Nelson-Watson Lake area, poss.: Williams, M. Y., 3.
- California, Elk Hills oil field: Bunch, E. S., 1.
- Ione area: Bates, T. F., 1.
- o Santa Ana Mts., NW., Paleocene, Eocene: U. S. G. S., 2.
- Canada, Alaska Highway, Ft. Nelson-Watson Lake area: Williams, M. Y., 1.
- Ceramics, indust. minerals: Worcester, W. G., 1.
- General: Hutt, G. M., 10.
- Manitoba dist.: Hutt, G. M., 15.
- Midwestern, non-metallics: Hutt, G. M., 7.
- Port Arthur to Winnipeg: Hutt, G. M., 11.
- Pouce Coupé-Peace River area: Crickmay, C. H., 1.
- Riverside Co.: Tucker, W. B., 2.
- Western: Hutt, G. M., 4.
- Winnipeg to Calgary: Hutt, G. M., 5.
- Winnipeg to Edmonton: Hutt, G. M., 13.
- Challenger Expedition, Atlantic deep-sea sediments: Emery, K. O., 3.
- Clay minerals, montmorillonite group: Ross, C. S., 2-a.
- Photometric interpretation: Hellman, N. N., 1.
- Differential thermal analysis: Grim, R. E., 2.
- Electron micrographs of minerals in: Shaw, B. T., 1.
- Formation, high-alumina: Allen, V. T., 4.
- General: Hutt, G. M., 1.
- Georgia bentonites: Fox, P. P., 2.
- Coastal Plain: Cooke, C. W., 1.
- Southwest: Herrick, S. M., 1.
- Tertiary fms.: MacNeil, F. S., 2.

Clay—Continued.

- Idaho, Latah Co.: Tullis, E. L., 1.
- Illinois, clay-shale mortar mix: Hursh, R. K., 1.
- Surface clays, for molding sands: Grogan, R. M., 3.
- Iowa: Gwynne, C. S., 1.
- Devonian: Stainbrook, M. A., 1.
- Kansas, McLouth gas and oil field: Lee, W., 1.
- Resources: Landes, K. K., 1.
- Kentucky: McFarlan, A. C., 2.
- Louisiana, Camp Polk, North Camp Polk areas: Maher, J. C., 3.
- Southern oil fields: Wallace, W. E., Jr., 1.
- Migration effect, minerals, hydrous aluminum oxides: Allen, V. T., 2.
- Minerals in, criteria: Bradley, W. F., 2.
- Minerals, mineral relations: Ross, C. S., 2.
- Mississippi: Morse, W. C., 2.
- Camp Shelby area: Brown, G. F., 1.
- Light-weight aggregate bldg. material: Morse, W. C., 6.
- Monroe Co.: Vestal, F. E., 1.
- Mississippi Valley industrial minerals: Voskuil, W. H., 1.
- Missouri: Branson, E. B., 3; Keller, W. D., 1.
- Montana, Little Rocky Mts. plains: U. S. G. S., 1.
- Montmorillonite group, clay minerals: Ross, C. S., 2-a.
- Organic liquids assoc.: Bradley, W. F., 1.
- Nevada, non-metallics: York, B., 1.
- New Jersey, Middlesex Co.: Barksdale, H. C., 1.
- New Mexico, Rio Puerco area: Wright, H. E., Jr., 1.
- New York, Catskill quad.: Cook, J. H., 2; Newland, D. H., 1; Ruedemann, R., 5.
- Coxsackie quad.: Cook, J. H., 3; Goldring, W., 3.
- North America, late-glacial clay chronology: Antevs, E. V., 1.
- North Carolina res.: Anonymous, 9.
- North Dakota, Emerado quad.: Laird, W. M., 1.
- North Texas area: Lozo, F. E., Jr., 1.
- Nova Scotia, industrial minerals: Cameron, A. E., 3.
- St. Rose-Chimney Corner coal field: Bell, W. A., 1.
- Ohio, Blaine Hill, Belmont Co. sec.: White, G. W., 4.
- Fulton Co.: Harker, D. H., 3.
- Mineral res.: Ohio Devel. Pub. Com., 1; White, G. W., 1.
- Ontario, Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
- Grimsthorpe-Barrie area: Meen, V. B., 1.
- Renfrew area: Satterly, J., 2.

Clay—Continued.

- Oregon, Hobart Butte, Lane Co.: Iverson, H. G., 1.
 Clay pellets, origin: Allen, V. T., 1.
 Pennsylvania: Foose, R. M., 2.
 Central. Ord.: Kay, G. M., 2.
 Conemaugh Gorge Missn.: Fettke, C. R., 2.
 Hanover-York dist.: Stose, A. J., 1.
 High-alumina clay: Foose, R. M., 3.
 Mineral res.: Ashley, G. H., 1.
 Saskatchewan, S.: Hutt, G. M., 17.
 Sauconite: Ross, C. S., 4.
 South Carolina: Taber, S., 1.
 Mineral res.: Anonymous, 20.
 South Dakota, min. res.: Rothrock, E. P., 1.
 Tennessee, bentonites: Fox, P. P., 2.
 Mineral res.: Anonymous, 56.
 Northeast: King, P. B., 4.
 Texas, Anahuac Oligocene fm.: Ellisor, A. C., 1.
 Anderson Co.: Whitcomb, B., 2.
 Angelina, Cherokee Cos.: Johnson, J., 1.
 Bastrop Co.: Nickell, C. O., 2.
 Baylor Co.: Evans, G. L., 4.
 Big Spring area: Livingston, P. P., 1.
 Coastal Plain, Oakville, Cuero, Goliad fms.: Weeks, A. W., 2.
 Falls Co.: Hatch, J., 1; Hoeman, E. C., 1.
 Fayette Co.: Sedlmeyer, J. J., 1.
 Freestone Co.: Whitcomb, B., 1.
 Grimes Co.: Ramsey, G. D., 2.
 Hidalgo Co. soils: Wynd, F. L., 1.
 High Plains: Evans, G. L., 5.
 Lee Co.: Harris, G. D., 1.
 Leon Co.: Crow, D., 1.
 Limestone Co.: Broman, I. J., 1, 2.
 Mineral res.: Sellards, E. H., 2.
 Robertson Co. mixture: Hoeman, E. C., 1.
 Southeast, Miocene, brackish and non-marine: Stenzel, H. B., 2.
 Thermal analysis: Speil, S., 1.
 United States, Lake Erie sediments: Cuthbert, F. L., 1.
 Northwest, weathering profiles: Allen, V. T., 3.
 Southeast: MacNeil, F. S., 3; Pierce, W. G., 2; Ralston, O. C., 1.
 Surveys of: Ries, H., 1.
 Western: Wimmeler, N. L., 1.
 Virginia, bauxite area: Bevan, A. C., 5.
 Burkes Garden quad.: Cooper, B. N., 1.
 Coastal Plain well-logs: Cederstrom, D. J., 2.
 Giles Co.: Ladd, H. S., 2.
 Glade Mtn. dist.: Miller, R. L., 1.
 Waynesboro area sink holes: McGill, W. M., 1.
 Washington, Blewett-Cle Elum fm.: Luper, R. L., 1.
 King Co. coal fields: Warren, W. C., 1.
 West Virginia: Martens, J. H. C., 1.

Clay—Continued.

- Wisconsin, Brulé River Basin: Bean, E. F., 1.
 Clay Basin gas field, Utah-Wyo.: Dobbin, C. E., 2.
 Clay minerals, photometric interpretation: Hellman, N. N., 1.
 Clay properties, control by pH: Grim, R. E., 1.
 Clays, related minerals, high-temperature effects: Grim, R. E., 4.
 Cleavage, Everett syncline, Pa.: Foose, R. M., 1.
 In minerals: Hawkins, A. C., 1.
 Climatic maps, U. S., of geol. interest: Visher, S. S., 2.
 Clinoclasite.
 Nevada: Palache, C., 4.
 Utah: Palache, C., 4.
 Clinton Co., Ky., oil field: McCauley, A., 1.
 Coal. See also Lignite.
 Alabama: Lloyd, S. J., 2.
 Mineral resources: Anonymous, 25.
 Alaska, Matanuska Valley field: Payne, T. G., 1; Tuck, R., 1.
 Moose Creek dist., Matanuska field: Apell, G. A., 1.
 1941-42: Smith, P. S., 1.
 Alberta: Irwin, J. L., 1.
 Alexo area: Crombie, G. P., 1, 2.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Cowley area: Hage, C. O., 1.
 Drinnan to Brulé Lake: Lang, A. H., 1.
 Dyson Creek area: Hage, C. O., 2.
 Entrance area: Land, A. H., 2.
 Fall Creek area: Henderson, J. F., 2.
 Pedley area: Irish, E. J. W., 1.
 West of 5th Meridian, poss.: Canada G. S., 1.
 Red Deer, Rosebud area: Alan, J. A., 1.
 Saunders map area: Erdman, O. A., 1.
 Stimson Creek area: Hume, G. S., 1.
 Wawa Creek area: McKay, B. R., 2.
 Analysis, petrographic: Parks, B. C., 1.
 British Columbia.
 Alaska Highway area min. poss.: Hage, C. O., 3; Thomas, L. C., 1.
 Dunlevy-Portage Mtn. area: Beach, H. H., 1.
 Fort Nelson-Watson Lake area, poss.: Williams, M. Y., 3.
 Hasler Creek area: Spivak, J., 1.
 Hazelton, Cassiar dist.: Armstrong, J. E., 3.
 Mt. Hulcross-Commotion Creek area: Wickenden, R. T. D., 1.
 Nicola area: Cockfield, W. E., 2.
 Peace River Foothills: McLearn, F. H., 2.
 Princeton area: Rice, H. M. A., 2.
 Smithers area: Armstrong, J. E., 2.
 Takla, Cassiar dist.: Armstrong, J. E., 6.

Coal—Continued.

- Canada, Alaska Highway, Ft. Nelson-Watson Lake poss.: Williams, M. Y., 1.
- Canol invs., Mackenzie River area: Hume, G. S., 8.
- Eastern Arctic: Robinson, J. L., 1; Anonymous, 58.
- Eastern fields: Bell, W. A., 3.
- Liard River area: Hage, C. O., 5.
- Medicine Hat to Vancouver: Hutt, G. M., 14.
- Pouce Coupé-Peace River area: Crickmay, C. H., 1.
- Resins in: Selvig, W. A., 1.
- Western: Hutt, G. M., 4.
- Winnipeg to Edmonton: Hutt, G. M., 13.
- Constitution: Horton, L., 1.
- Core invs.: Schopf, J. M., 5.
- Fossil plants, Wilmington area, Ill: Wilson, B. H., 2.
- Greenland: Shaw, V., 4.
- Illinois, correlation by plant fossils: Kosanke, R. M., 3.
- Geological Survey research program: Leighton, M. M., 2.
- Plant microfossils in: Kosanke, R. M., 4.
- Wayne Co. Penn. key beds: Sims, P. K., 1.
- Illinois Basin, Millersville ls.: Taylor, E. F., 2.
- Resources: Cady, G. H., 1.
- Indiana, Penn.: Franklin, D. W., 1.
- Kansas, E., Thayer coal bed: Schoewe, W. H., 1.
- Marmaton Penn. group: Jewett, J. M., 2.
- Resources: Landes, K. K., 1.
- Weir-Pittsburg coal bed: Abernathy, G. E., 1.
- Kentucky: McFarlan, A. C., 2.
- Union Co.: Jillson, W. R., 2.
- Metals, fuels, world has enough: Parsons, A. B., 1.
- Mexico, Colotlipa-Quechultenango min. dist.: González Reyna, J., 3.
- Nuevo León: Mullerried, 8.
- Missouri: Branson, E. B., 3.
- Montana, Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.
- New Brunswick, Grand Lake field: Wright, W. J., 1.
- New Mexico, bibliography: Bates, R. L., 1.
- North America, oil from coal and shale: Wilson, R. E., 1.
- Resources: Hald, K. C., 2.
- Nova Scotia: Cameron, A. E., 2.
- Joggins-River area: Goudge, M. G., 1.
- Mabou area: Douglas, G. V., 6.
- St. Rose-Chimney Corner coal field: Bell, W. A., 1.

Coal—Continued.

- Ohio: Stout, W. E., 6.
- Blaine Hill, Belmont Co. sec.: White, G. W., 4.
- Middle Kittanning coal, Greenford area: Sturgeon, M. T., 1.
- Mineral res.: Ohio, Devel. Pub. Com., 1; White, G. W., 1.
- Pfouts coal mine: Sturgeon, M. T., 2.
- Oklahoma, Broken Arrow coal, associated strata: Oakes, M. C., 1.
- Le Flore Co.: Kenchtel, M. M., 1.
- Oregon, Coos Bay quad.: Allen, J. E., 1.
- Origin: Hixon, H. W., 1; Janssen, R. E., 1.
- Pennsylvania, Conemaugh Gorge Missn.: Fettke, C. R., 2.
- Mineral resources: Ashley, G. H., 1.
- Plant fossils, preservation and coal fm.: Krystafovich, A., 1.
- Plants preserved in: Schopf, J. M., 3.
- Radioactivity, organic content, sedimentation: Russell, W. L., 2.
- Saskatchewan, S.: Hutt, G. M., 17.
- South Dakota, min. res.: Rothrock, E. P., 1.
- Dewey, Corson Cos.: Morgan, R. E., 1.
- Tennessee, min. res.: Anonymous, 56.
- Texas, Anderson Co.: Whitcomb, B., 2.
- Bastrop Co.: Nickell, C. O., 2.
- Houston Co.: Harrington, H., 1.
- Lee Co.: Harris, G. D., 1.
- Leon Co.: Crow, D., 1.
- Thermodynamic analysis, coal, oil fm.: Fuchs, W., 1.
- Uinta Basin, Utah-Colo., hydrocarbons: Barb, C. F., 1.
- United States, W.: Eisner, A., 1.
- Resins in: Selvig, W. A., 1.
- Resources: Fanning, L. M., 1.
- Virginia, Burkes Garden quad.: Cooper, B. N., 1.
- Washington, King Co.: Warren, W. C., 1.
- West Virginia, minerals, rocks: Erwin, J. P., 1; Martens, J. H. C., 1.
- Pennsylvanian: Taylor, N. W., 1.
- Plant microfossils in: Cross, A. T., 2.
- World resources: Meyerhoff, H. A., 1.
- Wyoming, paleoecology of: Wilson, L. R., 4.
- Willow Creek coal area: Andrews, D. A., 1.
- Wyoming-Montana, Elk Basin field: U. S. G. S., 4.
- Yukon, Whitehorse dist.: Cockfield, W. E., 1.
- Coal balls.
- Bowmanites, Carb., Iowa: Cross, A. T., 1.
- Medullosa noel, Carb., Ill.: Steidtmann, W. E., 1.
- Pteridosperm stems, Carb., Iowa: Andrews, H. N., 1.

Coal balls—Continued.

Staining plant remains, calcareous:
Kosanke, R. M., 2.

Trigonocarpus cf. Pachytesta, Tripterosperrum, Iowa: Hoskins, J. H., 1.

Cobalt.

British Columbia, Hazelton, Cassiar dists.: Armstrong, J. E., 3.

Possibilities: Warren, H. V., 4.

Canada, W.: Hutt, G. M., 4.

Loellingite and safflorite: Peacock, M. A., 2.

New Jersey, Franklin arsenides:
Holmes, R. J., 1.

United States, SE., with manganese:
Pierce, W. G., 2.

Cobaltite, British Columbia: Warren, H. V., 4.

Cobbles, Santa Catalina Is., Calif.: Clements, T. D., 2.

Coelenterata. See also Anthozoa; Hydrozoa; Invertebrata (general).

Colorado, Morrison fm., Colo. Plateau area: Stokes, W. L., 1.

Fauna, Eocene Santee ls., N. Car.: Harbison, A., 1.

Marine Tert. fms., Wash., Oreg.:
Weaver, C. E., 1.

North America, W., index fossils, marine Cenozoic fms.: Weaver, C. E., 2.

Oral cavity and jaws, evolution: Gregory, W. K., 1.

Ozark uplift, Ark.-Mo., faunas: Cullison, J. S., 1.

Quebec faunas: Dresser, J. A., 1.

Colemanite, Calif. borate mins.: Harriman, W. R., 1.

Colima Volcano, Mex.: Flores, T., 1.

Collections.
Arkansas, Magnet Cove minerals:
Shockley, W. G., 1.

Cycadeoids, Yale Univ.: Wieland, G. R., 2.

Illinois, Thomas A. Green Silurian fossils: Greacen, K. F., 1.

Meteorites, numbering: Leonard, F. C., 7.

Mineral collecting, specimens and value:
Bagrowski, B. P., 1.

United States Nat. Mus. Rept., 1943:
Bassler, R. S., 1.

Vertebrata, Pleist., Tex.: Geiser, S. W., 2.

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Colorado—Continued.

Mineralogy—Continued.

- Bismuth minerals in pegmatites: Heinrich, E. W., 2.
- Braunite, Snowmass, Pitkin Co.: Rogers, A. F., 3.
- Dahlite after bone: Anonymous, 89.
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- Magnetic field, survey over ig. pipes, Canon City area: Blum, V. J., 1, 2.
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 General: Edwards, S. C., 1.
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 Ohio, pyrite: Anonymous, 102.
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 Oregon, Hobart Butte clay pellets origin: Allen, V. T., 1.
 Ozark uplift, Ark.-Mo.: Cullison, J. S., 1.
 Plants, Mazon Creek, Ill.: Jannsen, R. E., 2.
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 Superior mining area: Short, M. N., 1.
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 Mt. Hulcross-Commotion Creek area: Wickenden, R. T. D., 1; Williams, M. Y., 2.
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 Kentucky, Owen Co., Eden beds: Jillson, W. R., 9.
 Tuscaloosa gravel, silicified: Fox, P. P., 3.
 Mexico, El Oro y Talpujahua mining camp: Bracho V., F., 1.
 Mississippi, Monroe Co.: Vestal, F. E., 1.
 Missouri, SE.: Croneis, C. G., 1.
 North Carolina, Fontana Dam site: Moneymaker, B. C., 1.
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 Ohio: Stout, W. E., 7.
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 Pennsylvania, Buck Hill area: Myers, R. E., 2.
 Central, eastern: Hersey, J. B., 1.
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 Stanstead area, Brome and Stanstead Cos.: Ambrose, J. W., 2.
 Texas, Anahuac Oligocene fm.: Ellis, A. C., 1.
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- Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
- Lee Co.: Harris, G. D., 1.
- United States, Cotton Valley beds, N. Gulf Coastal Plain: Swain, F. M., 1.
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- Washington, Blewett-Cle Elum fm.: Lupter R. L., 1.
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- Oil-field water studies: Case, L. C., 2.
- Texas, Anahuac field: Carpenter, C. B., 1.
- Waters from Frio fm., Gulf Coast: Jessen, F. W., 1.
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- Astronomical vs. geodetic latitudes and longitudes: Lambert, W. D., 1.
- Discussion: Longwell, C. R., 2; Willis, B., 2.
- Evidence for: Longwell, C. R., 1.
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- Pacific Basin, effect on: Chelikowsky, J. R., 1.
- Palinspastic, paleogeog. maps: Kay, G. M., 4.
- Tertiary mammals and continental drift: Du Toit, A. L., 1.
- Continental drift theory: Lloyd, J., 2.
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- Kasaan Penin. Prince of Wales Is.: Warner, L. A., 1.
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- Arizona, Castle Dome copper deposit: Peterson, N. P., 1.
- San Manuel deposit, hydrothermal alteration: Schwartz, G. M., 3.
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- Britannia mine No. 8 orebodies: Irvine, W. T., 1.
- Central-southern area: Hedley, M. S., 1.
- China Creek area: Stevenson, J. S., 4.
- Coast: Gunning, H. C., 2.
- Hazelton, Cassiar dist.: Armstrong, J. E., 3.
- Little Billie mine, Texada Is.: Stevenson, J. S., 5.
- Manson Creek area: Armstrong, J. E., 5, 7.
- Nicola area: Cockfield, W. E., 2.
- Omineca dist., poss.: Armstrong, J. E., 4.
- Premier mine deposits: Langille, E. G., 1.
- Princeton area: Rice, H. M. A., 2.

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British Columbia—Continued.

Smithers area: Armstrong, J. E., 2.
Takla, Cassiar dist.: Armstrong,
J. E., 6.

Tuya-Teslin area poss.: Watson,
K. D., 1.

California, Copperopolis mine: Lisle,
T. O., 5.

Riverside Co.: Tucker, W. B., 2.

Canada: McLaren, D. C., 1.

West, sphalerites: Warren, H. V., 5.

Cuba, El Cobre mine: Sierra Maestra
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Pennebaker, E. N., 1.

Idaho, Birch Creek area: Anderson,
A. L., 1.

Identification in polished sections: Ya-
goda, H., 1.

Manitoba, Mikanagan Lake area poss.:
Bateman, J. D., 1.

Sherridon area: Bateman, J. D., 6.

Mexico, Amarilla mine, Guerrero:
Acosta del Campo, C., 1.

Baja, Calif.: Antúnez Echegaray, F.,
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La Dicha mine: González Reyna, J., 3.

Pacific Coast: González Reyna, J., 1.

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Nuggets: Luoma, H. L., 2.

Missouri: Branson, E. B., 3.

Pyrite deposits: Grawe, O. R., 1.

Montana, ore bodies, strat. control:
Perry, E. S., 3.

Nevada, Elko Co.: Reeves, A., 1.

Mining dists.: Ferguson, H. G., 1.

Ore deposits: York, B., 1.

Newfoundland, Rambler min. area:
Quinn, H. A., 1.

New Jersey: Woodward, H. P., 1.

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A. C., 3.

New Mexico, Silver City area: Ent-
wistle, L. P., 1.

North America, Alaska Highway poss.:
Lord, C. S., 2.

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G. V., 3.

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Westworth dist.: Bancroft, M. F., 1.

Ontario, Bigwater Lake area poss.:
Berry, L. G., 1.

Flack Lake area poss.: Harding, W.
D., 2.

Kam Kotia mine mineralized zone:
Ferguson, S. A., 1.

Pennsylvania, min. res.: Ashley, G. H., 1.

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Bourlemaque Tp.: Norman, G. W.
H., 1.

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Quebec—Continued.

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Mines, 1.

Moulton Hill mine, Eastern Tps.:

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Saguenay Co., poss.: Retty, J. C., 1.

Wakeham Lake area: Claveau, J., 1.

Saskatchewan, min. poss.: Mawdsley,
J. B., 1.

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Sulphides, metal, solubility in dilute
vein-forming solutions: Garrels, R.
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Texas, Burnet Co. poss.: Barnes, V. E.,
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Sierra Diablo area: U. S. G. S., 1.

United States min. reserves: Jorale-
mon, I. B., 1.

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California, pellet phosphorite, Carmel
Valley: Rogers, A. F., 2.

Coquina, Cape Fear Penin., N. Car.: Wells,
B. W., 1.

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Antecedent-platform theory of origin:
Hoffmeister, J. E., 1.

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Watson Lake: Williams, M. Y., 1.

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Hume, G. S., 8.

Canol project: Laudon, L. R., 1.

Photo-geology, military application:
Dirmeyer, R. D., Jr., 1.

United States, S. Permian Basin:
Adams, J. E., 3.

Core analysis.

Arkansas, Schuler field: Kaveler, H.
H., 1.

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Illinois, rotary drilling cores: Mylius, L.
A., 1.

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lison, J. S., 2.

Saskatchewan, oil poss.: Anonymous, 35.
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Cores.

Fluorochemistry: De Ment, J. A., 2.

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L. A., 1.

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tables; Historical geology.

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J. A., 1, 2.

Faunas: Allan, J. A., 1, 2; Sander-
son, J. O. G., 1.

Alberta-British Columbia, Lower Cret.:
Hume, G. S., 7.

Arizona, N. Uinkaret Plateau: Koons,
E. D., 1.

Arkansas, Dev.: Miser, H. D., 1.

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 Bacon Is.-Ferry Lake fm., Cret., Texas: Jones, W. V., 1.
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 Cenozoic marine: Clark, B. L., 1.
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 Paleozoics: Johnson, J. H., 7.
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 Drilling-time data, geol. use: Shepherd, G. F., 2.
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 Fluorochemistry: De Ment, J. A., 3.
 Foraminifera, Miocene, W. Indies: Palmer, D. B. K., 1.
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 Herrin (No. 6) coal bed: Payne, J. N., 1.
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 Northeast, geophys. logging, water wells: Bays, C. A., 2.
 Plant microfossils from coal: Kosanke, R. M., 4.
 Sandoval pool-SW. Ill.: Hoover, W. F., 1.
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 Iowa, Dev.: Stainbrook, M. A., 1.
 Independence sh.: Stainbrook, M. A., 2.
 Kansas, Marmaton Penn. group: Jewett, J. M., 2.
 Penn. Morrowan rocks: Thompson, M. L., 2.
 Pleistocene-Pliocene boundary problem: Frye, J. C., 1.
 Southwest, Pleist.: Hibbard, C. W., 2.
 West-central, Pleist.: Frye, J. C., 1.
 Kinderhook fms., Miss. Valley: Easton, W. H., 3.
 Lincation with rock-movement: Cloos, E., 1.
 Louisiana, Cameron Meadows dome: McGuckin, G. M., 1.
 1942 wildcat wells: Blanpied, B. W., 4.
 Louisiana and Texas, Midway-Wilcox fms.: Murray, G. E., Jr., 1.
 Marine Cenozoic by species method: Clark, B. L., 1.
 Maryland, Antietam quartzite: Anderson, J. L., 1.
 Mexico, Brachiopoda, NW. of Las Delicias: Cloud, P. E., Jr., 1.
 Cretaceous fms.: Imlay, R. W., 1, 2.
 Michigan, Berea ss.: U. S. G. S., 1.
 Minnesota, Mesabi iron range: Bergquist, H. R., 1.

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- Mississippi Embayment area, Upper:
Copper, C. L., 1.
- Missouri: Branson, E. B., 3.
Northeast, Dev.: Branson, E. B., 2.
Southeast: Croneis, C. G., 1.
- Mollusca, Cenozoic: Clark, B. L., 1.
- Moorefield fm., Ark.: Gordon, M., Jr., 1.
- Nebraska, Pleist. loess: Schultz, C. B., 1.
- New Hampshire, Oliverian magma ser.,
Mt. Washington quad.: Chapman,
C. A., 1.
- New Mexico, Colorado group: Rankin,
C. H., Jr., 1.
Devonian: Stevenson, F. V., 1.
- Mississippian fms.: Laudon, L. R., 2.
- Northeast, Upper Paleozoic: Read,
C. B., 1.
- New York, Genessee group: Grossman,
W. L., 1.
Long Is., precipitation and ground-
water levels: Jacob, C. E., 1.
- Salamanca re-entrant area: MacClin-
tock, P., 1.
- New York City, Fordham gneiss: Fluhr,
T. W., 2.
- North America, Camb. fms.: Howell,
B. F., 3.
- Dredpanocladus and Pleist. glacia-
tion: Wynne, F. E., 1.
- Mississippian, Penn., vs. Europe:
Cheney, M. G., 1.
- Pennsylvanian fms.: Cheney, M. G.,
1: Moore, R. C., 3.
- Western marine Cenozoic fms.:
Weaver, C. E., 2.
- Wisconsin glacial maxima: Antevs,
E. V., 3.
- North Dakota, Fox Hills-Hell Creek-
Cannonball fms., by heavy mins.:
Lindberg, M. L. L., 2.
- Stratigraphy and structure: Laird,
W. M., 2.
- Ohio, Detroit River ls.: Stumm, C. E., 2.
- Middle Kittanning coal, Greenford
area: Sturgeon, M. T., 1.
- Oil-field waters studies: Case, L. C., 2.
- Oklahoma, Black Knob Ridge area:
U. S. G. S., 1.
- Broken Arrow coal beds: Oakes,
M. C., 1.
- Devonian: Miser, H. D., 1.
- Northeast: U. S. G. S., 2.
- Oregon, coast: Baldwin, E. M., 1.
Geology: Weaver, C. E., 3.
- Ostracoda, Olentangy sh., Ohio: Stew-
art, G. A., 1.
- Ozark uplift, Ark.-Mo.: Collison, J. S., 1.
- Pennsylvania, cent.-east: Hersey, J. D.,
1.
- Central, Ord.: Kay, G. M., 2.
- Conemaugh Gorge Missn.: Fettke,
C. R., 2.
- Hanover-York dist.: Stose, A. J., 1.
- Oil City quad.: Dickey, P. A., 1.

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- Pennsylvanian rocks, fusulinids, Kans.-
Utah-Colo.: Thompson, M. L., 4.
- Petrofabrics: Ingerson, F. E., 1.
- Quebec, Bourlemaque Tp.: Norman,
G. W. H., 1.
- General: Dresser, J. A., 1.
- Radioactivity well-logging: Jackson,
W. J., 1; Mercier, V. J., 1.
- Ruddell sh., Ark.: Gordon, M., Jr., 1.
- Simpson rocks, Kans.-Mo.: Leatherock,
C., 1.
- Stanley-Jackfork fms. age, Ark.-Okla.:
Cooper, C. L., 6.
- Stones River equivalents, Appalachian
region: Cooper, B. N., 2.
- Subsurface, by electrologs: Kornfeld,
M. M., 2.
- Susceptibility of sediments: Hoylman,
H. W., 1.
- Tennessee, Mascot-Jefferson City zinc
dist.: Oder, C. R. L., 1.
- Terraces: Johnson, D. W., 2.
- New England upland: Adams, G. F., 1.
- Texas, Anahuac Oligocene fm.: Ellisor,
A. C., 1.
- Burkeville Miocene fauna, strat. mean-
ings: Stenzel, H. B., 1.
- Central, Iss., dolomites: Crowley,
A. J., 1.
- Coastal Plain, Brazos-Rio Grande
Rivers: Weeks, A. W., 1.
- East, south, Cret.: U. S. G. S., 2.
- Hueco Mts., Upper Paleozoics: U. S.
G. S., 1.
- Pecan Gap, Wolfe City, Anona fms.:
Rouse, J. T., 1.
- Pennsylvanian, by ammonoids: Scott,
G., 1.
- Permian Pease River group faunas:
Roth, R. I., 1.
- South, Lower Cret. fms.: Imlay,
R. W., 6.
- Tyler Basin: Bailey, T. L., 1.
- Word Perm. fm., fauna and strat.
correls: Clifton, R. L., 3.
- Triassic, Idaho-Utah: Williams, J.
Stewart, 1.
- United States, Appalachian area, Stones
River equivalents: Cooper, B. N., 2.
- Appalachian coal fields, Pittsburgh-
Pottsville boundary: Ashley, G. H.,
9.
- Atlantic Coastal Plain, N. J.-Ga.:
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- Pennsylvanian, Kans.-Utah-Colo.:
Thompson, M. L., 4.
- Southeast: MacNeill, F. S., 3.
- Southern Appalachians, Clinnow
group, Ocoee ser.: Stose, G. W., 1.
- Triassic, W. Texas-E. New Mexico:
Sidwell, R., 2.
- Western, Pliocene floras: Chaney,
R. W., 5.

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- Utah, Coalville drill-core study : Hasler, J. W., 1.
 Dry Lake area : Williams, J. Stewart, 2.
 Uinta Basin Cret. : Walton, P. T., 1.
 Vermont, west-central : Cady, W. M., 2.
 Virginia, Burkes Garden quad. : Cooper, B. N., 1.
 Coastal Plain : Cederstrom, D. J., 1.
 Virginia-Kentucky, Ord. lss. : Huffman, G. G., 1.
 West Indies, Greater Antilles, Cret. fms. : Imlay, R. W., 1.
 Wyoming and Montana, oil horizons : Carroll, D. L., 2.

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- Carboniferous, Permian, N. Am.-Europe : Cooper, C. L., 6.
 Central Am. Cret. fms. : Imlay, R. W., 1.
 Colorado, Paleozoics : Johnson, J. H., 7.
 Cretaceous, Gulf Coastal Plain : U. S. G. S., 2.
 Lower, Tex.-La.-Ark. : Imlay, R. W., 6.
 West interior U. S. : U. S. G. S., 1.
 Florida, south Ga. stratigraphy : Applein, P. L., 1.
 Southern : Parker, G. G., 2.
 Georgia, Coastal Plain : Cooke, C. W., 1.
 Illinois, Dev. fms. : Cooper, G. A., 2 ; Warthin, A. S., Jr., 1.
 Maquoketa-Trenton fms. relations : Du Bois, E. P., 1.
 Illinois, Mo., Okla., Tex., Ord., Camb. : Folk, S., 1.
 Illinois and surrounding states, Dev. : Weller, J. M., 2.
 Jurassic fms., sou. U. S. : Imlay, R. W., 3.
 Kansas, Marmaton Penn. group : Jewett, J. M., 2.
 Kentucky, W., nat. gas : Jillson, W. R., 1.
 Louisiana-Texas, Midway-Wilcox fms. : Murray, G. E., Jr., 1.
 Mexico, Cret. fms. : Imlay, R. W., 1.
 Michigan, SW., Traverse group, Dundee fm. : U. S. G. S., 2.
 Michigan Basin, U. S., Trenton, Black River lss. : U. S. G. S., 2.
 Miocene, Pliocene, Va., N. Car. : Gardner, J. A., 2.
 Missouri : Branson, E. B., 3.
 Northeastern, Dev. : Branson, E. B., 2.
 Southeastern : Cronels, C. G., 1.
 Montana-Alberta, Dev., Missn. : U. S. G. S., 2.
 New Mexico, Colorado group : Rankin, C. H., Jr., 1.
 Devonian : Stevenson, F. V., 1.
 New York, Cocksackie quad. : Cook, J. H., 3 ; Goldring, W., 3.
 North America, Cambrian fms. : Howell, B. F., 3.
 Gulf, Caribbean areas : Seismog. Serv. Corp., 1.

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- Mississippian, Penn., vs. Europe : Cheney, M. G., 1.
 Pennsylvanian fms. : Cheney, M. G., 1 ; Moore, R. C., 3.
 Western, marine Cenozoic fms. : Weaver, C. E., 2.
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 North Carolina, Miocene, Pliocene : Mansfield, W. C., 1.
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 Geology : Weaver, C. E., 2.
 Stanley-Jackfork fms. age, Ark.-Okla. : Cooper, C. L., 6.
 Stones River equivalents, Appalachian region : Cooper, B. N., 2.
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 South, Lower Cret. fms. : Imlay, R. W., 6.
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 Atlantic Coastal Plain, N. J.-Ga. : Richards, H. G., 5.
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 Utah, Dry Lake area : Williams, J. Stewart, 2.
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- Fluorochemistry: De Ment, J. A., 4.
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 United States, S. Atlantic, gems: Barclay, G. C., 1.
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- Manganese deposits: Roberts, R. J., 1.
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- El General area: Dóndoli, C., 2.
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- Manganese deposits: Roberts, R. J., 1.

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- El General area: Dóndoli, C., 2.
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- El General area: Dóndoli, C., 2.
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- Alabama: Lloyd, S. J., 1, 2.
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 Southwest: SE. Geol. Soc., 1.
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Alaska, Moose Creek dist., Matanuska coal fields: Apell, G. A., 1.

Nickel-copper deposits, Spirit Mtn. area: Kingston, J., 1.

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Athabaska-Barrhead area: Feniak, M. W., 1.

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Fall Creek area: Henderson, J. F., 2.
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Red Deer, Rosebud area: Allan, J. A., 1, 2.

Saunders map area: Erdman, O. C., 1.
 Southern, structure-drilling for oil: Furnival, G. M., 1.

Stimson Creek area: Hume, G. S., 1.

Tay River area: Henderson, J. F., 1.
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Vermilion area: Nauss, A. W., 1.

Wainwright field: Hume, G. S., 5.

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Appalachian area, Ala.-Ga.: Cloud, P. E., Jr., 3.

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Salt River Valley: Lund, P. H., 1.

Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.

Arkansas, bauxite area: Malamphy, M. C., 1; Thoenen, J. R., 1.

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Dunlevy-Portage Mtn. area: Beach, H. H., 1.

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Hasler Creek area: Spivak, J., 1.

Hazelton, Cassiar dist.: Armstrong, J. E., 3.

Lone Mtn. area: McLearn, F. H., 1.

Manson Creek area: Armstrong, J. E., 7.

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Nicola area: Cockfield, W. E., 2.

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Premier mine deposits: Langille, E. G., 1.

Princeton area: Rice, H. M. A., 2.

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Takler, Cassiar dist.: Armstrong, J. E., 6.

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California, coast, Point Arena-Fort Ross: Weaver, C. E., 3.

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- Correlation by Glycymeris *veatchii*:
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- Fresno, Merced, Stanislaus Cos.:
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- Glenn Co.: Ryneerson, G. A., 1.
- Great Valley, correls. by Foraminifera:
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- Stratigraphic relations: Goudkoff,
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- Knoxville quicksilver dist.: Averitt,
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- Los Angeles Basin area: U. S. G. S., 2.
- Oil fields: Gregersen, A. I., 1.
- Puente, San Jose Hills: U. S. G. S., 1.
- Salinas Valley: U. S. G. S., 1.
- San Diego area: Hertlein, L. G., 1.
- San Luis Obispo Co.: Smith, C. T., 1.
- Santa Cruz area: U. S. G. S., 1.
- Santa Lucia Range: Taliaferro, N. L.,
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- Santa Rosa Hills-Purissima Hill:
U. S. G. S., 1.
- Sea-floor rocks off coast: Emery, K. O.,
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- Southern, batholith crystallization:
Larsen, E. S., 2.
- Tesla area: Campbell, A. S., 2.
- Canada, Alaska Highway, Ft. Nelson-
Watson Lake: Williams, M. Y., 1.
- Canol invs., Mackenzie River area:
Hume, G. S., 8.
- Canol project: Laudon, L. R., 1.
- Dominion Atlantic Ry. area: Hutt,
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- Dunvegan fm.: McLearn, F. H., 6.
- Fort Nelson-Liard-Beaver Rivers
area: Kindle, E. D., 1.
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- Lytton to Vancouver: Hutt, G. M., 12.
- Manitoba dist.: Hutt, G. M., 15.
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- Pouce Coupé River area: Crickmay,
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- Structure and relief: Brouillette, B., 1.
- West, oil devel.: Hume, G. S., 9.
- Western interior: McLearn, F. H., 3, 4.
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- Cenozoic: Mullerried, 9.
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- Colorado, Morrison fm., Colo. Plateau
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- Rangely oil and gas field: U. S. G. S.,
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- Selected well logs: Barb, C. F., 2.
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- White River Plateau: MacQuown,
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- Cuba: Brodermann, J., 1; Palmer, R. H.,
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- Elk Basin oil, gas field area, Wyo.-Mont.:
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- Florida: Cooke, C. W., 3.
- City of Tallahassee wells: Cole, W. S.,
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- Petroleum poss.: Gunter, H., 1, 2.
- Well studies: Cole, W. S., 1.
- Florida and S. Ga. stratigraphy: Ap-
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- Geologic calendar periods, time, lengths:
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- Georgia, Coastal Plain: Cooke, C. W., 1;
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- Prospecting for oil and gas: Peyton,
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- Southwest: Furcron, A. S., 2; Herrick,
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- Greenland: Shaw, V., 3; Anonymous, 32.
- East, between 74°-75°, and islands:
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- Gualala group, Calif.: Weaver, C. E., 3.
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- Teton Basin: Gardner, L. S., 1.
- Iowa: Gwynne, C. S., 1.
- Kansas: Lane, H. H., 1.
- Aldrich oil field: Carpenter, E. G., 1.
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- Eastern, oil and gas fields: Jewett,
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- Outcropping rocks: Moore, R. C., 4.
- Rock fms.: Moore, R. C., 1.
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- Kinetic theory, origin orogenic forces:
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- Louisiana: Humer, J., Jr., 2.
- Holly field, De Soto Parish: Spofford,
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- Maryland, deep oil test, Salisbury: Rich-
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 Columbian, cerium minerals: Cooke, S. R. B., 1.
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 Pecos River-Rio, Galisteo area: U. S. G. S., 1.
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 Powder River Basin, Wyo.-Mont.: U. S. G. S., 1.
 Rangely oil field, Colo.: U. S. G. S., 1.
 Saskatchewan, nat. gas fields: Edmunds, F. H., 2.
 Petroleum and gas poss.: Edmunds, F. H., 1.
 Southern: Hunt, G. M., 17.
 South Dakota: McCrackin, E. P., 1.
 Dewey, Corson Cos.: Morgan, R. E., 1.
 Texas: Sellards, E. H., 2.
 Artesian, aquifers: Guyton, W. F., 1.
 Bacon ls., E.: Jones, W. V., 1.
 Big Spring area: Livingston, P. P., 1.

Cretaceous—Continued.

Texas—Continued.

- Buda ls., age: Stephenson, L. W., 1.
 East and south: U. S. G. S., 2.
 Correlation, Pecan Gap, Wolfe City,
 Anonna fms.: Rouse, J. T., 1.
 Hueco Mts., El Paso, Hudspeth Cos.:
 U. S. G. S., 1.
 Irving area concretions: Loving, F., 1.
 Lower Rio Grande Valley: Wynd, F.
 L., 2.
 Merigale field, Wood Co.: Wright, A.
 C., 1.
 Nash, Damon Mounds: Barton, D.
 C., 2.
 Picton field, Hopkins Co.: Shelby, T.
 H., Jr., 1.
 Sand Flat field, Smith Co.: Weirich,
 T. E., 1.
 Sierra Diablo area: U. S. G. S., 1.
 Tyler Basin: Bailey, T. L., 1.
 Woodbine sand: Horton, C. W., 2.
 Trinidad: Seismog. Serv. Corp., 1.
 Uinta Basin, Utah, Colo., hydrocarbons:
 Barb, C. F., 1.
 United States, Anadarko Basin: Gib-
 bon, A., 1.
 Atlantic Coastal Plain, N. J.-Ga.:
 Richards, H. G., 5.
 Caestocorbula: Vokes, H. E., 1.
 Eastern Gulf area, oil poss.: Korn-
 field, J. A., 1.
 Rangely field, Rocky Mts.: Thomas,
 C. R., 1.
 Rocky Mts. area, oil poss.: Harri-
 son, T. S., 1.
 Southeast Gulf Coast: Brankstone,
 H. R., 1.
 West: Eisner, A., 1.
 Western, fluorspar: Gillson, J. L., 1.
 Western Interior: U. S. G. S., 1.
 Yellowstone-Bighorn area: Thom, W.
 T., Jr., 2.
 Utah, Coalville drill-core study: Hasler,
 J. W., 1.
 Salt Valley: Dyer, B. W., 1.
 Uinta Basin: Walton, P. T., 1.
 Upper Sevier River Valley: Gregory,
 H. E., 1.
 Wasatch Mts., N.-cent.: Eardley, A.
 J., 1.
 Virginia, Coastal Plain: Cederstrom,
 D. J., 1.
 Coastal Plain well logs: Cederstrom,
 D. J., 2.
 Washington, Blewett-Cle Elum fm.:
 Luper, R. L., 1.
 West Indies, mtn.-uplift problem:
 Trechmann, C. T., 1.
 Wyoming, Como Bluff anticline: Dun-
 bar, R. O., 1.
 Central: U. S. G. S., 2.
 General: La Fleiche, P., 2.
 Geology and devel., oil and gas fields:
 La Fleiche, P., 1.

Cretaceous—Continued.

Wyoming—Continued.

- Lance Creek oil and gas fields: U. S.
 G. S., 3.
 Little Buffalo Basin field: U. S. G.
 S., 8.
 Maverick Springs area: U. S. G. S., 1.
 Rocky Mts., evolution: Knight, S.
 H., 1.
 Teton Basin: Gardner, L. S., 1.
 Willow Creek coal area: Andrews, D.
 A., 1.
 Wildwood, Tatman fms.: Van Houten,
 F. B., 1.
 Wind River Mts., NW. end: U. S.
 G. S., 1.
 Wyoming and Mont., Elk Basin field:
 U. S. G. S., 4.
 Oil horizons: Carroll, D. L., 2.
 Yukon, Canol Road, Teslin River-Mac-
 millan Pass: Kindle, E. D., 2.
 Crinoidea. See also Echinodermata.
 Alberta, Alexo area: Crombie, G. P., 1.
 Aphelecrinus, Missn., U. S.: Kirk, E., 3.
 Colorado, Sawatch Range area: John-
 son, J. H., 3.
 Paleozoic faunas: Johnson, J. H., 7.
 West-Cent., NW., fms. Paleozoic
 faunas: Brill, K. G., Jr., 1.
 Cribanocrinus, Missn., U. S.: Kirk, E., 1.
 Ctenyocrinidae, Carb., U. S.: Wright,
 J., 1.
 Cymbiocrinus, Upper Missn., U. S., Kirk,
 E., 4.
 Cytilocrinus for Cyrtocrinus Kirk:
 Kirk, E., 2.
 Faunas, Barborton ls. mine, Ohio:
 Stauffer, C. R., 1.
 Early Upper Camb., Mont.: Lochman,
 C., 1.
 Genessee group, N. Y.: Grossman,
 W. L., 1.
 Middle Ord., cent. Pa.: Kay, G. M., 2.
 Permian, marginal marine strata, U.
 S.: Clifton, R. L., 1.
 Gualocrinus, Missn., U. S.: Kirk, E., 7.
 Holocrinus, Missn., Miss. Valley, U. S.:
 Kirk, E., 8.
 Illinois, Thomas A., Green Silurian fos-
 sils: Greacen, K. F., 1.
 Indiana, Clifty Falls State Park: Free-
 man, O. W., 2.
 Devonian: Sutton, A. H., 1.
 Harrodsburg ls.: Fix, G. F., 1.
 Iowa, Dev.: Stainbrook, M. A., 1.
 Kentucky, W., Dev.: Freeman, L. B., 1.
 Leadville ls., Colo., fauna: Johnson, J.
 H., 8.
 Maine, Sil. Ripogenus Dam fauna: Wil-
 lard, B., 1.
 Missouri, faunas: Branson, E. B., 3.
 Northeast, Dev.: Branson, E. B., 2.
 Southeast: Cronis, C. G., 1.
 Mooreocrinus, Carb., U. S.: Wright,
 J., 1.

Crinoidea—Continued.

- New Mexico, Dev. faunas: Stevenson, F. V., 1.
 Sandia fm. fauna: Northrop, S. A., 1.
 New York, Catskill quad. faunas: Ruedemann, R., 5, 6.
 Cocksackie quad. faunas: Goldring, W., 3.
 Thamnocrinus, Dev.: Goldring, W., 2.
 North America: Moore, R. C., 2.
 Devonian camerate: Kirk, E., 6.
 Pennsylvania, Huntingdon area Sil., Dev.: Willard, B., 2.
 Quebec faunas: Dresser, J. A., 1.
 Pont Rouge Ord. fauna: Sinclair, G. W., 2.
 Ripogenus Dam Sil. fauna, Maine: Willard, B., 1.
 Texas, Word Perm. fm., fauna and strat. corals: Clifton, R. L., 3.
 Thyridocrinus, Sil., Ill., Ind.: Kirk, E., 5.
 Ureocrinus, Carb., U. S.: Wright, J., 1.
 Washington, NW., Oligocene: Durham, J. W., 1.
 West Virginia, fossils, rocks, minerals: Martens, J. H. C., 1.
 Crocodilia. See also Reptilia.
 Fauna, Burkeville Miocene, SE. Tex.: Stenzel, H. B., 2.
 Cross bedding, Douglas Dam area, Tenn.: Laurence, R. A., 1.
 Crustacea. See also Cirripedia; Ostracoda; Trilobita.
 Alberta, Red Deer, Rosebud areas faunas: Allan, J. A., 1; Sanderson, J. O. G., 1.
 California, San Diego fauna: Hertle, L. G., 1.
 Colorado, Paleozoic faunas: Johnson, J. H., 7.
 Illinois, Maquoketa sh. fauna: Wells, J. W., 6.
 Tennessee, Douglas Dam area: Laurence, R. A., 1.
 Texas, decapod, Cret.: Stenzel, H. B., 4-a.
 Trinidad, Paleocene: Rutsch, R., 2.
 Cryolite, Colo.: Pearl, R. M., 3.
 Cryptozoan, Camb. Wis.: Twenhofel, W. H., 4.
 Crystal models, construction: Blank, H. R., 1.
 Crystallography. See also Mineralogy.
 Alaska, siderophyllite, Brooks Mtn.: Coats, R. E., 1.
 Amesite, Mass.: Gruner, J. W., 4.
 Amphiboles, calciferous, variations: Winchell, A. N., 1.
 Arkansas, Fayetteville area oolites: Henbest, L. G., 1.
 Binary system $P_2O_5-2CaO.P_2O_5$: Hill, W. L., 1.
 Black star spinel: Henderson, E. P., 1.
 Calcite, Lake Superior copper area: Palache, C., 2.
 Texas: Duncan, F., 1.

Crystallography—Continued.

- Calculation of density from X-ray data: Schlecht, W. G., 1.
 Crystal models, construction: Blank, H. R., 1.
 Dana's System of mineralogy: Fleischer, M., 1; Kerr, P. F., 1.
 Deformed rocks, exper. study: Knopf, E. F. B., 1.
 Emmonsite, tellurite of iron: Frondel, C., 1.
 Genesis, twin crystals: Buerger, M. J., 1.
 Glaucochroite, Franklin Furnace, N. J.: O'Daniel, H., 1.
 Gnomonic, linear heptaxial 2-circle calculations: Parsons, A. L., 3.
 Goethite, recrossing axial planes an error: Peacock, M. A., 1.
 Grain-selection, quartz-diagrams: Fellows, R. E., 1.
 Greenland: Shaw, V., 5.
 Hardness variations and orientation: Winchell, H., 3.
 Hawaii, 1840 Kilauea eruption: Macdonald, G. A., 3.
 Isostructural relationships, $AlPO_4$ and $SiSiO_4$: Gruner, J. W., 8.
 Mackayite, tellurite of iron: Frondel, C., 1.
 Magmatic and post-magmatic processes, terminology: Shand, S. J., 2.
 Maryland, Antietam quartzite: Anderson, J. L., 1.
 Mexico, Parícutin lavas, pyroclastics: Schmitter, E., 1.
 Michigan, Lake Michigan area: Seaman, W. A., 2.
 Minnesota, groutite, $HmNO_2$: Gruner, J. W., 6.
 Minnesotite: Gruner, J. W., 2.
 Moissanite, structure: Ramsdell, L. S., 2.
 Montmorillonite: Winchell, A. N., 2.
 Nematite, form birefringence, Quebec: Donnay, J. D. H., 1.
 New York, E. Adirondack area: Balk, R., 1.
 Herkimer Co. quartz: Hobbs, E. E., Sr., 1.
 Optical text-book: Glass, J. J., 1.
 Parícutin, Mex., lavas, pyroclastics: Schmitter, E., 1.
 Projections and zones: Fisher, D. J., 3.
 Pyrrhotite, unit cell, space group: Buerger, M. J., 3.
 Quartz, axes of reference: Rogers, A. F., 1.
 Deformation. Md.: Anderson, J. L., 1.
 Lamellae deformation: Ingerson, E. E., 2.
 Twinning frequency: Gault, H. R., 3.
 Rock-forming minerals, melting and crystallization: Schairer, J. F., 1.
 Selenite, Kans.: Carpenter, A. C., 1.
 Significant trends in geology: Bevan, A. C., 3.

Crystallography—Continued.

- Silicon carbide: Thibault, N. W., 1.
 Type IV, crystal structure: Ramsdell, L. S., 1.
 Type VI, crystal structure: Ramsdell, L. S., 2.
 South Dakota, Custer pegmatite minerals: Fisher, D. J., 1.
 Stilpnomelane structure: Gruner, J. W., 1.
 Tephroite, Franklin Furnace, N. J.: O'Daniel, H., 1.
 Topaz: Drake, H. Y., 1.
 Twin crystals, genesis: Buerger, M. J., 1.
 Twinning, Dauphiné, in quartz from sawing: Frondel, C., 2.
 Utah, selenite: Kelly, C., 3.
 Washington, D. C., area, crystalline rocks, liquid inclusions planes: Tuttle, O. F., 1.
 Willemite, Franklin Furnace, N. J.: O'Daniel, H., 1.
 X-ray diffraction in crystals: Zachariasen, W. H., 1.
 Yukon, plagioclase: Nuffield, E. W., 1.
 Zynite, Utah: Lovering, T. S., 1.
 Crystals, density from X-ray data: Schlecht, W. G., 1.

Cuba.

Areas described.

- Guisa-Los Negros area, Oriente Prov.: Woodring, W. P., 1.

Economic geology.

- Asphalt, econ. poss.: Montoulin, E. I., 1.
 Bituminous deposits: Brodermann, J., 2.
 Chromite, Camaguay Prov.: Guild, P. W., 1.
 Gravity prosp.: Hammer, S. I., 1.
 Copper deposits, structure of, Matahambre: Pennebaker, E. N., 1.
 Ores, Matahambre mine: Haffner, B. K., 1.
 El Cobre copper mine, Sierra Maestra Mts.: Anonymous, 83.
 Guisa-Los Negros area, Oriente Prov.: Woodring, W. P., 1.
 Manganese, Guisa-Los Negros area: Woodring, W. P., 1.
 Sierra Maestra: Park, C. F., Jr., 1.
 Petroleum poss.: Quadreny, A., 1.
 Tungsten deposits, Isla de Pinos: Page, L. R., 1.

Historical geology.

- Bituminous deposits: Brodermann, J., 2.
 General: Montoullieu, E. I., 1; Palmer, R. H., 1.
 Geologic résumé: Brodermann, J., 1.
 Guisa-Los Negros area, Oriente Prov.: Woodring, W. P., 1.
 Manganese deposits, Sierra Maestra: Park, C. F., Jr., 1.
 Terraces, Pleist.: Corral y Alemán, J. I. del, 1.
 Tungsten deposits, Isla de Pinos: Page, L. R., 1.

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Mineralogy.

- Bituminous deposits: Brodermann, J., 2.
 Chromite, Camaguey Prov.: Guild, P. W., 1.
 Gravimeter prosp.: Hammer, S. I., 1.
 Copper, El Cobre mine, Sierra Maestra Mts.: Anonymous, 83.
 Matahambre mine, ores, structure of deposits: Haffner, B. K., 1; Pennebaker, W. N., 1.
 Manganese, Guisa-Los Negros area: Woodring, W. P., 1.
 Tungsten deposits, Isla de Pinos: Page, L. R., 1.

Paleontology.

- Baggina, Tert.: Cushman, J. A., 4.
 Foraminifera, Eocene: Cole, W. S., 2.
 General: Palmer, R. H., 1.
 Geologic résumé: Brodermann, J., 1.
 Guisa-Los Negros area, Oriente Prov.: Woodring, W. P., 1.
 Mollusca, Pleist., Gibara Bay: Pérez Farfante, I., 1.
 Nodobaculatiella: Cushman, J. A., 4.

Petrology.

- Chromite, gravity prosp.: Hammer, S. I., 1.
 General: Palmer, R. H., 1.
 Manganese deposits, Sierra Maestra: Park, C. F., Jr., 1.
 Tungsten deposits, Isla de Pinos: Page, L. R., 1.

Physical geology.

- Copper deposits, Matahambre, ores, structure: Haffner, B. K., 1; Pennebaker, E. N., 1.
 General: Palmer, R. H., 1.
 Geologic résumé: Brodermann, J., 1.
 Guisa-Los Negros area, Oriente Prov.: Woodring, W. P., 1.
 Manganese deposits, Sierra Maestra: Park, C. F., Jr., 1.
 Tungsten deposits, Isla de Pinos: Page, L. R., 1.

Physiographic geology.

- General: Palmer, R. H., 1.
 Geologic résumé: Brodermann, J., 1.
 Guisa-Los Negros area, Oriente Prov.: Woodring, W. P., 1.
 Terraces, Pleist.: Corral y Alemán, J. I. del, 1.

Underground water.

- Ground water, slaty fms., Mestanza, Guama Rivers: Fernández Simon, A., 1.
 Mineral waters: Coscolluela, J. A., 1.
 Cult of the indeterminate: Bichan, W. J., 2.
 Curtisite, Skaggs Springs, Calif.: Lisle, T. O., 3.
 Cycadeoidea. See also Paleobotany.
 Fossil Cycad Nat. Monument, S. Dak.: Wieland, G. R., 1.
 Yale Univ. collections: Wieland, G. R., 2.

- Cypress Bayou oil field, La.: Blanpied, B. W., 3.
- Cystoidea.
Illinois, Thomas A. Green Silurian fossils: Greacen, K. F., 1.
Quebec faunas: Dresser, J. A., 1.
Cytheris pipkinensis for C. hannah: Stephenson, M. B., 4.
- Dacite.
Arizona, Superior mining area: Short, M. N., 1.
California, Santa Catalina Is. marine sed.: Clements, T. D., 2.
Manitoba, Island Lake area: McMurchy, R. C., 1.
Oregon, volcanoes of Three Sisters region: Williams, H., 1.
Dahlite after bone, Colo.: Anonymous, 89.
Dam, reservoir sites, geol. invs.: Burwell, E. B., Jr., 1.
Damourite, Iron Peak ores, Utah: Crawford, A. L., 2.
- Dams.
Douglas Dam area, Tenn.: Laurence, R. A., 1.
Hungry Horse Dam, Flathead Co., Mont.: Erdmann, C. E., 1.
Limestone sites, Tenn. Valley: Money-maker, B. C., 5.
River sand deposits, eng. aspects: Krynine, D. P., 1.
Sediment, movement, deposition, near debris-barriers: Johnson, J. W., 1.
Sites, engineering for dams: Creager, W. P., 1.
Tennessee, Cherokee, Douglas Dams sites, explor.: Laurence, R. A., 2.
Zuni Dam, N. Mex.: Eckel, E. B., 1.
Danaite, British Columbia: Warren, H. V., 4.
Danalite, Iron Mtn. area, N. Mex.: Glass, J. J., 2.
Dana's System of Mineralogy: Fleischer, M., 1; Kerr, P. F., 1; Pabst, A., 1.
David Dale Owen, pioneer geologist: Hendrickson, W. B., 1.
Definitions of geology: Cram, I. H., 3.
- Deformation.
Alabama, Pinckneyville complex: Gault, H. R., 2.
Alaska, Independence mine area: Stoll, W. C., 1.
Arizona, East Kaibab monocline, Grand Canyon area: Strahler, A. N., 1.
Kaibab, Coconino plateaus: Strahler, A. N., 4.
Batholiths, scale models: Grout, F. F., 1.
British Columbia, Twin "J" Mine: Stevenson, J. S., 3.
California, Cosumnes area: U. S. G. S., 1.
Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
Canada, Lake Consolation area: Mathews, W. H., 1.
Oil and gas fields: Hume, G. S., 2.
- Deformation—Continued.
Colorado, Red Creek area, Fremont Co.: Glockzin, A. R., 1.
Deformed rocks, exper. study: Knopf, E. F. B., 1.
Earth's surface, differential movement: Stetson, H. T., 1.
Earthquakes on the expanding earth: Shneiderov, A. J., 1.
Georgia, sillimanite deposits: Furcron, A. S., 4.
Greenland, Franz Josef Fjord area: Odell, N. E., 1.
Kansas, McLouth gas and oil field: Lee, W., 1.
Kinetic theory, origin orogenic forces: Fisher, J. E., 1.
Lithosphere, relation to gravity anomalies, fracture: Gunn, R., 1.
Louisiana, 1942 wildcat wells: Blanpied, B. W., 4.
Maryland, Antietam quartzite: Anderson, J. L., 1.
Cambrian quartzite: Anderson, J. L., 1.
Mexico, Plateau: Nye, S. S., 2.
Nevada, Comstock Lode area: Calkins, F. C., 1.
Rye Patch area: Vitaliano, C. J., 1.
North America, gold vein deposits: White, W. H., 1.
Ontario, North Spirit Lake area: Bateman, J. D., 7.
Pickle Lake-Crow River area: Horwood, H. C., 5.
Porcupine dist.: Evans, J. E. L., 1.
Red Lake area: Horwood, H. C., 3.
Stover Tp.: Horwood, H. C., 1.
Sudbury breccias, origin: Fairbairn, H. W., 3.
Quartz lamellae: Ingerson, F. E., 2.
Slip surfaces in rocks, metals, fm.: Nádai, A., 1.
Tennessee, NE.: King, P. B., 4.
Texas, Big Spring area: Livingston, P. P., 1.
United States, Basin and Range Prov.: Longwell, C. R., 8.
Northwest, Pleist. stage: Lupton, R. L., 3.
Rocky Mtn. area, basement control: Chamberlin, R. T., 4.
Structural geology: King, P. B., 3.
Western: Longwell, C. R., 7.
Utah, Wasatch Mts.: Eardley, A. J., 1.
Vermont, west-central: Cady, W. M., 2.
Virginia, Burkes Garden quad.: Cooper, B. N., 1.
Glade Mtn. dist.: Miller, R. L., 1.
Washington, Morton cinnabar dist.: Mackin, J. H., 1.
Wyoming, geology and devel., oil and gas fields: La Fleche, P., 1.
Deformed rocks, exper. study: Knopf, E. F. B., 1.

- Delafossite, structure of: Pabst, A., 2.
- Delineation, parallel folds, measurement strat. dimensions: Mertie, J. B., Jr., 2.
- Deltas.
- Alberta, Red Deer, Rosebud area: Sanderson, J. O. G., 1.
 - California, Knoxville ser.: Anderson, F. M., 1.
 - Mississippi, coastal area: Brown, G. F., 3.
 - New York, Catskill quad.: Cook, J. H., 2; Ruedemann, R., 5.
 - Coxsackie quad.: Cook, J. H., 3; Goldring, W., 3.
 - North Dakota, Emerado quad.: Laird, W. M., 1.
 - United States, Gulf Coast: Storm, L. W., 1.
- Depth-displacement slide rule: Phillipone, W. R., 1.
- Desclouzeite.
- Arizona, Apache mine, Gila Co.: Keithley, H. S., 1.
 - Mexico, Los Lamentos: Anonymous, 93.
- Deserts.
- California, sand: Laudermilk, J. D., 2.
 - United States: Price, W. A., 1.
- Deep oil wells, W. Va., records of: Tucker, R. C., 1.
- Del Valle oil field, Calif.: Hodges, F. C., 1.
- Depths, low frequency elec. prosp.: Lewis, W. B., 1.
- Density, sediments in reservoirs: Lane, E. W., 1.
- Development, subsurface methods for oil explor.: Brewer, C., Jr., 1.
- Devonian.
- Alabama-Mississippi Basin: Carroll, D. L., 1.
 - Alberta, Alexo area: Crombie, G. P., 1, 2.
 - Athabaska-Barrhead area: Feniak, M. W., 1.
 - Central area, Foothills: MacKay, B. R., 1.
 - Drilling, structure, for oil: Furnival, G. M., 1.
 - Drimman to Brulé Lake area: Lang, A. H., 1.
 - Dyson Creek area: Hage, C. O., 2.
 - Fall Creek area: Henderson, J. F., 2.
 - Saunders map area: Erdman, O. A., 1.
 - Tay River area: Henderson, J. F., 1.
 - West of 5th meridian: Canada G. S., 1.
 - Vermilion area: Nauss, A. W., 1.
 - Wainwright field: Hume, G. S., 5.
 - Wawa Creek area: MacKay, B. R., 2.
- Arizona, Grand Canyon, Colo. River:
- Cueto Rui-Díaz, E., 1.
 - Paleozoic, cent., NE.: U. S. G. S., 2.
 - North, Uinkaret Plateau: Koons, E. D., 1.
 - Superior mining area: Short, M. N., 1.
 - Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.
- Devonian—Continued.
- Arkansas: Miser, H. D., 1.
 - Batesville dist.: U. S. G. S., 1.
 - Bellows Falls quad., N. H.-Vt.: Kruger, F. C., 1.
 - Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
 - Canol invs., Mackenzie River area: Hume, G. S., 8.
 - Canol project: Laudon, L. R., 1.
 - Dominion Atlantic Ry. area: Hutt, G. M., 16.
 - Eastern Arctic: Robinson, J. L., 1.
 - Liard River area: Hage, C. O., 5.
 - Oil and gas fields: Hume, G. S., 2.
 - Structure and relief: Brouillette, B., 1.
 - Western, oil devel.: Hume, G. S., 9.
 - Colorado, northwestern: U. S. G. S., 2.
 - Paleozoics: Johnson, J. H., 7.
 - Sawatch Range area: Johnson, J. H., 3.
 - White River Plateau: MacQuown, W. C., Jr., 1.
- Geologic calendar, periods, time, lengths: Elias, M. K., 5.
- Greenland, East, between 74°-75°, and islands: Vischer, G. A., 1.
- Idaho, Birch Creek area: Anderson, A. L., 1.
- Illinois: Cooper, G. A., 2; Workman, L. E., 1.
- Cave in Rock dist.: Currier, L. W., 2.
 - Centralia-Salem area: Caylor, G. W., 1.
 - Hardin Co. fluorspar areas: Currier, L. W., 1.
 - Herrin (No. 6) coal bed: Payne, J. N., 1.
 - Rotary drilling cores: Mylius, L. A., 1.
 - Sandoval pool area: Hoover, W. F., 1.
 - Southern: Weller, J. M., 2.
 - Subsurface fms.: Warthin, A. S., Jr., 1.
- Illinois Basin oil fields, U. S.: Bays, C. A., 3.
- Indiana: Sutton, A. H., 1.
- Clifty Falls State Park: Freeman, O. W., 2.
- Iowa: Gwynne, C. S., 1; Stainbrook, M. A., 1.
- Ceramic shales and clays: Gwynne, C. S., 1.
- Independence sh.: Stainbrook, M. A., 2.
- Kansas, McLouth gas and oil field: Lee, W., 1.
- Rock fms.: Moore, R. C., 1.
 - Thomas Co.: Frye, J. C., 1-a.
- Kentucky: McFarlan, A. C., 2.
- Corniferous fm., Irvine, Estill Co.: McFarlan, A. C., 3.
 - Western: Freeman, L. B., 1.
- Maine, Mount Desert Is.: Chadwick, G. H., 1.

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- Manitoba, Winnipeg area: Hutt, G. M., 2.
 Michigan, oil, gas devel., 1943: Wasson, T., 1.
 Marquette iron range: Seaman, W. A., 1.
 Porter oil field: Landes, K. K., 4.
 South-central: U. S. G. S., 1.
 Southwest, Dundee fm.: U. S. G. S., 2.
 Sylvania, Bois Blanc fms.: U. S. G. S., 1.
 Michigan Basin, Dundee fm., Rogers City ls.: U. S. G. S., 1.
 Minnesota, iron ranges: Stauffer, C. R., 2.
 Southern: Thiel, G. A., 1.
 Mississippi, geol. map: Miss. G. Soc., 2.
 Monroe Co.: Vestal, F. E., 1.
 Missouri: Branson, E. B., 2.
 Northeast: Branson, E. B., 2.
 Northwest, recent oil invs.: Greene, F. C., 1.
 Southeast: Croneis, C. G., 1.
 Montana: U. S. G. S., 1.
 Little Rocks Mts. plains: U. S. G. S., 1.
 North, Big Belt Range: Lyons, J. B., 1.
 Northwest: U. S. G. S., 2.
 Nevada, Sloan Hill, Las Vegas area: Deiss, C. F., 1.
 New Brunswick, Grand Lake coal field: Wright, W. J., 1.
 Musquash area: Alcock, F. J., 4.
 St. George area: Alcock, F. J., 3.
 New Hampshire: Bannerman, H. M., 1;
 Billings, M. P., 3.
 Monadnock quad.: Billings, K. S. F. L., 1.
 Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Paleozoic magma ser.: Billings, M. P., 4.
 Pawtuckaway Mts.: Roy, C. J., 1.
 Pegmatites: Bannerman, H. M., 1.
 Mt. Washington area: Billings, K. S. F. L., 2.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 General: Stevenson, F. V., 1.
 Silver City area: Entwistle, L. P., 1.
 New York, Catskill quad.: Ruedemann, R., 5, 6.
 Coxsackie quad.: Goldring, W., 3.
 Genesee group: Grossman, W. L., 1.
 New York-Pa., zonal Ostracoda: Swartz, F. M., 1.
 North America, Foraminifera-formed lss.: Johnson, J. H., 9.
 Geosynclines in continental devel.: Kay, G. M., 1.
 Tectonic devel., E. edge of Pacific: Stille, H. W., 1.
 North Dakota, stratigraphy and structure: Laird, W. M., 2.

Devonian—Continued.

- Northwest Territories, Mackenzie River Valley: Stewart, J. S., 1, 2.
 Oil and gas poss., Mackenzie River Valley: Stewart, J. S., 1.
 Nova Scotia, Riverside Corner area: Messervey, J. P., 3.
 Ohio: Stout, W. E., 8.
 Barberton ls. mine: Stauffer, C. R., 1.
 Detroit River ls.: Stumm, E. C., 2.
 Franklin Co. and Columbus area: Harker, D. H., 2.
 Fulton Co.: Harker, D. H., 3.
 Geology of water: Stout, W. E., 1.
 Gypsum: Lintner, E. J., 1.
 Sandstones: Stout, W. E., 7.
 Summit Co. and Akron: Harker, D. H., 5.
 Wood Co.: Harker, D. H., 6.
 Oklahoma: Miser, H. D., 1.
 Arbuckle Mts.: Ham, W. E., 3; Lehman, R. P., 1.
 Black Knob Ridge area: U. S. G. S., 1.
 Bromide area: Ham, W. E., 2.
 Dougherty asphalt area: U. S. G. S., 1.
 Ground water: Dott, R. H., 4.
 Northeast: U. S. G. S., 2.
 Sulfur asphalt area: U. S. G. S., 1.
 West Edmond oil field: Atkinson, W. H., 1; Dahlgren, E. G., 1; Taylor, F. B., 1.
 Ontario, fluorspar Madoc dist.: Rowe, R. C., 2.
 Owen Sound area: Caley, J. F., 2.
 Pennsylvania, folded Appalachians, stream devel.: Strahler, A. N., 5.
 Huntingdon area: Willard, B., 2.
 Mineral resources areas: Ashley, G. H., 1.
 Oil City quad.: Dickey, P. A., 1.
 Possible future oil pools: Sherrill, R. E., 1.
 Quebec: Dresser, J. A., 1.
 Dudswell, Wolfe, Richmond, Compton Cos.: Cooke, H. C., 3.
 Gaspé ss.: Fritz, M. A., 4.
 Moulton Hill deposit: Hawley, J. E., 1.
 Orford area: Fortier, Y. O., 1.
 Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
 Standstead area, Brome and Standstead Cos.: Ambrose, J. W., 2.
 South Dakota: Rothrock, E. P., 1.
 Sweet Springs dist., Va.-W. Va.: Ladd, H. S., 1.
 Tennessee: Born, K. E., 21.
 Norris area: Hall, G. M., 1.
 Oil and gas poss.: Born, K. E., 3.
 Reverse faulting, Camden: Ross, R. M., 1.
 Texas, Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Moore Co.: Fosshage, E. W., 1.
 Permian Basin oil fields: Osborne, P. F., 1.

Devonian—Continued.

Texas—Continued.

- Permian Basin porosity: Jones, T. S., 1.
- Pre-Permian axes of deposition: Barton, J. M., 1.
- Sierra Diablo area: U. S. G. S., 1.
- United States, Anadarko Basin: Gibbon, A., 1.
- Appalachian Basin, Berea sand: U. S. G. S., 1.
- Basin-and-Range Prov.: Longwell, C. R., 8.
- Southwest, correl.: U. S. G. S., 2.
- Western Paleozoics: Bass, N. W., 1.
- Utah, N.-cent., Wasatch Mts.: Eardley, A. J., 1.
- Northeast: U. S. G. S., 2.
- Vermont, W., N. end Taconic thrust sheet: Kaiser, E. P., 1.
- Virginia, Bland, Giles Cos.: Ladd, H. S., 2.
- Burkes Garden quad.: Cooper, B. N., 1.
- Dolomites, Iss., New-Roanoke Rivers dist.: Cooper, B. N., 3.
- Rose Hill oil field: U. S. G. S., 1.
- Shenandoah Nat. Park: Rickard, H. L., 1.
- West Virginia, deep wells: Tucker, R. C., 1.
- Rocks, minerals: Erwin, J. P., 1.
- Wyoming: La Fleiche, P., 2.
- Little Buffalo Basin field: U. S. G. S., 8.
- Wind River Mts., NW. end.: U. S. G. S., 1.
- Yukon, Whitehorse dist.: Cockfield, W. E., 1.

Diabase.

- Arizona, Apache mine, Gila Co.: Keithley, H. S., 1.
- Superior mining dist.: Short, M. N., 1.
- California, San Luis Obispo Co.: Smith, C. T., 1.
- Carolina Piedmont: Kesler, T. L., 1.
- Maine, Mt. Waldo batholith: Trefethen, J. M., 1.
- New Jersey, Edgewater Road cut: Zoda, P., 6.
- Palisades area: Butler, S. B., 1.
- Ontario, E. extension of Fort Hope area: Prest, V. K., 2.
- Porcupine dist.: Evans, J. E. L., 1.
- Rennie-Leeson area: Bruce, E. L., 1.
- Stover Tp.: Horwood, H. C., 1.
- Pennsylvania, cent.-east: Hersey, J. B., 1.
- Triassic derivatives: Tomlinson, W. H., 3.
- United States, Stockton, Lockatong fms. type secs.: McLaughlin, D. B., 2.
- Diamond drill-hole sampling, surveying, interpretation: Collins, J. J., 1.

Diamond drilling in exploration, development: Moehlman, R. S., 1.

Diamond drilling, sampling, Mascot zinc deposits, Tenn.: Oder, C. R., L., 2.

Diamond-drill sampling calculations: Greenhalgh, C. W., 1.

Diamonds. See also Precious stones.

Appalachian, U. S.: Holden, R. J., 1.

Arkansas: Henson, P., 1; Wheeler, H. E., 2.

"Hot Springs diamonds": Buhlis, R., 2.

Cathodoluminescence of gems: De Ment, J. A., 2.

Famous, of the world: Shipley, R. M., 1.

Fancies, colored diamonds: Ball, S. H., 1.

General: Austin, A. C., 1; Shipley, R. M., 1; Van Leuven, E. P., 1.

Glossary: Anonymous, 6.

Hardness variation and orientation: Winchell, H., 3.

Industrial: Yarham, E. R., 1.

Luminescence: Buddhue, J. D., 2.

Punch Jones diamond, Va.: Anonymous, 34.

Virginia, Punch Jones diamond: Holden, R. J., 1.

Diaspore.

Pennsylvania, high-alumina clay: Foose, R. M., 3.

Clay, migration effect, minerals, hydrous aluminum oxides: Allen, V. T., 2.

Diatrophism.

California, Los Angeles area, subsidence, elevation: Grant, U. S., IV, 1.

Santa Lucia Range: Taliaferro, N. L., 1.

Sierra Nevada, Mono Lake area: Putnam, W. C., 1.

Canada: MacKay, B. R., 3.

Central America: Swainson, O. W., 1.

Isostasy theory, physical considerations: Hubbert, M. K., 2.

Mexico: Swainson, O. W., 1.

Ontario, Red Lake area: Horwood, H. C., 3.

Sedimentation, differential, products in 1 cycle: Krynine, P. D., 1.

Washington, geology: Weaver, C. E., 3.

Wyoming: La Fleiche, P., 2.

Willwood, Tatman fms.: Van Houten, F. B., 1.

Diatomaceae. See also Diatomaceous earth; Diatomite.

California, pellet phosphorite, Carmel Valley: Rogers, A. F., 2.

Fauna, Cochise culture area, Ariz.: Sayles, E. B., 1.

Marine ecology as related to paleontology: Ladd, H. S., 3.

Mexico, Gulf of Calif. area: Osorio Taffall, B. F., 1.

New Jersey, Brandywine Lighthouse boring, Miocene flora: Patrick, R. M., 1.

Diatomaceae—Continued.

- North America, W., marine Cenozoic fms. index fossils: Weaver, C. E., 2.
Paleoecological indicators: Lohman, K. E., 1.
United States, Lower Klamath Lake: Conger, P. S., 1.
Northern Great Basin: Cressman, L. S., 1.
Diatomaceous earth. See also Diatomaceae; Diatomite.
California, Casmalia area: U. S. G. S., 1.
Mexico: Diaz Lozano, E., 1.
Texas, High Plains: Evans, G. L., 5.
Diatomite. See also Diatomaceae; Diatomaceous earth.
British Columbia, Nicola area: Cockfield, W. E., 2.
California, Casmalia area: U. S. G. S., 1.
Santa Maria oil dist.: U. S. G. S., 1.
Nevada, non-metallies: York, B., 1.
Nova Scotia, Cobequid Mts.: Bancroft, M. F., 2.
Texas, High Plains: Evans, G. L., 5.
United States, Pacific Northwest: Skinner, K. G., 1.
Southeast, min. res.: Ralston, O. C., 1.

Dickite.

- Clay migration effect, minerals, hydrous aluminum oxides: Allen, V. T., 2.
Michigan, Marquette, Gogebic ranges: Gruner, J. W., 7.
Dictionary, geologic terms: Rice, C. M., 1.
Differentiation, magnesite from dolomite in crushed material: Faust, G. T., 2.
Digenite, Ariz., Superior mining area: Short, M. N., 1.
Dihydrate, Mineral County, Nev.: Goudey, H., 1.

Dikes. See also Intrusions.

- Alaska, explosion-breccia. Wrangell dist.: Gault, H. R., 5.
Groundhog Basin: Gault, H. R., 4.
Independence mine area: Stoll, W. C., 1.
Arizona, Borianna dist. and Aquarius Range: Hobbs, S. W., 1.
Grand Canyon, Colo. River: Cueto Rul-Diaz, E., 1.
Oak Creek Canyon: McKee, E. D., 3.
Superior mining dist.: Short, M. N., 1.
Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.
Arkansas, Magnet Cove ring-dike complex: Bissell, H. J., 1.
British Columbia, Ainsworth area: Rice, H. M. A., 1.
Britannia mine No. 8 orebodies: Irvine, W. T., 1.
China Creek area: Stevenson, J. S., 4.
Coast: Gunning, H. C., 2.
Coast Range batholith, prosp. Bridge River-Whitesail Lake: Joubin, F. R., 1.

Dikes—Continued.

British Columbia—Continued.

- Little Billie mine, Texada Is.: Stevenson, J. S., 5.
Nickel Plate Mtn. area: Dolmage, V., 1.
Premier mine deposits: Langille, E. G., 1.
Smithers area: Armstrong, J. E., 2.
Sullivan mine area: Swanson, C. O., 1.
Tuya-Teslin area: Watson, K. D., 1.
Twin "J" Mine: Stevenson, J. S., 3.
Tyaughton Lake area: Cairnes, C. E., 1.
Whitesail Lake area: Holland, S. S., 3.
California, Barstow quad., San Bernardino Co.: Miller, W. J., 2.
Blairsdon area: Durrell, C., 1.
Crestmore minerals: Woodford, A. O., 1.
Glenn Co.: Rynearson, G. A., 1.
Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.
Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.
Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
Pseudo, and foliated: Miller, W. J., 4.
San Luis Obispo Co.: Smith, C. T., 1.
Santa Cruz area: U. S. G. S., 1.
Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
Carolina Piedmont: Kesler, T. L., 1.
Colorado, Placerville dist.: Hoff, J. C., 1.
Columbia Basin, Wash.-Idaho: Lupher, R. L., 2.
Cuba, Guisa-Los Negros area: Woodring, W. P., 1.
Isla de Pinos tungsten deposits: Page, L. R., 1.
Georgia, SW.: Furcron, A. S., 2; SE. Geol. Soc., 2.
Greenland, East, between 74°-75°, and islands: Vischer, G. A., 1.
Idaho, Lath Co.: Tullis, E. L., 1.
Maine, Mount Desert Is.: Chadwick, G. H., 1.
Mt. Waldo batholith: Trefethen, J. M., 1.
Manitoba, Gurney gold mine area: Hage, C. O., 4.
Mauna Kea, Hawaii, ring structures: Macdonald, G. A., 6.
Mexico, Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.
Sonora tungsten deposits: Wiess, J. H., 1.
Taxco mining dist.: Fowler, G. M., 2.
Michigan iron deposits: Martin, H. M. M., 2.
Ishpeming gold range: Snelgrove, A. K., 3.
Lake Michigamme area: Seaman, W. A., 2.

Dikes—Continued.

Michigan iron deposits—Continued.

- Marquette iron range : Seaman, W. A., 1.
 Spruce River-Peshekee River areas : Seaman, W. A., 3.
 Montana, Gage dome oil field : Perry, E. S., 2.
 General : U. S. G. S., 1.
 Jardine Cravasse Mtn. dist. : Seager, G. F., 1.
 Little Rocky Mts. plains : U. S. G. S., 1.
 North Big Belt Range : Lyons, J. B., 1.
 Red Lodge chrome deposits : Conwell, C. N., 1.
 Nevada, Nye Co., oxidation : Michell, W. D., 1.
 Rye Patch area : Vitaliano, C. J., 1.
 New Brunswick, Musquash area plutonic rocks : Belyea, H. R., 1.
 New Hampshire, mechanics of : Billings, M. P., 2.
 Mt. Washington area : Billings, K. S. F. L., 2.
 Pawtuckaway Mts. : Roy, C. J., 1.
 New Jersey, Middlesex Co. : Barksdale, H. C., 1.
 New Mexico, Iron Mtn. dist. : Jahns, R. H., 1.
 Silver City area : Entwistle, L. P., 1.
 Taos Co. pegmatites : Jahns, R. H., 3.
 New York, east Adirondack, area : Balk, R., 1.
 Lake Sanford area : Stephenson, R. C., 1.
 New York City, Manhattan Borough : Murphy, J. J., 1.
 Syracuse, peridotite altered : Maynard, J. E., 1.
 North Carolina, Townsville area : White, W. A., 3.
 Northwest Territories, Prosperous Lake area : Anonymous, 77.
 Yellowknife-Beaulieu area : Jolliffe, A. W., 1, 3.
 Nova Scotia, Gabarus area : Douglas, G. V., 3.
 Ontario, Bryce-Robillard area : Moorhouse, W. W., 1.
 Dogpaw-Kakagi Lakes area : Thomson, R. 1.
 East Bull Lake area : Moore, E. S., 3.
 Fort Hope area : Prest, V. K., 1.
 Grimsthorpe-Barrie area : Meen, V. B., 1.
 Hollinger mine : Allen, C. C., 1.
 Kalasar, Kennebec Tps. : Harding, W. D., 1.
 Leeds Co. : Harrison, J. M., 1.
 Lochalsh area ultrabasic rocks : Ginn, P., 1.
 Porcupine dist. : Evans, J. E. L., 1; Gustafson, J. K., 1.
 Red Lake area : Horwood, H. C., 2, 3.
 Renfrew area : Satterly, J., 2.

Dikes—Continued.

Ontario—Continued.

- Rennie-Leeson area : Bruce, E. L., 1.
 Ross mine, Ramore area : Jones, W. A., 1.
 Southeast : Harrison, J. M., 2.
 Stover Tp. : Horwood, H. C., 1.
 Oregon, volcanoes of Three Sisters area : Williams, H., 1.
 Pennsylvania, Hanover-York dist. : Stose, A. J., 1.
 Purgatory Chasm, Mass. : Stachura, J., 1.
 Quebec, Beattie mine : Davidson, S. C., 1.
 Bourlemaque Tp. : Norman, G. W. H., 1.
 Calumet Is. : Osborne, F. F., 1.
 Eastern Tps. chromite : Stockwell, C. H., 1.
 La Motte area : Norman, G. W. H., 4.
 Lower Romaine River area : Freeman, B. C., 2.
 Malartic gold mine : Halet, R. A., 1.
 Matamec Lake area, Saguenay Co. : Greig, E. W., 1.
 Moisie area, Saguenay Co. : Faessler, C., 2.
 Opaka River area : Freeman, B. C., 2.
 Sept-Iles area, N. bank St. Lawrence : Faessler, C., 1.
 Stanstead area, Brome and Stanstead Cos. : Ambrose, J. W., 2.
 Wakeham Lake area : Claveau, J., 1.
 South Dakota, Beecher Rock Basin : Gwynne, C. S., 2.
 Texas, Burnet Co. : Barnes, V. E., 1.
 Llano Co. : Zapp, A. D., 1.
 United States, Mexico, min. dists. : Hulin, C. D., 1.
 Utah, Reaper mine pipe : Crawford, A. L., 5.
 Washington, Blewett-Cle Elum fm. : Broughton, W. A., 1; Lupher, R. L., 1.
 Chelan nickel deposits : Patty, E. N., 2.
 Magnetite deposits, Stevens, Okanagan Cos. : Broughton, W. A., 2.
 Wyoming, Yellowstone Park rhyolite-basalt complex : Fenner, C. N., 1; Hawkes, L., 1; Wilcox, R. E., 1.
 Dinosauria. See also Reptilia.
 Fauna, Como Bluff anticline, Wyo. : Dunbar, R. O., 1.
 Reconsideration, Morrison fm. in type area, Colo. : Waldschmidt, W. A., 1.
 Diopside.
 Nevada, Rye Patch area : Vitaliano, C. J., 1.
 New York, Adirondack area : Balk, R., 1.
 Ceramic materials : Broughton, J. G., 3.
 Utah, Iron Peak ores : Crawford, A. L., 2.
 Diorite
 Arizona, Superior mining area : Short, M. N., 1.

Diorite—Continued.

- British Columbia, China Creek area: Stevenson, J. S., 4.
 Greenwood-Phoenix area: McNaughton, D. A., 1.
 Twin "J" mine: Stevenson, J. S., 3.
 Whitesail Lake area: Holland, S. S., 3.
 California, Santa Catalina Island marine sed.: Clements, T. D., 2.
 Maine, Mt. Desert Is.: Chadwick, G. H., 1.
 Mt. Waldo batholith: Trefethen, J. M., 1.
 Manitoba, Island Lake area: McMurphy, R. C., 1.
 Mexico, Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.
 New Brunswick, Musquash area plutonic rocks: Belyea, H. R., 1.
 New Hampshire, Pawtuckaway Mts.: Roy, C. J., 1.
 Winnepesaukee area: Quinn, A. W., 2.
 Ontario, E. extension of Fort Hope area: Prest, V. K., 2.
 Pickle Crow gold mine: Monette, H. H., 1.
 Rennie-Leeson area: Bruce, E. L., 1.
 Quebec, Bourlamaque Tp.: Norman, G. W. H., 1.
 Wyoming, vermiculite deposits: Hagner, A. F., 1.
 Dip and strike, from three not parallel drill cores, lacking key beds: Gilluly, J., 1.
 Dip and strike, impact point, steeply dipping beds: Zirbel, N. N., 1.
 Directional drilling explor. tool: Short, E. H., Jr., 3.
 District of Columbia.
Paleontology.
 Petrified wood: Morgan, F., 1.
Petrology.
 Planes, liquid inclusions, Wash. area crystalline rocks: Tuttle, O. F., 1.

Dolomite.

- Alabama, min. res.: Anonymous, 25.
 Alberta, Dyson Creek area: Hage, C. O., 2.
 Vermilion area: Nauss, A. W., 1.
 Arizona, Apache mine, Gila Co.: Keithley, H. S., 1.
 British Columbia, Ainsworth area: Rice, H. M. A., 1.
 California, Guadalupe area: Lisle, T. O., 1.
 Canada, Canol invs., Mackenzie River area: Hume, G. S., 8.
 Ceramics, industrial minerals: Worcester, W. G., 1.
 Flin Flon-Sherridon-Herb Lake area: Stockwell, C. H., 2.
 Manitoba dist.: Hume, G. S., 8.
 Carolina Piedmont: Kesler, T. L., 1.

Dolomite—Continued.

- Colorado, Sawatch Range area: Johnson, J. H., 3.
 Differentiation, magnesite from dolomite in crushed materials: Faust, G. T., 2.
 Illinois: Workman, L. E., 1.
 Centralia-Salem, Dev.: Caylor, G. W., 1.
 Chicago area: Willman, H. B., 1.
 Decorah, Galena fms.: Biebler, C. L., 1.
 Rotary drilling cores: Mylius, L. A., 1.
 Illinois and surrounding states, Dev.: Weller, J. M., 2.
 Indiana, Dev.: Sutton, A. H., 1.
 Harrodsburg ls., mineralization: Fix, G. F., 1.
 Iowa, Dev.: Stainbrook, M. A., 1.
 Kentucky, W., Dev.: Freeman, L. B., 1.
 Michigan, Menominee iron range: Lamey, C. A., 1.
 Southwest, Traverse group, Dundee fm.: U. S. G. S., 2.
 Missouri, Bourbon High oil field: Cullison, J. S., 2.
 Nevada, Currant Creek dist.: Faust, G. T., 1.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 New York, Ceramic materials: Broughton, J. G., 3.
 Northwest Territories, Mackenzie River Valley: Stewart, J. S., 1.
 Nova Scotia, industrial minerals: Cameron, A. E., 3.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Upper Musquodoboit area: Messervey, J. P., 1.
 Ohio: Stout, W. E., 8.
 Franklin Co. and Columbus area: Harker, D. H., 2.
 Mineral res.: Ohio Devel. Pub. Com., 1.
 Rock water: Stout, W. E., 4.
 Oklahoma, ceramic raw materials: Burwell, A. L., 1.
 Ontario, Grimsthorpe-Barrie area: Meen, V. B., 1.
 Labrador, Kennebec Tps.: Harding, W. D., 1.
 Renfrew area: Satterly, J., 2.
 Ordovician bentonite beds, SE, U. S.: Fox, P. P., 2.
 Ozark uplift, Ark.-Mo.: Cullison, J. S., 1.
 Pennsylvania, Hanover-York dist.: Stose, A. J., 1.
 Mineral area.: Ashley, G. H., 1.
 Quebec, econ. minerals: Quebec Bur. Mines, 1.
 Châteauguay Co.: Morin, L. G., 1.
 Highgate Springs sequence: Kay, G. M., 6.

Dolomite—Continued.

- Staining tests for : Douglas, G. V., 5.
 Tennessee, Buffalo Cove area : Kesler, T. L., 2.
 Bumpass Cove manganese : Rodgers, J., 1.
 Douglas Dam area : Laurence, R. A., 1.
 Greene Co. : Snyder, F. G., 1.
 Northeast : King, P. B., 4.
 West-central : Born, K. E., 21.
 Texas, Apache Mts., Culberson Co. well : Maley, V. C., 1.
 Mason Co. : McCammon, J. H., II, 1.
 Pease River Perm. group : Roth, R. I., 1.
 Permian Basin, porosity : Jones, T. S., 1.
 United States, manganese, cobalt-bearing, SE. : Pierce, W. G., 2.
 Ozark region paleoecology : Cullison, J. S., 3.
 Southeast, min. res. : Balston, O. C., 1.
 Vermont, Highgate Springs sequence : Kay, G. M., 6.
 Virginia, bauxite area : Bevan, A. C., 5.
 Burkes Garden quad. : Cooper, B. N., 1.
 Glade Mtn. dist. : Miller, R. L., 1.
 Lick Mtn. dist. : Stead, F. W., 1.
 New-Roanoke Rivers dist. : Cooper, B. N., 3.
 Southwest : Cooper, B. N., 3.
 Waynesboro area sink holes : McGill, W. M., 1.
 Washington : Bennett, W. A. G., 1.
 West Virginia, fossils, minerals, rocks, soils : Martens, J. H. C., 1.
 Pittsburgh coal seam concretion minerals : Foster, W. D., 1.

Dolomites, Ill., freezing and thawing tests : Willman, H. B., 1.

Domes. See also Salt domes.

- Air trapped in beach sands : Emery, K. O., 5.
 Alberta, Wainwright field : Hume, G. S., 5.
 Arkansas, bauxite area : Malamphy, M. C., 1; Thoenen, J. R., 1.
 Arizona, Salt River Valley : Lund, P. H., 1.
 Bellows Falls quad., N. H.—Vt. : Kruger, F. C., 1.
 California, Elk Hills oil field : Bunch, E. S., 1.
 Sierra Nevada, Mono Lake area : Putnam, W. C., 1.
 Illinois : Workman, L. E., 1.
 Louisiana, Lafitte oil field : Vance, H., 1.
 Southern, oil fields : Wallace, W. E., Jr., 1.
 Massachusetts, Shelburne Falls gneiss dome : Balk, R., 3.
 Mississippi, res. : Morse, W. C., 5.
 Montana, Gage dome oil field : Perry, E. S., 2.

Domes—Continued.

- New Hampshire, Oliverian magma ser., Mt. Washington quad. : Chapman, C. A., 1.
 Petroleum, description of reservoirs : Plummer, F. B., 5.
 Quebec, lower Romaine River area : Retty, J. A., 1.
 United States, SE., Piedmont granite domes origin : White, W. A., 5.
 Western, oil poss. : U. S. G. S., 2.
 Wyoming, Maverick Springs area : U. S. G. S., 1.
 Dominican Republic.
Economic geology.
 Salt deposits : Anonymous, 18.
Mineralogy.
 Salt deposits : Anonymous, 18.
 Drainage changes. See also Glacial geology ; Physiographic geology (general).
 Alberta, Cowley area : Hage, C. O., 1.
 Drainage pattern : Warren, P. S., 2.
 Appalachian Valley, stream selectivity, U. S. : Sharp, H. S., 1.
 Arizona, Kaibab, Coconino Plateaus : Strahler, A. N., 4.
 Arizona-Utah, East Kaibab monocline : Babenroth, D. L., 1.
 British Columbia, Peace River Foot-hills : McLearn, F. H., 2.
 California, Mokelumne area : Durrel, C., 2.
 Canada : MacKay, B. R., 3.
 Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Lytton to Vancouver : Hutt, G. M., 12.
 Manitoba dist. : Hutt, G. M., 15.
 Medicine Hat to Vancouver : Hutt, G. M., 14.
 Winnipeg to Edmonton : Hutt, G. M., 13.
 Gold nuggets on mtn. tops : Crocker, W., 1.
 Illinois, E.-cent. buried valley : Horberg, L., 1.
 Northeast : Bays, C. A., 5.
 Preglacial phys. features : Horberg, L., 2.
 Kansas, valley erosion since Pliocene algal ls. deposit : Frye, J. C., 3.
 Kentucky : McFarlan, A. C., 2.
 Kentucky River : Jillson, W. R., 9.
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 Mine waste in Galena River bed sediments, Wis., Ill.: Adams, C., 1.
 Minnesota, Lake Superior beaches: Grogan, R. M., 1.
 Montana, Gravelly Range area: Atwood, W. M., 1.
 Nebraska, Pleist. loess: Schultz, C. B., 1.
 New York City, Manhattan Borough: Murphy, J. J., 1.
 North America, glacial: Crosby, I. B., 2.
 North Dakota, Fox Hills-Hell Creek-Cannonball fms.: Lindberg, M. L. L., 2.
 Ohio, E.: Ver Steeg, K., 2.
 Lake Erie shore: White, G. M., 2.
 Ontario, Flowerpot Island: Harrington, L., 1.
 Oregon, S. coast: Baldwin, E. M., 1.
 Quebec, Federal mine area: Auger, P. E., 2.
 Rain drops, effect on: Ellison, W. D., 1.
 Rocks and rivers: Shuler, E. W., 1.
 Selva Lacandona, Mex., Guatemala: Mullerried, 5.
 Soil, origin, erosion, preservation: Twenhofel, W. H., 1.
 South Carolina, Piedmont Valleys: Happ, S. C., 3.
 South Dakota, Beecher Rock Basin: Gwynne, C. S., 2.
 Stream, velocity, load of: Quirke, T. T., 1.
 Stream-transp., effect on mineral grains of sand size: Thiel, G. A., 2.
 Streams, drainage basins, erosional devel.: Horton, R. E., 1.
 Subglacial erosion hypothesis: Holmes, C. D., 2.
 Tennessee, ls., solution, Hales Bar Dam: Frink, J. W., 2.
 Texas, geology, climate, soils: Baker, C. L., 1.
 Hidalgo Co. soils: Wynd, F. L., 1.
 Lower Rio Grande Valley: Wynd, F. L., 2.
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- United States, climatic maps of geol. interest: Visher, S. S., 2.
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 Yellowstone-Bighorn area: Thom, W. T., Jr., 2.
 Utah, Logan Cave: Church, V., 1.
 Mt. Timpanoga caves: Bullock, K. C., 1.
 Wisconsin, Kickapoo Valley, floods: Happ, S. C., 1.
 Wyoming, Rocky Mts. evolution: Knight, S. H., 1.
 Willwood, Tatman fms.: Van Houten, F. B., 1.
 Erratic masses, Arbuckle Mts., Okla.: Lehman, R. P., 1.
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 Errors, maximum, mineralogic computations: Fairbairn, H. W., 4.
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 Quebec, Ile St. Bernard: Morin, L. G., 2.
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 Eucutta oil field, Miss.: Hughes, U. B., 1; Miss G. Soc., 1; Morse, W. C., 5; Williams, N., 1; Anonymous, 38.
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New York, Catskill quad. faunas: Ruedemann, R., 5, 6.
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 Deepkill Ord. sh.: Flower, R. H., 6.
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 Quebec faunas: Dresser, J. A., 1.

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- Ancestorless man: Gillette, J. M., 1.
 Birds, Calif.: Miller, L. H., 1.
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- Mankind so far: Howell, W. W., 1.
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 Tempo, mode, in evolution: Hutchinson, G. E., 3; Simpson, G. G., 1; Wright, S., 1.
 Evolution, creation, science: Marsh, F. L., 1.
 Evolution, succession, dispersal: Schmidt, K. P., 2.
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 New Jersey, Great Notch mineral area: Zodiac, P., 2.
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 Alkaline rocks, origin, differentiation: Bowen, N. L., 2.
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 Arizona, Coconino ss. small-scale structures: McKee, E. D., 2.
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 Batholiths, scale models: Grout, F. F., 1.
 Canada, nickel sulphide oxidation: Michener, C. E., 1.
 Clastic sediments, fine-grained, orientation analysis: Dapples, E. C., 1.
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 Heavy minerals in sediment-transportation studies: Rittenhouse, G., 1.
 Illinois, surface clays for molding sands: Grogan, R. M., 2.
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 Metallic minerals, determination, heat effect: Auger, P. E., 1.
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- Micro-drill, experimental: Wagner, W. R. T., 2.
- Microseisms and rockbursts: Hodgson, E. A., 2.
- Moon craters, experimental: Ley, W., 1.
- New England, gravity observations: Woollard, G. P., 1.
- Ontario, rockburst research, Lake Shore mines: Hodgson, E. A., 2.
- Petrographic analysis by fragment counting: Chayes, F., 2.
- Petroleum, origin: Nevin, C. M., 1.
- Quartz, deformation planes, crystallog. directions: Anderson, J. L., 1.
- X-ray effect on elastic constants: Frondel, C., 3.
- Radioactivity and petroleum genesis: Sheppard, C. W., 1.
- Silica, hydrothermal solubility: Kennedy, G. C., 1.
- Solubility: Hitchen, C. S., 1.
- Silica gel, and Warsaw fm. geodes: Robertson, P., 1.
- Staining tests for dolomite: Douglas, G. V., 5.
- Stream transp. effect on mineral grains of sand size: Thiel, G. A., 2.
- System $\text{NaAlSiO}_4\text{--CaSiO}_3\text{--NaSiO}_3$: Spivak, J., 2.
- Texas, W. Perm. Basin surface heat flow: Birch, A. F., 1.
- Torsion-balance surveys of inundated areas: Hasselman, K. F., 1.
- Tracks in sand, wet and dry: McKee, E. D., 1.
- Transportation of fine sediments by flowing water: Kalinske, A. A., 1.
- United States, Lake Erie sediments: Cuthbert, F. L., 1.
- Variations in crustal layers: Gutenberg, B., 7.
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- Water permeability, reservoir sands: Johnston, N., 1.

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- Bauxite explor. unit: Hendricks, S. B., 1.
- Clays, U. S.: Ries, H., 1.
- Combined surface and seismic: Geyer, R. L., 1.
- Mexico, oil program: Logan, L. J., 2.
- Petroleum: Illing, V. C., 1.
- Factors in localizing mining dists.: Hulin, C. D., 1.
- Famous diamonds of the world: Shipley, R. M., 1.

Fault scarps.

- United States, Olympic-Wallowa lineament: Raisz, E. J., 1.

Faulting.

- Alabama, flake graphite belt: Pallister, H. D., 1.
- Northern, Paleozoic stratigraphy: Cloud, P. E., Jr., 4.
- Pinckneyville complex: Gault, H. R., 2.

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Alabama—Continued.

- Tin belt: Hunter, F. R., 1.
- Tuscaloosa, Cottondale quads.: U. S. G. S., 1.
- Alaska, Agattu Island, Aleutians: Sharp, R. P., 1.
- Groundhog Basin: Gault, H. R., 4.
- Independence mine area: Stoll, W. C., 1.
- Katalla area: Miller, D. J., 1.
- Matanuska Valley coal field: Payne, T. G., 1; Tuck, R., 1.
- Moose Creek dist., Matanuska coal field: Apell, G. A., 1.
- Nickel-copper deposits, Spirit Mtn. area: Kingston, J., 1.
- Wide Bay anticline area: Kellum, L. B., 4.
- Yakataga area: Spieker, E. M., 1.
- Alberta, Alexo area: Crombie, G. P., 1, 2.
- Cowley area: Hage, C. O., 1.
- Drinnan to Brûlé Lake area: Lang, A. H., 1.
- Dyson Creek area: Hage, C. O., 2.
- Entrance area: Lang, A. H., 2.
- Fall Creek area: Henderson, J. F., 2.
- Oil field devels.: Storm, L. W., 2.
- Pedley area: Irish, E. J. W., 1.
- Stimson Creek area: Hume, G. S., 1.
- Tay River area: Henderson, J. F., 1.
- West of 5th meridian: Canada G. S., 1.
- Wawa Creek area: MacKay, B. R., 2.
- Arizona, Borianna dist. and Aquarius Range: Hobbs, S. W., 1.
- North, Uinkaret Plateau: Koons, E. D., 1.
- Oak Creek Canyon: McKee, E. D., 3.
- Superior mining area: Short, M. N., 1.
- Arizona-Utah, East Kaibab monocline: Babenroth, D. L., 1.
- Arkansas, Batesville area: Gordon, M., Jr., 1; U. S. G. S., 1.
- Bellows Falls quad., N. H.-Vt.: Kruger, F. C., 1.
- British Columbia, Ainsworth area: Rice, H. M. A., 1.
- Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.
- Bralorne mines: Gibson, S., 1.
- Britannia mine No. 8 orebodies: Irvine, W. T., 1.
- Central-sou. area: Hedley, M. S., 1.
- China Creek area: Stevenson, J. S., 4.
- Coast Range batholith, prosp., Bridge River-Whitesail Lake: Joubin, F. R., 1.
- Dunlevy-Portage Mtn. area: Beach, H. H., 1.
- Emerald tungsten project: Mason, E. E., 1.
- Fort Nelson-Watson Lake area, poss.: Williams, M. Y., 3.
- Hasler Creek area: Spivak, J., 1.

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British Columbia—Continued.

- Hazelton, Cassiar dist.: Armstrong, J. E., 3.
 Island Mtn. mine: Benedict, P. C., 1.
 Little Billie mine, Texada Is.: Stevenson, J. S., 5.
 Lone Mtn. area: McLearn, F. H., 1.
 Manson Creek area: Armstrong, J. E., 5, 7.
 Mt. Hulcross-Commotion Creek area: Wickenden, R. T. D., 1; Williams, M. Y., 2.
 Nickel Plate Mtn. area: Dolmage, V., 1.
 Omineca dist.: Armstrong, J. E., 4.
 Peace River Foothills: McLearn, F. H., 2.
 Pinchi Lake area: Armstrong, J. E., 1.
 Polaris-Taku mine: MacPherson, F. H., 1.
 Premier mine deposits: Langille, E. G., 1.
 Smithers area: Armstrong, J. E., 2.
 Sullivan mine area: Swanson, C. O., 1.
 Takla, Cassiar dist.: Armstrong, J. E., 6.
 Turner Valley area fields: Hume, G. S., 6.
 Tuya-Teslin area: Watson, K. D., 1.
 Twin "J" Mine: Stevenson, J. S., 3.
 Tyaughton Lake area: Cairnes, C. E., 1.
 California, Barstow quad., San Bernardino Co.: Miller, W. J., 2.
 Big Pine volcanic field: Mayo, E. B., 1.
 Casmalia area: U. S. G. S., 1.
 Coast, Point Arena-Port Ross: Weaver, C. E., 3.
 Diablo Range quicksilver deposits: Yates, R. G., 1.
 Elk Hills oil field: Bunch, E. S., 1.
 Glenn Co.: Rynearson, G. A., 1.
 Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.
 Knoxville quicksilver dist.: Averitt, P., 1.
 Los Angeles area, subsidence, elevation: Grant, U. S., IV, 1.
 Los Angeles Basin: U. S. G. S., 2.
 Lost Hills oil field: Barton, D. C., 3.
 McKittrick dist. bituminous deposits: U. S. G. S., 1.
 Mojave Desert: Laundermilk, J. D., 3.
 Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.
 Newhall-Potrero, Aliso Canyon, Del Valle, Van Canyon oil fields: Hodges, F. C., 1.
 Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
 Puente, San Jose Hills: U. S. G. S., 1.
 Rio Vista gas field: Frame, R. G., 1.
 Salinas Valley: U. S. G. S., 1.

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California—Continued.

- San Juan Bautista quad.: Allen, J. E., 2.
 San Miguelito oil field: Barnes, K. B., 2.
 Santa Ana Mts., Paleocene, Eocene: U. S. G. S., 2.
 Santa Catalina Is. marine sed.: Clements, T. D., 2.
 Santa Lucia Range: Taliaferro, N. L., 1.
 Santa Mario oil dist.: U. S. G. S., 1.
 Santa Rosa Hills-Purisima Hills dists.: U. S. G. S., 1.
 Santa Susana thrust, Los Angeles Co.: Hazzard, J. C., 1.
 Sierra Nevada, Mono Lake area: Putnam, W. C., 1.
 South Mtn. field: Bailey, W. C., 1.
 Canada: MacKay, B. R., 3.
 Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
 Canol invs., Mackenzie River area: Hume, G. S., 8.
 Canol project: Laudon, L. R., 1.
 Duparquet-Larder Lake-Rouyn area: Ambrose, J. W., 1.
 Flin Flon-Sheridon-Herb Lake area: Stockwell, C. H., 2.
 Fort Nelson-Liard-Beaver Rivers area: Kindle, E. D., 1.
 Gold deposits: Anonymous, 50.
 Golden to Sicamous: Hutt, G. M., 8.
 Liard River area: Hage, C. O., 5.
 Medicine Hat to Vancouver: Hutt, G. M., 14.
 Mineral industry: Moore, E. S., 4.
 Sicamous to Lytton: Hutt, G. M., 9.
 Western, oil field devel.: Hume, G. S., 9.
 Colorado, Elk Mtn. Penn. fault-zone: Bassett, C. F., 1.
 Maxwell reef area, Boulder Co.: MacCormack, R. J., 1.
 Rangely oil and gas field: U. S. G. S., 1.
 Rangely oil and gas field and Uinta Basin: B. M., 1.
 Red Creek area, Fremont Co.: Glockzin, A. R., 1.
 Specimen Mtn.: Wabikrom, E. E., 2.
 Vasquez overthrust, Middle Park: Tweto, O., 1.
 West-central, NW. fms.: Brill, K. G., Jr., 1.
 White River Plateau: MacQuown, W. C., Jr., 1.
 Columbia Basin, Wash.-Idaho: Lupter, R. L., 2.
 Costa Rica: Roberts, R. J., 1.
 Cuba: Palmer, K., II, 1.
 Guisa-Los Negros area: Woodring, W. P., 1.
 Isla de Pinos tungsten deposits: Page, L. R., 1.

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Cuba—Continued.

Matahambre copper mine: Haffner, B. K., 1; Pennebaker, E. N., 1.

Sierra Maestra area: Park, C. F., Jr., 1.

Dikes, foliated and pseudo, Calif.: Miller, W. J., 4.

Factors in localizing mining dists.: Hulin, C. D., 1.

Geology applied to Imbrian Plain of the moon; Spurr, J. E., 1.

Georgia, sillimanite deposits: Furcron, A. S., 4.

Gold nuggets on mtn. tops: Crockner, W., 1.

Greenland, East, between 74°–75°, and islands: Vischer, G. A., 1.

Franz Josef Fjord area: Odell, N. E., 1.

Hawaii, Kilauea Volcano solfataric rock alteration: Macdonald, G. A., 4.

Kilauea, flood developed chasm: Fagerlund, G. O., 2.

Idaho, Birch Creek area: Anderson, A. L., 1.

Teton Basin: Gardner, L. S., 1.

Illinois, Cave-in-Rock dist.: Currier, L. W., 2.

Hardin Co. fluorspar areas: Currier, L. W., 1; Hubbert, M. K., 1.

Northeast: Bays, C. A., 5.

Illinois and surrounding states, Dev.: Weller, J. M., 2.

Indiana, Harrodsburg ls., mineralization: Fix, G. F., 1.

Kansas, McLouth gas and oil field: Lee, W., 1.

Kentucky, Babb fault system: Hardin, G. C., Jr., 2.

Kentucky River: Jillson, W. R., 10.

North-central: Jillson, W. R., 8.

Union Co.: Jillson, W. R., 2.

Kinetic theory, origin orogenic forces: Fisher, J. E., 1.

Lithosphere, relation to gravity anomalies, fracture: Gunn, R., 1.

Louisiana, Cameron Meadows dome: McGuckin, G. M., 1.

Erath gas field: Anonymous, 78.

Natchitoches area: Maher, J. C., 1.

1942 wildcat wells: Blanpied, B. W., 4.

Southern oil fields: Wallace, W. E., Jr., 1.

Louisiana-Texas, Midway-Wilcox fms.: Murray, G. E., Jr., 1.

Maine, Mt. Waldo batholith: Trefethen, J. M., 1.

Manitoba, Flin Flon area: Bateman, J. D., 3.

Island Lake area: McMurphy, R. C., 1.

Mikanagan Lake area: Bateman, J. D., 1.

Snow Lake area: Harrison, J. M., 3, 4, 5.

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Maryland, Camb. quartzite: Anderson, J. L., 1.

Massachusetts, Shelburne Falls gneiss dome: Balk, R., 3.

Mexico, antimony deposits: White, D. E., 2.

Baja Calif., Concepción Penin.: Antúñez Echegaray, F., 1.

Cacahuamilpa area: Mullerried, 7.

El Alamo mine, Baja Calif.: Antúñez Echegaray, F., 1.

El Oro y Tlalpujahua mining camp: Bracho V., F., 1.

Gulf of Calif. area: Osorio Tafall, B. F., 1.

Lower California: Beal, C. H., 1.

Northern: Kellum, L. B., 1.

Pachuca-Real del Monte silver dist.: Thornburg, C. L., 1.

Pacific Coast: González Reyna, J., 1.

Parícutin volcano area: Williams, H., 2.

Permian area NW. of Las Delicias: King, R. E., 2.

Plateau: Nye, S. S., 2.

Poza Rica area, Veracruz: Arellano, A. R. V., 1.

Quicksilver-antimony deposits, Huit-zuco, Guerrero: McAllister, J. F., 1.

Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.

Sonora tungsten deposits: Wiese, J. H., 1.

Taxco mining dist.: Fowler, G. M., 2.

Valley of Tixtla: Mullerried, 3.

Michigan, iron deposits: Martin, H. M. M., 2.

Ishpeming gold range: Snelgrove, A. K., 3.

Lake Michigamme area: Seaman, W. A., 2.

Marquette, Baraga Cos.: Snelgrove, A. K., 2.

Marquette iron range: Seaman, W. A., 1.

Menominee iron range: Lamey, C. A., 1.

Republic area: Ayres, V. L., 1.

Spruce River-Peshekee River areas: Seaman, W. A., 3.

Michigan Basin, U. S., Dundee fm., Rogers City ls.: U. S. G. S., 1.

Salina, Bass Is. rocks: U. S. G. S., 1.

Trenton, Black River lss.: U. S. G. S., 2.

Minnesota, sou.: Thiel, G. A., 1.

Mississippi, geol. map: Miss. G. Soc., 2.

Heidelberg field: McCullough, R. A., 1.

Monroe Co.: Vestal, F. E., 1.

Oil and gas fields: Morse, W. C., 5.

Missouri: Branson, E. B., 3.

Pyrite deposits: Grawe, O. R., 1.

Southeastern: Cronels, C. G., 1.

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- Montana, Gage dome oil field: Perry, E. S., 2.
 General: U. S. G. S., 1.
 Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.
 Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 North Big Belt Range: Lyons, J. B., 1.
 South-central: U. S. G. S., 1, 2.
 Stillwater, Sweetgrass Cos.: Allsman, P. T., 1.
 Moon, lack of folded ranges: Chamberlin, R. T., 5.
 Nevada, Comstock Lode area: Calkins, F. C., 1.
 Groom dist., Lincoln Co.: Humphrey, F. L., 1.
 Mineralization: Bichan, W. J., 3.
 Mining dists.: Ferguson, H. G., 1.
 Nye Co., oxidation: Michell, W. D., 1.
 Quicksilver deposits: Bailey, E. H., 1.
 Rye Patch area: Vitaliano, C. J., 1.
 Sloan Hill, Las Vegas area: Deiss, C. F., 1.
 New Brunswick, Grand Lake coal field: Wright, W. J., 1.
 Musquash area: Alcock, F. J., 4.
 St. George area: Alcock, F. J., 3.
 Sussex area: Alcock, F. J., 1.
 New England mica deposits: Cameron, E. N., 1.
 Newfoundland, fluorspar deposits: Van Alstine, R. E., 1.
 New Hampshire, Monadnock quad.: Billings, K. S. F. L., 1.
 Mt. Washington area: Billings, K. S. F. L., 2.
 Oliverian magma ser., Mt. Wash. quad.: Chapman, C. A., 1.
 Pawtuckaway Mts.: Roy, C. J., 1.
 New Jersey copper deposits: Woodward, H. P., 1.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 Estancia Valley area: U. S. G. S., 1.
 Iron Mtn. dist.: Jahns, R. H., 1.
 Iron Mtn. ribbon rock: Jahns, R. H., 2.
 Northeast, Upper Paleozoic: Read, C. B., 1.
 Pecos River-Rio Galisteo area: U. S. G. S., 1.
 Rio Puerco area: Wright, H. E., Jr., 1.
 Silver City area: Entwistle, L. P., 1.
 Taos Co. pegmatites: Jahns, R. H., 3.
 New York, Adirondack E. area: Balk, R., 1.
 Catskill quad.: Ruedemann, R., 5, 6.
 Gouverneur talc dist.: U. S. G. S., 1.
 Lake Sanford area: Stephenson, R. C., 1.
 New York City, Fordham gneiss: Fluhr, T. W., 2.
 North America, geosynclines in continental devel.: Kay, G. M., 1.
 Gold vein deposits: White, W. H., 1.

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- North America—Continued.
 Mines: Townsend, H., 1.
 Tectonic devel., E. edge of Pacific: Stille, H. W., 1.
 North Carolina, Fontana Dam site: Moneymaker, B. C., 1.
 Townsville area: White, W. A., 3.
 Northwest Territories: Jolliffe, A. W., 2.
 Mackenzie River Valley: Stewart, J. S., 2.
 Prosperous Lake area: Jolliffe, A. W., 4; Anonymous, 77.
 Yellowknife area: Jolliffe, A. W., 3; Anonymous, 53.
 Nova Scotia, Bass River area: Weeks, L. J., 3.
 Londonderry area: Weeks, L. J., 2.
 Mabou coal area: Douglas, G. V., 6.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Shinimikas area: Bell, W. A., 4.
 Ohio, structural features: Ver Steeg, K., 1.
 Wood Co.: Harker, D. H., 6.
 Oil-field waters, study: Case, L. C., 2.
 Oklahoma, Anadarko Basin: Wheeler, R. W., 1.
 Arbuckle Mts.: Ham, W. E., 3; Lehman, R. P., 1.
 Black Knob Ridge area: U. S. G. S., 1.
 Bromide area: Ham, W. E., 1.
 Dougherty asphalt area: U. S. G. S., 1.
 Le Flore Co.: Knechtel, M. M., 1.
 Sulfur asphalt area: U. S. G. S., 1.
 Tillman Co. torsion-balance survey: Klaus, H., 1.
 Velma field: Rutledge, R. B., 1.
 West Edmond field: McGee, D. A., 1; Taylor, F. B., 1.
 Ontario, Beatty-Munro area: Satterly, J., 1.
 Bruce ser., Falconbridge-Dryden Tps.: Fairbairn, H. W., 2.
 Bryce-Robillard area: Moorhouse, W. W., 1.
 Central Patricia mine: Hicks, H. B., 1.
 Cunningham-Garnet area: Meen, V. B., 2.
 Fort Hope area: Prest, V. K., 1.
 Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
 Grimsthorpe-Barric area: Meen, V. B., 1.
 Kam Kotia mine mineralized zone: Ferguson, S. A., 1.
 Kerr Addison gold mine: McLaren, D. C., 2.
 Madoc fluorspar dist.: Rowe, R. C., 2.
 Pickle Crow gold mine: Monette, H. H., 1.
 Pickle Lake-Crow River area: Horwood, H. C., 8.
 Porcupine dist.: Evans, J. E. L., 1.

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Ontario—Continued.

- Red Lake area : Horwood, H. C., 3.
- Renfrew area : Satterly, J., 2.
- Ross mine, Ramore area : Jones, W. A., 1.
- Sudbury breccias origin : Fairbairn, H. W., 3.
- Whitefish Bay area : Fraser, N. H. C., 1.

Oregon, Coos Bay quad. : Allen, J. E., 1.

- Geology : Weaver, C. E., 3.
- Northwest : U. S. G. S., 1.
- Replacement aplite breccia, Cornucopia : Goodspeed, G. E., 2.
- Southern coast : Baldwin, E. M., 1.
- Washington Co. iron deposits : Libbey, F. W., 1.

Ozark uplift, Ark.-Mo. : Cullison, J. S., 1.

Pacific Basin, late geol. history : Stearns, H. T., 3.

Palinspastic, paleogeog. maps : Kay, G. M., 4.

Pennsylvania, central-eastern : Hersey, J. B., 1.

Everett syncline area : Foose, R. M., 1.

Folded Appalachians, stream devel. : Strahler, A. N., 5.

- Hanover-York dist. : Stose, A. J., 1.
- High-alumina clays : Foose, R. M., 3.
- Mineral res. areas : Ashley, G. H., 1.

Petroleum, migration and origin : Plummer, F. B., 4.

Reservoirs, description : Plummer, F. B., 5.

Powder River Basin, Wyo.-Mont. : U. S. G. S., 1.

Quebec, Beattie mine : Davidson, S. C., 1.

Bourlamaque Tp. : Norman, G. W. H., 1.

Cadillac-Bourlamaque area : Norman, G. W. H., 2.

Dudswell, Wolfe, Richmond, Compton Cos. : Cooke, H. C., 3.

Eastern Tps., chromites : Stockwell, C. H., 1.

Highgate Springs sequence : Kay, G. M., 6.

La Motte area : Norman, G. W. H., 4.

Little Long Lac-Sturgeon River dist. gold belts : Tyson, A. E., 1.

Louvicourt area : Norman, G. W. H., 6.

Lower Romaine River area : Retty, J. A., 1.

Malartic gold mine : Halet, R. A., 1.

Matamec Lake area, Saguenay Co. : Greig, E. W., 1.

Montmorency fault, Lottainville-Loretteville : Putnam, H. M., 1.

Montreal area : Clark, T. H., 1.

Moulton Hill mine, Eastern Tps. : Hawley, J. E., 1 ; Rowe, R. C., 1.

Noranda dist. ore deposits : Wilson, M. E., 2.

Faulting—Continued.

Quebec—Continued.

Opaoka River area : Freeman, B. C., 2.

Orford area : Fortier, Y. O., 1.

Rouyn-Beauchastel area : Wilson, M. E., 1.

Rouyn-Malartic-Destor area : Norman, G. W. H., 3.

Scotstown, Wolfe, Compton, Frontenac Cos. : Cooke, H. C., 1.

Sept Iles area, N. bank St. Lawrence : Faessler, C., 1.

Stanstead area, Brome and Stanstead Cos. : Ambrose, J. W., 2.

Wakeham Lake area : Claveau, J., 1.

Quitman fault zone, Ala.-Miss. : U. S. G. S., 1.

Refraction waves reflected at fault zone : Robinson, W. B., 1.

South Dakota : Rothrock, E. P., 1.

Beecher Rock Basin : Gwynne, C. S., 2.

Dewey, Corson Cos. : Morgan, R. E., 1.

Sweet Springs dist., Va.-W. Va. : Ladd, H. S., 1.

Tennessee, Camden, Paleozoics : Ross, R. M., 1.

Chamberlain syncline underthrusting : Laurence, R. A., 3.

Cherokee, Douglas Dams sites, explor. : Laurence, R. A., 2.

Cumberland Plateau fields : Born, K. E., 4.

Eastern, zinc deposits : Crawford, J., 1 ; Kent, D. F., 1.

Folded Appalachians : King, P. B., 2.

Greene Co. : Snyder, F. G., 1.

Norris area : Hall, G. M., 1.

Northeastern : King, P. B., 4.

Sweet water dist. structure : Dunlap, J. C., 1.

Texas, Anahuac field : Carpenter, C. B., 1.

Anderson Co. : Whitcomb, B., 2.

Apache Mts., Culbertson Co. well : Maley, V. C., 1.

Balcones, Luling, Mexia zones : Weeks, A. W., 3.

Cayuga oil field : Peacock, H. B., 1.

East and south : U. S. G. S., 2.

Erath Co. : Nickell, C. O., 3.

Hueco Mts., El Paso, Hudspeth Cos. : U. S. G. S., 1.

Lee Co. : Harris, G. D., 1.

Lower Rio Grande Valley : Wynd, F. L., 2.

Redon emanations in oil explor. : Sterrett, E., 1.

Sand Flat field, Smith Co. : Bartell, L. D., 1.

Sierra Diablo area : U. S. G. S., 1.

South Guadalupe Mts. : U. S. G. S., 1.

South Houston oil field : Eby, J. B., 1.

Webb Co., refraction waves reflected at fault zone : Robinson, W. B., 1.

Woodbine sand : Horton, C. W., 2.

Faulting—Continued.

- United States, Anadarko Basin: Gibbon, A., 1.
 Basin - and - Range Prov.: Longwell, C. R., 8.
 Columbia intermontane prov. divs.: Freeman, O. W., 3.
 East Gulf Coast area, oil poss.: Kornfeld, J. A., 1.
 Great Basin area: Wheeler, H. E., 1.
 Gulf Coast: Storm, L. W., 1.
 Gulf Coast anticlines: Meyer, W. G., 1.
 Gulf Coast salt domes: Hanna, M. A., 1.
 Olympic-Wallowa lineament: Raisz, E. J., 1.
 Reading Overthrust: Miller, B. L., 1.
 Rocky Mtn. deformation, basement control: Chamberlin, R. T., 4.
 Southeast Gulf Coast: Brankstone, H. R., 1.
 Southern Appalachians, Chilhowee group, Ocoee ser.: Stose, G. W., 1.
 Stockton, Lockatong fms. type secs.: McLaughlin, D. B., 2.
 Structural geology: King, P. B., 3.
 Upper Miss. Valley, zinc-lead dist.: Heyl, A. V., Jr., 1.
 West, orogeny: Longwell, C. R., 7.
 Yellowstone-Bighorn area: Thom, W. T., Jr., 2.
 Utah, Beaver Co.: Hobbs, S. W., 2.
 Big Cottonwood Canyon: Calkins, F. C., 2.
 House Range: Kelly, C., 2.
 Mt. Timpanogos, caves: Bullock, K. C., 1.
 Salt Valley: Dyer, B. W., 1.
 Southwest, Post-Wasatch fms.: Gregory, H. E., 2.
 Tintic dist., E.: Lovering, T. S., 3.
 Traverse Mts. manganese deposits: Crawford, A. L., 3.
 Uinta Basin Cret.: Walton, P. T., 1.
 Upper Sevier River Valley: Gregory, H. E., 1.
 Wasatch Mts.: Eardley, A. J., 1.
 Zion Canyon landslide: Grater, R. K., 1.
 Vermont, Highgate Springs sequence: Kay, G. M., 6.
 Taconic thrust sheet, W., N. end: Kaiser, E. P., 1.
 West-central: Cady, W. M., 2.
 Virginia, Bland, Giles Cos.: Ladd, H. S., 2.
 Burkes Garden quad.: Cooper, B. N., 1.
 Coastal Plain: Cederstrom, D. J., 1.
 Cumberland overthrust: U. S. G. S., 1.
 Glade Mtn. dist.: Miller, R. L., 1.
 Lick Mtn. dist.: Stead, F. W., 1.
 Overthrusts: Miller, R. L., 2.
 Pegmatites: Brown, W. R., 2.
 Rose Hill oil field: U. S. G. S., 1.

Faulting—Continued.

- Virginia—Continued.
 Sallings Mtn. area: Bloomer, R. O., 1.
 Shenandoah Nat. Park: Rickard, H. L., 1.
 Washington, Blewett-Cle Elum fm.: Broughton, W. A., 1; Luper, R. L., 1.
 Dolomite: Bennett, W. A. G., 1.
 Geology: Weaver, C. E., 3.
 King Co. coal fields: Warren, W. C., 1.
 Metaline Falls area: Huttli, J. B., 1.
 Morton cinnabar dist.: Mackin, J. H., 1.
 Wyoming, Como Bluff anticline: Dunbar, R. O., 1.
 General: La Fleiche, P., 2.
 Geology and devel., oil and gas fields: La Fleiche, P., 1.
 Lance Creek oil and gas field: U. S. G. S., 3.
 Laramie Range anorthosite structure: Newhouse, W. H., 1.
 Maverick Springs area: U. S. G. S., 1.
 Teton Basin: Gardner, L. S., 1.
 Willwood, Tatman fms.: Van Houton, F. B., 1.
 Wind River Mts., NW. end: U. S. G. S., 1.
 Wyoming Basin: Knight, S. H., 2.
 Wyoming-Colorado, Washakie Basin: U. S. G. S., 1.
 Wyoming-Montana, Elk Basin field: U. S. G. S., 4.
 Yukon, Canol Road, Teslin River-Macmillan Pass: Kindle, E. D., 2.
 Dublin Gulch: Thompson, R. M., 1.
 Fayette gas field, Ala.: Lloyd, S. J., 1.
 Feldspar.
 Alabama, Pinckneyville complex: Gault, H. R., 2.
 British Columbia, China Creek area: Stevenson, J. S., 4.
 Canada, ceramics, industrial minerals: Worcester, W. G., 1.
 Clay properties control by pH: Grim, R. E., 1.
 Hydrothermal alteration in acid solutions: Gruner, J. W., 5.
 Indiana, Mansfield ss. minerals: Gault, H. R., 1.
 Mexico, Baja Calif.: Antúñez Echeagaray, F., 3.
 New England, mica deposits: Cameron, E. N., 1.
 New Hampshire: Bannerman, H. M., 1.
 Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Pegmatites: Bannerman, H. M., 1.
 Ontario, E. extension of Fort Hope area: Frost, V. K., 2.
 Gabbro-wehrlite: Froberg, M. H., 1.
 Porcupine dist.: Evans, J. E. L., 1.
 Renfrew area: Satterly, J., 2.
 Purgatory Chasm, Mass.: Stachura, J., 1.

Feldspar—Continued.

Quebec: Dufresne, A. O., 1.

Bourlamaque Tp.: Norman, G. W. H., 1.

Economic minerals: Quebec Bur. Mines, 1.

Matamec Lake area, Saguenay Co.: Greig, E. W., 1.

Rhode Island beach minerals: Hyne- man, J. R., 1.

South Dakota, Beecher Rock Basin peg- matites: Gwynne, S. C., 2.

Custer pegmatite minerals: Fisher, D. J., 1.

Utah, House Range Mts.: Crawford, A. L., 1.

Iron Peak ores: Crawford, A. L., 2.

Virginia: Brown, W. R., 2.

Wyoming, Yellowstone Park rhyolite- basalt complex: Fenner, C. N., 1.

Felsite, Mt. Desert Is., Maine: Chadwick, G. H., 1.

Ferberite.

Colorado, min. res.: Pearl, R. M., 2.

Cuba, Isla de Pinos tungsten deposits: Page, L. R., 1.

Ferrimolybdenite, Cottonwood-American Fork dists., Utah: Crawford, A. L., 6.

Fire clays. See also Clay.

Canada, Lytton to Vancouver: Hutt, G. M., 12.

Midwestern non-metallics: Hutt, G. M., 7.

Missouri: Keller, W. D., 1.

New Jersey, Middlesex Co.: Barksdale, H. C., 1.

New York, ceramic materials: Brough- ton, J. G., 3.

Nova Scotia, industrial minerals: Cam- erton, A. E., 3.

Pennsylvania, high - alumina clays: Foote, R. M., 3.

Iron minerals in: Leatham, E., 1.

Texas, Limestone Co.: Broman, I. J., 2.

Fish scales, fossil, use in micropaleontology: David, L. R., 4.

Flat Top, Round Mtn. manganese dists., Va.: Ladd, H. S., 2.

Floor of the ocean: Jones, O. W., 1; Smith, P. A., 1.

Flora oil field, Miss.: Hughes, U. B., 1; Miss. G. Soc., 1; Morse, W. C., 5; Anony- mous, 38.

Florida.

5th, 6th Geol. Survey Bienn. Repts., 1941-44: Gunter, H., 4.

General geology: Cooke, C. W., 3.

Economic geology.

Geology, petroleum: Gunter, H., 2.

Heavy minerals, beach, dune sands: Miller, R., III, 1.

Peninsula oil wells: Gunter, H., 3.

Petroleum, nat. gas: Gunter, H., 1, 2.

Possibilities: Reaves, R., 1.

Stratigraphy and structure: Applin, P. L., 1.

Florida—Continued.

Economic geology—Continued.

Sunniland oil field: Hughes, U. B., 1.

Historical geology.

Beach conditions, Daytona Beach: Fin- eren, W. W., 1.

Cenozoic, late: Parker, G. G., 2.

Coastal area, Gulf: Applin, E. R., 2.

Everglades, ground water and geology: Parker, G. G., 3; Stephens, J. C., 1.

General: Cooke, C. W., 3.

Geology, petroleum: Gunter, H., 1, 2.

Gulf Hammock fm.: Ericson, D. B., 1.

Magnetic survey, Fla. Penin.: Lee, F. W., 1.

Peninsula oil wells: Gunter, H., 3.

Pleistocene, effect on geology, ground water, S.: Parker, G. G., 5.

Palm Beach Co.: Smith, E. R., 1.

Stratigraphy and structure: Applin, P. L., 1.

Well studies: Cole, W. S., 1.

Mineralogy.

Heavy minerals, beach, dune sands: Miller, R. III, 1.

Palaeontology.

Articulina genus and species: Cushman, J. A., 5.

Cetaceans, Tert.: Kellogg, A. R., 1.

Cormorant, Pleist.: Wetmore, A., 4.

Foraminifera, diagnostic: Applin, E. R., 1.

Gastropoda, Alum Bluff group: Gard- ner, J. A., 1.

General: Cooke, C. W., 3.

Oysters, Miocene, Tampa Bay: Gardner, J. A., 4.

Pleistocene, Palm Beach: Smith, E. R., 1.

Stenoglossa, Alum Bluff group: Gardner, J. A., 1.

Stratigraphy and structure: Applin, P. L., 1.

Well studies: Cole, W. S., 1.

Petrology.

Cenozoic, late: Parker, G. G., 2.

General: Cooke, C. W., 3.

Physical geology.

Pleistocene, effect on geology, ground water, S.: Parker, G. G., 5.

Well studies: Cole, W. S., 1.

Physiographic geology.

Beach conditions, Daytona Beach: Fineren, W. W., 1.

Cenozoic, late: Parker, G. G., 2.

General: Cooke, C. W., 3.

Pleistocene, effect on geology, ground water, S.: Parker, G. G., 5.

Underground water.

Artesian ls., Orlando, recharge from wells: Unklesbay, A. G., 1.

Artesian water, coastal area: Cooper, H. H., Jr., 2; Warren, M. A., 2.

Cenozoic, late: Parker, G. G., 2.

Everglades, ground water and geology: Parker, G. G., 3; Stephens, J. C., 1.

General: Cooke, C. W., 3.

Florida—Continued.

Underground water—Continued.

- Ground-water, invs., Duval, Nassau
Cos.: Cooper, H. H., Jr., 1.
Salty, Miami area, cation-exchange:
Love, S. K., 1.
Southeast: Cross, W. P., 1.
Miami area water resources: Parker,
G. G., 1.
Pleistocene, effect on geology, ground
water, S.: Parker, G. G., 5.
Salt-water encroachment in lss., Miami:
Brown, R. H., 1.
Southern area: Parker, G. G., 4.
Flow of heat from intrusive into country
rock: Van Orstrand, C. E., 1.
Flow structure models from field data: Lowe,
K. E., 2.
Flow, liquids thro thin cracks: Wentworth,
C. K., 2.

Fluorescence.

- Arizona, calcite: Anonymous, 91.
Black light and bacteria for oil prosp.:
De Ment, J. A., 8.
Calcite crystals, Tex.: Duncan, F., 1.
General: De Ment, J. A., 6.
California dolomite, Guadalupe area:
Lisle, T. O., 1.
Cathodoluminescence of gems: De Ment,
J. A., 2.
Corundum: De Ment, J. A., 4.
Curtisite, Skagg Springs, Calif.: Lisle,
T. O., 3.
Diamonds: Buddhue, J. D., 2.
Fluorochemistry: De Ment, J. A., 3,
7, 9.
Fluorite, fluorochemistry: De Ment, J.
A., 9.
Luminescence to find minerals in pol-
ished secs.: Yagoda, H., 2.
Minerals: Warren, T. S., 2.
Related to minerals: Smith, F. G., 1.
Sources, ultra-violet light: Barrett, R.
L., 1.
Ultra-violet light in prosp.: Warren,
T. S., 1.
Uranium, Oregon: Anonymous, 87.
Test for: Sill, C. W., 1.

Fluoride, Ala. ground water: Carlston, C. W.,
1.

Fluorite.

- Alaska, Groundhog Basin: Gault, H. R.,
4.
Arizona, Bortana dist. and Aquarius
Range: Hobbs, S. W., 1.
Colorado, min. res.: Pearl, R. M., 2.
Fluorochemistry of: De Ment, J. A., 9.
Illinois, Cave in Rock dist.: Currier,
L. W., 2.
Hardin Co. fluorspar areas: Currier,
L. W., 1.
Newfoundland, fluorspar deposits: Van
Alstine, R. E., 1.
New Mexico, Red River min. area: Sid-
well, R., 1.
Tennessee, Sweetwater dist. structure:
Dunlap, J. C., 1.

Fluorite—Continued.

- United States: King, F. W., 1.
Southeastern, min. res.: Ralston,
O. C., 1.
Fluorochemistry: Dement, J. A., 3, 7, 9.
Corundum: De Ment, J. A., 3.
Fluorspar.
Canada, ceramics, industrial minerals:
Worcester, W. G., 1.
Colorado, Jamestown area: Bunzel,
P. M., 1.
Illinois, Cave in Rock dist.: Currier,
L. W., 2.
Hardin Co. fluorspar areas: Currier,
L. W., 1.
Kentucky, Babb fault system: Hardin,
G. C., Jr., 2.
King Mounds: King, F. W., 1.
Nevada, non-metallics: York, B., 1.
Newfoundland: Van Alstine, R. E., 1.
Nova Scotia, industrial minerals: Cam-
eron, A. E., 3.
Lake Ainslie area: Douglas, G. V., 7.
Ontario, Madoc dist.: Rowe, R. C., 2.
Quebec: Dufresne, A. O., 1.
United States: King, F. W., 1; Wagga-
man, W. H., 1.
Western: Gillson, J. L., 1.
Utah, Beaver Co.: Marsh, J. A., 1.
Folding.
Alabama, complex, Pinckneyville: Gault,
H. R., 2.
Flake graphite belt: Pallister, H. D.,
1.
Tin belt: Hunter, F. R., 1.
Tuscaloosa, Cottondale quads.: U. S.
G. S., 1.
Alaska, Agattu Island, Aleutians:
Sharp, R. P., 1.
Katalla area: Miller, D. J., 1.
Matanuska Valley coal field: Payne,
T. G., 1.
Moose Creek dist., Matanuska coal
fields: Apell, G. A., 1.
Nickel-copper deposits, Spirit Mtn.
area: Kingston, J., 1.
Yakataga area: Spieker, E. M., 1.
Alberta, Alexo area: Crombie, G. P.,
1, 2.
Cowley area: Hage, C. O., 1.
Drinnan to Brulé Lake area: Lang,
A. H., 1.
Dyson Creek area: Hage, C. O., 2.
Fall Creek area: Henderson, J. F., 2.
Oil field devel.: Storm, L. W., 2.
Saunders map area: Erdman, O. A., 1.
Stimson Creek area: Hume, G. S., 1.
Wawa Creek area: MacKay, B. R., 2.
Arizona, N., Uinkaret Plateau: Koons,
E. D., 1.
Superior mining area: Short, M. N., 1.
Arizona-Utah, East Kaibab monocline:
Babenroth, D. L., 1.
Arkansas, Batesville dist.: U. S. G. S., 1.
Bauxite area: Thoenen, J. R., 1.
Devonian: Miser, H. D., 1.

Folding—Continued.

- Bellows Falls quad., N. H.-Vt.: Kruger, F. C., 1.
- British Columbia, Ainsworth area: Rice, H. M. A., 1.
- Alaska Highway, Ft. St. John Ft. Nelson: Hage, C. O., 3.
- Britannia mine No. 8 orebodies: Irvine, W. T., 1.
- China Creek area: Stevenson, J. S., 4.
- Coast: Gunning, H. C., 2.
- Dunlevy-Portage Mtn. area: Beach, H. H., 1.
- Fort Nelson area: Kindle, E. D., 1.
- Fort Nelson-Watson Lake area: Williams, M. Y., 3.
- Hazleton, Cassiar dist.: Armstrong, J. E., 3.
- Island Mtn. mine: Benedict, P. C., 1.
- Little Billie mine, Texada Is.: Stevenson, J. S., 5.
- Lone Mtn. area: McLearn, F. H., 1.
- Manson Creek area: Armstrong, J. E., 5.
- Mt. Hulcross-Commotion Creek area: Wickenden, R. T. D., 1.
- Nicola area: Cockfield, W. E., 2.
- Nickel Plate Mtn. area: Dolmage, V., 1.
- Omineca dist.: Armstrong, J. E., 4.
- Peace River Foothills: McLearn, F. H., 2.
- Pinchi Lake area: Armstrong, J. E., 1.
- Smithers area: Armstrong, J. E., 2.
- Sullivan mine area: Swanson, C. O., 1.
- Tuya-Teslin area: Watson, K. D., 1.
- Twin "J" mine: Stevenson, J. S., 3.
- California, Big Pine volcanic field: Mayo, E. B., 1.
- Chowchilla field: Hodges, F. C., 2.
- Diablo Range quicksilver deposits: Yates, R. G., 1.
- Dry well, 16,246 ft. deep: Cavins, O., 1.
- Glenn Co.: Rynearson, G. A., 1.
- Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.
- Kettleman Hills North Dome oil field: Van Couvering, M., 1.
- Los Angeles area, subsidence, elevation: Grant, U. S., IV, 1.
- Lost Hills oil field: Barton, D. C., 3.
- McKittrick dist. bituminous deposits: U. S. G. S., 1.
- Midway-Sunset oil field, SE, part: U. S. G. S., 1.
- Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.
- Newhall-Potrero, Aliso Canyon, Del Valle, Oak Canyon oil fields: Hodges, F. C., 1.
- Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
- Playa del Rey oil field: Hodges, F. C., 3.
- Puente, San Jose Hills: U. S. G. S., 1.
- Salinas Valley: U. S. G. S., 1.

Folding—Continued.

California—Continued.

- San Luis Obispo Co. bituminous sands: U. S. G. S., 1.
- Santa Catalina Is. marine sed.: Clements, T. D., 2.
- Santa Lucia Range: Taliaferro, N. L., 1.
- Santa Monica Mts.: Cotton, C. A., 1.
- Santa Rosa Hills-Purisima Hills dists.: U. S. G. S., 1.
- South Coast Ranges, Pleist.: Chamberlin, R. T., 3.
- South Mtn. field: Bailey, W. C., 1.
- Canada: MacKay, B. R., 3.
- Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y.: 1.
- Alaska Highway, Watson Lake-Teslin River: Lord, C. S., 1.
- Arctic, reconnaissance flight: Bateman, J. D., 4.
- Canol invs., Mackenzie River area: Hume, G. S., 8.
- Dominion Atlantic Ry. area: Hutt, G. M., 16.
- Flin Flon-Sherridon-Herb Lake area: Stockwell, C. H., 2.
- Fort Nelson-Liard-Beaver Rivers area: Kindle, E. D., 1.
- Golden to Sicamous: Hutt, G. M., 8.
- Liard River area: Hage, C. O., 5.
- Medicine Hat to Vancouver: Hutt, G. M., 14.
- Oil and gas fields: Hume, G. S., 2, 9.
- Sicamous to Lytton: Hutt, G. M., 9.
- Stull Lake area: Spector, I. H., 1.
- Colorado, Canon City area: Blum, V. J., 1.
- Red Creek area, Fremont Co.: Glockzin, A. R., 1.
- Rocky Mtn. Nat. Park: Wegemann, C. H., 1.
- Specimen Mtn.: Wahlstrom, E. E., 2.
- Vasquez overthrust, Middle Park: Tweto, O., 1.
- White River Plateau, Glenwood Springs area: MacQuown, W. C., Jr., 1.
- Cuba: Palmer, R. H., 1.
- Guisa-Los Negros area: Woodring, W. P., 1.
- Isla de Pinos tungsten deposits: Page, L. R., 1.
- Matahambre copper mine: Pennebaker, E. N., 1.
- Sierra Maestre area: Park, C. F., Jr., 1.
- Delineation, parallel folds, measurement strat. dimensions: Mertie, J. B., Jr., 2.
- Dikes, foliated and pseudo, Calif.: Miller, W. J., 4.
- Georgia, kyanite deposits: Furcron, A. S., 4.
- Sillimanite deposits: Furcron, A. S., 4.

Folding—Continued.

- Greenland, East, between 74°–75°, and islands: Vischer, G. A., 1.
 Franz Josef Fjord area: Odell, N. E., 1.
 Idaho, Birch Creek area: Anderson, A. L., 1.
 Latah Co.: Tullis, E. L., 1.
 Illinois, Cave in Rock dist.: Currier, L. W., 2.
 Hardin Co. fluorspar area: Currier, L. W., 1.
 Northeast: Bays, C. A., 5.
 Kansas, Aldrich oil field: Carpenter, E. G., 1.
 Cross-section, geol. subsurface, Ford-Wallace Cos.: Edson, F. C., 1.
 Kinetic theory, origin orogenic forces: Fisher, J. E., 1.
 Lineation with rock-movement, correl.: Cloos, E., 1.
 Maine, Mount Desert Is.: Chadwick, G. H., 1.
 Mt. Waldo batholith: Trefethen, J. M., 1.
 Manitoba, E. of Flin Flon: Bateman, J. D., 5.
 Gurney gold mine area: Hage, C. O., 4.
 Island Lake area: McMurchy, R. C., 1.
 Mikanagan Lake area: Bateman, J. D., 1.
 Sherridon area: Bateman, J. D., 6.
 Sherritt Gordon mine area: Bateman, J. D., 2.
 Snow Lake area: Harrison, J. M., 3, 4.
 Massachusetts, Chester-Blandford State Forest: Billings, M. P., 1.
 Shelburne Falls gneiss dome: Balk, R., 3.
 Mexico, N.: Kellum, L. B., 1.
 Nuevo León: Mullerried, 8.
 Permian area NW. of Las Delicias: King, R. E., 1.
 Quicksilver-antimony deposit, Huit-zuco, Guerrero: McAllister, J. F., 1.
 Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.
 Michigan, Berea ss.: U. S. G. S., 1.
 Iron deposits: Martin, H. M. M., 2.
 Lake Michigamme area: Seaman, W. A., 2.
 Marquette iron range: Seaman, W. A., 2.
 Porter oil field: Landes, K. K., 4.
 Republic area: Ayres, V. L., 1.
 Spruce River-Peshekee River area: Seaman, W. A., 3.
 Sylvania, Bois Blanc fms.: U. S. G. S., 1.
 Traverse group, Dundee fm.: U. S. G. S., 2.
 Michigan Basin: U. S. G. S., 1, 2.
 Missouri: Branson, E. B., 3.
 Pyrite deposits: Grawe, O. R., 1.

Folding—Continued.

- Montana, Gage dome oil field: Perry, E. S., 2.
 Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.
 Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 Mountains, S.-cent.: U. S. G. S., 2.
 North Big Belt Range: Lyons, J. B., 1.
 Ore bodies, strat. control: Perry, E. S., 3.
 Red Lodge chrome deposits: Conwell, C. N., 1.
 Nevada, Groom dist., Lincoln Co.: Humphrey, F. L., 1.
 Mining dists.: Ferguson, H. G., 1.
 New Hampshire, Monadnock quad.: Billings, K. S. F. L., 1.
 Mt. Washington area: Billings, K. S. F. L., 2.
 Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Pawtuckaway Mts.: Roy, C. J., 1.
 New Jersey, Martinsburg slate: Broughton, J. G., 2.
 New Mexico, Estancia Valley area: U. S. G. S., 1.
 Iron Mtn. dist.: Jahns, R. H., 1.
 Northeast, Upper Paleozoic: Read, C. B., 1.
 Silver City area: Entwistle, L. P., 1.
 New York, Adirondack E. area: Balk, R., 1.
 Catskill quad.: Ruedemann, R., 5, 6.
 Kalk Berg Range, nested folds: Chadwick, G. H., 3.
 New York City, Manhattan borough: Murphy, J. J., 1.
 Non-concentric, exper. inv.: Straley, H. W., III, 1.
 North America, geosynclines in continental devel.: Kay, G. M., 1.
 Gulf, Caribbean areas: Seismog. Serv. Corp., 1.
 Mines: Townsend, H., 1.
 Tectonic devel. E. edge of Pacific: Stille, H. W., 1.
 Nova Scotia, Lake Ainslie area: Douglas, G. V., 7.
 Mabou coal area: Douglas, G. V., 6.
 Riverside Corner area: Messervey, J. P., 3.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Upper Musquodoboit area: Messervey, J. P., 1.
 Wentworth dist.: Bancroft, M. F., 1.
 Ohio, structural features: Ver Steeg, K., 1.
 Oklahoma, Apache field: Scott, V. C., 1.
 Arbuckle Mts.: Lehman, R. P., 1.
 Barite: Ham, W. E., 1.
 Bromide area: Ham, W. E., 2.
 Le Flore Co.: Knechtel, M. M., 1.

Folding—Continued.

Oklahoma—Continued.

- Velma field: Rutledge, R. B., 1.
- West Edmond field: McGee, D. A., 1.
- Ontario, Beatty-Munro area: Satterly, J., 1.
- Bigwater Lake area: Berry, L. G., 1.
- Bruce ser., Falconbridge-Dryden Tps.: Fairbairn, H. W., 2.
- Central Patricia mine: Hicks, H. B., 1.
- Cunningham-Garnet area: Meen, V. B., 2.
- Fort Hope area: Prest, V. K., 1.
- Gas fields: Brant, A. A., 2.
- Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
- Grimsthorpe-Barrie area: Meen, V. B., 1.
- Hollinger mine: Allen, C. C., 1.
- Kaladar, Kennebec Tps.: Harding, W. D., 1.
- Kam Kotia mine mineralized zone: Ferguson, S. A., 1.
- Kerr Addison gold mine: McLaren, D. C., 2.
- Little Long Lac Hardrock porphyry: Reid, J. A., 3.
- North Spirit Lake area: Bateman, J. D., 7.
- Pickle Crow gold mine: Monette, H. H., 1.
- Porcupine dist.: Evans, J. E. L., 1.
- Red Lake area: Horwood, H. C., 2, 3.
- Renfrew area: Satterly, J., 2.
- Ross mine, Ramore area: Jones, W. A., 1.
- Sudbury breccias, origin: Fairbairn, H. W., 3.
- Whitefish Bay area: Fraser, N. H. C., 1.
- Oregon, Coos Bay quad.: Allen, J. E., 1.
- Geology: Weaver, C. E., 3.
- Washington Co. iron deposits: Libbey, F. W., 1.
- Pacific Basin, late geol. history: Stearns, H. T., 3.
- Palinoplastic, paleogeog. maps: Kay, G. M., 4.
- Pennsylvania, Buck Hill area: Myers, R. E., 2.
- Central-eastern: Hersey, J. B., 1.
- Everett syncline area: Foose, R. M., 1.
- Folded Appalachians, stream devel.: Strahler, A. N., 5.
- Hanover-York dist.: Stose, A. J., 1.
- Mineral resources areas: Ashley, G. H., 1.
- Oil City quad.: Dickey, P. A., 1.
- Quebec, Bourlamaque Tp.: Norman, G. W. H., 1.
- Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
- Cadillac-Bourlamaque area: Norman, G. W. H., 2.
- Calumet Is.: Osborne, F. F., 1.
- Châteauguay Co.: Morin, L. G., 1.

Folding—Continued.

Quebec—Continued.

- Dassarat area structure: Auger, P. E., 5.
- Highgate Springs sequence: Kay, G. M., 6.
- Hincks Tp.: Tanton, T. L., 1.
- La Corne molybdenite mine: McLaren, D. C., 4.
- Little Long Lac-Sturgeon River dist. gold belts: Tyson, A. E., 1.
- Lower Romaine River area: Retty, J. A., 1.
- Montmorency fault, Lottainville-Loretteville: Putnam, H. M., 1.
- Montreal area: Clark, T. H., 1.
- Moulton Hill deposit: Hawley, J. E., 1.
- Opaoka River area: Freeman, B. C., 2.
- Stanstead area, Brome and Stanstead Cos.: Ambrose, J. W., 2.
- South Dakota: Rothrock, E. P., 1.
- Dewey, Corson Cos.: Morgan, R. E., 1.
- Sweet Springs dist., Va., W. V.: Ladd, H. S., 1.
- Tennessee, Cherokee, Douglas Dams sites, explor.: Laurence, R. A., 2.
- Eastern zinc deposits: Crawford, J., 1.
- Folded Appalachians: King, P. B., 2.
- Greene Co.: Snyder, F. G., 1.
- Jefferson City area ore bodies: Brockaw, A. L., 1.
- Mississippian ls.: Frink, J. W., 1.
- Northeast: King, P. B., 4.
- West-central: Born, K. E., 21.
- Texas, Anderson Co.: Whitcomb, B., 2.
- Burnet Co.: Barnes, V. E., 1.
- Erath Co.: Nickell, C. O., 3.
- Lower Rio Grande Valley: Wynd, F. L., 2.
- Sierra Diablo area: U. S. G. S., 1.
- South Tyler field, Smith Co.: Weirich, T. E., 1.
- Woodbine sand: Horton, C. W., 2.
- United States, Anadarko Basin: Gibbon, A., 1.
- Columbia intermontane prov. divs.: Freeman, O. W., 3.
- Helium gas fields: Baden, M. W., 1.
- Michigan Basin, Lower Ord., Camb.: U. S. G. S., 2.
- Rocky Mts. deformation, basement control: Chamberlin, R. T., 4.
- Southeast, Gulf Coast: Brankstone, H. R., 1.
- Structural geology: King, P. B., 3.
- Upper Miss. Valley, zinc-lead dist.: Heyl, A. V., Jr., 1.
- Western: Wimmer, N. L., 1.
- Utah, Coalville drill-core study: Hasler, J. W., 1.
- Uinta Basin Cret.: Walton, P. T., 1.
- Wasatch Mts.: Eardley, A. J., 1.
- Vermont, west-central: Cady, W. M., 2.

Folding—Continued.

- Vermont, Highgate Springs sequence:
 Kay, G. M., 6.
 West-central: Cady, W. M., 2.
 West, North end Taconic thrust sheet:
 Kaiser, E. P., 1.
 Virginia, Burkes Garden quad.: Cooper,
 B. N., 1.
 Coastal Plain: Cederstrom, D. J., 1.
 Glade Mtn. dist.: Miller, R. L., 1.
 Lick Mtn. dist.: Stead, F. W., 1.
 Rose Hill oil field: U. S. G. S., 1.
 Shenandoah Nat. Park: Rickard,
 H. L., 1.
 Washington, Blewett-Cle Elum fm.:
 Broughton, W. A., 1; Lupher, R. L.,
 1.
 Dolomite: Bennett, W. A. G., 1.
 Geology: Weaver, C. E., 3.
 King Co. coal fields: Warren, W. C., 1.
 Morton cinnabar dist.: Mackin, J. H.,
 1.
 Olympic Penin.: Green, S. H., 1.
 Wyoming, central: U. S. G. S., 2.
 Como Bluff anticline: Dunbar, R. O.,
 1.
 General: La Fleiche, P., 2.
 Geology and devel., oil and gas fields:
 La Fleiche, P., 1.
 Laramie Range anorthosite struc-
 ture: Newhouse, W. H., 1.
 Maverick Springs area: U. S. G. S., 1.
 Vermiculite deposits: Hagner, A. F.,
 1.
 Willow Creek coal area: Andrews,
 D. A., 1.
 Wind River Mts., NW. end: U. S.
 G. S., 1.
 Wyoming-Colorado, Washakie Basin:
 U. S. G. S., 1.
 Wyoming-Montana, Elk Basin field:
 U. S. G. S., 4.

Foraminifera.

- Alabama, Coal Bluff marl mbr., Naheola
 fm.: Cushman, J. A., 4.
 Lisbon fm. fauna: Cushman, J. A., 4.
 Yellow Bluff Eocene: Cushman, J. A.,
 2.
 Ammobaculites detonenensis for A. varia-
 bils: Tappan, H. N., 1.
 Arkansas, Marlbrook marl, Cret.: Cush-
 man, J. A., 6.
 Articulina genus and species. Miss.
 Fla.: Cushman, J. A., 5.
 Bagгина, Tert., N. Am., Cuba: Cush-
 man, J. A., 4.
 Barbados, larger Paleocene, Eocene:
 Vaughan, T. W., 2.
 Bibliography of new forms, 1941-43:
 Thalmann, H. E., 1.
 Bibliography of recent lit.: Cushman,
 J. A., 4.
 California, Coast, Point Arena-Fort
 Ross: Weaver, C. E., 3.
 Cretaceous, Upper: Cushman, J. A., 4.
 Fresno Co., Tumey fm.: Cushman,
 J. A., 3.

Foraminifera—Continued.

- California—Continued.
 Great Valley correls. by: Goudkoff,
 P. P., 1.
 Imperial Valley, west side: Tarbet,
 L. A., 1.
 Camerinitidae, dimensions, whorls, cham-
 bers: Frizzell, D. L., 1.
 Colorado, Morrison fm., Colo. Plateau
 area: Stokes, W. L., 1.
 Paleozoic faunas: Johnson, J. H., 7.
 Sawatch Range area: Johnson, J. H.,
 3.
 West-central, NW. fms., Paleozoic
 faunas: Brill, K. G., Jr., 1.
 Cuba: Palmer, R. H., 1.
 Eocene: Cole, W. S., 2.
 Guisa-Los Negros area: Woodring,
 W. P., 1.
 Evolution, Fusulinidae: Dunbar, C. O.,
 2.
 Parallel: Cushman, J. A., 8.
 Faunas, Florida: Cole, W. S., 1; Cooke,
 C. W., 3.
 McBean fm. type loc., Ga.: Cushman,
 J. A., 4.
 Pecan Gap chalk, Tex.: Cushman,
 J. A., 4.
 Permian NW. of Las Delicias, Mex.:
 King, R. E., 1.
 Valley of Tixtla, Mex.: Mullerried, 2.
 Florida, City of Tallahassee wells: Cole,
 W. S., 1.
 Tertiary, Cret. faunas: Applin, E. R.,
 1.
 Florida and S. Georgia stratigraphy:
 Applin, P. L., 1.
 Fusulinidae: Dunbar, C. O., 2.
 Evolution and correls. of Penn. rocks:
 Thompson, M. L., 5.
 Pennsylvanian, Kans. - Utah - Colo.:
 Thompson, M. L., 4.
 Mexico: Dunbar, C. O., 1.
 New Mexico, Sierra Nacimiento:
 U. S. G. S., 2.
 Texas, New Mexico: Thompson,
 M. L., 6.
 Permian, Mex.: Dunbar, C. O., 1;
 Thompson, M. L., 1.
 Georgia, Coastal Plain: Cooke, C. W., 1.
 Southwest: SE. Geol. Soc., 2.
 Twigg clay fauna: Cushman, J. A., 4.
 Illinois, Porters Creek fm. Paleocene:
 Cooper, C. L., 1.
 Imperial Valley, Calif., fauna: Tarbet,
 L. A., 1.
 Index fossils: McLearn, F. H., 3.
 Iowa, Dev.: Stainbrook, M. A., 1.
 Jamaica, Bowden Tert. fauna: Palmer,
 D. B. K., 1.
 Buff Bay Miocene: Cushman, J. A.,
 10.
 Kansas, fusulinids, Penn. Morrowan
 rocks: Thompson, M. L., 2.
 Leadville ls., Colo., fauna: Johnson,
 J. H., 8.

Foraminifera—Continued.

- Lepidocyclina, Oligocene, Palmat, Vera Cruz, Mex.: Hanzawa, S., 1.
- Limestones formed by: Johnson, J. H., 9.
- Louisiana, Nachitoches area: Maher, J. C., 1.
- Maryland, Tert.: Jenkins, W. A., Jr., 1.
- Mexico, Cacahuamilpa area faunas: Mullerried, 7.
- Lepidocyclina, Oligocene, Palmalt, Vera Cruz: Hanzawa, S., 1.
- Nuevo León: Mullerried, 8.
- Valley of Tixtla: Mullerried, 3.
- Microfauna, E. Tex. Embayment Cret.: Lozo, F. E., Jr., 2.
- Mississippi, Camp Shelby area fauna: Brown, G. F., 1.
- Coastal area: Brown, G. F., 3.
- Moodys marl mbr., Jackson fm.: Cushman, J. A., 4.
- Mooreville chalk fauna: Cushman, J. A., 4.
- New Jersey, Brandywine Lighthouse boring, fauna: Richards, H. G., 2.
- New Mexico, Sierra Nacimiento: U. S. G. S., 2.
- Nodobacularella, Tert., Cuba, N. Am.: Cushman, J. A., 4.
- Nodosaria graysonensis for N. bifurcata: Tappan, H. N., 1.
- North America, index fossils: Cushman, J. A., 1.
- Nodobacularella, Tert.: Cushman, J. A., 4.
- Western, index fossils, marine Cenozoic fms.: Weaver, C. E., 2.
- Nummulitic lss. formed by: Johnson, J. H., 9.
- Nummulitidae, test characters: Frizzell, D. L., 2.
- Oregon, Cape Blanco Eocene: Bandy, O. L., 1.
- Coos Bay quad.: Allen, J. E., 1.
- Coos Bay Tert. fms. faunas: Weaver, C. E., 4.
- Magafossils, NW.: U. S. G. S., 1.
- Pelagic, vertical distrib.: Phlegers, F. B., Jr., 1.
- Proculus, devel.: Schenck, H. G., 1.
- Pseudoclavulina, Cret., Green Co., Ala.: Cushman, J. A., 4.
- Rectuvigerina, Tert., N. Am.: Mathews, R. D., 1.
- Relation to stratigraphy, oil geology: Ladd, H. S., 3.
- Reussellina, Cret., Tert., N. Am.: Cushman, J. A., 4.
- Simultaneous sectioning: Mathews, R. D., 2.
- Spiroculina, genus and species: Cushman, J. A., 7.
- Texas, Anahuac Oligocene fm.: Cushman, J. A., 11; Ellis, A. C. 1.
- Big Spring area: Livingston, P. P., 1.
- Colorado River sec., Penn.: Plummer, H. J., 2.

Foraminifera—Continued.

- Texas—Continued.
- Correlations, Word Perm. fm., fauna and stratigraphy: Clifton, R. L., 3.
- Cretaceous: Barker, R. W., 1.
- Marble Falls, Smithwick, Strawn, Penn. fms.: Plummer, H. J., 1.
- North Comanchean fauna: Lozo, F. E., Jr., 1.
- Pease River group Perm. fauna: Roth, R. I., 1.
- Spiroculina, Oligocene: Cushman, J. A., 4.
- Trinidad, Paleocene: Rutsch, R., 2.
- Cipero marl: Cushman, J. A., 9.
- Tumey ss fauna, Calif.: Zimmerman, J. J., 1.
- United States, Cotton Valley beds, N. Gulf Coastal Plain: Swain, F. M., 1.
- Desmoinesian fusulines: Thompson, M. L., 3.
- Fusulinidae, Penn., Kans-Utah-Colo.: Thompson, M. L., 4.
- Gulf of Mexico, fauces and distrib.: Lowman, S. W., 2.
- Utah, Dry Lake area: Williams, J. Stewart, 2.
- Vaglinas, Cret., U. S. Gulf Coast: Todd, R., 1.
- Virginia, Aquia Tert. fm.: Cushman, J. A., 4.
- Coastal Plain: Cederstrom, D. G., 1.
- Virgulina naheolensis for V. alabamensis, Ala.: Cushman, J. A., 4.
- Washington, NW., Oligocene: Durham, J. W., 1.
- Washita group, Tex., Okla., Cret.: Loeblich, A. R., Jr., 1.
- Formation, slip surfaces in metals, rocks: Nádaí, A., 1.
- Fort Norman oil field, Northwest Territories: Hopkins, O. B., 1; Anonymous 7.
- Fossil pigments: Fox, D. L., 2.
- Fossil treasures of Wah Wah Valley, Utah: Kelly, C., 1.
- Fossils, Mo., common rocks, minerals: Keller, W. D., 3.
- Franklin quad. oil and gas field index maps, Pa.: Dickey, P. A., 2.
- Frontiers for the wildcat: Taylor, F. B., 2.
- Frost action, 10 o'clock markings: Lang, W. T. B., 1.
- Fuchsite, chromium micas: Whitmore, D. R. E., 1.
- Fucoidea, Pa., Huntingdon area, Sil., Dev.: Willard, B., 2.
- Fulgurites.
- California, sand, enclosing lechatelierite: Rogers, A. F., 4.
- North Carolina, Nags Head: Hill, J., 1.
- Fuller's earth.
- South Dakota, res.: Rothrock, E. P., 1.
- Texas, Angelina, Cherokee Cos.: Johnson, J., 1.
- Fayette Co.: Sedlmeyer, J. J., 1.
- Grimes Co.: Ramsay, G. D., 2.

- Fullerton pool, Andrews Co., Tex.: Moore, J. H., 1.
- Fumaroles, Parícutin volcano, Mex.: Foshag, F. W., 1; Ordóñez, E., 3.
- Fundamentals of geology: Fleener, F. L., 4.
- Fusulinidae.
- Evolution, correl., Penn. rocks: Thompson, M. L., 5.
- Pennsylvanian, Kansas - Utah - Colo.: Thompson, M. L., 4.
- Sierra Nacimiento, N. Mex.: U. S. G. S., 2.
- Texas, Perm. Pease River group fauna: Roth, R. I., 1.
- United States, Desmoinesian fusulines: Thompson, M. L., 3.
- Gabbro.**
- British Columbia, Greenwood-Phoenix area: McNaughton, D. A., 1.
- Tyaughton Lake area: Cairnes, C. E., 1.
- New Hampshire, Pawtuckawet Mts.: Roy, C. J., 1.
- Winnepesaukee area: Quinn, A. W., 2.
- New York, east Adirondack area: Balk, R., 1.
- Lake Sanford area: Stephenson, R. C., 1.
- Ontario, Bryce-Robillard area: Moorhouse, W. W., 1.
- Southeast: Harrison, J. M., 2.
- Oregon, Ashland area, magmatic differentiation: Merriam, R. H., 1.
- Quebec, Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
- Stanstead area, Brome and Stanstead Cos.: Ambrose, J. W., 2.
- Wakeham Lake area: Claveau, J., 1.
- Gabbro-wehrlite, Lochalsh, Ontario: Froberg, M. H., 1.**
- Galena.**
- Alaska, Groundhog Basin: Gault, H. R., 4.
- Arizona, Superior mining area: Short, M. N., 1.
- British Columbia, Ainsworth area: Rice, H. M. A., 1.
- Britannia mine No. 8 orebodies: Irvine, W. T., 1.
- Sullivan mine area: Swanson, C. O., 1.
- Canada, Alaska Highway, Watson Lake-Teslin River: Lord, C. S., 1.
- Colorado, Maxwell reef area, Boulder Co.: MacCornack, R. J., 1.
- Gold, host minerals: Schwartz, G. M., 2.
- Mexico, El Alamo mine, Baja Calif.: Antúñez Echegaray, F., 2.
- Nevada, Groom dist., Lincoln Co.: Humphrey, F. L., 1.
- New Mexico, Boston Hill area: Entwistle, L. P., 2.
- North America mines: Townsend, H., 1.
- Origin of name: Bandy, M. C., 1.
- Quebec, Moulton Hill deposit: Hawley, J. E., 1.
- Galena—Continued.
- Tennessee, Greene Co.: Snyder, F. G., 1.
- Yukon, Whitehorse dist.: Cockfield, W. E., 1.
- Gallium.**
- Canada, W., sphalerites: Warren, H. V., 5.
- General: De Ment, J. A., 1.
- Maine, Norway area pollucite: Ahrens, L. H., 1.
- Gamma-ray activity, sed. rocks: Russell, W. L., 1.
- Gamma-ray logs, measuring oil-well depths: Shepherd, G. F., 1.
- Garnet.**
- British Columbia, Little Billie mine, Texada Is.: Stevenson, J. S., 5.
- California, pseudomorphism, zonal growth, Garnet Hill: Trainer, J. N., 1.
- Grain analyses, sand size mins.: Alling, H. L., 1.
- Indiana, Mansfield ss. minerals: Gault, H. R., 1.
- Kansas, gem minerals: Graffham, A. A., 1.
- Maine, Kennebec Valley esker: Trefethen, J. M., 2.
- Manitoba, Snow Lake area: Ebbutt, F., 1.
- Nevada, Elko Co.: Reeves, A., 1.
- New Mexico, Iron Mtn. dist.: Glass, J. J., 2; Jahns, R. H., 1.
- New York, east Adirondack area: Balk, R., 1.
- Gore Mtn.: Lisle, T. O., 4.
- North Dakota, Fox Hills-Hell Creek-Cannonball fms.: Lindberg, M. L., 2.
- Ontario, Kenogamis River area: Macdonald, R. D., 1.
- Oregon, quartz min. locs.: Dake, H. C., 2.
- Quebec: Dufresne, A. O., 1.
- Rhode Island beach mins.: Hyneman, J. R., 1.
- United States, S. Atlantic area: Barclay, G. C., 1.
- Utah, Beaver Co.: Hobbs, S. W., 2.
- Garnet-melteigite, Ark., Magnet Cove ring-dike complex: Bissell, H. J., 1.
- Gastroliths.**
- Colorado, Morrison fm., Colo. Plateau area: Stokes, W. L., 1.
- Minnesota, Dakota Cret. fm.: Stauffer, C. R., 3.
- Gastropoda.** See also Mollusca: Invertebrata (general).
- Alberta, Alexo area: Crombie, G. P., 1.
- Red Deer, Rosebud area faunas: Allan, J. A., 1; Sanderson, J. O. G., 1.
- Arkansas, Batesville area, Carb. fauna: Gordon, M., Jr., 1.
- Bellerophonacea, new genera, U. S.: Knight, J. B., 2.

Gastropoda—Continued.

- California, Coalinga anticline fauna :
 U. S. G. S., 2.
 Knoxville ser. faunas : Anderson,
 F. M., 1.
 Mollusca : Keen, A. M., 2.
 Santa Lucia Range : Taliaferro, N. L.,
 1.
 Colorado Morrison fm., Colo. Plateau
 area : Stokes, W. L., 1.
 Paleozoic faunas : Johnson, J. H., 7.
 Pierre fm. faunal zones : Oswald,
 M. L., 1.
 Sawatch Range area : Johnson, J. H.,
 3.
 West-central, NW. fms. Paleozoic
 faunas : Brill, K. G., Jr., 1.
 Conularidae, Dev., Pa. : Swartz, F. M., 5.
 Cuba, Guica-Los Negros area : Woodring,
 W. P., 1.
 Detroit River ls., Ohio faunas : Stumm,
 E. C., 2.
 Fauna, Barberton ls. mine, Ohio : Stauff-
 fer, C. R., 1.
 Cochise culture area, Ariz. : Sayles,
 E. B., 1.
 Detroit River ls., Ohio : Stumm, E. C.,
 2.
 Eocene Santee ls., N. Car. : Harbison,
 A., 1.
 Gualala group, Calif. : Weaver, C. E.,
 3.
 Mesabi iron range, Minn. : Bergquist,
 H. R., 1.
 San Diego, Calif. : Hertlein, L. G., 1.
 Tatman fm., Wyo. : Van Houten, F. B.,
 1.
 Faunas, early Upper Camb., Mont. :
 Lochman, C., 1.
 Marine Tert. fms., Wash., Oreg. :
 Weaver, C. E., 1.
 Permian, Kaibab fm., Ariz. : Nicol, D.,
 2.
 United States, Perm. marginal ma-
 rine strata : Clifton, R. L., 1.
 Valley of Tixtla, Mex. : Mullerried, 2.
 Florida, Alum Bluff fauna : Gardner,
 J. A., 1.
 Fauna : Cooke, C. W., 3.
 Georgia, Costal Plain : Cooke, C. W., 1.
 Gualala group, Calif. : Weaver, C. E., 3.
 Hodopocus, Tert., SW. U. S. : Pilsbry,
 H. A., 1.
 Honduras Pleist. : Haas, F., 1.
 Illinois, Dev. fms. : Cooper, G. A., 2.
 Thomas A. Green Sil. fossils : Greacen,
 K. F., 1.
 Indiana, Glen Dean ls. fauna : Haas, O.,
 3.
 Invertebrata, Miocene, Burkeville, Tex. :
 Stenzel, H. B., 1.
 Iowa, Dev. : Stainbrook, M. A., 1.
 Illinoian, post-Illinoian Pleist. : Kay,
 G. F., 2.
 Kansas, N.-cent., Pleist. : Hibbard, C. W.,
 1.

Gastropoda—Continued.

- Leadville ls., Colo., fauna : Johnson,
 J. H., 8.
 Louisiana ls., Mo., fauna : Williams,
 J. S., 1.
 Maine, Sil., Ripogenus Dam fauna :
 Willard, B., 1.
 Mesolanites, Cret., SW. Utah : Yen,
 T.-C., 4.
 Mexico, Cacahuamilpa area faunas :
 Mullerried, 7.
 Northeast Tert. fms. Mollusca : Gard-
 ner, J. A., 5.
 Nuevo León : Mullerried, F. K. G., 7.
 Valley of Tixtla : Mullerried, 3.
 Mississippi, Mollusca, Ripley Cret. fm. :
 Harbison, A., 2.
 Missouri, faunas : Branson, E. B., 3.
 Loess fauna : Cameron, C. C., 1.
 Northeast, Dev. : Branson, E. B., 2.
 Mollusca, Mexico, Tert. : Gardner, J. A.,
 3.
 Mississippi, Ripley fm. Cret. : Harbi-
 son, A., 2.
 Paleocene, Trinidad, Soldado Rock :
 Rutsch, R., 2.
 Pleist., Cuba : Pérez Farfante, I., 1.
 New Jersey, Brandywine Lighthouse
 boring, fauna : Richards, H. G., 2.
 Cape May canal Pleist. fauna : Rich-
 ards, H. G., 3.
 New Mexico, Dev. faunas : Stevenson,
 F. V., 1.
 New York, Coxsackie quad. faunas :
 Goldring, W., 3.
 North America : Knight, J. B., 1.
 Western index fossils, marine Ceno-
 zoic fms. : Weaver, C. E., 2.
 Ohio, Allegheny fm. fauna : Sturgeon,
 M. T., 3.
 Oregon, Coos Bay Tert. fms. faunas :
 Weaver, C. E., 4.
 Ozark uplift, Ark.-Mo., faunas : Culli-
 son, J. S., 1.
 Pennsylvania, Huntingdon area Sil.,
 Dev. : Willard, B., 2.
 Oil City quad. : Dickey, P. A., 1.
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 Pleurotoma cabinae for P. (Bela) re-
 beccae : Caster, K. E., 4.
 Protoconchs : Smith, B., 2.
 Quebec faunas : Dresser, J. A., 1.
 Silery fm. Camb. faunas : Rasetti,
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 lard, B., 1.
 Serratocerithium, Paleocene, Calif. :
 Compton, R. R., 1.
 Stenoglossa, Alum Bluff group, Fla. :
 Gardner, J. A., 1.
 Texas, Buda ls. fauna : Stephenson, L.
 W., 1.
 North, Comanchean fauna : Lozo, F.
 E., Jr., 1.
 Tumeys ss. fauna, Calif. : Zimmerman,
 J. J., 1.

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 Vitrinella, Pleist., Md.: Rehder, H. A., 1.
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- Geiger-Muller counter, geol. applications: Press, F., 1.
- Gemology from geol. viewpoint: Snelgrove, A. K., 1.
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 Cathodoluminescence of gems: De Ment, J. A., 2.
 Chalcocite, covellite, Alaska: Anonymous, 44.
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 Mineral res.: Pearl, R. M., 2.
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 Genthelvitte, Colo.: Glass, J. J., 2.
 Geochemical anomalies, Heidelberg oil field, Miss.: Horvitz, L., 1.
 Geochemical interpretation, water analyses: Piper, A. M., 2.
- Geochemical prospecting: Gabriel, F. G., 2.
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 Alberta, Turner Valley oil field ls. reservoirs: Goodman, A. J., 1.
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 Petroleum explor.: Merritt, J. W., 1.
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 Present trends: Wells, R. C., 1.
 Research Com. program: Lowman, S. W., 1.
 Texas, Chambers Co., geochem. prosp.: Horvitz, L., 1.
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- Geochemistry and oil explor.: Merritt, J. W., 1.
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 California, S. desert: Hilton, J. W., 1.
 Illinois, Warsaw fm.: Robertson, P., 1;
 Rost, R. J., 1.
 Indiana: Eisele, W. F., 2.
 Harrodsburg ls., mineralization: Fix, G. F., 1.
 Kentucky River, Drennon abandoned channel: Jillson, W. R., 5.
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 Quartz, Keokuk: Grinstead, L. R., 1.
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 Alabama: Carroll, D. L., 1.
 Midway-Wilcox contact area: Toulmin, L. D., Jr., 2.
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 Alaska, Jurassic: Kellum, L. B., 3.
 Alberta, Alexo area: Crombie, G. P., 1.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Cowley area: Hage, C. O., 1.
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 Red Deer, Rosebud area: Allan, J. A., 1, 2; Sanderson, J. O. G., 1.
 Southern, structure drilling for oil: Furnival, G. M., 1.
 Wainwright field: Hume, G. S., 5.
 Arizona, Grand Canyon, Colo. River: Cucto Rui-Díaz, E., 1.
 Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.
 British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.
 Dunlevy-Portage Mtn. area: Beach, H. H., 1.
 Greenwood-Phoenix area: McNaughton, D. A., 1.
 Island Mtn. mine: Benedict, P. C., 1.
 Manson Creek area: Armstrong, J. E., 7.
 Mount Hulcross-Commotion Creek area: Williams, M. Y., 2.
 Premier mine deposits: Langille, E. G., 1.
 California, Casimalla area: U. S. G. S., 1.
 Central, Pliocene: Axelrod, D. I., 5.
 Coast, Point Arena-Fort Ross: Weaver, C. E., 3.
 Fresno, Merced, Stanislaus Cos.: U. S. G. S., 2.
 Great Basin area: Axelrod, D. I., 7.
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 Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
 Alaska Highway, Watson Lake-Teslin River: Lord, C. S., 1.
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 Fort Nelson-Liard-Beaver Rivers area: Kindle, E. D., 1.
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 Trans-Canada Highway, Hearst-Longlac sec.: Evans, J. E. L., 2.
 Central America Cret. fms.: Imlay, R. W., 2.
 Colorado, Placerville dist.: Haff, J. C., 1.
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 Selected well logs: Barb, C. F., 2.
 White River Plateau, Glenwood Springs area: MacQuown, W. C., Jr., 1.
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 Cuba: Brodermann, J., 1; Palmer, R. H., 1.
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 Southeast Mo.: Croneis, C. G., 1.
 Florida, Everglades: Parker, G. G., 3.
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 Georgia, Coastal Plain: Cooke, C. W., 1.
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- Kansas, Cheyenne ss., Russell Co.: Swineford, A., 1-a.
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 McLouth gas and oil field: Lee, W., 1.
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 Thomas Co.: Frye, J. C., 1-a.
 Kentucky, Corniferous fm., Irvine, Estill Co.: McFarlan, A. C., 3.
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 Louisiana, Natchitoches area: Maher, J. C., 1.
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 Mexico, Colotlipa-Quechultenango min. dist.: González Reina, J., 3.
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 Minnesota, S.: Thiel, G. A., 1.
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 Camp Shelby area: Brown, G. F., 1.
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 Devonian, NE.: Branson, E. B., 2.
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 Wentworth dist.: Bancroft, M. F., 1.
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 Oklahoma, barite: Ham, W. E., 1.
 Black Knob Ridge area: U. S. G. S., 1.
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 Northeast: U. S. G. S., 2.
 West Edmond field: McGee, D. A., 1.
 Ontario, Bigwater Lake area: Berry, L. G., 1.
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 Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
 Cadillac-Bourlamaque area: Norman, G. W. H., 2.
 General: Dresser, J. A., 1.
 La Corne molybdenite mine: McLaren, D. C., 4.
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 Saskatchewan, nat. gas fields : Edmunds, F. H., 2.
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 Dewey, Corson Cos. : Morgan, R. E., 1.
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 Douglas Dam area : Laurence, R. A., 1.
 Mascot-Jefferson City zinc dist. : Oder, C. R. L., 1.
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 Coastal Plain, Oakville, Cuero, Goliad fms. : Weeks, A. W., 2.
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 Lower Rio Grande Valley : Wynd, F. L., 2.
 Merigale field, Wood Co. : Wright, A. C., 1.
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 Uinta Basin, Utah-Colo., hydrocarbons : Barb, C. F., 1.
 United States, Great Basin area : Wheeler, H. E., 1.
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Montana, Jardine-Crevasse Mtn. dist. : Senger, G. F., 1.

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New Hampshire, Monadnock quad. : Billings, K. S. F. L., 1.

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North America, historical geology : Hussey, R. C., 1.

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Ontario, Red Lake area : Horwood, H. C., 3.

Oregon, Coos Bay quad. : Allen, J. E., 1.

Ozark uplift, Ark.-Mo. : Cullison, J. S., 1.

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Pennsylvania, Hanover-York dist. : Stose, A. J., 1.

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Athabaska-Barrhead area : Feniak, M. W., 1.

Bassano area : Canada G. S., 1.

Cowley area : Canada G. S., 1; Hage, C. O., 1.

Central area, foothills : MacKay, B. R., 1.

Drinnan to Brûlé Lake area : Lang, A. H., 1.

Dyson Creek area : Hage, C. O., 2.

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Fall Creek area : Henderson, J. F. 2.

Lower Cret. : Hume, G. S., 7.

Morley area : Canada G. S., 1.

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 Rice, H. M. A., 1.
 Alaska Highway, Ft. St. John-Ft. Nelson : Hage, C. O., 3.
 Britannia mine No. 8 orebodies : Irvine, W. T., 1.
 China Creek area : Stevenson, J. S., 4.
 Coast Range batholith prosp., Bridge River-Whitesail Lake : Joubin, F. R., 1.
 Dunlevy-Portage Mtn. area : Beach, H. H., 1.
 Greenwood-Phoenix area : McNaughton, D. A., 1.
 Hasler Creek area : Spivak, J., 1.
 Hazelton, Cassiar dist. : Armstrong, J. E., 3.
 Island Mtn. mine : Benedict, P. C., 1.
 Little Billie mine, Texada Is. : Stevenson, J. S., 5.
 Lone Mtn. area : McLearn, F. H., 1.
 Lower Cret. : Hume, G. S., 7.
 Manson Creek area : Armstrong, J. E., 7.
 Mt. Hulcross-Commotion Creek area : Wickenden, R. T. D., 1.
 Nickel Plate Mtn. area : Dolmage, V., 1.
 Nicola area : Cockfield, W. E., 2.
 Omineca dist. : Armstrong, J. E., 4.
 Peace River Pothills : McLearn, F. H., 2.
 Pinchi Lake area : Armstrong, J. E., 1.
 Princeton area : Rice, H. M. A., 2.
 Smithers area : Armstrong, J. E., 2.
 Sullivan mine area : Swanson, C. O., 1.
 Takla, Cassiar dist. : Armstrong, J. E., 6.
 Taku River, Cassiar dist. : Kerr, F. A., 1.
 Tuya-Teslin area : Watson, K. D., 1.
 Twin "J" mine : Stevenson, J. S., 3.
 Tyaughton Lake area : Cairnes, C. E., 1.
 California, Barstow quad., San Bernardino Co. : Miller, W. J., 2.
 Big Pine volcanic field : Mayo, E. B., 1.
 Blairsdien area : Durrell, C., 1.
 Casmalia area : U. S. G. S., 1.
 Coast, Point Arena-Fort Ross : Weaver, C. E., 3.
 Crestmore minerals : Woodford, A. O., 1.
 Diablo Range quicksilver deposits : Yates, R. G., 1.
 Glenn Co. : Rynearson, G. A., 1.
 Ione area : Bates, T. F., 1.
 Knoxville quicksilver dist. : Averitt, P., 1.
 Los Angeles Basin area : U. S. G. S., 2.
 McKittrick dist. bituminous deposits : U. S. G. S., 1.
 Needles-Goffs area, San Bernardino Co. : Miller, W. J., 3.

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- California—Continued.
 Palm Springs-Blythe Strip, Riverside Co. : Miller, W. J., 1.
 Puente, San Jose Hills : U. S. G. S., 1.
 Salinas Valley : U. S. G. S., 1.
 San Diego area : Hertlein, L. G., 1.
 San Luis Obispo Co. : Smith, C. T., 1.
 Bituminous sands : U. S. G. S., 1.
 Santa Cruz area : U. S. G. S., 1.
 Santa Lucia Range : Taliaferro, N. L., 1.
 Santa Maria oil dist. : U. S. G. S., 1.
 Santa Rosa Hills-Purisima Hills dists. : U. S. G. S., 1.
 Seismograph explor. : Salvatori, H., 1.
 South Mtn. field : Bailey, W. C., 1.
 Tesla area : Campbell, A. S., 2.
 Canada : MacKay, B. R., 3.
 Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Alaska Highway, Watson Lake-Teslin River : Lord, C. S., 1.
 Canol invs., Mackenzie River area : Hume, G. S., 8.
 Cretaceous fms. : Hume, G. S., 7.
 Duparquet-Larder Lake-Rouyn area : Ambrose, J. W., 1.
 Eastern Arctic : Robinson, J. L., 1.
 Flin Flon-Sherridon-Herb Lake area : Stockwell, C. H., 2.
 Fort Nelson - Liard - Beaver Rivers area : Kindle, E. D., 1.
 General : Canada G. S., 1.
 Lower Liard River area : Hage, C. O., 5.
 1917-1945 : Moran, P. J., 1.
 Oil and gas fields : Hume, G. S., 2.
 Development : Hume, G. S., 9.
 Pouce Coupé-Peace River area : Crickmay, C. H., 1.
 Structure and relief : Brouillette, B., 1.
 Stull Lake area : Spector, I. H., 1.
 Trans - Canada Highway, Hearst-Longlac sec. : Evans, J. E. L., 2.
 Carolina Piedmont : Kessler, T. L., 1.
 Central America Cret. fms. : Inlay, R. W., 2.
 Selva Lacandona, Mex., Guatemala : Mullerried, 4.
 Clay Basin gas field, Utah-Wyo. : Dobbin, C. E., 2.
 Colorado, Canon City area : Blum, V. J., 1, 2.
 Red Creek area, Fremont Co. : Glockzin, A. R., 1.
 Sawatch Range area : Johnson, J. H., 3.
 Specimen Mtn. : Wahlstrom, E. E., 2.
 Uinta Basin and Rangely field : Bench, B. M., 1.
 White River Plateau, Glenwood Springs area : MacQuown, W. C., Jr., 1.

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- Costa Rica, El General area: Dóndoli, C., 2.
- Cuba: Palmer, R. H., 1.
Bituminous deposits: Brodermann, J., 2.
General: Brodermann, J., 1.
Guisa-Los Negros area: Woodring, W. P., 1.
Isla de Pinos tungsten deposits: Page, L. R., 1.
Sierra Maestra area: Park, C. F., Jr., 1.
- Florida, Everglades: Parker, G. G., 2.
General: Cooke, C. W., 3.
Petroleum poss.: Gunter, H., 1.
Southern: Parker, G. G., 2, 5.
Pleistocene effect: Parker, G. G., 5.
- Georgia Coastal Plain: Cooke, C. W., 1.
Kyanite deposits: Furcron, A. S., 4.
Sillimanite deposits: Furcron, A. S., 4.
- Southeastern coast: Warren, M. A., 1.
Southwestern: Furcron, A. S., 2, SE.
G. Soc., 2.
- Greenland, East, between 74°-75°, and islands: Vischer, G. A., 1.
Franz Josef Fjord area: Odell, N. E., 1.
- Hawaii, Kilauea Volcano solfataric rock alteration: Macdonald, G. A., 4.
- Idaho, Birch Creek area: Anderson, A. L., 1.
Latah Co.: Tullis, E. L., 1.
Teton Basin: Gardner, L. S., 1.
- Illinois: Workman, L. E., 1.
Cave in Rock dist.: Currier, L. W., 2.
Chicago area: Bretz, J. H., 1.
Hardin Co. fluorspar areas: Currier, L. W., 1.
- Iowa: Gwynne, C. S., 1.
- Kansas: Lane, H. H., 1.
Eastern oil and gas fields: Jewett, J. M., 1.
Finney, Gray Cos.: Latta, B. F., 1.
McLouth gas and oil field: Lee, W., 1.
Neosho River Valley near Parsons: Williams, C. C., 1.
Outcropping rocks: Moore, R. C., 4.
Thomas County: Frye, J. C., 1-a.
- Kentucky: McFarlan, A. C., 2.
History of: Jillson, W. R., 6.
Western, Dev.: Freeman, L. B., 1.
- Louisiana, Jefferson Davis, Acadia Parishes: Stanley, T. B., Jr., 1.
Natchitoches area: Maher, J. C., 1.
- Louisiana-Texas, Midway-Wilcox fms.: Murray, G. E., Jr., 1.
- Magnetometer, aid in geol. mapping: Ambrose, J. W., 3.
- Maine, Kennebec Valley esker: Trefethen, J. M., 2.
Mt. Waldo batholith: Trefethen, J. M., 1.

Geologic maps—Continued.

- Manitoba, Athapapuskw Lake area: Canada G. S., 1.
East of Flin Flon: Bateman, J. D., 5.
Island Lake area: McMurchy, R. C., 1.
Gurney gold mine area: Hage, C. O., 4.
Mikanagan Lake area: Bateman, J. D., 1.
Sheridon area: Bateman, J. D., 6.
Sherritt Gordon mine area: Bateman, J. D., 2.
Snow Lake area: Ebbutt, F., 1; Harrison, J. M., 3, 5.
- Massachusetts, Chester-Blandford State Forest: Billings, M. P., 1.
- Mauna Kea, Hawaii, ring structures: Macdonald, G. A., 6.
- Mexico, Cerro de Mercado Mtn.: Terrones Benitez, A., 1.
Cretaceous fms.: Imlay, R. W., 2.
Gulf of Calif. area: Osorio, Tafall, B. F., 1.
Nuevo León: Mullerried, 8.
Pacific Coast: Gonzáles Reyna, J., 1.
Permian area NW. of Las Delicias: King, R. E., 1, 2.
Quicksilver-antimony deposits, Huitzuco, Guerrero: McAllister, J. F., 1.
- Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.
- Sonora tungsten deposits: Wiese, J. H., 1.
- Michigan: Martin, H. M. M., 1.
Berea ss.: U. S. G. S., 1.
Lake Michigamme area: Seaman, W. A., 2.
Marquette, Baraga Cos.: Snelgrove, A. K., 2.
Menominee iron range: Lamey, C. A., 1.
Republic area: Ayres, V. L., 1.
South-central: U. S. G. S., 1.
Southwest Traverse group, Dundee fm.: U. S. G. S., 2.
- Spruce River-Peshekee River areas: Seaman, W. A., 3.
- Sylvania, Bois Blanc fms.: U. S. G. S., 1.
- Minnesota, S.: Thiel, G. A., 1.
- Mississippi, Camp Shelby area: Brown, G. F., 1.
Coastal area: Brown, G. F., 3.
Embayment area, upper: Cooper, C. L., 1.
General: Miss. G. Soc., 2.
Monroe Co.: Vestal, F. E., 1.
- Missouri: Branson, E. B., 3.
Moselle fault area: Frank, A. J., 2.
Northwest, recent oil invs.: Greene, F. C., 1.
Pleistocene: Holmes, C. D., 1.
- Montana, Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.

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Montana—Continued.

- Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 North Big Belt Range: Lyons, J. B., 1.
 South-central: U. S. G. S., 1.
 Moselle fault area, Mo.: Frank, A. J., 2.
 Nevada, bibliography: Prince, R. W., 1.
 Comstock Lode area: Calkins, F. C., 1.
 Groom dist., Lincoln Co.: Humphrey, F. L., 1.
 Quicksilver deposits: Bailey, E. H., 1.
 Rye Patch area: Vitaliano, C. J., 1.
 New Brunswick, Musquash area: Alcock, F. J., 4; Belyea, H. R., 1.
 St. George area: Alcock, F. J., 3.
 Sussex area: Alcock, F. J., 1.
 Waterford area: Canada G. S., 1.
 New England, mica deposits: Cameron, E. N., 1.
 Newfoundland, fluorspar deposits: Van Alstine, R. E., 1.
 Rambler min. area: Quinn, H. A., 1.
 New Hampshire: Bannerman, H. M., 1; Billings, M. P., 2.
 Bellows Falls, Plymouth, Mt. Washington quads.: Billings, M. P., 3.
 Monadnock quad.: Billings, K. S. F. L., 1.
 Mt. Washington area: Billings, K. S. F. L., 2; Billings, M. P., 3.
 Pawtuckaway Mts.: Roy, J., 1.
 Pegmatites: Bannerman, H. M., 1.
 Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Winnetoesaukee area: Quinn, A. W., 2.
 New Jersey, copper deposits: Woodward, H. P., 1.
 Middlesex Co.: Barksdale, H. C., 1.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 Curry, Roosevelt Cos.: Theis, C. V., 1.
 Estancia Valley area: U. S. G. S., 1.
 Iron Mtn. dist.: Jahns, R. H., 1.
 Iron Mtn. ribbon rock: Jahns, R. H., 2.
 Pecos River-Rio Galisteo area: U. S. G. S., 1.
 Silver City area: Entwistle, L. P., 1.
 New York, Adirondack area: Balk, R., 1.
 Bedford dist.: Fluhr, T. W., 3.
 Catskill quad.: Cook, J. H., 2; Ruedemann, R., 5, 6.
 Coxsackie quad.: Cook, J. H., 3; Goldring, W., 3.
 Gouverneur talc dist.: U. S. G. S., 5.
 Lake Sanford area: Stephenson, R. C., 1.
 New York City, Manhattan Borough: Murphy, J. J., 1.
 Salamanca re-entrant area: MacClintock, P., 1.
 Willsboro area: Broughton, J. G., 1.

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- North America, Alaska Highway: Lord, C. S., 2.
 Gulf, Caribbean areas: Seismog, Serv. Corp., 1.
 Rocky Mtn. area: Deegan, C. J., 5.
 Tectonic devel., E. edge of Pacific: Stillé, H. W., 1.
 North Carolina: N. Car. Dept. Conserv. Devel., 1.
 North Dakota, Emerado quad.: Laird, W. M., 1.
 Well-irrigation areas: Rasmussen, W. C., 1.
 Northwest Territories: Jolliffe, A. W., 2.
 Mackenzie River Valley: Steward, J. S., 2.
 Prosperous Lake area: Jolliffe, A. W., 4.
 Yellowknife area: Jolliffe, A. W., 3, 5.
 Yellowknife-Beaulieu area: Jolliffe, A. W., 1.
 Yellowknife gold mines. Anonymous, 29.
 Nova Scotia, Bass River area: Weeks, L. J., 3.
 Bridgeville area: Messervey, J. P., 2.
 Lake Ainslie area: Douglas, G. V., 7.
 Londonderry area: Weeks, L. J., 2.
 Mabou coal area: Douglas, G. V., 6.
 Riverside Corner area: Messervey, J. P., 3.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Shinimikas area: Bell, W. A., 4; Canada G. S., 1.
 Upper Musquodoboit area: Messervey, J. P., 1.
 Ohio, Berea sand pools: U. S. G. S., 1.
 Franklin Co. and Columbus area: Harker, D. H., 2.
 Fulton Co.: Harker, D. H., 3.
 Geology of water: Stout, W. E., 1.
 Geology of water supply: Ohio Water Sup. Bd., 1.
 Old drainage systems: Stout, W. E., 3.
 Rock fms.: Stout, W. E., 4.
 Structural features: Ver Steeg, K., 1.
 Summit Co. and Akron: Harker, D. H., 5.
 Water supply: Stout, W. E., 2.
 Wood Co.: Harker, D. H., 6.
 Oklahoma, Apache field: Scott, V. C., 1.
 Arbuckle Mts.: Ham, W. E., 3; Lehman, R. P., 1.
 Black Knob Ridge area: U. S. G. S., 1.
 Bromide area: Ham, W. E., 2.
 Dougherty asphalt area: U. S. G. S., 1.
 Ground water: Dott, R. H., 4; U. S. G. S., 7.
 Sulphur asphalt area: U. S. G. S., 1.
 West Edmond oil field: Dahlgren, E. G., 1; McGee, D. A., 1.

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- Ontario, Beatty-Munro area: Satterly, J., 1.
 Bigwater Lake area: Berry, L. G., 1.
 Bruce ser., Falconbridge-Dryden Tps.: Fairbairn, H. W., 2.
 Bryce-Robillard area: Moorhouse, W. W., 1.
 Cunningham-Garnet area: Meen, V. B., 2.
 East Bull Lake area: Moore, E. S., 3.
 East extension of Fort Hope area: Prest, V. K., 2.
 Essex County: Canada G. S., 1.
 Flack Lake area: Harding, W. D., 2.
 Fort Hope area: Prest, V. K., 1.
 Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
 Grimsthorpe-Barrie area: Meen, V. B., 1.
 Kaladar, Kennebec Tps.: Harding, W. D., 1.
 Kam Kotia mine mineralized zone: Ferguson, S. A., 1.
 Kenogamis River area: Macdonald, R. D., 1.
 Leeds Co.: Harrison, J. M., 1.
 North Spirit Lake area: Bateman, J. D., 7.
 Owen Sound area: Caley, J. F., 2.
 Pickle Crow gold mine: Monette, H. H., 1.
 Porcupine dist.: Evans, J. E. L., 1.
 Porcupine-Shining tree area: Ontario, Dept. Mines, 1.
 Red Lake area: Horwood, H. C., 2, 3.
 Renfrew area: Satterly, J., 2.
 Rennie-Leeson area: Bruce, E. L., 1.
 Southeastern: Harrison, J. M., 2.
 Sudbury area: Fairbairn, H. W., 3.
 Whitefish Bay area: Fraser, N. H. C., 1.
 Windsor-Sarnia area: Canada G. S., 1.
 Ordovician bentonite beds, SE. U. S.: Fox, P. P., 2.
 Oregon, Ashland area: Merriam, R. H., 1.
 Northwest: U. S. G. S., 1.
 Volcanoes of Three Sisters area: Williams, H., 1.
 Ottawa-Bonnechere graben and Lake Ontario homocline maps, correction: Kay, G. M., 5.
 Ozark uplift, Ark.-Mo.: Cullison, J. S., 1.
 Palinspastic, paleogeog. maps: Kay, G. M., 4.
 Pennsylvania: Graham, J. B., 1.
 Central-eastern: Hershey, J. B., 1.
 Central, Ord.: Kay, G. M., 2.
 Folded Appalachians, stream devel.: Strahler, A. N., 5.
 Hanover-York dist.: Stose, A. J., 1.
 Mineral res. areas: Ashley, G. H., 1.
 Point Pleasant area: McLaughlin, D. B., 1.
 Possible future oil pools: Sherrill, R. E., 1.

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- Puerto Rico, glass sand: Meyerhoff, H. A., 2.
 Quebec: Dresser, J. A., 1; Dufresne, A. O., 1.
 Beattie mine: Davidson, S. C., 1.
 Beauchastel Tp.: Ambrose, J. W., 3.
 Bourlamaque Tp.: Norman, G. W. H., 1.
 Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
 Cadillac-Bourlamaque area: Norman, G. W. H., 2.
 Calumet Is.: Osborne, F. F., 1.
 Dudswell, Wolfe, Richmond, Compton Cos.: Cooke, H. C., 3.
 Hincks Tp.: Tanton, T. L., 1.
 Louvicourt area: Norman, G. W. H., 6.
 La Motte area: Norman, G. W. H., 4.
 Lower Romaine River area: Retty, J. A., 1.
 Matamec Lake area, Saguenay Co.: Greig, E. W., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Montmorency fault, Lottainville-Loretteville: Putman, H. M., 1.
 Moulton Hill mine, Eastern Tps.: Hawley, J. E., 1; Rowe, R. C., 1.
 Opaoka River area: Freeman, B. C., 2.
 Orford area: Fortier, Y. O., 1.
 Quebec Prov.: Quebec Bur. Mines, 1.
 Rouyn-Beauchastel area: Wilson, M. E., 1.
 Rouyn-Malartic-Destor area: Norman, G. W. H., 3.
 Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
 Sept-Iles area, N. bank St. Lawrence: Faessler, C., 1.
 Stanstead area, Brome and Stanstead Cos.: Ambrose, J. W., 2.
 Wakeham Lake area: Claveau, J., 1.
 Quitman fault zone, Ala.-Miss.: U. S. G. S., 1.
 Rangely oil field, Colo.: U. S. G. S., 1.
 Saskatchewan, Cypress Lake area: Canada G. S., 1.
 Kindersley area: Wickenden, R. T. D., 2.
 Natural gas fields: Edmunds, F. H., 2.
 Petroleum and gas poss.: Edmunds, F. H., 1.
 South Dakota: Rothrock, E. P., 1.
 Dewey, Corson Cos.: Morgan, R. E., 1.
 Pegmatites, Custer area: Fisher, D. J., 1.
 Sweet Springs dist., Va., W. Va.: Ladd, H. S., 1.
 Tennessee bentonites: Fox, P. P., 2.
 Northeast: King, P. B., 4.
 West central: Borne, K. E., 21.
 Texas: Sellards, E. H., 2.
 Big Spring area: Livingston, P. P., 1.

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Texas—Continued.

- Cayuga oil field: Peacock, H. B., 1.
- Coastal Plain, Brazos-Rio Grande Rivers: Weeks, A. W., 1.
- El Paso area: Sayre, A. N., 1.
- Guadalupe Mts.: U. S. G. S., 1.
- Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
- Llano Co.: Chelf, C. R., 1.
- Lower Rio Grande Valley: Wynd, F. L., 2.
- Sierra Diablo area: U. S. G. S., 1.
- Smoothingiron mass: Romberg, F., 1.
- United States, Anadarko Basin: Gibson, A., 1; Gould, C. N., 1.
- Appalachian Basin, Berea sand: U. S. G. S., 1.
- Basin-and-Range Prov.: Longwell, C. R., 8.
- Cotton Valley beds, N. Gulf Coastal Plain: Swain, F. M., 1.
- Reading overthrust: Miller, B. L., 1.
- Rocky Mtn. deformation, basement control: Chamberlin, R. T., 4.
- Southeast, manganese, cobalt-bearing beds: Pierce, W. G., 2.
- Stockton, Lockatong fms. type secs.: McLaughlin, D. B., 2.
- Tectonic map: King, P. B., 1.
- West: Longwell, C. R., 7.
- Western interior: U. S. G. S., 1.
- Utah, Beaver Co.: Hobbs, S. W., 2.
- Uinta Basin Cret.: Walton, P. T., 1.
- Wasatch Mts., N.-cent.: Eardley, A. J., 1.
- Vermont, west-central: Cady, W. M., 2.
- West, N. end Taconic thrust sheet: Kaiser, E. P., 1.
- Virginia, Bland, Giles Cos.: Ladd, H. S., 2.
- Burks Garden quad.: Cooper, B. N., 1.
- Dolomites, Iss., New-Roanoke River dist.: Cooper, B. N., 3.
- Glade Mtn. dist.: Miller, R. L., 1.
- Lick Mtn. dist.: Stead, F. W., 1.
- Rose Hill oil field: U. S. G. S., 1.
- Washington, Blewett-Cle Elum fm.: Broughton, W. A., 1; Lupton, R. L., 1.
- King Co. coal fields: Warren, W. C., 1.
- Northwest, Oligocene: Durham, J. W., 1.
- Stevens, Okanogan Cos. magnetite deposits: Broughton, W. A., 2.
- West Virginia, Berea sand pools: U. S. G. S., 1.
- Wisconsin, Brûlé Rivér Basin: Bean, E. F., 1.
- Wyoming, Como Bluff anticline: Dunbar, R. O., 1.
- General: La Fleiche, P., 2.
- Jackson Hole Nat. Monument: Fryxell, F. M., 2.

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Wyoming—Continued.

- Lance Creek oil and gas field: U. S. G. S., 3.
- Little Buffalo Basin field: U. S. G. S., 8.
- Maverick Springs area: U. S. G. S., 1.
- Teton Basin: Gardner, L. S., 1.
- Vermiculite deposits: Hagner, A. F., 1.
- Willow Creek coal area: Andrews, D. A., 1.
- Willwood, Tatman fms.: Van Houten, F. B., 1.
- Wind River Mts., NW. end: U. S. G. S., 1.
- Yellowstone Park rhyolite-basalt complex: Wilcox, R. E., 1.
- Wyoming-Colorado, Washakie Basin: U. S. G. S., 1.
- Wyoming-Montana, Elk Basin field: U. S. G. S., 4.
- Yukon, Canol Road, Teslin River-Macmillan Pass: Kindle, E. D., 2.
- Selwyn River area: Bostock, H. S., 2.
- Upper McQuesten River area: Bostock, H. S., 1.
- Geologic research, necessity not luxury: Kornfeld, M. M., 1.
- Geologic terms, dictionary: Rice, C. M., 1.
- Geologic time. See also Historical geology: Radioactivity.
- Batholith, S. and Lower Calif., crystallization: Larsen, E. S., 2.
- Earth crust, astronomical dating: Shapley, H., 1.
- Geologic calendar, periods, time, lengths: Elias, M. K., 5.
- How the earth shows its age: Lane, A. C., 3.
- Lead isotopes as tracers: Lane, A. C., 1.
- Life calendar: Colbert, E. H., 3.
- New York, Hudson Valley area: Reudemann, R., 3.
- North America, uranium: Vanderwilt, J. W., 1.
- North Carolina, Spruce Pine monazite: Bliss, A. D., 1.
- Oil and gas fields, time of origin and accumulation: Levorsen, A. I., 2.
- Pelecypoda, geol. range: Gardner, J. A., 2.
- Physical, chemical processes in geology: Krynine, P. D., 6.
- Theory of the past: Haldane, J. B. S., 1.
- Thorium-uranium ratios, rocks, minerals: Keevil, N. B., 2.
- Time of oil and gas accumulation: Levorsen, A. I., 2.
- Geologic use, drilling-time data: Shepherd, G. F., 2.
- Geological Surveys: Ashley, G. H., 2.
- Geologist and soil conservation: Ireland, H. A., 1.

- Geologists starred in Am. Men Sci., 1903-43, age, education: Visher, S. S., 3.
- Geology, a chapter in the art of war: Van Amringe, E. V., 1.
- Aid to civil engineering: Pastor, R., 1.
- Applied to military tactics: Erwin, H. D., 1.
- Applied to modern warfare: Rubenstein, Henry S., 2.
- Applied to terrain intelligence: Erdmann, C. E., 2.
- Climate, soils of Texas: Baker, C. I., 1.
- Contribution to human progress: Bagg, R. M., 1.
- Definitions of: Cram, I. H., 3.
- From the air: Levings, W. S., 1.
- In mining: Schmitt, H. A., 1.
- In the service of man: Fearnside, W. G., 1.
- Major in colleges: Levorsen, A. I., 1.
- Uses in war: Denison, A. R., 1.
- Geology and civil eng. relations: Hernández S., A., 1.
- Geology and geophysics problems: Am. J. Sci., 1.
- Geology and min. res. in war: Foose, R. M., 2.
- Geology and oil in Florida: Gunter, H., 1.
- Geology and prospecting: Gunning, H. C., 1.
- Geology and war: Steidle, E., 2.
- Geomagnetic survey, Carolina Bays, N. Car.: McCampbell, J. C., 2.
- Geometrical orientation of cores to show subsurface fms. dip: Subkow, P., 1.
- Geomorphology. See also Physiographic Geology.
- California, Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.
- General: Melton, F. A., 1.
- Streams, drainage basins, erosional devel.: Horton, R. E., 1.
- Systematic and regional: Lucke, J. B., 1.
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 St. Maurice River pre-glacial channel: Laverdière, J. W., 1.
 Sept-Iles area, N. bank St. Lawrence: Faessler, C., 1.
 Saskatchewan, S.: Hutt, G. M., 17.
 South Dakota, Missouri Valley, Little Bend-White River: Rothrock, E. P., 2.
 United States, buried Wisconsin valleys: Fisk, H. N., 1.
 Central, Tertiary Teays River: Ver Steeg, K., 4.
 Columbia intermontane prov. divs.: Freeman, O. W., 3.
 Green, White, Adirondack Mts.: Balk, R., 2; Peattie, R., 1.
 Iowan is outwash from Des Moines lobe of Wisconsin glaciation: Hobbs, W. H., 8.
 Middle West glacial drift: Hurst, H., 1.
 Mississippi Valley drainage: Frye, J. C., 2.

Glacial geology—Continued.

United States—Continued.

- Northwest Cordilleran glaciation : Hobbs, W. H., 7.
 Periglacial rock streams, Blue Ridge area : Smith, H. T. U., 3.
 Pleistocene Citronelle fm. : Fisk, H. N., 2.
 Pleistocene stage, Northwest : Lupper, R. L., 3.
 Waihu fanglomerate, Hawaii : Stearns, H. T., 1.
 Washington, Chelan Lake glaciation : Freeman, O. W., 1.
 Wisconsin, Brûlé River Basin : Bean, E. F., 1.
 Lake-basin seal, Trout Lake area : Chancey, J., 1.
 Wyoming, Jackson Hole area : Fryxell, F. M., 3.
 Jackson Hole Nat. Monument : Fryxell, F. M., 2.
 Wind River Mts. : Branson, E. B., 4.
 Yukon, Canol Road, Teslin River-Macmillan Pass : Kindle, E. D., 2.
 McQueston River area : Bostock, H. S., 1.
 Selwyn River area : Bostock, H. S., 2.
 Whitehorse dist. : Cockfield, W. E., 1.
 Glacial lakes. See also Beaches ; Lakes, extinct ; Shore lines ; Terraces.
 British Columbia, Tuva-Teslin area : Watson, K. D., 1.
 Bull Lake, Jackson Hole, Wyo. : Fryxell, F. M., 3.
 California, Sierra Nevada, Mono Lake area : Putnam, W. C., 1.
 Canada : MacKay, B. R., 3.
 Lake Agassiz, Manitoba : Hutt, G. M., 2.
 Manitoba dist. : Hutt, G. M., 15.
 Pleistocene artifact-bearing deposits, age : Stanley, G. M., 1.
 Winnipeg to Edmonton : Hutt, G. M., 13.
 Colorado, Rocky Mtn. Nat. Park : Wegemann, C. H., 1.
 Lake Agassiz, Manitoba-N. Dak. : Hutt, G. M., 2, 13, 15 ; Laird, W. M., 1.
 Lake Algonquin : Bean, E. F., 1.
 Lake Arkona, Ohio : Stout, W. E., 2.
 Lake Bonneville, Utah : Eardly, A. J., 1.
 Lake Chelan, Wash. : Freeman, O. W., 1.
 Lake Chicago : Bean, E. F., 1.
 Lake Duluth, Wis. : Bean, E. F., 1.
 Lake Erie, Ohio : Stout, W. E., 2.
 Lake Gravelbourg, Sask. : Hutt, G. M., 17.
 Lake Kinkaid, Sask. : Hutt, G. M., 17.
 Lake Leverett, Wash. : Hobbs, W. H., 7.
 Lake Lundy (Elkton, Dana), Ohio : Stout, W. E., 2.
 Lake Maumee, Ohio : Harker, D. H., 6.
 Lake Missoula, Mont. : Hobbs, W. H., 7.

Glacial lakes—Continued.

- Lake Okanogan, Wash. : Hobbs, W. H., 7.
 Lake Regina, Canada : Hutt, G. M., 13, 15, 17.
 Lake Saskatoon, Canada : Hutt, G. M., 13.
 Lake Souris, N. Dak. : Hutt, G. M., 13, 15, 17 ; Rasmussen, W. C., 1.
 Lake Warren, Ohio : Harker, D. H., 6 ; Stout, W. E., 2.
 Lake Wayne, Ohio : Stout, W. E., 2.
 Lake Whittlesey, Ohio : Harker, D. H., 6 ; Stout, W. E., 2.
 Manitoba, Winnipeg area : Hutt, G. M., 2.
 Michigan : Martin, H. M. M., 1.
 New York, Catskill quad. : Cook, J. H., 2 ; Ruedemann, R., 5.
 North Dakota, Emerado quad. : Laird, W. M., 1.
 Ohio, geology of water : Stout, W. E., 3.
 Old drainage systems : Stout, W. E., 3.
 Water supply : Stout, W. E., 2.
 Wood Co. : Harker, D. H., 6.
 Saskatchewan, S. : Hutt, G. M., 17.
 United States, NW., Cordilleran glaciation : Hobbs, W. H., 7.
 Utah, Escalante Bay of Lake Bonneville : Dennis, P. E., 1.
 Traverse Mts. manganese deposits : Crawford, A. L., 3.
 Wasatch Mts. : Eardly, A. J., 1.
 Wisconsin, Brûlé River Basin : Bean, E. F., 1.
 Wyoming, Jackson Hole area : Fryxell, F. M., 3.
 Glaciers.
 Alaska, Aleutian Islands : Freiday, D., 1.
 Copper River area : Moffit, F. H., 1.
 British Columbia, glaciation phases : Davis, N. F. G., 1.
 Hazelton, Cassiar dist. : Armstrong, J. E., 3.
 Smithers area : Armstrong, J. E., 2.
 Taku River, Cassiar dist. : Kerr, F. A., 1.
 California, Sierra Nevada, Mono Lake area : Putnam, W. C., 1.
 Canada, Arctic : Robinson, J. L., 1.
 Latest glaciation boundary : Hobbs, W. H., 6.
 General : Matthes, F. E., 1 ; Seligman, G., 1.
 Greenland : Shaw, V., 3.
 Glacial anticlines : Hobbs, W. H., 4.
 Growth of continental glacier : Hobbs, W. H., 1.
 Michigan, iron deposits : Martin, H. M. M., 2.
 Montana, sources, Yellowstone Nat. Park : Bevan, A. C., 8.
 North America, Alaska Highway : Lord, C. S., 2.
 General : Matthes, F. E., 1.

Glaciers—Continued.

- Oregon, volcanoes of Three Sisters region: Williams, H., 1.
- Subglacial erosion hypothesis: Holmes, C. D., 2.
- Washington, Chelan Lake glaciation: Freeman, O. W., 1.
- Yukon, Whitehorse dist.: Cockfield, W. E., 1.

Glass sand.

- Mississippi Valley, indust. minerals: Voskuil, W. H., 1.
- Oklahoma, central Arbuckle Mts.: Ham, W. E., 3.
- Ceramic raw materials: Burwell, A. L., 1.
- Puerto Rico: Frazier, J. E., 1.

- Glaucochroite, Franklin Furnace, N. J.: O'Daniel, H., 1.

Glaucconite.

- Kentucky, W., Dev.: Freeman, L. B., 1.
- New Jersey, Monmouth Co.: Hawkins, A. C., 2.
- Texas, Bexar Co.: Jones, R. A., 1.
- Lee Co.: Harris, G. D., 1.
- Virginia, Coastal Plain well logs: Cederstrom, D. J., 2.

Glossary of speleology: Muma, M. H., 1.

- Glycymeridae, Pelecypoda, genera, subgenera: Nicol, D., 4.

Gneiss.

- Alabama, Pinckneyville complex: Gault, H. R., 2.
- Bellows Falls quad., N. H.-Vt.: Kruger, F. C., 1.
- Carolina Piedmont: Kesler, T. L., 1.
- Georgia, SW.: Furcron, A. S., 2; SE. Geol. Soc., 2.
- Greenland, Franz Josef Fjord area: Odell, N. E., 1.
- Maine, Kennebec Valley esker: Trefethen, J. M., 2.
- Manitoba, Mikanagan Lake area: Bateman, J. D., 1.
- Snow Lake area: Ebbutt, F., 1, Harrison, J. M., 4.
- Massachusetts, Shelburne Falls gneiss dome: Balk, R., 3.
- New Brunswick, Musquash area plutonic rocks: Belyea, H. R., 1.
- New Hampshire, Monadnock quad.: Fowler-Billings, K. S., 1.
- Oliverian magma ser., Mt. Wash. quad.: Chapman, C. A., 1.
- Pawtuckaway Mts.: C. J., 1.
- New York, Gouverneur talc dist.: U. S. G. S., 5.
- New York City, Fordham gneiss corral: Fluhr, T. W., 2.
- Westchester Co.: Fluhr, T. W., 1.
- North Carolina, W., bldg. stones: Money-maker, B. C., 2.
- Ontario, Kenogamis River area: MacDonald, R. D., 1.
- Renfrew area: Satterly, J., 2.
- Rennie-Leeson area: Bruce, E. L., 1.

Gneiss—Continued.

- Quebec, Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
- Hincks Tp.: Tanton, T. L., 1.
- Texas, Llano Co., N.: Zapp, A. D., 1.
- Wyoming, vermiculite deposits: Hagner, A. F., 1.

- Gnomonic, linear heptaxial 2-circle calculations: Parsons, A. L., 3.

- Goethite, recrossing axial planes an error: Peacock, M. A., 1.

Gold.

- Alaska, Copper River area: Moffit, F. H., 1.

- Fairbanks mining dist., lode bonanza?: Camp, F. B., 1.

- General: Griffin, H., 1.

- Independence mine area: Stoll, W. C., 1.

- 1941-42: Smith, P. S., 1.

- Arctic America placers: Patty, E. N., 1.
- Arizona, Superior mining area: Short, M. N., 1.

- British Columbia, Alaska Highway area min. poss.: Thomas, L. O., 1.

- Bralorne mines: Gibson, S., 1.

- Britannia mine No. 8 orebodies: Irvine, W. T., 1.

- Central-southern area: Hedley, M. S., 1.

- China Creek area: Stevenson, J. S., 4.

- Coast Range batholith prosp., Bridge River-Whitesail, Lake: Joubin, F. R., 1.

- Depth relations: Warren, H. V., 3.

- Greenwood-Phoenix area: McNaughton, D. A., 1.

- Hazleton, Cassiar dist.: Armstrong, J. E., 3.

- Island Mtn. mine: Benedict, P. C., 1.

- Little Billie mine, Texada Is.: Stevenson, J. S., 5.

- Manson Creek area: Armstrong, J. E., 5, 7.

- Nickel Plate Mtn. area: Dolmage, V., 1.

- Nicola area: Cockfield, W. E., 2.

- Northeastern lode deposits: Holland, S. S., 1.

- Omineca dist.: Armstrong, J. E., 4.

- Pinchi Lake area: Armstrong, J. E., 1.

- Polaris-Taku mine: MacPherson, F. H., 1.

- Premier mine deposits: Langille, E. G., 1.

- Princeton area: Rice, H. M. A., 2.

- Smithers area: Armstrong, J. E., 2.

- Southeast lode deposits: Mathews, W. H., 2.

- Southwest lode deposits: Stevenson, J. S., 1.

- Takla, Cassiar dist.: Armstrong, J. E., 6.

Gold—Continued.

British Columbia—Continued.

- Tuya-Tealin area poss.: Watson, K. D., 1.
 Twin "J" Mine: Stevenson, J. S., 3.
 Tyaughton Lake area: Cairnes, C. E., 1.
 Vancouver Is.: Stevenson, J. S., 2.
 Whitesail Lake poss.: Holland, S. S., 2, 3.
 California, Riverside Co.: Tucker, W. B., 2.
 San Gabriel Mts., batholith: Lauder-milk, J. D., 6.
 Canada: Anonymous, 50.
 Cordillera econ. devel.: Kidd, D. F., 1.
 Duparquet-Larder Lake-Rouyn area: Ambrose, J. W., 1.
 Flin Flon-Sherridon-Herb Lake area: Stockwell, C. H., 2.
 Industry, mineral: Moore, E. S., 4.
 Lytton to Vancouver: Hutt, G. M., 12.
 Medicine Hat to Vancouver: Hutt, G. M., 14.
 Port Arthur to Winnipeg: Hutt, G. M., 11.
 Pre-Cambrian mineral poss.: Hoff-man, A., 1.
 Stull Lake area poss.: Spector, I. H., 1.
 Tweedsmuir Park: Anonymous, 28.
 Western: Hutt, G. M., 4.
 Sphalerites: Warren, H. V., 5.
 Canadian Northwest: Griffin, H., 1.
 Colorado, Maxwell reef area, Boulder Co.: MacCornack, R. J., 1.
 Mineral res.: Pearl, R. M., 2.
 Elements in, minor: Warren, H. V., 2.
 Gold-vein deposits, mechanism, environ-ment, N. Am.: White, W. H., 1.
 Host minerals: Schwartz, G. M., 2.
 Manitoba, E. of Flin Flon: Bateman, J. D., 5.

- Flin Flon area: Bateman, J. D., 3.
 Gurney mine area: Hage, C. O., 4.
 Herb-Snow Lakes area: McDiarmid, J. S., 2.
 Island Lake area: McMurphy, R. C., 1.
 Mikanagan Lake area poss.: Bate-man, J. D., 1.
 Possibilities: McDiarmid, J. S., 1.
 Snow Lake area: Ebbutt, F., 1. Har-ri-son, J. M., 4, 5.
 Mexico, Amarilla mine, Guerrero: Aco-s-ta del Campo, C., 1.
 Baja Calif.: Antúnez Echegaray, F., 3.
 El Alamo mine, Baja Calif.: Antúnez Echegaray, F., 2.
 El Oro y Tlalpujahua mining camp: Bracho V., F., 1.
 Pacific Coast: González Reyna, J., 1.
 Michigan, Ishpeming gold range: Snel-grove, A. K., 3.
 Marquette, Baraga Cos.: Snelgrove, A. K., 2.

Gold—Continued.

Michigan—Continued.

- Marquette iron range: Seaman, W. A., 1.
 Montana, Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 Ore bodies, strat. control: Perry, E. S., 3.
 Nevada, Comstock Lode area: Calkins, F. C., 1.
 Goldfield epithermal deposits: Wilson, H. D. B., 1.
 Groom dist., Lincoln Co.: Humphrey, F. L., 1.
 Mineralization: Bichan, W. J., 3.
 Mining dists.: Ferguson, H. G., 1.
 Ore deposits: York, B., 1.
 Newfoundland, Rambler min. area: Quinn, H. A., 1.
 New Mexico, Red River min. area: Sid-well, R., 1.
 Silver City area: Entwistle, L. P., 1.
 North America, Alaska Highway: Lord, C. S., 2.
 Mines: Townsend, H., 1.
 Vein deposits: White, W. H., 1.
 Northwest Territories: Jolliffe, A. W., 2.
 Prosperous Lake area: Jolliffe, A. W., 4: Anonymous, 77.
 Yellowknife gold mines: Jolliffe, A. W., 3; Anonymous, 29.
 Nuggets on mtn. tops: Crocker, W., 1.
 Ontario: Rickard, T. A., 3.
 Beatty-Munro area: Satterly, J., 1.
 Bigwater Lake area poss.: Berry, L. G., 1.
 Bryce-Robillard area: Moorhouse, W. W., 1.
 Central Patricia mine: Hicks, H. B., 1.
 Dogpaw-Kakagi Lakes area devel.: Thomson, R., 1.
 Fort Hope area: Prest, V. K., 1.
 Gauthier, Tp., Kirkland Lake area: Thomson, Jas. E., 1.
 General: Moore, E. S., 5.
 Hollinger mine: Allen, C. C., 1.
 Kaladar, Kennebec Tps.: Harding, W. D., 1.
 Kerr Addison mine: McLaren, D. C., 2.
 Little Long Lac area: Armstrong, H. S., 1.
 Little Long Lac Hardrock porphyry: Reid, J. A., 3.
 North Spirit Lake area: Bateman, J. D., 7.
 Northwest prosp. poss.: Horwood, H. C., 4.
 Pickle Crow gold mine: Monette, H. H., 1.
 Pickle Lake-Crow River area poss.: Horwood, H. C., 5.
 Red Lake area: Horwood, H. C., 2, 3.
 Rennie-Leeson area: Bruce, E. L., 1.
 Ross mine, Ramore area: Jones, W. A., 1.

Gold—Continued.

Ontario—Continued.

- Stover Tp.: Horwood, H. C., 1.
 Whitefish Bay area: Fraser, N. H. C., 1.
 Probabilities, estimating deposits:
 Swanson, C. O., 2.
 Quebec: Dresser, J. A., 1; Dufresne, A. O., 1.
 Beattie mine: Davidson, S. C., 1.
 Bourlemaque Tp.: Norman, G. W. H., 1.
 Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
 Calumet Island: Osborne, F. F., 1.
 Economic minerals: Quebec Bur. Mines, 1.
 Little Long Lac-Sturgeon River dist.: Tyson, A. E., 1.
 Malartic gold mine: Halet, R. A., 1.
 Montbrayite, telluride: Peacock, M. A., 3.
 Moulton Hill mine, Eastern Tps.: Hawley, J. E., 1; Rowe, R. C., 1.
 Noranda dist. ore deposits: Wilson, M. E., 2.
 Orford area: Fortier, Y. O., 1.
 Red Lake area, Ontario, prosp. poss.: Horwood, H. C., 3.
 Saskatchewan, N.: Mawdsley, J. B., 1; Anonymous, 105.
 South Carolina min. res.: Anonymous, 20.
 South Dakota, min. res.: Rothrock, E. P., 1.
 Spectrographic assay for: Scobie, A. G., 1.
 Tennessee, Coker Creek: Anonymous, 81.
 United States min. reserves: Joralemon, I. B., 1.
 Northwest: Fernquist, C. O., 1.
 Yukon, Canol Road, Teslin River-Macmillan Pass: Kindle, E. D., 2.
 Dublin Gulch: Thompson, R. M., 1.
 Selwyn River area: Bostock, H. S., 2.
 Upper McQueston River area: Bostock, H. S., 1.
 Whitehorse dist.: Cockfield, W. E., 1.
 Gold deposition: Bichan, W. J., 1.

Grabens.

- Arizona, Utah, East Kaibab monocline: Babenroth, D. L., 1.
 Mississippi, Heidelberg field: McCullough, R. A., 1.
 Nevada, Groom dist., Lincoln Co.: Humphrey, F. L., 1.
 Ontario, Renfrew area: Satterly, J., 2.
 Texas, Anderson Co.: Whitcomb, B., 2.
 Balcones, Luling, Mexia fault zones: Weeks, A. W., 3.
 United States, Gulf Coast anticlines: Meyer, W. G., 1.
 Utah, Salt Valley: Dyer, B. W., 1.
 Grain analyses, sand size mins.: Alling, H. L., 1.

Grain size, shapes, ig. rock minerals: Peniak, M. W., 2.

Grand Canyon, Ariz.: Merriam, J. C., 1.

Grand Saline salt dome, Van Zandt Co., Tex.: Peters, J. W., 1.

Granite.

- Alabama, Pinckneyville complex: Gault, H. R., 2.
 Alaska, Groundhog Basin: Gault, H. R., 4.
 Alkaline rocks, origin, differentiation: Shand, S. J., 4.
 Arizona, Borianna dist. and Aquarius Range: Hobbs, S. W., 1.
 British Columbia, Ainsworth area: Rice, H. M. A., 1.
 Tuya-Teslin area: Watson, K. D., 1.
 California, Big Pine volcanic field: Mayo, E. B., 1.
 Canada, Alaska Highway, Watson Lake-Teslin River: Lord, C. S., 1.
 Pine Hill, gneiss, feldspathic: Faessler, C., 5.
 Colorado, Sawatch Range area: Johnson, J. H., 3.
 Costa Rica: Dóndoli, C., 1.
 Idaho, Birch Creek area: Anderson, A. L., 1.
 Illinois, Pope Co.: Weller, J. M., 5.
 Maine, Kennebec Valley esker: Trefethen, J. M., 2.
 Mount Desert Is.: Chadwick, G. H., 1.
 Mt. Waldo batholith: Trefethen, J. M., 1.
 Manitoba, Island Lake area: McMurchy, R. C., 1.
 Snow Lake area: Ebbutt, F., 1.
 Maryland, linear analysis, medium grained: Chayes, F., 3.
 Mexico, El Estado de Morelos: N. de Parrés, F., 1.
 Radioactivity: Blau, M., 1.
 Sonora tungsten deposits: Wiese, J. H., 1.
 Nebraska, W., pre-Penn. stratigraphy: Dillé, G. S., 1.
 New Brunswick, Musquash area plutonic rocks: Belyea, H. R., 1.
 Newfoundland, fluorspar deposits: Van Alstine, R. E., 1.
 New Hampshire, Monadnock quad.: Fowler-Billings, K. S., 1.
 Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Winnepesaukee area: Quinn, A. W., 2.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 Iron Mtn. ribbon rock: Jahns, R. H., 2.
 New York, E. Adirondack area: Balk, R., 1.
 North Carolina res.: Anonymous, 9.
 Western, bldg. stones: Moneymaker, B. C., 2.
 Northwest Territories, Yellowknife area: Jolliffe, A. W., 3.

Granite—Continued.

- Nova Scotia, Antigonish Harbor: Douglas, G. V., 4.
 Gabarus area: Douglas, G. V., 3.
 Ontario, E., extension of Fort Hope area: Prest, V. K., 2.
 Fort Hope area: Prest, V. K., 1.
 Kaladar, Kennebec Tps.: Harding, W. D., 1.
 Leeds Co.: Harrison, J. M., 1.
 Pickle Crow gold mine: Monette, H. H., 1.
 Porcupine dist.: Evans, J. E. L., 1.
 Red Lake area: Horwood, H. C., 3.
 Rennie-Leeson area: Bruce, E. L., 1.
 Southeast: Harrison, J. M., 2.
 Stover Tp.: Horwood, H. C., 1.
 Pennsylvania, cent.-eastern: Hersey, J. B., 1.
 Mineral res.: Ashley, G. H., 1.
 Quebec, Châteauguay Co.: Morin, L. G., 1.
 Economic res.: Quebec Bur. Mines, 1.
 La Motte area: Norman, G. W. H., 4.
 Preissac-La Corne area: Norman, G. W. H., 5.
 Stanstead area, Brome and Stanstead Cos.: Ambrose, J. W., 2.
 Wakeham Lake area: Claveau, J., 1.
 South Carolina, Piedmont sillimanite deposits: Smith, L. L., 1.
 South Dakota, Beecher Rock Basin: Gwynne, C. S., 2.
 Texas, Burnet Co.: Barnes, V. E., 3.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Mason Co.: McCammon, J. H. II, 1.
 United States, Piedmont SE., soil colors: White, W. A., 1.
 Piedmont, SE., granite domes origin: White, W. A., 5.
 Southeast, indurated veneers: White, W. A., 2.
 Vermont, Barre dist.: Mould, W. P., 1.
 Washington, Chelan Lake glaciation: Freeman, O. W., 1.
 Wyoming, vermiculite deposits: Hagner, A. F., 1.

Granodiorite.

- Alabama, Pickneyville complex: Gault, H. R., 2.
 British Columbia, Greenwood-Phoenix area: McNaughton, D. A., 1.
 Whitesall Lake area: Holland, S. S., 3.
 California, Crestmore minerals: Woodford, A. O., 1.
 Canada, Alaska Highway, Watson Lake-Teslin River: Lord, C. S., 1.
 New Hampshire, Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Oregon, replacement aplite breccia, Cornucopia: Goodspeed, G. E., 2.
 Quebec, Bourlemaque Tp.: Norman, G. W. H., 1.

Graphite.

- Alabama min. res.: Pallister, H. D., 1; Anonymous, 25.
 Canada, Black Donald mine: McLaren, D. C., 6.
 Gold, host minerals: Schwartz, G. M., 2.
 North America, crucible grade: Gwinn, G. R., 1.
 Ontario, Renfrew area: Satterly, J., 2.
 Quebec: Dufresne, A. O., 1.
 Graphs to obtain true thickness of vein or bed: Miller, F. S., 1.
 Graptolitoidea.
 Bithecae in Graptoloidea: Decker, C. E., 6.
 Ceratiocaris, Ord., Lynnport, Pa.: Ruedemann, R., 4.
 Colorado, Sawatch Range area: Johnson, J. H., 3.
 Maine, Sil. Ripogenus Dam fauna: Willard, B., 1.
 Newfoundland, Ord., giant: Twenhofel, W. H., 4.
 New Jersey, Upper Camb. faunas: Howell, B. F., 7.
 New York, Catskill quad. faunas: Ruedemann, R., 5, 6.
 Cocksackie quad. faunas: Goldring, W., 3.
 Hudson Valley area: Ruedemann, R., 3.
 Oklahoma, Ordovician: Decker, C. E., 1.
 Big Canyon: Decker, C. E., 5.
 Carter Co. well cuttings: Decker, C. E., 3, 4.
 Quebec faunas: Dresser, J. A., 1.
 Ripogenus Dam fauna, Sil., Maine: Willard, B., 1.
 Tennessee, Camb.: Decker, C. E., 7.
 Texas, Upper Camb., Wilberne, Mason Co.: Decker, C. E., 5-a.
 United States, Ord., pendent: Decker, C. E., 2.
 Virginia, Camb.: Decker, C. E., 8.
 Gravel.
 Alabama: Anonymous, 25.
 Alaska, Copper River area: Moffit, F. H., 1.
 British Columbia, Dunlevy-Fortage Mts. area: Beach, H. H., 1.
 Manson Creek area: Armstrong, J. E., 5.
 California, Elk Hills oil field: Bunch, E. S., 1.
 Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.
 Mokelumne dist.: Hutt, G. M., 15.
 San Luis Obispo Co.: Smith, C. T., 1.
 Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
 Manitoba dist.: Hutt, G. M., 15.
 Trans-Canada Highway, Hearst-Longlac sec.: Evans, J. E. L., 2.
 Winnipeg to Edmonton: Hutt, G. M., 13.

Gravel—Continued.

- Earth resistivity method of prospecting :
 Wilcox, S. W., 1.
 Georgia, Coastal Plain : Cooke, C. W., 1.
 Illinois, earthresistivity elec. surveys :
 Workman, L. E., 2.
 Iowa, Illinoian and post-Illinoian
 Pleist. : Kay, G. F., 2.
 Kansas resources : Landes, K. K., 1.
 Kentucky, Tuscaloosa Cret. gravel : Fox,
 P. P., 3.
 Kentucky River, Drennon abandoned
 channel : Jillson, W. R., 5.
 Pot Ripple abandoned channel : Jill-
 son, W. R., 3.
 Louisiana, S. oil fields : Wallace, W. E.,
 Jr., 1.
 Maine, Kennebec Valley esker : Trefe-
 then, J. M., 2.
 Mexico, quicksilver-antimony deposits,
 Huitzuc, Guerrero : McAllister,
 J. F., 1.
 Mississippi : Morse, W. C., 2.
 Camp Shelby area : Brown, G. F., 1.
 Monroe Co. : Vestal, F. E., 1.
 Mississippi Valley : Voskuil, W. H., 1?
 Missouri, NW. : Greene, F. C., 1.
 Montana, Little Rocky Mts. plains : U.
 S. G. S., 1.
 Nebraska Pleist. loess : Schultz, C. B., 1.
 New Mexico, Rio Puerco area : Wright,
 H. E., Jr., 1.
 New York, Catskill quad. : Cook, J. H.,
 2 ; Newland, D. H., 1 ; Ruedemann,
 R., 5.
 Salamanca re-entrant area : MacClin-
 tock, P., 1.
 North Carolina, Cape Fear Penin. :
 Wells, B. W., 1.
 North Dakota, Emerado quad. : Laird,
 W. M., 1.
 White River fm. : Powers, W. E., 1.
 Ohio, Fulton Co. : Harker, D. H., 3.
 Resources : Ohio Devel. Pub. Com., 1 ;
 White, G. W., 1.
 Ontario, Bigwater Lake area : Berry,
 L. G., 1.
 Gauthier Tp., Kirkland Lake area :
 Thomson, Jas. E., 1.
 Grimsthorpe-Barrie area : Meen, V.
 B., 1.
 Kaladar, Kennebec Tps. : Harding,
 W. D., 1.
 Rennie-Leeson area : Bruce, E. L., 1.
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East Texas oil devel.: Gelsner, S. W., 2.
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Geology in geophysics: Cloos, E., 2.
Geophysical prosp., Cameron Meadows dome, La.: McGuckin, G. M., 1.
Grand Canyon, Ariz., explor.: Cucto Ruiz-Diaz, E., 1.
James Dwight Dana and his mineralogy: Fleener, F. L., 1.
Kansas oil and gas fields: Koester, E. A., 1.

History—Continued.

- Kentucky, geol. map.: Jillson, W. R., 6.
 Kentucky River: Jillson, W. R., 10.
 Land plants, beginnings, history: Berry, E. W., 3.
 Michigan iron devel.: Martin, H. M. M., 2.
 Military Unit, U. S. Geol. Survey: U. S. G. S. Mil. Unit, 2.
 Mississippi oil fields: Anonymous, 38.
 New Jersey, copper deposits: Woodward, H. P., 1.
 New Brunswick mines: Hawkins, A. C., 3.
 Ohio, Pfouts coal mine: Sturgeon, M. T., 2.
 Petroleum geology: Heroy, W. B., 1; Hogin, R., 1.
 Texas, Pleist. vertebrates, collection: Geiser, S. W., 3.
 Tucson Ariz., meteorite: McGough, P. J., 1.
 U. S. Geol. Survey Military Unit: U. S. G. S. Mil. Unit, 2.
 Utah, S., sc. explor.: Gregory, H. E., 3.
 Washington, Metaline Falls area: Huttli, J. B., 1.
 West Virginia Geological Survey: Price, P. H., 1.
 Hobson oil field, Tex.: Spice, W. H., Jr., 1.
 Hollandite, SW. U. S., tungsten vanadium: Fleischer M., 2.
 Holly field, De Soto Parish, La.: Spofford, H. N., 1.
 Holly Ridge oil field, La.: Ives, G. O., 2.
 Honduras.
 Economic geology.
 Petroleum poss.: Mullerried, 1.
 Paleontology.
 Gastropoda, Pleist.: Haas, F., 1.
 Horizontal drilling for oil: Wiesman, T. R., 1.
 Hornblendes.
 Amphiboles, calciferous, variations: Winchell, A. N., 1.
 Carolina, Piedmont: Kesler, T. L., 1.
 Indiana, Mansfield ss. minerals: Gault, H. R., 1.
 Maine, Kennebec Valley esker: Trefethen, J. M., 2.
 Manitoba, Island Lake area: McMurphy, R. C., 1.
 Mexico, El Estado de Morelos: N. de Parrés, F., 1.
 New Hampshire, Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 New York, E. Adirondack area: Balk, R., 1.
 Utah, Iron Peak ores: Crawford, A. L., 2.
 Hornfels, Kilauea Volcano, Hawaii, ejected blocks: Macdonald, G. A., 3.
 Horsts, U. S. Gulf Coast anticlines: Meyer, W. G., 1.
- Hot springs. See also Thermal waters.
 British Columbia, Ainsworth area: Rice, H. M. A., 1.
 Fort Nelson-Watson Lake area: Williams, M. Y., 3.
 California, Sierra Nevada, Mono Lake area: Putnam, W. C., 1.
 Flow of heat from intrusive into country rock: Van Orstrand, C. E., 1.
 How the earth shows its age: Lane, A. C., 3.
 Howlite, borate minerals, Calif.: Harriman, W. R., 1.
 Hub gas field, Miss.: Anonymous, 88.
 Huebnerite, Townsville tungsten area, N. C.: White, W. A., 3.
 Hulsite, Brooks Mtn., Alaska: Anonymous, 74.
 Hyalite, Palisades area, N. J.: Butler, S. B., 1.
 Hydrodynamical factor, ore deposition: Douglas, G. V., 8.
 Hydrology: Seligman, G., 1.
 Hydrosphere, evolution: Lane, A. C., 2.
 Hydrothermal alteration.
 Arizona, Castle Dome copper deposit: Peterson, N. P., 1.
 San Manuel copper deposit: Schwartz, G. M., 3.
 British Columbia, Pinchi Lake area: Armstrong, J. E., 1.
 Manson Creek area: Armstrong, J. E., 5.
 California, Knoxville quicksilver dist.: Averitt, P., 1.
 Cuba, Sierra Maestra area: Park, C. F., Jr., 1.
 Feldspars in acid solutions: Gruner, J. W., 5.
 Idaho, Latah Co.: Tullis, E. L., 1.
 Illinois, Cave in Rock dist.: Currier, L. W., 2.
 Hardin Co. fluorspar areas: Currier, L. W., 1.
 Mexico, quicksilver-antimony deposits, Huitzoco, Guerrero: McAllister, J. F., 1.
 Montana, Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 New Jersey, copper deposits: Woodward, H. P., 1.
 Palisades area: Butler, S. B., 1.
 New Mexico, Boston Hill area: Entwistle, L. P., 2.
 Iron Mtn. ribbon rock: Jahns, R. H., 2.
 North Carolina, Townsville area tungsten: White, W. A., 3.
 Nova Scotia, Lake Ainslie area: Douglas, G. V., 7.
 Oklahoma barite: Ham, W. E., 1.
 Ontario, hematite: Brownell, G. M., 1.
 Little Long Lac Hardrock porphyry: Reid, J. A., 3.
 Porcupine dist.: Evans, J. E. L., 1.
 Red Lake area: Horwood, H. C., 3.

Hydrothermal alteration—Continued.

Ontario—Continued.

Ross mine, Ramore area: Jones, W. A., 1.

Sudbury breccias origin: Fairbairn, H. W., 3.

Replacement and igneous intrusion: Reid, J. A., 1.

United States, western clays: Wimmeler, N. L., 1.

United States-Mexico, mining dists.: Hulin, C. D., 1.

Utah, E. Tintic dist.: Lovering, T. S., 3.

Virginia pegmatites: Pegau, A. A., 1.

Hydrothermal solubility of silica: Kennedy, G. C., 1.

Hydrozoa.

Jellyfish, Cret., Tex.: Caster, K. E., 3; Kirkland, F., 1.

Kirklandia, Cret. jellyfish, Tex.: Caster, K. E., 3.

Quebec faunas: Dresser, J. A., 1.

Washington, NW., Oligocene: Durham, J. W., 1.

Hypersthene, Kilauea Volcano, Hawaii, ejected blocks: Macdonald, G. A., 3.

Hypothesis on crustal movements: De Lury, J. S., 2.

Idaho.

Areas described.

Latah Co.: Tullis, E. L., 1.

Economic geology.

Latah Co.: Tullis, E. L., 1.

Lead-zinc-copper deposits, Birch Creek area: Anderson, A. L., 1.

Mining industry, 1943-44: Campbell, A., 1.

Paragenesis, tungsten ore, Ima mine: Clabaugh, S. E., 1.

Phosphate, Teton Basin: Gardner, L. S., 1.

Historical geology.

Dikes, clastic, Columbia Basin: Lupher, R. L., 2.

Latah Co.: Tullis, E. L., 1.

Lead-zinc-copper deposits, Birch Creek area: Anderson, A. L., 1.

Phosphate deposits, Teton Basin: Gardner, L. S., 1.

Mineralogy.

"Cave pearls", pisolites: Mackin, J. H., 2.

Lead-zinc-copper deposits, Birch Creek area: Anderson, A. L., 1.

Paragenesis, tungsten ores, Ima mine: Clabaugh, S. E., 1.

Pyromorphite, Mullan, Little Giant mine: Fernquist, C. O., 2.

Paleontology.

Birds, mammals, Pliocene: Miller, L. H., 2.

Mollusca, Idaho fm. Pliocene fresh-water: Yen, T.-C., 1.

Salt Lake Miocene fm.: Yen, T.-C., 2.

Idaho—Continued.

Petrology.

"Cave pearls", pisolites: Mackin, J. H., 2.

Dikes, clastic, Columbia Basin: Lupher, R. L., 2.

Latah Co.: Tullis, E. L., 1.

Lead-zinc-copper deposits, Birch Creek area: Anderson, A. L., 1.

Physical geology.

Craters of the Moon: Barrette, K., 1.

Dikes, clastic, Columbia Basin: Lupher, R. L., 2.

Landslides area, Little Salmon River Canyon: Wagner, W. R. T., 1.

Latah Co.: Tullis, E. L., 1.

Lead-zinc-copper deposits, Birch Creek area: Anderson, A. L., 1.

Paragenesis, tungsten ore, Ima mine: Clabaugh, S. E., 1.

Phosphate, Teton Basin: Gardner, L. S., 1.

Physiographic geology.

Dikes, clastic, Columbia Basin: Lupher, R. L., 2.

Latah Co.: Tullis, E. L., 1.

Lead-zinc-copper deposits, Birch Creek area: Anderson, A. L., 1.

Underground water.

Water-table fluctuations, Spokane Valley: Piper, A. M., 1.

Idocrase, N. Mex., Iron Mtn. area: Glass, J. J., 2.

Igneous activity: Mack, S., 1.

Igneous and volcanic rocks. See also Batholiths; Dikes; Intrusions; Laccoliths; Magmas; Petrology.

Abyssal vs. magmatic theory of ore genesis: White, C. H., 1.

Alabama, flake graphite belt: Pallister, H. D., 1.

Pinckneyville complex: Gault, H. R., 2.

Tin belt: Hunter, F. R., 1.

Alaska, Agattu Island, Aleutians: Sharp, R. P., 1.

Groundhog Basin: Gault, H. R., 4.

Katakia area: Miller, D. J., 1.

Lemesurier Island: Fisher, R. B., 1.

Matanuska Valley coal field: Tuck, R., 1.

Nickel-copper deposits, Spirit Mtn. area: Kingston, J., 1.

Alberta, Cowley area: Hage, C. O., 1.

Entrance area: Lang, A. H., 2.

Pedley area: Irish, E. J. W., 1.

Saunders map area: Erdman, O. A., 1.

Wawa Creek area: MacKay, B. R., 2.

Arizona, Borianna dist. and Aquarius Range: Hobbs, S. W., 1.

Northern, Uinkaret Plateau: Koons, E. D., 1.

Oak Creek Canyon: McKee, E. D., 3.

Paleozoic, central, NE.: U. S. G. S., 2.

Igneous and volcanic rocks—Continued.

Arizona—Continued.

- Superior mining area : Short, M. N., 1.
 Tombstone dist., Uncle Sam porphyry : Gilluly, J., 2.
 Arizona-Utah, East Kaibab monocline : Babenroth, D. L., 1.
 Arkansas, bauxite area : Thoenen, J. R., 1.
 Magnet Cove area : Shockley, W. G., 1.
 Bellows Falls quad., N. H.-Vt. : Kruger, F. C., 1.
 British Columbia, Ainsworth area : Rice, H. M. A., 1.
 Alaska Highway, Ft. St. John-Ft. Nelson : Hage, C. O., 3.
 Bralorne mines : Gibson, S., 1.
 Britannia mine No. 8 orebodies : Irvine, W. T., 1.
 Central-southern : Hedley, M. S., 1.
 China Creek area : Stevenson, J. S., 4.
 Coast : Gunning, H. C., 2.
 Coast Range Batholith prosp., Bridge River-Whitesail Lake : Joubin, F. R., 1.
 Cobalt area : Warren, H. V., 4.
 Emerald tungsten project : Mason, E. E., 1.
 Greenwood-Phoenix area : McNaughton, D. A., 1.
 Hazelton, Cassiar dist. : Armstrong, J. E., 3.
 Little Bille mine, Texada Is. : Stevenson, J. S., 5.
 Manson Creek area : Armstrong, J. E., 5, 7.
 Nickel Plate Mtn. area : Dolmage, V., 1.
 Nicola area : Cockfield, W. E., 2.
 Omineca dist. : Armstrong, J. E., 4.
 Pinchi Lake area : Armstrong, J. E., 1.
 Premier mine deposits : Langille, E. G., 1.
 Smithers area : Armstrong, J. E., 2.
 Sullivan mine area : Swanson, C. O., 1.
 TaKu River, Cassiar dist. : Kerr, F. A., 1.
 Tuya-Teslin area : Watson, K. D., 1.
 Twin "J" Mine : Stevenson, J. S., 3.
 Tyaughton Lake area : Cairnes, C. E., 1.
 Whitesail Lake area : Holland, S. S., 3.
 California, Barstow quad., San Bernardino Co. : Miller, W. J., 2.
 Big Pine volcanic field : Mayo, E. B., 1.
 Diablo Range quicksilver deposits : Yates, R. G., 1.
 Eclogite in glaucophane schists : Switzer, G., 1.

Igneous and volcanic rocks—Continued.

California—Continued.

- Fresno, Merced, Stanislaus Cos. : U. S. G. S., 2.
 Glenn Co. : Rynearson, G. A., 1.
 Imperial Valley, west side : Tarbet, L. A., 1.
 Jamesburg quad., Monterey Co. : Fiedler, W. M., 1.
 Knoxville quicksilver dist. : Averitt, P., 1.
 Los Angeles Basin area : U. S. G. S., 2.
 Needles-Goffs area, San Bernardino Co. : Miller, W. J., 3.
 Palm Springs-Blythe Strip, Riverside Co. : Miller, W. J., 1.
 Puente, San Jose Hills : U. S. G. S., 1.
 Salinas Valley : U. S. G. S., 1.
 San Diego area : Hertlein, L. G., 1.
 San Juan Bautista quad. : Allen, J. E., 2.
 San Luis Obispo Co. : Smith, C. T. 1.
 Bituminous sands : U. S. G. S., 1.
 Santa Ana Mts., Paleocene, Eocene : U. S. G. S., 2.
 Santa Catalina Is. marine sed. : Clements, T. D., 2.
 Santa Cruz area : U. S. G. S., 1.
 Santa Rosa Hills-Purisima Hills dists. : U. S. G. S., 1.
 Sea-floor rocks off coast : Emery, K. O., 4.
 Sierra Nevada, Mono Lake area : Putnam, W. C., 1.
 Canada : MacKay, B. R., 3.
 Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Alaska Highway, Watson Lake-Teslin River : Lord, C. S., 1.
 Dominion Atlantic Ry. area : Hutt, G. M., 16.
 Duparquet-Larder Lake-Rouyn area : Ambrose, J. W., 1.
 Eastern Arctic : Robinson, J. L., 1.
 Flin Flon-Sheridon-Herb Lake area : Stockwell, C. H., 2.
 Gold deposits : Anonymous, 50.
 Lower Cret. : McLearn, F. H., 4.
 Lytton to Vancouver : Hutt, G. M., 12.
 Medicine Hat to Vancouver : Hutt, G. M., 14.
 Port Arthur to Winnipeg : Hutt, G. M., 11.
 Structure and relief : Brouillette, B., 1.
 Stull lake area : Spector, I. H., 1.
 Trans-Canada Highway, Hearst-Longlac sec. : Evans, J. E. L., 2.
 Carolina Piedmont : Kesler, T. L., 1.
 Central America, Selva Lacandona, Mex., Guatemala : Mullerried, 4.
 Classification by chem. analysis : Swayne, W. H., 1.

Igneous and volcanic rocks—Continued.

- Colorado, Canon City area : Blum, V. J., 1, 2.
 Placerville dist. : Haff, J. O., 1.
 Rocky Mtn. Nat. Park : Wegemann, C. H., 1.
 Sawatch Range area : Johnson, J. H., 3.
 Specimen Mtn. : Wahlstrom, E. E., 2.
 Vasquez overthrust, Middle Park : Tweto, O., 1.
 White River Plateau, Glenwood Springs area : MacQuown, W. C., Jr., 1.
 Costa Rica : Roberts, R. J., 1.
 El General area : Dóndoli, C., 2.
 Meseta Central : Dóndoli, C., 3.
 Remineralization poss. : Dóndoli, C., 4.
 Cuba : Palmer, R. H., 1.
 Gravity prosp. : Hammer, S. I., 1.
 Guisa-Los Negros area : Woodring, W. P., 1.
 Isla de Pinos tungsten deposits : Page, L. R., 1.
 Sierra Maestra area : Park, C. F., Jr., 1.
 Dikes, foliated and pseudo, Calif. : Miller, W. J., 4.
 Eruptive rocks : Bowen, N. L., 1.
 Florida : Cooke, C. W., 3.
 Well studies : Cole, W. S., 1.
 Georgia, Blue Ridge, S. end : Furcron, A. S., 5.
 Kyanite deposits : Furcron, A. S., 4.
 Sillimanite deposits : Furcron, A. S., 4.
 Southwest : Furcron, A. S., 2; SE. G. Soc., 2.
 Grain sizes, shapes : Feniak, M. W., 2.
 Greenland, chemical analyses : Munck, S., 1.
 East, between 74°-75°, and islands : Vischer, G. A., 1.
 Franz Josef Fjord area : Odell, N. E., 1.
 General : Shaw, V., 3.
 Idaho, Birch Creek area : Anderson, A. L., 1.
 Latah Co. : Tullis, E. L., 1.
 Illinois, Hardin Co. fluor spar areas : Currier, L. W., 1.
 Kansas, Barton Co. buried hills : Walters, R. F., 1.
 Eastern, oil and gas fields : Jewett, J. M., 1.
 Outcropping rocks : Moore, R. C., 4.
 Labrador, cent., iron ore poss. : Retty, J. A., 2.
 Magnetic density contrast, and ig. rock classn. : Nettleton, L. L., 2.
 Maine, Mount Desert Is. : Chadwick, G. H., 1.
 Mt. Waldo batholith : Trefethen, J. M., 1.

Igneous and volcanic rocks—Continued.

- Manitoba, east of Flin Flon area : Bateman, J. D., 5.
 Flin Flon area : Bateman, J. D., 3.
 Gurney gold mine area : Hage, C. O., 4.
 Island Lake area : McMurphy, R. C., 1.
 Mikanagan Lake area : Bateman, J. D., 1.
 Sherridon area : Bateman, J. D., 6.
 Sherritt Gordon mine area : Bateman, J. D., 2.
 Snow Lake area : Ebbutt, F., 1; Harrison, J. M., 3, 4, 5.
 Massachusetts, Chester-Blandford State Forest : Billings, M. P., 1.
 Shelburne Falls gneiss dome : Balk, R., 3.
 Mexico, Amarilla mine, Guerrero : Acosta del Campo, C., 1.
 Cerro de Mercado Mtn. : Terrones Benitez, A., 1.
 Colotlipa-Quechultenango min. dist. : González Reyna, J., 3.
 Concepción Penin., Baja Calif. : Antón Echegaray, F., 1.
 El Estado de Morelos : N. de Parrés, F., 1.
 El Oro y Tlalpujahua mining camp : Bracho V., F., 1.
 Guadalajara Valley : Díaz, S., 1.
 Gulf of Calif. area : Osorio Tafall, B. F., 1.
 Lower Calif. : Beal, C. H., 1.
 Manganeses : Roderiguez Cabo, J., Jr., 1.
 Northern : Kellum, L. B., 1.
 Nuevo León : Mullerried, 8.
 Pacific Coast : González Reyna, J., 1.
 Parícutin Volcano area : Williams, H., 2.
 Permian area NW. of Las Delicias : King, R. E., 2.
 Sierra de Juarez, Baja Calif. : Fries, C., Jr., 1.
 Taxco mining dist. : Fowler, G. M., 2.
 Tungsten deposits, Sonora : Wiese, J. H., 1.
 Valley of the Lerma : Waitz, P., 1.
 Valley of Tixtla : Mullerried, 3.
 Michigan iron deposits : Martin, H. M. M., 2.
 Ishpeming gold range : Snelgrove, A. K., 2.
 Lake Michigamme area : Seaman, W. A., 2.
 Marquette, Baraga Cos. : Snelgrove, A. K., 2.
 Republic area : Ayres, V. L., 1.
 Spruce River-Peshekee River areas : Seaman, W. A., 3.
 Minerals, grain sizes and shapes : Feniak, M. W., 2.
 Minnesota, S. : Thiel, G. A., 1.

Igneous and volcanic rocks—Continued.

- Missouri: Branson, E. B., 3.
 Bourbon High oil field: Cullison, J. S., 2.
 Ozarks, soil fm.: Humbert, R. P., 1.
 Montana, Gage dome oil field: Perry, E. S., 2.
 General: U. S. G. S., 1.
 Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 North Big Belt Range: Lyons, J. B., 1.
 Ore bodies, strat. control: Perry, E. S., 3.
 Red Lodge chrome deposits: Conwell, C. N., 1.
 Stillwater, Sweetgrass Cos.: Allsman, P. T., 1.
 Nevada, Comstock Lode area: Calkins, F. C., 1.
 Mineralization: Bichan, W. J., 3.
 Mining dists.: Ferguson, H. G., 1.
 Ore deposits: York, B., 1.
 Quicksilver deposits: Bailey, E. H., 1.
 Rye Patch area: Vitaliano, C. J., 1.
 New Brunswick, Musquash area: Alcock, F. J., 4; Belyea, H. R., 1.
 St. George area: Alcock, F. J., 3.
 New England, mica deposits: Cameron, E. N., 1.
 Newfoundland, Rambler min. area: Quinn, H. A., 1.
 New Hampshire: Bannerman, H. M., 1; Billings, M. P., 2.
 Monadnock quad.: Billings, K. S. F. L., 1.
 Mt. Washington area: Billings, K. S. F. L., 2.
 Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Pawtuckaway Mts.: Roy, C. F., 1.
 Winnepesaukee area: Quinn, A. W., 2.
 New Jersey, copper deposits: Woodward, H. P., 1.
 Middlesex Co.: Barksdale, H. C., 1.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 Curry, Roosevelt Cos.: Theis, C. V., 1.
 Estancias Valley area: U. S. G. S., 1.
 Iron Mtn. dist.: Jahns, R. H., 1.
 Northeast, Upper Paleozoic: Read, C. B., 1.
 Red River min. area: Sidwell, R., 1.
 Silver City area: Entwistle, L. P., 1.
 New York, Adirondack area: Anderson, S. A., 1; Balk, R., 1.
 Gouverneur talc dist.: U. S. G. S., 5.
 Lake Sanford area: Stephenson, R. C., 1.
 New York City, Fordham gneiss: Fluhr, T. W., 2.
 Manhattan Borough: Murphy, J. J., 1.
 North America, Alaska Highway: Lord, C. S., 2.
 Mines: Townsend, H., 1.

Igneous and volcanic rocks—Continued.

- North America—Continued.
 Tectonic devel. E. edge of Pacific: Stille, H. W., 1.
 North Carolina, Townsville area: White, W. A., 3.
 Northwest Territories: Jolliffe, A. W., 2.
 Prosperous Lake area: Jolliffe, A. W., 4; Anonymous, 77.
 Yellowknife gold mine, Jolliffe, A. W., 4; Anonymous, 29.
 Aerial prosp.: Jolliffe, A. W., 5.
 Nova Scotia, Bass River area: Weeks, L. J., 3.
 Bridgeville area: Messervey, J. P., 2.
 Gabarus area: Douglas, G. V., 3.
 Lake Ainslie area: Douglas, G. V., 7.
 Londonderry deposits: Weeks, L. J., 1, 2.
 Mabou coal area: Douglas, G. V., 6.
 North Grant area: Douglas, G. V., 1.
 Shinimikias area: Bell, W. A., 4.
 Wentworth dist.: Bancroft, M. F., 1.
 Oklahoma, NE.: U. S. G. S., 2.
 Ontario, Beatty-Munro area: Satterly, J., 1.
 Bigwater Lake area: Berry, L. G., 1.
 Bruce ser., Falconbridge-Dryden Tps.: Fairbairn, H. W., 2.
 Bryce-Robillard area: Moorhouse, W. W., 1.
 Central Patricia mine: Hicks, H. B., 1.
 Cunningham-Garnet area: Meen, V. B., 2.
 East Bull Lake area: Moore, E. S., 3.
 East Extension of Fort Hope area: Prest, V. K., 2.
 Flack Lake area: Harding, W. D., 2.
 Fort Hope area: Prest, V. K., 1.
 Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
 Grimsthorpe-Barrie area: Meen, V. B., 1.
 Kaladar, Kennebec Tps.: Harding, W. D., 1.
 Kam Kotia mine mineralized zone: Ferguson, S. A., 1.
 Kenogamis River area: Macdonald, R. D., 1.
 Kerr Addison gold mine: McLaren, D. C., 2.
 Lochalsh area ultrabasic rocks: Ginn, P., 1.
 Natural gas fields: Brant, A. A., 2.
 North Spirit Lake area: Bateman, J. D., 7.
 Northwestern: Horwood, H. C., 4.
 Origin Haliburton-Bancroft alkaline rocks: Chayes, F., 4.
 Pickle Crow gold mine: Monette, H. H., 1.
 Porcupine dist.: Evans, J. E. L., 1.
 Red Lake area: Horwood, H. C., 2, 3.
 Rennie-Leeson area: Bruce, E. L., 1.

Igneous and volcanic rocks—Continued.

Ontario—Continued.

Ross mine, Ramore area : Jones, W. A., 1.

Sudbury-Bruce ser. relations : Fairbairn, H. W., 1.

Whitefish Bay area : Fraser, N. H. C., 1.

Oregon, coast : Baldwin, E. M., 1; Stephenson, E. L., 1.

Geology : Weaver, C. E., 3.

Volcanoes of Three Sisters region : Williams, H., 1.

Pennsylvania, cent.-east : Hersey, J. B., 1.

Hanover-York dist. : Stose, A. J., 1.

Triassic diabase derivatives : Tomlinson, W. H., 3.

Petrofabrics : Ingerson, F. E., 1.

Petroleum, description of reservoirs : Plummer, F. B., 5.

Quebec : Dresser, J. A., 1; Dufresne, A. O., 1.

Beattie mine : Davidson, S. C., 1.

Bourlamaque Tp. : Norman, G. W. H., 1.

Buteux area, Abitibi Co. and Terr. : Freeman, B. C., 1.

Cadillac-Bourlamaque area : Norman, G. W. H., 2.

Calumet Is. : Osborne, F. F., 1.

Dasserat area structure : Auger, P. E., 5.

Dudswell, Wolfe, Richmond, Compton Cos. : Cooke, H. C., 3.

La Corne molybdenite mine : McLaren, D. C., 4.

La Motte area : Norman, G. W. H., 4.

Little Long Lac-Sturgeon River dist. gold belts : Tyson, A. E., 1.

Louvicoourt area, Norman, G. W. H., 6.

Lower Romaine River area : Retty, J. A., 1.

Matemec Lake area, Saguenay Co. : Greig, E. W., 1.

Malartic gold mine : Halet, R. A., 1.

Moisie area, Saguenay Co. : Faessler, C., 2.

Moulton Hill deposit : Hawley, J. E., 1.

Opaoka River area : Freeman, B. C., 2.

Orford area : Fortier, Y. O., 1.

Rouyn-Malartic-Destor area : Norman, G. W. H., 3.

Scotstown, Wolfe, Compton, Frontenac Cos. : Cooke, H. C., 1.

Sept-Îles area, N. bank St. Lawrence :

Faessler, C., 1.

Standstead area, Brome and Standstead Cos. : Ambrose, J. W., 2.

Wakeham Lake area : Claveau, J., 1.

Replacement and igneous intrus. : Reid, J. A., 1.

Rock colors : DeFord, R. K., 1.

Saskatchewan, N. : Mawdsley, J. B., 1.

Sedimentation, differential, products in 1 cycle : Krynine, P. D., 1.

Igneous and volcanic rocks—Continued.

South Dakota : Rothrock, E. P., 1.

Beecher Rock Basin : Gwynne, C. S., 2.

Dewey, Corson Cos. : Morgan, R. E., 1.

Tennessee, Norris area : Hall, G. M., 1.

Northeast : King, P. B., 4.

Texas, Llano Co. : Zapp, A. D., 1.

Lower Rio Grande Valley : Wynd, F. L., 2.

Sierra Diablo area : U. S. G. S., 1.

South Guadalupe Mts. : U. S. G. S., 1.

Tyler Basin : Bailey, T. L., 1.

Western, deep wells : Patton, L. T., 2.

Winkler Co. : Patton, L. T., 1.

United States, Basin-and-Range Prov. : Longwell, C. R., 8.

Green, White, Adirondack Mts. : Balk, R., 2.

Radioactivity in old rocks : Beers, R. F., 1.

Southwest, correl. : U. S. G. S., 2.

Western, fluorspar : Gillson, J. L., 1.

United States-Mexico, min. dists. : Hulin, C. D., 1.

Utah, Beaver Co. : Hobbs, S. W., 2.

Cottonwood-American Fork dists. : Crawford, A. L., 6.

House Range Mts. : Crawford, A. L., 1.

Southwest, Post-Wasatch fms. : Gregory, H. E., 2.

Twin Peaks deposits : Crawford, A. L., 4.

Uinta Basin Cret. : Walton, P. T., 1.

Upper Sevier River Valley : Gregory, H. E., 1.

Vermont, Barre dist. : Mould, W. P., 1.

Taconic thrust sheet, W., N. end : Kaiser, E. P., 1.

West-central : Cady, W. M., 2.

Virginia, Shenandoah Nat. Park : Rickard, H. L., 1.

Washington, Blewett-Cle Elum fm. : Luper, R. L., 1.

Cambrian, Stevens Co. : Campbell, C. D., 1.

Chelan nickel deposit : Patty, E. N., 2.

Geology : Weaver, C. E., 3.

King Co. coal fields : Warren, W. C., 1.

Stevens, Okanogan Cos. magnetite deposits : Broughton, W. A., 2.

Morton cinnabar dist. : Mackin, J. H., 1.

Olympic Penin. : Green, S. H., 1.

Washington, D. C., crystalline rocks, liquid inclusions planes : Tuttle, O. F., 1.

Wisconsin, Brûlé River Basin : Bean, E. F., 1.

Wyoming : La Fleche, P., 2.

Vermiculite deposits : Hagner, A. F., 1.

Wind River Mts. NW. end : U. S. G. S., 1.

Igneous and volcanic rocks—Continued.

Wyoming—Continued.

Yellowstone Park rhyolite-basalt complex: Fenner, C. W., 1; Hawkes, L., 1; Wilcox, R. E., 1.

Wyoming-Colorado, Washakie Basin: U. S. G. S., 1.

Yukon, Canol Road, Teslin River-Macmillan Pass: Kindie, E. D., 2.

Selwyn River area: Bostock, H. S., 2.
Upper McQueston River area: Bostock, H. S., 1.

Whitehorse dist.: Cockfield, W. R., 1.

Illinois.

Coal research program: Leighton, M. M., 2.

Geological Survey's activities in war and peace: Leighton, M. M., 6

Economic geology.

Bethel ss.: Pye, W. D., 1.

Cave in Rock dist.: Currier, L. W., 2.
Clay, Marion, Wayne Cos.: Easton, W. H., 2.

Surface, for molding sands: Grogan, R. M., 2.

Clays and shales as mortar mix: Hursh, R. K., 1.

Coal resources, Illinois Basin: Cady, G. H., 1.

Devonian: Workman, L. E., 1.

Correlations, Sandoval oil pool: Hoover, W. F., 1.

Dolomites, Chicago area: Willman, H. B., 1.

Fluorspar areas, Hardin Co.: Currier, L. W., 1.

Geology from rotary drilling cores: Mylius, L. A., 1.

Herrin (No. 6) coal bed: Sims, P. K., 1.
Structure: Payne, J. N., 1.

Lawrence Co. pool diorama: Squires, F., 1.

Lower Ord. and Camb. oil poss.: Folk, S., 1.

Mineral industries, 1943: Voskuil, W. H., 2.

Petroleum poss., Maquoketa-"Trenton": Bays, C. A., 4.

Petroleum and gas devels., 1943-44: Bell, A. H., 2.

Undiscovered oil reserves: Leighton, M. M., 3.

Zinc mines, Galena dist.: Lincoln, F. C., 1.

Zinc-lead deposits, NW.: Willman, H. B., 1.

Historical geology.

Bethel ss.: Pye, W. D., 1.

Buried Missn. slump-blocks in Penn.: Swann, D. H., 1.

Buried valley, E.-cent.: Horberg, C. L., 1.

Cave in Rock dist.: Currier, L. W., 2.
Chicago area geol. maps: Bretz, J. H., 1.

Clay, Merion, Wayne Cos.: Easton, W. H., 2.

Illinois—Continued.

Historical geology—Continued.

Coals, correl. by plant microfossils: Kosanke, R. M., 3.

Corals, Kinkaid Missn. index fossils: Easton, W. H., 5.

Correlation, Dev. fms.: Cooper, G. A., 2.
Decorah horizons: Bleber, C. L., 1.

Devonian: Workman, L. W., 1.

Centralia-Salem area: Caylor, Caylor, G. W., 1.

Correlations: Hoover, W. F., 1; Weller, J. M., 2.

Middle, subsurface fms.: Warthin, A. S., Jr., 1.

Sandoval pool correls.: Hoover, W. F., 1.

Southern Ill.: Weller, J. M., 2.

Earth-sensitivity surveys, elec.: Workman, L. E., 2.

Fluorspar areas, Hardin Co.: Currier, L. W., 1.

Geology from rotary drilling cores: Mylius, L. A., 1.

Geophysical logging, water wells: Bays, C. A., 2.

Herrin (No. 6) coal bed structure: Payne, J. N., 1.

Illinois Basin Penn.: Leighton, M. M., 1.

Lower Ord. and Camb. oil poss.: Folk, S., 1.

Maquoketa-Trenton fms. relations: Du Bois, E. P., 1.

Millersville ls., N. Ill. Basin: Taylor, E. F., 2.

Northeastern Ill.: Bays, C. A., 5.

Pennsylvania, subsurface study: Taylor, E. F., 1.

Plant microfossils from coals: Kosanke, R. M., 4.

Porters Creek fm., Paleocene: Cooper, C. L., 1.

Rosiclare-Fredonia contact, Hardin, Pope Cos.: Tippie, F. E., 1.

Shoal Creek ls., Wayne Co.: Sims, P. K., 1.

Wayne Co. Penn. key beds: Sims, P. K., 1.

Mineralogy.

Bethel ss.: Pye, W. D., 1.

Clays and shales as mortar mix: Hursh, R. K., 1.

Zinc mines, Galena dist.: Lincoln, F. C., 1.

Zinc-lead deposits, NW.: Willman, H. B., 1.

Paleontology.

Brachiopoda, Dev.: Cooper, G. A., 3.

Bryozoa, Chester: McFarlan, A. C., 1.
Coals, correls. by plant microfossils: Kosanke, R. M., 3.

Corals, Kinkaid Missn.: Easton, W. H., 5.

Amplexoid, Chester: Easton, W. H., 7.
Correlation, Dev. fms.: Cooper, G. A., 2.

Illinois—Continued.

Paleontology—Continued.

- Crustacea, Maquoketa sh.: Wells, J. W., 6.
 Devonian, Centralia-Salem area: Caylor, G. W., 1.
 Correlations: Cooper, G. A., 2; Weller, J. M., 2.
 Foraminifera, Porters Creek fm., Paleocene: Cooper, C. L., 1.
 Fossil plant miniatures, Mazon Creek: Janssen, R. E., 2.
 Fossil plants, Wilmington area: Wilson, B. H., 2.
 Goldius, Sil.: Miller, A. K., 8.
 Grus, Pleist. crane: Galbreath, E. C., 1.
 Haplolepidae, Carb. fish: Westoll, T. S., 1.
 Insecta, Carb., Mazon Creek: Carpenter, F. M., 1.
 Medullosa noei, foliage, roots, seeds, in coal balls: Steidtmann, W. E., 1.
 Ostracoda, Penn.: Scott, H. W., 1.
 Plant microfossils from coals: Kosanke, R. M., 4.
 Silurian fossils, Thomas A. Green collections: Greacen, K. F., 1.
 Thyridocrinus, Mid. Sil.: Kirk, E., 5.

Petrology.

- Bethel ss.: Pye, W. D., 1.
 Cave in Rock dist.: Currier, L. W., 2.
 Clays, surface, for molding sands: Grogan, R. M., 2.
 Correlation, Dev. fms.: Cooper, G. A., 2.
 Decorah horizons: Bieber, C. L., 1.
 Devonian: Workman, L. W., 1.
 Centralia-Salem area: Caylor, G. W., 1.
 Correlations: Hoover, W. F., 1; Weller, J. M., 2.
 Sandoval pool: Hoover, W. F., 1.
 Southern Ill.: Weller, J. W., 2.
 Dolomites, Chicago area: Willman, H. B., 1.
 Galena River bed sediments: Adams, C., 1.
 Geodes: Rost, R. J., 1.
 Granite, Pope Co.: Weller, J. M., 5.
 Herrin (No. 6) coal bed structure: Payne, J. N., 1.
 Maquoketa-Trenton fms. relations: Du Bois, E. P., 1.
 Silica gel and Warsaw fm. geodes: Robertson, P., 1.
- Physical geology*.
- Buried Missn. slump-blocks in Penn.: Swann, D. H., 1.
 Buried valley, E.-cent.: Horberg, C. L., 1.
 Cave in Rock dist.: Currier, L. W., 2.
 Correlation, Dev. fms.: Cooper, G. A., 2.
 Faults, Cave in Rock and Rosiclare dists.: Hubbert, M. K., 1.
 Fluorspar areas, Hardin Co.: Currier, L. W., 1.
 Northeastern Ill.: Bays, C. A., 5.

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Physical geology—Continued.

- Rosiclare-Fredonia contact, Hardin, Pope Co.: Tippie, F. E., 1.
 Sedimentation, pool 15, Rock Island: Péwé, T. L., 1.
 Zinc-lead deposits, NW.: Willman, H. B., 1.

Physiographic geology.

- Buried Valley, E.-cent.: Horberg, C. L., 1.
 Cave in Rock dist.: Currier, L. W., 2.
 Fluorspar areas, Hardin Co.: Currier, L. W., 1.
 Northeastern Ill.: Bays, C. A., 5.
 Pre-glacial phys. features: Horberg, C. L., 2.

Underground water.

- Earth-resistivity surveys, elec.: Workman, L. E., 2.
 Geophysical explor. for ground water: Bays, C. A., 1.
 Geophysical logging, water wells: Bays, C. A., 2.
 Ground-water res., Peoria Co.: Suter, M., 1.
 Northeastern Ill.: Bays, C. A., 5.
 Water res.: Gerber, W. D., 1.

Illite, clay properties control by pH: Grim, R. E., 1.

Ilmenite.

- Indiana, Mansfield ss. minerals: Gault, H. R., 1.
 New York, Lake Sanford area: Stephenson, R. C., 1.
 Quebec, Saguenay Co., poss.: Retty, J. A., 1.
 Virginia, Piney River: Davidson, D. M., 1.

Imagination in petroleum geology: Cram, I. H., 1.

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- Alabama, SW.: SE. G. Soc., 1.
 Tertiary fms.: Toulmin, L. D., Jr., 1.
 West-central, Cret.: McGlamery, W., 1.
 Alberta, Cowley area: Hage, C. O., 1.
 Arkansas, Batesville dist. Missn.: U. S. G. S., 1.
 Bermuda: Livingston, W., 1.
 Brachiopoda: Cooper, G. A., 1.
 Calcareous algae, useful micro-fossils: Johnson, J. H., 6.
 California, Casmalia area: U. S. G. S., 1.
 Elk Hills oil field: Bunch E. S., 1.
 Great Valley, corals, by Foraminifera: Goudkoff, P. P., 1.
 Midway-Sunset oil field, SE. part: U. S. G. S., 1.
 Puente, San Jose Hills: U. S. G. S., 1.
 Salinas Valley: U. S. G. S., 1.
 Santa Ana Mts., Paleocene, Eocene: U. S. G. S., 2.
 Santa Rosa Hills-Purisima Hills: U. S. G. S., 1.

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- Tumey Tert. ss., Fresno Co.: Zimmerman, J. J., 1.
- Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
- Canol invs., Mackenzie River area: Hume, G. S., 8.
- Dunvegan fm.: McLearn, F. H., 6.
- Liard River area: Hage, C. O., 5.
- Lower Cret.: McLearn, F. H., 4.
- Western interior Cret.: McLearn, F. H., 3.
- Central America, Selva Lacandona, Mex., Guatemala: Mullerried, 4.
- Conodonts: Branson, E. B., 1.
- Crinoida: Moore, R. C., 2.
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- Diatoms as paleoecological indicators: Lohman, K. E., 1.
- Fish scales, fossils, as oil indicators: Anonymous, 97.
- Florida, S. Ga. stratigraphy: Applin, P. L., 1.
- Foraminifera, N. A.: Cushman, J. A., 1.
- Fusulinidae, evolution, and correl. of Penn. rocks: Thompson, M. L., 5.
- Georgia: Applin, P. L., 1; Herrick, S. M., 1.
- Southwest: SE. Geol. Soc., 2.
- Tertiary fms.: MacNeil, F. S., 2.
- Glycymeris ventchli, Cret., Tert., Calif.: Smith, C. T., 2.
- Graptolites, Ord. well cuttings, Carter Co., Okla.: Decker, C. E., 4.
- Greenland, East, between 74°-75°, and islands: Vischer, G. A., 1.
- Illinois, Dev.: Cooper, G. A., 2.
- Kinkaid Missn. corals: Easton, W. H., 5.
- Illinois and surrounding States, Dev.: Weller, J. M., 2.
- Kansas, W., cent., Pleist.: Frye, J. C., 1.
- Louisiana-Texas, Midway-Wilcox fms.: Murray, G. E., Jr., 1.
- Mexico, Nuevo León: Mullerried, 8.
- Perm. area NW. of Las Delicias: King, R. E., 2.
- Mississippi, coastal area: Brown, G. F., 3.
- Macrofossils from wells: Stephenson, L. W., 4.
- Montana, Sweetgrass arch marine Juras.: Cobban, W. A., 2.
- New York, Lower Dev. zonal Ostracoda: Swartz, F. M., 1.
- North America: Caster, K. E., 2; Shimer, H. W., 1.
- Mississippian: Cheney, M. G., 1.
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- Western marine Cenozoic fms.: Weaver, C. E., 2.
- Oklahoma, Sulphur asphalt area: U. S. G. S., 1.
- Ordovician bentonite beds, SE. U. S.: Fox, P. P., 2.

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- Oregon, Coos Bay quad.: Allen, J. E., 1.
- Northwest, megafossils: U. S. G. S., 1.
- South coast: Baldwin, E. M., 1.
- Ostrea, Cret., Miss.: Stephenson, L. W., 2.
- Paleontology petroleum, and the search for oil: Johnson, J. H., 4.
- Pennsylvania, Lower Dev. zonal Ostracoda: Swartz, F. M., 1.
- Quebec, Dev. Bryozoa: Fritz, M. A., 4.
- Reconsideration, Morrison fm. in type area, Colo.: Waldschmidt, W. A., 1.
- South Dakota, Dewey, Corson Cos.: Morgan, R. E., 1.
- Texas, Anahuac Oligocene fm.: Ellisor, A. C., 1.
- Burkeville Miocene fauna, strat. meanings: Stenzel, H. B., 1.
- Huaco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
- Lee Co.: Harris, G. D., 1.
- Tyler Basin: Bailey, T. L., 1.
- United States, Atlantic Coastal Plain, N. J.-Ga.: Richards, H. G., 5.
- Great Basin area: Wheeler, H. E., 1.
- Ozark region paleoecology: Cullison, J. S., 3.
- Southeastern: Fox, P. P., 2; MacNeil, F. S., 2.
- West interior Juras.: Imlay, R. W., 5.
- Utah, Dry Lake area: Williams, J. Stewart, 2.
- Vaginulinas, Cret., U. S. Gulf Coast: Todd, R., 1.
- Virginia, Burkes Garden quad.: Cooper, B. N., 1.
- Coastal Plain: Cederstrom, D. J., 1, 2.
- Index fossils of North America: Shimer, H. W., 1.
- Indiana.
- Status, geology, geography, in curricula: Moulton, B., 1.
- Economic geology.*
- Pennsylvanian: Franklin, D. W., 1.
- Petroleum and gas devel., 1943: Esarey, R. E., 1.
- Petroleum and gas recent discoveries: Fidler, M. M., 2.
- Historical geology.*
- Clifty Falls State Park: Freeman, O. W., 2.
- Climatic changes, post-Pleist., by fossil pollen: Potzger, J. E., 5.
- Devonian: Sutton, A. H., 1.
- Geologic story: Freeman, O. W., 4.
- Hazleton Bridge fm.: Malott, C. A., 2.
- Heavy minerals, Mansfield ss.: Gault, H. R., 1.
- No New Corydon fm. in Huntington Quarry: Cumings, E. R., 1.
- Pennsylvanian: Franklin, D. W., 1.
- Rosiclare, Aux Vases ss.: Malott, C. A., 4.
- Mineralogy.*
- Heavy minerals, Mansfield ss.: Gault, H. R., 1.

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Mineralization, Harrodsburg ls.: Fix, G. F., 1.

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Bone beds, Mid. Dev.: Wells, J. W., 3.
Clifty Falls State Park: Freeman, O. W., 2.

Climatic changes, post-Pleist., by fossil pollen: Potzger, J. E., 6.

Devonian: Sutton, A. H., 1.

Glen Dean Carb. ls.: Haas, O., 3.

Harrodsburg ls.: Fix, G. F., 1.

Pentremites, Missn., Crane area: Haas, O., 2.

Pollens, peat bogs, and lakes: Potzger, J. E., 2.

Thyridocrinus, Mid. Sil.: Kirk, E., 5.

Turkey, Pleist.: Wetmore, A., 3.

Petrology.

Devonian: Sutton, A. H., 1.

Geodes: Eisele, W. F., 2.

Mineralization, Harrodsburg ls.: Fix, G. F., 1.

Pennsylvanian: Franklin, D. W., 1.

Rosiclar, Aux Vases ss.: Malott, C. A., 4.

Physical geology.

Harrodsburg ls.: Fix, G. F., 1.

Karst area: Malott, C. A., 1.

Wind-polished pebbles, Newton Co.: Fidler, M. M., 1.

Physiographic geology.

Dunes, geol. story: Freeman, O. W., 4.

Karst area: Malott, C. A., 1.

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Karst area: Malott, C. A., 1.

Indiana, Northwest Territories: Anonymous, 17.

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Industrial earthquake hazards, E. Canada: Hudgson, E. A., 4.

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Washington, Olympic Penin.: Green, S. H., 1.

Influence of topography on military tactics: Rubenstein, Henry S., 1.

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California, Miocene, Puente Hills: Pierce, W. D., 1.

Pleistocene, La Brea: Pierce, W. D., 1.

Fossils, San Francisco, Calif.: Stanger, F. M., 1.

Illinois, Mason Creek, Carb.: Carpenter, F. M., 1.

Mexico, NE., Tert. fms.: Gardner, J. A., 3.

North America: Carpenter, F. M., 1. 2.

Protodonata, Perm., Kans.: Klots, E. B., 1.

Protozygoptera, Perm., Kans.: Klots, E. B., 1.

Syrphidae, Tert., Colo.-Wyo.-Utah: Hull, F. M., 1.

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Cambrian, NE. Iowa: Schuldt, W. C., 1.

Illinois, Chicago area dolomites: Willman, H. B., 1.

Missouri, Bourbon High oil fields: Culison, J. S., 2.

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Texas, cent., lss., dolomites: Crowley, A. J., 1.

Interpretation, earth-resistivity measurements: Muskat, M., 1.

Interstitial heterogeneity of sand reservoirs: Law, J., 1.

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Alabama, flake graphite belt: Pallister, H. D., 1.

Pinckneyville complex: Gault, H. R., 2.

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Alaska, explosion breccia, Wrangell dist.: Gault, H. R., 5.

Groundhog Basin: Gault, H. R., 4.

Nickel-copper deposits, Spirit Mtn. area: Kingston, J., 1.

Arizona, Boriana dist. and Aquarius Range: Hobbs, S. W., 1.

Salt River Valley: Lund, P. H., 1.

Superior mining area: Short, M. N., 1.

Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.

Arkansas, bauxite area: Thoenen, J. R., 1.

Batholiths, scale models: Grout, F. F., 1.

Bellows Falls quad., N. H.-Vt.: Kruger, F. C., 1.

British Columbia, Ainsworth area: Rice, H. M. A., 1.

Britannia mine No. 8 prebodies: Irvine, W. T., 1.

Central-Southern area: Haas, O., 2.

China Creek area: Stevenson, J. S., 4.

Coast: Gunning, H. C., 2.

Coast Range batholith, prosp. Bridge River-Whitesall Lake: Joubin, F., 1.

Cobalt: Warren, H. V., 4.

Emerald tungsten project: Mason, E. E., 1.

Greenwood-Phoenix area: McNaughton, D. A., 1.

Hazleton, Cassiar dist.: Armstrong, J. E., 2.

Manson Creek area: Armstrong, J. E., 7.

Nickel Plate Mtn. area: Dolmage, V., 1.

Omineca dist.: Armstrong, J. E., 4.

Pinchi Lake area: Armstrong, J. E., 1.

Piemont mine deposits: Langille, E. G., 1.

Sullivan mine area: Swanson, C. O., 1.

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British Columbia—Continued.

- Twin "J" Mine: Stevenson, J. S., 3.
 Tyughton Lake area: Cairnes, C. E., 1.
 Whitesail Lake area: Holland, S. S., 3.
 California, Blairsden area: Durrell, C., 1.
 Crestmore minerals: Woodford, A. O., 1.
 Glenn Co.: Ryneerson, G. A., 1.
 Jamesburg quad., Monterey Co.
 Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.
 Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
 San Luis Obispo Co.: Smith, C. T., 1.
 Santa Cruz area: U. S. G. S., 1.
 Santa Lucia Range: Taliaferro, N. L., 1.
 Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
 Alaska Highway, Watson Lake-Teslin River: Lord, C. S., 1.
 Duparquet-Larder Lake-Rouyn area: Ambrose, J. W., 1.
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 Colorado, Canon City area ig. pipes: Blum, V. J., 2.
 Placerville dist.: Haff, J. C., 1.
 White River Plateau, Glenwood Springs area: MacQuown, E. C., Jr., 1.
 Costa Rica, El General area: Dóndoli, C., 2.
 Cuba: Palmer, R. H., 1.
 Guisa-Los Negros area: Woodring, W. P., 1.
 Isla de Pinos tungsten deposits: Page, L. R., 1.
 Dikes, foliated and pseudo, Calif.: Miller, W. J., 4.
 Factors in localizing mining dists.: Hulin, C. D., 1.
 Georgia, Blue Ridge, S. end: Furcron, A. S., 5.
 Columbia Co. serpentine: Furcron, A. S., 1.
 Kyanite deposits: Furcron, A. S., 4.
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 Southwest: Furcron, A. S., 2; SE. G. Soc., 2.

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- Greenland, East, between 74°-75°, and islands: Vischer, G. A., 1.
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 Idaho, Birch Creek area: Anderson, A. L., 1.
 Latah Co.: Tullis, E. L., 1.
 Labrador, cent., iron ore poss.: Retty, J. A., 2.
 Maine, Kennebec Valley: Trefethen, J. M., 2.
 Mount Desert Is.: Chadwick, G. H., 1.
 Mount Waldo batholith: Trefethen, J. M., 1.
 Manitoba, Flin Flon area: Bateman, J. D., 3.
 Gurney gold mine area: Hage, C. O., 4.
 Island Lake area: McMurchy, R. C., 1.
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 Sherritt Gordon mine area: Bateman, J. D., 2.
 Snow Lake area: Ebbutt, F., 1; Harrison, J. M., 3, 5.
 Massachusetts, Shelburne Falls gneiss dome: Balk, R., 3.
 Mauna Kea, Hawaii, ring structures: Macdonald, G. A., 6.
 Mexico, Amarilla mine, Guerrero: Acosta del Campo, C., 1.
 Concepción Penin., Baja Calif.: Antunez Echeagaray, F., 1.
 El Estado de Morelos: N. de Parres, F., 1.
 El Oro y Tlalpujahua mining camp: Bracho V., F., 1.
 Gulf of Calif. area: Osorio Tafall, B. F., 1.
 Manganese: Rodriguez Cabo, J., Jr., 1.
 Nueva León: Mullerried, 8.
 Pacific Coast: González Reyna, J., 1.
 Permian area NW. of Las Delicias: King, R. E., 1, 2.
 Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.
 Sonora tungsten deposits: Wiese, J. H., 1.
 Michigan, Ishpeming gold range: Snelgrove, A. K., 3.
 Lake Michigan area: Seaman, W. A., 2.
 Marquette iron range: Seaman, W. A., 1.
 Spruce River-Peshekee River areas: Seaman, W. A., 3.
 Montana: U. S. G. S., 1.
 Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 Little Rocky Mts. plains: U. S. G. S., 1.
 North Big Belt Range: Lyons, J. B., 1.

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Red Lodge chrome deposits: Conwell, C. N., 1.

Nevada, mineralization: Bichan, W. J., 3.

Mining dists.: Ferguson, H. G., 1.

Ore deposits: York, B., 1.

Rye Patch area: Vitaliano, C. J., 1.

New Brunswick, Musquash area plutonic rocks: Alcock, F. J., 4; Bel-yea, H. R., 1.

St. George area: Alcock, F. J., 3.

New England, mica deposits: Cameron, E. N., 1.

Newfoundland, Rambler mine area: Quinn, H. A., 1.

New Hampshire: Bannerman, H. M., 1.

Mechanics of: Billings, M. P., 2.

Monadnock quad.: Billings, K. S. F. L., 1.

Mt. Washington area: Billings, K. S. F. L., 2.

Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.

Paleozoic magma ser.: Billings, M. P., 4.

Pawtuckaway Mts.: Roy, C. J., 1.

Pegmatites: Bannerman, H. M., 1.

Winnepesaukee area: Quinn, A. W., 2.

New Jersey, copper deposits: Woodward, H. P., 1.

Middlesex Co.: Barksdale, H. C., 1.

Palisades area: Butler, S. B., 1.

New Mexico, Boston Hill deposits: Entwistle, L. P., 2.

Estancia Valley area: U. S. G. S., 1.

Iron Mtn. dist.: Jahns, R. H., 1, 2.

Red River min. area: Sidwell, R., 1.

Taos Co. pegmatites: Jahns, R. H., 3.

New York, east Adirondack area: Balk, R., 1.

Fordham gneiss: Fluhr, T. W., 2.

Lake Sanford area: Stephenson, R. C., 1.

New York City, Manhattan Borough: Murphy, J. J., 1.

North America, Alaska Highway: Lord, C. S., 2.

North Carolina, Townsville area: White, W. A., 3.

Northwest Territories: Jolliffe, A. W., 2.

Prosperous Lake area: Jolliffe, A. W., 4.

Yellowknife-Beaulieu area: Jolliffe, A. W., 1, 3.

Nova Scotia, Bass River area: Weeks, L. J., 3.

Bridgeville area: Messervey, J. P., 2.

Londonderry deposits: Weeks, L. J., 1.

Wentworth dist.: Bancroft, M. F., 1.

Ontario, Beatty-Munro area: Satterly, J., 1.

Bruce ser., Falconbridge-Dryden Tps.: Fairbairn, H. W., 2.

Bryce-Robillard area: Moorhouse, W. W., 1.

Intrusions—Continued.

Ontario—Continued.

Central Patricia mine: Hicks, H. B., 1.
Cunningham-Garnet area: Meen, V. B., 2.

Dogpaw-Kakagi Lakes area: Thomson, R., 1.

Dome mine, porphyry-sediment contact: Holmes, T. C., 1.

East Bull Lake area: Moore, E. S., 3.

Flack Lake area: Harding, W. D., 2.

Fort Hope area: Prest, V. K., 1.

Gabbro-wehlrite: Froberg, M. H., 1.
Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.

Grimsthorpe-Barrie area: Meen, V. B., 1.

Haliburton-Bancroft alkaline rocks, origin: Hayes, F., 4.

Hollinger mine: Allen, C. C., 1.

Kaladar, Kennebec Tps.: Harding, W. D., 1.

Little Long Lac Hardrock porphyry: Reid, J. A., 3.

Lochalsh area ultrabasic rocks: Grim, P., 1.

North Spirit Lake area: Bateman, J. D., 7.

Northwest: Horwood, H. C., 4.

Pickle Crow gold mine: Monette, H. H., 1.

Pickle Lake-Crow River area poss.: Horwood, H. C., 5.

Porcupine dist.: Evans, J. E. L., 1.
Gustafson, J. K., 1.

Red Lake area: Horwood, H. C., 2, 3.

Renfrew area: Satterly, J., 2.

Rennie-Leeson area: Bruce, E. L., 1.

Ross mine, Ramore area: Jones, W. A., 1.

Southeast: Harrison, J. M., 2.

Stover Tp.: Horwood, H. C., 1.

Whitefish Bay area: Fraser, N. H. C., 1.

Oregon, Ashland area: Merriam, R. H., 1.

Coast: Stephenson, E. L., 1.

Wallowa batholith, origin: Goodspeed, G. E., 1.

Pennsylvania, Hanover-York dist.: Stose, A. J., 1.

Post-Paleozoic mineralization: Myers, W. M., 1.

Quebec, Beattie mine: Davidson, S. C., 1.

Bourlamaque Tp.: Norman, G. W. H., 1.

Buteaux area, Abitibi Co. and Terr.: Freeman, B. C., 1.

Calumet Is.: Osborne, F. F., 1.

Eastern Tps., chromite: Stockwell, C. H., 1.

General: Dresser, J. A., 1.

La Corne molybdenite mine: McLaren, D. C., 4.

La Motte area: Norman, G. W. H., 4.

Malartic gold mine: Halet, R. A., 1.

Intrusions—Continued.

Quebec—Continued.

- Matemec Lake area, Saguenay Co. : Greig, E. W., 1.
 Moisie area, Saguenay Co. : Faessler, C., 2.
 Moulton Hill deposit : Hawley, J. E., 1.
 Opaoka River area : Freeman, B. C., 2.
 Orford area : Fortier, Y. O., 1.
 Preissac-La Corne area : Norman, G. W. H., 5.
 Scotstown, Wolfe, Compton, Frontenac Cos. : Cooke, H. C., 1.
 Sept-Iles area, N. bank St. Lawrence : Faessler, C., 1.
 Stanstead area, Brome and Stanstead Cos. : Ambrose, J. W., 2.
 Wakeham Lake area : Claveau, J., 1.
 Replacement and igneous intrusions : Reid, J. A., 1.
 Saskatchewan, N. : Mawdsley, J. B., 1.
 South Carolina, Piedmont sillimanite deposits : Smith, L. L., 1.
 South Dakota, Beecher Rock Basin : Gwynne, C. S., 2.
 Tennessee, Norris area : Hall, G. M., 1.
 Texas, Llano Co., N. : Zapp, A. D., 1.
 Mason Co. : McCammon, J. H., II, 1.
 United States, Green, White, Adirondack Mts. : Balk, R., 2.
 Stockton, Lockatong fms. type secs. : McLaughlin, D. B., 2.
 Western, fluorspar : Gillson, J. L., 1.
 Yellowstone-Bighorn area : Thom, W. T., Jr., 2.
 Utah, Beaver Co. : Hobbs, S. W., 2.
 Cottonwood-American Fork dists. : Crawford, A. L., 6.
 House Range Mts. : Crawford, A. L., 1.
 Reaper mine pipe : Crawford, A. L., 5.
 Vermont, Barre dist. : Mould, W. P., 1.
 Virginia pegmatites : Brown, W. R., 2.
 Washington, Blewett-Cle Elum fm. : Broughton, W. A., 1 ; Lupter, R. L., 1.
 Chelan nickel deposit : Patty, E. N., 2.
 Morton cinnabar dist. : Mackin, J. H., 1.
 Stevens, Okanogan Cos. magnetite deposits : Broughton, W. A., 2.
 Wyoming, Laramie Range anorthosite structure : Newhouse, W. H., 1.
 Vermiculite deposits : Hagner, A. F., 1.
 Yellowstone Park rhyolite-basalt complex : Fenner, C. N., 1 ; Hawkes, L., 1 ; Wilcox, R. E., 1.
 Yukon, Upper McQuesten River area : Bostock, H. S., 1.
 Whitehorse dist. : Cockfield, W. E., 1.

Invertebrata.

- Arctic America, Silliman fossil mount : Shaw, V., 2.
 Arizona, Perm., Trias. : Lauder milk, J. D., 5.
 Brachiopoda : Cooper, G. A., 1.

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- British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson : Hage, C. O., 3.
 Lone Mtn. area : McLearn, F. H., 1.
 Smithers area : Armstrong, J. E., 2.
 Burkeville Miocene fauna, Tex. : Stenzel, H. B., 1.
 Canada, Alaska Highway, Ft. Nelson-Watson Lake : Williams, M. Y., 1.
 Central America, faunas : Imlay, R. W., 2.
 Conodonts : Branson, E. B., 1.
 Crinoidea : Moore, R. C., 2.
 Ecology of marine organisms : Ladd, H. S., 2.
 Faunas, Paleozoic, Cenozoic, Mex., Cent. Am. : Mullerried, 9.
 Gastropoda, N. Am. : Knight, J. B., 1.
 Protoconchs : Smith, B., 2.
 Illinois, Decorah, Galena fms. : Bieber, C. L., 1.
 Iowa, Illinoian and post-Illinoian Pleist. : Kay, G. F., 2.
 John Day area, Oreg. : Merriam, J. C., 1.
 Mexico, faunas : Imlay, R. W., 2.
 Missouri : Branson, E. B., 3.
 New Jersey, Cape May canal area : Richards, H. G., 3.
 Oral cavity and jaws, evolution : Gregory, W. K., 1.
 Texas, Burkeville miocene fauna : Stenzel, H. B., 2.
 Tracks, Coconino ss., Grand Canyon : McKee, E. D., 1.
 United States, Ozark region paleoecology : Cullison, J. S., 3.
 Virginia, Lee Co. : Huffman, G. G., 1.
 Wah Wah Valley, Utah : Kelly, C., 1.
 Wyoming, central, Trias., Juras. fms. : Branson, E. B., 6.

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 Mapleton meteorite : Wilson, B. H., 1.

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- Arctinurus, Sil.: Miller, A. K., 8.
Bowmanites, Paleozoic, coal-ball fructification: Cross, A. T., 1.
Brachiopoda, Independence shale: Stainbrook, M. A., 3.
Conodonts, Upper Dev.: Youngquist, W. L., 1.
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Pteridosperm stems, Carb. coal balls: Andrews, H. N., 1.
Trigonocarpus cf. Pachytesta, Tripterosperrum: Hoskins, J. H., 1.

Iron.

- Alabama, min. res.: Anonymous, 25.
Alaska, Kasaan Penin. Prince of Wales Is.: Warner, L. A., 1.
British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.
Alaska Highway area min. poss.: Thomas, L. O., 1.
Greenwood-Phoenix area: McNaughton, D. A., 1.
Smithers area: Armstrong, J. E., 2.
California, Copperopolis mine: Lisle, T. O., 5.
Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
Riverside Co.: Tucker, W. B., 2.
Canada, E. Arctic area min. res.: Anonymous, 58.
Mineral industry: Moore, E. S., 4.
Steep Rock mines: Samuel, W., 1.
Western: Hutt, G. M., 4; Warren, H. V., 5.
Coleman Mo. sink deposit: Kreamalmyer, K. L., 1.
Greenland, Oviak area: Anonymous, 32.
Hawaii, Kilauea volcano, ejected blocks: Macdonald, G. A., 3.
Labrador, central, poss.: Rotty, J. A., 2.
Hollinger Lake area: Anonymous, 98.
Limonites, chem. and mineralog. composition: Blanchard, R., 1.
Loellingite and safflorite: Peacock, M. A., 2.
Manitoba, Black Is., Lake Winnipeg: Brownell, G. M., 2.
Island Lake area: McMurchy, R. C., 1.
Metallography of meteoritic iron: Perry, S. H., 1.
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Mexico, Baja Calif.: Antúnez Echegaray, F., 3.
Cerro de Mercado Mtn.: Terrones Benitez, A., 1.
El Oro y Tlalpujahua mining camp: Bracho V., F., 1.
Nuevo León: Mullerried, 8.
Pacific Coast: González Reyna, J., 1.
Michigan: Martin, H. M. M., 1, 2.
Gogebic, Marquette ranges: Gruner, J. W., 7.

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Michigan—Continued.

- Lake Michigan area: Seaman, W. A., 2.
Marquette iron range: Gruner, J. W., 7; Seaman, W. A., 1.
Menominee iron range: Lamey, C. A., 1.
Republic area: Ayres, V. L., 1.
Spruce River-Peshekee River areas: Seaman, W. A., 3.
Minnesota, Mesabi range: Jones, R. H. B., 1.
Minnesota: Gruner, J. W., 2.
Southeast: Stauffer, C. R., 2.
Missouri: Branson, E. B., 3.
Newbauer sink deposit: Kreamalmyer, K. L., 1.
Pyrite deposits: Grawe, O. R., 1.
Silver Hollow sink deposit: Kreamalmyer, K. L., 1.
New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
Iron Mtn. ribbon rock: Jahns, R. H., 2.
Silver City area: Entwistle, L. P., 1.
Tertiary collapse breccia: Kelley, V. C., 1.
New York, Adirondack area: Anderson, S. A., 1.
Catskill quad.: Newland, D. H., 1; Ruedemann, R., 5.
Lake Sanford area: Stephenson, R. C., 1.
Microolithologies sed. rocks, use: Alling, H. L., 2.
North America, coronas, coronites, fm.: Shand, S. J., 3.
Deposit map: Mikami, H. M., 1.
Pre-Cambrian fms.: Bruce, E. L., 2.
Nova Scotia, Bass River area poss.: Weeks, L. J., 3.
Bridgeville area: Messervey, J. P., 2.
Gabus area: Douglas, G. V., 3.
Londonderry deposits: Weeks, L. J., 1, 2.
Manchester mine: Douglas, G. V., 2.
Ohio, E., petroliferous Penn.: Ireland, H. A., 2.
Mineral res.: Ohio Devel. Pub. Com., 1.
Ontario, Bigwater Lake area poss.: Berry, L. G., 1.
Bryce-Robillard area: Moorhouse, W. W., 1.
Central Patricia mine: Hicks, H. B., 1.
Conchillites, Findlayson Lake: Tanton, T. L., 2.
Flack Lake area poss.: Harding, W. D., 2.
Northwest, prosp. poss.: Horwood, H. C., 4.
Pickle Crow gold mine: Monette, H. H., 1.

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Pickle Lake-Crow River area poss.:

Horwood, H. C., 5.

Renfrew area: Satterly, J., 2.

Oregon, Washington Co.: Libbey, F. W., 1.

Pennsylvania: Foose, R. M., 2.

Cumberland Valley ores: Foose, R. M., 4.

Fire clays, minerals in: Leatham, E., 1.

Hanover-York dist.: Stose, A. J., 1.

Mineral res.: Ashley, G. H., 1.

Photomicrography, colites: Fairbanks, E. E., 1.

Quebec: Dufresne, A. O., 1.

Economic minerals: Quebec Bur. Mines, 1.

Hincks Tp.: Tanton, T. L., 1.

Moisie area, Saguenay Co.: Faessler, C., 2.

Saguenay Co., poss.: Retty, J. A., 1.

Saskatchewan, N.: Anonymous, 105.

South Dakota, min. res.: Rothrock, E. P., 1.

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Northeast: King, P. B., 4.

Texas, Houston Co., poss.: Harrington, H., 1.

United States, NW., weathering profiles: Allen, V. T., 3.

Western: Burchard, E. F., 1.

Utah, Iron Peak ores: Crawford, A. L., 2.

Twin Peaks deposits: Crawford, A. L., 4.

Virginia, Glade Mtn. dist.: Miller, R. L., 1.

Kelly Bank mine: Milton, C., 1.

Washington, Blewett-Cle Elum fm.: Broughton, W. A., 1; Luper, R. L., 1.

Cle Elum dist.: Zapffe, C., 1.

Stevens, Okanogan Cos.: Broughton, W. A., 2.

World map: Mikami, H. M., 1.

Ironstone, Mt. Huleross-Commotion Creek area, British Columbia: Wickenden, R. T. D., 1.

Isolation, grains in index oils: Lindberg, M. L. L., 1.

Isometograph for block diagrams: Forbes, J. M., 1.

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Alberta, Wainwright field: Hume, G. S., 5.

Aliso Canyon oil field, Calif.: Hodges, F. C., 1.

Arkansas, bauxite area: Thoenen, J. R., 1.

Schuler field: Kaveler, H. H., 1.

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Big Horn Basin oil and gas fields, Mont.-Wyo.: U. S. G. S., 1.

California, Aliso Canyon oil field: Hodges, F. C., 1.

Elk Hills oil field: Bunch, E. S., 1.

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Seismograph explor.: Salvatori, H., 1.

South Mtn. field: Bailey, W. C., 1.

Colorado, Rangely oil and gas field: U. S. G. S., 1.

W.-cent. and NW. fms.: Brill, K. G., Jr., 1.

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Florida, and S. Ga. stratigraphy: Applelin, P. L., 1.

General: Cooke, C. W., 3.

Illinois: Workman, L. E., 1.

Bethel ss.: Pye, W. D., 1.

Cave in Rock dist.: Currier, L. W., 2.

Clay Co.: Easton, W. H., 2.

East-central buried valley: Horberg, C. L., 1.

Hardin Co. fluor spar areas: Currier, L. W., 1.

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Maquoketa-Trenton fms., relations: Du Bois, E. P., 1.

Marion Co.: Easton, W. H., 2.

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Illinois Basin, Millersville ls.: Taylor, E. F., 2.

Iowa, NE.: Schultdt, W. C., 1.

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Louisiana, Acadia Parish: Barton, D. C., 4.

Cameron Meadows dome: McGuckin, G. M., 1.

Erath gas field: Anonymous, 78.

Holly field, De Soto Parish: Spofford, H. N., 1.

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Michigan, south-cent.: U. S. G. S., 1.

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- Newhall-Potrero oil field, Calif.: Hodges, F. C., 1.
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- Ohio, Berea, Second Berea sands: U. S. G. S., 1.
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- Pennsylvania, central Ord.: Kay, G. M., 2.
- Oil City quad.: Dickey, P. A., 1.
- Southwest oil-bearing sands: Matteson, L. S., 1.
- Powder River Basin, Wyo.-Mont.: U. S. G. S., 1.
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- Tennessee, oil and gas poss.: Born, K. E., 3.
- Texas, South Houston oil field: Eby, J. B., 1.
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- United States, Cotton Valley beds, N. Gulf Coastal Plain: Swain, F. M., 1.
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- Wyoming, Lance Creek oil and gas field: U. S. G. S., 3.
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- Geodesist's contrib. to geoscience: Field, R. M., 2.
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- New York, Hudson Valley area: Ruedemann, R., 3.
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- Jacalitos Northwest oil field, Calif.: Gregeresen, A. I., 3.
- Jackson gas field, Miss.: Morse, W. C., 5.
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- Foraminifera, Bowden area: Palmer, D. B. K., 1.
- Buff Bay, Miocene: Cushman, J. A., 10.
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- Kansas, gem minerals: Graffham, A. A., 1.
- Nevada, Elko Co.: Reeves, A., 1.
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- Jasperoid, British Columbia, Greenwood-Phoenix area: McNaughton, D. A., 1.
- Jelenite, Kansas, gem minerals: Graffham, A. A., 1.
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- British Columbia, Sullivan mine area: Swanson, C. O., 1.
- California, Barstow quad., San Bernardino Co.: Miller, W. J., 2.
- Big Pine volcanic field: Mayo, E. B., 1.
- Glenn Co.: Rynearson, G. A., 1.
- Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.
- Canada: MacKay, B. R., 3.
- Colorado, White River Plateau, Glenwood Springs area: MacQuown, W. C., Jr., 1.
- Cuba, Guisa-Los Negros area: Woodring, W. P., 1.
- Isla de Pinos tungsten deposits: Page, L. R., 1.
- Illinois, Cave in Rock dist.: Currier, L. W., 2.
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- Indiana, Harrodsburg ls., mineralization: Fix, G. F., 1.
- Kentucky Dam, solution channel: Stoneymaker, B. C., 3.
- Maine, Mt. Waldo batholith:** Trefethen, J. M., 1.
- Massachusetts, Shelburne Falls gneiss dome: Balk, R., 3.
- New Hampshire, Pawtuckaway Mts.: Roy, C. J., 1.
- New Jersey, Edgewater Road cut: Zodac, P., 6.
- New York, Lake Sanford area: Stephenson, R. C., 1.
- North America, erosion: Crosby, I. B., 2.

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- North Carolina, Fontana Dam site:
Money-maker, B. C., 1.
- Ohio, structural features: Ver Steeg,
K., 1.
- Pennsylvania, Everett syncline area:
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- Quebec, Matemec Lake area, Saguenay
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- South Dakota: Rothrock, E. P., 1.
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- Eastern zinc deposits: Crawford,
J., 1.
- Texas, Baylor Co.: Evans, G. L., 4.
- Sierra Diablo area: U. S. G. S., 1.
- South Guadalupe Mts.: U. S. G. S., 1.
- United States, Piedmont SE. soil colors:
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- Utah, Zion Canyon landslide: Grater,
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B. N., 1.
- Jorullo volcano, Mex.: Flores, T., 1.
- Jumpingpound oil field, Alberta: Beach, F.
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- June Lake Glacier, Calif.: Putnam, W. C., 1.
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- Alabama-Mississippi Basin: Carroll, D.
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- Alaska, nickel-copper deposits, Spirit
Mtn. area: Kingston, J., 1.
- Wide Bay anticline area: Kellum, L.
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- Alberta, Alexo area: Crombie, G. P., 1, 2.
- Central area, foothills: MacKay, B.
R., 1.
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- Jumpingpound oil field: Beach, F.
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- Southern, structure drilling for oil:
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- Tay River area: Henderson, J. F., 1.
- Turner Valley oil field ls. reservoirs:
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- Vermilion area: Nauss, A. W., 1.
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- Arizona, Uinkaret Plateau: Koons, E.
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- Arkansas, Schuler field: Kaveler, H. H.,
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- British Columbia, Alaska Highway, Ft.
St. John-Ft. Nelson: Hage, C. O.,
3.
- Coast: Gunning, H. C., 2.
- Dunlevy-Portage Mtn. area: Beach,
H. H., 1.
- Hazelton, Cassiar dist.: Armstrong,
J. E., 7.

Jurassic—Continued.

British Columbia—Continued.

- Manson Creek area: Armstrong, J. E.,
7.
- Nicola area: Cockfield, W. E., 2.
- Omineca dist.: Armstrong, J. E., 4.
- Pinchi Lake area: Armstrong, J. E.,
1.
- Premier mine deposits: Langille, E.
G., 1.
- Princeton area: Rice, H. M. A., 2.
- Smithers area: Armstrong, J. E., 2.
- Takla, Cassiar dist.: Armstrong, J. E.,
6.
- Taku River, Cassiar dist.: Kerr, F. A.,
1.
- Tyughton Lake area: Cairnes, C. E.,
1.
- California, Barstow quad., San Bernar-
dino Co.: Miller, W. J., 2.
- Chowchilla field: Hodges, F. C., 2.
- Coast, Point Arena-Fort Ross:
Weaver, C. E., 3.
- Diablo Range quicksilver deposits:
Yates, R. G., 1.
- Glenn Co.: Rynearson, G. A., 1.
- Ione area: Bates, T. F., 1.
- Jamesburg quad., Monterey Co.: Fied-
ler, W. M., 1.
- Knoxville quicksilver dist.: Averitt,
P., 1.
- Knoxville ser.: Anderson, F. M., 1.
- Los Angeles Basin area: U. S. G. S., 2.
- Oil fields: Gregerson, A. I., 1.
- Palm Springs-Blythe Strip, Riverside
Co.: Miller, W. J., 1.
- Petroleum poss.: Gregerson, A. I., 1.
- Playa del Rey oil field: Hodges, F. C.,
3.
- San Diego area: Hertlein, L. G., 1.
- San Luis Obispo Co.: Smith, C. T., 1.
- Santa Lucia Range: Talliaferro, N. L.,
1.
- Santa Maria oil dist.: U. S. G. S., 1.
- Santa Rosa Hills-Purisima Hills
dists.: U. S. G. S., 1.
- Sea-floor rocks off coast: Emery, K.
O., 4.
- Canada, Alaska Highway, Watson Lake-
Teslin River: Lord, C. S., 1.
- Lytton to Vancouver: Hutt, G. M., 12.
- Medicine Hat to Vancouver: Hutt, G.
M., 14.
- Structure and relief: Brouillette, B.,
1.
- Western, oil devel.: Hume, G. S., 9.
- Central America, Mesozoic: Mullerried,
9.
- Selva Lacandonia, Mex., Guatemala:
Mullerried, 4.
- Colorado, Morrison fm., Colorado Pla-
teau area: Stokes, W. L., 1.
- Morrison fm., type area reconsider-
ation: Waldschmidt, W. A., 1.
- Northwestern: U. S. G. S., 2.

Jurassic—Continued.

Colorado—Continued.

- Placerville dist.: Haff, J. C., 1.
 Selected well logs: Barb, C. F., 2.
 Vasquez overthrust, Middle Park:
 Tweto, O., 1.
 Cuba: Brodermann, J., 1; Palmer, R.
 H., 1.
 Elk Basin oil and gas field, Wyo.-Mont.:
 U. S. G. S., 4.
 Geologic calendar, periods, time,
 lengths: Elias, M. K., 5.
 Greenland, East, between 74°-75°, and
 islands: Vischer, G. A., 1.
 Idaho, Teton Basin: Gardner, L. S., 1.
 Kansas, Thomas Co.: Frye, J. C., 1-a.
 Louisiana, 1942 wildcat wells: Blan-
 pied, B. W., 4.
 Mexico, Gulf of Calif. area: Osorio Ta-
 fall, B. F., 1.
 Mesozoic: Mullerried, 9.
 Northern: Kellum, L. B., 1, 2.
 Nuevo León: Mullerried, 8.
 Permian area NW. of Las Delicias,
 Coahuila: King, R. E., 2.
 Plateau: Nye, S. S., 2.
 Pozo Rica area, Veracruz: Arellano,
 A. R. V., 1.
 Valley of Tixtla: Mullerried, 2, 3.
 Mississippi: McGlothlin, T., 1.
 Monroe Co.: Vestal, F. E., 1.
 Missouri: Branson, E. B., 3.
 Montana, Ellis fm., type section: Cob-
 ban, W. A., 1.
 Gage dome oil field: Perry, E. S., 2.
 General: U. S. G. S., 1.
 Jardine-Crevasse Mtn. dist.: Seager,
 G. F., 1.
 Little Rocky Mts. plains: U. S. G. S.,
 1.
 North Big Belt Range: Lyons, J. B., 1.
 South-central area: U. S. G. S., 1, 2.
 Sweetgrass arch, marine: Cobban,
 W. A., 2.
 Nevada, Comstock Lode area: Calkins,
 F. C., 1.
 Mining dists.: Ferguson, H. G., 1.
 Ore deposits: York, B., 1.
 New Mexico, Curry, Roosevelt Cos.:
 Theis, C. V., 1.
 Estancia Valley area: U. S. G. S., 1.
 Mesozoic, NE.: Read, C. B., 1.
 Pecos River-Rio Galisteo area: U. S.
 G. S., 1.
 New York City, Manhattan Borough:
 Murphy, J. J., 1.
 North America, Alaska Highway: Lord,
 C. S., 2.
 Caribbean, Gulf, poss. zones: Anon-
 ymous, 107.
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 J. H., 9.

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North America—Continued.

- Geosynclines in continental devel.:
 Kay, G. M., 1.
 Gulf area: Imlay, R. W., 7.
 Gulf, Caribbean area: Seismog. Serv.
 Corp., 1: Anonymous, 107.
 North Dakota, stratigraphy and struc-
 ture: Laird, W. M., 2.
 Oklahoma, ground water: Dott, R. H., 4.
 Oregon, Coos Bay squad.: Allen, J. E., 1.
 Geology: Weaver, C. E., 3.
 Rangely oil field, Colo.: U. S. G. S., 1.
 Reconsideration, Morrison fm. in type
 area, Colo.: Waldschmidt, W. A., 1.
 Saskatchewan, oil and gas poss.: Ed-
 munds, F. H., 1.
 South Dakota: Rothrock, E. P., 1.
 Beecher Rock Basin: Gwynne, C. S., 2.
 Dewey, Corson Cos.: Morgan, R. E., 1.
 United States, Cotton Valley beds, N.
 Gulf Coastal Plain: Swain, F. M., 1.
 Rangley oil field, Rocky Mts.: Thom-
 as, C. R., 1.
 Schuler fm.: Swain, F. M., 2.
 Southeast Gulf Coast: Brankstone,
 H. R., 1.
 West interior, index fossils: Imlay,
 R. W., 5.
 Utah, Logan Cave: Church, V., 1.
 Northeast: U. S. G. S., 2.
 Salt Valley: Dyer, B. W., 1.
 Study, Coalville drill-core: Hasler,
 J. W., 1.
 Uinta Basin: Walton, P. T., 1.
 Upper Sevier River Valley: Gregory,
 H. E., 1.
 Wasatch Mts., N.-cent.: Eardly, A.
 J., 1.
 Zion Canyon: Grater, R. K., 1.
 Washington, geology: Weaver, C. E., 3.
 West Indies, mtn.-uplift problem:
 Trechmann, C. T., 1.
 Wyoming: La Fleche, P., 2.
 Central area: Branson, E. B., 6;
 U. S. G. S., 2.
 Como Bluff anticline: Dunbar, R.
 O., 1.
 Lance Creek oil and gas field: U. S.
 G. S., 3.
 Little Buffalo Basin field: U. S. G.
 S., 8.
 Maverick Springs area: U. S. G. S., 1.
 Teton Basin: Gardner, L. S., 1.
 Wind River Mts., NW. end: U. S. G.
 S., 1.
 Wyoming and Montana oil horizons:
 Carroll, D. L., 2.
 Yukon, Canol Road, Teslin River-Mac-
 millan Pass: Kindle, E. D., 2.
 Selwyn River area: Bostock, H. S., 2.
 Upper McQuesten River area: Bos-
 tock, H. S., 1.
 Whitehorse dist.: Cockfield, W. E., 1.

Kansas.

Areas described.

Thomas County: Frye, J. C., 1-a.

Economic geology.

Aldrich oil field, Ness Co.: Carpenter, E. G., 1.

Arbuckle ls. optimum producing rate: Amstutz, P. T., Jr., 1.

Carmi pool, Pratt Co.: Galley, J. E., 1.

Cheyenne ss., Russell Co.: Swineford, A., 1-a.

Cross-section, geol. subsurface, Ford-Wallace Cos.: Edson, F. C., 1.

Exploration, oil and gas, W. Kans., 1943: Ver Wiebe, W. A., 2.

Gem minerals: Graffham, A. A., 1.

Ground-water, Finney, Gray Cos.: Latta, B. F., 1.

McLouth gas and oil field: Lee, W., 1.

Marmaton group, Penn.: Jewett, J. M., 2.

Mineral wealth: Landes, K. K., 1.

Oil and gas fields, 1943: Ver Wiebe, W. A., 1-a.

Petroleum, gas devel.: Koester, E. A., 1. East Kans.: Jewett, J. M., 1.

Thayer coal bed, E. Kans.: Schoewe, W. H., 1.

Weir-Pittsburg coal bed, mined area: Abernathy, G. E., 1.

Historical geology.

Aldrich oil field, Ness Co.: Carpenter, E. G., 1.

Carmi pool, Pratt Co.: Galley, J. E., 1.

Cheyenne ss., Russell Co.: Swineford, A., 1-a.

Correlation, Simpson rocks, Kans.-Mo.: Leatherock, C., 1.

Cross-section, geol. subsurface, Ford-Wallace Cos.: Edson, F. C., 1.

General: Lane, H. H., 1.

Ground-water, Finney, Gray Cos.: Latta, B. F., 1.

Neosho River Valley near Parsons: Williams, C. C., 1.

McLough gas and oil field: Lee, W., 1.

Marmaton group, Penn.: Jewett, J. M., 2.

Oil and gas fields, E. Kans.: Jewett, J. M., 1.

Ore deposits, structural control, Tri-State dist.: Fowler, G. M., 1.

Outcropping rocks, tabular description: Moore, R. C., 4.

Pennsylvanian Morrowan rocks: Thompson, M. L., 2.

Pennsylvanian rocks, fusulinids: Thompson, M. L., 4.

Pleistocene: Frye, J. C., 1; Kay, G. F., 1, 2.

Southwest Kans.: Hibbard, C. W., 2.

Pre-Cambrian hills, buried, Barton Co.: Walters, R. F., 1.

Rock fms.: Moore, R. C., 1.

Thayer coal bed, E. Kans.: Schoewe, W. H., 1.

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Historical geology—Continued.

Thomas County: Frye, J. C., 1-a.

Weir-Pittsburg coal bed, mined area: Abernathy, G. E., 1.

Mineralogy.

Cheyenne ss., Russell Co.: Swineford, A., 1-a.

Cowley Co. meteorite: Niningger, H. H., 1.

Gem minerals: Graffham, A. A., 1.

Mineral wealth: Landes, K. K., 1.

Selenite, crystals: Carpenter, A. C., 1.

Diamond Hill area: Zumwalt, F. M., 1.

Paleontology.

Algae, lime-secreting, Penn., Perm.: Johnson, J. H., 10.

Aves, Rexroad Pliocene fauna: Wetmore, A., 2.

Basalt artifacts, Pleist. gravels: Graffham, A. A., 2.

Calamites and Ottawa fossil forest: Schoewe, W. H., 2.

Casteroides, Pleist.: Green, M., 1.

Eucaster, Epigaulus, Pliocene, Trego Co.: Hibbard, C. W., 6.

Fauna, Flint Hills: Kennedy, M., 2.

Fannules, late Cenozoic, SW.: Hibbard, C. W., 7.

Flora, Flint Hills: Kennedy, M., 2.

Fusulinids, Penn., Morrowan rocks: Thompson, M. L., 2, 4.

Mammals, Pliocene, Seward Co.: Hibbard, C. W., 4.

Pleistocene: Hibbard, C. W., 1, 2.

Protodonata, Perm.: Klots, E. B., 1.

Protozygoptera, Perm.: Klots, E. B., 1.

Reptilia, mid-Penn.: Lane, H. H., 2.

Testudo, Pliocene, Seward Co.: Hibbard, C. W., 3.

Tricromerum, Cret. plesiosaur: Riggs, E. S., 1.

Vertebrata: Lane, H. H., 1.

Petrology.

Barite concretions, "roses," Salina area: Kennedy, M., 1.

Cheyenne ss., Russell Co., Swineford, A., 1-a.

Gem minerals: Graffham, A. A., 1.

Ground-water, Finney, Gray Cos.: Latta, B. F., 1.

McLouth gas and oil field: Lee, W., 1.

Marmaton group, Penn.: Jewett, J. M., 2.

Pennsylvanian Morrowan rocks: Thompson, M. L., 2.

Pleistocene, N.-cent. Kans.: Hibbard, C. W., 1.

Pre-Cambrian hills, buried, Barton Co.: Walters, R. F., 1.

Rock City, Ottawa Co.: Landes, K. K., 5.

Septaria, Cret.: Zumwalt, F. M., 2.

Volcanic ash, Pleist. cf. Pliocene: Swineford, A., 2.

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Physical geology.

Aldrich oil field, Ness Co.: Carpenter, E. G., 1.

Cross section, geol. subsurface, Ford-Wallace Cos.: Edson, F. C., 1.

Erosional modification of landmarks in historic time: Smith, H. T. U., 1.

McLouth gas and oil field: Lee, W., 1.

Marmaton group, Penn.: Jewett, J. M., 2.
Oil and gas fields, E. Kans.: Jewett, J. M., 1.

Pleistocene: Frye, J. C., 1.

Pre-Cambrian buried hills, Barton Co.: Walters, R. F., 1.

Rock City, Ottawa Co.: Landes, K. K., 5.

Valley erosion since Pliocene algal ls. deposit: Frye, J. C., 3.

Physiographic geology.

Oil and gas fields, E. Kans.: Jewett, J. M., 1.

Pleistocene: Frye, J. C., 1.

Scenic Kansas: Landes, K. K., 2.

Pre-Cambrian buried hills, Barton Co.: Walters, R. F., 1.

Thomas County: Frye, J. C., 1-a.

Valley erosion since Pliocene algal ls. deposit: Frye, J. C., 3.

Underground water.

Cheyenne ss., Russell Co.: Swinefold, A., 1-a.

Ground water, Finney, Gray Cos.: Latta, B. F., 1.

Neosho River Valley near Parsons: Williams, C. C., 1.

Thomas County: Frye, J. C., 1-a.

Kaolin. See also Clays.

Georgia, Coastal Plain: Cooke, C. W., 1.

Mississippi: Morse, W. C., 2.

North Carolina min. res.: Anonymous, 9.
Oregon, Hobart Butte clay pellets origin: Allen, V. T., 1.

Quebec: Dufresne, A. O., 1.

Economic minerals: Quebec Bur. Mines, 1.

South Carolina min. res.: Anonymous, 20.

Texas, Freestone Co.: Whitcomb, B., 1.

Limestone Co.: Broman, I. J., 2.

Kaolinite.

California, Edwin clay, Ione area:

Bates, T. F., 1.

Clay, migration effect, minerals, hydrous aluminum oxides: Allen, V. T., 2.

Clay properties control by pH: Grim, R. E., 1.

Hawaii, Kilauea Volcano solfataric rock alteration: Macdonald, G. A., 4.

Pennsylvania, high-alumina clays: Foose, R. M., 3.

United States, W.: Wimmeler, N. L., 1.

Kaolinization, Virginia pegmatites: Brown, W. R., 2.

Karst topography.

Arizona, Kaibab, Coconino plateaus: Strahler, A. N., 4.

Karst topography—Continued.

Arizona—Continued.

Petrified Forest Nat. Park: Malott, C. A., 3.

Cuba, Guisa-Los Negros area: Woodring, W. P., 1.

Indiana, S.: Malott, C. A., 1.

United States, deserts: Price, W. A., 1.

Kentucky.

History of geol. map of Ky.: Jillson, W. R., 6.

Economic geology.

Appalachian area, oil and gas, 1943-44:

Appalachian G. Soc., 1.

Clinton Co. oil field: McCauley, A., 1.

Corniferous, Irvine, Estill Co.: McFarlan, A. C., 3.

Fluorspar: King, F. W., 1.

Babb fault system: Hardin, G. C., Jr., 2.

General: McFarlan, A. C., 2.

Petroleum and gas devel., 1943: Freeman, L. B., 2.

Union Co.: Jillson, W. R., 2.

Historical geology.

Clinton Co. oil field: McCauley, A., 1.

Corniferous, Irvine, Estill Co.: McFarlan, A. C., 3.

Correlation chart, natural gas sand, W.: Jillson, W. R., 1.

Devonian subsurface stratigraphy, W.: Freeman, L. B., 1.

Drennon abandoned channel, Kentucky River: Jillson, W. R., 5.

Elkhorn, Pliocene channel, Kentucky River: Jillson, W. R., 4.

General: McFarlan, A. C., 2.

Geologic map, history of: Jillson, W. R., 6.

History of geol. map: Jillson, W. R., 6.
Kentucky River: Jillson, W. R., 10.

Ordovician, Middle, lss., Va.-Ky.: Huffman, G. G., 1.

Pot Ripple abandoned channel, Kentucky River: Jillson, W. R., 3.

Union Co.: Jillson, W. R., 2.

Mineralogy.

Celestite, Livingston Co.: Hardin, G. C., Jr., 1.

Fluorspar, Babb fault system: Hardin, G. C., Jr., 2.

General: McFarlan, A. C., 2.

Palaeontology.

Bone beds, Mid. Dev.: Wells, J. W., 3.

Bryozoa, Chester: McFarlan, A. C., 1.

Conodonts, Brassfield fm.: Branson, E. B., 5.

Cincinnati area: Cooper, C. L., 4.

Richmond: Branson, E. B., 7.

Cull conglomer., Eden sh., Owen Co.: Jillson, W. R., 9.

Devonian subsurface stratigraphy, W. Ky.: Freeman, L. B., 1.

Ordovician, Middle, lss., Va.-Ky.: Huffman, G. G., 1.

Kentucky—Continued.

Petrology.

- Corniferous, Irvine, Estill Co.: McFarlan, A. C., 3.
 Cull conglomerate, Eden sh., Owen Co.: Jillson, W. R., 9.
 Devonian subsurface stratigraphy, W.: Freeman, L. B., 1.
 Ordovician, Middle, lss., Va.-Ky.: Huffman, G. G., 1.
 Tuscaloosa gravel, silicified, Livingston Co.: Fox, P. P., 3.

Physical geology.

- Devonian subsurface stratigraphy, W.: Freeman, L. B., 1.
 Faulted area, N-central: Jillson, W. R., 8.
 Fluorspar, Babb fault system: Hardin, G. C., Jr., 2.
 General: McFarlan, A. C., 2.
 Kentucky Dam, solution channel: Moneymaker, B. C., 3.
 Kentucky River: Jillson, W. R., 10.
 Ordovician, Middle, lss., Va.-Ky.: Huffman, G. G., 1.
 Roaring Spring: Jillson, W. R., 7.
 Union Co.: Jillson, W. R., 2.

Physiographic geology.

- Drennon abandoned channel, Kentucky River: Jillson, W. R., 5.
 Elkhorn, Pliocene channel, Kentucky River: Jillson, W. R., 4.
 General: McFarlan, A. C., 2.
 Kentucky River: Jillson, W. R., 10.
 Pot Ripple abandoned channel: Jillson, W. R., 3.
 Union Co.: Jillson, W. R., 2.

Underground water.

- Kentucky Dam, solution channel: Moneymaker, B. C., 3.
 Roaring Spring: Jillson, W. R., 7.

Kernite.

- California, borate minerals: Harriman, W. R., 1.
 Death Valley: Bagg, R. M., 3.

Kettleman Hills North Dome oil field, Calif.:

- Van Couvering, M., 1.

Kinetic theory, origin orogenic forces:

- Fisher, J. E., 1.

Knoop microhardness tester, min. tool: Win-

- chell, H., 2.

Kramerite, Calif. borate minerals: Harri-

- man, W. R., 1.

Kyanite.

- Canada, ceramics, industrial minerals: Worcester, W. G., 1.
 Georgia: Furcron, A. S., 4.
 Sillimanite group of minerals: Jeffrey, J. A., 1.

Labrador.

Economic geology.

- Iron, Hollinger Lake area: Anonymous, 98.
 Iron ore poss., central: Retty, J. A., 2.

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Mineralogy.

- Iron, Hollinger Lake area: Anonymous, 98.

- Iron ore poss., central: Retty, J. A., 2.

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- Central, iron ore poss.: Retty, J. A., 2.
 Labradorite, Hawaii, Kilauea volcano, ejected blocks: Macdonald, G. A., 3.
 Laccoliths. See also Intrusions.
 Arizona, Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.
 Maine, Mount Desert Is.: Chadwick, G. H., 1.
 Manitoba, Mikanagan Lake area: Bateman, J. D., 1.
 Montana, N. Big Belt Range: Lyons, J. B., 1.
 Utah, House Range Mts.: Crawford, A. L., 1.

- Lafitte oil field, La.: Vance, H., 1.

- Lake filling and bog fm.: Potzger, J. E., 4.

- Lake St. John oil field, La.: Ives, G. O., 2.

Lakes.

- Canada, Winnipeg to Edmonton: Hutt, G. M., 13.

- Lake filling and bog fm.: Potzger, J. E., 4.

- Mono Lake, Calif.: Putnam, W. C., 1.

- Saskatchewan, saline: Rawson, D. S., 1.

- Wisconsin, bib., 1871-1945: Potzger, J. E., 4.

Lakes, extinct. See also Glacial lakes.

- Bull Lake, Jackson Hole, Wyo.: Fryxell, F. M., 3.

- Canada, Winnipeg to Edmonton: Hutt, G. M., 13.

- Carolina Bays, N. Car.-S. Car.: Cooke, C. W., 2.

- Lake Arkona, Ohio, glacial: Stout, W. E., 2.

- Lake Leverett, Wash.: Hobbs, W. H., 7.

- Lake Lundy (Elkton, Dana), Ohio, glacial: Stout, W. E., 2.

- Lake Missoula, Mont.: Hobbs, W. H., 7.

- Lake Okanogan, Wash.: Hobbs, W. H., 7.

- Lake Souris, N. Dak., glacial: Rasmussen, W. C., 1.

- Lake Warren, Ohio, glacial: Stout, W. E., 2.

- Lake Wayne, Ohio, glacial: Stout, W. E., 2.

- Lake Whittlesey, Ohio, glacial: Stout, W. E., 2.

- Mexico, Valley of the Lerma: Waitz, P., 1.

- North Dakota, Emerald quad.: Laird, W. M., 1.

- Well-irrigation areas: Rasmussen, W. C., 1.

- Ohio, geology of water: Stout, W. E., 1.

- Old drainage system: Stout, W. E., 3.

- Wood Co.: Harker, D. H., 6.

- Oregon, Summer Lake pumice beds: Allison, I. S., 1.

Lakes, extinct—Continued.

- Pennsylvania, Grand Canyon: Ashley, G. H., 7.
 Texas, Quat., High Plains: Evans, G. L., 6.
 United States, N. Great Basin: Cressman, L. S., 1.
 Northwest, Pleist. stage: Lupher, R. L., 3.
 Utah, Escalante Bay of Lake Bonneville: Dennis, P. E., 1.
 Washington, Chelan Lake glaciation: Freeman, O. W., 1.
 Lamprophyres, Nev., Rye Patch area: Vitaliano, C. J., 1.
 Lance Creek oil and gas field, Wyo.: U. S. G. S., 3.
 Land bridges.

Tertiary mammals and continental drift: Du Toit, A. L., 1.

Landmarks, modified by erosion in historic time, Kans.: Smith, H. T. U., 1.

Land plants, beginnings, history: Berry, E. W., 3.

Landslides.

Angles of repose and sliding friction: Van Burkalow, A., 1.

Arizona, Uinkaret Plateau: Koons E. D., 1.

California, Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.

Santa Cruz area: U. S. G. S., 1.

Columbia Basin, Wash.-Idaho: Lupher, R. L., 2.

Idaho, Latah Co.: Tullis, E. L., 1.

Little Salmon River Canyon: Wagner, W. R. T., 1.

Utah, Zion Canyon: Grater, R. K., 1.

Washington, Palouse area: Kardos, L. T., 1.

Langbeinite.

New Mexico: Johnson, B. L., 1.

Texas: Johnson, B. L., 1.

Lapis lazuli, Colo.: Rosencrans, H. I., 1.

Late glacial clay chronology: Antevs, E. V., 1.
 Laterite, Edwin clay, Ione area, Calif.:

Bates, T. F., 1.

Latite, Current Creek dist. Nev.: Faust, G. T., 1.

Lavas and lava flows. See also Intrusions.

Arizona, Grand Canyon, Colorado River: Cueto Rui-Díaz, E., 1.

Oak Creek Canyon: McKee, E. D., 3.

Sunset Crater: Cotton, H. S., 1; Nichols, T. 1.

Uinkaret Plateau: Koons, E. D., 1.

Arizona-Utah, East Kaibab monocline: Babenroth, D. L., 1.

British Columbia, coast: Gunning, H. C., 2.

Greenwood-Phoenix area: McNaughton, D. A., 1.

Nicola area: Cockfield, W. E., 2.

Tuya-Teslin area: Watson, K. D., 1.

Tyaughton Lake area: Cairnes, C. E., 1.

Lavas and lava flows—Continued.

California, Big Pine volcanic field: Mayo, E. B., 1.

Mojave Desert: Laundermilk, J. D., 3.

Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.

Point Arena-Fort Ross coast: Weaver, C. E., 3.

San Luis Obispo Co.: Smith, C. T., 1.

Table Mtn. area: Condit, C., 2.

Canada, Dominion Atlantic Ry. area: Hutt, G. M., 16.

Colorado, Specimen Mtn.: Wahlstrom, E. E., 2.

White River Plateau: MacQuown, W. C., Jr., 1.

Costa Rica, Meseta Central: Dóndoli, C., 3.

Gold nuggets on mtn. tops: Crocker, W., 1.

Greenland: Shaw, V., 3; Anonymous, 32.

Hawaii, AA lava flow structure: Macdonald, G. A., 7.

Harbor protection: Jaggar, T. A., Jr., 1.

Honolulu ser.: Winchell, H., 1.

Kilauea Volcano, ejected blocks: Macdonald, G. A., 4.

1840 eruption: Macdonald, G. A., 2.

Solfataric rock alterations: Macdonald, G. A., 4.

Mauna Kea, ring structures: Macdonald, G. A., 6.

Idaho, Craters of the Moon: Barrette, K., 1.

Latah Co.: Tullis, E. L., 1.

Maine, Mount Desert Is.: Chadwick, G. H., 1.

Manitoba, Island Lake area: McMurchy, R. C., 1.

Mauna Kea, Hawaii, ring structures: Macdonald, G. A., 6.

Melilite-nepheline basalts: Stearns, H. T., 2.

Mexico, antimony deposits: White, D. E., 2.

Concepción Penin., Baja Calif.: Antúñez Echegaray, F., 1.

El Oro y Tlalpujahua mining camp:

Bracho V., F., 1.

Parícutin Volcano: Williams, H., 2.

Origin and devel.: Bullard, F. M., 3.

Permian area NW. of Las Delicias, Coahuila: King, R. E., 2.

Valley of the Lerma: Waitz, P., 1.

Montana, N. Big Belt Range: Lyons, J. B., 1.

Nevada, mining dists.: Ferguson, H. G., 1.

Mineralization: Bichan, W. J., 3.

Ore deposits: York, B., 1.

Newfoundland, fluor spar deposits: Van Alstine, R. E., 1.

New Mexico, Zuni Dam: Eckel, E. B., 1.

Lavas and lava flows—Continued.

- Nova Scotia, Londonderry area : Weeks, L. J., 2.
 Ontario, Beatty-Munro area : Satterly, J., 1.
 Bryce-Robillard area : Moorhouse, W. W., 1.
 Cunningham-Garnet area : Meen, V. B., 2.
 Dogpaw-Kakagi Lakes area : Thomson, R., 1.
 East extension of Fort Hope area : Prest, V. K., 2.
 Grimsthorpe-Barrie area : Meen, V. B., 2.
 Hollinger mine : Allen, C. C., 1.
 Kam Kotia mine mineralized zone : Ferguson, S. A., 1.
 Red Lake area : Horwood, H. C., 2, 3.
 Rennie-Leeson area : Bruce, E. L., 1.
 Stover Tp. : Horwood, H. C., 1.
 Oregon, volcanoes of Three Sisters region : Williams, H., 1.
 Pacific Basin, late geol. history : Stearns, H. T., 3.
 Parícutin volcano, Mex., 1943 : Ordóñez, E., 1, 3; Schmitter, E., 1; Williams, H., 2.
 Quebec, Beattie mine : Davidson, S. C., 1.
 Bourlamaque Tp. : Norman, G. W. H., 1.
 Buteux area, Abitibi Co., and Terr. : Freeman, B. C., 1.
 La Motte area : Norman, G. W. H., 4.
 Noranda dist. ore deposits : Wilson, M. E., 2.
 United States, Columbia intermontane prov. divs. : Freeman, O. W., 3.
 Utah, post-Wasatch fms. : Gregory, H. E., 2.
 San Francisco dist. : Reiser, A. R., 1.
 Sevier River Valley : Gregory, H. E., 1.
 Wasatch Mts. : Eardly, A. J., 1.
 Viscosity of lava : Wentworth, C. K., 3.
 Volcanism, petrogenesis : Daly, R. A., 1.

Leached outcrops : Blanchard, R., 3.
Lead.

- Alaska, 1941-42 : Smith, P. S., 1.
 Groundhog Basin : Gault, H. R., 4.
 Arizona, Apache mine, Gila Co. : Keithley, H. S., 1.
 Superior mining area : Short, M. N., 1.
 British Columbia, Ainsworth area : Rice, H. M. A., 1.
 Alaska Highway area min. poss. : Thomas, L. C., 1.
 Greenwood-Phoenix area : McNaughton, D. A., 1.
 Hazelton Cassiar dist. : Armstrong, J. E., 3.
 Manson Creek area : Armstrong, J. E., 5, 7.
 Nicola area : Cockfield, W. E., 2.
 Omineca dist., poss. : Armstrong, J. E., 4.

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- British Columbia—Continued.
 Premier mine deposits : Langille, E. G., 1.
 Princeton area : Rice, H. M. A., 2.
 Smithers area : Armstrong, J. E., 2.
 Sullivan mine area : Swanson, C. O., 1.
 California, Riverside Co. : Tucker, W. B., 2.
 Canada, W. sphalerites : Warren H. V., 5.
 Idaho, Birch Creek area : Anderson, A. L., 1.
 Illinois, NW. : Willman H. B., 1.
 Isotopes as tracers of ore origin : Lane, A. C., 1.
 Kansas resources : Landes, K. K., 1.
 Mexico, Nuevo León : Mullerried, 8.
 Pacific Coast : González Reyna, J., 1.
 Missouri : Branson, E. B., 3.
 Montana, ore bodies, strat. control : Perry E. S., 3.
 Nevada, Groom dist. Lincoln Co. : Humphrey F. L., 1.
 Mining dists. : Ferguson, H. G., 1.
 Ore deposits : York, B., 1.
 New Mexico Silver City area : Entwistle, L. P., 1.
 North America, Alaska Highway poss. : Lord, C. S., 2.
 North Carolina, Spruce Pine monazite : Bliss, A. D., 1.
 Northwest Territories : Joliffe, A. W., 2.
 Quebec : Dufresne, A. O., 1.
 Calumet Is. : Osborne, F. F., 1.
 Economic minerals : Quebec Bur. Mines, 1.
 Federal mine area : Auger, P. E., 2.
 Moulton Hill deposit : Hawley, J. E., 1; Rowe, R. C., 1.
 Saskatchewan min. poss. : Mawdsley, J. B., 1.
 South Dakota, min. res. : Rothrock, E. P., 1.
 Tennessee, N. E. : King, P. B., 4.
 Thorium-uranium ratios, rocks, minerals : Keevil, N. B., 2.
 Tri-State dist., ore deposits : Fowler, G. M., 1.
 United States, min. reserves : Joralemon, I. B., 1.
 Upper Miss. Valley dist. : Heyl, A. V., Jr., 1.
 Virginia, Glade Mtn. dist. : Miller, R. L., 1.
 Washington, Metaline Falls area : Huttli, J. B., 1.
 Yukon, Upper McQuesten River area : Bostock, H. S., 1.
 Whitehorse dist. : Cockfield, W. E., 1.
 Lechatellierite, sand fulgurites enclosing, Calif. : Rogers, A. F., 4.
 Leucoxene, Mansfield ss. minerals, Ind. : Gault, H. R., 1.

Life calendar: Colbert, E. H., 3.
 Life, origin, conchilites catalyzers: Tanton, T. L., 3.
 Life, origin, nature, fossil evidence: McFarlan, A. C., 4.
 Life thro the ages: Huff, W. G., 1.
 Lignite. See also Coal.
 Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
 Arctic area, E., min. res.: Anonymous, 58.
 Mississippi: Morse, W. C., 2.
 Saskatchewan, S.: Hutt, G. M., 17.
 Texas, Bastrop Co.: Nickell, C. O., 2.
 Fayette Co.: Sedlmeyer, J. J., 1.
 Lee Co.: Harris, G. D., 1.
 Leon Co.: Crow, D., 1.
 Limestone. See also Building stone.
 Alabama, min. res.: Anonymous, 25.
 Southeast, solution of: MacNeil, F. S., 4.
 Southwest: SE. Geol. Soc., 1.
 Tertiary fms.: Toulmin, L. D., Jr., 1.
 Alaska, Lemesurier Is., Paligorskite in: Fisher, R. B., 1.
 Alberta, Alexo area: Crombie, G. P., 1.
 Cowley area: Hage, C. O., 1.
 Drinnan to Brûlé Lake area: Lang, A. H., 1.
 Dyson Creek area: Hage, C. O., 2.
 Stimson Creek area: Hume, G. S., 1.
 Tay River area: Henderson, J. F., 1.
 Turner Valley oil field ls. reservoirs: Goodman, A. J., 1.
 Wainwright field: Hume, G. S., 5.
 Algae, calcareous, Leadville ls., Colo.: Johnson, J. H., 8.
 Algal-Foraminiferal fm.: Johnson, J. H., 9.
 Alkaline rocks, differentiation: Bowen, N. L., 2; Shand, S. J., 4.
 Arizona, Grand Canyon, Colorado River: Cueto Rui-Díaz, E., 1.
 Oak Creek Canyon: McKee, E. D., 3.
 Paleozoic, central, NE.: U. S. G. S., 2.
 Superior mining area: Short, M. N., 1.
 Arkansas, Batesville area: Gordon, M., Jr., 1.
 Devonian: Miser, H. D., 1.
 Schuler field: Kaveler, H. H., 1.
 Bermuda: Livingston, W., 1.
 British Columbia, Ainsworth area: Rice, H. M. A., 1.
 Coast: Gunning, H. C., 2.
 Dunlevy-Portage Mtn. area: Beach, H. H., 1.
 Emerald tungsten project: Mason, E. E., 1.
 Fort Nelson area: Kindle, E. D., 1.
 Greenwood-Phoenix area: McNaughton, D. A., 1.
 Turner Valley area fields: Hume, G. S., 6.
 Tuya-Teslin area: Watson, K. D., 1.
 Tyaughton Lake area: Cairnes, C. E., 1.

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California, Crestmore minerals: Woodford, A. O., 1.
 Riverside Co.: Tucker, W. B., 2.
 Canada, Canol invs., Mackenzie River area: Hume, G. S., 8.
 Flin Flon-Sherridon-Herb Lake area: Stockwell, C. H., 2.
 Manitoba dist.: Hutt, G. M., 15.
 Carolina Piedmont: Kesler, T. L., 1.
 Colorado, Morrison fm.; Colorado Plateau area: Stokes, W. L., 1.
 Sawatch Range area: Johnson, J. H., 3.
 Cuba, Guisa-Los Negros area: Woodring, W. P., 1.
 Florida, oil poss.: Gunter, H., 1.
 Southern: Parker, G. G., 2.
 Formation: Plummer, F. B., 8.
 Georgia, Coastal Plain: Cooke, C. W., 1.
 Solution of: MacNeil, F. S., 4.
 Southeast coast: Warren, M. A., 1.
 Tertiary fms.: MacNeil, F. S., 2.
 Hales Bar Dam, Tenn., solution: Frink, J. W., 2.
 Illinois: Workman, L. E., 1.
 Cave in Rock dist.: Currier, L. W., 2.
 Centralia-Salem, Dev.: Caylor, G. W., 1.
 Devonian fms.: Cooper, G. A., 2.
 Hardin Co. fluorspar area: Currier, L. W., 1.
 Rotary drilling cores: Mylius, L. A., 1.
 Sandoval pool area: Hoover, W. F., 1.
 Southern: Weller, J. M., 2.
 Water res.: Gerber, W. D., 1.
 Illinois and surrounding States, Dev.: Weller, J. M., 2.
 Illinois Basin, Millersville ls.: Taylor, E. F., 2.
 Indiana, Dev.: Sutton, A. H., 1.
 Iowa, Dev.: Stainbrook, M. A., 1.
 Kansas, central, algal ls.: Frye, J. C., 3.
 McLouth gas and oil field: Lee, W., 1.
 Marmaton Penn. group: Jewett, J. M., 2.
 Kentucky, corniferous fm., Irvine, Estill Co.: McFarlan, A. C., 3.
 Devonian, W.: Freeman, L. B., 1.
 Kentucky Dam, solution channel: Moneymaker, B. C., 2.
 Louisiana, Camp Polk, North Camp Polk areas: Maher, J. C., 3.
 Maine, Kennebec Valley esker: Trefethen, J. M., 2.
 Mexico, Amarilla mine, Guerrero: Acosta del Campo, C., 1.
 Antimony deposits: White, D. E., 2.
 El Estado de Morelos: N. de Parrés, F., 1.
 Permian NW. of Las Delicias, Coahuila: Kling, B. E., 2.
 Quicksilver-antimony deposits: McAllister, J. F., 1.
 Sonora tungsten deposits: Wiese, J. H., 1.

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- Taxco mining dist.: Fowler, G. M., 2.
 Michigan, SW., Traverse group, Dundee fm.: U. S. G. S., 2.
 Mississippi, Camp Shelby area: Brown, G. F., 1.
 Monroe Co., Vestal, F. E., 1.
 Mississippi Valley, indust. minerals: Voskuil, W. H., 1.
 Missouri, Louisiana ls.: Williams, J. S., 1.
 Northeast, Dev.: Branson, E. B., 2.
 Southeast: Croneis, C. G., 1.
 Montana, Gage dome oil field: Perry, E. S., 2.
 Little Rocky Mts., plains: U. S. G. S., 1.
 North Big Belt Range: Lyons, J. B., 1.
 Sweetgrass arch marine Juras.: Cobban, W. A., 2.
 Nevada, mining dists.: Ferguson, H. G., 1.
 Non-metallics: York, B., 1.
 Rye Patch area: Vitaliano, C. J., 1.
 New Jersey, Newark ser., Granton quarry, North Bergen: Kindle, C. H., 1.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 Tertiary iron in collapsed ls.: Kelley, V. C., 1.
 New York, Catskill quad.: Newland, D. H., 1; Ruedemann, R., 5.
 Microlithologies sed. rocks, use: Alling, H. L., 2.
 Monroe, Bear Mtn. Park min. locs.: Ayres, V. L., 2.
 Westchester Co.: Fluhr, T. W., 1.
 North America, Gulf Coast recent sediments: Rolshausen, F. W., 1.
 North Dakota, White River fm.: Powers, W. E., 1.
 Northwest Territories, Mackenzie River Valley: Stewart, J. S., 1.
 Nova Scotia, Admiral Rock: Messervey, J. P., 6.
 Antigonish Harbor: Douglas G. V., 4.
 Industrial res.: Cameron, A. E., 3.
 Riverside Corner area: Messervey, J. P., 3.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Upper Musquodoboit area: Messervey, J. P., 1.
 Windsor area: Messervey, J. P., 5.
 Ohio: Stout, E. W., 8.
 Barberton ls. mine: Stauffer, C. R., 1.
 Blaine Hill, Belmont Co. sec.: White, G. W., 4.
 Franklin Co. and Columbus area: Harker, D. H., 2.
 Maxville ls.: Lamborn, R. E., 1.

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- Mineral res.: Ohio Devel. Pub. Com., 1; White, G. W., 1.
 Rock water: Stout, W. E., 4.
 Oklahoma, Bromide area: Ham, W. E., 2.
 Ceramic raw materials: Burwell, A. L., 1.
 Devonian: Miser, H. D., 1.
 West Edmond field: McGee, D. A., 1.
 Ontario, E. extension of Fort Hope area: Prest, V. K., 2.
 Grimsthorpe-Barrie area: Meen, V. B., 1.
 Kaladar, Kennebec Tps.: Harding, W. D., 1.
 Leeds Co.: Harrison, J. M., 1.
 Renfrew area: Satterly, J., 2.
 Ordovician bentonite beds, SE. U. S.: Fox, P. P., 2.
 Pennsylvania, cent., Ord.: Kay, G. M., 2.
 Central-eastern: Hersey, J. B., 1.
 Conemaugh Gorge Missn.: Fettke, C. R., 2.
 Hanover-York dist.: Stose, A. J., 1.
 Huntingdon area: Willard, B., 2.
 Mineral res.: Ashley, G. H., 1.
 Petroleum, migration and origin: Plummer, F. B., 4.
 Quebec, Highgate Springs sequence: Kay, G. M., 6.
 Hincks Tp.: Tanton, T. L., 1.
 Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
 Sept-Iles area, N. bank St. Lawrence: Faessler, C., 1.
 Stanstead area, Brome and Stadstead Cos.: Ambrose, J. W., 2.
 Quitman fault zone, Ala.-Miss.: U. S. G. A., 1.
 Rhode Island min. locs.: Winslow, W. S., 1.
 South Carolina: Taber, S., 1.
 Tennessee, W.-cent.: Born, K. E., 1.
 Texas, Anderson Co.: Whitcomb, B., 2.
 Baylor Co.: Evans, G. L., 4.
 Big Spring area: Livingston, P. P., 1.
 Buda ls. age: Stephenson, L. W., 1.
 Burnet Co.: Barnes, V. E., 3.
 Central, Carb.: Plummer, F. B., 2.
 Concord salt dome, Anderson Co.: Alexander, C. L., 2.
 Damon Mound ls.: Hurlut, E. M., Jr., 1.
 Erath Co.: Nickell, C. O., 3.
 High Plains: Evans, G. L., 5.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Lee Co.: Harris, G. D., 1.
 Limestone Co.: Broman, I. J., 1.
 Northern: Lozo, F. E., Jr., 1.
 Rock wool: Plummer, F. B., 6.
 Travis Co.: Nickell, C. O., 4.

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- Texas-New Mexico, Delaware Basin Perm.: Adams, J. E., 2.
- United States, Cotton Valley beds, N. Gulf Coastal Plain: Swain, F. M., 1.
- Eastern Gulf area, oil poss.: Kornfeld, J. A., 1.
- Gulf Coastal Plain, structure from gravimetric data: Barton, D. C., 5.
- Permian marginal marine strata: Clifton, R. L., 1.
- Southeastern: MacNeil, F. S., 3.
- Southern, Permian Basin: Adams, J. E., 3.
- Stockton, Lockatong fms. type secs.: McLaughlin, D. B., 2.
- Utah, SW., post-Wasatch fms.: Gregory, H. E., 2.
- Vermont, Highgate Springs sequence: Kay, G. M., 2.
- Virginia, Appalachian Valley Ord. facies: Cooper, B. N., 4.
- Bauxite area: Bevan, A. C., 5.
- Bland, Giles Cos.: Ladd, H. S., 2.
- Burkes Garden quad.: Cooper, B. N., 1.
- Covington-Staunton-Buchanan area: Edmundson, R. S., 1.
- Glade Mtn. dist.: Miller, R. L., 1.
- New-Roanoke Rivers area: Cooper, B. N., 3.
- Rose Hill oil field: U. S. G. S., 1.
- Southwest: Cooper, B. N., 3.
- Washington: Bennett, W. A. G., 1.
- Olympic Penin.: Green, S. H., 1.
- Stevens, Okanogan Cos. magnetic deposits: Broughton, W. A., 2.
- West Virginia, fossils, rocks, minerals: Erwin, J. P., 1; Martens, J. H. C., 1.
- Yukon, Upper McQuesten River area: Bostock, H. S., 1.
- Whitehorse dist.: Cockfield, W. E., 1.
- Limonite.** See also Iron.
- Alabama, Midway-Wilcox contact area: Toulmin, L. D., Jr., 2.
- Composition, chem. and mineralog.: Blanchard, R., 1.
- Mexico, Amarilla mine, Guerrero: Acosta del Campo, C., 1.
- Minnesota, SE., iron ores: Stauffer, C. R., 2.
- Nova Scotia, Bridgeville area: Messervy, J. P., 2.
- Londonderry deposits: Weeks, L. J., 1.
- Texas, Irving area concretions: Loving, G., 1.
- Virginia, Rorer mine: Holden, R. J., 2.
- West Virginia, fossils, rocks, minerals, soils: Martens, J. H. C., 1.
- Limuloid Trias. tracks, Ariz. Petrified Forest:** Caster, K. E., 1.
- Lination problems solution:** Lowe, K. E., 1.
- Lination with rock-movement, correl.:** Cloos, E., 1.
- Lithia, Colo., Brown Derby mine pegmatites: Hanley, J. B., 2.
- Lithification and diagenesis:** Krynnine, P. D., 4.
- Lithium.**
- California, Searles Lake: Gale, W. A., 1; Anonymous, 76.
- Maine, Norway area pollucite: Ahrens, L. H., 1.
- Manitoba poss.: McDiarmid, J. S., 1.
- New Mexico, Taos Co. pegmatites: Jahns, R. H., 3.
- Northwest Territories: Anonymous, 17.
- Lithosphere, relation to gravity anomalies, fracture:** Gunn, R., 1.
- Llanoria geosyncline, Penn.: Barton, J. M., 1.
- Livingstonite, Mex., quicksilver-antimony deposits: McAllister, J. F., 1.
- Loam.**
- Texas, Hidalgo Co. soils: Wynd, F. L., 1.
- Lee Co.: Harris, G. D., 1.
- Loellingite, N. J.: Peacock, M. A., 2.
- Loellingite-safflorite, British Columbia: Warren, H. V., 4.
- Loess.**
- Canada, Arctic, latest glaciation boundary: Hobbs, W. H., 6.
- Dust, analyses of: Swineford, A., 1.
- Glacial vs. desert origin: Bryan, K., 1.
- Infiltration into: Duley, F. L., 1.
- Iowa, ceramic shales and clays: Gwynne, C. S., 1.
- Illinoian and post-Illinoian Pleist.: Kay, G. F., 2.
- Kansas, N.-central, Pleist.: Hibbard, C. W., 1.
- West-central, Pleist.: Frye, J. C., 1.
- Kentucky, Union Co.: Jillson, W. R., 2.
- Mississippi: Morse, W. C., 2.
- Missouri: Branson, E. B., 3.
- Pleistocene: Holmes, C. D., 1.
- Nebraska: Elias, M. K., 4.
- Origin of: Bryan, K., 1.
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- Soil profiles: Williams, B. H., 1.
- Origin of, Miss. Valley: Holmes, C. D., 4; Russell, R. J., 2.
- Properties in eng.: Watkins, W. I., 1.
- Soils, classn. devels.: Thorp, J., 1.
- Symposium on loess, 1944: Elias, M. K., 3.
- United States, lower Miss. Valley: Russell, R. J., 1; Thwaites, F. T., 1.
- Lost Hills oil field, Calif.: Barton, D. C., 3.
- Louisiana.**
- Geological Survey history:** Huner, J., Jr., 1.
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- Cameron Meadows dome, Cameron Parish: McGuckin, G. M., 1.
- Development, oil and gas, N. La. and S. Ark., 1942: Blanpied, B. W., 1.
- Developments, 1943, Gulf Coast: Leavenworth, P. B., 2.

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Economic geology—Continued.

- Developments, oil and gas, 1944: Wilson, R. M., 1.
- Domes, deep-seated, S. oil fields: Wallace, W. E., Jr., 1.
- Erath gas field, Vermillion Parish: Anonymous, 78.
- Future oil fields: Howe, H. V., 1.
- Ground water, Natchitoches area: Maher, J. C., 1.
- Gulf Coast devels. oil and gas 1944: Shepherd, G. F., 3.
- Heaving shale problem: Wade, G., 1.
- Holly field, De Soto Parish: Spofford, H. N., 1.
- Lafitte oil field: Vance, H., 1.
- Northern oil fields, 1942: Blanpied, B. W., 3.
- Oil and gas map: La. Geol. S., 1.
- Petroleum and gas, 1943: Huner, J., Jr., 2.
- Ruston gas field, Lincoln Parish: Kamb, H. R., 1.
- Salt dome, Acadia Parish: Barton, D. C., 4.
- Salt domes discovered, 1942: Blanpied, B. W., 5.
- Salt mine, Avery Is.: Fuller, R. T., 1.
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- Spindle Top oil well: Lucas, A. F. G., 1.
- Wildcat wells, 1942: Blanpied, B. W., 4.

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- Alexandria area, ground water: Maher, J. C., 2.
- Cretaceous, Coastal Plain: U. S. G. S., 2.
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- Ground-water geology, Camp Polk, North Camp Polk area: Maher, J. C., 2.

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- Low-velocity layer in seismic explor.: Lyons, P. L., 1.
- Luling oil field, Tex., water: Plummer, F. B., 1.
- Luminescence to find minerals in polished secs.: Yagoda, H., 2.
- Lyell and his Principles of geology: Anonymous, 60.
- Machine for serial sectioning fossils: Olsen, F. R., 1.
- Mackayite, paragenesis: Frondel, C., 1.
- Maddox spoon for studying sediments: Maddox, D. C., 1.
- Magmas and magmatic differentiation. See also Batholiths; Dikes; Igneous and volcanic rocks; Intrusions; Laccoliths; Lavas and lava flows.
- Abyssal vs. magmatic theory of ore genesis: White, C. H., 1.
- Alkaline rocks, origin, differentiation: Bowen, N. L., 2: Shand, S. J., 4.
- Arizona, Superior mining area: Short, M. N., 1.
- Tombstone dist., Uncle Sam Porphyry: Gilluly, J., 2.
- Batholith, S. and Lower Calif., crystallization: Larsen, E. S., 2.
- Batholiths, scale models: Grout, F. F., 1.
- British Columbia, Ainsworth area: Rice, H. M. A., 1.
- Nickel Plate Mtn. area: Dolmage, V., 1.
- Sullivan mine area: Swanson, C. O., 1.
- Twin "J" Mine: Stevenson, J. S., 3.

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 California, Big Pine volcanic field: Mayo, E. B., 1.
 Blairsdien area: Durrell, C., 1.
 Mojave Desert: Lauder milk, J. D., 3.
 San Luis Obispo Co.: Smith, C. T., 1.
 Contact deposits, artificial silicate magma: Insley, H., 1.
 Feldspars in acid solutions: Gruner, J. W., 5.
 Generation by frictional heat: De Lury, J. S., 1.
 Greenland, Franz Josef Fjord area: Odell, N. E., 1.
 Hawaii, 1840 Kilauea eruption: Macdonald, G. A., 2.
 Volcanism, petrogenesis: Daly, R. A., 1.
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 Illinois, Cave in Rock dist.: Currier, L. W., 2.
 Hardin Co. fluor spar areas: Currier, L. W., 1.
 Magmatic and post-magmatic processes, terminology: Shand, S. J., 2.
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 Valley of Tixtla: Mullerried, 3.
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 Nevada, Currant Creek dist.: Faust, G. T., 1.
 Goldfield epithermal deposits: Wilson, H. D. B., 1.
 Mining dists.: Ferguson, H. G., 1.
 Ore deposits: York, B., 1.
 New Brunswick, Musquash area plutonic rocks: Belyea, H. R., 1.
 New Hampshire, mechanics of intrusions: Billings, M. P., 2.
 Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Pawtuckaway Mts.: Roy, C. J., 1.
 Winnepesaukee area: Quinn, A. W., 2.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 Iron Mtn. fibbon rock: Jahns, R. H., 2.
 New York, east Adirondack area: Balk, R., 1.
 Lake Sanford area: Stephenson, R. C., 1.
 North America, gold vein deposits: White, W. H., 1.
 Ontario, Dome mine, porphyry-sediment contact: Holmes, T. C., 1.
 Hollinger mine: Allen, C. C., 1.
 Kenogamis River area: Macdonald, R. D., 1.
 Lochalsh area ultrabasic rocks: Ginn, P., 1.
- Magma and magmatic differentiation—Con.**
 Ontario—Continued.
 Origin, Haliburton-Bancroft alkaline rocks: Chayes, F., 4.
 Porcupine dist.: Evans, J. E. L., 1.
 Southeastern: Harrison, J. M., 2.
 Oregon, gabbro sills, Ashland: Merriam, R. H., 1.
 Replacement aplite breccia, Cornucopia: Goodspeed, G. E., 2.
 Wallowa batholith, origin: Goodspeed, G. E., 1.
 Pennsylvania, post-Paleozoic mineralization: Myers, W. M., 1.
 Triassic diabase derivatives: Tomlinson, W. H., 3.
 Quebec, Eastern Tps., chromite: Stockwell, C. H., 1.
 La Motte area: Norman, G. W. H., 4.
 South Dakota, pegmatites: Page, L. R., 3.
 Texas, Llano Co., barite: Zapp, A. D., 1.
 United States-Mexico, mining dists.: Hulin, C. D., 1.
 Utah, Cottonwood-American Fork dists.: Crawford, A. L., 6.
 Reaper mine pipe: Crawford, A. L., 5.
 Volcanic heat: Graton, L. C., 2.
 Wyoming, Yellowstone Park rhyolite-basalt complex: Fenner, C. N., 1; Hawkes, L., 1; Wilcox, R. E., 1.
Magmatic and post-magmatic processes, terminology: Shand, S. J., 2.
Magnesia, Ontario, brucite deposits, Rutherglen dist.: Keith, M. L., 1.
Magnesite.
 Differentiation, magnesite from dolomite in crushed materials: Faust, G. T., 2.
 Nevada, non-metallics: York, B., 1.
 Currant Creek dist.: Faust, G. T., 1.
 Quebec: Dufresne, A. O., 1.
 Economic minerals: Quebec Bur. Mines, 1.
 Texas, Llano Co.: Chelf, C. R., 1.
 Mason Co.: McCammon, J. H., II, 1.
 Utah: Crawford, A. L., 7.
Magnesium.
 Alaska, nemalite, Kobuk River Valley: Fackler, W. C., 1.
 Georgia, Columbia Co. serpentine: Furcron, A. S., 1.
 Nevada, Currant Creek dist., in tuff: Vitaliano, C. J., 2.
 Ontario, Renfrew area: Satterly, J., 2.
 United States, min. reserves: Joralemon, I. B., 1.
 Magnet Cove, Ark., min. collections: Shockley, W. G., 1.
Magnetic anomalies.
 Arkansas, bauxite area: Malampy, M. C., 1; Thoenen, J. R., 1.
 Colorado, Canon City area: Blum, V. J., 2.
 Florida Penin.: Lee, F. W., 1.

Magnetic anomalies—Continued.

- Magnetic density contrast, and ig. rock classn.: Nettleton, L. L., 2.
- Magnetic interpretation: Wantland, D., 1.
- Magnetometer, aid in geol. mapping: Ambrose, J. W., 3.
- Minnesota Mesabi range: Jones, R. H. B., 1.
- North Carolina Bays: McCampbell, J. C., 2.
- Parícutin volcano, Mex.: Bodle, R. R., 3.
- Quebec, Beauchastel Tp.: Ambrose, J. W., 3.
- Texas, Grand Saline salt dome: Peters, J. W., 1.
- Washington, Stevens, Oaknogan Cos. magnetite deposits: Broughton, W. A., 2.
- Magnetic, density contrasts and ig. rocks: Nettleton, L. L., 1, 2.
- Magnetic interpretation: Wantland, D., 1.
- Magnetite.

- Alaska, Copper River area: Moffit, F. H., 1.
- British Columbia, Greenwood-Phoenix area: McNaughton, D. A., 1.
- Sullivan mine area: Swanson, C. O., 1.
- Chromite, correlated with containing rocks: Thayer, T. P., 1.
- Indiana, Mansfield ss. minerals: Gault, H. R., 1.
- Magnetic, density contrasts and ig. rocks: Nettleton, L. L., 1, 2.
- Maine, Kennebec Valley esker: Trefethen, J. M., 2.
- Mexico, El Alamo mine, Baja Calif.: Antúñez Echegaray, F., 2.
- Minnesota, Mesabi range: Jones, R. H. B., 1.
- New York, Adirondack area: Anderson, S. A., 1.
- Lake Sanford area: Stephenson, R. C., 1.
- Ontario, Central Patricia mine: Hicks, H. B., 1.
- Leeds Co.: Harrison, J. M., 1.
- Quebec, Moisie area, Saguenay Co.: Faessler, C., 2.
- United States, Adirondack, Highlands, dists.: Buddington, A. F., 2.
- Utah, Iron Peak ores: Crawford, A. L., 2.
- Washington, Stevens, Okanogan Cos.: Broughton, W. A., 2.
- Magnetometer, aid in geol. mapping: Ambrose, J. W., 3.
- Magnetometer tracing, Duluth, Minn., gabbro contact: Schwartz, G. M., 1.
- Magnitude determination for deep-focus earthquakes: Gutenberg, B., 9.

Maine.

Economic geology.

- Mica mines, Black, Plumbago Mts.: Marble, C. F., 1.

Maine—Continued.

Historical geology.

- Esker, Kennebec Valley: Trefethen, J. M., 2.
- Mount Desert Is.: Chadwick, G. H., 1.
- Mt. Waldo batholith area: Trefethen, J. M., 1.

Mineralogy.

- Esker, Kennebec Valley: Trefethen, J. M., 2.
- Mica mines, Black, Plumbago Mts.: Marble, C. F., 1.
- Pollucite, Norway area: Ahrens, L. H., 1.

Paleontology.

- Paleozoic fossil homonyms: Flower, R. H., 2.
- Silurian fauna, Ripogenus Dam: Willard, B., 1.

Petrology.

- Esker, Kennebec Valley: Trefethen, J. M., 2.
- Mount Desert Is.: Chadwick, G. H., 1.
- Mt. Waldo batholith area: Trefethen, J. M., 1.

Physical geology.

- Esker, Kennebec Valley: Trefethen, J. M., 2.
- Mount Desert Is.: Chadwick, G. H., 1.
- Mt. Waldo batholith area: Trefethen, J. M., 1.

Physiographic geology.

- Esker, Kennebec Valley: Trefethen, J. M., 2.
- Mount Desert Is.: Chadwick, G. H., 1, 4.
- Wave modification of eskers: Lougee, R. J., 1.

Malachite.

- Colorado, geophys. prosp. at mine: Heiland, C. A., 2.
- Nova Scotia, North Grant area: Douglas, G. V., 1.
- Mallalieu oil field, Miss.: Morse, W. C., 5; Anonymous, 38.

Mammalia.

- Aelurodon saevus group, S. Dak.: McGrew, P. O., 2.
- Alberta, Red Deer, Rosebud area, faunas: Allan, J. A., 1; Sanderson, J. O. G., 1.
- Amebelodon, Pliocene, Oreg.: Wilson, J. A., 1.
- Tertiary, Texas Panhandle, jaw: Gregory, J. T., 2.
- Bears, present, past, Calif.: Stock, C., 2.
- Bison, Great Plains, U. S.: Schultz, C. M., 2.
- Blanco fauna, Pleist., Tex.: Meade, G. E., 2.
- California, Pleist.: Peabody, F. E., 1.
- Carnivores, Miocene, Wyo., auditory region: Hough, M. J., 1.
- Great Plains, N. Am.: Riggs, S. E., 3.

Mammalia—Continued.

- Casteroides, Pleist., Kans.: Green M., 1.
 Cetaceans, Tert., Fla.: Kellogg, A. R., 1.
 Chalicotheres as biol. type: Borissiak, A. A., 1.
 Classification, principles: Simpson, G. G., 2.
 Eucaster, Epigaulus, Pliocene, Kans.: Hibbard, C. W., 6.
 Fauna, Burkeville Miocene, SE. Tex.: Stenzel, H. B., 2.
 Cochise culture area, Ariz.: Sayles, E. B., 1.
 Pleistocene, Neb.: McGrew, P. O., 1.
 Willwood fm., Wyo.: Van Houten, F. B., 1.
 Florida fauna: Cooke, C. W., 3.
 Fossils, San Francisco, Calif.: Stanger, F. M., 1.
 Georgia, Coastal Plain: Cooke, C. W., 1.
 Idaho, Pliocene: Miller, L. H., 2.
 Jaws and oral cavity, evolution: Gregory, W. K., 1.
 Kansas, N.-cent., Pleist.: Hibbard, C. W., 1.
 Seward Co. Pliocene: Hibbard, C. W., 4.
 Southwest, Pleist.: Hibbard, C. W., 2.
 Life calendar: Colbert, E. H., 3.
 Louisiana, Natchitoches area: Maher, J. C., 1.
 Mammals, and land bridges: Anonymous, 4.
 Origin, from therapsid suborder crania: Olson, E. C., 1.
 Man, and extinct animals, N. Am.: Sauer, C. O., 1.
 Martinique, vertebrate fauna: Chabaud, P., 1.
 Mastodon, Jackson, Ohio: Ver Steeg, K., 3.
 Monosaulax, Miocene beaver, Mont.: Wood, H. E., 2d, 1.
 Nebraska, Pleist. loess fauna: Schultz, C. B., 1.
 Neohipparion, 3-toed horse, Nev.: Stock, C., 3.
 North America, artifacts with fossil bones: Montagu, M. F. A., 1.
 Mastodon and early man: Eiseley, L. C., 1.
 North Dakota, White River fm.: Powers, W. E., 1.
 Oral cavity and jaws, evolution: Gregory, W. K., 1.
 Oregon, Pliocene: Miller, L. H., 2.
 Palaeomerycidae, Tert., N. Am.: Stinton, R. A., 2.
 Phylogenetic trees: Jepsen, G. L., 1.
 Platycerabos dodsoni for Parabos dodsoni, preoccupied: Barbour, E. L., 1.
 Pleistocene glacial drifts and loess: Holmes, C. D., 1.
 Pliotaxidea, Pliocene badger, N. Am.: Hall, E. R., 2.

Mammalia—Continued.

- Rhinoceros tooth, Eocene, Oreg.: Stinton, R. A., 1.
 Rodents, lagomorphs, Quat., San Josecito Cave, Mex.: Cushing, J. E., Jr., 1.
 Pliocene cricetine, Mulholland fauna, Calif.: Hoffmeister, D. F., 1.
 Scuridae, Nearctic, Tert., Quat., U. S.: Bryant, M. D., 1.
 Tapirus, Pleist., Calif.: Stock, C., 1.
 Tempo and mode in evolution: Simpson, G. G., 1.
 Tertiary mammals and continental drift: Du Toit, A. L., 1.
 Texas, Bison, fossil, and artifacts: Sellards, E. H., 4.
 Coastal Plain, Oakville, Cuero, Goliad fms.: Weeks, A. W., 2.
 United States Cenozoic facies, Rocky Mtn. area: Van Houten, F. B., 2.
 Lower Klamath Lake faunas: Cressman, L. S., 2.
 Northern Great Basin: Cressman, L. S., 1.
 Western, Paleocene, Eocene: Van Houten, F. B., 3.
 Utah, Duchesne River Oligocene: Scott, W. B., 1.
 Vertebrata, Burkeville Miocene, Tex.: Stenzel, H. B., 1.
 Walrus, glacial, New England: Palmer, R. S., 1.
 Man, fossil.
 American Indians, origin: Wissler, C., 1.
 Ancestorless man: Gillette, J. M., 1.
 Arizona, Cochise culture stages: Antevs, E. V., 2; Sayles, E. B., 1.
 Canada, Pleist. artifact-bearing beds, age: Stanley, G. M., 1.
 Caves, paleont. explor.: White, C. D., 1.
 General: Merriam, J. C., 1.
 Indians, N. Am., origin: Wissler, C., 1.
 Jaws and oral cavity, evolution: Gregory, W. K., 1.
 John Day area, Oreg.: Merriam, J. C., 1.
 Kansas, artifacts, Pleist. gravels: Graham, A. A., 2.
 Mankind so far: Howells, W. W., 1.
 Nevada, Etna Cave: Roberts, F. H. H., Jr., 1.
 Nomenclature of: Evans, F. G., 1.
 North America, artifacts with fossil bones: Montagu, M. F. A., 1.
 Early man: Sauer, C. O., 1.
 Geologic antiquity: Bryan, K. O.
 Indians, origin: Wissler, C., 1.
 Mastodon and early man: Eiseley, L. C., 1.
 Paleo-Indians: Roberts, F. H. H., Jr., 2.
 Oral cavity and jaws, evolution: Gregory, W. K., 1.
 Oregon, Summer Lake pumice beds: Allison, I. S., 1.

Man, fossil—Continued.

- Texas, Big Bend area, artifacts: Witte, A. H., 1.
- Bison, fossil, and artifacts: Sellards, E. H., 4.
- Deep burial, Abilene area: Ray, C. N., 2.
- United States, Cerro Pedernal artifacts, distrib.: Ray, L. L., 1.
- Northern Great Basin: Cressman, L. S., 1.

Mankind so far: Howels, W. W., 1.

Manganese.

- Alabama, Walnut Grove, Carb.: Anonymous, 8.
- Arizona, Artillery Mts. Pliocene deposits: Lasky, S. G., 1.
- British Columbia, depth relations: Warren, H. V., 3.
- Takla, Cassiar dist.: Armstrong, J. E., 6.
- California, Riverside Co.: Tucker, W. B., 2.
- Canada W., sphalerites: Warren, H. V., 5.
- Costa Rica: Roberts, R. J., 1.
- Cuba, Guisa-Los Negros area: Woodring, W. P., 1.
- Sierra Maestra area: Park, C. F., Jr., 1.
- Mexico: Rodriguez Cabo, J., Jr., 1.
- Concepción Penin., Baja Calif.: Antúnez Echegaray, F., 1.
- Pacific Coast: González Reyna, J., 1.
- Michigan, Marquette iron range: Seaman, W. A., 1.
- New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
- Silver City area: Entwistle, L. P., 1.
- North Carolina: White, W. A., 4.
- Nova Scotia, Bass River area poss.: Weeks, L. J., 3.
- Bridgeville area: Messervey, J. P., 2.
- Oklahoma, Bromide area: Ham, W. E., 2.
- South Dakota, min. res.: Rothrock, E. P., 1.
- Sweet Springs dist., Va.-W. Va.: Ladd, H. S., 1.
- Tennessee, Bumpass Cove dolomite: Rodgers, J., 1.
- Northeastern: King, P. B., 4.
- United States, SE., cobalt-bearing: Pierce, W. G., 2.
- Southwest, tungsten, vanadium: Fleischer, M., 2.
- Utah, Traverse Mts.: Crawford A. L. 3.
- Virginia Bland, Giles Cos.: Ladd, H. S., 2.
- Glade Mtn. dist.: Miller, R. L., 1.
- Kelly Bank mine: Milton, C., 1.
- Lick Mtn. dist.: Stead, F. W., 1.
- Washington, Olympic Penin.: Green, S. H., 1.

Manitoba.

Economic geology.

- Chromite, Bird River, composition: Bateman, J. D., 8.
- Gold, E. of Flin Flon: Bateman, J. D., 3, 5.
- Possibilities: McDiarmid, J. S., 1.
- Gurney gold mine area: Hage, C. O., 4.
- Hematite, Black Is., Lake Winnipeg: Brownell, G. M., 2.
- Herb-Snow Lakes gold area: McDiarmid, J. S., 2; Anonymous, 49.
- Island Lake area: McMurchy, R. C., 1.
- Mikanagan Lake area: Bateman, J. D., 1.
- Sherritt Gordon mine area: Bateman, J. D., 2, 6.
- Snow Lake area: Ebbutt, F., 1; Harrison, J. M., 3, 4, 5.

Historical geology.

- Athapapuskow Lake area, geol. map: Canada G. S., 1.
- Gold area, E. of Flin Flon: Bateman, J. D., 3, 5.
- Gurney gold mine area: Hage, C. O., 4.
- Island Lake area: McMurchy, R. C., 1.
- Mikanagan Lake area: Bateman, J. D., 1.
- Sherridon area: Bateman, J. D., 6.
- Sherritt Gordon mine area: Bateman, J. D., 2.
- Snow Lake area: Ebbutt, F., 1; Harrison, J. M., 3, 4, 5.
- Winnipeg area: Hutt, G. M., 2.

Mineralogy.

- Chromite, Bird River, composition: Bateman, J. D., 8.
- Gold, E., of Flin Flon: Bateman, J. D., 3.
- Gurney gold mine area: Hage, C. O., 4.
- Hematite, Black Is., Lake Winnipeg: Brownell, G. M., 2.
- Herb-Snow Lakes gold area: McDiarmid, J. S., 2.
- Island Lake area: McMurchy, R. C., 1.
- Mikanagan Lake area: Bateman, J. D., 1.
- Sherritt Gordon mine area: Bateman, J. D., 2.
- Snow Lake area: Ebbutt, F., 1; Harrison, J. M., 3, 4.

Paleontology.

- Dinichtys, Dev.: Okulitch, V. J., 1.
- Halysites, Ord.: Leith, E. I., 1.

Petrology.

- Gold, E. of Flin Flon: Bateman, J. D., 3, 5.
- Gurney gold mine area: Hage, C. O., 4.
- Island Lake area: McMurchy, R. C., 1.
- Mikanagan Lake area: Bateman, J. D., 1.
- Sherridon area: Bateman, J. D., 6.
- Snow Lake area: Ebbutt, F., 1.

Physical geology.

- Gold area, E. of Flin Flon: Bateman, J. D., 3, 5.

Manitoba—Continued.

Physical geology—Continued.

- Gurney gold mine area: Hage, C. O., 4.
 Hematite, Black Is., Lake Winnipeg:
 Brownell, G. M., 2.
 Island Lake area: McMurchy, R. C., 1.
 Mikanagan Lake area: Bateman, J. D., 1.
 Sheridon area: Bateman, J. D., 6.
 Snow Lake area: Harrison, J. M., 3, 4.
Physiographic geology.
 Gurney gold mine area: Hage, C. O., 4.
 Snow Lake area: Ebbutt, F., 1; Harrison, J. M., 5.
 Winnipeg area: Hutt, G. M., 2.

Mansfieldite, Oreg., Hobart Butte: Allen, V. T., 5.

Mansfieldite-scorodite ser., Oreg., Hobart Butte: Allen, V. T., 5.

Map interpretation with military application: Hadley, H. D., 1.

Map reading: Greitzer, S. L., 1.

Map reading for the soldier: Goodfriend, A., 1.

Map symbols, terminology: Wright, J. K., 2.
 Mapping for everybody: Greenhood, D., 1.

Maps, better understanding of: Gill, W. H., 4.

Maps, use in peace and war: Musham, H. A., 1.

Marble.

British Columbia, Nickel Plate Mtn. area: Dolmage, V., 1.

California, Big Pine volcanic field: Mayo, E. B., 1.

Costa Rica: Dondoli, C., 1.

Mexico, Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.

New York, Gouverneur talc dist.: U. S. G. S., 5.

Monroe, Bear Mtn. Park min. locs.: Ayres, V. L., 2.

North Carolina, W., bldg. stones: Moneymaker, B. C., 5.

Ontario, Grimsthorpe-Barrie area: Meen, V. B., 1.

Quebec, econ. minerals: Quebec Bur. Mines, 1.

Tennessee, res.: Anonymous, 56.

Texas, Travis Co.: Nickell, C. O., 4.
 Virginia, Appalachian Valley Ord. facies: Cooper, B. N., 4.

Washington, Stevens Co. Camb.: Campbell, C. D., 1.

Marcasite.

Canada, nickel sulphide oxidation: Michener, C. E., 1.

Michigan, residual placer deposits, Lake Mich.: Ball, J. R., 2.

Missouri, pyrite deposits: Grawe, O. R., 1.

Pennsylvania fire clays, minerals in: Leatham, E., 1.

Marine ecology as related to paleontology: Ladd, H. S., 3.

Marine oil pool, Dev., Ill.: Bell, A. H., 1.

Mariposite, chromium micas: Whitmore, D. R. E., 1.

Marl.

California, Elk Hills oil field: Bunch, E. S., 1.

Colorado, Morrison fm., Colorado Plateau area: Stokes, W. L., 1.

Florida petroleum poss.: Gunter, H., 1.
 Mississippi, Camp Shelby area: Brown, G. F., 1.

Nebraska, Pleist. loess: Schultz, C. B., 1.
 North Dakota, White River fm.: Powers, W. E., 1.

North Texas area: Lozo, F. E., Jr., 1.

Nova Scotia, Antigonish Harbor: Douglas, G. V., 4.

Lanark area: Messervey, J. P., 4.

Ontario, Peterborough Co.: McLaren, D. C., 5.

Renfrew area: Satterly, J., 2.

Quebec: Quebec Bur. Mines, 1.

Quitman fault zone, Ala.—Miss.: U. S. G. S., 1.

Texas, Big Spring area: Livingston, P. P., 1.

United States, SE.: MacNeil, F. S., 3.

Virginia, Coastal Plain well logs: Cederstrom, D. J., 2.

Marmatite, Sullivan mine area, British Columbia: Swanson, C. O., 1.

Martite, Utah, Twin Peaks deposits: Crawford, A. L., 1.

Martinique.

Paleontology.

Precolumbian vertebrate fauna: Chabanaud, P., 1.

Physical geology.

Mt. Pelée: Anonymous, 43.

Maryland.

Economic geology.

Deep oil test, Salisbury: Richards, H. G., 6.

Historical geology.

Antietam quartzite: Anderson, J. L., 1.
 Deep oil test, Salisbury: Richards, H. G., 6.

Minerology.

Chrome mine, Choate: Zodac, P., 5.

Rutile, Harford Co.: Tomlinson, W. H., 2.

St. Mary's meteorite, 1910: Cecil, F. D., 1.

Paleontology.

Deep oil test, Salisbury: Richards, H. G., 6.

Foraminifera, Text.: Jenkins, W. A., Jr., 1.

Skolithos, Diplocraterion, Sabellidites, Camb. Antietam ss.: Howell, B. F., 7-a.

Vitrinella, Plect., St. Mary's Co.: Rehder, H. A., 1.

Petrology.

Antietam quartzite: Anderson, J. L., 1.

Maryland—Continued.

Petrology—Continued.

Deep oil test, Salisbury: Richards, H. G., 6.

Linear analysis, medium-grained granite: Chayes, F., 3.

Quartz, deformation planes, crystallog. directions: Anderson, J. L., 1.

Physical geology.

Antietam quartzite: Anderson, J. L., 1.

Erosion, upper Chesapeake Bay area: Gottschalk, L. C., 1.

Quartz, deformation planes, crystallog. directions: Anderson, J. L., 1.

Sand Cave, Garrett Co.: Muma, M. H., 2.

Physiographic geology.

Erosion, upper Chesapeake Bay area: Gottschalk, L. C., 1.

Massachusetts.

Geologic work, cooperative: Currier, L. W., 3.

Surveys, maps in state planning: Herlihy, E. M., 1.

Economic geology.

Pegmatite mines, Chester-Blandford State Forest: Billings, M. P., 1.

Historical geology.

Narragansett Basin stratigraphy: Knox, A. S., 1.

Pegmatite mines, Chester-Blandford State Forest: Billings, M. P., 1.

Mineralogy.

Amesite structure: Gruner, J. W., 4.

Chelmsford, granite-migmatite: Keevil, N. B., 3.

Riebeckite, West Quincy area: Bjareby, G., 1.

Paleontology.

Flora, Carb., Wamsutta fm.: Knox, A. S., 1.

Petrology.

Chelmsford, granite-migmatite: Keevil, N. B., 3.

Pegmatite mines, Chester-Blandford State Forest: Billings, M. P., 1.

Purgatory Chasm: Stachura, J., 1.

Shelburne Falls gneiss dome: Balk, R., 3.

Physical geology.

Chelmsford, granite-migmatite: Keevil, N. B., 3.

Pegmatite mines, Chester-Blandford State Forest: Billings, M. P., 1.

Purgatory Chasm: Stachura, J., 1.

Shelburne Falls gneiss dome: Balk, R., 3.

Stability of coast, Boston: Marmer, H. A., 1.

Physiographic geology.

Glacial border-drainage, lobe-edge bank: Logan, R. F., 1.

Ground-water studies: Brashears, M. L., Jr., 1.

Narragansett Basin stratigraphy: Knox, A. S., 1.

Massachusetts—Continued.

Underground water.

Ground-water studies: Brashears, M. L., Jr., 1.

Meanders.

Arizona, Grand Canyon, Colorado River: Cueto Rui-Diaz, E., 1.

General: Crosby, I. B., 1.

Kentucky, Kentucky River: Jillson, W. R., 10.

Mexico, Valley of the Lerma: Waitz, P., 1.

Ohio, eastern: Ver Steeg, K., 2.

Mechanical analysis.

Earths rocks: Planas, J. I., 1.

Errors of sampling: Rittenhouse, G., 2.

Indiana, Mansfield ss. minerals: Gault, H. R., 1.

Missouri, Ozarks ig. rocks: Humbert, R. P., 1.

River sand deposits, eng. aspects: Krynine, D. P., 1.

Melilites, rock-forming minerals, melting and crystallization: Schairer, J. F., 1.

Melonite, Montbray mines, Quebec: Peacock, M. A., 4.

Men and methods in prospecting: Cleveland, C. E., 1.

Mesitite, Boston Hill deposits, N. Mex.: Entwistle, L. P., 2.

Mesozoic undifferentiated.

British Columbia, Tuya-Teslin area: Watson, K. D., 1.

Colorado, Canon City area: Blum, V. J., 1.

Mexico, Sierra de Juarez, Baja, Calif.: Fries, C., Jr., 1.

North America, Mesozoic, Cenozoic plants: LaMotte, R. S., 1.

Metabentonites, cent. Pa., Ord.: Kay, G. M., 2.

Metadiorite, Rye Patch area, Nev.: Vitaliano, C. J., 1.

Metal molds of fossils: Rasetti, F., 7.

Metallic mineral determination, polished sec.: Auger, P. E., 4.

Heat effect: Auger, P. E., 1.

Metallography of meteoritic iron: Perry, S. H., 1.

Metals, fuels, world has enough: Parsons, A. B., 1.

Future of: Palmer, R. S., 1.

Metals, origin: Fleener, F. L., 3.

Metamorphism.

Alabama, Pickneyville complex: Gault, H. R., 2.

Tin belt: Hunter, F. R., 1.

Arizona, Superior mining area: Short, M. N., 1.

Arkansas, Magnet Cove minerals: Shockley, W. G., 1.

Bellows Falls quad., N. H.-Vt.: Kruger, F. C., 1.

British Columbia, Ainsworth area: Rice, H. M. A., 1.

Metamorphism—Continued.

British Columbia—Continued.

Central-southern area: Hedley, M. S., 1.

Greenwood-Phoenix area: McNaughton, D. A., 1.

Nickel Plate Mtn. area: Dalmage, V., 1.

Sullivan mine area: Swanson, C. O., 1.

Tuys-Teslin area: Watson, K. D., 1.

Twin "J" Mine: Stevenson, J. S., 3.

Tyughton Lake area: Cairnes, C. E., 1.

California, Crestmore minerals: Woodford, A. O., 1.

Glenn C.: Rynearson, G. A., 1.

Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.

Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.

Santa Catalina Is. marine sed.: Clements, T. D., 2.

Canada, Lake Consolation area: Mathews, W. H., 1.

Carolina Piedmont: Kesler, T. L., 1.

Colorado, White River Plateau, Greenwood Springs area: MacQuown, W. C., Jr., 1.

Cuba, Isla de Pinos tungsten deposits: Page, L. R., 1.

Flow of heat from intrusive into country rock: Van Orstrand, C. E., 1.

Georgia, kyanite deposits: Furcron, A. S., 4.

Greenland, Franz Josef Fjord area: Odell, N. E., 1.

Idaho, Latah Co.: Tullis, E. L., 1.

Maine, Mount Desert Is.: Chadwick, G. H., 1.

Manitoba, Gurney gold mine area: Hage, C. O., 4.

Mikanagan Lake area: Bateman, J. D., 1.

Sherritt Gordon mine area: Bateman, J. D., 2.

Snow Lake area: Harrison, J. M., 3.

Mexico, Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.

Sonora tungsten deposits: Wiese, J. H., 1.

Michigan, Lake Michigamme area: Seaman, W. A., 2.

Republic area: Ayres, V. L., 1.

Spruce River-Peshekee River areas: Seaman, W. A., 3.

Montana: U. S. G. S., 1.

Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.

Red Lodge chrome deposits: Conwell, C. N., 1.

Nevada, Comstock Lode area: Calkins, F. C., 1.

Mining dists.: Ferguson, H. G., 1.

Ore deposits: York, B., 1.

Rye Patch area: Vitaliano, C. J., 1.

Metamorphism—Continued.

New Hampshire, Mt. Washington area: Billings, K. S. F. L., 2.

New Jersey, Middlesex Co.: Barksdale, H. C., 1.

New Mexico, Estancia Valley area: U. S. G. S., 1.

Iron Mtn. dist.: Jahns, R. H., 1, 2.

New York, Catskill quad.: Ruedemann, R., 5, 6.

New York City, Manhattan Borough: Murphy, J. J., 1.

North America, Alaska Highway: Lord, C. S., 2.

Coronas, coronites, fm.: Shand, S. J., 3.

North Carolina, Fontana Dam site: Moneymaker, B. C., 1.

Northwest Territories: Jolliffe, A. W., 2.

Oklahoma, Dev.: Miser, H. D., 1.

Ontario, Flack Lake area: Harding, W. D., 2.

Kenogamic River area: Macdonald, R. D., 1.

Red Lake area: Horwood, H. C., 2, 3.

Sudbury breccias origin: Fairbairn, H. W., 3.

Whitefish Bay area: Fraser, N. H. C., 1.

Pennsylvania, Hanover-York dist.: Stose, A. J., 1.

Petrofabrics: Ingerson, F. E., 1.

Quebec: Dufresne, A. O., 1.

Beattie mine: Davidson, S. C., 1.

Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.

Calumet Is.: Osborne, F. F., 1.

La Motte area: Norman, G. W. H., 4.

Lower Romaine River area: Retty, J. A., 1.

Rouyn, Malartic-Destor area: Norman, G. W. H., 3.

Saskatchewan, N.: Mawdsley, J. B., 1.

South Carolina, Piedmont sillimanite deposits: Smith, L. L., 1.

United States, S. Appalachians, elastic sediments: Moneymaker, B. C., 6.

Utah, Beaver Co.: Hobbs, S. W., 2.

Reaper mine pipe: Crawford, A. L., 5.

Virginia, Shenandoah Nat. Park: Rickard, H. L., 1.

Washington, Blewett-Cle Elum fm.: Lupton, R. L., 1.

Stevens, Okanogan Cos. magnetite deposits: Broughton, W. A., 2.

Wyoming, vermiculite deposits: Hagner, A. F., 1.

Yellowstone Park rhyolite-basalt complex: Fenner, C. N., 1; Wilcox, R. E., 1.

Whitehorse dist.: Cockfield, W. E., 1.

Metasomatism.

Alberta, Turner Valley oil field ls. reservoirs: Goodman, A. J., 1.

Oregon, replacement aplite breccia, Cornucopia: Goodspeed, G. C., 2.

Metasomatism—Continued.

Oregon—Continued.

Wallowa batholith, origin: Goodspeed, G. E., 1.

Meteorite waters, Alberta Turney Valley oil field: Goodman, A. J., 1.

Meteorite falls: Leonard, F. C., 11.

Meteorite origin(?), Carolina Bays: Sass, H. R., 1.

Meteorites.

Aerolites, identifying criteria: Leonard, F. C., 10.

Angelica Tp., Wis.: Buckstaff, R. N., 1.

Bibliography of, iron: Perry, S. H., 1.

Cape York, Greenland: Shaw, V., 1; Anonymous 32.

Carolina Bays, origin: McCampbell, J. C., 3.

Cavour, S. Dak.: Lindsay, N. B., 1.

Classification: Leonard, F. C., 1.

Cowley County, Kans.: Nininger, H. H., 1.

Drum Mts., Utah, siderite: Anonymous, 68, 69, 71, 75.

Electromagnetic cane for finding meteorites: La Paz L., 3.

Etching, preserving, metallic: Nininger, H. H., 3.

Falls of, co-ordinate numbers: Leonard, F. C., 2.

Fayette Co., Tex.: Sedlmeyer, J. J., 1.

Formation, meteoritic iron oxide: Buddha, J. D., 1.

General: Stocking, H. E., 1.

Geomagnetic survey, Carolina Bays, N. Car.: McCampbell, J. C., 2.

Lunar craters, origin: Leonard, F. C., 3.

Mapleton, Iowa: Wilson, B. H., 1.

Metallography of meteoritic iron: Perry, S. H., 1.

Meteoritic falls, co-ordinate numbers: Leonard, F. C., 2.

Nickel in, tests for: Anonymous, 68, 69, 95.

Numbering in collections: Leonard F. C., 7.

Place in cosmos: Leonard, F. C., 4.

Positions, original subsequent: La Paz, L., 2.

Puente-Ladron, N., Mex. aerolite: Nininger, H. H., 2.

Quartz Mtn., Nev., siderite: Leonard, F. C., 5.

Quinn Canyon, Nev., siderite: Leonard, F. C., 5.

St. Mary's, Md., 1919: Cecil, F. D., 1.

Tucson, Ariz., history of: McGough, P. J., 1.

Windmill Station same as Valley Wells aerolitic falls, Calif.: Leonard, F. C., 6.

Zodiacal light and counter glow: Leonard, F. C., 8.

Meteorites and the moon: Nininger, H. H., 4.

Mexico.

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Areas described.

Baja Calif., explor.: Antúñez Echegaray, F., 3.

Colotlipa-Quechultenango min. dist.: González Reyna, J., 3.

El Estado de Morelos: N. de Parrés, F., 1.

Permian area, NW. of Las Delicias, Coahuila: King, R. E., 2.

Sonora, S., tungsten: Wiese, J. H., 1.

Economic geology.

Amarilla mine, Guerrero: Acosta del Campo, C., 1.

Antimony deposits: White, D. E., 2.

Baja Calif., explor.: Antúñez Echegaray, F., 3.

Bibliography, mineralogy, geology, 1919-1930: Aguilar y Santillán, R., 1.

Cerro de Mercado, iron mtn.: Terrones Benitez, A., 1.

Colotlipa-Quechultenango min. dist.: González Reyna, J., 3.

Copper, La Dicha mine: González Reyna, J., 3.

Diatomaceous earth: Diaz Lozano, E., 1.

Drilling programs, oil fields: Aguilar, M. R., 1.

El Alamo mine, Baja Calif.: Antúñez Echegaray, F., 2.

El Oro y Tlalpujahua mining camp: Bracho V., F., 1.

Foreign work by U. S. Geol. Survey: Dorr, J. V., 2d. 1.

Geologic history, N.: Kellum, L. B., 1.

Geophysical prosp., Isthmus Tehuantepec, Campeche, Tabasco: Tirado Osorio, N., 1.

Lower Calif., geology and oil poss.: Beal, C. H., 1.

Manganese: Rodríguez Cabo, J., Jr., 1.

Concepción Penín., Baja Calif.: Antúñez Echegaray, F., 1.

Mineral dists.: Hulin, C. D., 1.

Mineral resources: González Reyna, J., 2.

North Mex., oil poss.: Kellum, L. B., 2.

Nuevo León: Mullerried, 8.

Pachuca-Real del Monte silver dist.: Thornburg, C. L., 1.

Pacific Coast, min. res.: González Reyna, J., 1.

Petroleum explor. program: Logan, L. J., 2.

Plateau orogeny, relation to ore, oil, ground water: Nye, S. S., 2.

Posa Rica area, Veracruz: Areallamo, A. R. V., 1.

Potash poss.: Flores, T., 2.

Quartz, Majada Verde, Guanajuato: Muños Lumbier, M., 3.

Quicksilver, Huitzaco: Salazar, J. B., 1.

Mexico—Continued.

Economic geology—Continued.

- Quicksilver-antimony deposits, Huit-zuco, Guerrero: McAllister, J. F., 1.
 Radioactive minerals: Castro, C., 1.
 Radioactivity invs.: Blau, M., 1.
 Scheelite, Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.
 Silver mines, Sultepec: Ray, H. C., 1.
 Taxco mining dist.: Fowler, G. M., 2.
 Tungsten, S. Sonora: Wiese, J. H., 1.

Historical geology.

- Amarilla mine, Guerrero: Acosta del Campo, C., 1.
 Baja Calif., explor.: Antúñez Eche-garay, F., 3.
 Batholith, Cret., crystallization time: Larsen, E. S., 2.
 Bibliography, mineralogy, geology, 1919-1930: Aguilar y Santillán, R., 1.
 Cacahuamilpa area: Mullerried, 7.
 Carboniferous: Mullerried, 9.
 Cerro de Mercado, iron mtn.: Terrones Benitez, A., 1.
 Colotlipa-Quechultenango min. dist.: González Reyna, J., 3.
 Cretaceous fms.: Imlay, R. W., 2.
 Correlations: Imlay, R. W., 1.
 El Estado de Morelos: N. de Parrés, F., 1.
 Geography, geology, relations: Lozano García, R., 1.
 Geologic history, N.: Kellum, L. B., 1.
 Gulf of Calif. area: Osorio Tafall, B. F., 1.
 Highway profiles: Muñoz Lumbier, M., 2.
 Lepidocyclina, Oligocene, Palmalt. Vera Cruz: Hanzawa, S., 1.
 Lower Calif., geology and oil poss.: Beal, C. H., 1.
 Manganese, Concepción Penin, Baja Calif.: Antúñez Echeagaray, F., 1.
 Mesozoic: Mullerried, 9.
 Northern Mexico: Kellum, L. B., 2.
 Nuevo León: Mullerried, 8.
 Pacific Coast, min. res.: González Reyna, J., 1.
 Paleozoic: Mullerried, 9.
 Parícutin Volcano areal geology: Williams, H., 2.
 Permian: Mullerried, 9.
 Area NW. of Las Delicias, Coahuila: King, R. E., 1, 2.
 Chiapas: Thompson, M. L., 1.
 Plateau orogeny, relation to ore, oil, ground water: Nye, S. S., 2.
 Poza Rica area, Veracruz, tectonics: Arellano, A. R. V., 1.
 Quicksilver-antimony deposits, Huit-zuco, Guerrero: McAllister, J. F., 1.
 Scheelite, Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.
 Tertiary fms., NE.: Gardner, J. A., 3.
 Tungsten deposits, S. Sonora: Wiese, J. H., 1.

Mexico—Continued.

Historical geology—Continued.

- Valley of the Lerma: Waitz, P., 1.
 Valley of Tixtla, Guerrero: Mullerried, 2, 3.

Mineralogy.

- Antimony deposits: White D. E., 2; McAllister, J. F., 1.
 Baja Calif., explor.: Antúñez Eche-garay, F., 3.
 Colotlipa-Quechultenango min. dist.: González Reyna, J., 3.
 Copper, La Dicha mine: González Reyna, J., 3.
 Descloizites, wulfenites, Los Lamentos: Anonymous, 93.
 El Alamo mine, Baja Calif.: Antúñez Echeagaray, F., 2.
 El Oro y Tlalpujahua mining camp: Bracho V., F., 1.
 Manganese: Rodríguez Cabo, J., Jr., 1.
 Concepción Penin., Baja Calif.: Antúñez Echeagaray, F., 1.
 Mineral dists.: Hullin, C. D., 1.
 Mineral resources: González Reyna, F., 2.
 Pachuca-Real del Monte silver dist.: Thornburg, C. L., 1.
 Pacific Coast, min. res.: González Reyna, J., 1.
 Potash poss.: Flores, T., 2.
 Quicksilver, Huitzuco: Salazar, J. B., 1.
 Quicksilver-antimony deposits: McAl-lister, J. F., 1.
 Radioactive mins.: Castro, C., 1.
 Radioactivity invs.: Blau, M., 1.
 Scheelite, Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.
 Silver mines, Sultepec: Ray, H. C., 1.
 Sphalerite: Anonymous, 55.
 Taxco mining dist.: Fowler, G. M., 2.
 Tungsten, S. Sonora: Wiese, J. H., 1.
Paleontology.
 Ammonoid, Perm., Sonora: Miller, A. K., 6.
 Brachiopoda, Perm., NW. of Las De-licias, Coahuila: Cloué, P. E., Jr., 1.
 Cacahuamilpa area: Mullerried, 7.
 Cephalopoda, Perm. area NW. of Las Delicias, Coahuila: Miller, A. K., 1.
 Cretaceous fms.: Imlay, R. W., 2.
 Diatomaceous earth: Díaz Lozano, E., 1.
 Flamingo, Pliocene: Miller, L. H., 3.
 Fusulinids, Perm.: Thompson, M. L., 1.
 Fusulines, Perm., Penn., Las Delicias area: Dunbar, C. O., 1.
 Graptocarcinus, Cret.: Stenzel, H. B., 4.
 Gulf of Calif. area: Osorio Tafall, B. F., 1.
 Helicoprion, Perm., Coahuila: Muller-ried, 10.
 Lepidocyclina, Palmalt, Vera Cruz, Oli-gocene: Hanzawa, S., 1.
 Nuevo León: Mullerried, 8.

Mexico—Continued.

Paleontology—Continued.

- Permian area, NW. of Las Delicias, Coahuila: King, R. E., 1, 2.
Plants, preservation in Parícutin ash deposits: Dorf, E., 1.
Rodents, lagomorphs, Quat., San Josecito Cave: Cushing, J. E., Jr., 1.
Tertiary Mollusca, NE.: Gardner, J. A., 3.
Valley of Tixtla, Guerrero: Mullerried, 2, 3.

Petrology.

- Amarilla mine, Guerrero: Acosta del Campo, C., 1.
Ashes, grit, of Parícutin in Mexico City: Hernández Velasco, J. A., 1.
Preservation of plants in: Dorf, E., 1.
El Estado de Morelos: N. de Parrés, F., 1.
El Oro y Talpujahua mining camp: Bracho V., F., 1.
Guadalajara Valley: Díaz, S., 1.
Gulf of Calif. area: Osorio Tafall, B. F., 1.
Manganese, Concepción Penín., Baja Calif.: Antúñez Echegaray, F., 1.
Nuevo León: Mullerried, 8.
Parícutin volcano: Milton, C., 2; Williams, H., 2.
Ashes, preservation of plants in: Dorf, E., 1.
Lavas, pyroclastics: Schmitter, E., 1.
Quicksilver-antimony deposits: McAllister, J. F., 1.
Scheelite, Sierra de Juárez, Baja Calif.: Fries, C., Jr., 1.
Tungsten, S. Sonora: Wiese, J. H., 1.
Valley of the Lerma: Waitz, P., 1.

Physical geology.

- Amarilla mine, Guerrero: Acosta del Campo, C., 1.
Antimony deposits: White, D. E., 2.
Cacahuamilpa area: Mullerried, 7.
Colotipa-Quechultenango min. dist.: González Reina, J., 3.
Earthquakes: Swainson, O. W., 1.
April 15, 1941, Feb. 22, 1943: Collins, M. P., 1.
El Alamo mine, Baja Calif.: Antúñez Echegaray, F., 2.
El Estado de Morelos: N. de Parrés, F., 1.
El Oro y Talpujahua mining camp: Bracho V., F., 1.
Fumaroles of Parícutin: Foshag, W. F., 1.
Geography, geology, relations: Lozano García, R., 1.
Geologic history, N.: Kellum, L. B., 1.
Gulf of Calif. area: Osorio Tafall, B. F., 1.
Lower Calif., geology and oil poss.: Beal, C. H., 1.
Manganese deposits: Rodríguez Cabo, J., Jr., 1.

Mexico—Continued.

Physical geology—Continued.

- Manganese deposits—Continued.
Concepción Penín., Baja Calif.: Antúñez Echegaray, F., 1.
Mineral dists.: Hulin, C. D., 1.
Nuevo León: Mullerried, 8.
Pachuca-Real del Monte silver dist.: Thornburg, C. L., 1.
Pacific Coast, min. res.: González Reyna, J., 1.
Parícutin Volcano, 1943: Bodle, R. R., 3; Bullard, F. M., 3; Castigliola, J., 1; Flores, T., 3, 4; Fuller, R. E., 1; Graton L. C., 1; Green, J. A., 1; Hobbs, W. H., 3; Killinger, P. E., 1; Lawrence, D. B., 1, 2; Milton, C., 2; Ordóñez, E., 1, 2, 3; Pough, F. H., 1; Trask, P. D., 2; Valencia, R. F., 1, 2; Wickett, W. A., 1; Anonymous, 10, 14, 19.
Activity, Jan.-Mar. 1945: Nat. Research Council Comm., 1.
Areal geology: Williams, H., 2.
Ashes, preservation of plants: Dorf, E., 1.
Associated activity: Westland, A. J., 1.
Cyclic activity: White, D. E., 1.
Geologic problems: Mullerried, 6.
Geophysical-seismological invs.: Covarrubias, L. F., 2.
Height of cone: Covarrubias, L. F., 2.
Helicopter expedition: Graton, L. C., 4.
History: Trask, P. D., 1, 2.
Lavas, pyroclastics: Schmitter, E., 1.
1945: Eggler, W. A., 1.
Origin, devel.: Bullard, F. M., 3.
Plants, preserved in ashes: Dorf, E., 1.
Volcanic phenomena: Covarrubias, L. F., 3.
Volcanic studies: Fuller, R. E., 1; Graton, L. C., 3.
Permian area, NW. of Las Delicias, Coahuila: King, R. E., 1, 2.
Plants preserved in Parícutin ashes: Dorf, E., 1.
Plateau orogeny, relation to ore, oil, ground water: Nye, S. S., 2.
Poza Rica area, Veracruz, tectonics: Arellano, A. R. V., 1.
Quicksilver-antimony deposits: McAllister, J. F., 1.
Radioactivity invs.: Blau, M., 1.
Scheelite, Sierra de Juárez, Baja Calif.: Fries, C., Jr., 1.
Sierra Madre del Sur, rising mts.: Hobbs, W. H., 3.
Taxco mining dist.: Fowler, G. M., 2.
Tungsten, S. Sonora: Wiese, J. H., 1.
Valley of the Lerma: Waitz, P., 1.
Valley of Tixtla: Mullerried, 3.
Volcanic eruptions: Flores, T., 1.
Volcanoes: Jaggard, T. A., Jr., 2.

Mexico—Continued.

Physical geology—Continued.

Volcanology, seismology: Sanchez, P. C., 1.

Water caves, Yucatan Penin.: Anonymous, 70.

Wind erosion, Selva Lacandona: Mullerried, 5.

Physiographic geology.

Atlantic Coast: Muñoz Lumbier, M., 1.

El Oro y Talpujahua mining camp: Bracho V., F., 1.

Geography, geology, relations: Lozano García, R., 1.

Glacial geology: Blásquez Lopez, L., 1.

Manganesite deposits, Concepción Penin, Baja Calif.: Antúnez Echegaray, F., 1.

Nuevo León: Mullerried, 8.

Permian area NW. of Las Delicias, Coahuila: King, R. E., 1, 2.

Poza Rica area, Veracruz, tectonics: Areallano, A. R. V., 1.

Quicksilver-antimony deposits: McAllister, J. F., 1.

Valley of the Lerma: Waitz, P., 1.

Valley of Tixtla: Mullerried, 3.

Underground water.

El estado de Morelos: N. de Parrés, F., 1.

Guadalajara Valley: Díaz, S., 1.

Plateau orogeny, relation to ore, oil, ground water: Nye, S. S., 2.

Rivers, Yucatan Penin., underground: Anonymous, 70.

Valley of Tixtla: Mullerried, 2.

Water caves, Yucatan Penin.: Anonymous, 70.

Meyerhofferite, borate minerals, Calif.: Harriman, W. R., 1.

Mica.

Alabama, Pinckneyville complex: Gault, H. R., 2.

Alaska, siderophyllite, Brooks Mtn.: Coats, R. R., 1.

Canada, midwestern non-metallics: Hutt, G. M., 7.

Chromium variety: Whitmore, D. R. E., 1.

Maine, Kennebec Valley esker: Trefethen, J. M., 2.

Mines, Black, Plumbago Mts.: Marble, C. F., 1.

Massachusetts, Chester-Blandford State Forest: Billings, M. P., 1.

Mexico, Baja Calif.: Antúnez Echegaray, F., 3.

Michigan, Marquette iron range: Seaman, W. A., 1.

New England: Cameron, E. N., 1.

Pegmatites: Cameron, E. N., 1.

New Hampshire: Bannerman, H. M., 1.

Pegmatites: Bannerman, H. M., 1.

New York, Monroe, Bear Mtn. Park min. locs.: Ayres, V. L., 2.

Mica—Continued.

North Carolina: Murdock, T. G., 1;

Olson, J. C., 1; Anonymous, 9.

Franklin-Silva dist. pegmatites: Heinrich, E. W., 1.

Ontario, Eau Claire fields: McLaren, D. C., 3.

Pennsylvania, Wissahickon fm.: Postel, A. W., 1.

Purgatory Chasm, Mass.: Stachura, J., 1.

Quebec: Dufresne, A. O., 1.

Economic minerals: Quebec Bur. Mines, 1.

Rhode Island beach mins.: Hyneman, J. R., 1.

South Dakota, Beecher Rock Basin pegmatites: Gwynne, C. S., 2.

Custer pegmatite minerals: Fisher, D. J., 1.

United States, SE. min. res.: Ralston, O. C., 1.

Color in sheets: Jahns, R. H., 4.

Pegmatites: Griffiths, W. R., 1.

Virginia pegmatites: Brown, W. R., 2.

War uses: Wayland, R. G., 1.

West Virginia: Martens, J. H. C., 1.

Mica schists.

Carolina Piedmont: Kesler, T. L., 1.

Quebec, Moulton Hill deposit: Hawley, J. E., 1.

South Carolina, Piedmont sillimanite deposits: Smith, L. L., 1.

Michigan.

Economic geology.

Berea ss.: U. S. G. S., 1.

Copper, Keweenaw Penin.: Address, J. E., 1.

Developments, oil and gas, 1943-44: Hardenberg, H. J., 1.

Dundee fm., Rogers City ls., Michigan Basin: U. S. G. S., 1.

Elements, rare, occurrence: Snelgrove, A. K., 4.

Iron deposits: Martin, H. H. M., 2.

Ishpeming gold range: Snelgrove, A. K., 3.

Lake Michigamme area: Seaman, W. A., 2.

Marquette iron range: Seaman, W. A., 1.

Menominee iron range: Lamey, C. A., 1.

Mineral invs., Marquette, Baraga Cos.: Snelgrove, A. K., 2.

Natural resources: Martin, H. H. M., 1.

Petroleum and gas poss.: U. S. G. S., 1.

Porter oil field: Landes, K. K., 4.

Republic area: Ayres, V. L., 1.

Salina, Bass Is. rocks, Mich. Basin: U. S. G. S., 1.

Salt: Martin, H. H. M., 3.

Spruce River-Peshekee River areas: Seaman, W. A., 3.

Sylvania, Bois Blanc, Dev. fms.: U. S. G. S., 2.

Michigan—Continued.

Economic geology—Continued.

Traverse group, Dundee fm.: U. S. G. S., 2.

Historical geology.

Berea ss.: U. S. G. S., 1.

Dundee fm., Rogers City ls., Mich. Basin: U. S. G. S., 1.

General: Martin, H. M. M., 1.

Iron deposits: Martin, H. M. M., 2.

Lake Michigamme area: Seaman, W. A., 2.

Marquette iron range: Seaman, W. A., 1.

Menominee iron range: Lamey, C. A., 1.

Mineral invs., Marquette, Baraga Cos.: Snelgrove, A. K., 2.

Petroleum and gas devel., 1943: Was- son, T., 1.

Porter oil field: Landes, K. K., 4.

Republic area: Ayres, V. L., 1.

Salina, Bass Is. rocks, Mich. Basin: U. S. G. S., 1.

South-central Mich.: U. S. G. S., 1.

Spruce River-Peshekee River areas: Seaman, W. A., 3.

Sylvania, Bois Blanc, Dev. fms.: U. S. G. S., 1.

Traverse group, Dundee fm.: U. S. G. S., 2.

Mineralogy.

Agates, Keweenaw Penin.: Luoma, H. L., 1.

Anthraconite, Norwood area: Wulfman, C. E., 1.

Brine, Sil., Bay City: Case, L. C., 1.

Copper, Keweenaw Penin.: Andress, J. E., 1.

Copper-silver nuggets, Keweenaw Penin.: Luoma, H. L., 2.

Dickite, chromium in iron, Marquette, Gogebic ranges: Gruner, J. W., 7.

Elements, rare, occurrence: Snelgrove, A. K., 4.

Iron deposits: Martin, H. M. M., 2.

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Mineralogy.

- Common rocks and minerals: Keller, W. D., 3.
- Pyrite deposits: Grawe, O. R., 1.
- Quartz geode, Keokuk: Grinstead, L. R., 1.
- Silver Hollow, Newbauer, Coleman iron deposits: Kreamalmyer, K. L., 1.

Paleontology.

- Brachiopoda, Dev.: Cooper, G. A., 3.
- Devonian, NE. Mo.: Branson, E. B., 2.
- Southeastern Mo.: Croneis, C. G., 1.
- Dinosaur, Cret.: Gilmore, C. W., 1.
- Fossils, Mo. loess: Cameron, C. C., 1.
- Geology: Branson, E. B., 3.
- Louisiana ls. stratigraphy and fauna: Williams, J. S., 1.
- Ozark uplift, Lower Ord.: Cullison, J. S., 1.

Petrology.

- Common rocks and minerals: Keller, W. D., 3.

Missouri—Continued.

Petrology—Continued.

Core, Bourbon High oil field: Cullison, J. S., 2.

Devonian, NE. Mo.: Branson, E. B., 2.

Southeastern Mo.: Croneis, C. G., 1.

Geodes: Rost, R. J., 1.

Geology: Branson, E. B., 3.

Ozark uplift, Lower Ord.: Cullison, J. S., 1.

Pennsylvanian cycles, St. Louis area: Frank, A. J., 1.

Weathering, soil fm., ig. rocks, Ozarks: Humbert, R. P., 1.

Physical geology.

Devonian, NE. Mo.: Branson, E. B., 2.

Southeastern Mo.: Croneis, C. G., 1.

Earthquake, 3/27/45, Moselle fault: Frank, A. J., 2.

Geology: Branson, E. B., 3.

Pyrite deposits: Grawe, O. R., 1.

Silver Hollow, Newbauer, Coleman iron deposits: Kreamalmyer, K. L., 1.

Weathering, soil fm., ig. rocks, Ozarks: Humbert, R. P., 1.

Physiographic geology.

Devonian, NE. Mo.: Branson, E. B., 2.

Geology: Branson, E. B., 3.

Ozark uplift, Lower Ord.: Cullison, J. S., 1.

Pavement-boulders as interglacial evidence: Holmes, C. D., 3.

Pyrite deposits: Grawe, O. R., 1.

Silver Hollow, Newbauer, Coleman iron deposits: Kreamalmyer, K. L., 1.

Underground water.

Geology: Branson, E. B., 3.

Pyrite deposits: Grawe, O. R., 1.

Springs, large: Beckman, H. C., 1.

Molding sand. See also Sand.

Alabama: Berkelhamer, L. H., 1.

British Columbia: Smith, W., 1.

Clays, bonding action: Grim, R. E., 3.

Foundry sands: Ries, H., 2.

Illinois, surface clays for: Grogan, R. M., 2.

New York, Catskill quad.: Newland, D. H., 1; Ruedemann, R., 5.

Mollusca. See also Cephalopoda; Gastropoda; Invertebrata (general); Pelecypoda.

Acteocina, Salton Sink, Quat., Calif.: Willett, G., 2.

Arcidae, Tert., Trinidad: Rutsch, R., 1.

Biometrical analysis of assemblages: Schenck, H. G., 2.

California, Tert.: Keen, A. M., 2.

Colorado, Paleozoic faunas: Johnson, J. H., 7.

Fauna, marine Tert. fms., Wash., Oreg.: Weaver, C. E., 1.

Florida fauna: Cooke, C. W., 3.

Pleistocene, Palm Beach Co.: Smith, E. R., 1.

Georgia, Coastal Plain: Cooke, C. W., 1.

Mollusca—Continued.

Idaho, Pliocene fresh-water: Yen, T.-C., 1.

Salt Lake fm. Miocene: Yen, T.-C., 2.
Leadville ls., Colo., fauna: Johnson, J. H., 8.

Loess, lower Miss. Valley, U. S.: Russell, R. J., 1.

Maryland, deep oil test, Salisbury: Richards, H. G., 6.

Mexico, Neuvo León: Mullerried, 8.

Northeast, Tert. fms.: Gardner, J. A., 3.

New York, faunas, Catskill quad.: Ruedemann, R., 5, 6.

North America, W., index fossils, marine Cenozoic fms.: Weaver, C. E., 2.

North Carolina, Miocene, Pliocene: Mansfield, W. C., 1.

Oklahoma, Laverne Pliocene fm.: Leonard, A. B., 1.

Protodonax, Cret., W. U. S.: Vokes, H. E., 3.

Speciation, correl., Cenozoic: Clark, B. L., 1.

Types, Royal Ontario Mus. Paleontology: Fritz, M. A., 3.

United States, Atlantic Coastal Plain, N. J.-Ga.: Richards, H. G., 5.

Northern Great Basin: Cressman, L. S., 1.

Pleistocene, Lower Klamath Lake: Baker, F. C., 1.

Western, Morrison fm. Juras. fauna: Yen, T.-C., 3.

Virginia, Miocene: Mansfield, W. C., 1.

Molybdenite.

Alaska, Shakan area: Robinson, G. D., 1.

Colorado, min. res.: Pearl, R. M., 2.

Nevada, Nye Co., oxidation: Mitchell, W. D., 1.

New Mexico, Red River min. area: Sidwell, R., 1.

Northwest Territories, Prosperous Lake area: Jolliffe, A. W., 4; Anonymous, 77.

Quebec, La Corne mine: McLaren, D. C., 4.

La Motte area: Norman, G. W. H., 4.

Preissac-La Corne area: Norman, G. W. H., 5.

Molybdenum.

Alaska: Joesting, H. R., 1.

Canada, Medicine Hat to Vancouver: Hutt, G. M., 14.

Mineral industry: Moore, E. S., 4.

Mexico, Baja Calif.: Antúnez Echegaray, F., 3.

Pacific Coast: González Reyna, J., 1.

Nevada, Nye Co., oxidation: Michell, W. D., 1.

North Carolina, poss.: Anonymous, 9.

Northwest Territories: Jolliffe, A. W., 2.

Molybdenum—Continued.

Quebec: Dufresne, A. O., 1.

La Motte area: Norman, G. W. H., 4.

Monadnocks.

Kansas, Barton Co. buried hills: Walters, R. F., 1.

New Jersey, Schooley peneplain: Strahler, A. N., 3.

Virginia, Sallings Mtn. area: Bloomer, R. O., 1.

Monazite, Spruce Pine area, N. C.: Bliss, A. D., 1.

Montana.

Areas described.

Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.

Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.

Economic geology.

Big Horn Basin oil and gas fields: U. S. G. S., 1.

Chrome deposits, Red Lodge: Conwell, C. N., 1.

Chromite, Stillwater, Sweetgrass Cos.: Allsman, P. T., 1.

Corundum, Belgrade: Murdock, H. E., 1.

Possibilities: Parks, R. D., 1.

Elk Basin oil and gas field: U. S. G. S., 4.

Gage dome oil field: Perry, E. S., 2.

Jardine-Crevasse Mtn. dist., min. res.: Seager, G. F., 1.

Little Rocky Mts. plains, oil and gas poss.: U. S. G. S., 1.

Mesozoic-Paleozoic Basins, S.-central: U. S. G. S., 2.

Mississippian-Devonian, NW.: U. S. G. S., 2.

Petroleum: Perry, E. S., 1.

Petroleum and gas poss.: Carroll, D. L., 2.

Phosphate, Phosphoria Perm. fm.: Gilbert, G., 1.

Powder River Basin: U. S. G. S., 1.

Stratigraphic control, ore bodies: Perry, E. S., 3.

Historical geology.

Amsden fm. age: Scott, H. W., 3.

Big Horn Basin: U. S. G. S., 1.

Cambrian, early Upper: Lochman, C., 1.

Chromite deposits, Stillwater, Sweetgrass Cos.: Allsman, P. T., 1.

Elk Basin oil and gas field: U. S. G. S., 4.

Ellis Juras. fm., type sec.: Cobban, W. A., 1.

Gage dome oil field: Perry, E. S., 2.

General: U. S. G. S., 1.

Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.

Igneous rocks, N. Big Belt Range: Lyons, J. B., 1.

Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.

Jurassic marine, Sweetgrass arch: Cobban, W. A., 2.

Montana—Continued.

Historical geology—Continued.

Little Rocky Mts. plains, oil and gas poss.: U. S. G. S., 1.

Mesozoic-Paleozoic Basins, S.-cent.: U. S. G. S., 1, 2.

Mississippian-Devonian, NW.: U. S. G. S., 2.

Phosphoria Perm. fm., phosphate: Gilbert, G., 1.

Powder River Basin: U. S. G. S., 1.

Stratigraphic control, ore bodies: Perry, E. S., 3.

Mineralogy.

Chrome deposits, Red Lodge: Conwell, C. N., 1.

Chromite, Stillwater, Sweetgrass Cos.: Allsman, P. T., 1.

Columbian, cerium minerals: Cooke, S. R. B., 1.

Corundum, Belgrade: Murdock, H. E., 1.

Jardine-Crevasse Mtn. dist., min. res.: Seager, G. F., 1.

Pegmatite minerals, unusual: Cooke, S. R. B., 1.

Paleontology.

Asterichnites, Cret.: Brown, B., 1.

Belemnite tracks, Cret., 8-pointed stars: Brown, B., 2.

Conodonts, Dev.: Cooper, C. L., 3.

Corals, Otten Missn. fm.: Easton, W. H., 6.

Post-Osage Missn.: Sloss, L. L., 1.

Faunas, early Upper Camb.: Lochman, C., 1.

Jurassic, marine, Sweetgrass arch: Cobban, W. A., 2.

Mississippian-Devonian, NW.: U. S. G. S., 2.

Monsaulax, Miocene beaver: Wood, H. E., 2d, 1.

Nassovinae, Anomocarinae, Mid. Camb.: Howell, B. F., 12.

Wood, Tert.: Beck, G. F., 3.

Petrology.

Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.

Igneous rocks, N. Big Belt Range: Lyons, J. B., 1.

Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.

Jurassic, marine, Sweetgrass arch: Cobban, W. A., 2.

Moraine, Eocene, history: Atwood, W., 1.

Physical geology.

Big Horn Basin: U. S. G. S., 1.

Chrome deposits, Red Lodge: Conwell, C. N., 1.

Chromite, Stillwater, Sweetgrass Cos.: Allsman, P. T., 1.

Elk Basin oil and gas fields: U. S. G. S., 4.

Gage dome oil field: Perry, E. S., 2.

General: U. S. G. S., 1.

Montana—Continued.

Physical geology—Continued.

- Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.
 Igneous rocks, N. Big Belt Range: Lyons, J. B., 1.
 Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 Jurassic, marine, Sweetgrass arch: Cobban, W. A., 2.
 Little Rocky Mts. plains: U. S. G. S., 1.
 Mesozoic-Paleozoic Basins, S.-cent.: U. S. G. S., 1, 2.
 Moraine, Eocene, history: Atwood, W. W., 1.
 Powder River Basin: U. S. G. S., 1.
 Stratigraphic control, ore bodies: Perry, E. S., 3.

Physiographic geology.

- Beartooth Mts., Rainbow Pleist. ice cap: Bevan, A. C., 6.
 East Boulder Plateau: Bevan, A. C., 7.
 General: U. S. G. S., 1.
 Glaciers, sources, Yellowstone Nat. Park: Bevan, A. C., 7.
 Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.
 Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 Little Rocky Mts. plains: U. S. G. S., 1.
 Moraine, Eocene, history: Atwood, W. W., 1.

Montbrayite, Quebec, gold telluride: Peacock, M. A., 3.

Montmorillonite.

- Bibliography, selected: Winchell, A. N., 2.
 Clay, migration effect, minerals, hydrous aluminum oxides: Allen, V. T., 2.
 Properties control by pH: Grim, R. E., 1.
 General: Ross, C. S., 2-a.
 Organic liquids assoc.: Bradley, W. F., 1.

Monzodiorite, Winnepesaukee area: Quinn, A. W., 2.

Monzonite.

- Nevada, Rye Patch area: Vitaliano, C. J., 1.
 New Hampshire, Oliverian magma ser., Mt. Wash. quad.: Chapman, C. A., 1.
 Pawtuckaway Mts.: Roy, C. J., 1.
 Moon, cf. earth, mtn. ranges: Chamberlin, R. T., 5.
 Imbrian Plain, and geology: Spurr, J. E., 1.
 Lack of folded ranges: Chamberlin, R. T., 5.

Moose Creek dist., Matanuska coal fields, Alaska: Apell, G. A., 1.

Moraines. See also Glacial geology.

- Alaska, Copper River area: Moffit, F. H., 1.
 Alberta, drainage pattern: Warren, P. S., 2.

Moraines—Continued.

- British Columbia, Tuya-Teslin area: Watson, K. D., 1.
 California, Sierra Nevada, Mono Lake area: Putnam, W. C., 1.
 Canada, Arctic, reconnaissance flight: Bateman, J. D., 4.
 James Bay area: Shaw, G., 1.
 Colorado, Rocky Mtn. Nat. Park: Jones, W. D., 1; Wegemann, C. H., 1.
 Iowa, Illinoian and post-Illinoian Pleist.: Kay, G. F., 2.
 Maine, Mt. Desert Is.: Chadwick, G. H., 4.
 Massachusetts, border-drainage, lobe-edge bank: Logan, R. F., 1.
 Mexico: Blasquez Lopez, L., 1.
 New York, Salamanca re-entrant area: MacClintock, P., 1.
 Ohio, water supply: Stout, W. E., 2.
 Ontario, Red Lake area: Horwood, H. S., 3.
 Wisconsin, Brûlé River Basin: Bean, E. F., 1.
 Wyoming, Jackson Hole area: Fryxell, F. M., 3.

Morin, Mount Tremblant intrus., contact between: Faessler, C., 6.

Morphology.

- Quebec, glacial geology: Dagenais, P., 1.
 Mounds, Gulf Coastal Plain, U. S.: Dietz, R. S., 1.
 Mt. Auburn oil pool, Sil., Mo.: Bell, A. H., 1.
 Mt. Holly oil field, Ark.: Blanpied, B. W., 2.
 Mountain leather or paligorskite, Alaska: Fisher, R. B., 1.
 Mud analysis logging: Souther, R. E., 1.
 Mud cracks, Perm., Trias., Ariz.: Lauder-milk, J. D., 5.
 Mud flows, Blairsden area, Calif.: Durrell, C., 1.
 Mudstones, Calif., Casmalia area: U. S. G. S., 1.
 Nova Scotia, St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Multiple working hypotheses: Chamberlin, T. C., 1.

Muscovite.

- Canada mineral industry: Moore, E. S., 4.
 Indiana, Mansfield ss. minerals: Gault, H. R., 1.
 Massachusetts, Chester-Blandford State Forest: Billings, M. P., 1.
 New England, mica deposits: Cameron, E. N., 1.
 New Hampshire, Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
 Quebec, La Motte area: Norman, G. W. H., 4.
 United States, SE., color in sheets: Jahns, R. H., 4.

Natrolite.

- Oregon, quartz min. locs.: Dake, H. C., 2.

Natural bridges.

Rainbow Bridge, Utah: Anonymous, 80.

Natural earth currents invs.: Dahlberg, R. S., 1.

Natural gas.

Alabama: Lloyd, S. J., 1, 3.

Geol. Survey Ann. Rept., 1943-44:

Ala. Geol. S., 1.

Possibilities: Lloyd, S. J., 2.

Resources: Anonymous, 25.

Well logs, 1940-45, poss.: Toulmin, L. D., Jr., 3.

Alaska, Arctic area poss.: Anonymous, 39.

Katalla area poss.: Miller, D. J., 1.

Alberta, Athabaska-Barrhead area, poss.: Feniak, M. W., 1.

Cowley area poss.: Hage, C. O., 1.

Developments: Storm, L. W., 2.

Drinnan to Brûlé Lake area, poss.: Lang, A. H., 1.

Entrance area poss.: Lang, A. H., 2.

General: Beach, F. K., 2.

Jumpingpound field: Beach, F. K., 1.

Pedley area, poss.: Irish, E. J. W., 1.

Turner Valley oil field ls. reservoirs: Goodman, A. J., 1.

Wainwright field: Hume, G. S., 5.

Appalachian area, U. S., 1943-44: Appalachian G. Soc., 1.

Appalachian Basin, U. S., Berea sand poss.: U. S. G. S., 1.

Application of hydrocarbon reserves: Carter, D. V., 2.

Arizona, Paleozoic, cent., NE., poss.: U. S. G. S., 2.

Salt River Valley prospects: Lund, P. H., 1.

Arkansas, Calhoun field: Stein, F. B., 1.

Developments, 1942: Blanpied, B. W., 2.

1944: Wilson, R. M., 1.

Schuler field: Elliott, G. R., 1; Kaveler, H. H., 1.

Southern, devel. 1943: Crowell, A. M., 1.

Southern-La. N., 1942 devel.: Blanpied, B. W., 1.

Berea sand, Ohio, W. Va.: U. S. G. S., 1.

Big Horn Basin oil and gas fields, Mont.-Wyo.: U. S. G. S., 1.

British Columbia, Alaska Highway area min. poss.: Thomas, L. O., 1.

Alaska Highway, Fort St. John-Fort Nelson poss.: Hage, C. O., 3.

Lone Mtn. area poss.: McLearn, F. H., 1.

Turner Valley area fields: Hume, G. S., 6.

California, Carbon dioxide gas field, Mendocino, Sonoma Cos.: Hubbard, H. G., 1.

Chowchilla field: Hodges, F. C., 2.

Developments, 1943-44: Gregersen, A. I., 2, 3; Moody, G. B., 1.

Natural gas—Continued.

California—Continued.

Discoveries and developments, 1943-1944: Wilhelm, V. H., 1; Winterburn, R., 1.

Elk Hills oil field: Bunch, E. S., 1.

Fresno, Merced, Stanislaus Cos.: U. S. G. S., 2.

Newhall-Potrero, Aliso Canyon, Del Valle, Oak Canyon oil fields: Hodges, F. C., 1.

Playa del Rey oil field: Hodges, F. C., 3.

Possibilities, oil, gas: Gregersen, A. I., 1.

Rio Vista field: Frame, R. G., 1.

Salinas Valley poss.: U. S. G. S., 1.

Santa Ana Mts. poss.: U. S. G. S., 2.

Seismograph explor.: Salvatori, H., 1.

Sutter (Marysville) Buttes field: Stalder, W., 1.

Canada, Alaska Highway, Ft. Nelson-Watson Lake poss.: Williams, M. Y., 1.

Canol invs., Mackenzie River area poss.: Hume, G. S., 8.

Developments, 1943-44: Hume, G. S., 4.

Eastern, poss.: Logan, L. J., 1.

Medicine Hat to Vancouver: Hutt, G. M., 14.

Oil and gas fields: Hume, G. S., 2.

Possibilities: Ness, J., 1.

Potential fields: Nickle, C. O., 1.

Pouce Coupé-Peace River area: Crickmay, C. H., 1.

Western, devel.: Hume, G. S., 9.

Capillary-gravity equilibrium in reservoirs: Johnston, N., 2.

Challenge to geology: Denison, A. R., 1.

Clay Basin field, Utah-Wyo.: Dobbin, C. E., 2.

Colorado, Fort Collins anticline: Tripp, R. M., 4.

Northwestern: U. S. G. S., 2.

Rangely field: Bench, B. M., 1;

U. S. G. S., 1.

Selected well logs: Barb, C. F., 2.

Cuba poss.: Quadreny, A., 1.

Development, subsurface methods for oil explor.: Brewer, C., Jr., 1.

Drilling-time data, geol. use: Shepherd, G. F., 2.

East Texas developments, 1943-44; Alexander, C. I., 1.

Florida: Gunter, H., 2.

Florida-south Ga., poss.: Applin, P. L., 1.

Geochemistry and oil explor.: Merritt, J. W., 1.

Georgia poss.: Peyton, G., 2.

Prospecting: Peyton, G., 2.

Gulf Coast, Tex., La., devels. 1943: Leavenworth, P. B., 2.

Natural gas—Continued.

- Illinois, Herrin (No. 6) coal bed poss.:
Payne, J. N., 1.
1943 developments: Bell, A. H., 2.
Inclined water tables, oil reservoirs:
Johnston, N., 2.
Indiana, devel. 1943: Esarey, R. E., 1.
Recent discoveries: Fidler, M. M., 2.
Indications of occurrence: DeGolyer,
E. L., 1.
Kansas, cross-sec., geol. subsurface,
Ford-Wallace Cos.: Edson, F. C., 1.
Developments: Koester, E. A., 1.
Eastern fields: Jewett, J. M., 1.
McLouth gas and oil field: Lee, W., 1.
Marmaton Penn. group: Jewett,
J. M., 2.
1943: Ver Wiebe, W. A., 1-a.
Resources: Landes, K. K., 1.
Western, explor., 1943: Ver Wiebe,
W. A., 2.
Kentucky: McFarlan, A. C., 2.
Developments, 1943: Freeman, L.
B., 2.
Union Co.: Jillson, W. R., 2.
Western, correl. chart: Jillson, W.
R., 1.
Limestones vs. sandstones as reservoir
rocks, Tex., N. Mex.: Bulnes,
A. C., 1.
Louisiana, Cameron Meadows dome:
McGuckin, G. M., 1.
Developments, 1943: Huner, J.,
Jr., 2.
Erath field: Anonymous, 78.
Gulf Coast devels. 1944: Shepherd,
G. F., 3.
Holly field, De Soto Parish: Spofford,
H. N., 1.
Lafitte oil field: Vance, H., 1.
Northern, devels., 1942, 1944: Blan-
plied, B. W., 3; Wilson, R. M., 1.
Oil and gas map: La. Geol. S., 1.
Ruston gas fields: Kamb, H. R., 1.
Southern oil fields: Wallace, W. E.,
Jr., 1.
Louisiana-Arkansas, 1942, devels.:
Blanplied, B. W., 1.
Mexico, Baja Calif., poss.: Antúñez
Echeagaray, F., 3.
Northern, poss.: Kellum, L. B., 1.
Michigan, Berea ss.: U. S. G. S., 1.
Development, 1943-44: Hardenberg,
H. J., 1; Wasson, T., 1.
South-central poss.: U. S. G. S., 1.
Southwest, Traverse group, Dundee
fm.: U. S. G. S., 2.
Sylvania Bois Blanc fms. Dev., poss.:
U. S. G. S., 1.
Michigan Basin, U. S., poss.: U. S.
G. S., 2.
Microörganizms and petroleum hydro-
carbons: ZoBell, C. E., 5.
Migration, accumulation: Van Tuyl,
F. M., 3.

Natural gas—Continued.

- Mississippi: Anonymous, 33, 38.
Developments: Morse, H. M., 1, 2;
Morse, W. C., 4, 5.
Monroe Co.: Vestal, F. E., 1.
Oil and gas fields: Ives, G. O., 2;
Williams, N., 1.
Possibilities: Anonymous, 88.
Resources: Morse, W. C., 5.
Missouri, poss.: Branson, E. B., 3.
Montana, poss.: Carroll, D. L., 2.
Little Rocky Mts. plains poss.: U. S.
G. S., 1.
South-central poss.: U. S. G. S., 2.
Mud analysis logging: Southern, R.
E., 1.
Nebraska, devel. 1943: Reed, E. C., 1.
New Mexico, devels., 1943, 1944: Giesey,
S. C., 1; Kelly, J. M., 1; Winter,
N. B., 1.
Estancias Valley area: U. S. G. S., 1.
Pecos River-Rio Galisteo area: U. S.
G. S., 1.
New York, devels., 1943: Hartnagel, C.
A., 1.
North America, Gulf, Caribbean areas,
gas poss.: Seismog. Serv. Corp., 1.
Resources: Terry, L. F., 1.
Rocky Mtn. area, elec. logging: Dee-
gan, C. J., 5.
North Dakota, stratigraphy and struc-
ture: Laird, W. M., 2.
Northwest Territories, oil and gas poss.,
Mackenzie River Valley: Stewart,
J. S., 1.
Ohio, Barberton ls. mine: Stauffer, C.
R., 1.
Berea sand pools: U. S. G. S., 1.
Developments, 1943: Cottingham, K.,
1.
Mineral resources: Ohio Devel. Pub.
Com., 1; White, G. W., 1.
Second Berea sand: U. S. G. S., 1.
Oil and gas fields, time of origin and
accumulation: Levorsen, A. I., 2.
Oklahoma: Mid-con. Oil and Gas. As-
soc., 1.
Apache field: Scott, V. C., 1.
Developments, 1943-44: Borden, J.
L., 1; Sloan, R. D., 1.
Le Flore Co.: Knechtel, M. M., 1.
Northeast: U. S. G. S., 2.
Velma field: Rutledge, R. B., 1.
West Edmond field: McGee, D. A., 1;
Taylor, F. B., 1.
Ontario, devels., 1941-42: Crozier, A.
R., 1.
Essex Co.: Canada G. S., 1.
Gas fields: Brent, A. A., 2.
Isopach map: Galey, J. F., 1.
Owen Sound, poss.: Caley, J. F., 2.
Oregon, poss.: Weaver, C. E., 3.
Northwest poss.: U. S. G. S., 1.
Origin of: Willcox, O. W., 1.

Natural gas—Continued.

- Paleozoic poss., Colio., N. Mex., Ariz., Utah: Bass, N. W., 1.
 Pennsylvania, res.: Ashley, G. H., 1.
 1943 devel.: Galey, J. T., 1; Simmons, A. C., 1.
 Oil City quad.: Dickey, P. A., 1.
 Possible future oil pools: Sherrill, R. E., 1.
 Petroleum, migration, origin: Plummer, F. B., 4.
 Description of reservoirs: Plummer, F. B., 5.
 Powder River Basin, Wyo.-Mont.: U. S. G. S., 1.
 Quitman fault zone, Ala.-Miss., poss.: U. S. G. S., 1.
 Radioactivity, and drilling: Sawdon, W. A., 1.
 Well-logging: Jackson, W. J., 1.
 Rangely oil field, Colo.: U. S. G. S., 1.
 Reservoirs, subsurface, fundamental data: Donoghue, D., 2.
 Resources and resourcefulness: Cram, I. H., 2.
 Saskatchewan: Edmunds, F. H., 2.
 Development, 1944: Swain, E., 1.
 Kindersley area poss.: Wickenden, R. T. D., 2.
 Possibilities: Edmunds, F. H., 1.
 Source beds: Willcox, O. W., 1.
 South Dakota, Dewey, Corson Cos., poss.: Morgan, R. E., 1.
 Possibilities: Rothrock, E. P., 1.
 Tennessee, Cumberland Plateau fields: Born, K. E., 4.
 Developments, 1943: Born, K. E., 2.
 Possibilities: Born, K. E., 3.
 Terminology, geol., in classn. oil and gas accumulation: Brod, I. O., 1.
 Texas, Anahuac field: Carpenter, C. B., 1.
 Anderson Co.: Whitcomb, B., 2.
 Developments, 1943: Carter, D. V., 1;
 Decker, H., 1; Dewey, R. S., 1;
 Gilmore, R. B., 1; Leavenworth, P. B., 1; Perini, V. C., Jr., 1; Spice, W. H., Jr., 1, 2.
 Houston Co.: Harrington, H., 1.
 Leon Co.: Crow, D., 1.
 Merigale field, Wood Co.: Wright, A. C., 1.
 Moore Co.: Foshage, E. W., 1.
 Panhandle devels., 1944: Wagner, C. R., Jr., 1.
 Picton field, Hopkins Co.: Shelby, T. H., Jr., 1.
 Resources: Sellards, E. H., 2.
 Rise of water levels in wells: Rose, N. A., 2.
 Sand Flat field, Smith Co.: Bartell, I. H., 1.
 Seeligson field: Deegan, C. J., 6.
 South, devels., 1944: Scrafford, J. B., 1.
 South Tyler field, Smith Co.: Weirich, T. E., 1.

Natural gas—Continued.

- Texas—Continued.
 Upper Gulf Coast devels., 1944: Noble, H. A., 1.
 Waters from Frio fm., Gulf Coast: Jessen, F. W., 1.
 West, devels., 1944: Giesey, S. C., 1.
 West-central, N., devels., 1943-44: North Tex. G. Soc., 1.
 West Ranch oil field, Jackson Co.: Bauernschmidt, A. J., Jr., 1.
 Willamar field: Ives, G. O., 1.
 Thermodynamics, gas migrating vertically from oil trap: Tripp, R. M., 2.
 Time of oil and gas accumulation: Levorsen, A. I., 2.
 Uinta Basin, Utah-Colo., hydrocarbons: Barb, C. F., 1.
 And Rangely field, Colo.: Bench, B. M., 1.
 United States, Anadarko Basin: Gibbon, A., 1.
 Appalachian area: Gulley, M. G., 2;
 Lockett, J. R., 1.
 Bureau Mines Ann. rept., 1939: Cat-tell, R. A., 1.
 Developments, 1943-44: OS&L Assoc., 1.
 Eastern Gulf area, oil poss.: Korn-feld, J. A., 1.
 Eastern Interior Basin, 1943-44: Bell, A. H., 1.
 Exploration, drilling, 1944: Lahee, F. H., 3.
 Helium gas fields: Baden, M. W., 1.
 Mid-Continent devels., 1943: Cole, V. B., 1; Koester, E. A., 2.
 Rangely field, Rocky Mts.: Thomas C. R., 1.
 Reserves: DeGolyer, E. L., 3, 4.
 Resources: Fanning, L. M., 1.
 Rocky Mtn. area poss.: Deegan, C. J., 3, 4; Harrison, T. S., 1; Shoenfelt, C. E., 1.
 South: Egloff, G., 1.
 Southeast devels.: Alexander, C. W., 1; Hazzard, R. T., 1.
 Western poss.: U. S. G. S., 2.
 Utah, NE.: U. S. G. S., 2.
 Vertical source in oil and gas accumu-lation: Gardner, J. H., 1.
 Virginia, Rose Hill field poss.: U. S. G. S., 1.
 Washakie Basin, Wyo.-Colo., poss.: U. S. G. S., 1.
 Washington, poss.: Weaver, C. E., 3.
 Well-shot data, interpretation: Dix, C. H., 1.
 West Texas, devels. 1943: Reger, D. B., 1.
 West Virginia, Berea sand pools: U. S. G. S., 1.
 Deep wells: Tucker, R. C., 1.
 Developments 1943: Reger, D. B., 1.
 Kanawha-Jackson-Campbells Creek fields: Headlee, A. J. W., 1.

Natural gas—Continued.

West Virginia—Continued.

- Prospecting : Lafferty, R. C., Jr., 1.
 Rocks, minerals, res. : Erwin, J. P., 1.
 World resources : Meyerhoff, H. A., 1.
 Wyoming fields : La Fleiche, P., 2;
 Pierce, W. G., 1.
 Central, poss., Trias., Juras. : U. S.
 G. S., 2.
 Geology and devel., oil and gas fields :
 La Fleiche, P., 1.
 Lance Creek field : U. S. G. S., 3.
 Little Buffalo Basin field : U. S. G.
 S., 8.
 Map, oil and gas fields : Thomas, H.
 D., 1.
 Maverick Springs area : U. S. G. S., 1.
 Oil and gas fields, test wells : U. S.
 G. S., 1.
 Possibilities : Carroll, D. L., 2.
 Wind River Mts., poss. : U. S. G. S., 1.
 Wyoming-Montana, Elk Basin field : U.
 S. G. S., 4.

Nautiloidea.

- Central America, Tert. : Miller, A. K.,
 12.
 Cynatoceratidae, Cret., N. Am. : Miller,
 A. K., 4.
 Faunas, Kaibab Perm. fm., Ariz. : Nicol,
 D., 2.
 Permian marginal marine strata, U.
 S. : Clifton, R. L., 1.
 Nautilus, Ala. : Vegiard, H. E., 1.
 North America, Dev., classn. : Flower,
 R. H., 3.
 Tertiary : Miller, A. K., 12.
 Texas, Glass Mts., Sierra Diablo, Perm. :
 Miller, A. K., 9.
 Word Perm. fm., fauna and strat.
 correls. : Clifton, R. L., 3.

Nebo oil field, La. : Blanpied, B. W., 3.

Nebraska.

Economic geology.

- Loess : Elias, M. K., 4.
 Petroleum and gas devels., 1943 : Reed,
 E. C., 1.

Historical geology.

- Pleistocene loess : Schultz, C. B., 1.
 Pre-Pennsylvania stratigraphy : Dille,
 G. S., 1.
 Soil profiles in loess : Williams, B. H., 1.

Paleontology.

- Aelurodon saevus group : McGrew,
 P. O., 2.
 Chara, Pliocene, Ash Hollow : Kiener,
 W., 1.
 Corynotrypa, Penn. : Condra, G. E., 4.
 Fauna, Pleist. : McGrew, P. O., 1.
 Macrochelys, Miocene Marsland : Zang-
 erl, R., 3.
 Platycerabos dodsoni for Parabos dod-
 soni, preoccupied : Barbour, E. H.,
 1.
 Pleistocene loess : Schultz, C. B., 1.

Nebraska—Continued.

Petrology.

- Loess : Elias, M. K., 4.
 Pleistocene loess : Schultz, C. B., 1.
 Soil profiles in loess : Williams, B. H., 1.

Physical geology.

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Physiographic geology.

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Nemalite.

- Alaska, Kobuk River Valley : Fackler,
 W. C., 1.
 Quebec, form birefringence : Donnay,
 J. D. H., 1.

Neotocite, Wash., Olympic Penin. : Green,
 S. H., 1.

Neotypes : Simpson, G. G., 3.

Nepheline.

- Ontario, SE. migmatites : Moyd, L.
 S., 1.
 System $\text{NaAlSi}_3\text{O}_8\text{--CaSiO}_3\text{--NaSiO}_3$: Spi-
 vak, J., 2.

Nepheline syenite, Wausau area, Wis. :
 Emmons, R. C., 2.

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 V. P., 1.
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 J. P., 1.
 Comstock Lode area : Calkins, F. C., 1.
 Geochemistry, Goldfield epithermal de-
 posits : Wilson, H. D. B., 1.
 Groom dist., Lincoln Co. : Humphrey,
 F. L., 1.
 Magnesite dist., Currant Creek : Faust,
 G. T., 1.

- Mineralization : Bichan, W. J., 3.
 Mining dists. : Ferguson, H. G., 1.
 Molybdenite, oxidation, Nye Co. :
 Michell, W. D., 1.

- Ore deposits, geology : York, B., 1.
 Quicksilver deposits : Bailey, E. H., 1.
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 Valley : Blanchard, R., 2.

Historical geology.

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 F. L., 1.

- Mineralization : Bichan, W. J., 3.
 Mining dists. : Ferguson, H. G., 1.
 Ore deposits, geology : York, B., 1.
 Quicksilver deposits : Bailey, E. H., 1.
 Rye Patch area : Vitallano, C. J., 1.
 Sloan Hill, Las Vegas area : Deiss,
 C. F., 1.

Mineralogy.

- Clinoclasite : Palache, C., 4.

Nevada—Continued.

Mineralogy—Continued.

- Dihydrate, Mineral Co. : Goudey, H., 1.
 Elko Co. min. collecting : Reeves, A., 1.
 Emmonsite, tellurite of iron : Frondel, C., 1.
 Geochemistry, Goldfield epithermal deposits : Wilson, H. D. B., 1.
 Groom dist., Lincoln Co. : Humphrey, F. L., 1.
 Mackayite, tellurite of iron : Frondel, C., 1.
 Magnesite dist., Currant Creek : Faust, G. T., 1.
 Magnesium in tuff, Currant Creek dist. : Vitaliano, C. J., 2.
 Mineralization : Bichan, W. J., 3.
 Mining dists. : Ferguson, H. G., 1.
 Molybdenite, oxidation, Nye Co. : Mitchell, W. D., 1.
 Ore deposits, geology : York, B., 1.
 Quartz Mtn. siderite : Leonard, F. C., 5.
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Paleontology.

- Cedar, hemlock, Tert. : Beck, G. F., 1.
 Etna Cave, fossil man : Roberts, F. H. H., Jr., 1.
 Nechipparion, 3-toed horse : Stock, C., 3.
 Pelicans, Pleist. : Hall, E. R., 1.

Petrology.

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 Geochemistry, Goldfield epithermal deposits : Wilson, H. D. B., 1.
 Groom dist., Lincoln Co. : Humphrey, F. L., 1.
 Magnesite dist., Currant Creek : Faust, G. T., 1.
 Ore deposits, geology : York, B., 1.
 Rye Patch area : Vitaliano, C. J., 1.

Physical geology.

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 Geochemistry, Goldfield epithermal deposits : Wilson, H. D. B., 1.
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 Ground vibrations : Carder, D. S., 1.
 Lake Mead area earthquake magnitudes : Jones, A. E., 1.
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 Molybdenite, oxidation, Nye Co. : Mitchell, W. D., 1.
 Ore deposits, geology : York, B., 1.
 Quicksilver deposits : Bailey, E. H., 1.
 Rye Patch area, contact metamorphism : Vitaliano, C. J., 1.
 Salt Cave : Harrington, M. R., 1.
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New Brunswick.

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 Musquash area : Alcock, F. J., 4.
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 St. George, Charlotte Co. geol. map : Alcock, F. J., 3.
 Sussex area : Alcock, F. J., 1.
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Petrology.

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Physical geology.

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 Pegmatites, mica-bearing : Cameron, E. N., 1.

Historical geology.

- Mica deposits : Cameron, E. N., 1.

Mineralogy.

- Beryllium in pegmatite wall rocks : Stoll, W. C., 2.
 Mica deposits : Cameron, E. N., 1.

Paleontology.

- Walrus, glacial : Palmer, R. S., 1.

Petrology.

- Beryllium in pegmatite wall rocks : Stoll, W. C., 2.

- Gravity observations : Woollard, G. P., 1.

- Mica deposits : Cameron, E. N., 1.
 Pegmatites, mica-bearing : Cameron, E. N., 1.

Physical geology.

- Gravity observations : Woollard, G. P., 1.

- Mica deposits : Cameron, E. N., 1.

Physiographic geology.

- Terraces, upland, S. : Adams, G. F., 1.

Underground water.

- Ground-water supplies : Stearns, D. E., 1.

Newfoundland.

Economic geology.

- Fluospir, St. Lawrence area : Van Alstine, R. E., 1.

- Rambler min. deposits : Quinn, H. A., 1.

Mineralogy.

- Rambler min. deposits : Quinn, H. A., 1.

Newfoundland—Continued.

Paleontology.

Ceratocephala, Mid. Ord.: Kindle, C. H., 4.

Graptolite, Middle Ord.: Twenhofel, W. H., 4.

Petrology.

Fluorspar, St. Lawrence area: Van Alstine, R. E., 1.

Rambler mine deposits: Quinn.

Physical geology.

Fluorspar, St. Lawrence area: Van Alstine, R. E., 1.

Rambler min. deposits: Quinn, H. A., 1.

Physiographic geology.

Rambler min. deposits: Quinn, H. A., 1.

Newhall-Potrero oil field, Calif.: Hodges, F. C., 1.

New Hampshire.

Economic geology.

Pegmatites: Bannerman, H. M., 1.

Sillimanite: Anonymous, 81.

Monadnock quad.: Billings, K. S. F. L., 1.

Historical geology.

Bellows Falls quad.: Kruger, F. C., 1.

Geologic maps, Bellows Falls, Mt. Washington, Plymouth quads.: Billings, M. P., 3.

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Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.

Pawtuckaway Mts.: Roy, C. J., 1.

Pegmatites: Bannerman, H. M., 1.

Sillimanite, Monadnock quad.: Billings, K. S. F. L., 1.

Mineralogy.

Amethyst, smoky quartz, topaz: Verrow, H. J., 1.

Chrysoberyl, Wakefield area: Chayes, F., 1.

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Pegmatites: Bannerman, H. M., 1.

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Uraninite, Ruggles mine: Shaub, R. M., 1.

Paleontology.

Pollen analyses, peat bogs: Krauss, R. W., 1.

Petrology.

Bellows Falls quad.: Kruger, F. C., 1.

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Magma ser., Paleozoic, radioactivity: Billings, M. P., 4.

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Mt. Washington area: Billings, K. S. F. L., 2.

Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.

New Hampshire—Continued.

Petrology—Continued.

Pawtuckaway Mts.: Roy, C. J., 1.

Pegmatites: Bannerman, H. M., 1.

Sillimanite, Monadnock quad.: Billings, K. S. F. L., 1.

Physical geology.

Bellows Falls quad.: Kruger, F. C., 1.

Igneous intrusions: Billings, M. P., 2.

Magma ser., Paleozoic, radioactivity: Billings, M. P., 4.

Magmatic contrasts, Winnepesaukee area: Quinn, A. W., 2.

Monadnock quad.: Billings, K. S. F. L., 1.

Mt. Washington area: Billings, K. S. F. L., 2.

Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.

Pawtuckaway Mts.: Roy, C. J., 1.

Pegmatites: Bannerman, H. M., 1.

Physiographic geology.

Monadnock quad.: Billings, K. S. F. L., 1.

New Hope oil field, Tex.: Stehr, R. A., 1.

New Jersey.

Economic geology.

Copper mines, mining: Woodward, H. P., 1.

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Historical geology.

Cape May canal area: Richards, H. G., 3.

Copper mines, mining: Woodward, H. P., 1.

Limestone in Newark ser., Granton quarry, North Bergen: Kindle, C. H., 1.

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Schooley peneplain: Strahler, A. N., 3.

Mineralogy.

Arsenides, nickel, cobalt, Franklin: Holmes, R. J., 1.

Borosilicates in diabase, Lambertville: Tomlinson, W. H., 1.

Copper mines, mining: Woodward, H. P., 1.

New Brunswick: Hawkins, A. C., 3.

Duffrenite, related minerals, Monmouth Co.: Hawkins, A. C., 2.

Geode crystal, Sowerbutt quarry: Anonymous, 84.

Great Notch mineral excursion: Zodac, P., 2.

Greensands: Zodac, P., 3.

Hyalite, Palisades area: Butler, S. B., 1.

Jasper: Zodac, P., 4.

Loellingite: Peacock, M. A., 2.

Stilbites: Anonymous, 61.

Tephroite, glaucocroite, willemite, Franklin Furnace: O'Daniel, H., 1.

Zincite, Franklin Furnace: Henderson, E. P., 3.

Paleontology.

Belemnites, New Egypt: Anonymous, 72.

Bog sediments, Pine Barrens: Potzger, J. E., 3.

New Jersey—Continued.

Paleontology—Continued.

Cape May canal area: Richards, H. G., 3.

Diatomaceae, Miocene: Patrick, R. M., 1.

Faunas, Upper Camb.: Howell, B. F., 7.

Macrofossils, Brandywine Lighthouse: Richards, H. G., 2.

Pine Barrens, Pleist. refugium: Potzger, J. E., 3.

Reptilia, check list: Rapp, W. F., Jr., 1.
Corrections: Colbert, E. H., 2.

Petrology.

Cape May canal area: Richards, H. G., 3.
Copper mines, mining: Woodward, H. P., 1.

Diabase cut, Edgewater: Zodac, P., 6.
Geode crystal, Sowerbutt quarry: Anonymous, 84.

Limestone in Newark ser., Granton quarry, North Bergen: Kindle, C. H., 1.

Quartz crystals, Herkimer Co.: Hobbs, E. E., Sr., 1.

Physical geology.

Copper mines, mining: Woodward, H. P., 1.

Martinsburg slate: Broughton, J. G., 2.
Middlesex Co.: Barksdale, H. C., 1.

Schooley peneplain: Strahler, A. N., 3.

Physiographic geology.

Cape May canal area: Richards, H. G., 3.

Underground water.

Ground water, Middlesex Co.: Barksdale, H. C., 1.

New Mexico.

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Economic geology.

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Developments, oil and gas, 1943-44: Glessey, S. C., 1; Winter, N. B., 1.

Estancia Valley area: U. S. G. S., 1.

Harding pegmatites, Taos Co.: Jahns, R. H., 3.

Iron, Tert. in collapse breccia: Kelley, V. C., 1.

Langbeinite: Johnson, B. L., 1.

Limestones vs. ss. as reservoir rocks:

Bulnes, A. C., 1.
Manganiferous iron ore deposits, Silver City: Entwistle, L. P., 1.

Pecos River, Rio Galisteo area oil poss.: U. S. G. S., 1.

Permian Ochoa ser., Delaware Basin: Adams, J. E., 2.

Petroleum and gas devel., 1943: Kelly, J. M., 1.

Polyhalite deposits: Conley, J. E., 1.
Red River min. area: Sidwell, R., 1.

Ribbon rocks, beryllium tactite, Iron Mtn.: Jahns, R. H., 2.

New Mexico—Continued.

Historical geology.

Beryllium, tungsten, Iron Mtn. dist.: Jahns, R. H., 1.

Colorado group, Upper Cret.: Rankin, C. H., Jr., 1.

Curry, Roosevelt Cos.: Theis, C. V., 1.

Devonian: Stevenson, F. V., 1.

Estancia Valley area: U. S. G. S., 1.

Fusulinidae, Penn. distrib., Sierra Nacimiento: U. S. G. S., 2.

Lea Co.: Nye, S. S., 1.

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Silver City: Entwistle, L. P., 1.

Mississippian fms., SW.: Laudon, L. R., 2.

Paleozoic, Upper, NE.: Read, C. B., 1.

Pecos River-Rio Galisteo area: U. S. G. S., 1.

Permian Ochoa ser., Delaware Basin: Adams, J. E., 2.

Ribbon rocks, beryllium tactite, Iron Mtn.: Jahns, R. H., 2.

Rio Puerco area, Tert., Quat.: Wright, H. E., Jr., 1.

Mineralogy.

Bastnäsite, Gallinas Mts.: Glass, J. J., 3.

Beryllium, tungsten, Iron Mtn. dist.: Jahns, R. H., 1.

Bismuth minerals in pegmatites: Heinrichs, E. W., 2.

Bromine in carnallite, sylvite: Lindberg, M. L. L., 3.

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Helvite, identification: Gruner, J. W., 3.

Helvite, danalite, Iron Mtn. area: Glass, J. J., 2.

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Manganiferous iron ore, Boston Hill: Entwistle, L. P., 2.

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Puente-Ladron aerolite: Nininger, H. H., 2.

Red River min. area: Sidwell, R., 1.

Ribbon rocks, beryllium tactite, Iron Mtn.: Jahns, R. H., 2.

Staurolite: Branson, O. T., 1.

Paleontology.

Bryozoa, Upper Dev.: Fritz, M. A., 1.

Colorado group, Upper Cret.: Rankin, C. H., Jr., 1.

Corals, Lower Penn.: Moore, R. C., 6.

Devonian: Stevenson, F. V., 1.

Fusulinidae, Penn. distrib., Sierra Nacimiento: U. S. G. S., 2.

Fusulinids, Penn.: Thompson, M. L., 6.

Schizophoria, Penn.: Northrop, S. A., 1.

Petrology.

Colorado group, Upper Cret.: Rankin, C. H., Jr., 1.
Estancia Valley area: U. S. G. S., 1.

New Mexico—Continued.

Petrology—Continued.

- Limestones vs. ss. as reservoir rocks:
Bulnes, A. C., 1.
- Manganiferous iron ore, Silver City:
Entwistle, L. P., 1.
- Paleozoic, Upper, NE.: Read, C. B., 1.
- Permian Ochoa ser., Delaware Basin:
Adams, J. E., 2.
- Ribbon rocks, beryllium tactite, Iron
Mtn.: Jahns, R. H., 2.
- Sands, modern sources, Rio Grande
Valley: Rittenhouse, G., 3.

Physical geology.

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Jahns, R. H., 1.
- Estancia Valley area: U. S. G. S., 1.
- Harding pegmatites, Taos Co.: Jahns,
R. H., 3.
- Iron, Tert. in collapse breccia: Kelley,
V. C., 1.
- Manganiferous iron ore deposits, Bos-
ton Hill: Entwistle, L. P., 2.
- Silver City: Entwistle, L. P., 1.
- Paleozoic, Upper, NE.: Read, C. B., 1.
- Pecos River-Rio Galisteo area: U. S.
G. S., 1.
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Adams, J. E., 2.
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Mtn.: Jahns, R. H., 2.
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H. E., Jr., 1.
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Valley: Rittenhouse, G., 3.
- Zuni Dam: Eckel, E. B., 1.

Physiographic geology.

- Curry, Roosevelt Cos.: Theis, C. V., 1.
- Rio Puerco area, Tert., Quat.: Wright,
H. E., Jr., 1.

Underground water.

- Ground water, Curry, Roosevelt Cos.:
Theis, C. V., 1.
- Lea Co.: Nye, S. S., 1.
- Mimbres Valley: White, W. N., 1.
- Manganiferous iron ore, Silver City:
Entwistle, L. P., 1.
- Rio Puerco area, Tert., Quat.: Wright,
H. E., Jr., 1.
- Roswell artesian basin: Fiedler, A.
G., 1.

New York.

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- Catskill quad., Camb., Ord.: Ruede-
mann, R., 6.
- Coxsackie quad.: Goldring, W., 3.

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Appalachian Geol. Soc., 1.
- Catskill quad.: Newland, D. H., 1.
- Ceramic materials: Broughton, J. G., 3.
- Coxsackie quad.: Goldring, W., 3.
- Gouverneur talc dist.: U. S. G. S., 5.
- Iron mines, Adirondack area: Anderson,
S. A., 1.

New York—Continued.

Economic geology—Continued.

- Petroleum and gas devel., 1943: Hart-
nagel, C. A., 1.
- Titaniferous magnetite, Lake Sanford
area: Stephenson, R. C., 1.
- Wollastonite, Willsboro: Broughton, J.
G., 1.

Historical geology.

- Adirondack area: Balk, R., 1.
- Carlisle Center fm.: Goldring, W., 1.
- Catskill quad.: Ruedemann, R., 5, 6.
- Coxsackie quad.: Goldring, W., 3.
- Fordham gneiss, correl., New York City:
Fluhr, T. W., 2.
- Genesee group: Grossman, W. L., 1.
- Gneiss-Inwood ls. contacts, Westchester
Co.: Fluhr, T. W., 1.
- Gouverneur talc dist.: U. S. G. S., 5.
- Hudson Valley graptolite shs. and nega-
tive gravity anomalies: Ruede-
mann, R., 3.
- Manhattan Borough subsurface: Mur-
phy, J. J., 1.
- Ostracoda, Lower Dev. zonal: Swartz,
F. M., 1.
- Paleozoic age of New York City rocks:
Kindle, C. H., 5.
- Pegmatite dist., Bedford: Fluhr, T. W.,
3.
- Salamanca, re-entrant drift correl.:
MacClintock, P., 1.
- Titaniferous magnetite, Lake Sanford
area: Stephenson, R. C., 1.
- Wollastonite, Willsboro: Broughton, J.
G., 1.

Mineralogy.

- Adirondack area: Balk, R., 1.
- Garnets, Gore Mtn.: Lisle, T. O., 4.
- Gouverneur talc dist.: U. S. G. S., 5.
- Iron mines, Adirondack area: Ander-
son, S. A., 1.
- Monroe, Bear Mtn. Park min. locs.:
Ayres, V. L., 2.
- Titaniferous magnetite, Lake Sanford
area: Stephenson, R. C., 1.
- Wollastonite, Willsboro: Broughton,
J. G., 1.

Paleontology.

- Catskill quad.: Ruedemann, R., 5, 6.
- Coxsackie quad.: Goldring, W., 3.
- Colpodexylon, Dev. lycopod: Banks, H.
P., 1.
- Eudolatites, Sil.: Howell, B. F., 8.
- Eurypterid, Deepkill sh.: Flower, R.
H., 6.
- Fish, Upper Dev., check list: Carter, A.
L., 1.
- Genesee group: Grossman, W. L., 1.
- Hexactinellida, Dev.: Reimann, I. G., 5.
- Hudson Valley graptolite shs. and
negative gravity anomalies: Ruede-
mann, R., 3.
- Meristella, color patterns: Reimann, I.
G., 2.

New York—Continued.

Paleontology—Continued.

- Ostracoda, Lower Dev. zonal: Swartz, F. M., 1.
 Paleozoic fossil homonyms: Flower, R. H., 2.
 Scaplecodonts, Sil. Manitoulin dolomite: Eller, E. R., 1.
 Snail, Dev., Livingston Co.: Howell, B. F., 13.
 Sponges, Hamilton lyssacine: Reimann, I. G., 5.
 Terataspis thorax: Reimann, I. G., 1.
 Thamnocrinus, Dev. crinoid: Goldring, W., 2.

Petrology.

- Adirondack area: Balk, R., 1.
 Catskill quad.: Ruedemann, R., 5, 6.
 Fordham gneiss, correl., New York City: Fluhr, T. W., 2.
 Genesee group: Grossman, W. L., 1.
 Gneiss-Inwood ls. contacts, Westchester Co.: Fluhr, T. W., 1.
 Iron mines, Adirondack area: Anderson, S. A., 1.
 Manhattan Borough subsurface: Murphy, J. J., 1.
 Microlithologies, use: Alling, H. L., 2.
 Pegmatite dist., Bedford: Fluhr, T. W., 3.
 Peridotite dike, altered, Syracuse: Maynard, J. E., 1.
 Salamanca, re-entrant drift correl.: MacClintock, P., 1.
 Titaniferous magnetite, Lake Sanford area: Stephenson, R. C., 1.

Physical geology.

- Adirondack area: Balk, R., 1.
 Catskill quad.: Ruedemann, R., 5, 6.
 Cornwall-Massena earthquake, 9/5/44: Hodgson, E. A., 3.
 Cocksackie quad.: Goldring, W., 3.
 Finger Lakes dist., glacial geol.: Churcher, P., 1.
 Fordham gneiss, correl., New York City: Fluhr, T. W., 2.
 Gouverneur talc dist.: U. S. G. S., 5.
 Hudson Valley graptolite shs. and negative gravity anomalies: Ruedemann, R., 3.
 Manhattan Borough subsurface: Murphy, J. J., 1.
 Nested folds: Chadwick, G. H., 3.
 Peridotite dike, altered, Syracuse: Maynard, J. E., 1.

- Titaniferous magnetite, Lake Sanford area: Stephenson, R. C., 1.

Physiographic geology.

- Catskill quad.: Ruedemann, R., 5.
 Glacial geology: Cook, J. H., 2.
 Cocksackie quad.: Goldring, W., 3.
 Glacial drainage diversion, by glacier margins: Engeln, O. D. von, 1.
 Cayuta Lake: Engeln, O. D. von, 1.
 Manhattan Borough subsurface: Murphy, J. J., 1.

New York—Continued.

Physiographic geology—Continued.

- Salamanca, re-entrant drift. correl.: MacClintock, P., 1.

Underground water.

- Ground-water levels and precipitation, correl., Long Is.: Jacob, C. E., 1.
 Long Is., W.-cent., water table: Jacob, C. E., 2.
 Suffolk County wells: Roberts, C. M., 1.
 Wells in Kings County: Leggette, R. M., 2.

Nickel.

- Alaska, Spirit Mtn. prospect poss.: Kingston, J., 1.
 Bohemia Basin, Yakobi Is. deposit: Walton, M. S., Jr., 1.
 British Columbia, Alaska Highway area min. poss.: Thomas, L. C., 1.
 Canada, Lytton to Vancouver, poss.: Hutt, G. M., 12.
 Mineral industry: Moore, E. S., 4.
 Sulphide oxidation: Michener, C. E., 1.
 Meteorites, tests for: Anonymous, 68, 69, 95.
 New Jersey, Franklin arsenides: Holmes, R. J., 1.
 North America, mines: Townsend, H., 1.
 Northwest Territories: Jolliffe, A. W., 2.
 Ontario, NW. prosp. poss.: Horwood, H. C., 4.
 Saskatchewan, N.: Anonymous, 105.
 United States, NW., weathering profiles: Allen, V. T., 3.
 Washington, Chelan deposit: Patty, E. N., 2.

- Nickel sulphides, primary, oxidation of: Michener, C. E., 1.

Nodules.

- California, agate-filled nodules, Chuck-walla Mts.: Schweitzer, C. G., 1.
 Berkeley area agates: Bolander, L. P., Jr., 1.
 Blue agate: Schweitzer, C. G., 2.
 Pennsylvania, high-alumina clays: Foose, R. M., 3.
 Plants, Mazon Creek, Ill.: Jannsen, R. E., 2.
 Tennessee, barite, NE. Monroe Co.: Anonymous, 82.

Nomenclature.

- Alaskoceras sewardense for Plectoceras sewardense: Miller, A. K., 7.
 Ammobaculites detonensis for A. variabilis: Tappan, H. N., 1.
 Ankareh fm., Utah: Williams, J. Stewart, 1.
 Archimedes (Hall), revision: Easton, W. H., 4.
 Arizona, Crater Mound vs. Meteor Crater: Darton, N. H., 1.
 Augite vs. pigeonite, Hawaii: Hess, H. H., 1.
 Auloporidae: Elias, M. K., 1.

Nomenclature—Continued.

- Biological names and terms, source-book : Brown, R. W., 2.
- Biscorbis arizonica* for *Bicorbula arizonica* : Condra, G. E., 6.
- Blancan deposits, U. S. : Elias, M. K., 2.
- Bryozoa, Mid-continent, U. S., Penn., Perm. : Moore, R. C., 5.
- California, Fresno, Merced, Stanislaus Cos. : U. S. G. S., 2.
- Cambrian, NE. Iowa : Schultdt, W. C., 1.
- Carlisle Center fm. for Sharon Springs fm., N. Y. : Goldring, W., 1.
- Carolina gneiss : Kesler, T. L., 1.
- Central Am., Cret. fms. correls. : Imlay, R. W., 1.
- Colorado, Morrison fm., Colorado Plateau area : Stokes, W. L., 1.
- West-central and NW. fms. : Brill, K. G., Jr., 1.
- Coniferous woods, Tert., W. N. Am. : Beck, G. F., 5.
- Crephicephalus edwardsi* for *C. oweni* : Raasch, G. O., 1.
- Cretaceous, Tyler Basin, Tex. : Bailey, T. L., 1.
- Cythereis pipkinensis* for *C. hanna* : Stephenson, M. B., 4.
- Cytidocrinus* for *Cyrtocrinus* Kirk : Kirk, E., 2.
- Dana's System of mineralogy : Fleischer, M., 1.
- Devonian, SE. Mo. : Croneis, C. G., 1.
- Southern Illinois : Weller, J. M., 1.
- Emma Creek Pleist. fm. Kans. : Frye, J. C., 1.
- Galena, origin : Bandy, M. C., 1.
- Glossary of speleology : Muma, M. H., 1.
- Glycymeridae, Pelecypoda, genera, subgenera : Nicol, D., 4.
- Goldius* vs. *scutellum* : Miller, A. K., 8.
- Ground moraine definition : Cook, J. H., 1.
- Gulf Hammock fm. vs. Avon Park fm., Fla. : Ericson, D. B., 1.
- Hederelloidea* : Elias, M. K., 1.
- Huanghoceras bryani* for *H. percostatum* : Young, J. A., Jr., 1.
- Iowa, Pleist. : Chamberlin, R. T., 1.
- Lingula clarkel* for *L. elliptica* : Flower, R. H., 2.
- Mclearnites for *Mclearnia* : Caster, K. E., 4.
- Magmatic and post-magmatic processes, terminology : Shand, S. J., 2.
- Man, fossil, names : Evans, E. G., 1.
- Map symbols, terminology : Wright, J. K., 2.
- Mexico, Cret. fm. correls. : Imlay, R. W., 1.
- Microfacies : Campbell, I., 1.
- Micropynodon* for *Pynomicrodon* : Hibbard, C. W., 5.
- Mineral names : Van Leuven, E. P., 2.
- Mississippian, N. Am. : Cheney, M. G., 1.
- Modiolopsis clintonensis* for *M. ovata* : Flower, R. H., 2.

Nomenclature—Continued.

- Mollusca, Cenozoic : Clark, B. L., 1.
- Moorefield fm., Ark. : Gordon, M., Jr., 1.
- Mortonoceras vespertinum* (Morton), genoholotype : Adkins, W. S., 1.
- Neotypes : Simpson, G. G., 3.
- New Mexico Dev. : Stevenson, F. V., 1.
- Nodosaria graysonensis* for *N. bifurcata* : Tappan, H. N., 1.
- North America, Missn., Penn. : Cheney, M. G., 1.
- Geosynclines, classn. : Kay, G. M., 7.
- Odontogryphaea, for *Gryphaea*, Cret., Tex. : Adkins, W. S., 2.
- Ontario, Sudbury-Bruce ser. relations : Fairbairn, H. W., 1.
- Ore, mineral : Fleener, F. L., 2.
- Ostreidae, nomenclatorial synopsis : Stenzel, H. B., 6.
- Pachycephalosauridae*, dome-headed dinosaurs : Sternberg, C. M., 2.
- Paleozoic fossil homonyms : Flower, R. H., 2.
- Parmicorbula* for *Corbula neaeroides* : Vokes, H. E., 1.
- Parrosaurus* for *Neosaurus* Gilmore : Gilmore, C. W., 4.
- Pennsylvania, N. Am. : Cheney, M. G., 1.
- Pervinqueria* cf. *romeri* Haas is *Prionocyclus* : Haas, O., 1.
- Phylogenetic terms, analysis, redefinitions : Haas, O., 5.
- Platycerabos dodsoni* for *Parabos dodsoni*, preoccupied : Barbour, E. H., 1.
- Pleurotoma cabinne* for *P. (Bela) rebecca* : Caster, K. E., 4.
- Port Orford, Cape Blanco beds, Oreg. coast : Baldwin, E. M., 1.
- Prionocyclus wyomingensis* type, U. S. : Haas, O., 4.
- Prionotropis woollgari* type, U. S. : Haas, O., 4.
- Proculus* in *Foraminifera* : Schenck, H. G., 1.
- Pterinea nylander* for *P. Briska* : Flower, R. H., 2.
- Pyroxene* vs. *augite* : Macdonald, G. A., 5.
- Raia stellaris* for *R. texana* Lerighe, fossil ray, tex. : Baughman, J. L., 1.
- Red Wash fm. for Ankareh fm., Utah : Williams, J. Stewart, 1.
- Roan gneiss : Kesler, T. L., 1.
- Rock colors : DeFord, R. K., 1.
- Ruddell sh., Ark. : Gordon, M., Jr., 1.
- Schizodus*, authorship and genotype : Nicol, D., 3.
- Seismology, definitions, nomenclature : Woodruff, G. B., 1.
- Serratocerithium*, Paleocene, Calif. : Compton, R. R., 1.
- Species concept in petrology : Shand, S. J., 1.
- Speleology glossary : Muma, M. H., 1.

Nomenclature—Continued.

- Spores, Paleozoic, synopsis, generic definition: Schopf, J. M., 2.
 Stones River equivalents, Appalachian area: Cooper, B. N., 2.
 Terminology, geol., in classn. oil and gas accumulation: Brod, I. O., 1.
 Texas, Amahuac Oligocene fm.: Ellisor, A. C., 1.
 Tyler Basin, Cret.: Bailey, T. L., 1.
 United States, S. Appalachians, Chilhowee group, Ocoee ser.: Stose, G. W., 1.
 Southern Appalachians pre-Curds-ville: Cooper, B. N., 5.
 Utah, NE. Trias. rocks: Williams, J. Stewart, 1.
 Virgulina naheolensis for V. alabamensis, Ala.: Cushman, J. A., 4.
 West Indies, Greater Antilles, Cret. fms. correl.: Imlay, R. W., 1.
 Nomograph in map making: Harrison, R. E., 1.
 Nontronite.
 Clay, migration effect, minerals, hydrous aluminum oxides: Allen, V. T., 2.
 United States, Pacific NW.: Allen V. T., 6.
 North America.

Economic geology.

- Aerogeology in mineral explor.: Levings, W. S., 1.
 Alaska Military Highway: Lord, C. S., 2.
 Coal, oil shale, oil sand res.: Heald, H. C., 2.
 Continental shelf poss.: Gross, H. E., 2.
 Corundum: Metcalf, R. W., 1.
 Electrical logging, Rock Mtn. area: Deegan, C. J., 5.
 Gold vein deposits, mechanism, environment: White, W. H., 1.
 Graphite, crucible grade: Gwinn, G. R., 1.
 Gulf, Caribbean oil zones: Seismog. Serv. Corp., 1.
 Marine oil poss.: Gross, H. E., 2.
 Mines, peculiar prospects: Townsend, H., 1.
 Natural gas res.: Terry, L. F., 1.
 Northwest region: Anonymous, 11.
 Petroleum reserves and statistics: Gester, G. C., 1.
 From coal and shale: Wilson, R. E., 1.
 Resources: Pratt, W. E., 1. 4.
 Pre-Cambrian iron fms.: Bruce, E. L., 2.
 Radioactivity, organic content Paleozoic shs.: Beers, R. F., 2.
 Silver ores, tetrahedrite: Michell, W. D., 2.
 Tantalite occurrence: Baker, J. S., 1.
 World iron-ore map: Mikami, H. M., 1.
 Zones, petrol., Caribbean, Gulf of Mexico: Anonymous, 107.

North America—Continued.

Historical geology.

- Alaska Highway prog. rept.: Howell, J. V., 1.
 Military Highway: Lord, C. S., 2.
 Atlantic Coastal Plain, Cenozoic correl.: Richards, H. G., 4.
 Cambrian fms., correl.: Howell, B. F., 3.
 Correlations, marine Cenozoic fms., west: Weaver, C. E., 2.
 Drepanocladus and Pleist. glaciation: Wynne, F. E., 1.
 Geosynclines in continental devel.: Kay, G. M., 1.
 Classification: Kay, G. M., 7.
 Gulf, Caribbean oil zones: Seismog. Serv. Corp., 1.
 Historical geology: Hussey, R. C., 1.
 Jurassic fms., Gulf area: Imlay, R. W., 7.
 Mississippian, Penn. rocks, classn.: Cheney, M. G., 1.
 Paleogeographic, palinspastic maps: Kay, G. M., 4.
 Palinspastic, paleogeog. maps: Kay, G. M., 4.
 Pennsylvanian fms., correl.: Moore, R. C., 3.
 Pre-Cambrian iron fms.: Bruce, E. L., 2.
 Sedimentation, Gulf Coast Tert.: Richardson, C. B., 1.
 Tectonic devel. E. edge of Pacific: Stille, H. W., 1.
 Wisconsin glacial maxima, correl.: Antevs, E. V., 3.
 Zones, petrol., Caribbean, Gulf of Mexico: Anonymous, 107.

Mineralogy.

- Alcan Highway prospects: Thomas, L. O., 2.
 Alaska Military Highway: Lord, C. S., 2.
 Calcite, Lake Superior copper area, crystallog.: Palache, C., 2.
 Chromites, composition: Stevens, R. E., 1.
 Coronas, and coronites: Shand, S. J., 3.
 Corundum: Metcalf, R. W., 1.
 Gold vein deposits, mechanism, environment: White, W. H., 1.
 Graphite, crucible-grade: Gwinn, G. R., 1.
 Meteorites: Stocking, H. E., 1.
 Mines, peculiar prospects: Townsend, H., 1.
 Pre-Cambrian iron fms.: Bruce, E. L., 2.
 Radioactivity, organic content, Paleozoic shs.: Beers, R. F., 2.
 Silver ores, tetrahedrite: Michell, W. D., 2.
 Tantalite occurrence: Baker, J. S., 1.
 Thorium-uranium rations, rocks, minerals: Keevil, N. B., 2.
 Uranium: Vanderwilt, J. W., 1.

North America—Continued.

Palaeontology.

- Algae, calcareous : Johnson, J. H., 1.
 American Indians, origin : Wissler, C., 1.
 Archimedes (Hall) revision : Condra, G. E., 1.
 Artifacts with fossil mammal bones, earliest account : Montagu, M. F. A., 1.
 Atlantic Coastal Plain, Cenozoic corals : Richards, H. G., 4.
 Baggina, Tert. : Cushman, J. A., 4.
 Biometrical analysis, molluscan assemblages : Schenck, H. G., 2.
 Blastoida : Cline, L. M., 1.
 Devonian : Reimann, I. G., 4.
 Brachiopoda : Cooper, G. A., 1.
 Cenozoic, W. : Hertlein, L. G., 2.
 Campophyllum, revision : Easton, W. H., 1.
 Carnivores, Miocene, Great Plains : Riggs, S. E., 2.
 Cephalopoda, Camb. longicones, nautilicones, brevicones : Ulrich, E. O., 1.
 Chalicotheres as biol. types : Borissiak, A. A., 1.
 Charophyta : Peck, R. E., 1.
 Concretions containing fossils : Edwards, S. C., 1.
 Conodonts : Branson, E. B., 1.
 Corbulidae, supraspecific groups : Vokes, H. E., 4.
 Crinoidea : Moore, R. C., 2.
 Camarate, Dev. : Kirk, E., 6.
 Cybele, Ord. : Howell, B. F., 10.
 Drepanocladus and Pleist. glaciation : Wynne, F. E., 1.
 Early man : Sauer, C. O., 1.
 Early man and mastodon : Eiseley, L. C., 1.
 Flora, Eocene, of SE. : Berry, E. W., 2.
 Foraminifera : Cushman, J. A., 1, 4.
 Fusulinidae, evolution : Dunbar, C. O., 2.
 Gastropoda, Paleozoic : Knight, J. B., 1.
 General : Hussey, R. C., 1.
 Glycymeridae, Pelecypoda, genera, subgenera : Nicol, D., 4.
 Index fossils : Caster, K. E., 2 ; Shimer, H. W., 1.
 Insecta : Carpenter, F. M., 1, 2.
 Limestones formed by Foraminifera : Johnson, J. H., 9.
 Man, geologic antiquity : Bryan, K., 2.
 Mastodon and early man : Eiseley, L. C., 1.
 Mollusca, biometrical analysis of assemblages : Schenck, H. G., 2.
 Cenozoic, speciation, correl. of : Clark, B. L., 1.
 Nautiloidea, Cret. Cymatoderatidae : Miller, A. K., 4.
 Devonian, classn. : Flower, R. H., 3.
 Tertiary : Miller, A. K., 12.
 Nodobaculiariella : Cushman, J. A., 4.

North America—Continued.

Palaeontology—Continued.

- Octactinellids, Mid. Dev. : Reimann, I. G., 3.
 Odontogryphaea-Flemingostrea oyster stock : Stenzel, H. B., 7.
 Palaeomerycidae, cervoids, Tert. : Stirton, R. A., 2.
 Paleo-Indians : Roberts, F. H. H., Jr., 2.
 Plants, Mesozoic, Cenozoic, cat. : LaMotte, R. S., 1.
 Pliocene floras of West : Chaney, R. W., 3.
 Pliotaxidae, Pliocene badger : Hall, E. R., 2.
 Radio activity, organic content Paleozoic shs. : Beers, R. F., 2.
 Rectuvigerina, Tert. : Mathews, R. D., 1.
 Reussellinae, Cret., Tert. : Cushman, J. A., 4.
 Silicified plant remains, Carb., Cret., Tert. : Arnold, C. A., 2.
 Sowerbyella, Ord. : Sinclair, G. W., 4.
 Thamniscus, Perm., Penn. : Condra, G. E., 8.
 Trees and history : Chaney, R. W., 7.
 Trilobites : Ball, J. R., 1.
 Typhinae gastropods, Tert. : Keen, A. M., 1.
 Woods, Tert. coniferous, W. : Beck, G. F., 5.
 Xiphosurans, Carb., Perm. : Raymond, P. E., 2.

Petrology.

- Concretions : Edwards, S. C., 1.
 Jurassic fms., Gulf area : Imlay, R. W., 7.
 Limestones formed by Foraminifera : Johnson, J. H., 9.
 Mississippian, Penn. rocks, classn. : Cheney, M. G., 1.
 Recent sediments, Gulf Coast : Rolshausen, F. W., 1.

Physical geology.

- Geosynclines in continental devel. : Kay, G. M., 1.
 Glacial erosion : Crosby, I. B., 2.
 Gold vein deposits, mechanism, environment : White, W. H., 1.
 Gulf, Caribbean oil zones : Seismog. Serv. Corp., 1.
 Paleogeographic, palinspastic maps : Kay, G. M., 4.
 Palinspastic, paleogeog. maps : Kay, G. M., 4.
 Radioactivity, organic content, Paleozoic shs. : Beers, R. F., 2.
 Sedimentation, Gulf Coast, Tert. : Richardson, C. B., 1.
 Seismicity of the earth : Gutenberg, B., 8.
 Tectonic devel. E. edge of Pacific : Stille, H. W., 1.
 Variations in radioactivity data : Keovil, N. B., 1.

North America—Continued.

Physiographic geology.

Alaska Military Highway: Lord, C. S., 2.

Areas glaciated during glacial ages: Flint, R. F., 4.

Desert features: Cummings, E. R., 2.

Drepanocladus and Pleist. glaciation: Wynne, F. E., 1.

Geosynclines, classn.: Kay, G. M., 7.

Glacial erosion: Crosby, I. B., 2.

Glaciers: Matthes, F. E., 1.

Iowan, Tazwell drifts and ice sheet: Flint, R. F., 3.

Late-glacial clay chronology: Antevs, E. V., 1.

Periglacial climates and phenomena: Taber, S., 2.

Post-Pleistocene deglaciation, reglaciation: Matthes, F. E., 2.

Wisconsin glacial maxima, correl.: Antevs, E. V., 3.

Underground water.

Ground water: Lohman, S. W., 1.

North Carolina.

Brown Mtn. light, origin: Mansfield, G. R., 1.

Resources, general: Anonymous, 9.

Economic geology.

Building stones, W.: Moneymaker, B. C., 2.

Manganese deposits: White, W. A., 4.

Mica: Murdock, T. G., 1.

In pegmatites: Olson, J. C., 1.

Petroleum, poss.: Hill, W. B., 1.

Resources, general: Anonymous, 9.

Tungsten: Munds, W. H., 1.

Townsville area: White, W. A., 3.

Historical geology.

Cape Fear Penin.: Wells, B. W., 1.

Geologic map: N. Car. Dept. Conserv. Devel., 1.

Metamorphic rocks, correl., Carolina Piedmont: Kesler, T. L., 1.

Miocene: Gardner, J. A., 2; Mansfield, W. C., 1.

Monazite, Spruce Pine: Bliss, A. D., 1.

Pliocene: Gardner, J. A., 2; Mansfield, W. C., 1.

Tungsten deposit, Townsville area: White, W. A., 3.

Well logs, Coastal Plain: Mundorff, M. J., 1.

Mineralogy.

Manganese deposits: White, W. A., 4.

Monazite, Spruce Pine: Bliss, A. D., 1.

Pegmatites, composite, Franklin-Sylvanica dist.: Heinrich, E. W., 1.

Resources, gen.: Anonymous, 9.

Tungsten: Munds, W. H., 1.

Townsville area: White, W. A., 3.

Paleontology.

Miocene: Mansfield, W. C., 1.

Mollusca, Eocene Santee ls.: Harbison, A., 1.

Ostracoda, Miocene, Duplin marl: Edwards, R. A., 1.

North Carolina—Continued.

Paleontology—Continued.

Pelecypoda, Miocene, Pliocene: Gardner, J. A., 2.

Pliocene: Mansfield, W. C., 1.

Petrology.

Building stones, W.: Moneymaker, B. C., 2.

Chert, Great Smoky quartzite fm., Graham Co.: Fox, P. P., 4.

Fontana Dam site: Moneymaker, B. C., 1.

Metamorphic rocks, correl., Carolina Piedmont: Kesler, T. L., 1.

Monazite, Spruce Pine: Bliss, A. D., 1.

Mica in pegmatites: Olson, J. C., 1.

Nags Head and fulgurites: Hill, J., 1.

Tungsten, Townsville area: White, W. A., 3.

Physical geology.

Carolina Bays: Cooke, C. W., 2.

Fontana Dam site: Moneymaker, B. C., 1.

Geomagnetic survey, Carolina Bays, N. C.: McCampbell, J. C., 2.

Metamorphic rocks, correl., Carolina Piedmont: Kesler, T. L., 1.

Meteorite origin (?) Carolina Bays: Sass, H. R., 1.

Tungsten, Townsville area: White, W. A., 3.

Physiographic geology.

Cape Fear Penin.: Wells, B. W., 1.

Carolina Bays: Cooke, C. W., 2.

No artesian origin: McCampbell, J. C., 1.

Origin: Hutchinson, G. E., 1; Johnson, D. W., 1; Sass, H. R., 1.

Underground water.

Carolina Bays, no artesian origin: McCampbell, J. C., 1.

Ground water: Mundorff, M. J., 2.

Well logs, Coastal Plain: Mundorff, M. J., 1.

North Dakota.

23d Bienn. Rept., Geol. Survey, 1942-44; Laird, W. M., 3.

Areas described.

Emerado quad.: Laird, W. M., 1.

Economic geology.

Stratigraphy and structure: Laird, W. M., 2.

Historical geology.

Emerado quad.: Laird, W. M., 1.

Heavy min. correl., Fox Hills-Hell Creek-Cannonball fms.: Lindberg, M. L. L., 2.

Stratigraphy and structure: Laird, W. M., 2.

Well-irrigation areas: Rasmussen, W. C., 1.

Mineralogy.

Heavy min. correl., Fox Hills-Hell Creek-Cannonball fms.: Lindberg, M. L. L., 2.

North Dakota—Continued.

Palaeontology.

White River fm.: Powers, W. E., 1.

Petrology.

White River fm.: Powers, W. E., 1.

Physiographic geology.

Emerado quad.: Laird, W. M., 1.

Stratigraphy and structure: Laird, W. M., 2.

Well-irrigation areas: Rasmussen, W. C., 1.

Underground water.

Emerado quad.: Laird, W. M., 1.

Well-irrigation areas: Rasmussen, W. C., 1.

North Lisbon oil field, La.: Blanpied, B. W., 3.

North Nebo oil field, La.: Blanpied, B. W., 3.

Northwest Territories.

Economic geology.

Aeroprospecting, Yellowknife area: Jolliffe, A. W., 5.

Deep-well drilling, Mackenzie River Valley: Stewart, J. S., 2.

Economic minerals: Jolliffe, A. W., 2.

Mineral resources: Anonymous, 17.

Petroleum, explor.: Wet, J. P., de, 1.

Mackenzie River Valley poss.: Stewart, J. S., 1.

Possibilities: Anonymous, 24.

Prosperous Lake area: Jolliffe, A. W., 4, 5; Anonymous, 77.

Rare-element pegmatite minerals, Yellowknife-Beaulieu area: Jolliffe, A. W., 1.

Yellowknife area, faults, ore bodies: Jolliffe, A. W., 3.

Gold mines: Anonymous, 29.

Historical geology.

Aeroprospecting, Yellowknife area: Jolliffe, A. W., 5.

Deep-well drilling, Mackenzie River Valley: Stewart, J. S., 2.

Petroleum poss., Mackenzie River Valley: Stewart, J. S., 1.

Prosperous Lake area: Jolliffe, A. W., 4.

Rare-element pegmatite minerals, Yellowknife-Beaulieu area: Jolliffe, A. W., 1.

Yellowknife area: Jolliffe, A. W., 2.

Faults, ore bodies: Jolliffe, A. W., 3.

Gold mines: Anonymous, 29.

Mineralogy.

Economic minerals: Jolliffe, A. W., 2.

Mineral res.: Anonymous, 17.

Prosperous Lake area: Jolliffe, A. W., 4; Anonymous, 77.

Rare-element pegmatite minerals, Yellowknife-Beaulieu area: Jolliffe, A. W., 1.

Yellowknife area, faults, ore bodies: Jolliffe, A. W., 3.

Gold mines: Anonymous, 29.

Petrology.

Deep-well drilling, Mackenzie River Valley: Stewart, J. S., 2.

Northwest Territories—Continued.

Petrology—Continued.

Rare-element pegmatite minerals, Yellowknife-Beaulieu area: Jolliffe, A. W., 1.

Yellowknife area, faults, ore bodies: Jolliffe, A. W., 3.

Physical geology.

Deep-well drilling, Mackenzie River Valley: Stewart, J. S., 2.

Petroleum poss., Mackenzie River Valley: Stewart, J. S., 1.

Prosperous Lake area: Jolliffe, A. W., 4; Anonymous, 77.

Rare-element pegmatite minerals, Yellowknife-Beaulieu area: Jolliffe, A. W., 1.

Yellowknife area: Anonymous, 53.

Faults, ore bodies: Jolliffe, A. W., 3.

Physiographic geology.

Aeroprospecting, Yellowknife area: Jolliffe, A. W., 5.

Prosperous Lake area: Jolliffe, A. W., 4.

Novaculite.

Illinois and surrounding states, Dev.: Weller, J. M., 2.

Oklahoma, Dev.: Miser, H. D., 1.

Tennessee, W.-cent.: Born, K. E., 2.

Nova Scotia.

Areas described.

Londonderry iron deposits, Colchester Co.: Weeks, L. J., 1.

Economic geology.

Barites, fluorspar, Lake Ainslie area: Douglas, G. V., 7.

Bass River area: Weeks, L. J., 3.

Coal res.: Cameron, A. E., 2.

Copper, North Grant: Douglas, G. V., 1.

Wentworth dist.: Bancroft, M. F., 1.

Diatomite, Oxford, Tetamagouche areas: Bancroft, M. F., 2.

Dolomite, Upper Musquodoboit: Messervey, J. P., 1.

Gabarus area mineral deposits: Douglas, G. V., 3.

Industrial minerals: Cameron, A. E., 3.

Iron, Bridgeville area: Messervey, J. P., 2.

Manchester mine: Douglas, G. V., 2.

Joggins River-Hebert Coal dist.: Goudge, M. G., 1.

Limestone, Admiral Rock: Messervey, J. P., 6.

Antigonish Harbor: Douglas, G. V., 4.

Riverside Corner: Messervey, J. P., 3.

Windsor area: Messervey, J. P., 5.

Londonderry area: Weeks, L. J., 2.

Mabou coal area: Douglas, G. V., 6.

Marl, Lanark area: Messervey, J. P., 4.

Mines Ann. rept. 1943: Cameron, A. E., 2.

Petroleum poss.: MacNeil, D. J., 1.

St. Rose-Chimney Corner coal field: Bell, W. A., 1.

Historical geology.

Bass River area: Weeks, L. J., 3.

Nova Scotia—Continued.

Historical geology—Continued.

- Carboniferous, N.: Bell, W. A., 2.
 Copper deposits, North Grant: Douglas, G. V., 1.
 Wentworth dist.: Bancroft, M. F., 1.
 Dolomite, Upper Musquodoboit: Messervey, J. P., 1.
 Iron, Bridgeville area: Messervey, J. P., 2.
 Lake Ainslie area: Douglas, G. V., 7.
 Limestone, Riverside Corner: Messervey, J. P., 3.
 Londonderry area: Weeks, L. J., 2.
 Iron deposits, Colchester Co.: Weeks, L. J., 1.
 Mabou coal area: Douglas, G. V., 6.
 Marl, Lanark area: Messervey, J. P., 4.
 Petroleum poss.: MacNeil, D. J., 1.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Shinimikas area geol. map: Bell, W. A., 4; Canada G. S., 1.

Mineralogy.

- Barites, fluor spar, Lake Ainslie area: Douglas, G. V., 7.
 Bass River area: Weeks, L. J., 3.
 Coal res.: Cameron, A. E., 2.
 Copper, North Grant: Douglas, G. V., 1.
 Wentworth dist.: Bancroft, M. F., 1.
 Gabarus area min. deposits: Douglas, G. V., 3.
 Industrial minerals: Cameron, A. E., 3.
 Iron, Bridgeville area: Messervey, J. P., 2.
 Londonderry deposits, Colchester Co.: Weeks, L. J., 1.
 Manchester mine: Douglas, G. V., 2.
 Londonderry area: Weeks, L. J., 2.

Paleontology.

- Carboniferous, N.: Bell, W. A., 2.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.

Petrology.

- Barites, fluor spar, Lake Ainslie area: Douglas, G. V., 7.
 Bass River area: Weeks, L. J., 3.
 Dolomite, Upper Musquodoboit: Messervey, J. P., 1.
 Gabarus area min. deposits: Douglas, G. V., 3.
 Londonderry iron deposits, Colchester Co.: Weeks, L. J., 1.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.

Physical geology.

- Bass River area: Weeks, L. J., 3.
 Copper, Wentworth dist.: Bancroft, M. F., 1.
 Dolomite, Upper Musquodoboit: Messervey, J. P., 1.
 Iron deposits, Bridgeville area: Messervey, J. P., 3.
 Londonderry deposits, Colchester Co.: Weeks, L. J., 1.
 Lake Ainslie area: Douglas, G. V., 7.

Nova Scotia—Continued.

Physical geology—Continued.

- Limestones, Riverside Corner: Messervey, J. P., 3.
 Londonderry area: Weeks, L. J., 2.
 Mabou coal area: Douglas, G. V., 6.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Shinimikas area geol. map: Bell, W. A., 4.
Physiographic geology.
 Lake Ainslie area: Douglas, G. V., 7.
 Londonderry area iron deposits, Colchester Co.: Weeks, L. J., 1.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Shinimikas area geol. map: Bell, W. A., 4.
 Nuclear radiation effect on radioactivity logs: Fearson, R. E., 2.
 Oak Canyon oil field, Calif.: Hodges, F. C., 1.

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- Wyoming, Yellowstone Park rhyolite-basalt complex: Fenner, C. N., 1; Wilcox, R. E., 1.

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 Continental drift hypothesis: Chelikowsky, J. R., 1.
 Floor of: Smith, P. A., 1.
 Foraminifera, pelagic, vertical distrib.: Phleger, F. B., Jr., 1.
 General: Stetson, H. C., 1.
 Geochemistry of: Hutchinson, G. E., 2.
 Geodesist's contrib. to geoscience: Field, R. M., 2.
 Geophysical, geological study: Hess, H. H., 2.
 Hydrosphere, evolution: Lane, A. C., 2.
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 Radioactivity of: Rona, E., 1.
 Radium content, ocean-bottom sediments: Piggot, C. S., 1.

Ochre, Sept-Iles area, Quebec: Faessler, C., 1.
Ogallala Pliocene fm. field trip: Price, W. A., 2.*Ohio.**Areas described.*

- Eastern Ohio, physiography: Ver Steeg, K., 2.

Ohio—Continued.

Areas described—Continued.

- Franklin Co. and Columbus area, water supply: Harker, D. H., 2.
 Fulton Co. water supply: Harker, D. H., 2.
 Wood Co., water supply: Harker, D. H., 6.

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- Berea, Second Berea sands oil and gas pools: U. S. G. S., 1.
 Coal: Stout, W. E., 6.
 Dolomites: Stout, W. E., 8.
 Fluorspar: King, F. W., 1.
 Gypsum: Lintner, E. J., 1.
 Iron, petroliferous, Penn.: Ireland, H. A., 2.
 Limestone mine, Barberton: Stauffer, C. R., 1.
 Maxville ls.: Lamborn, R. E., 1.
 Mineral res.: Ohio Devel. Pub. Com., 1; White, G. W., 1.
 Petroleum and gas devel., 1943: Cottingham, K., 1.
 Standstones and conglomerates: Stout, W. E., 7.
 Water supply, Franklin Co. and Columbus area: Harker, D. H., 2.

Historical geology.

- Berea sand, oil and gas pools: U. S. G. S., 1.
 Glackhand Missn. ss.: Ver Seeg, K., 5.
 Blaine Hill, Belmont Co. sec., Penn., Perm.: White, G. W., 4.
 Detroit River ls.: Stumm, E. C., 2.
 Geology of water supply: Ohio Water Sup. Bd., 1; Stout, W. E., 1.
 Gypsum: Lintner, E. J., 1.
 Iron, petroliferous Penn.: Ireland, H. A., 2.
 Middle Kittanning coal, Greenford-Washingtonville: Sturgeon, M. T., 1.
 Old drainage systems: Stout, W. E., 3.
 Physiography, E. Ohio: Ver. Steeg, K., 2.
 Rock water: Stout, W. E., 4.
 Second Berea sand: U. S. G. S., 1.
 Structural features: Ver. Steeg, K., 1.
 Summit Co. and Akron: Harker, D. H., 5.
 Water supply, Franklin Co. and Columbus area: Harker, D. H., 2.
 Fulton Co.: Harker, D. H., 3.
 Wood Co.: Harker, D. H., 5.

Mineralogy.

- Iron, petroliferous Penn.: Ireland, H. A., 2.
 Mineral res.: White, G. W., 1.
 Pyrite concretions: Anonymous, 102.

Paleontology.

- Arthrodiran gnathal plate, Upper Dev., Cleveland: Dunkle, D. H., 4.
 Bone beds, Mid. Dev.: Wells, J. W., 3.
 Gtenacanthus, Penn.: Wells, J. W., 4.
 Detroit River ls.: Stumm, E. C., 2.

Ohio—Continued.

Paleontology—Continued.

- Diplognathus, Dev. arthrodiran fish: Dunkle, D. H., 1.
 Fish, arthrodiran, Upper Dev.: Dunkle, D. H., 3.
 Fossil plant locs., Penn., Perm.: Stout, W. E., 9.
 Gastropoda, Allegheny fm.: Sturgeon, M. T., 3.
 Haplolepididae, Carb. fish: Westoll, T. S., 1.
 Limestone mine, Barberton: Stauffer, C. R., 1.
 Mastodon, Jackson area: Ver Steeg, K., 3.
 Ostracoda, Olentangy sh.: Stewart, G. A., 1.
 Plum Brook sh., Erie Co.: Stewart, G. A., 1.

Petrology.

- Berea sand: U. S. G. S., 1.
 Blackhand Missn. ss.: Ver Steeg, K., 5.
 Blaine Hill, Belmont Co. sec., Penn., Perm.: White, G. W., 4.
 Cone-in-cone fm., Copperas Mtn.: Eisele, W. F., 1.
 Dolomites: Stout, W. E., 8.
 Limestone mine, Barberton, geol. sec.: Stauffer, C. R., 1.
 Maxville ls.: Lamborn, R. E., 1.
 Pyrite concretions: Anonymous, 102.
 Sandstones and congloms.: Stout, W. E., 7.
 Soil types, weathering changes: Mickelson, G. A., 1.
 Summit Co. and Akron: Harker, D. H., 5.

Physical geology.

- Lake Erie shore erosion: White, G. W., 2.
 Structural features: Ver Steeg, K., 1.
 Water supply, Franklin Co. and Columbus area: Harker, D. H., 2.
 Wood Co.: Harker, D. H., 6.

Physiographic geology.

- Berea sand: U. S. G. S., 1.
 Geology of water: Stout, W. E., 1.
 Lake Erie shore erosion: White, G. W., 2.
 Old drainage systems: Stout, W. E., 3.
 Physiography, E. Ohio: Ver Steeg, K., 2.
 Radio explor. for buried valleys: Higgy, R. C., 1.
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 Summit Co. and Akron: Harker, D. H., 5.
 Water supply: Stout, W. E., 2.
 Franklin Co. and Columbus area: Harker, D. H., 2.
 Summit Co. and Akron: Harker, D. H., 5.
 Wood Co.: Harker, D. H., 6.

Underground water.

- Geology of water supply: Ohio Water Bd., 1; Stout, W. E., 1.

Ohio—Continued.

Underground water—Continued.

- Ground-water survey: Harker, D. H., 7.
 Mineral resources: Ohio Devel. Pub. Com., 1.
 Rock water: Stout, W. E., 4.
 Summit Co. and Akron: Harker, D. H., 5.
 Water supply: Stout, W. E., 2, 5.
 Franklin Co. and Columbus: Harker, D. H., 2.
 Fulton Co.: Harker, D. H., 3.
 Wood Co.: Harker, D. H., 6.
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 Oil reserve data, standardization: Lahee, F. H., 2.
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 Canada, W., oil devel.: Hume, F. S., 9.
 Louisiana, Acadia Parish: Barton, D. C., 4.
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 North America, oil from coal and shale: Wilson, R. E., 1.
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 Radioactivity, organic content, sedimentation: Russell, W. L., 2.
 Saskatchewan, oil and gas poss.: Edmunds, F. H., 1.
 South Dakota poss.: Thorrock, E. P., 1.
 Texas, Barnett oil sh. poss.: Plummer, F. B., 3.
 Uinta Basin, Utah, Colo., hydrocarbons: Barb, C. F., 1.

Oil shale—Continued.

- United States, oil and gasoline from oil sh.: Fieldner, A. C., 1.
 Development of: Gibbon, A., 2.
 Resources: Fanning, L. M., 1.
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 Oil-well instruments, services, use in mining: Kothney, G. L., 1.
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 Arbuckle Mts., central, glass sand: Ham, W. E., 3.
 Barite: Ham, W. E., 1.
 Black Knob Ridge, Atoka Co.: U. S. G. S., 1.
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 Devonian: Miser, H. D., 1.
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 Early seismic discoveries: Weatherby, B. B., 1.
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 Le Flore Co.: Knechtel, M. M., 1.
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 Mineral resources map: Okla. Geol. S., 1.
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 Sulphur asphalt area, Murray Co.: U. S. G. S., 1.
 Time of oil and gas accumulation: Levorsen, A. I., 2.
 Velma field: Rutledge, R. B., 1.
 West Edmond oil field: Atkinson, W. H., 1; Dahlgren, E. G., 1; Deegan, C. J., 1; McGee, D. A., 1; Taylor, F. B., 1.
Historical geology.
 Arbuckle group: Ireland, H. A., 3.
 Arbuckle Mts.: Lehman, R. P., 1.
 Central, geology, glass sand: Ham, W. E., 3.
 Barite: Ham, W. E., 1.
 Black Knob Ridge, Atoka Co.: U. S. G. S., 1.
 Broken Arrow coal, assoc. strata: Oakes, M. C., 1.
 Cambrian, Ord., NE.: U. S. G. S., 2.
 Devonian: Miser, H. D., 1.
 Dougherty asphalt area: U. S. G. S., 1.
 Ground-water supplies: Dott, R. H., 4.
 Le Flore Co.: Knechtel, M. M., 1.

Oklahoma—Continued.

Historical geology—Continued.

- Manganese, Bromide area : Ham, W. E., 2.
- Ordovician, Camb., NE. : U. S. G. S., 2.
- Ore deposits, structural control, Tri-State dist. : Fowler, G. M., 1.
- Stanley-Jackfork fms. age relations : Cooper, C. L., 6.
- Sulphur asphalt area, Murray Co. : U. S. G. S., 1.
- Velma field : Rutledge, R. B., 1.
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Mineralogy.

- Arbuckle Mts., central, geology, glass sand : Ham, W. E., 3.
- Barite : Ham, W. E., 1.
- Glass sand, dolomites, lss., for ceramics : Burwell, A. L., 1.
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- Mineral res. map : Okla. Geol. S., 1.

Paleontology.

- Belemnite, Missn., Caney sh. : Flower, R. H., 4.
- Cambrian, Ord., NE. : U. S. G. S., 2.
- Cephalopoda, Penn., Union Valley fm. : Miller, A. K., 3.
- Coral, Penn. paleocyclusid : Howell, B. F., 6.
- Corals, Lower Penn. : Moore, R. C., 6.
- Devonian : Miser, H. D., 1.
- Echinoderms, Ord. : Sinclair, G. W., 3.
- Foraminifera, Washita Cret. group : Loeblich, A. R., Jr., 1.
- Graptolites, Ord., Carter Co. : Decker, C. E., 3, 4.
- Big Canyon : Decker, C. E., 5.
- Viola, near Norman : Decker, C. E., 1.
- Hederella, Penn. : Condra, G. E., 4.
- Micro-faunas, Penn.-Missn. fms. : Cooper, C. L., 5.
- Mollusca, Laverne Pliocene fm. : Leonard, A. B., 1.
- Mortoniceras vespertinum (Morton), Cret. : Adkins, W. S., 1.
- Ordovician, Camb., N. E. : U. S. G. S., 2.
- Petrodus, Penn. : Stovall, J. W., 1.

Petrology.

- Arbuckle Mts., central : Ham, W. E., 3.
- Broken Arrow coal and assoc. strata : Oakes, M. C., 1.
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- Anadarko Basin tectonics : Wheeler, R. W., 1.
- Apache oil field, Caddo Co. : Scott, V. C., 1.
- Arbuckle Mts. : Lehman, R. P., 1.
- Central, geology : Ham, W. E., 3.
- Barite : Ham, W. E., 1.
- Black Knob Ridge area, Atoka Co. : U. S. G. S., 1.

Oklahoma—Continued.

Physical geology—Continued.

- Devonian : Miser, H. D., 1.
- Dougherty asphalt area : U. S. G. S., 1.
- Le Flore Co. : Knechtel, M. M., 1.
- Manganese, Bromide area : Ham, W. E., 2.
- Ordovician, Camb., NE. : U. S. G. S., 2.
- Sediment transp., Canadian River, by ripple-wake suspension : Lane, E. W., 2.
- Seneca fault area, earth currents : Dahlberg, R. S., Jr., 1.
- Sulphur asphalt area, Murray Co. : U. S. G. S., 1.
- Tillman Co., torsion balance survey : Klaus, H., 1.
- Velma field : Rutledge, R. B., 1.
- West Edmond oil field : McGee, D. A., 1; Taylor, F. B., 1.

Ground water.

- Ground water : Dott, R. H., 4; U. S. G. S., 6, 7.
- Water for industry : Dott, R. H., 1.

Olivine.

- Arizona : Anonymous, 41.
- Hawaii, Kilauea volcano, ejected blocks : Macdonald, G. A., 2.
- Solfataric rock alteration : Macdonald 4.
- North America, coronas, coronites, fm. : Shand, S. J., 3.
- Ontario, Porcupine dist. : Evans, J. E. L., 1.
- Rock-forming minerals, melting and crystallization : Schairer, J. F., 1.

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- Geophysical surveys, gas fields : Brant, A. A., 2.
- Ontario thro 2 billion years : Moore, E. S., 5.

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- Cunningham-Garnet area : Meen, V. B., 2.
- Fort Hope area : Prest, V. K., 1.
- Gauthier Tp., Kirkland Lake area : Thomson, Jas. E., 1.
- Grimsthorpe-Barrie area : Meen, V. B., 1.
- Kaladar, Keenebec Tps. : Harding, W. D., 1.
- Red Lake area : Horwood, H. C., 2.
- Renfrew area : Satterly, J., 2.
- Rennie-Leeson area : Bruce, E. L., 1.
- Whitefish Bay area : Fraser, N. H. C., 1.

Economic geology.

- Beatty-Munro area : Satterly, J., 1.
- Bryce - Robillard area : Moorhouse, W. W., 1.
- Central Patricia mine : Hicks, H. B., 1.
- Dogpaw-Kakagi Lakes area, devel. : Thomson, R., 1.
- East Bull Lake area : Moore, E. S., 3.
- Essex Co., geol.-index maps : Canada, G. S., 1.

Ontario—Continued.

Economic geology—Continued.

- Flack Lake area : Harding, W. D., 2.
 Fluorspar, Madoc dist. : Rowe, R. C., 2.
 Future for prospecting, NW. : Horwood, H. C., 4.
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 Geophysical prosp., 1937-44 : Brant, A. A., 1.
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 Gold, Kerr Addison mine : McLaren, D. C., 2.
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 Hematite, NW. : Brownell, G. M., 1.
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 Ontario thro 2 billion years : Moore, E. S., 5.
 Owen Sound area : Caley, J. F., 2.
 Petroleum, 1941-42 : Crozier, A. R., 2.
 Pickle Crow gold mine : Monette, H. H., 1.
 Porphyry-sediment contacts, Dome mine : Holmes, T. C., 1.
 Prospecting future, Pickle Lake-Crow River area : Horwood, H. C., 5.
 Red Lake area min. deposits : Horwood, H. C., 2, 3.
 Renfrew area min. res. : Satterly, J., 2.
 Rennie-Leeson area : Bruce, E. L., 1.
 Ross mine, Ramore area : Jones, W. A., 1.
 Scheelite veins related to porphyry intrusive, Hollinger mine : Allen, C. C., 1.
 Stover Tp., N. : Horwood, H. C., 1.
 Whitefish Bay area : Fraser, N. H. C., 1.

Historical geology.

- Anorthosites, SE. : Harrison, J. M., 2.
 Beatty-Munroe area : Satterly, J., 1.
 Bigwater Lake area : Barry, L. G., 1.
 Breccia, Sudbury : Fairbairn, H. W., 3.
 Bryce-Robillard area : Moorhouse, W. W., 1.
 Bruce ser., Falconbridge-Dryden Tps. : Fairbairn, H. W., 2.
 Central Patricia mine : Hicks, H. B., 1.
 Cunningham-Garnet area : Meen, V. B., 2.
 East Bull Lake area : Moore, E. S., 3.

Ontario—Continued.

Historical geology—Continued.

- Essex County, geol.-index maps : Canada G. S., 1.
 Flack Lake area : Harding, W. D., 2.
 Fluorspar, Madoc dist. : Rowe, R. C., 2.
 Fort Hope area : Prest, V. K., 1.
 Gauthier Tp., Kirkland Lake area : Thomson, Jas. E., 1.
 Gold deposits, Kerr Addison mine : McLaren, D. C., 2.
 Grimsthorpe-Barrie area : Meen, V. B., 1.
 Kaladar, Kennebec Tps. : Harding, W. D., 1.
 Kam Kotia mine, mineralized zone : Ferguson, S. A., 1.
 Map, isopach : Caley, J. F., 1.
 Metamorphism, Kenogamis River area : Macdonald, R. D., 1.
 North Spirit Lake area : Bateman, J. D., 7.
 Ontario thro 2 billion years : Moore, E. S., 5.
 Owen Sound area : Caley, J. F., 2.
 Pickle Crow gold mine : Monette, H. H., 1.
 Pickle Lake—Crow River area, prosp. future : Horwood, H. C., 5.
 Porcupine-Shiningtree area : Ontario Dept. Mines, 1.
 Porphyry, Porcupine dist. : Evans, J. E. L., 1; Gustafson, J. K., 1.
 Quartz crystals, Leeds Co. : Harrison, J. M., 1.
 Red Lake area : Horwood, H. C., 2, 3.
 Renfrew area : Satterly, J., 2.
 Rennie-Leeson area : Bruce, E. L., 1.
 Stover Tp., N. : Horwood, H. C., 1.
 Sudbury-Bruce ser. relations, Sudbury : Fairbairn, H. W., 1.
 Whitefish Bay area : Fraser, N. H. C., 1.
 Windsor-Sarnia area geol. map : Canada G. S., 1.
Mineralogy.
 Brucite, Rutherglen dist. : Keith, M. L., 1.
 Central Patricia mine : Hicks, H. B., 1.
 Conchilites, Findlayson Lake : Tanton, T. L., 2.
 Dogpaw-Kakagi Lakes area, devel. : Thomson, R., 1.
 Fluorspar, Madoc dist. : Rowe, R. C., 2.
 Future for prospecting, NW. : Horwood, H. C., 1.
 Gabbro-wehrlite near Lochalsh : Froberg, M. H., 1.
 Gold, Kerr Addison mine : McLaren, D. C., 2.
 Gold and silver : Rickard, T. A., 2.
 Hardrock porphyry, Little Long Lac : Reid, J. A., 3.
 Hematite, NW. : Brownell, G. M., 1.
 Kam Kotia mine mineralized zone : Ferguson, S. A., 1.
 Little Long Lac gold area : Armstrong, H. S., 1.

Ontario—Continued.

Mineralogy—Continued.

- Metamorphism, Kenogamis River area :
 Macdonald, R. D., 1.
 Nepheline and corundum-bearing rocks :
 Moyd, L. S., 1.
 North Spirit Lake area : Bateman, J. D.,
 7.
 Pickle Crow gold mine : Monette, H. H.,
 1.
 Red Lake area min. deposits : Horwood,
 H. C., 2, 3.
 Renfrew area, min. res. : Satterly, J., 2.
 Rennie-Leeson area : Bruce, E. L., 1.
 Ross mine, Ramore area : Jones, W. A.,
 1.
 Scheelite veins related to porphyry in-
 trusives, Hollinger mine : Allen,
 C. C., 1.
 Stover Tp., N. : Horwood, H. C., 1.

Palaeontology.

- Brachiopoda, lingulid, Ord. : Sinclair,
 G. W., 5.
 Escharopora hogbeni Fritz, distrib. :
 Kay, G. M., 3.
 Microfossils in bogs : Wilson, L. R., 1.
 Octactinellids, Mid. Dev. : Reimann,
 I. G., 3.
 Rafinesquina, Opikina, Opikinella, Ot-
 tawa ls. : Wilson, A. E., 1.
 Scolecodonts, Sil. Manitoulin dolomite :
 Eller, E. R., 1.
 Stigmatella, Ord. : Armstrong, H. S., 2.
 Strophomena, Trigrammaria, Micro-
 trypa, Ottawa ls. : Wilson, A. E., 2.
 Trilobites, Ord. : Sinclair, G. W., 1.

Petrology.

- Anorthosites, SE. : Harrison, J. M., 2.
 Beatty-Munroe area : Satterly, J., 1.
 Bigwater Lake area : Berry, L. G., 1.
 Breccia, Sudbury : Fairbairn, H. W., 3.
 Bryce-Robillard area : Moorhouse,
 W. W., 1.
 East Bull Lake area : Moore, E. S., 3.
 Eastern extension, Fort Hope area :
 Prest, V. K., 2.
 Flack Lake area : Harding, W. D., 2.
 Fort Hope area : Prest, V. K., 1.
 Gabbro-whelrite near Lochalsh : Froh-
 berg, M. H., 1.
 Gauthier Tp., Kirkland Lake area :
 Thomson, Jas. E., 1.
 Gold, Kerr Addison mine : McLaren,
 D. C., 2.
 Grimsthorpe-Barrie area : Meen, V. B.,
 1.
 Haliburton-Bancroft alkaline rocks,
 origin : Chayes, F., 4.
 Hardrock porphyry, Little Long Lac :
 Reid, J. A., 3.
 Kaladar, Kennebec Tps. : Harding,
 W. D., 1.
 Kam Kotia mine mineralized zone :
 Ferguson, S. A., 1.
 Metamorphism, Kenogamis River area :
 Macdonald, R. D., 1.

Ontario—Continued.

Petrology—Continued.

- Nepheline and corundum-bearing rocks,
 SE. : Moyd, L. S., 1.
 North Spirit Lake area : Bateman, J. D.,
 7.
 Pickle Crow gold mine : Monette, H. H.,
 1.
 Porphyry, Porcupine dist. : Evans, J. E.
 L., 1 ; Gustafson, J. K., 1.
 Porphyry-sediment contacts, Dome
 mine : Holmes, T. C., 1.
 Quartz crystals, Leeds Co. : Harrison,
 J. M., 1.
 Red Lake area : Horwood, H. G., 2, 3.
 Renfrew area, min. res. : Satterly, J., 2.
 Rennie-Leeson area : Bruce, E. L., 1.
 Rockburst research, Lake Shore mines :
 Hodgson, E. A., 2.
 Ross mine, Ramore area : Jones, W. A.,
 1.
 Stover Tp., N. : Horwood, H. C., 1.
 Sudbury-Bruce ser. relations, Sudbury :
 Fairbairn, H. W., 1.
 Ultra-basic rocks, Lochalsh : Ginn, P., 1.
 Whitefish Bay area : Fraser, N. H. C., 1.
Physical geology.
 Anorthosites, SE. : Harrison, J. M., 2.
 Beatty-Munroe area : Satterly, J., 1.
 Bigwater Lake area : Berry, L. G., 1.
 Breccia, Sudbury : Fairbairn, H. W., 3.
 Bruce ser., Falconbridge-Dryden Tps. :
 Fairbairn, H. W., 2.
 Bryce - Robillard area : Moorhouse,
 W. W., 1.
 Central Patricia mine : Hicks, H. B., 1.
 Cornwall-Massena earthquake, 9/5/44 :
 Hodgson, E. A., 3.
 Cunningham-Garnet area : Meen, V. B.,
 2.
 Dogpaw-Kakagi Lakes area : Thomson,
 R., 1.
 Earthquake, Cornwall : Legget, R. F., 1.
 East Bull Lake area : Moore, E. S., 3.
 Eastern extension, Fort Hope area :
 Prest, V. K., 2.
 Flowerpot Island : Harrington, L., 1.
 Fluorspar, Madoc. dist. : Rowe, R. C., 2.
 Fort Hope area : Prest, V. K., 1.
 Future for prospecting, NW. : Horwood,
 H. C., 4.
 Gabbro-whelrite near Lochalsh : Froh-
 berg, M. H., 1.
 Gauthier Tp., Kirkland Lake area :
 Thomson, Jas. E., 1.
 Geophysical surveys, gas fields : Brant,
 A. A., 2.
 Gold, Kerr Addison mine : McLaren,
 D. C., 2.
 Grimsthorpe-Barrie area : Meen, V. B., 1.
 Haliburton - Bancroft alkaline rocks,
 origin : Chayes, F., 4.
 Hardrock porphyry, Little Long Lac :
 Reid, J. A., 3.
 Kaladar, Kennebec Tps. : Harding,
 W. D., 1.

Ontario—Continued.

Physical geology—Continued.

- Kam Kotia mine mineralized zone: Ferguson, S. A., 1.
 Metamorphism, Kenogamis River area: Macdonald, R. D., 1.
 North Spirit Lake area: Bateman, J. D., 7.
 Ontario thro 2 billion years: Moore, E. S., 5.
 Owen Sound area: Caley, J. F., 2.
 Pickle Crow gold mine: Monette, H. H., 1.
 Pickle Lake-Crow River area, future prosp.: Horwood, H. C., 5.
 Porphyry, Porcupine dist.: Evans, J. E. L., 1; Gustafson, J. K., 1.
 Porphyry - sediment contacts, Dome mine: Holmes, T. C., 1.
 Quartz crystals, Leeds Co.: Harrison, J. M., 1.
 Red Lake area: Horwood, H. C., 2, 3.
 Renfrew area: Satterly, J., 2.
 Rennie-Leeson area: Bruce, E. L., 1.
 Replacement and igneous intrusions: Reid, J. A., 1.
 Rockburst research, Lake Shore mines: Hodgson, E. A., 2.
 Ross mine, Ramore area: Jones, W. A., 1.
 Scheelite veins related to porphyry intrusives, Hollinger mine: Allen, C. C., 1.
 Stover Tp., N.: Horwood, H. C., 1.
 Sudbury-Bruce ser. relations, Sudbury: Fairbairn, H. W., 1.
 Ultrabasic rocks, Lochalsh: Ginn, P., 1.
 Whitefish Bay area: Fraser, N. H. C., 1.

Physiographic geology.

- Bigwater Lake area: Berry, L. G., 1.
 East Bull Lake area: Moore, E. S., 3.
 Flack Lake area: Harding, W. D., 2.
 Fort Hope area: Prest, V. K., 1.
 Grimsthorpe-Barrie area: Meen, V. B., 1.
 Kaladar, Kennebec Tps.: Harding, W. D., 1.
 Ontario thro 2 billion years: Moore, E. S., 5.

- Red Lake area: Horwood, H. C., 3.
 Stover Tp., N.: Horwood, H. C., 1.
 Whitefish Bay area: Fraser, N. H. C., 1.

Oulites.

- Arkansas, Fayetteville area, nuclei in: Henbest, L. G., 1.
 Schuler field: Kaveler, H. H., 1.
 Illinois: Workman, L. E., 1.
 Missouri, NE. Dev.: Branson, E. B., 2.
 Wisconsin, Cave of the Mounds, Blue Mounds: Pond, A. W., 1.

Opal. See also Gems; Precious stones.

- California, Guadalupe area: Lisle, T. O., 1.
 Hawaii, Kilauea Volcano solfataric rock alteration: Macdonald, G. A., 4.
 Kansas, gem minerals: Graffham, A. A., 1.

Opal—Continued.

- Oregon, quartz min. locs.: Dake, H. C., 2.

- Ophiuroidea, Oligocene, NW. Wash.: Durham, J. W., 1.

- Ordovician. See also Paleontology, Ordovician.

- Alabama bentonites: Fox, P. P., 2.

- Northern, Paleozoic stratigraphy: Cloud, P. E., Jr., 4.

- Alabama-Mississippi Basin: Carroll, D. L., 1.

- Appalachian Valley, U. S.: Sharp, H. S., 1.

- Arkansas, Batesville dist.: U. S. G. S., 1.

- Bellows Falls quad., Vt.-N. H.: Kruger, F. C., 1.

- Canada, Arctic: Robinson, J. L., 1.

- Canol invs., Mackenzie River area: Hume, G. S., 8.

- Flin Flon-Sheridson-Herb Lake area: Stockwell, C. H., 2.

- Friponne River area: Laverdière, J. W., 2.

- Manitoba dist.: Hutt, G. M., 15.

- Oil and gas fields: Hume, G. S., 2.

- St. Lawrence Valley, Trenton: Sinclair, G. W., 5.

- Structure and relief: Brouillette, B., 1.

- Western, oil devel.: Hume, G. S., 9.

- Colorado, Las Animas arch struc. devel.: Maher, J. C., 4.

- Northwestern: U. S. G. S., 2.

- Paleozoics: Johnson, J. H., 7.

- Red Creek area, Fremont Co.: Glockzin, A. R., 1.

- Sawatch Range area: Johnson, J. H., 3.

- Geologic calendar, periods, time, lengths: Elias, M. K., 5.

- Georgia, bentonites: Fox, P. P., 2.

- Greenland, Franz Josef Fjord area: Odell, N. E., 1.

- Idaho, Birch Creek area: Anderson, A. L., 1.

- Illinois, Decorah, Galens fms.: Bieber, C. L., 1.

- Maquoketa-Trenton fms. relations: Du Bois, E. P., 1.

- Northeast: Bays, C. A., 5.

- Petroleum poss.: Folk, S., 1.

- Water res.: Geber, W. D., 1.

- Illinois Basin, U. S., oil fields: Bays, C. A., 3.

- Indiana, Clifty Falls State Park: Freeman, O. W., 2.

- Iowa: Gwynne, C. S., 1.

- Ceramic shales and clays: Gwynne, C. S., 1.

- Kansas, Barton Co. buried hills: Walters, R. F., 1.

- Carmi pool, Pratt Co.: Galley, J. E., 1.

- Cross-section, geol. subsurface, Ford-Wallace Cos.: Edson, F. D., 1.

Ordovician—Continued.

Kansas—Continued.

McLouth gas and oil field: Lee, W., 1.
Rock fms.: Moore, R. C., 1.

Kentucky: McFarlan, A. C., 2.

Clinton Co. field: McCauley, A., 1.
Eden conglomer., Owen Co.: Jillson, W. R., 9.

Manitoba, Snow Lake area: Ebbutt, F., 1.

Winnipeg area: Hutt, G. M., 2.
Mexico, Pacific Coast: González Reyna, J., 1.

Michigan, Marquette iron range: Seaman, W. A., 1.

Petroleum, gas devel., 1943: Wasson, T., 1.

South-central: U. S. G. S., 1.

Michigan Basin, U. S.: U. S. G. S., 2.

Minnesota, SE., iron ores: Stauffer, C. R., 2.

Southern: Thiel, G. A., 1.

Mississippi, Monroe Co.: Vestal, F. E., 1.

Missouri: Branson, E. B., 3.

Bourbon High oil field: Cullison, J. S., 2.

Northwestern, recent oil inv.: Greene, F. C., 1.

Pyrite deposits: Grawe, O. R., 1.

Silver Hollow, Newbauer, Coleman iron deposits: Kreamalmeyer, K. L., 1.

Montana: U. S. G. S., 1.

Little Rocky Mts. plains: U. S. G. S., 1.

Nebraska, W., pre-Penn. stratigraphy: Dillé, G. S., 1.

New Brunswick, Sussex area: Alcock, F. J., 1.

Newfoundland, fluorspar deposits: Van Alstine, R. E., 1.

Rambler min. area: Quinn, H. A., 1.

New Hampshire: Billings, M. P., 2.

Monadnock quad.: Billings, K. S. F. L., 1.

Paleozoic magma ser.: Billings, M. P., 4.

Mt. Washington area: Billings, K. S. F. L., 2.

Oliverian magma ser., Mt. Washington: Chapman, C. A., 1.

New Jersey, Martinsburg slate: Broughton, J. G., 2.

New Mexico, Boston Hill deposits: Entwistle, L. P., 2.

Silver City area: Entwistle, L. P., 1.

New York, Catskill quad.: Ruedemann, R., 5, 6.

Coxsackie quad.: Goldring, W., 3.

Hudson Valley area: Ruedemann, R., 3.

North America, Foraminifera-formed lss.: Johnson, J. H., 9.

Ordovician—Continued.

North America—Continued.

Geosynclines in continental devel.: Kay, G. M., 1.

Tectonic devel. E. edge of Pacific: Stille, H. W., 1.

North Dakota, Emerado quad.: Laird, W. M., 1.

Stratigraphy and structure: Laird, W. M., 1.

Northwest Territories, Mackenzie River Valley: Stewart, J. S., 1.

Yellowknife area: Jolliffe, A. W., 3.

Ohio: Stout, W. E., 8.

Franklin Co. and Columbus area: Harker, D. H., 2.

Geology of water: Stout, W. E., 1.

Rock fms.: Stout, W. E., 4.

Oklahoma, Arbuckle group: Ireland, H. A., 3.

Arbuckle Mts.: Ham, W. E., 3; Lehman, R. P., 1.

Black Knob Ridge area: U. S. G. S., 1.

Bromide area: Ham, W. E., 2.

Dougherty asphalt area: U. S. G. S., 1.

Ground water: Dott, R. H., 2.

Northeast: U. S. G. S., 2.

Sulphur asphalt area: U. S. G. S., 1.

Velma field: Rutledge, R. B., 1.

West Edmond oil field: Atkinson, W. H., 1; Taylor, F. B., 1.

Ontario, E. extension of Fort Hope area: Prest, V. K., 2.

Leeds Co.: Harrison, J. M., 1.

Owen Sound area: Caley, J. F., 2.

Renfrew area: Satterly, J., 2.

Ozark uplift, Ark.-Mo.: Cullison, J. S., 1.

Pennsylvania, cent.: Kay, G. M., 2.

Central-eastern: Hersey, J. B., 1.

Folded Appalachians, stream devel.: Strahler, A. N., 5.

Hanover-York dist.: Stose, A. J., 1.

Levis trough: Ashley, G. H., 8.

Mineral res. areas: Ashley, G. H., 1.

Possible future oil pools: Sherrill, R. E., 1.

Quebec: Dresser, J. A., 1.

Age of sponge beds at Little Metis: Howell, B. F., 1.

Châteauguay Co.: Morin, L. G., 1.

Dudswell, Wolfe, Richmond, Compton Cos.: Cooke, H. C., 3.

Highgate Springs sequence: Kay, G. M., 6.

Moulton Hill deposit: Hawley, J. E., 1.

Montmorency fault, Lottainville-Loretteville: Putman, H. M., 1.

Montreal area: Clark, T. H., 1.

Pre-Trenton secs.: Sinclair, G. W., 7.

Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.

Ordovician—Continued.

Quebec—Continued.

- Sept-Iles area, N. bank St. Lawrence:
Faessler, C., 1.
Stanstead area, Brome and Stanstead
Cos.: Ambrose, J. W., 2.
Sandstones, Ohio: Stout, W. E., 7.
Simpson rocks, Kans.-Mo.: Leatherock,
C., 1.
South Dakota, Dewey, Corson Cos.:
Morgan, R. E., 1.
Sweet Springs dist., Va.-W. Va.: Ladd,
H. S., 1.
Tennessee, bentonites: Fox, P. P., 2.
Bumpass Cove, manganese in: Rod-
gers, J., 1.
Cumberland Plateau fields: Born,
K. E., 4.
Douglas Dam area: Laurence, R. A.,
1.
Eastern, zinc deposits: Crawford, J.,
1; Kent, D. F., 1; Oder, C. R. L., 3.
Greene Co.: Snyder, F. G., 1.
Mascot-Jefferson City zinc dist.:
Oder, C. R. L., 1.
Northeast: King, P. B., 4.
Petroleum and gas poss.: Born, K. E.,
3.
Texas, Apache Mts., Culberson Co. well:
Maley, V. C., 1.
Burnet Co.: Barnes, V. E., 3.
Central, Lower: Crowley, A. J., 1.
Hueco Mts., El Paso, Hudspeth Cos.:
U. S. G. S., 1.
Moore Co.: Fosshage, E. W., 1.
Northcentral, Ellenberger beds:
Crowley, A. J., 2.
Permian Basin oil fields: Osborne,
P. F., 1.
Pre-Permian axes of deposition:
Barton, J. M., 1.
Sierra Diablo area: U. S. G. S., 1.
Smoothingiron mass: Romberg, F., 1.
Western, pre-Perm. axes of deposi-
tion: Barton, J. M., 1.
Virginia, Appalachian Valley, facies:
Cooper, B. N., 4.
Bauxite area: Bevan, A. C., 5.
Bland, Giles Cos.: Ladd, H. S., 2.
Burkes Garden quad.: Cooper, B. N., 1.
Covington-Staunton-Buchanan area:
Edmundson, R. S., 1.
Dolomites, Iss., industrial, New-Roan-
oke Rivers dist.: Cooper, B. N., 3.
Lee Co.: Huffman, G. G., 1.
Rose Hill oil field: U. S. G. S., 1.
Shenandoah Nat. Park: Rickard,
H. L., 1.
Virginia-Kentucky, Iss.: Huffman, G. G.,
1.
Washington dolomite: Bennett, W. A.
G., 1.
Geology: Weaver, C. E., 3.
Metaline dist. drill-hole deviation:
Sampson, E., 1.

Ordovician—Continued.

- West Virginia, rocks, minerals: Erwin,
J. P., 1.
Wyoming: La Fleiche, P., 2.
Little Buffalo Basin field: U. S. G. S.,
8.
Wind River Mts, NW. end: U. S.
G. S., 1.
Yukon, Canol Road, Teslin River-Mac-
millan Pass: Kindle, E. D., 2.
Ore deposits, origin. For ore deposits in
general, see Economic geology (gen-
eral).
Abyssal vs. magnetic theory of ore gen-
esis: White, C. H., 1.
Alabama, tin belt: Hunter, F. R., 1.
Alaska, Groundhog Basin: Gault.
Independence mine area: Stoll, W. C.,
1.
Nickel-copper deposits, Spirit Mtn.
area: Kingston, J., 1.
Arizona, Borianna dist. and Aquarius
Range: Hobbs, S. W., 1.
Castle Dome copper deposit: Peter-
son, N. P., 1.
Superior mining area: Short, M. N., 1.
British Columbia, Ainsworth area:
Rice, H. M. A., 1.
Bralorne mines: Gibson, S., 1.
Britannia mine No. 8 ore bodies:
Irvine, W. T., 1.
China Creek area: Stevenson, J. S., 4.
Coast: Gunning, H. C., 2.
Emerald tungsten project: Mason,
E. E., 1.
Island Mtn. mine: Benedict, P. C., 1.
Little Billie mine, Texada Is.: Stev-
enson, J. S., 5.
Manson Creek area: Armstrong, J. E.,
5, 7.
Nickel Plate Mtn. area: Dolmage, V.,
1.
Nicola area: Cockfield, W. E., 2.
Omineca dist.: Armstrong, J. E., 4.
Pinchi Lake area: Armstrong, J. E.,
1.
Premier mine deposits: Langille, E.
G., 1.
Smithers area: Armstrong, J. E., 2.
Sullivan mine area: Swanson, C. O., 1.
Tuya-Teslin area: Watson, K. D., 1.
Twin "J" Mine: Stevenson, J. S., 3.
California, Diablo Range quicksilver
deposits: Yates, R. G., 1.
Glenn Co.: Rynearson, G. A., 1.
Knoxville quicksilver dist.: Averitt,
P., 1.
Palm Springs-Blythe Strip, Riverside
Co.: Miller, W. J., 1.
San Luis Obispo Co.: Smith, C. T., 1.
Canada, Flin Flon-Sherridon-Herb Lake
area: Stockwell, C. H., 2.
Gold deposits: Anonymous, 50.
Nickel sulphide oxidation: Michener,
C. E., 1.

Ore deposits, origin—Continued.

Canada—Continued.

- Sphalerites, W.: Warren, H. V., 5.
- West, tin: Warren, H. V., 1.
- Cinnabar, colloidal deposition: Pollock, J. P., 1.
- Colorado, Maxwell reef area, Boulder Co.: MacCornack, R. J., 1.
- Contact deposits, artificial silicate magma: Insley, H., 1.
- Copper, Keweenaw Penin., Mich.: Andrews, J. E., 1.
- Mode of occurrence: McLaren, D. C., 1.
- Costa Rica: Roberts, R. J., 1.
- Cuba, chromite: Hammer, S. I., 1.
- Guisa-Los Negros area: Woodring, W. P., 1.
- Isla de Pinos tungsten deposits: Page, L. R., 1.
- Matahambre copper mine: Haffner, B. K., 1; Pennebaker, E. N., 1.
- Sierra Maestra area: Park, C. F., Jr., 1.
- Cult of the indeterminate: Bichan, W. J., 2.
- Flow of heat from intrusive into country rock: Van Orstrand, C. E., 1.
- Geology and prospecting: Gunning, H. C., 1.
- Georgia, Columbia Co. serpentine: Furchon, A. S., 1.
- Gold deposition: Bichan, W. J., 1.
- Host minerals: Schwartz, G. M., 2.
- Hydrodynamical factor, ore deposition: Douglas, G. V., 8.
- Idaho, Birch Creek area: Anderson, A. L., 1.
- Ima mine tungsten: Clabaugh, S. E., 1.
- Illinois, Cave in Rock dist.: Currier, L. W., 2.
- Hardin Co. fluorspar areas: Currier, L. W., 1.
- Northwest, zinc-lead deposits: Willman, H. B., 1.
- Indiana, Harrodsburg ls., mineralization: Fix, G. F., 1.
- Lead isotopes as tracers: Lane, A. C., 1.
- Manitoba, Black ls., Lake Winnipeg hematite: Brownell, G. M., 2.
- Flin Flon area: Bateman, J. D., 3.
- Gurney gold mine area: Hage, C. O., 4.
- Island Lake area: McMurphy, R. C., 1.
- Sherridon area: Bateman, J. D., 6.
- Snow Lake area: Ebbutt, F., 1; Harrison, J. M., 3.
- Mexico, Amarilla mine, Guerrero: Acosta del Campo, C., 1.
- Cerro de Mercado Mtn.: Terrones Benitez, A., 1.
- El Alamo mine, Baja Calif.: Antúñez Echegaray, F., 2.

Ore deposits, origin—Continued.

Mexico—Continued.

- El Oro y Tlalpujahua mining camp: Bracho V., F., 1.
- Manganese: Rodríguez Cabo, J., Jr., 1.
- Pachucha-Real del Monte silver dist.: Thornburg, C. L., 1.
- Pacific Coast: González Reyna, J., 1.
- Plateau: Nye, S. S., 2.
- Quicksilver-antimony deposits: McAllister, J. F., 1.
- Sierra de Juárez, Baja Calif.: Fries, C., Jr., 1.
- Sonora tungsten deposits: Wiese, J. H., 1.
- Michigan iron deposits: Martin, H. M. M., 2.
- Lake Michigan area: Seaman, W. A., 2.
- Marquette, Baraga Cos.: Snelgrove, A. K., 2.
- Marquette iron range: Seaman, W. A., 1.
- Republic area: Ayres, V. L., 1.
- Minnesota, SE., iron ores: Stauffer, C. R., 2.
- Missouri, pyrite deposits: Grawe, O. R., 1.
- Silver Hollow, Newbauer, Coleman iron deposits: Krealmalyer, K. L., 1.
- Montana, Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
- Ore bodies, strat. control: Perry, E. S., 3.
- Stillwater, Sweetgrass Cos.: Allsman, P. T., 1.
- Nevada, Currant Creek dist.: Faust, G. T., 1.
- Goldfield epithermal deposits: Wilson, H. D. B., 1.
- Groom dist., Lincoln Co.: Humphrey, F. L., 1.
- Mineralization: Bichan, W. J., 3.
- Mining dists.: Ferguson, H. G., 1.
- Ore deposits: York, B., 1.
- Quicksilver deposits: Bailey, E. H., 1.
- Rye Patch area: Vitaliano, C. J., 1.
- New Jersey, copper deposits: Woodward, H. P., 1.
- New Mexico, Boston Hill area: Entwistle, L. P., 2.
- Iron Mtn. dist., beryllium, tungsten deposits: Jahns, R. H., 1.
- Iron Mtn. ribbon rock: Jahns, R. H., 2.
- Red River min. area: Sidwell, R., 1.
- Silver City area: Entwistle, L. P., 1.
- Tertiary iron in collapsed ls.: Kelley, V. C., 1.
- New York, Lake Sanford area: Stephenson, R. C., 1.
- North America, gold vein deposits: White, W. H., 1.

Ore deposits, origin—Continued.

- North Carolina, Townsville area tungsten: White, W. A., 3.
- Northwest Territories, Yellowknife area: Jolliffe, A. W., 3.
- Nova Scotia, Lake Ainslie area: Douglas, G. V., 7.
- Londonderry deposits: Weeks, L. J., 1.
- North Grant area: Douglas, G. V., 1.
- Wentworth dist.: Bancroft, M. F., 1.
- Ohio gypsum: Lintner, E. J., 1.
- Oklahoma barite: Ham, W. E., 1.
- Ontario, Central Patricia mine: Hicks, H. B., 1.
- Fluorspar, Madoc dist.: Rowe, R. C., 2.
- Gabbro-wehrilite: Froberg, M. H., 1.
- Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
- General: Moore, E. S., 5.
- Hollinger mine: Allen, C. C., 1.
- Kam Kotia mine mineralized zone: Ferguson, S. A., 1.
- Kerr Addison gold mine: McLaren, D. C., 2.
- Little Long Lac area: Armstrong, H. S., 1.
- Hardrock porphyry: Reid, J. A., 3.
- Northwest, hematite: Brownell, G. M., 1.
- Porcupine dist porphyries: Gustafson, J. K., 1.
- Red Lake area: Horwood, H. C., 3.
- Ross mine, Ramore area: Jones, W. A., 1.
- Ore, mineral: Fleener, F. L., 2.**
- Oregon, Wash. Co. iron deposits: Libbey, F. W., 1.**
- Pennsylvania min. res.: Ashley, G. H., 1.
- Quebec, Beattie mine: Davidson, S. C., 1.
- Calumet Is.: Osborne, F. F., 1.
- Eastern Tps., chromite: Stockwell, C. H., 1.
- La Motte area: Norman, G. W. H., 4.
- Little Long Lac-Sturgeon River dist. gold belts: Tyson, A. E., 1.
- Lower Romaine River area: Retty, J. A., 1.
- Melartic gold mine: Halet, R. A., 1.
- Mountain Hill deposit: Hawley, J. E., 1.
- Noranda dist. ore deposits: Wilson, M. E., 2.
- South Carolina, Piedmont sillimanite deposits: Smith, L. L., 1.
- South Dakota, min. res.: Rothrock, E. P., 1.
- Sulphides, metal, solubility in dilute vein-forming solutions: Garrels, R. M., 1.
- Sweet Springs dist., Va.-W. Va.: Ladd, H. S., 1.
- Tennessee, eastern zinc deposits: Crawford, J., 1.
- Greene Co.: Snyder, F. G., 1.
- Zinc deposits: Stockdale, P. B., 2.

Ore deposits, origin—Continued.

- Tennessee—Continued.
- Jefferson City area ore bodies: Brokaw, A. L., 1.
- Mascot, Jefferson zinc dist.: Ziemke, P. C., 1.
- Northeast: King, P. B., 4.
- Sweetwater dist. structure: Dunlap, J. C., 1.
- Texas, Llano Co., N., barite: Zapp, A. D., 1.
- Mason Co.: McGammon, J. H., II, 1.
- Tri-State dist., ore deposits: Fowler, G. M., 1.
- United States, SE., cobalt-bearing manganese: Pierce, W. G., 2.
- United States-Mexico, min. dists.: Hulin, C. D., 1.
- Utah, Beaver Co.: Hobbs, S. W., 2.
- Cottonwood-American Fork area: Crawford, A. L., 6.
- Eastern Tintic dist.: Lovering, T. S., 3.
- Reaper mine pipe: Crawford, A. L., 5.
- Twin Peaks deposits: Crawford, A. L., 4.
- Washington, Blewett-Cle Elum fm.: Broughton, W. A., 1.; Lupher, R. L., 1.
- Chelan nickel deposit: Patty, E. N., 2.
- Cle Elum iron dist.: Zapffe, C., 1.
- Metaline Falls area: Hutt, J. B., 1.
- Morton cinnabar dist.: Mackin, J. H., 1.
- Olympic Penin.: Green, S. H., 1.
- Stevens, Okanogan Cos., magnetite deposits: Broughton, W. A., 2.
- Weinschenkite, Va.: Milton, C., 1.
- Whither "replacement": Bichan, W. J., 2.
- Yukon, Upper McQuesten River area: Bostock, H. S., 1.
- Whitehorse dist.: Cockfield, W. E., 1.

Oregon.

Economic geology.

- Antimony: Wagner, N. S., 1.
- Black sands, coastal: Stephenson, E. L., 1.
- Coos Bay quad., geology and coal: Allen, J. E., 1.
- Hobart Butte, Lane Co.: Iverson, H. G., 1.
- Iron ores, high alumina, Wash. Co.: Libbey, F. W., 1.
- Northwest: U. S. G. S., 1.
- Optical calcite: Anonymous, 99.
- Vanadium-bearing black sand: Allen, J. E., 3.

Historical geology.

- Coast, S., Cenozoic: Baldwin, E. M., 1.
- Coos Bay quad., geology and coal: Allen, J. E., 1.
- Coos Bay Tert. fms.: Weaver, C. E., 4.
- Floras, Dalles Tert.: Chaney, R. W., 4.
- Pliocene: Chaney, R. W., 6.
- Tertiary, Troutdale: Chaney, R. W., 5.

Oregon—Continued.

Historical geology—Continued.

- Geology, oil and gas: Weaver, C. E., 3.
- Iron ores, high alumina, Wash. Co.: Libbey, F. W., 1.
- Magmatic differentiation, gabbro sills, Ashland: Merriam, R. H., 1.
- Northwest: U. S. G. S., 1.
- Pumice beds, Summer Lake: Allison, I. S., 1.
- Volcanoes, Three Sisters region: Williams, H., 1.

Mineralogy.

- Antimony: Wagner, N. S., 1.
- Black sands, coast: Stephenson, E. L., 1.
- Clay pellets, Hobart Butte: Allen, V. T., 1.
- Hobart Butte, Lane Co.: Iverson, H. G., 1.
- Iron ores, high alumina, Wash. Co.: Libbey, F. M., 1.
- Mansfieldite and mansfieldite-scorodite ser.: Allen, V. T., 5.
- Optical calcite: Anonymous, 99.
- Quartz minerals: Dake, H. C., 2.
- Uranium with agate: Anonymous, 87.
- Zeolites: Dake, H. C., 4; Roberts, L. E., 1.

Paleontology.

- Amebelodon, Malheur Co. Pliocene: Wilson, J. A., 1.
- Birds, mammals, Pliocene: Miller, L. H., 2.
- Coos Bay Tert. fms.: Weaver, C. E., 4.
- Diatoms, Lower Klamath Lake: Conger, P. S., 1.
- Fauna, marine Tert. fms.: Weaver, C. E., 1.
- Floras, Alvord Creek Tert.: Axelrod, D. I., 6.
- Dalles, Tert.: Chaney, R. W., 6.
- Troutdale, Tert.: Chaney, R. W., 5.
- Foraminifera, Eocene, Cape Blanco: Bandy, O. L., 1.
- Mammalia, Aves, Lower Klamath Lake: Cressman, L. S., 2.
- Mollusca, Lower Klamath Lake: Baker, F. C., 1.
- Northwest: U. S. G. S., 1.
- Peat, pollen, Lower Klamath Lake: Hansen, H. P., 1.
- Peat bogs, Pacific Coast area: Hansen, H. P., 2.
- Pliocene floras: Chaney, R. W., 2.
- Pumice beds, Summer Lake: Allison, I. S., 1.
- Rhinoceros tooth, Eocene: Stirton, R. A., 1.
- Teredo wood: Wharton, J. R., 1.
- Tertiary floras: Chaney, R. W., 2, 4, 5, 6.

Petrology.

- Aplite breccia, replacement, Cornucopia: Goodspeed, G. E., 2.
- Clay pellets, Hobart Butte: Allen, V. T., 1.

Oregon—Continued.

Petrology—Continued.

- Coast, S., Cenozoic: Baldwin, E. M., 1.
- Coos Bay quad.: Allen, J. E., 1.
- Tertiary fms.: Weaver, C. E., 4.
- Geology, oil and gas: Weaver, C. E., 3.
- Iron ores, high alumina, Wash. Co.: Libbey, F. W., 1.
- Magmatic differentiation, gabbro sills, Ashland: Merriam, R. H., 1.
- Northwest: U. S. G. S., 1.
- Priddy's Ranch agates, thunder eggs: Colburn, L., 1.
- Pumice beds, Summer Lake: Allison, I. S., 1.
- Volcanoes, Three Sisters region: Williams, H., 1.
- Wallowa batholith: Goodspeed, G. E., 1.

Physical geology.

- Aplite breccia, replacement, Cornucopia: Goodspeed, G. E., 2.
- Coast, S., Cenozoic: Baldwin, E. M., 1.
- Coos Bay quad., geology and coal: Allen, J. E., 1.
- Geology, oil and gas: Weaver, C. E., 3.
- Iron ores, high alumina, Wash. Co.: Libbey, F. W., 1.
- Magmatic differentiation, gabbro sills, Ashland: Merriam, R. H., 1.
- Northwest: U. S. G. S., 1.
- Pumice beds, Summer Lake: Allison, I. S., 1.
- Volcanoes, Three Sisters region: Williams, H., 1.
- Wallowa batholith: Goodspeed, G. E., 1.

Physiographic geology.

- Black sands coastal area: Stephenson, E. L., 1.
- Coast, S., Cenozoic: Baldwin, E. M., 1.
- Coos Bay quad.: Allen, J. E., 1.
- Geology, oil and gas: Weaver, C. E., 3.
- Three Sisters volcanic region: Williams, H., 1.

Organic material into petroleum: White-

more, F. C., Jr., 1; ZoBell, C. E., 3.

Origin, energy of oscillatory earthquake

waves: Fu, C. Y., 1.

Origin of petroleum: Nevin, C. M., 1; White-

more, F. C., Jr., 1; ZoBell, C. E., 3.

Orogeny.

California, Big Pine volcanic field: Mayo, E. B., 1.

Santa Lucia Range: Taliaferro, N. L., 1.

Santa Monica Mtn.: Cotton, C. A., 1.

Sierra Nevada, Mono Lake area: Put-

nam, W. C., 1.

South, Coast Ranges, Pleist.: Cham-

berlin, R. T., 3.

Canada, Alaska Highway, Ft. Nelson-

Watson Lake: Williams, M. Y., 1.

Canol project: Laudon, L. R., 1.

Dominion Atlantic Ry. area: Hutt,

G. M., 16.

Lake Consolation area: Mathews,

W. H., 1.

Orogeny—Continued.

Canada—Continued.

Medicine Hat to Vancouver : Hutt, G. M., 14.

Sicamous to Lytton : Hutt, G. M., 9.
Structure and relief : Brouillette, B., 1.

Central America, Selva Lacandona, Mex., Guatemala : Mullerried, F. K. G., 4.

Colorado, Las Animas arch struc. devel. : Maher, J. C., 4.

Rocky Mtn. Nat. Park : Wegemann, C. H., 1.

White River Plateau, Glenwood Springs area : MacQuown, W. C., Jr., 1.

Geology applied to Imbrian Plain of the moon : Spurr, J. E., 1.

Glacial vs. desert origin of loess : Bryan, K., 1.

Greenland : Shaw, V., 3.

Franz Josef Fjord area : Odell, N. E., 1.

Hypothesis on crustal movements : De Lury, J. S., 2.

Kansas, W., cent., Pleist. : Frye, J. C., 1.
Kinetic theory, origin orogenic forces : Fisher, J. E., 1.

Maine Mount Desert Is. : Chadwick, G. H., 1.

Mexico, Colotlipa-Quechultenango min. dist. : González Reyna, J., 3.

Plateau : Nye, S. S., 2.

Michigan, iron deposits : Martin, H. M. M., 2.

Montana, Gravelly Range area : Atwood, W. W., 1.

Moon cf. earth, mtn. ranges : Chamberlin, R. T., 5.

New Mexico, Estancia Valley area : U. S. G. S., 1.

Northeast, Upper Paleozoic : Read, C. B., 1.

Rio Puerco area : Wright, H. E., Jr., 1.

North America, geosynclines in continental devel. : Kay, G. M., 1.

Tectonic devel., E. edge of Pacific : Stille, H. W., 1.

Oceanography and earthquakes : Buen, O. de, 1.

Oklahoma, Anadarko Basin : Wheeler, R. W., 1.

Ontario : Moore, E. S., 5.

Oregon, geology : Weaver, C. E., 3.

Pennsylvania, Buck Hill area : Myers, R. E., 2.

Western : Arthur, E. W., 1.

Texas, Lower Rio Grande Valley : Wynd, F. L., 2.

United States, Cascade Mts. : Case, R. O., 1.

Green, White, Adirondack Mts. : Balk, R., 2; Peattie, R., 1.

Rocky Mtn. deformation, basement control : Chamberlin, R. T., 4.

Western : Johnson, B. L., 3; Longwell, C. R., 7.

Orogeny—Continued.

Utah, Uinta Basin Cret. : Walton, P. T., 1.

Wasatch Mts. : Eardley, A. J., 1.

Vermont, west-central : Cady, W. M., 2.
Virginia, Burkes Garden quad. : Cooper, B. N., 1.

Shenandoah Nat. Park : Rickard, H. L., 1.

Washington, Blewett-Cle Elum fm. : Lupter, R. L., 1.

Geology : Weaver, C. E., 3.

West Indies, mtn.-uplift problem : Trechmann, C. T., 1.

Wyoming : La Fleiche, P., 2.

Rocky Mts. evolution : Knight, S. H., 1.

Orthoclase.

Utah, Twin Peaks deposits : Crawford, A. L., 4.

Wyoming, Yellowstone Park rhyolite-basalt complex : Wilcox, R. E., 1.

Ostracoda.

California, Imperial Valley, west side : Tarbet, L. A., 1.

Cythereis pipkinensis for C. hanna : Stephenson, M. B., 4.

Ectodemites, Penn., Tex., moulting : Cooper, C. L., 2.

Fauna, Florida well studies : Cole, W. S., 1.

Leadville ls., Colo. : Johnson, J. H., 8.

Tatman fm., Wyo. : Van Houten, F. B., 1.

Georgia, mid-Paleozoic : Swartz, F. M., 2.

Imperial Valley, Calif., fauna : Tarbet, L. A., 1.

Leadville ls., Colo., fauna : Johnson, J. H., 8.

Leperditidae, mid-Paleozoic, Ga. : Swartz, F. M., 2.

Louisiana, Natchitoches area : Maher, J. C., 1.

Microfauna, E. Texas Embayment Cret. : Lozo, F. E., Jr., 2.

Mississippi, Camp Shelby area : Brown, G. F., 1.

Missouri, faunas : Branson, E. B., 3.

Muscle scars, Perm., Penn., U. S. : Scott, H. W., 2.

New York, Catskill quad. faunas : Ruedemann, R. E., 5, 6.

Coxsackie quad. faunas : Goldring, W., 3.

New York-Pennsylvania, Lower Dev. zonal fossils : Swartz, F. M., 1.

North America, W., index fossils, marine Cenozoic fms : Weaver, C. E., 2.

Nova Scotia, St. Rose-Chimney Corner coal field : Bell, W. A., 1.

Ohio, Olentangy sh. fauna : Stewart, G. A., 1.

Plum Brook sh. Dev. fauna : Stewart, G. A., 1.

Ostracoda—Continued.

- Ontogeny of, Calif., S.: LeRoy, L. W., 1.
 Paleozoic, bib. index since 1934: Agnew, A. F., 1.
 Quebec faunas: Dresser, J. A., 1.
 Reklaw Eocene, Tex.: Stephenson, M. B., 2.
 Straight-backed, Paleozoic, classn.: Swartz, F. M., 3.
 Tennessee, W.-cent.: Born, K. E., 1.
 Texas, Anahuac Oligocene fm.: Ellis, A. C., 1.
 Cook Mtn. Eocene: Stephenson, M. B., 3.
 North Comanchean fauna: Lozo, F. E., Jr., 1.
 Reklaw Eocene: Stephenson, M. B., 2.
 Tertiary: Stephenson, M. B., 1.
 United States, Cotton Valley beds, N. Gulf Coastal Plain: Swain, F. M., 1.
 Pennsylvanian, Permian: Scott, H. W., 1.
 Schuler Juras. fm. faunas: Swain, F. M., 2.
 Utah, Dry Lake area: Williams, J. Stewart, 2.
 Ostreidae, nomenclatorial synopsis: Stenzel, H. B., 6.
 Our oil resources: Fanning, L. M., 1.
 Overthrusts and overthrusting. See also Faulting; Physical geology (general).
 Alberta, Tay River area: Henderson, J. F., 1.
 California, Santa Susana thrust, Los Angeles Co.: Hazzard, J. C., 1.
 Colorado, Vasquez Mts., Middle Park: Tweto, O., 1.
 Georgia, S. end of Blue Ridge: Furcron, A. S., 5.
 Montana, N. Big Belt Range: Lyons, J. B., 1.
 New Jersey, Martinsburg slate: Broughton, J. G., 2.
 New York, Catskill quad.: Ruedemann, R., 5, 6.
 Oklahoma, Arbuckle Mts.: Lehman, R. P., 1.
 Black Knob Ridge area: U. S. G. S., 1.
 Tennessee, folded Appalachians: King, P. B., 2.
 Jefferson City area ore bodies: Brockaw, E. P., 1.
 Northeast: King, P. B., 4.
 United States, Reading overthrust: Miller, B. L., 1.
 Southern Appalachians, Chilhowee group, Ocoee ser.: Stose, G. W., 1.
 Vermont, W. N. end Taconic overthrust sheet: Kaiser, E. P., 1.
 Virginia, Burkes Garden quad.: Cooper, B. N., 1.
 Faulting relations: Miller, R. L., 2.
 Glade Mtn. dist.: Miller, R. L., 1.
 Wyoming, Willwood, Tatman fms.: Van Houten, F. B., 1.
 Pachycephalosaurus, bonehead dinosaur: Colbert, E. W., 1.
 Pacific ocean, marine bottom samples: Rev-elle, R. R. D., 1.
 Paleobotany. See also Paleontology.
 Alberta, Drinnan to Brulé Lake area: Lang, A. H., 1.
 Fossil cones: Anonymous, 45.
 Pedley area: Irish, E. J. W., 1.
 Red Deer, Rosebud area flora: Sander-son, J. O. G., 1.
 Algae, calcareous, N. Am.: Johnson, J. H., 1.
 Upper Camb., N. J.: Howell, B. F., 7.
 Leadville ls., Colo.: Johnson, J. H., 8.
 Mississippian: McGlothlin, T., 1.
 Algal-Bryozoa consortia, Paleozoic: Elias, M. K., 6.
 Algal-Foraminiferal fm.: Johnson, J. H., 9.
 Alturas Tert. flora, Calif.: Axelrod, D. I., 7.
 Alvord Creek Tert. flora, Oreg.: Axel-rod, D. I., 6.
 Arizona, Perm., Trias.: Lauder milk, J. D., 5.
 Bermuda, ancient surfaces: Livingston, W., 1.
 Biochemical fossils: Fox, D. L., 1.
 Black Hawk Ranch Tert. flora, Calif.: Axelrod, D. I., 1.
 Bowmanites, Carb., Iowa: Cross, A. T., 1.
 Pennsylvanian, Mich.: Arnold, C. A., 1.
 British Columbia, Dunlevy-Portage Mtn. area flora: Beach, H. H., 1.
 Lone Mtn. area: McLearn, F. H., 1.
 Smithers area: Armstrong, J. E., 2.
 Burkeville Miocene, SE. Tex.: Stenzel, H. B., 1, 2.
 Calamites, Flint Hills, Kans.: Kennedy, M., 2.
 Ottawa fossil forest, Kans.: Schoewe, W. H., 2.
 Calcareous algae, useful micro-fossils: Johnson, J. H., 6.
 California, petrified wood: Lauder milk, J. D., 1.
 Puente, San Jose Hills: U. S. G. S., 1.
 Cambrian, early Upper, Mont.: Loch-man, C., 1.
 Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
 Fossil floras and stratigraphy: Bell, W. A., 3.
 West interior Cret.: McLearn, F. H., 3.
 Carotenoids in ocean sediments: Fox, D. L., 1.
 Cedar, hemlock, Tert., Nev.: Beck, G. F., 1.
 Chára, Pliocene, Nebr.: Kiener, W., 1.
 Charophyta, Miss.: McGlothlin, T., 1.
 North America: Peck, R. E., 1.

Paleobotany—Continued.

- Coal, E. Canada fields, correl. by coal plants: Bell, W. A., 3.
 Origin: Hixon, H. W., 1.
 Resins in, U. S., Canada: Selvig, W. A., 1.
 Cochise culture area, Ariz.: Sayles, E. B., 1.
 Colorado, Paleozoics: Johnson, J. H., 7.
 Sawatch Range area: Johnson, J. H., 3.
 West-central and NW. fms.: Brill, K. G., Jr., 1.
 Colpodexylon, Dev. lycopod, N. Y.: Banks, H. P., 1.
 Coniferous woods, Tert., west N. Am.: Beck, G. F., 5.
 Cryptozoon, Ord., Minn.: Stauffer, C. R., 4.
 Cycads, Cret., S. Dak.: Wieland, G. R., 1.
 Yale Univ. collections: Wieland, G. R., 2.
 Dalles Tert., flora, Oreg.: Chaney, R. W., 4.
 Diatomaceous earth, Mex.: Diaz Lozano, E., 1.
 Diatomite, High Plains, Tex.: Evans, G. L., 5.
 Ecology of marine organisms: Ladd, H. S., 3.
 Eopuntia, Eocene cactus, Utah: Chaney, R. W., 8.
 Eopuntia douglassii, Utah: Laudermilk, J. D., 8.
 Floras Alturas, Tert., Calif.: Axelrod, D. I., 7.
 Alvord Creek, Tert., Oreg.: Axelrod, D. I., 6.
 Appalachian area, Cenozoic, Ala., Ga.: Cloud, P. E., Jr., 3.
 Black Hawk Ranch, Tert., Calif.: Axelrod, D. I., 1.
 Carboniferous, Nova Scotia: Bell, W. A., 2.
 Wilmington area, Ill.: Wilson, B. H., 2.
 Dalles, Tert., Oreg.: Chaney, R. W., 4.
 Eocene, SE, N. Am.: Berry, E. W., 2.
 Southeast U. S.: Brown, R. W., 1.
 Florida: Cooke, C. W., 3.
 McKitterick Pleist., Calif.: Mason, H. L., 1.
 Mesabi iron range, Minn.: Bergquist, H. R., 1.
 Mulholland, Tert., Calif.: Axelrod, D. I., 2.
 Oakdale, Tert., Calif.: Axelrod, D. I., 3.
 Permian, marginal marine strata, U. S.: Clifton, R. L., 1.
 Pliocene, Calif.: Axelrod, D. I., 5;
 Chaney, R. W., 2, 6.
 Oregon: Chaney, R. W., 2, 6.
 Remington Hill, Tert., Calif.: Condit, C., 1.

Paleobotany—Continued.

Floras—Continued.

- Sonoma, Tert., Calif.: Axelrod, D. I., 4.
 Table Mtn., Tert., Calif.: Condit, C., 2.
 Tertiary, W. N. Am.: Chaney, R. W., 3.
 Troutdale, Tert., Oreg.: Chaney, R. W., 5.
 Wamsutta fm., Carb., Mass.: Knox, A. S., 1.
 Forests, Pleist., S. Car.: Buell, M. F., 1.
 Fossils, San Francisco, Calif.: Stanger, F. M., 1.
 General: Chaney, R. W., 1; Merriam, J. C., 1.
 Georgia, Coastal Plain: Cooke, C. W., 1.
 Greenland, Tert. ss.: Shaw, V., 4.
 Gymnosperm embryos: Schopf, J. M., 1.
 Illinois coal, correl. by plant fossils: Kosanke, R. M., 3.
 Plant microfossils from coal: Kosanke, R. M., 4.
 Indiana, climatic changes, post-Pleist., by fossil pollen: Potzger, J. E., 6.
 John Day area, Oreg.: Merriam, J. C., 1.
 Juglandaceae, Tert., U. S., W.: Beck, G. F., 2.
 Kanab, Trias flora, Utah: Laudermilk, J. D., 7.
 Kansas, cent., algal ls.: Frye, J. C., 3.
 Lake filling and bog fm.: Potzger, J. E., 4.
 Land plants, beginnings, history: Berry, E. W., 3.
 Louisiana, Tex., Midway-Wilcox fms.: Murray, F. E., Jr., 1.
 Maples, petrified, cent. Wash.: Beck, G. F., 4.
 Medullosa noei, Ill. coal balls: Steidtmann, E. W., 1.
 Mexico, Nuevo León: Mullerried, S.
 Valley of Tixtal: Mullerried, 3.
 Mississippi, Camp Shelby area flora: Brown, G. F., 1.
 Missouri: Branson, E. B., 3.
 Mulholland Tert. flora, Calif.: Axelrod, D. I., 2.
 New Hampshire, peat bogs: Krauss, R. W., 1.
 New Jersey, bog sediments, Pine Barrens: Potzger, J. E., 3.
 Brandywine Lighthouse, Miocene diatoms: Patrick, R. M., 1.
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 New York, Coxsackie quad. fossil plants: Golding, W., 3.
 Genesee group: Grossman, W. L., 1.
 North America, Mesozoic, Cenozoic plants: LaMotte, R. S., 1.
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 North Carolina, Cape Fear Penin.: Wells, B. W., 1.
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- Nova Scotia—Continued.
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 Oregon, NW., megafossils: U. S. G. S., 1.
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- Table Mtn. Tert. flora, Calif.: Condit, C.,
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 Western, coal: Eisner, A., 1.
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- Central America Cret. fms.: Imlay, R. W., 2.
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 Indiana, climatic changes, post-Pleist., by fossil pollen: Potzger, J. E., 6.
 Mexico, Cret. fms.: Imlay, R. W., 2.
 North America, periglacial climates and phenomena: Taber, S., 2.
 Reptilia, extinction: Cowles, R. B., 1.
 Washington, E., post-glacial veg.: Hansen, H. P., 3.

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- Biometrical analysis, molluscan assemblages: Schenck, H. G., 2.
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 Ozark region: Ladd, H. S., 3.
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- Alberta, Vermilion area: Nauss, A. W., 1.
 California, Great Valley, strat. relations: Goudkoff, P. P., 1.
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 Florida and S. Ga. stratigraphy: Applin, P. L., 1.
 Greenland, East, between 74°-75°, and islands: Vischer, G. A., 1.
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- Missouri, Louisiana ls.: Williams, J. S., 1.
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 Kansas, McLouth gas and oil field: Lee, W., 1.
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 Tertiary mammals and continental drift: Du Toit, A. L., 1.
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 Index fossils of N. Am.: Shimer, H. W., 1.
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- Marine ecology as related to paleontology : Ladd, H. S., 3.
- Metal molds of fossils : Rasetti, F., 7.
- Microlithologies, use : Ailing, H. L., 2.
- Neotypes : Simpson, G. G., 3.
- Paleontology and the search for oil :
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- Phylogenetic trees : Jepsen, G. L., 1.
- Photographing fossils : Rasetti, F., 8.
- Photography of megafossils : Eaton,
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- Phylogenetic terms, analysis, redefinition : Haas, O., 5.
- Plant fossils, mode of preservation and
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- Post-war paleontology : Howell, B. F., 5.
- Precision progress, geology, paleontology : Elias, M. K., 9.
- Research in physical sciences : Miller,
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- Science in the Univ. : Calif. Univ. Faculty, 1.
- Significant trends in geology : Bevan,
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- Special creation vs. evolution : Marsh,
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- Stereophotography of fossils : Gott,
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- Tempo and mode in evolution : Wright,
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- Crephicephalus edwardsi* for *C. oweni* :
Raasch, G. O., 1.
- Maryland, *Skolithos*, *Diplocraterion*,
Sabellidites, *Antietam* ss. : Howell,
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- Montana, faunas : Lochman, C., 1.
- Nassovinae, *Anomocarinas* : Howell,
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- New Jersey faunas : Howell, B. F., 7.
- North. America, *longicones* : Ulrich,
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- Pennsylvania, *Hardyston* fm. *Skolithos* :
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- Worm on trilobite : Ruedemann, R., 1.
- Quebec, Gaspé faunas : Rasetti, F., 9.
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- Loganopeltidea*, *Loganopeltis*, facial
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- Texas, graptolites, Wilberns, Mason Co. :
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- United States, *bithecae* in *Graptolitoidea* :
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- Virginia, graptolites : Decker, C. E., 8.
- Washington, *Metaline* fm. fauna :
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- Wisconsin, *Trilobita*, *Cryptozoan* : Twenhofel, W. H., 4.

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- Alberta, Alexo area : Crombie, G. P., 1.
- Appendages, Bryozoa : Elias, M. K., 8.
- Arkansas, Batesville area fauna : Gordon, M., Jr., 1.
- Corals, Lower Penn. : Moore, R. C., 6.
- Micro-faunas, Penn.-Missn. fms. :
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- Calcareous algae, useful micro-fossils :
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- Canada, E., coal fields : Bell, W. A., 3.
- Fossil floras and stratigraphy : Bell,
W. A., 3.
- Sandalodus*, selachian : Sternberg,
C. M., 3.
- Colorado, Leadville ls., calcareous algae :
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- Conodont morphology : Hass, W. H., 1.
- Fusulinidae*, evolution : Dunbar, C. O.,
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- And correl. of Penn. rocks : Thompson,
M. L., 5.
- Pennsylvanian, Kans. - Utah - Colo. :
Thompson, M. L., 4.
- Greenland, *Actinopterygii* denticles :
Goodrich, E. S., 1.
- Illinois, Chester Bryozoa : McFarlan,
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- Fossil plant miniatures : Jannsen,
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- Kinkaid Missn. corals : Easton, W. H.,
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- Medullosa noci* in coal balls : Steidtmann, W. E., 1.
- Pennsylvanian *Ostracoda* : Scott,
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- Indiana, Crane area Missn. *Pentremites* :
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- Glen Dean ls. fauna : Haas, O., 3.
- Insecta, Mazon Creek, Ill. : Carpenter,
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- Iowa, *Bowmanites*, coal balls : Cross,
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- Pteridosperm* stems, coal balls : Andrews, H. N., 1.
- Kansas, *Calamites*, Ottawa fossil forest : Schoewe, W. H., 2.
- Flint Hills : Kennedy, M., 2.
- Fusulinids*, Penn. Morrow rocks :
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- Lime-secreting algae : Johnson, J. H.,
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- Reptilia mid-Penn. : Lane, H. H., 2.
- Kentucky, Chester Bryozoa : McFarlan,
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- Conodonts, Cincinnati Arch area :
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- Louisiana ls., Mo. fauna : Williams,
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- Mammals, origin, from therapsid suborder
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- Massachusetts, Wamsutta fm. flora :
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- Mexico, fusulines, Las Delicias area : Dunbar, C. O., 1.
- Michigan, E. A. Strong's Missn. fauna, Point au Gres ls. : Ehlers, G. M., 1.
- Pennsylvanian Bowmanites : Arnold, C. A., 1.
- Mississippi Valley corals, Chouteau, related forms : Easton, W. H., 3.
- Montana, corals, Otter Missn. fm. : Easton, W. H., 6.
- Northwest, Missn. fauna : U. S. G. S., 2.
- Post-Osage Missn. corals : Sloss, L. L., 1.
- Nebraska, Penn. Corynotrypa : Condra, G. E., 4.
- New Mexico, corals, Lower Penn. : Moore, R. C., 6.
- Fusulinidae, Sierra Nacimiento : U. S. G. S., 2.
- Pennsylvanian : Thompson, M. L., 6.
- Schizophoria, Penn. : Northrop, S. A., 1.
- North America, Archimedes (Hall), revision : Condra, G. E., 1.
- Revision of Campophyllum : Easton, W. H., 1.
- Thamniscus : Condra, G. E., 8.
- Western, plant remains : Arnold, C. A., 2.
- Xiphosourans : Raymond, P. E., 2.
- Nova Scotia, N., floras : Bell, W. A., 2.
- Ohio, Ctenacanthus, Penn. : Wells, J. W., 4.
- Fossil plant locs., Penn. : Stout, W. E., 9.
- Gastropoda, Allegheny fm. : Sturgeon, M. T., 3.
- Oklahoma, Cephalopoda, Penn. Union Valley fm. : Miller, A. K., 3.
- Corals, Lower Penn. : Moore, R. C., 6.
- Micro-faunas, Penn.-Missn. fms. : Cooper, C. L., 5.
- Mississippian belemnite, Caney sh. : Flower, R. H., 4.
- Paleocyclus coral, Penn. : Howell, B. F., 6.
- Petrodus, Penn. : Stovall, J. W., 1.
- Oklahoma-Utah, Penn. Hederella : Condra, G. E., 4.
- Plant fossils, mode of preservation and coal fm. : Krystafovich, A., 1.
- Texas, ammonoids, Chinati, Finlay Mts. : Miller, A. K., 10.
- Coral-bearing Lower Penn. strata : Moore, R. C., 6; Plummer, F. B., 6-a.
- Edops : Romer, A. S., 1.
- Foraminifera, Penn. : Plummer, H. J., 2.
- Ostracoda moulting in Ectodemites : Cooper, C. L., 2.
- Pennsylvanian tabulate Anthozoa : Wells, J. W., 5.

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- Western, Penn. fusulinids : Thompson, M. L., 6.
- United States, Aphelecrinus, Missn. : Kirk, E., 3.
- Bryozoa, ctenostomatous : Condra, G. E., 3.
- Chelotrypid, Mid-continent : Moore, R. C., 5.
- Corals, Chester amplexoid : Easton, W. H., 7.
- Rugose, Penn., Mid-continent : Jeffords, R. M., 3.
- Cribanocrinus, Missn. : Kirk, Ed., 1.
- Cromyocrinidae : Wright, J., 1.
- Cymbiocrinus, Upper Missn. : Kirk, E., 4.
- Desmoinesian fusulines : Thompson, M. L., 3.
- Gaulocrinus, Missn. : Kirk, E., 7.
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- Mississippi Valley, Holcoerinus : Kirk, E., 8.
- Ostracoda muscle scars : Scott, H. W., 2.
- Paleozoic Gastropoda : Knight, J. B., 3.
- Utah, Penn. Rhombotrypella : Condra, G. E., 2.
- Cenozoic, undifferentiated.*
- Arizona, Calcitro arachnid : Petrunkevitch, A., 1.
- Cretaceous.*
- Alabama, Pseudoclavulina, Greene Co. : Cushman, J. A., 4.
- Alberta, Alexo area : Crombie, G. P., 1.
- Red Deer, Rosebud area faunas : Allan, J. A., 1.
- Stegoceras, dome-headed dinosaur : Sternberg, C. M., 2.
- Arkansas, Dierks ls. ammonites : Imlay, R. W., 4.
- Marlbrook marl, Foraminifera : Cushman, J. A., 6.
- Thalassemyd turtles : Schmidt, K. P., 1.
- Belemnites, New Egypt, N. J. : Anonymous, 72.
- British Columbia, Dunlevy-Portage Mtn. area : Beach, H. H., 1.
- Calcareous algae, useful micro-fossils : Johnson, J. H., 6.
- California, Foraminifera : Cushman, J. A., 4.
- Glycymeris veatchii biostratigraphy : Smith, C. T., 2.
- Radiolaria : Campbell, A. S., 2.
- Canada, dinosaurs : Sternberg, C. M., 1.
- Dunvegan fm. : McLearn, F. H., 6.

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Peace River Valley starfish: McLearn, F. H., 5.

Central American faunas: Imlay, R. W., 2.

Colorado, Pierre fm. faunal zones: Oswald, M. L., 1.

District of Columbia, petrified wood: Morgan, F., 1.

Faunas, Florida well studies: Cole, W. S., 1.

Mesabi iron range, Minn.: Bergquist, H. R., 1.

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Flora, Mesabi iron range, Minn.: Bergquist, H. R., 1.

Florida, diagnostic Foraminifera: Applein, E. R., 1.

Tallahassee City wells: Cole, W. S., 1.

Kansas, *Trinacromerum* plesiosaur: Riggs, E. S., 1.

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Mammals, origin from therapsid sub-order crania: Olson, E. C., 1.

Mexico, faunas: Imlay, R. W., 2.

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Microptycnodon for *Pycnomicrodon*: Hibbard, C. W., 5.

Minnesota, Dakota fm. gastroliths: Stauffer, C. R., 3.

Mississippi, Foraminifera, Mooreville chalk: Cushman, J. A., 4.

Mollusca, Dumas area, Ripley fm.: Harbison, A., 2.

Ostrea: Stephenson, L. W., 2.

Missouri, dinosaurs: Gilmore, C. W., 1.

Montana, *Asterichnites*: Brown, B., 1.

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New Mexico, Colorado group: Rankin, C. H., Jr., 1.

North America, Nautiloidea, *Cymatoceratidae*: Miller, A. K., 4.

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Supraspecific groups, *Corbulidae*: Vokes, H. E., 4.

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Oklahoma, *Mortonoceras vespertinum* (Morton): Adkins, W. S., 1.

Washita group Foraminifera: Loeblich, A. R., Jr., 1.

Pterosaurs, fish-catchers: Gudger, E. W., 1.

Reptilia, extinction: Cowles, R. B., 1.

Saskatchewan, *Baculites*: Robinson, H. R., 1.

South Dakota cycads: Wieland, G. R., 1.

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Texas, algal reefs in Austin chalk, Brewster Co.: Johnson, J. H., 2.

Buda ls. coral: Wells, J. W., 1.

Buda ls. fauna: Stephenson, L. W., 1.

Crabs, lobsters, shrimps, Dallas: Stenzel, H. B., 5.

Crustacea, decapod: Stenzel, H. B., 4-a.

East Texas Embayment microfauna: Lozo, F. E., Jr., 2.

Foraminifera: Barker, R. W., 1.

Pecan Gap chalk, type locality: Cushman, J. A., 4.

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Gryphaea: Adkins, W. S., 2.

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Kirklandia, jellyfish: Caster, K. E., 3.

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Toothed birds, fish-catchers: Gudger, E. W., 1.

United States, *Caestocorbula*: Vokes, H. E., 1.

Gulf Coast *Vaginulinas*: Todd, R., 1.

Rocky Mtn. floras: Reeside, J. B., Jr., 1.

Spiroloculina genus and species: Cushman, J. A., 7.

Western, *Protodonax*, Mollusca: Vokes, H. E., 3.

Utah, gastropod, Iron Co.: Yen, T.-C., 4.

Winged fish-catchers: Gudger, E. W., 1.

Wyoming, *Asterichnites*: Brown, B., 1.

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Alberta, Alexo area: Crombie, G. P., 1.

Blastoids: Reimann, I. G., 6.

Canada, Mackenzie River Basin corals: Smith, S., 1.

Mackenzie River *Sphaerospongia*: Warren, P. S., 1.

Scaumenac Bay fossil fish: Laverdière, J. W., 3.

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Brachiopoda: Cooper, G. A., 3.

Indiana: Sutton, A. H., 1.

Bone beds: Wells, J. W., 3.

Iowa, conodonts: Youngquist, W. L., 1.

Independence sh. Brachiopoda: Stainbrook, M. A., 3.

Kentucky bone beds: Wells, J. W., 3.

Manitoba, *Dinichtys*: Okulitch, V. J., 1.

Meristella, color patterns: Reimann, I. G., 2.

Michigan, scolecodonts, Kawkawlin: Eller, E. R., 2.

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- New York, Colpodecyon lycopod: Banks, H. P., 1.
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 Hamilton lyssacine sponges: Reimann, I. G., 5.
 Hexactinellida: Reimann, I. G., 5.
 Meristella color patterns: Reimann, I. G., 5.
 Snail, Livingston Co.: Howell, B. F., 13.
 Terataspis restoration: Reimann, I. G., 1.
 Thamnocerinus: Goldring, W., 2.
 Western, check-list of fish: Carter, A. L., 1.
 New York-Pennsylvania, zonal Ostracoda: Swartz, F. M., 1.
 North America, Archimedes (Hall), revision: Condra, G. E., 1.
 Blastoidea: Reimann, I. G., 4.
 Crinoidea, camerate: Kirk, E., 6.
 Nautiloidea classn.: Flower, R. H., 3.
 Octactinellids: Reimann, I. G., 3.
 Ohio bone beds: Wells, J. W., 3.
 Diplognathus, arthrodiran fish: Dunkel, D. H., 1.
 Fish, arthrodiran: Dunkel, D. H., 3, 4.
 Olentangy sh. Ostracoda: Stewart, G. A., 1.
 Plum Brook sh. Ostracoda: Stewart, G. A., 1.
 Oklahoma: Miser, H. D., 1.
 Ontario, octactinellids: Reimann, I. G., 3.
 Pennsylvania, Conularidae structures: Swartz, F. M., 5.
 Huntingdon area: Willard, B., 2.
 Synphorinae: Swartz, F. M., 4.
 Quebec, Fleurantia dentition, Scaumene Bay: Bystrow, A. P., 1.
 Tennessee: Born, K. E., 1.
 Tetracorolla, revision: Stumm, E. C., 1.
 United States, Bellerophonacea genera: Knight, J. B., 2.
 Cincinnati Arch area fish: Wells, J. W., 2.
 Gastropoda, Paleozoic: Knight, J. B., 3.

Jurassic.

- Alaska-western N. Am.: Kellum, L. B., 3.
 Alberta, Alexo area: Crombie, G. P., 1.
 British Columbia, Dunlevy-Portage Mtn. area: Beach, H. H., 1.
 Calcareous algae, useful micro-fossils: Johnson, J. H., 6.
 Faunas, Valley of Tlaxtla, Mex.: Mullerried, 2.
 Mammals, origin, from Therapsid suborder crania: Olson, E. C., 1.
 North America, W., Brachiopoda: Hertlein, L. G., 2.
 Pterosaurs, fish-catchers: Gudger, E. W., 1.

Paleontology—Continued.

Jurassic—Continued.

- Toothed birds, fish-catchers: Gudger, E. W., 1.
 United States, Morrison fm. Mollusca: Yen, T.-C., 3.
 Schuler fm.: Swain, F. M., 2.
 Southern, fossils: Imlay, R. W., 3.
 Utah, dinosaurs, Emery Co.: Stokes, W. L., 2.
 Winged fish-catchers: Gudger, E. W., 1.
 Ordovician.
 Arctic America, Silliman fossil mount: Shaw, V., 2.
 Conodont morphology: Hass, W. H., 1.
 Illinois, Maquoketa sh. Crustacea: Wells, J. W., 6.
 Kentucky, Brassfield fm. conodonts: Branson, E. B., 5.
 Eden conglom., Owen Co.: Jillson, W. R., 9.
 Richmond conodonts: Branson, E. B., 7.
 Manitoba, Halysites: Leith, E. I., 1.
 Minnesota, Shakopee dolomite cryptozoon: Stauffer, C. R., 4.
 Straight Cephalopoda: Miller, A. K., 2.
 Newfoundland, Ceratocephala: Kindle, C. H., 4.
 Giant graptolites: Twenhofel, W. H., 4.
 New York, Deepkill sh. eurypterid: Flower, R. H., 6.
 North America, brevicones, nautilicones: Ulrich, E. O., 1.
 Cybele: Howell, B. F., 10.
 Sowerbyella: Sinclair, G. W., 4.
 Oklahoma, echinoderms: Sinclair, G. W., 3.
 Graptolites, Big Canyon and Carter Co.: Decker, C. E., 3, 4, 5.
 Viola graptolites near Norman: Decker, C. E., 1.
 Ontario, cent., Stigmatella: Armstrong, H. S., 2.
 Lingulid Brachiopoda: Sinclair, G. W., 5.
 Rafinesquina, Opikina, Opikinella, Ottawa ls.: Wilson, A. E., 1.
 Strophomena, Trigrammaria, Microtrypa, Ottawa ls.: Wilson, A. E., 2.
 Trilobita: Sinclair, G. W., 1.
 Ozark uplift, Ark.-Mo., faunas: Cullison, J. S., 1.
 Pennsylvania, Ceratiocaris, Hess quarry, Lynnport: Ruedemann, R., 4.
 Quebec, age of sponge beds at Little Metis: Howell, B. F., 1.
 Brachiopoda, lingulid: Sinclair, G. W., 5.
 Breviconic Cephalopoda, Pont Rouge: Flower, R. H., 5.
 Cephalopoda, Arthropoda: Kindle, C. H., 2.
 Escharopora, Hull beds: Fritz, M. A., 2.

Paleontology—Continued.

Ordovician—Continued.

Quebec—Continued.

- Loganopeltoides, Loganopeltis, facial suture devel. : Rasetti, F., 2.
- Pont Rouge fauna : Sinclair, G. W., 2.
- Tennessee, merostome : Caster, K. E., 5.
- United States, Bellerophonacea genera : Knight, J. B., 2.
- Bithecae in Graptolitoidea : Decker, C. E., 6.
- Graptolites, pendent : Decker, C. E., 2.
- Ozark region : Cullison, J. S., 3.
- Utah, fossils, Wah Wah Valley : Kelly, C., 1.

Paleozoic, undifferentiated.

- Alaska, Cephalopoda : Miller, A. K., 7.
- Algal-Bryozoa consortia : Elias, M. K., 6.
- Gastropoda, N. Am. : Knight, J. B., 1.
- Ostracoda, index since 1934 : Agnew, A. F., 1.
- Spores, synopsis, generic definitions : Schopf, J. M., 2.
- Trilobita, N. Am. : Ball, J. R., 1.

Permian.

- Appendages, Bryozoa : Elias, M. K., 8.
- Arizona, Bicorbula, Bryozoa : Condra, G. E., 5.
- Fossils : Lauder milk, J. D., 5.
- Grand Canyon shark : David, L. R., 1.
- Kaibab fm. faunas, paleoecology : Nicol, D., 2.
- Trilobita, Kaibab fm. : Snow, J. I., 1.
- British Columbia, Dunlevy-Portage Mtn. area : Beach, H. H., 1.
- Calcareous algae, useful micro-fossils : Johnson, J. H., 6.
- Fusulinidae, evolution : Dunbar, C. O., 2.
- Kansas, Flint Hills : Kennedy, M., 2.
- Lime-secreting algae : Johnson, J. H., 10.
- Protodonata, Protozygoptera : Klots, E. B., 1.
- Mammalia, origin, from therapsid sub-order crania : Olson, E. C., 1.
- Mexico, ammonoid, Sonora : Miller, A. K., 6.
- Brachiopoda, NW. of Las Delicias : Cloud, P. E., Jr., 1.
- Cephalopoda, NW. of Las Delicias : Miller, A. K., 1.
- Chiapas, fusulinids : Thompson, M. L., 1.
- Fusulines, Las Delicias area : Dunbar, C. O., 1.
- Helicoprion, Coahuila : Mullerried, 10.
- North America, Thamniscus : Condra, G. E., 8.
- Ziphsurans : Raymond, P. E., 2.
- Pennsylvania, Ostracoda : Scott, H. W., 1.

Paleontology—Continued.

Permian—Continued.

- Texas, Ammonoidea, Cherry Canyon fm., Delaware Mts. : Clifton, R. L., 2.
- Finlay Mts. : Miller, A. K., 10.
- Western : Miller, A. K., 5.
- Diadectes : Romer, A. S., 2.
- Nautiloids, Glass Mts. : Miller, A. K., 9.
- Sierra Diablo : Miller, A. K., 9.
- Western, Bryozoa : Condra, G. E., 7.
- Word fm., fauna and strat. correls. : Clifton, R. L., 3.
- United States, Bellerophonacea genera : Knight, J. B., 2.
- Bryozoa, ctenostomatous : Condra, G. E., 3.
- Mid-continent, cheilotrypid : Moore, R. C., 5.
- Gastropoda, Paleozoic : Knight, J. B., 3.
- Marginal marine strata : Clifton, R. L., 1.
- Ohio, fossil plant locs. : Stout, W. E., 9.
- Ostracoda muscle scars : Scott, H. W., 2.
- Trilobita : Weller, J. M., 1.
- West Virginia, Ostracoda : Scott, H. W., 1.

Quaternary.

- California, Acteocina, Salton Sink : Willett, G., 2.
- Aves : Howard, H., 1 ; Miller, L. H., 1.
- Bears, past, present : Stock, C., 2.
- Flora, McKittrick asphalt beds : Pleist. : Mason, H. L., 1.
- Fossils, San Francisco area : Stanger, F. M., 1.
- Insecta, Pleist., La Brea : Pierce, W. D., 1.
- Mammalia, Pleist. : Peabody, F. E., 1.
- Pleistocene turkey tarsometatarsi : Howard, H., 3.
- Tapirus, Pleist. : Stock, C., 1.
- Teratornis locomotion : Fisher, H. I., 1.
- Florida, cormorant, Pleist. : Wetmore, A., 4.
- Palm Beach Co. Pleist. : Smith, E. R., 1.
- Honduras, Pleist. Gastropoda : Haas, F., 1.
- Illinois, Grus, Pleist. crane : Galbreath, E. C., 1.
- Indiana, Pleist. turkey : Wetmore, A., 3.
- Kansas, Casteroides : Green, M., 1.
- Cenozoic faunas, late, SW. : Hibbard, C. W., 7.
- Southwestern, Pleist. : Hibbard, C. W., 2.
- Mammals, origin, from therapsid sub-order crania : Olson, E. C., 1.

Paleontology—Continued.

Quaternary—Continued.

- Martinique, pre-Columbian vertebrate fauna: Chabanaud, P., 1.
 Maryland, Pleist. Vitrinella, St. Mary's Co.: Rehder, H. A., 1.
 Mexico, rodents, lagomorphs, San Josecito Cave: Cushing, J. E., Jr., 1.
 Nebraska, Pleist. fauna: McGrew, P. O., 1.
 Pleistocene loess: Schultz, C. B., 1.
 Nevada, Pleist. pelicans: Hall, E. R., 1.
 New England glacial walrus: Palmer, R. S., 1.
 New Jersey, Brandywine Lighthouse boring, macrofossils: Richards, H. G., 2.
 Cape May Canal area: Richards, H. G., 3.
 North America, Cenozoic speciation, correl.: Clark, B. L., 1.
 Corbulidae, supraspecific groups: Vokes, H. E., 4.
 Indiana, origin: Wissler, C., 1.
 Western, Brachiopoda: Hertlein, L. G., 2.
 Ontario, microfossils in bogs: Wilson, L. R., 1.
 Pennsylvania, Pleist. Eumeces, Frankstown Cave: Hoffstetter, R., 1.
 South Carolina, Pleist. forests: Buell, M. F., 1.
 Texas, Blanco Pleist. fauna, Crosby Co.: Meade, G. E., 2.
 Pleistocene vertebrates, collection: Geiser, S. W., 3.
 United States, Bison, Great Plains area: Schultz, C. M., 2.
 Lower Klamath Lake, diatoms: Conger, P. S., 1.
 Faunas: Cressman, L. S., 2.
 Mollusca: Baker, F. C., 1.
 Peat: Hansen, H. P., 2.
 Neararctic Sciuridae: Bryant, M. D., 1.
 Pacific Coast area peat deposits: Hansen, H. P., 2.
 Washington, E., post-glacial vegetation: Hansen, H. P., 3.
 Wisconsin, butternut, hickory, post-Pleist. range: Wilson, L. R., 2.

Silurian.

- Arctic America, Parafavosites: Bassler, R. S., 2.
 Blastoides: Reimann, I. G., 6.
 Calcareous algae, useful micro-fossils: Johnson, J. H., 6.
 Illinois Goldius: Miller, A. K., 8.
 Thomas A. Green fossil collections: Greacen, K. F., 1.
 Thyridocrinus: Kirk, E., 5.
 Indiana, Thyridocrinus: Kirk, E., 5.
 Iowa, Aretinurus: Miler, A. K., 8.
 Kentucky, Brassfield fm. conodonts: Branson, E. B., 5.
 Maine, Ripogenus Dam fauna: Willard, B., 1.

Paleontology—Continued.

Silurian—Continued.

- New York, Eudolatites: Howell, B. F., 8.
 New York-Ontario, scolecodonts, Manitoulin dolomite: Eller, E. R., 1.
 Pennsylvania, Huntingdon area: Willard, B., 2.
 Quebec, Gaspé, Ceratocephala: Kindle, C. H., 4.
 Trilobita, Port Daniel: Kindle, C. H., 3.
 United States, Bellerophonacea genera: Knight, J. B., 2.
 Bithecae in Graptoloidea: Decker, C. E., 6.
 Gastropoda, Paleozoic: Knight, J. B., 3.

Tertiary.

- Alabama, Foraminifera, Yellow Bluff Eocene: Cushman, J. A., 2.
 Coal Bluff marl mbr., Naheola fm.: Cushman, J. A., 4.
 Lisbon fm.: Cushman, J. A., 4.
 Nautiloid: Vegiard, H. E., 1.
 Red Deer, Rosebud areas faunas: Allan, J. A., 1.
 Barbados, larger Paleocene, Eocene Foraminifera: Vaughan, T. W., 2.
 Burkeville Miocene fauna, Tex.: Stenzel, H. B., 1.
 Calcareous algae, useful micro-fossils: Johnson, J. H., 6.
 California, Arthropoda: Pierce, W. D., 1.
 Abyssal fish fauna: David, L. R., 5.
 Aves: Howard, H., 1.
 Bathypelagic fish faunas: David, L. R., 5.
 Bears, past, present: Stock, C., 2.
 Black Hawk Ranch flora: Axelrod, D. I., 1.
 Cyprinodont Pisces, Death Valley: Miller, R. R., 1.
 Fish-scale, assemblages: David, L. R., 2.
 Use in micropaleontology: David, L. R., 4.
 Floras, Alturas: Axelrod, D. I., 7.
 Mulholland: Axelrod, D. I., 2.
 Oakdale: Axelrod, D. I., 3.
 Pliocene: Axelrod, D. I., 5; Chaney, R. W., 2, 6.
 Remington Hill: Condit, C., 1.
 Sonoma: Axelrod, D. I., 4.
 Table Mtn.: Condit, C., 2.
 Foraminifera, Fresno Co.: Cushman, J. A., 3.
 Glycymeris veatchii biostratigraphy: Smith, C. T., 2.
 Insecta, Miocene, Puente Hills: Pierce, W. D., 1.
 Kreyenhagen fm. Radiolaria, Los Banos: Clark, B. L., 2.
 Michlerax, Miocene hawk: Howard, H., 2.
 Mollusca: Keen, A. M., 2.

Paleontology—Continued.

Tertiary—Continued.

California—Continued.

Ostracoda, ontogeny: LeRoy, L. W., 1.

Petrified wood: Laudermilk, J. D., 1.

Radiolaria, Miocene: Campbell, A. S., 1.

Rodents, Mulholland Pliocene: Hoffmeister, D. F., 1.

Sau Diego marine Pliocene: Hertlein, L. G., 1.

Serratocerithium, Paleocene, Compton, R. E., 1.

Shallow-water Miocene fish faunas: David, L. R., 6.

Stickleback, Ridge fm.: David, L. R., 3.

Central America, Miocene Glycymeris: Nicol, D., 4.

Nautiloidea: Miller, A. K., 12.

Chalicotheres as biol. type: Borissiak, A. A., 1.

Colorado, Paleotironyx, Paleocene turtle: Schmidt, K. P., 3.

Cuba, Foraminifera, Eocene: Cole, W. S., 2.

Nodobaculiella: Cushman, J. A., 4.

Faunas, Florida well studies: Cole, W. S., 1.

Marine fms.: Wash., Oreg.: Weaver, C. E., 1.

Florida, Alum Bluff Gastropoda: Gardner, J. A., 1.

Alum Bluff Stenoglossa: Gardner, J. A., 1.

Articulina genus and species: Cushman, J. A., 5.

Cetaceans: Kellogg, A. R., 1.

City of Tallahassee wells: Cole, W. S., 1.

Foraminifera, diagnostic Applin, E. R., 1.

Tampa Bay Miocene oysters: Gardner, J. A., 4.

Georgia, Alum Bluff group Stenoglossa: Gardner, J. A., 1.

Foraminifera, McBean fm. type locs.: Cushman, J. A., 4.

Twigg clay Foraminifera: Cushman, J. A., 4.

Grus proavus type: Rapp, W. F., Jr., 2.

Idaho, Pliocene fresh-water Mollusca, Idaho fm.: Yen, T.-C., 1.

Salt Lake fm. Miocene Mollusca: Yen, T.-C., 2.

Idaho-Oregon, Pliocene birds, mammals: Miller, L. H., 2.

Illinois, Porters Creek fm. Foraminifera: Cooper, C. L., 1.

Jamaica, Bowden Foraminifera: Palmer, D. B. K., 1.

Buff Bay Miocene Foraminifera: Cushman, J. A., 10.

Paleontology—Continued.

Tertiary—Continued.

Kansas, Aves, Rexroad Pliocene: Wetmore, A., 2.

Eucaster, Epigaulus, Pliocene: Hibbard, C. W., 6.

Mammalia, Pliocene, Seward Co.: Hibbard, C. W., 4.

Testudo, Pliocene, Seward Co.: Hibbard, C. W., 3.

Mammalia, origin, from therapsid suborder crania: Olson, E. C., 1.

Maryland, Foraminifera: Jenkins, W. A., Jr., 1.

Mexico, Lepidocyclina, Oligocene, Vera Cruz: Hanzawa, S., 1.

Mollusca, NE.: Gardner, J. A., 3.

Pliocene flamingo: Miller, L. H., 3.

Mississippi, Articulina genus and species: Cushman, J. A., 5.

Fauna, Camp Shelby area: Brown, G. F., 1.

Foraminifera, Moodys marl mbr., Jackson fm.: Cushman, J. A., 4.

Montana, Monosaulax, Miocene beaver: Wood, H. E., 2d, 1.

Petrified trees: Beck, G. F., 3.

Nebraska, Ash Hollow, Pliocene Chara: Kiener, W., 1.

Macrochelys, Miocene: Zangerl, R., 3.

Nevada, cedar, hemlock: Beck, G. F., 1.

Neohipparion, 3-toed horse: Stock, C., 3.

New Jersey, Brandywine Lighthouse boring, macrofossils: Richards, H. G., 2.

Diatoms: Patrick, R. M., 1.

North America, Baggina: Cushman, J. A., 4.

Cenozoic speciation, correl.: Clark, B. L., 1.

Cervoid Palaeomerycidae: Stirton, R. A., 2.

Chalicotheres as biol. type: Borissiak, A. A., 1.

Corbulidae, supraspecific groups: Vokes, H. E., 4.

Flora, SE. Eocene: Berry, E. W., 2.

Great Plains Miocene carnivores: Riggs, S. E., 2.

Nautiloidea: Miller, A. K., 12.

Nodobaculiella: Cushman, J. A., 4.

Plataxidea, Pliocene badger: Hall, E. R., 2.

Rectuvigerina: Mathews, R. D., 1.

Reussellinae: Cushman, J. A., 4.

Typhinae Gastropoda: Keen, A. M., 1.

Western, Brachiopoda: Hertlein, L. G., 2.

Coniferous fossil woods: Beck, G. F., 5.

Floras: Chaney, R. W., 2, 3, 6.

Plant remains: Arnold, C. A., 2.

Paleontology—Continued.

Tertiary—Continued.

North Carolina, Miocene, Pliocene :
Mansfield, W. C., 1.

Mollusca, Eocene Santee ls. : Harbi-
son, A., 1.

Ostracoda, Duplin marl : Edwards,
R. A., 1.

North Carolina-Virginia, Miocene, Plio-
cene Pelecypoda : Gardner, J. A., 2.
Oklahoma, Laverne fm. Pliocene Mol-
lusca : Leonard, A. B., 1.

Oregon, Amebelodon, Pliocene : Wilson,
J. A., 1.

Coos Bay fms. : Weaver, C. E., 4.

Floras, Alvord Creek : Axelrod, D. I.,
6.

Dalles : Chaney, R. W., 4.

Pliocene : Chaney, R. W., 2, 6.

Troutdale : Chaney, R. W., 5.

Foraminifera, Cape Blanco Eocene :
Bandy, O. L., 1.

Rhinoceros tooth, Eocene : Stirton,
R. A., 1.

Oregon-Idaho, Pliocene birds, mammals :
Miller, L. H., 2.

Pelecypoda, geol. range : Gardner, J. A.,
2.

South Dakota, Miocene avifauna : Miller,
A. H., 1.

Pliocene Macrochelys : Zangerl, R., 3.

Syrphidae, Colo.-Wyo.-Utah : Hull, F.
M., 1.

Tertiary mammals and continental
drift : Du Toit, A. L., 1.

Texas, Amebelodon jaw, Panhandle :
Gregory, J. T., 2.

Anahuac Oligocene fm. : Ellisor, A. C.,
1.

Foraminifera, Anahuac fm. : Cush-
man, J. A., 11.

Invertebrata, Burkeville Miocene :
Stenzel, H. B., 1.

Ostracoda : Stephenson, M. B., 1.

Cook Mtn. : Stephenson, M. B., 2.

Reklaw Eocene : Stephenson, M. B.,
2.

Paleocene Tehuacana : Stenzel, H. B.,
3.

Southeast Miocene, brackish, non-
marine : Stenzel, H. B., 2.

Spiroloculina, Oligocene : Cushman,
J. A., 4.

Trees and history : Chaney, R. W., 7.

Trinidad, Arcidae : Rutsch, R., 1.

Foraminifera, Cipero marl : Cushman,
J. A., 9.

Soldado Rock, Paleocene Mollusca :
Rutsch, R., 2.

United States, Gulf Coast, Turbinolia :
Monsour, E., 1.

Neararctic Sciuridae : Bryant, M. D.,
1.

Rocky Mtn. floras : Reeside, J. B., Jr.,
1.

Paleontology—Continued.

Tertiary—Continued.

United States—Continued.

Southeast, Eocene flora : Brown,
R. W., 1.

Southern, Claibornian Gastropoda :
Palmer, K. E. V. W., 1.

Southwest, Hodopoeus : Pilsbry, H.
A., 1.

Spiroloculina genus and species :
Cushman, J. A., 7.

Western, Juglandaceae : Beck, G. F., 2.

Mammalia, Paleocene, Eocene : Van
Houten, F. B., 3.

Tertiary floras : Chaney, R. W., 2.

Utah, Duchesne River Oligocene Mam-
malia : Scott, W. B., 1.

Eopuntia, Eocene cactus : Chaney, R.
W., 8.

Eopuntia douglassii : Laudermilk, J.
D., 8.

Virginia, Aquia fm. Foraminifera :
Cushman, J. A., 4.

Miocene : Mansfield, W. C., 1.

Yorktown fm. Pelecypoda : McGavock,
C. B., Jr., 1.

Virginia-North Carolina, Miocene, Plio-
cene Pelecypoda : Gardner, J. A., 2.

Washington, central, petrified maples :
Beck, G. F., 4.

Miocene fossil wood, Saddle Mtn. :
Dake, H. C., 1.

Northwest, Oligocene fauna : Durham,
J. W., 1.

Russell Forests, fossil : Beck, G. F., 6.

West Indies, Antilles, Palmoxylon :
Loubiere, A., 1.

Eocene, Miocene corals : Wells, J.
W., 7.

Wyoming, Aspideretes Eocene : Zangerl,
R., 1.

Brachyuranochampsia, Eocene : Zan-
gerl, R., 2.

Carnivores, Miocene, auditory region :
Hough, M. J., 1.

Coal-seam paleoecology : Wilson,
L. R., 4.

Echmatemys, Eocene turtles : Gil-
more, C. W., 3.

Eocarthartes, Eocene vulture : Wet-
more, A., 1.

Eocene lizard : Gilmore, C. W., 2.

Triassic.

Arizona fossils : Laudermilk, J. D., 5.

Moenkopi fm. study : Anonymous,
101.

Petrified Forest limuloid trails : Cas-
ter, K. E., 1.

British Columbia, Dunlevy-Portage Mtn.
area : Beach, H. H., 1.

Liard River area : McLearn, F. H., 7.

Canada, Rockies faunas : Warren, P. S.,
3.

Mammals, origin, from therapsid sub-
order crania : Olson, E. C., 1.

Paleontology—Continued.

Triassic—Continued.

Pennsylvania, dinosaur tracks: Ashley, G. H., 5.

Gwyneddosaurus: Bock, W., 1.

Mollusca: Richards, H. G., 1.

Texas, Amphibia, Dockum fm., Howard Co.: Sawin, H. J., 2.

Buettneria restoration: Sawin, H. J., 1.

Trilophosaurus, Howard Co.: Gregory, J. T., 1.

Utah, Kanab dinosaurs: Lauder milk, J. D., 7.

Paleontology, petroleum, and search for oil: Johnson, J. H., 4.

Paleozoic, undifferentiated.

Alabama, Tuscaloosa, Cottondale quads.: U. S. G. S., 1.

Arkansas, bauxite area: Thoenen, J. R., 1.

British Columbia, Tuya-Teslin area: Watson, K. D., 1.

California, Barstow quad., San Bernardino Co.: Miller W. J., 7.

Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.

Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.

Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.

Colorado, Canon City area: Blum, V. J., 1.

Georgia, SW.: Furcron, A. S., 2; SE. Geol. Soc., 2.

Mexico, Colotlipa-Quechultenango min. dist.: González Reyna, J., 3.

Gulf of California area: Osorio Taffall, B. F., 1.

Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.

Nova Scotia, Bass River area: Weeks, L. J., 3.

Londonderry area: Weeks, L. J., 2.

Oil fields, Alberta, British Columbia: Hume, G. S., 7.

Ontario gas fields: Brant, A. A., 2.

Ostracoda, straight-backed Paleozoic, classn.: Swartz, F. M., 3.

United States, W. fluorspar: Gillson, J. L., 1.

Washington dolomite: Bennett, W. A. G., 1.

Stevens, Okanogan, Cos. magnetite deposits: Broughton, W. A., 2.

Paligorskite.

Alaska, Lemesurier Is.: Fisher, R. B., 1.

Palinspastic, paleogeog. maps: Kay, G. M., 4.

Panama.*Economic geology*.

Foreign work by U. S. Geol. Survey: Dorr, J. V., 2d, 1.

Paragenesis.

Abyssal vs. magmatic theory of ore genesis: White, C. H., 1.

Alabama, tin belt: Hunter, F. R., 1.

Alaska, nickel-copper deposits, Spirit Mtn. area: Kingston, J., 1.

Arizona, San Manuel copper deposit: Schwartz, G. M., 3.

Superior mining area: Short, M. N., 1.

Blakeite, tellurite of iron: Frondel, C., 1.

British Columbia, Ainsworth area: Rice, H. M. A., 1.

Nickel Plate Mtn. area: Dolmage, V., 1.

Twin "J" Mine: Stevenson, J. S., 3.

Canada, W., sphalerites: Warren, H. V., 5.

Cuba, Matahambre copper mine: Haffner, B. K., 1.

Gold deposition: Bichen, W. J., 1.

Idaho, Birch Creek area: Anderson, A. L., 1.

Ima mine tungsten: Clabaugh, S. E., 1.

Kentucky, Babb fault system: Hardin, G. C., Jr., 2.

La Plata ore minerals, Colo.: Schafer, P. A., 1.

Magmatic, post-magmatic processes, terminology: Shand, S. J., 2.

Mexico, Pacific Coast: González Reyna, J., 1.

Missouri, pyrite deposits: Grawe, O. R., 1.

Montana, Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.

Neilhart minerals: Schafer, P. A., 1.

Nevada, Rye Patch area: Vitaliano, C. J., 1.

Newfoundland, fluorspar deposits: Van Alstine, R. E., 1.

New Mexico, Boston Hill deposits: Entwistle, L. P., 2.

Iron Mtn. ribbon rock: Jahns, R. H., 2.

Silver City area: Entwistle, L. P., 1.

North America, gold vein deposits: White, W. H., 1.

North Carolina, Townsville area tungsten: White, W. A., 3.

Oklahoma, Bromide area: Ham, W. E., 2.

Ontario, Leeds Co.: Harrison, J. M., 1.

Ross mine, Ramore area: Jones, W. A., 1.

Oregon, Ashland area, magmatic differentiation: Merriam, R. H., 1.

Quebec, Moulton Hill deposit: Hawley, J. E., 1.

South Dakota, Custer pegmatites and minerals: Fisher, D. J., 1.

Tennessee, Greene Co.: Snyder, F. G., 1.

United States, upper Miss. Valley, zinc-lead dist.: Heyl, A. V., Jr., 1.

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- Utah, Iron Peak ores: Crawford, A. L., 2.
 Tintic dist., E.: Lovering, T. S., 3.
 Repaire mine pipe: Crawford, A. L., 5.
 Parícutin Volcano, Mex.: White, D. E., 1.
 Associated activity: Westland, A. J., 1.
 Parrosaurus for Neosaurus Gilmore: Gilmore, C. W., 4.
 Patton oil field, Ark.: Blanplied, B. W., 2.
 Pavement-boulders as interglacial evidence: Holmes, C. D., 3.
 Pearceite, Colo., min. res.: Pearl, R. M., 2.
 Peat. See also Bogs; Paleobotany; Pollen analysis.
 Indiana, pollen analysis: Potzger, J. E., 2.
 Iowa, Illinoian and post-Illinoian Pleist.: Kay, G. F., 2.
 Nebraska, Pleist. loess: Schultz, C. B., 1.
 New Hampshire bogs, pollen analyses: Krauss, R. W., 1.
 New Jersey: Waksman, S. A., 1.
 Ohio, Fulton Co.: Harker, D. H., 3.
 Resources: Ohio Devel. Pub. Com., 1.
 Ontario, Rennie-Leeson area: Bruce, E. L., 1.
 Pennsylvania, Pittsburgh area: Schopf, J. M., 4.
 Quebec, econ. res.: Quebec Bur. Mines, 1.
 Texas, Gonzales Co. bogs: Chelf, C. R., 2.
 Lee Co.: Harris, G. D., 1.
 Polk, San Jacinto Cos., bogs: Shafer, G. H., 1.
 United States, Lower Klamath Lake: Hansen, H. P., 1.
 Northern Great Basin: Cressman, L. S., 1.
 Pacific Coast area: Hansen, H. P., 2.
 West Virginia: Martens, J. H. C., 1.
 Wisconsin, butternut, hickory, post-Pleist. range: Wilson, L. R., 2.
- Pebbles.**
 Alberta, Alexo area: Crombie, G. P., 1.
 Tay River area: Henderson, J. F., 1.
 California, Carmel Valley pellet phosphorite: Rogers, A. F., 2.
 Mokelumne area: Durrell, C., 2.
 Santa Catalina Is. marine sed.: Clements, T. D., 2.
 Santa Lucia Range: Taliaferro, N. L., 1.
 Tumej Tert. ss., Fresno Co.: Zimmerman, J. J., 1.
- Canada, Trans-Canada Highway.**
 Hearst-Long Lac sec.: Evans, J. E. L., 2.
 Indiana, wind-polished, Newton Co.: Fidler, M. M., 1.
 Iowa, Illinoian, post-Illinoian Pleist.: Kay, G. F., 2.
 Kentucky River, Drennon abandoned channel: Jillson, W. R., 5.
 Lake Superior, Minn.: Grogan, R. M., 1.

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- Maine, Kennebec Valley esker: Trefethen, J. M., 2.
 Minnesota, Dakota fm. gastroliths: Stauffer, C. R., 3.
 Lake Superior beaches: Grogan, R. M., 1.
 Missouri, SE.: Croneis, C. G., 1.
 Ohio, Blackhand Missn. ss.: Ver Steeg, K., 5.
 Ontario, Dome mine, porphyry-sediment contact: Holmes, T. C., 1.
 Pebbles of brick, rounded, Salmon River, Quebec: Cooke, H. C., 2.
 Quebec, Salmon River, time of rounding: Cooke, H. C., 2.
 Saskatchewan, S.: Hutt, G. M., 17.
 Texas, Perm. Pease River group: Roth, R. I., 1.
- Pecos River-Rio Grande area, N. Mex., oil poss.: U. S. G. S., 1.**
- Pedestal rocks.**
 Granites, veneered, SE. U. S.: White, W. A., 2.
- Pediments.**
 Arizona, East Kaibab monocline, Grand Canyon area: Strahler, A. N., 1.
 Desert features, N. Am.: Cumings, E. R., 2.
 Montana, N. Big Belt Range: Lyons, J. B., 1.
 Utah, Wasatch Mts.: Eardley, A. J., 1.
- Pegmatites.**
 Alabama, tin belt: Hunter, F. R., 1.
 California, Crestmore minerals: Woodford, A. O., 1.
 Colorado, beryllium, tantalum: Hanley, J. B., 1.
 Bismuth minerals in: Heinrich, E. W., 2.
 Brown Derby mine, lithia: Hanley, J. B., 2.
 Exploration for: Bannerman, H. M., 2.
 Locating by airplane: Whitney, R. J., 1.
 Maine, Kennebec Valley esker: Trefethen, J. M., 2.
 Mt. Waldo batholith: Trefethen, J. M., 1.
- Massachusetts, Chester-Blandford State Forest: Billings, M. P., 1.**
- Mexico, Pacific Coast: González Reyna, J., 1.**
- Montana, Belgrade: Murdock, H. E., 1.**
- Unusual minerals in: Cooke, S. R. B., 1.**
- Nevada, Rye Patch area: Vitallano, C. J., 1.**
- New England, mica deposits: Cameron, E. N., 1.**
- Wall rock minerals: Stoll, W. C., 2.**
- New Hampshire: Bannerman, H. M., 1.**
- Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.**
- New Mexico, bismuth minerals in: Heinrich, E. W., 2.**
- Taos Co.: Jahns, R. H., 3.**

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- New York, Adirondacks eastern area :
Balk, R., 1.
Bedford dist. : Fluhr, T. W., 3.
North Carolina : Olson, J. C., 1.
Franklin-Sylva mica dist. : Heinrich,
E. W., 1.
Northwest Territories, Yellowknife-
Beaulieu area : Jolliffe, A. W., 1.
Ontario, Fort Hope area : Prest, V. K., 1.
Kaladar, Kennebec Tps. : Harding,
W. D., 1.
Leeds Co. : Harrison, J. M., 1.
Pennsylvania, min. res. : Ashley, G. H.,
1.
Triassic diabase derivatives : Tomlin-
son, W. H., 3.
Quebec, La Corne molybdenite mine :
McLaren, D. C., 4.
La Motte area : Norman, G. W. H., 4.
Preissac-La Corne area : Norman,
G. W. H., 5.
South Dakota, Beecher Rock Basin :
Gwynne, C. S., 2.
Custer area : Fisher, D. J., 1, 2.
Mineral res. : Rothrock, E. P., 1.
Structure, mineralogy of : Page,
L. R., 3.
United States, granitic, internal struc-
ture : Cameron, E. N., 2.
Mica-bearing : Griffiths, E. N., 2.
Utah, House Range Mts. : Crawford,
A. L., 1.
Reaper mine pipe : Crawford, A. L., 5.
Virginia : Brown, W. R., 2 ; Pegau, A. A.,
1.
Wyoming, vermiculite deposits : Hagner,
A. F., 1.

Pelecypoda. See also Mollusca.

- Alaska, Wide Bay anticline area : Kel-
lum, L. B., 4.
Alberta, Alexo area : Crombie, G. P., 1.
Arcidae, Tert., Trinidad : Rutsch, R., 1.
Arkansas, Batesville area, Carb. fauna :
Gordon, M., Jr., 1.
British Columbia, Dunlevy-Portage Mtn.
area fauna : Beach, H. H., 1.
Tyaughton Lake area : Cairnes, C. E.,
1.
California, Coalinga anticline fauna :
U. S. G. S., 2.
Knoxville ser. faunae : Anderson,
F. M., 1.
Mollusca : Keen, A. M., 2.
Pleistocene : Willett, G., 1.
Santa Lucia Range : Taliaferro, N. L.,
1.
Canada, Dunvegan Cret. fm. faunas :
McLearn, F. H., 6.
Rockies Trias. faunas : Warren, P. S.,
3.
Colorado, Morrison fm., Colorado Pla-
teau area : Stokes, W. L., 1.
Paleozoic faunas : Johnson, J. H., 7.
Pierre fm. faunal zones : Oswald,
M. L., 1.

Pelecypoda—Continued.

Colorado—Continued.

- Sawatch Range area : Johnson, J. H.,
3.
Corbulidae, supraspecific groups : Vokes,
H. E., 4.
Cuba, Guisa-Los Negros area : Wood-
ring, W. P., 1.
Detroit River ls., Ohio faunas : Stumm,
E. C., 2.
Faunas, Cochise culture area, Ariz. :
Sayles, E. B., 1.
Eocene, Santa ls., N. Car. : Harbison,
A., 1.
Flint Hills fauna, Kans. : Kennedy,
M., 2.
Florida fauna : Cooke, C. W., 3.
Genessee group, N. Y. : Grossman,
W. L., 1.
Gualala group, Calif. : Weaver, C. E.,
3.
Marine Tert. fms., Wash.-Oreg. :
Weaver, C. E., 1.
Mesabi iron range, Minn. : Bergquist,
H. R., 1.
Permian, Kaibab fm., Ariz. : Nicol,
D., 2.
Marginal marine strata, U. S. :
Clifton, R. L., 1.
Pease River group fauna, Tex. :
Roth, R. I., 1.
Point au Gras Missn. ls., Mich. : Eh-
lers, F. M., 1.
San Diego area, Calif. : Hertlein,
L. G., 1.
Tatman fm., Wyo. : Van Houten,
F. B., 1.
Valley of Tixtla, Mex. : Mullerried, 2.
Georgia, Coastal Plain : Cooke, C. W., 1.
Glycymeris, Miocene, Cent. Am. : Nicol,
D., 4.
Glycymeris Veatchii, Cret., Tert., Calif. :
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Illinois, Dev. fms. : Cooper, G. A., 2.
Thomas A. Green Silurian fossil col-
lection : Greacen, K. F., 1.
Index fossils : McLearn, F. H., 3.
Invertebrata, Miocene, Burkeville, Tex. :
Stenzel, H. B., 1.
Iowa, Illinoian, post-Illinoian Pleist. :
Kay, G. F., 2.
Kansas, N.-cent. Pleist. : Hibbard, C.
W., 1.
Louisiana ls., Mo., fauna : Williams,
J. S., 1.
Maine, Sil., Ripogenus Dam fauna : Wil-
lard, B., 1.
Mexico, Nuevo León : Mullerried, 8.
Tertiary fms., NE., Mollusca : Gard-
ner, J. A., 3.
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- Missouri, faunas : Branson, E. B., 3.
 Loess fauna : Cameron, C. C., 1.
 Modiolopsis clintonensis for M. ovata :
 Flower, R. H., 2.
 Mollusca, Paleocene, Trinidad, Soldado
 Rock : Rutsch, R., 2.
 Pleistocene, Cuba : Pérez Farfante, I.,
 1.
 Ripley Cret. fm., Dumas area, Miss. :
 Harbison, A., 2.
 New Jersey, Brandywine Lighthouse
 boring, fauna : Richards, H. G., 2.
 Cape May Canal Pleist. fauna : Rich-
 ards, H. G., 3.
 New Mexico, Colorado group : Rankin,
 C. H., Jr., 1.
 New York, Cocksackie quad. faunas :
 Goldring, W., 3.
 North America, Gulf area : Imlay, R. W.,
 7.
 North Carolina, Miocene, Pliocene :
 Gardner, J. A., 2.
 Nova Scotia, St. Rose-Chimney Corner
 coal field : Bell, K. A., 1.
 Odontogryphaea for Gryphaea, Cret.,
 Tex. : Adkins, W. S., 2.
 Odontogryphaea-Flemingostrea oyster
 stock : Stenzel, H. B., 7.
 Oregon, Coos Bay Tert. fms. faunas :
 Weaver, C. E., 4.
 Ostrea, Cret., Miss. : Stephenson, L. W.,
 2.
 Miocene, Tampa Bay, Fla. : Gardner,
 J. A., 4.
 Ostreidae, nomenclatorial synopsis :
 Stenzel, H. B., 6.
 Paleoecology, oysters : Stenzel, H. B., 8.
 Parmicorbula for Corbula neaeroides :
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 Pennsylvania, Oil City quad. : Dickey,
 P. A., 1.
 Triassic Mollusca : Richards, H. G., 1.
 Protodonax, Cret., West U. S. : Vokes,
 H. E., 3.
 Pseudonotis, Carb., Perm. : Nicol, D., 1.
 Pterinea nylanderii for P. briska : Flower,
 R. H., 2.
 Quebec faunas : Dresser, J. A., 1.
 Ripogenus Dan fauna, Sil., Maine : Wil-
 liard, E., 1.
 Schizodus, authorship, genotype : Nicol,
 D., 3.
 Tempo and mode in evolution : Simp-
 son, G. G., 1.
 Texas, Anahuac Oligocene fm. : Ellisor,
 A. C., 1.
 Buda ls. fauna : Stephenson, L. W., 1.
 Irving area concretions : Loving, G., 1.
 North Comanchean fauna : Lozo, F. E.,
 Jr., 1.
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 Word Perm. fm. fauna and strat.
 correls. : Clifton, R. L., 3.

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- Tumey ss. fauna, Calif. : Zimmerman,
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 Utah, Dry Lake area : Williams, J. Stew-
 art, 2.
 Uinta Basin Cret. : Walton, P. T., 1.
 Virginia, Miocene, Pliocene : Gardner,
 J. A., 2.
 Yorktown fm. Miocene fauna : Mc-
 Gavock, C. B., Jr., 1.
 Washington, NW., Oligocene : Durham,
 J. W., 1.
- Penneplains.
- Arizona, Kaibab, Coconino plateaus :
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 Arizona-Utah, East Kaibab monocline :
 Babenroth, D. L., 1.
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 Illinois, S. : Weller, J. M., 1.
 Kansas, Barton Co. buried hills : Wal-
 ters, R. F., 1.
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 R. E., 2.
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- Pennsylvania.
- Geologic Survey progress : Ashley, G. H.,
 3.
 Gravity inv., cent.-E. Pa. : Hersey, J. B.,
 1.
- Areas described.
- County descriptions : Ashley, G. H., 1.
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- Economic geology.
- Appalachian area, oil and gas, 1943-44 ;
 Appalachian Geol. Soc., 1.
 Franklin quad., oil and gas-field farm-
 line maps : Dickey, P. A., 2.
 Geology and min. res. in war : Foose,
 R. M., 2.
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 Iron ores, Cumberland Valley : Foose,
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 Mineral res. : Ashley, G. H., 1.
 Oil-bearing sands, SW. : Matteson, L. S.,
 1.
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 lin, Oil City quads. : Dickey, P. A.,
 2.
 Petroleum and gas devel. 1943 : Galey,
 J. T., 1 ; Simmons, A. C., 1.

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Economic geology—Continued.

Possible future oil pools: Sherrill, R. E., 1.

Post-Paleozoic mineralization: Myers, W. M., 1.

Zinc, Saucon Valley: Myers, R. E., 1.

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Buck Hill area: Myers, R. E., 2.

Conemaugh Gorge Missn., Cramer area: Fettke, C. R., 2.

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Devonian sequence near Huntingdon: Willard, B., 2.

General: Ashley, G. H., 1.

Geology and minerals: Myers, R. E., 3.

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Ground-water supplies: Graham, J. B., 1.

Hanover-York dist.: Stose, A. J., 1.

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Mississippian, continental-marine relations: Willard, B., 2.

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Oil City quad.: Dickey, P. A., 1.

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Ostracoda, zonal, Lower Dev.: Swartz, F. M., 1.

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Stream devel., folded Appalachians: Strahler, A. N., 5.

Triassic, Point Pleasant area: McLaughlin, D. B., 1.

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Geology and minerals: Myers, R. E., 3.

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Iron minerals in fire clays: Leatham, E., 1.

Iron ores, Cumberland Valley: Foose, R. M., 4.

Micaceous minerals in slate: Bates, T. F., 2.

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Eumeces, Pleist., Frankstown Cave: Hoffstetter, R., 1.

Gwyneddosaurus, Trias, Montgomery Co.: Bock, W., 1.

Haplolepididae, Carb. fish: Westoll, T. S., 1.

Mollusca, Trias.: Richards, H. G., 1.

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Ordovician, Middle, cent. Pa.: Kay, G. M., 2.

Ostracoda, Lower Dev. zonal: Swartz, F. M., 1.

Permian: Scott, H. W., 1.

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Petrology.

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Clays, high-alumina: Foose, R. M., 3.

Conemaugh Gorge Missn., Cramer area: Fettke, C. R., 2.

Iron minerals in fire clays: Leatham, E., 1.

Micaceous minerals in slate: Bates, T. F., 2.

Ordovician, Middle, cent. Pa.: Kay, G. M., 2.

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- Hanover-York dist.: Stose, A. J., 1.
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- Block fields, boulder slopes: Peltier, L. C., 1.
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- Ground water: Leggette, R. M., 1.
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 Philadelphia area: Graham, J. B., 2.
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 Pentlandite, Canada, nickel sulphide oxidation: Michener, C. E., 1.

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- California, Glenn Co.: Ryneanson, G. A., 1.
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 La Motte area: Norman, G. W. H., 4.
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- Alabama: Lloyd, S. J., 2.
 Alaska, Copper River area: Moffit, F. H., 1.
 Arizona, East Kaibab monocline, Grand Canyon area: Strahler, A. N., 1.
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- Oak Creek Canyon: McKee, E. D., 3.
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 Arizona-New Mexico-Utah-Colo. correls.: U. S. G. S., 2.
 Arizona-Utah, East Kaibab monocline: Babenroth, D. L., 1.
 Big Horn Basin oil and gas fields, Mont.-Wyo.: U. S. G. S., 1.
 British Columbia, China Creek area: Stevenson, J. S., 4.
 Dunlevy-Portage Mtn. area: Beach, H. H., 1.
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 Nicola area: Cockfield, W. E., 2.
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 Idaho, Latah Co.: Tullis, E. L., 1.
 Teton Basin: Gardner, L. S., 1.
 Iowa: Gwynne, C. S., 1.
 Kansas: Lane, H. H., 1.
 Aldrich oil field: Carpenter, E. G., 1.
 Barton Co.: Frye, J. C., 1-a.
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 East, oil, gas fields: Jewett, J. M., 1.
 Finney, Gray Cos.: Latta, B. F., 1.
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 Outcropping rocks: Moore, R. C., 4.
 Rocks fms.: Moore, R. C., 1.
 Thomas Co.: Frye, J. C., 1-a.
 Mexico, N.: Kellum, L. B., 1, 2.
 Northwest of Las Delicias, Coahuila: King, R. E., 1.
 Potash poss.: Flores, T., 2.

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Mexico, N.—Continued.

Sonora tungsten deposits: Wiese, J. H., 1.

Mexico-Central America, Paleozoics: Mullerried, F. K. G., 9.

Mississippi, Monroe Co.: Vestal, F. E., 1.

Missouri: Branson, E. B., 3.

Montana: U. S. G. S., 1.

Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.

Phosphoria fm., Garrison area: Gilbert, G., 1.

South-central: U. S. G. S., 1, 2.

Nevada ore deposits: York, B., 1.

New Mexico, Curry, Roosevelt Cos.: Theis, C. V., 1.

Estancia Valley area: U. S. G. S., 1.

Iron Mtn. dist.: Jahns, R. H., 1.

Northeast, Upper Paleozoic: Read, C. B., 1.

Pecos River-Rio Galisteo area: U. S. G. S., 1.

North America, Foraminifera-formed lss.: Johnson, J. H., 9.

North Dakota, stratigraphy, structure: Laird, W. M., 2.

Ohio: Stout, W. E., 8.

Blaine Hill, Belmont Co. sec.: White, G. W., 4.

Geology of water: Stout, W. E., 1.

Rock fms.: Stout, W. E., 4.

Oklahoma, Apache field: Scott, V. C., 1.

Barite: Ham, W. E., 1.

Dougherty asphalt area: U. S. G. S., 1.

Ground water: Dott, R. H., 4.

Velma field: Rutledge, R. B., 1.

West Edmond, field: Atkinson, W. H., 1; McGee, D. A., 1.

Oregon, geology: Weaver, C. E., 3.

Pennsylvania, min. res. areas: Ashley, G. H., 1.

Possible future oil pools: Sherrill, R. E., 1.

Sandstones, Ohio: Stout, W. E., 7.

South Dakota: Rothrock, E. P., 1.

Texas, Apache Mts., Culberson Co. well: Maley, V. C., 1.

Baylor Co.: Evans, G. L., 4.

Big Spring area: Livingston, P. P., 1.

Clay Co.: Evans, G. L., 1, 2.

Fullerton pool: Moore, J. H., 1.

Huaco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.

Moore Co.: Fosshage, E. W., 1.

Pease River group: Roth, R. I., 1.

Permian Basin oil fields: Osborne, P. F., 1.

Sierra Diablo area: U. S. G. S., 1.

South Guadalupe Mts.: U. S. G. S., 1.

Word fm., fauna and strat. correl.: Clifton, R. L., 3.

United States, Anadarko Basin: Gibson, A., 1.

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Anadarko Basin red beds: Gould, C. N., 1.

Helium gas fields: Baden, M. W., 1.

Marginal marine strata: Clifton, R. L., 1.

Rocky Mts. oil poss. in: Harrison, T. S., 1.

Southern, Permian Basin: Adams, J. E., 3.

Southwest, correl.: U. S. G. S., 2.

Western, fluorspar: Gillson, J. L., 1.

Paleozoics: Bass, N. W., 1.

Utah, NE.: U. S. G. S., 2.

Salt Valley: Dyer, B. W., 1.

Wasatch Mts., N.-cent.: Eardley, A. J., 1.

Virginia, Shenandoah Nat. Park: Rickard, H. L., 1.

Washington geology: Weaver, C. E., 3.

Wyoming: La Fleiche, P., 2.

Central: U. S. G. S., 2.

Como Bluff anticline: Dunbar, R. O., 1.

Little Buffalo Basin field: U. S. G. S., 8.

Maverick Springs area: U. S. G. S., 1.

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Wind River Mts., NW., end: U. S. G. S., 1.

Wyoming and Montana oil horizons: Carroll, D. L., 2.

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Pervinqueria cf. romeri Haas is Prionocyclus: Haas, O., 1.

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Alabama, Pinckneyville complex: Gault, H. R., 2.

General: Ingerson, F. E., 1.

Grain-selection, quartz-diagrams: Fellows, R. E., 1.

Hawaiian Islands: Daly, R. A., 1.

Igneous rocks, grain sizes, shapes: Feniak, M. W., 2.

Kansas, Cheyenne ss., Russell Co.: Swineford, A., 1-a.

Ontario, Little Long Lac Hardrock porphyry: Reid, J. A., 3.

Quartz lamellae, deformation: Ingerson, F. E., 2.

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Accumulation and origin: Fash, R. H., 1.

Aerial photos: Levings, W. S., 1.

In oil industry: Gaty, J. P., 1.

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 Katalla area poss. : Miller, D. J., 1.
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 Alberta, Alexo area poss. : Crombie, G. P., 2.
 Athabaska-Barrhead area poss. : Feniak, M. W., 1.
 Bituminous sands : Clark, K. A., 1.
 Cowley area poss. : Hage, C. O., 1.
 Development, oil : Storm, L. W., 2.
 Drinnan to Brûlé Lake area, poss. : Lang, A. H., 1.
 Dyson Creek area poss. : Hage, C. O., 2.
 Entrance area poss. : Lang, A. H., 2.
 Jumping Pound field : Beach, F. K., 1.
 Pedley area poss. : Irish, E. J. W., 1.
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 Southern, structure-drilling for oil : Furnival, G. M., 1.
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 British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson poss. : Hage, C. O., 3.
 Dunlevy-Portage Mtn. area poss. : Beach, H. H., 1.
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- Puente, San Jose Hills poss.: U. S. G. S., 1.
 Salinas Valley poss.: U. S. G. S., 1.
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 San Miguelito oil field: Barnes, K. B., 2.
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 Santa Cruz area poss.: U. S. G. S., 1.
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 Canol project poss.: Laudon, L. R., 1.
 Developments, 1943-44: Hume, G. S., 4.
 Eastern, poss.: Logan, L. J., 1.
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 Possibilities: Cochrane, H. G., 1.
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- Selected well-logs: Barb, C. F., 2.
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 Continental shelf, poss.: Gross, H. E., 2.
 United States, geol. survey; Anonymous, 104.
 Continuous profiling for refraction shooting: Barthelmes, A. J., 1.
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 Core analysis: Barnes, K. B., 1.
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- Exploration program: Logan, L. J., 2.
- Northern poss.: Kellum, L. B., 1, 2.
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- Oil-field drilling program: Aguilar, M. R., 1.
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- Michigan: Martin, H. M. M., 3.
- Berea ss.: U. S. G. S., 1.
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- Heidelberg field: McCullough, R. A., 1; Morse, W. C., 3.
- Monroe Co.: Vestal, F. E., 1.
- Oil fields: Todd, J. D., 1; Williams, N., 1.
- Oil and gas fields: Ives, G. O., 2; Williams, N., 1.
- Possibilities: Anonymous, 88.
- Resources: Morse, W. C., 5.
- Missouri, poss.: Branson, E. B., 3.
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- Gage dome oil field: Perry, E. S., 2.
- Little Rocky Mts. plains poss.: U. S. G. S., 1.
- Northwest, Missn., Dev. poss.: U. S. G. S., 2.
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- Pinchi Lake area: Armstrong, J. E., 1.
- Takla, Cassiar dists.: Armstrong, J. E., 6.
- Tuya-Teslin area poss.: Watson, K. D., 1.
- Tyaughton Lake area: Cairnes, C. E., 1.
- Canada, Cordillera econ. devel.: Kidd, D. F., 1.
- Lytton to Vancouver: Hutt, G. M., 12.
- Cuba, Isla de Pinos tungsten deposits: Page, L. R., 1.
- Mexico, El Alamo mine, Baja Calif.: Antúnez Echegaray, F., 2.
- Pacific Coast: González Reyna, J., 1.
- Michigan, marcasite residual deposits, Lake Mich.: Ball, J. R., 2.
- Nevada, mining dists.: Ferguson, H. G., 1.
- Ore deposits: York, B., 1.

Placers—Continued.

- North America, Alaska Highway: Lord, C. S., 2.
 Quebec, Orford area: Fortier, Y. O., 1.
 South Dakota, min. res.: Rothrock, E. P., 1.
 Texas, Mason Co.: McCammon, J. H. II, 1.
 United States, NW.: Fernquist, C. O., 1.
 Yukon, Canol Road, Teslin River-Macmillan Pass: Kindle, E. D., 2.
 Dublin Gulch: Thompson, R. M., 1.
 Upper McQuesten River Area: Bostock, H. S., 1.

Plagioclase.

- Hawaii, Kilauea Volcano, ejected blocks: Macdonald, G. A., 3.
 New Hampshire, Oliverian magma ser., Mt. Washington: Chapman, C. A., 1.
 Wyoming, Yellowstone Park rhyolite-basalt complex: Wilcox, R. E., 1.

Plagionite, Yukon: Nuffield, E. W., 1.

Plane and Raleigh waves: Fu, C. Y., 2.

Plant fossils, mode of preservation and coal fm.: Krystafovich, A., 1.

Plant geography, foundations: Cain, S. A., 2.

Plants, preservation in Parícutin, Mex., volcanic ash: Dorf, E., 1.

Plastic relief models: Gill, W. H., 1.

Platinum.

Alaska, Cooper River area: Moffit, F. H., 1.

Arctic American placers: Patty, E. N., 1.

British Columbia, Alaska Highway area min. poss.: Thomas, L. C., 1.

Princeton area: Rice, H. M. A., 2.

Mexico, El Oro y Talapujuhua mining camp: Bracho V., F., 1.

Nuevo León: Mullerried, 8.

Pacific Coast: González Reyna, J., 1.

Spectrographic assay for: Scobie, A. G., 1.

Playa del Rey oil field, Calif., isopach maps: Hodges, F. C., 3.

Plasma.

North America, desert features: Cummings, E. R., 2.

Texas, Quat., High Plains: Evans, G. L., 6.

Pleistocene, Iowa, as geol. period: Chamberlin, R. T., 1.

Polarized light compensator for opaque minerals: Turner, A. F., 1.

Polished thin sections, preparation: Kennedy, G. C., 2.

Pollen analysis. See also Bogs; Paleobotany; Peat.

General: Godwin, H., 1; Kosanke, R. M., 1; Sears, P. B., 1.

Indiana peat bogs and lakes: Potzger, J. E., 2.

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Lake filling and bog fm.: Potzger, J. E., 4.

Pollen analysis—Continued.

New Hampshire peat bogs: Krauss, R. W., 1.

New Jersey, bog sediments, Pine Barrens: Potzger, J. E., 3.

Peat: Waksman, S. A., 1.

North Carolina, Cape Fear Penin: Wells, B. W., 1.

Ontario, microfossils in bogs: Wilson, L. R., 1.

Oregon, Summer Lake pumice beds: Allison, I. S., 1.

Plant geography, foundations: Cain, S. A., 2.

South Carolina, Spartanburg Co., buried soils: Cain, S. A., 1.

Spores, Paleozoic, synopsis, generic definition: Schopf, J. M., 2.

United States, Lower Klamath Lake: Hansen, H. P., 1.

Northern Great Basin: Cressman, L. S., 1.

Pacific Coast area bogs: Hansen, H. P., 2.

Washington, E., post-glacial veg.: Hansen, H. P., 3.

Wisconsin, butternut, hickory post-Pleist. range: Wilson, L. R., 2.

Vilas Co. bogs: Potzger, J. E., 1.

Pollen analysis and history: Deevey, E. S., Jr., 1.

Pollucite, Norway area, Maine: Ahrens, L. H., 1.

Polonium, radioactive, Mex.: Castro, C., 1.

Polymers, mineral: Ives, R. L., 2.

Polymorphic transitions and geol. phenomena: Bridgman, P. W., 1.

Popocatepetl Volcano, Mex.: Flores, T., 1.

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Alaska, Canadian Northwest, new frontiers: Griffin, H., 1.

Birds, origin: Williams, A. B., 1.

California, Death Valley: Bagg, R. M., 3.

Mojave Desert: Laudermilk, J. D., 3.

Petrified wood: Laudermilk, J. D., 1.

Sand: Laudermilk, J. D., 2.

Coal: Janssen, R. E., 1.

Diamonds: Austin, A. C., 1.

Encyclopedia of gems: Briggs, H. E., 2.

Idaho, Craters of the Moon: Barrette, K., 1.

Indian red sh. beads, Ariz.: Laudermilk, J. D., 4.

Indiana, Clifty Falls State Park: Freeman, O. W., 2.

Life thro the ages: Huff, W. G., 1.

Map reading: Greitzer, S. L., 1.

Metals, origin of: Fleener, F. L., 3.

Michigan, glacial geol.: Martin, H. M. M., 4.

Ontario, Flowerpot Island: Harrington, L., 1.

Origin of birds: Williams, A. B., 1.

Pachycephalosaurus, bonehead dinosaur: Colbert, E. W., 1.

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- Phosphate facts : Evans, E. H., 1.
- Reading book of rocks : Bell, O. J., 1.
- Science of seven seas : Stommel, H., 1.
- Trilobita, N. Am. : Ball, J. R., 1.

Porifera. See also Spongiae.

- Colorado, Morrison fm., Colo. Plateau ser. : Stokes, W. L., 1.
- Paleozoic faunas : Johnson, J. H., 7.
- New Jersey, Cape May Canal Pleist. fauna : Richards, H. G., 3.
- Quebec faunas : Dresser, J. A., 1.

Porphyry.

- Arizona, Superior mining area : Short, M. N., 1.
- Tombstone dist., Uncle Sam porphyry : Gilluly, J., 2.
- British Columbia, China Creek area : Stevenson, J. S., 4.
- Premier mine deposits : Langille, E. G., 1.
- Twin "J" Mine : Stevenson, J. S., 3.
- California, Crestmore minerals : Woodford, A. O., 1.
- Idaho, Birch Creek area : Anderson, A. L., 1.
- Ontario, Dome Mine, porphyry-sediment contact : Holmes, T. C., 1.
- Fort Hope area : Prest, V. K., 1.
- Pickle Crow gold mine : Monette, H. H., 1.
- Porcupine dist. : Evans, J. E. L., 1 ; Gustafson, J. K., 1.
- Rennie-Leeson area : Bruce, E. L., 1.
- Quebec, Bourlamaque Tp. : Norman, G. W. H., 1.
- Porter oil field, Midland Co., Mich. : Landes, K. K., 4.
- Post-glacial lake-forests fm. : Potzger, J. E., 5.
- Post-war geology : Willard, B., 1-a.
- Potash. See also Alumite.
- Mexico, poss. : Flores, T., 2.
- New Mexico, polyhalite deposits : Conley, J. E., 1.
- Nova Scotia, industrial minerals : Cameron, A. E., 3.
- Texas, polyhalite deposits : Conley, J. E., 1.
- Texas-New Mexico, Delaware Basin Perm. : Adams, J. E., 2.
- Utah, Salt Valley : Dyer, B. W., 1.

Potassium.

- North America, radioactivity : Beers, R. F., 2.
- Radiometric determination in rocks and soils : Beers, R. F., 3.
- United States, radioactivity in old rocks : Beers, R. F., 1.
- Poteau-Gilmore gas field, Okla. : Knechtel, M. M., 1.

Potholes.

- Hawaii, subaerial and marine : Wentworth, C. K., 1.
- Texas, Big Spring area : Livingston, P. P., 1.

- Powder-blast, with long-hole blast mining : Fowler, H. M., 1.

Powellite.

- New Mexico, Iron Mtn. dist., beryllium, tungsten deposits : Jahns, R. H., 1.
- Utah, Cottonwood-American Fork dists. : Crawford, A. L., 6.

Pre-Cambrian. See also Paleontology, pre-Cambrian.

- Alabama, tin belt : Hunter, F. R., 1.
- Alabama-Mississippi Basin : Carroll, D. L., 1.
- Arizona, Grand Canyon, Colorado River : Cueto Rui-Diaz, E., 1.
- San Manuel copper deposit : Schwartz, G. M., 3.
- Superior mining area : Short, M. N., 1.
- Tombstone dist., Uncle Sam porphyry : Gilluly, J., 2.
- British Columbia, Fort Nelson-Watson Lake area : Williams, M. Y., 3.
- Island Mtn. mine : Benedict, P. C., 1.
- Manson Creek area : Armstrong, J. E., 7.
- Omineca dist. : Armstrong, J. E., 4.
- Sullivan mine area : Swanson, C. O., 1.
- California, Barstow quad., San Bernardino Co. : Miller, W. J., 2.
- Needles-Goffs area, San Bernardino Co. : Miller, W. J., 3.
- Palm Springs-Blythe Strip, Riverside Co. : Miller, W. J., 1.
- San Juan Bautista quad. : Allen, J. E., 2.
- Canada, Alaska Highway, Watson Lake-Teslin River : Lord, C. S., 1.
- Arctic, E. : Robinson, J. L., 1.
- Reconnaissance flight : Bateman, J. D., 4.
- Canadian Shield, NW. : Joliffe, A. W., 6.
- Duparquet-Larder Lake-Rouyn area : Ambrose, J. W., 1.
- Flin Flon-Sheridon-Herb Lake area : Stockwell, C. H., 2.
- Lake Consolation area : Mathews, W. H., 1.
- Medicine Hat to Vancouver : Hutt, G. M., 14.
- Mineral poss. : Hoffman, A., 1.
- Oil and gas fields : Hume, G. S., 2.
- Port Arthur to Winnipeg : Hutt, G. M., 11.
- Structure and relief : Brouillette, B., 1.
- Stull Lake area : Spector, I. H., 1.
- Trans-Canada Highway, Hearst-Long Lac seg. : Evans, J. E. L., 2.
- Western, tin : Warren, H. V., 1.
- Carolina Piedmont : Kesler, T. L., 1.
- Colorado, Canon City area : Blum, V. J., 1.
- Red Creek area, Fremont Co. : Glockzin, A. R., 1.

Pre-Cambrian—Continued.

Colorado—Continued.

Sawatch Range area : Johnson, J. H., 3.

Selected well-logs : Barb, C. F., 2.

Vasquez overthrust, Middle Park : Tweto, O., 1.

White River Plateau, Glenwood Springs area : MacQuown, W. C., Jr., 1.

Florida : Cooke, C. W., 3.

Georgia, kyanite deposits : Furcron, A. S., 4.

Sillimanite deposits : Furcron, A. S., 4.

South end of Blue Ridge : Furcron, A. S., 5.

Southwestern : Furcron, A. S., 2 ; SE. Geol. Soc., 2.

Greenland : Shaw, V., 3.

Franz Josef Fjord area : Odell, N. E., 1.

Idaho, Latch Co. : Tullis, E. L., 1.

Illinois, NE. : Bays, C. A., 5.

Indian red sh. beads, Ariz. : Lauder-milk, J. D., 4.

Iowa : Gwynne, C. S., 1.

Kansas, Barton Co. buried hills : Wal-ters, R. F., 1.

Cross-section, geol. subsurface, Ford-Wallace Cos. : Edson, F. C., 1.

Eastern, oil and gas fields : Jewett, J. M., 1.

Rock fms. : Moore, R. C., 1.

Thomas County : Frye, J. C., 1-a.

Labrador, cent., iron ore poss. : Retty, J. A., 2.

Hollinger Lake area : Anonymous, 98.
Manitoba, E. of Flin Flon : Bateman, J. D., 5.

Flin Flon area : Bateman, J. D., 3.

Gurney gold mine area : Hage, C. O., 4.

Island Lake area : McMurphy, R. C., 1.

Mikanagan Lake area : Bateman, J. D., 1.

Sherridon area : Bateman, J. D., 6.

Sherritt Gordon mine area : Bateman, J. D., 2.

Snow Lake area : Ebbutt, F., 1 ; Har-rison, J. M., 4, 5.

Winnipeg area : Hutt, G. M., 2.

Maryland, deep oil test, Salisbury : Richards, H. G., 6.

Mexico, Gulf of Calif. area : Osorio Ta-fall, B. F., 1.

Pacific Coast : González Reyna, J., 1.

Taxco mining dist. : Fowler, G. M., 2.

Michigan, iron deposits : Martin, H. M. M., 2.

Ishpeming gold range : Snelgrove, A. K., 3.

Lake Michigamme area : Seaman, W. A., 2.

Marquette iron range : Seaman, W. A., 1.

Pre-Cambrian—Continued.

Michigan, iron deposits—Continued.

Menominee iron range : Lamey, C. A., 1.

Republic area : Ayres, V. L., 1.

Spruce River-Peshekee River areas : Seaman, W. A., 3.

Minnesota, S. : Thiel, G. A., 1.

Mississippi, Monroe Co. : Vestal, F. E., 1.

Missouri : Branson, E. B., 3.

Bourbon High oil field : Cullison, J. S., 2.

Ozarks, ig. rocks : Humbert, R. P., 1.

Montana : U. S. G. S., 1.

Columbium, cerium minerals : Cooke, S. R. B., 1.

Gravelly Range area : Atwood, W. W., 1.

Jardine-Crevasse Mtn. dist. : Seager, G. F., 1.

Little Rocky Mts. plains : U. S. G. S., 1.

North Big Belt Range : Lyons, J. B., 1.

Red Lodge chrome deposits : Conwell, C. N., 1.

Nevada, Groom dist., Lincoln Co. : Humphrey, F. L., 1.

Ore deposits : York, B., 1.

New Brunswick, Musquash area : Alcock, F. J., 4.

Plutonic rocks : Belyea, H. R., 1.

St. George area : Alcock, F. J., 3.

Sussex area : Alcock, F. J., 1.

Newfoundland, fluorspar deposits : Van Alstine, R. E., 1.

New Jersey copper deposits : Wood-ward, H. P., 1.

Middlesex Co. : Barksdale, H. C., 1.

New Mexico, Boston Hill deposits : En-twistle, L. P., 2.

Estancia Valley area : U. S. G. S., 1.

Red River min. area : Sidwell, R., 1.

New York, east Adirondack area : Balk, R., 1.

Gouverneur talc dist. : U. S. G. S., 5.

New York City, Manhattan Borough : Murphy, J. J., 1.

North America, Alaska Highway : Lord, C. S., 2.

Foraminifera-formed lss. : Johnson, J. H., 9.

Geosynclines in continental devel. : Kay, G. M., 1.

Iron fms. : Bruce, E. L., 2.

Tectonic devel., E. edge of Pacific Ocean : Stille, H. W., 1.

North Carolina, Townsville area : White, W. A., 3.

North Dakota, stratigraphy and struc-ture : Laird, W. M., 2.

Northwest Territories, Prosperous Lake area : Jolliffe, A. W., 4.

Yellowknife area : Jolliffe, A. W., 3.

Yellowknife gold mines : Anonymous, 29.

Pre-Cambrian—Continued.

- Nova Scotia, Bridgeville area: Messervey, J. P., 2.
 Gabarus area: Douglas, G. V., 3.
 Lake Ainslie area: Douglas, G. V., 7.
 Mabou coal area: Douglas, G. V., 6.
 Upper Musquodoboit area: Messervey, J. P., 1.
 Oklahoma, Arbuckle group: Ireland, H. A., 3.
 Bromide area: Ham, W. E., 2.
 Ground water: Dott, R. H., 4.
 Northeast: U. S. G. S., 2.
 Ontario: Rickard, T. A., 2.
 Beatty-Munro area: Satterly, J., 1.
 Bigwater Lake area: Berry, L. G., 1.
 Bruce ser., Falconbridge-Dryden Tps.: Fairbairn, H. W., 2.
 Bryce-Robillard area: Moorhouse, W. W., 1.
 Central Patricia mine: Hicks, H. B., 1.
 Cunningham-Garnet area: Meen, V. B., 2.
 Dome mine, porphyry-sediment contact: Holmes, T. C., 1.
 East Bull Lake area: Moore, E. S., 3.
 East extension of Fort Hope area: Prest, V. K., 2.
 Flack Lake area: Harding, W. D., 2.
 Fluorspar, Madoc dist.: Rowe, R. C., 2.
 Fort Hope area: Prest, V. K., 1.
 Gabbro-wehrlite: Froberg, M. H., 1.
 Gas fields: Brant, A. A., 2.
 Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
 General: Moore, E. S., 5.
 Grimsthorpe-Barrie area: Meen, V. B., 1.
 Hollinger mine: Allen, C. C., 1.
 Kaladar, Kennebec Tps.: Harding, W. D., 1.
 Kam Kotia mine mineralized zone: Ferguson, S. A., 1.
 Kerr Addison gold mine: McLaren, D. C., 2.
 Leeds Co.: Harrison, J. M., 1.
 North Spirit Lake area: Bateman, J. D., 7.
 Northwest: Horwood, H. C., 4.
 Owen Sound area: Caley, J. F., 2.
 Porcupine dist.: Evans, J. E. L., 1;
 Gustafson, J. K., 1.
 Porcupine-Shiningtree area: Ontario Dept. Mines, 1.
 Red Lake area: Horwood, H. C., 2, 3.
 Rendrew area: Satterly, J., 2.
 Rennie-Leeson area: Bruce, E. L., 1.
 Ross mine, Ramore area: Jones, W. A., 1.
 Southeast: Harrison, J. M., 2.
 Stover Tp.: Horwood, H. C., 1.
 Sudbury area: Fairbairn, H. W., 3.
 Sudbury-Bruce ser. relations: Fairbairn, H. W., 1.

Pre-Cambrian—Continued.

- Ontario—Continued.
 Whitefish Bay area: Fraser, N. H. C., 1.
 Pennsylvania, cent.-east.: Hersey, J. B., 1.
 Hanover-York dist.: Stose, A. J., 1.
 Mineral res.: Ashley, G. H., 1.
 Wissahickon fm.: Postel, A. W., 1.
 Quebec: Dresser, J. A., 1; Dufresne, A. O., 1.
 Beattie mine: Davidson, S. C., 1.
 Bourlamaque Tp.: Norman, G. W. H., 1.
 Butex area, Abitibi Co. and Terr.: Freeman, B. C., 1.
 Cadillac-Bourlamaque area: Norman, G. W. H., 2.
 Calumet ls.: Osborne, F. F., 1.
 Cobalt ser., sub-Cobalt surface: Ambrose, J. W., 4.
 Dasserat area structure: Auger, P. E., 5.
 Hincks Tp.: Tanton, T. L., 1.
 La Corne molybdenite mine: McLaren, D. C., 4.
 La Motte area: Norman, G. W. H., 4.
 Little Long Lac-Sturgeon River dist. gold belts: Tyson, A. E., 1.
 Louvicourt area: Norman, G. W. H., 6.
 Lower Romaine River area: Retty, J. A., 1.
 Malartic gold mine: Halet, R. A., 1.
 Matamec Lake area, Saguenay Co.: Greig, E. W., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Montmorency fault, Lottainville-Loretteville: Putman, H. M., 1.
 Noranda dist. ore deposits: Wilson, M. E., 2.
 Opaoka River area: Freeman, B. C., 2.
 Orford area: Fortier, Y. O., 1.
 Rouyn-Beauchastel area: Wilson, M. E., 1.
 Rouyn-Malartic-Destor area: Norman, G. W. H., 3.
 Sept-Iles area: Faessler, C., 1.
 Wakeham Lake area: Claveau, J., 1.
 Saskatchewan, N.: Mawdsley, J. B., 1.
 South Dakota: Rothrock, E. P., 1.
 Beecher Rock Basin: Gwynne, C. S., 2.
 Custer area pegmatites: Fisher, D. J., 1.
 Dewey, Corson Cos.: Morgan, R. E., 1.
 Tennessee, NE.: King, P. B., 4.
 Texas: Sellards, E. H., 2.
 Burnet Co.: Barnes, V. E., 3.
 Highest structural point, Franklin Mts.: Adams, J. E., 1.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Llano Co.: Chelf, C. R., 1; Zapp, A. D., 1.

Pre-Cambrian—Continued.

Texas—Continued.

Sierra Diablo area: U. S. G. S., 1.

Smoothingiron mass: Romberg, F., 1.

United States, Basin-and-Range prov.:

Longwell, C. R., 8.

Green, White, Adirondack Mts.: Balk, R., 2.

Michigan Basin, Lower Ord., Camb.: U. S. G. S., 2.

Rocky Mtn. deformation, basement control: Chamberlin, R. T., 4.

Southern Appalachians, Chilhowe group, Ocoee ser.: Stose, G. W., 1.

Southwest, correl.: U. S. G. S., 2.

Yellowstone-Bighorn area: Thom, W. T., Jr., 2.

Utah, Uinta Basin: Walton, P. T., 1.

Wasatch Mts., N.-cent.: Eardley, A. J., 1.

Vermont, W., N. end Taconic thrust sheet: Kaiser, E. P., 1.

Virginia soils, Fauquier Co.: Petro, J. H., 1.

Washington, geology: Weaver, C. E., 3.

Wisconsin, Brûlé River Basin: Bean, E. F., 1.

Wyoming: La Fleiche, P., 2.

Como Bluff anticline: Dunbar, R. O., 1.

Geology, devel., oil, gas fields: La Fleiche, P., 1.

Lance Creek oil and gas field: U. S. G. S., 3.

Laramie Range anorthosite structure: Newhouse, W. H., 1.

Little Buffalo Basin field: U. S. G. S., 8.

Oil and gas fields map: Thomas, H. D., 1.

Rocky Mts., evolution: Knight, S. H., 1.

Wind River Mts. NW. end: U. S. G. S., 1.

Yukon, Canol Road, Teslin River-Macmillan Pass: Kindle, E. D., 2.

Selwyn River area: Bostock, H. S., 2.

Upper McQuesten River area: Bostock, H. S., 1.

Whitehorse dist.: Cockfield, W. E., 1.

Precious stones. See also Gems, and the individual varieties.

Medicinal use: Podolsky, E., 1.

Precision progress, geology, paleontology: Elias, M. K., 9.

Pricelte, Calif. borate minerals: Harriman, W. R., 1.

Probabilities, estimating gold deposits: Swanson, C. O., 2.

Probertite, Los Angeles Co., Calif.: Murdoch, J., 1.

Problems in geology and geophysics: Am. J. Sci., 1.

Proculus in Foraminifera: Schenck, H. G., 1.

Production of broken line patterns with Ben Day: Ives, R. L., 1.

Profiles, Aleutian Trench: Murray, H. W., 1.

Projections and zones: Fisher, D. J., 3.

Prospecting for oil: Krynine, P. D., 2.

Pseudobiorite, bldg. stones, N. Car.: Money-maker, B. C., 2.

Pseudomorphs.

California, garnets, Garnet Hill, zonal growths: Trainer, J. N., 1.

Psilomelane.

Costa Rica: Roberts, R. J., 1.

Cuba, Sierra Maestra area: Park, C. F., Jr., 1.

United States, SW., tungsten, vanadium: Fleischer, M., 2.

Virginia, Bland, Giles Cos.: Ladd, H. S., 2.

West Virginia: Martens, J. H. C., 1.

Pteropoda.

New York, Coxsackie quad.: Goldring, W., 3.

Genessee group fauna: Grossman, W. L., 1.

Mexico, NE. Tert. fms. Mollusca: Gardner, J. A., 3.

Quebec faunas: Dresser, J. A., 1.

Puerto Rico. See also West Indies.

Economic geology.

Glass sand: Frazier, J. E., 1; Meyerhoff, H. A., 2.

Historical geology.

Glass sand: Meyerhoff, H. A., 2.

Mineralogy.

Glass sand: Frazier, J. E., 1.

Pumice.

British Columbia, Tyaughton Lake area: Cairnes, C. E., 1.

Kansas resources: Landes, K. K., 1.

Pumicite.

Texas, Fayette Co.: Sedlmeyer, J. J., 1.

Punch Jones diamond: Anonymous, 34.

Pyrite.

Arizona, Superior mining area: Short, M. N., 1.

British Columbia, Bralorne mines: Gibson, S., 1.

Greenwood-Phoenix area: McNaughton, D. A., 1.

Sullivan mine area: Swanson, C. O., 1.

Canada, nickel sulphide oxidation: Michener, C. E., 1.

Colorado, Maxwell reef area, Boulder Co.: MacCornack, R. J., 1.

Cuba, Matahambre copper mine: Hañner, B. K., 1.

Gold, host minerals: Schwartz, G. M., 2.

Indiana, Mansfield ss. minerals: Gault, H. R., 1.

Manitoba, Island Lake area: McMurphy, K. C., 1.

Snow Lake area: Harrison, J. M., 3.

Mexico, El Alamo mine, Baja Calif.: Antúñez Echegaray, F., 2.

Taxco mining dist.: Fowler, G. M., 2.

Pyrite—Continued.

- Missouri: Grawe, O. R., 1.
 Montana, Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 New York, east Adirondack area: Balk, R., 1.
 North America, mines: Townsend, H., 1.
 Ohio, concretions: Anonymous, 102.
 Ontario, Dogpaw-Kakagi Lakes area devel.: Thomson, R., 1.
 Flack Lake area: Harding, W. D., 2.
 Leeds Co.: Harrison, J. M., 1.
 Little Long Lac area: Armstrong, H. S., 1.
 Renfrew area: Satterly, J., 2.
 Pennsylvania fire clays, minerals in: Leatham, E., 1.
 Quebec: Dufresne, A. O., 1.
 Beattie mine: Davidson, S. C., 1.
 Economic minerals: Quebec Bur. Mines, 1.
 La Motte area: Norman, G. W. H., 4.
 Recovery from coal-mine refuse: Mitchell, D. R., 1.
 Saskatchewan min. poss.: Mawdsley, J. B., 1.
 Tennessee, Greene Co.: Snyder, F. G., 1.
 Sweetwater dist. structure: Dunlap, J. C., 1.
 West Virginia, Pittsburgh coal seam concretion minerals: Foster, W. D., 1.
 Pyritized diabase, Saguenay Co., Quebec: Retty, J. A., 1.

Pyrolusite.

- Costa Rica: Roberts, R. J., 1.
 Cuba, Sierra Maestra area: Park, C. F., Jr., 1.
 New Mexico, Boston Hill area: Entwistle, L. P., 2.
 Pyromorphite, Mullan, Idaho: Fernquist, C. O., 2.

Pyroxene.

- Carolina Piedmont: Kesler, T. L., 1.
 Hawaii, Kilauea volcano, ejected blocks: Macdonald, G. A., 3.
 Hawaiian lavas: Macdonald, G. A., 5.
 New York, E. Adirondack area: Balk, R., 1.
 Monroe, Bear Mtn. Park min. locs.: Ayres, V. L., 2.
 Rock-forming minerals, melting, crystallization: Schairer, J. F., 1.
 Pyroxenites, Greenwood-Phoenix area, British Columbia: McNaughton, D. A., 1.

Pyrrhotite.

- Alaska, Groundhog Basin: Gault, H. R., 4.
 British Columbia, Sullivan mine area: Swanson, C. O., 1.
 Canada, Flin Flon-Sherridon-Herb Lake area: Stockwell, C. H., 2.
 Nickel sulphide oxidation: Michener, C. E., 1.

Pyrrhotite—Continued.

- Gold, host minerals: Schwartz, G. M., 2.
 Montana, Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 Ontario, Flack Lake area: Harding, W. D., 2.
 Saskatchewan min. poss.: Mawdsley, J. B., 1.
 Unit cell, space group: Buerger, M. J., 3.

Quartz.

- Alabama, Pinckneyville complex: Gault, H. R., 2.
 Arizona, Boriana dist. and Aquarius Range: Hobbs, S. W., 1.
 Arkansas, "Hot Springs diamonds": Buhlis, R., 2.
 Axes of reference: Rogers, A. F., 1.
 British Columbia, coast: Gunning, H. C., 2.
 Whitesail Lake area: Holland, S. S., 3.
 California, Edwin clay, Ione area: Bates, T. F., 1.
 Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.
 Mokelumne area crystals: Durrell, C., 2.
 Canada: Hutt, G. M., 3.
 Midwestern nonmetallies: Hutt, G. M., 7.
 Clay properties control by pH: Grim, R. E., 1.
 Cuba, Matahambre copper mine: Haffner, B. K., 1.
 Gold, host minerals: Schwartz, G. M., 2.
 Grain analyses, sand size mins.: Alling, H. L., 1.
 Grain-selection, quartz diagrams: Fellows, R. E., 1.
 Indiana, Harrodsburg ls. mineralization: Fix, G. F., 1.
 Mansfield ss. minerals: Gault, H. R., 1.
 Isostructural relationships, AlPO_4 and SiSiO_4 : Gruner, J. W., 8.
 Lamellae, deformation: Ingerson, F. E., 2.
 Manitoba, Island Lake area: McMurphy, R. C., 1.
 Snow Lake area: Harrison, J. M., 4.
 Maryland, Antitam quartzite: Anderson, J. L., 1.
 Mexico, Majada Verde, Guanahuato: Muñoz Lumbier, M., 3.
 Taxco mining dist.: Fowler, G. M., 2.
 Microanalysis, X-ray diffraction: Donnay, J. D. H., 2.
 Missouri, Bourbon High oil field: Culison, J. S., 2.
 Keokuk geode: Grinstead, L. R., 1.
 Pyrite deposits: Grawe, O. R., 1.
 Nevada, Rye Patch area: Vitaliano, C. J., 1.

Quartz—Continued.

- New Jersey, Great Notch min. area :
Zodiac, P., 2.
- New York, Herkimer Co. : Hobbs, E. E.,
Sr., 1.
- Microolithologies sed. rocks, use : Al-
ling, H. L., 2.
- Northwest Territories, Yellowknife
area : Jolliffe, A. W., 3.
- Ontario, Kaladar, Kennebec Tps. : Hard-
ing, W. D., 1.
- Leeds Co. : Harrison, J. M., 1.
- Little Long Lac area : Armstrong,
H. S., 1.
- Pickle Crow gold mine : Monette, H.
H., 1.
- Porcupine dist. : Evans, J. E. L., 1.
- Oregon, min. locs. : Dake, H. C., 2.
- Purgatory Chasm, Mass. : Stachura, J.,
1.
- Quebec, econ. minerals : Quebec Bur.
Mines, 1.
- La Motte area : Norman, G. W. H., 4.
- South Dakota, Beecher Rock Basin :
Gwynne, C. S., 2.
- Texas, Anahuac Oligocene fm. : Ellisor,
A. C., 1.
- Llano, Co. : Chelf, F. R., 3.
- Twinning, Dauphiné, in quartz from
sawing : Frondel, C., 2.
- United States, crystals : Stoiber, R. E., 1.
- South Atlantic, gems : Barclay, G. C.,
1.
- Utah, Iron Peak ores : Crawford, A. L.,
2.
- Twin Peaks deposits : Crawford, A.
L., 4.
- X-ray effect on elastic constants : Fron-
del, C., 3.
- Washington, Cloverdale area : Anony-
mous, 46.
- Washington, D. C. area, crystalline
rocks, liquid inclusions planes :
Tuttle, O. F., 1.
- Wyoming, Yellowstone Park rhyolite-
basalt complex : Fenner, C. N., 1.
- Quartz biotite.
- New Hampshire, Oliverian magma ser.,
Mt. Washington quad. : Chapman,
C. A., 1.
- Quartz diorite.
- Alabama, Pinckneyville complex : Gault,
H. R., 2.
- California, Crestmore minerals : Wood-
ford, A. O., 1.
- Massachusetts, Shelburne Falls gneiss
(Dome, Dalk, R., 0).
- Ontario, Leeds Co. : Harrison, J. M., 1.
- Quebec, Stanstead area : Ambrose,
J. W., 2.
- Quartz porphyry, Hollinger mine, Ontario :
Allen, C. C., 1.
- Quartz senenite, Winnepesaukee area, N. H. :
Quinn, A. W., 2.

Quartzite.

- Alabama, min. res. : Anonymous, 25.
- Alberta, Dyson Creek area : Hage,
C. O., 2.
- Tay River area : Henderson, J. F., 1.
- Arizona, Superior mining area : Short,
M. N., 1.
- British Columbia, Ainsworth area :
Rice, H. M. A., 1.
- California, Crestmore area : Woodford,
A. O., 1.
- Santa Catalina Is. marine sed. :
Clements, T. D., 2.
- Caroline Piedmont : Kesler, T. L., 1.
- Colorado, Sawatch Range area : John-
son, J. H., 3.
- Cuba, Isla de Pinos tungsten deposits :
Page, L. R., 1.
- Maine, Kennebec Valley esker : Tre-
fethen, J. M., 2.
- New Hampshire, Monadnock quad. :
Billings, K. S. F. L., 1.
- New Mexico, Boston Hill deposits :
Entwistle, L. P., 2.
- North Carolina, Fontana Dam site :
Moneymaker, B. C., 1.
- Nova Scotia, Upper Musquodoboit area :
Messervey, J. P., 1.
- Ontario, Kaladar, Kennebec Tps. :
Harding, W. D., 1.
- Leeds Co. : Harrison, J. M., 1.
- Pennsylvania, Hanover York dist. :
Stose, A. J., 1.
- Quebec, Scotstown, Wolfe, Compton,
Frontenac Cos. : Cooke, H. C., 1.
- Stanstead area, Brome, Stanstead
Cos. : Ambrose, J. W., 2.
- Wakeham Lake area : Claveau, J., 1.
- South Dakota, Beecher Rock Basin :
Gwynne, C. S., 2.
- Texas, Lee Co. : Harris, G. D., 1.
- United States, SE., manganese deposits,
cobalt-bearing : Pierce, W. G., 2.
- Virginia, Glade Mtn. dist. : Miller, R.
L., 1.
- Lick Mtn. dist. : Stead, F. W., 1.
- Waynesboro sink holes : McGill, W.
M., 1.
- Washington, Stevens, Okanogan Cos.
magnetite deposits : Broughton, W.
A., 2.
- Yukon, Upper McQuesten River area :
Bostock, H. S., 1.
- Quaternary. See also Glacial geology ; Pale-
ontology, Quaternary.
- Alabama-Mississippi Basin : Carroll, D.
L., 1.
- Alaska, Katena area : Miller, D. J., 1.
- Matanuska Valley coal field : Tuck,
R., 1.
- Nickel-copper deposits, Spirit Mtn.
area : Kingston, J., 1.
- Wide Bay anticline area : Kellum, L.
B., 4.
- Yakataga area : Spieker, E. M., 2.

Quaternary—Continued.

- Alberta, Alexo area: Crombie, G. P., 1.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Cowley area: Hage, C. O., 1.
 Dyson Creek area: Hage, C. O., 2.
 Red Deer, Rosebud area: Allan, J. A., 1, 2; Sanderson, J. O. G., 1.
 Arizona, age of Colorado River: Longwell, C. R., 10.
 Apache mine, Gila Co.: Keithley, H. S., 1.
 Thermal gradients and climatic changes: Lovering, T. S., 2.
 Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.
 Arizona-Utah, East Kaibab monocline: Babenroth, D. L., 1.
 Arkansas, Batesville dist.: U. S. G. S., 1.
 British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.
 Dunlevy-Portage Mtn. area: Beach, H. H., 1.
 Greenwood-Phoenix area: McNaughton, D. A., 1.
 Taku River, Cassiar dist.: Kerr, F. A., 1.
 Tuya-Teslin area: Watson, K. D., 1.
 Western: McCabe, T. T., 1.
 California, Barstow quad.: Miller, W. J., 2.
 Big Pine volcanic field: Mayo, E. B., 1.
 Casmalia area: U. S. G. S., 1.
 Chowchilla field: Hodges, F. C., 2.
 Coast, Point Arena-Fort Ross: Weaver, C. E., 3.
 Diablo Range quicksilver deposits: Yates, R. G., 1.
 Elk Hills oil field: Bunch, E. S., 1.
 Fresno, Merced, Stanislaus Cos.: U. S. G. S., 2.
 Imperial Valley, west side: Tarbet, L. A., 1.
 Jamesburg quad.: Fiedler, W. M., 1.
 Knoxville quicksilver dist.: Averitt, P., 1.
 Los Angeles area, subsidence, elevation: Grant, U. S. IV, 1.
 Los Angeles Basin area: U. S. G. S., 2.
 Lost Hills oil field: Barton, D. C., 3.
 Needles-Goffs area: Miller, W. J., 3.
 Oil fields: Gregersen, A. I., 1.
 Palm Springs-Blythe Strip area: Miller, W. J., 1.
 Petroleum poss.: Gregersen, A. I., 1.
 Puente, San Jose Hills: U. S. G. S., 1.
 Rio Vista gas field: Frame, R. G., 1.
 Salinas Valley: U. S. G. S., 1.
 San Diego area: Hertlein, L. G., 1.
 San Juan Bautista quad.: Allen, J. E., 2.
 San Luis Obispo Co.: Smith, C. T., 1.
 Santa Catalina Is. marine sed.: Clements, T. D., 2.

Quaternary—Continued.

- California—Continued.
 Santa Cruz area: U. S. G. S., 1.
 Santa Maria oil dist.: U. S. G. S., 1.
 Santa Monica Mts.: Cotton, C. A., 1.
 Santa Rosa Hills-Purisima Hills dists.: U. S. G. S., 1.
 Sea-floor rocks off coast: Emery, K. O., 4.
 Seismograph explor.: Salvatori, H., 1.
 South Mtn. field: Bailey, W. C., 1.
 Southern, Coast Ranges, Pleist.: Chamberlin, R. T., 3.
 Canada, Arctic, latest glaciation boundary: Hobbs, W. H., 6.
 Fort Nelson-Liard-Beaver Rivers area: Kindle, E. D., 1.
 James Bay area: Shaw, G., 1.
 Lower Liard River area: Hage, C. O., 5.
 Medicine Hat to Vancouver: Hutt, G. M., 14.
 Pleistocene artifact-bearing deposits, age: Stanley, G. M., 1.
 Stull Lake area: Spector, I. H., 1.
 Trans-Canada Highway, Hearst-Longlac area: Evans, J. E. L., 2.
 Central America, Selva Lacandona, Mex.-Guatemala: Mullerried, 4.
 Cenozoic: Mullerried, F. K. G., 9.
 Colorado, Sawatch Range area: Johnson, J. H., 3.
 White River Plateau: MasQuown, W. C., Jr., 1.
 Cuba: Brodermann, J., 1.
 Guisa-Los Negros area: Woodring, W. P., 1.
 Pleistocene terraces: Corral y Alemán, J. I. del, 1.
 Florida: Cooke, C. W., 3.
 Duvall, Nassau Cos.: Cooper, H. H., Jr., 1.
 Everglades: Parker, G. G., 3.
 Pleistocene, Palm Beach Co.: Smith, E. R., 1.
 Petroleum poss.: Gunter, H., 1.
 Sands, heavy minerals: Miller, R., III, 1.
 Southern: Parker, G. G., 2.
 Pleistocene effect: Parker, G. G., 5.
 Well studies: Cole, W. S., 1.
 Florida and S. Georgia stratigraphy: Applin, P. L., 1.
 Georgia: Peyton, G., 2.
 Coastal Plain: Cooke, C. W., 1.
 Prospecting for oil and gas: Peyton, G., 2.
 Southwest: Furcron, A. S., 2; SE. Geol. Soc., 2.
 Greenland, East, between 74°-75°, and islands: Vischer, G. A., 1.
 Greenland, Franz Josef Fjord area: Odell, N. E., 1.

Quaternary—Continued.

- Hawaii, Honolulu ser.: Winchell, H., 1.
 Melillite-nepheline basalts: Stearns, H. T., 2.
 Idaho, Birch Creek area: Anderson, A. L., 1.
 Latah Co.: Tullis, E. L., 1.
 Teton Basin: Gardner, L. S., 1.
 Illinois, E.-cent. buried valley: Horberg, L., 1.
 Herrin (No. 6) coal bed: Payne, J. N., 1.
 Northeast: Bays, C. A., 5.
 Iowa, Illinoian and post-Illinoian Pleist.: Kay, G. F., 1, 2.
 Pleistocene: Kay, G. F., 3; Leighton, M. M., 5.
 Bibliography: Kay, G. F., 3.
 Kansas: Lane, H. H., 1.
 Aldrich oil field: Carpenter, E. G., 1.
 Cheyenne ss., Russell Co.: Swineford, A., 1-a.
 Eastern oil and gas fields: Jewett, J. M., 1.
 Finney, Gray Cos.: Latta, B. F., 1.
 McLouth gas and oil field: Lee, W., 1.
 Neosho River Valley near Parsons: Williams, C. C., 1.
 Outcropping rocks: Moore, R. C., 4.
 Pleistocene-Pliocene boundary problem: Frye, C. J., 1.
 Rock fms.: Moore, R. C., 1.
 Southwest Pleist.: Hibbard, C. W., 2.
 Thomas County: Frye, J. C., 1-a.
 Kentucky: McFarlan, A. C., 2.
 Union Co.: Jillson, W. R., 2.
 Kentucky Dam, solution channel: Moncymaker, B. C., 3.
 Kentucky River: Jillson, W. R., 10.
 Loess, lower Miss. Valley, U. S.: Russell, R. J., 1; Thwaites, F. T., 1.
 Louisiana, Erath gas field: Anonymous, 78.
 Jefferson Davis, Acadia. Parishes: Stanley, T. B., Jr., 1.
 Southern oil fields: Wallace, W. E., Jr., 1.
 Louisiana-Texas, Midway-Wilcox fms.: Murray, G. E., Jr., 1.
 Maryland, deep oil test, Salisbury: Richards, H. G., 6.
 Massachusetts, Narragansett Basin stratigraphy: Knox, A. S., 1.
 Mexico, Cacahuamilpa area: Mullerried, 7.
 Cenozoic: Mullerried, 9.
 El Estado de Morelos: N. de Parrés, F., 1.
 El Oro y Tlalpujahua mining camp: Bracho V., F., 1.
 Gulf of Calif. area: Osorio Tafall, B. F., 1.
 Highway profiles: Muñoz Lumbier, M., 2.
 Nuevo León: Mullerried, 8.
 Pacific Coast: González Reyna, J., 1.

Quaternary—Continued.

- Mexico—Continued.
 Parícutin Volcano area: Williams, H., 2.
 Permian area NW. of Las Delicias, Coahuila: King, R. E., 2.
 Valley of Tixtla: Mullerried, 3.
 Michigan, Marquette iron range: Seaman, W. A., 1.
 Porter oil field: Landes, K. K., 4.
 Minnesota, S.: Thiel, G. A., 1.
 Mississippi: McGlothlin, T., 1.
 Camp Shelby area: Brown, G. F., 1.
 Coastal area: Brown, G. F., 3.
 Geologic map: Miss. G. Soc., 2.
 Monroe Co.: Vestal, F. E., 1.
 Missouri: Branson, E. B., 3.
 Montana: U. S. G. S., 1.
 Beartooth Mts. Rainbow Pleist. ice cap: Bevan, A. C., 6.
 Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.
 Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 North Big Belt Range: Lyons, J. B., 1.
 Northwest, recent oil invs.: Greene, F. C., 1.
 Stillwater, Sweetgrass Cos.: Allsman, P. T., 1.
 Nebraska, Pleist. loess: Schultz, C. B., 1.
 Soil profiles in loess: Williams, B. H., 1.
 Nevada, Comstock Lode area: Calkins, F. C., 1.
 Groom dist., Lincoln Co.: Humphrey, F. L., 1.
 Quicksilver deposits: Bailey, E. H., 1.
 New Hampshire, Monadnock quad.: Billings, K. S. F. L., 1.
 New Jersey, Cape May Canal area: Richards, H. G., 3.
 Middlesex Co.: Barksdale, H. C., 1.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 Curry, Roosevelt Cos.: Theis, C. V., 1.
 Estancia Valley area: U. S. G. S., 1.
 Iron Mtn. dist.: Jahns, R. H., 1.
 Pecos River-Rio Galisteo area: U. S. G. S., 1.
 Rio Puerco area: Wright, H. E., Jr., 1.
 Silver City area: Entwistle, L. P., 1.
 New York, Catskill quad.: Cook, J. H., 2.
 Cocksackie quad.: Cook, J. H., 3.
 Salamanca re-entrant area: MacClintock, P., 1.
 New York City, Manhattan Borough: Murphy, J. J., 1.
 North America, Drepanocladus and Pleist. glaciation: Wynne, F. E., 1.
 Periglacial climates and phenomena: Taber, S., 2.
 Western, marine Cenozoic fms.: Weaver, C. E., 2.
 North Carolina, Cape Fear Penin.: Wells, B. W., 1.
 Coastal Plain: Mundorff, M. J., 1.

Quaternary—Continued.

- North Dakota, Emerado quad.: Laird, W. M., 1.
 North Texas area: Lozo, F. E., Jr., 1.
 Northwest Territories, Mackenzie River Valley: Stewart, J. S., 2.
 Petroleum and gas poss.: Stewart, J. S., 1.
 Nova Scotia, Lake Ainslie area: Douglas, C. V., 7.
 Mabou coal area: Douglas, C. V., 6.
 Ohio, Barberton ls. mine: Stauffer, C. R., 1.
 Eastern: Ver Steeg, K., 2.
 Franklin Co. and Columbus area: Harker, D. H., 2.
 Summit Co. and Akron: Harker, D. H., 5.
 Oklahoma, Le Flore Co.: Knechtel, M. M., 1.
 Ground water: Dott, R. H., 4.
 Ontario, Beatty-Munro area: Satterly, J., 1.
 Bigwater Lake area: Berry, L. G., 1.
 Bryce-Robillard area: Moorhouse, W. W., 1.
 Cunningham-Garnet area: Meen, V. B., 2.
 East Bull Lake area: Moore, E. S., 3.
 Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
 Grimsthorpe-Barrie area: Meen, V. B., 1.
 Kaladar, Kennebec Tps.: Harding, W. D., 1.
 Red Lake area: Horwood, H. C., 3.
 Renfrew area: Satterly, J., 2.
 Rennie-Leeson area: Bruce, E. L., 1.
 Southeast: Harrison, J. M., 2.
 Stover Tp.: Horwood, H. C., 1.
 Whitefish Bay area: Fraser, N. H. C., 1.
 Oregon coast: Baldwin, E. M., 1;
 Stephenson, E. L., 1.
 Geology: Weaver, C. E., 3.
 Summer Lake pumice beds: Allison, I. S., 1.
 Pacific Basin, late geol. history: Stearns, H. T., 3.
 Pennsylvania, Hanover-York dist.: Stose, A. J., 1.
 Mineral res. areas: Ashley, G. H., 1.
 Pittsburgh area: Schopf, J. M., 4.
 Periglacial climates and phenomena: Taber, S., 2.
 Pollen analysis: Sears, P. B., 1.
 Post-glacial lake-forests fm.: Potzger, J. E., 5.
 Quebec: Dresser, J. A., 1.
 La Corne molybdenite mine: McLaren, D. C., 4.
 Lake Jacques Cartier area: Faessler, C., 3.
 Lower Romaine River area: Retty, J. A., 1.

Quaternary—Continued.

- Quebec—Continued.
 Matamec Lake area, Saguenay Co.: Greig, E. W., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Opaoka River area: Freeman, B. C., 2.
 Sept-Iles area: Faessler, C., 1.
 Shawinigan area: Faessler, C., 4.
 Shisaw area Pleist.: Legget, R. F., 2.
 South Dakota: Rothrock, E. P., 1.
 Tennessee, NE.: King, P. B., 4.
 Texas: Sellards, E. H., 2.
 Anahuac field: Carpenter, C. B., 1.
 Artesian aquifers: Guyton, W. F., 1.
 Big Spring area: Livingston, P. P., 1.
 Clay Co. terraces: Evans, G. L., 2.
 Coastal Plains: Evans, G. L., 6.
 Brazos-Rio Grande Rivers: Weeks, A. W., 1.
 Freestone Co.: Whitcomb, B., 1.
 High Plains: Evans, G. L., 5.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Lee Co.: Harris, G. D., 1.
 Lower Rio Grande Valley: Wynd, F. L., 2.
 Sierra Diablo area: U. S. G. S., 1.
 South Guadalupe Mts.: U. S. G. S., 1.
 West Ranch oil field, Jackson Co.: Bauernschmidt, A. J., Jr., 1.
 United States, Anadarko Basin: Gibbon, A., 1.
 Atlantic Coastal Plain, N. J.-Ga.: Richards, H. G., 5.
 Blancan deposits, cent. Great Plains: Elias, M. K., 2.
 Green, White, Adirondack Mts.: Balk, R., 2.
 Gulf Coast: Storm, L. W., 1.
 Gulf Coastal Plain structure from gravimetric data: Barton, D. C., 5.
 Iowan is outwash from Des Moines lobe of Wisconsin glaciation: Hobbs, W. H., 8.
 Mississippi Valley drainage: Frye, J. C., 2.
 Periglacial rock streams, Blue Ridge area: Smith, H. T. U., 3.
 Southeastern Gulf Coast: Brankstone, H. R., 1.
 Utah, Beaver Co.: Hobbs, S. W., 2.
 Post-Wasatch fms.: Gregory, H. E., 2.
 Sevier River Valley: Gregory, H. E., 1.
 Wasatch Mts., N.-cent.: Eardley, A. J., 1.
 Virginia, Coastal Plain: Cederstrom, D. J., 1, 2.
 Glade Mtn. dist.: Miller, R. L., 1.
 Washington, geology: Weaver, C. E., 3.
 King Co. coal fields: Warren, W. C., 1.
 Wyoming, Maverick Springs area: U. S. G. S., 1.
 Teton Basin: Gardner, L. S., 1.
 Wind River Mts.: U. S. G. S., 1.

Quaternary—Continued.

- Yukon, Canol Road, Teslin River-Mac-Millan Pass: Kindle, E. D., 2.
 Selwyn River area: Bostock, H. S., 2.
 Whitehorse dist.: Cockfield, W. E., 1.

Québec.

Areas described.

- Calumet Is. area: Osborne, F. F., 1.
 Matemac Lake area, Saguenay Co.: Greig, W. E., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Opaoka River area, Abitibi Terr.: Freeman, B. C., 2.
 Romaine River area, lower: Retty, J. A., 1.
 Sept-Iles area: Faessler, C., 1.
 Wakeham Lake area, Saguenay Co.: Claveau, J., 1.

Economic geology.

- Beattie gold mine: Davidson, S. C., 1.
 Bourlemaque Tp.: Norman, G. W. H., 1.
 Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
 Calumet Is. area: Osborne, F. F., 1.
 Chromite, Eastern Tps.: Stockwell, C. H., 1.
 Economic minerals: Quebec Bur. Mines, 1.
 General: Dresser, J. A., 1.
 Gold belts, Little Long Lac-Sturgeon River dist.: Tyson, A. E., 1.
 Hematite, Hincks Tp.: Tanton, T. L., 1.
 La Motte area, Abitibi Co.: Norman, G. W. H., 4.
 Malartic gold mine: Halet, R. A., 1.
 Mineral resources: Dufresne, A. O., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Molybdenite, La Corne mine: McLaren, D. C., 4.
 Pegmatites, Preissac-La Corne area: Norman, G. W. H., 5.
 Moulton Hill deposits, Eastern Tps.: Hawley, J. E., 1; Rowe, R. C., 1.
 Noranda dist. ore deposits: Wilson, M. E., 2.

- Orford area: Fortier, Y. O., 1.
 Romaine River area: Retty, J. A., 1.
 Rouyn-Malartic-Destor area: Norman, G. W. H., 3.

- Sept-Iles area: Faessler, C., 1.
 Stanstead, Brome and Stanstead Cos.: Ambrose, J. W., 2.
 Wakeham Lake area, Saguenay Co.: Claveau, J., 1.

Historical geology.

- Age, sponge beds at Little Metis: Howell, B. F., 1.
 Beattie gold mine: Davidson, S. C., 1.
 Beauchastel Tp. mapping: Ambrose, J. W., 3.
 Bryozoa show Gaspé ss. Mid. Dev.: Fritz, M. A., 4.
 Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.

Quebec—Continued.

Historical geology—Continued.

- Cadillac-Bourlamaque area: Norman, G. W. H., 2.
 Calumet Is. area: Osborne, F. F., 1.
 Châteauguay Co.: Morin, L. G., 1.
 Cobalt ser., sub-Cobalt surface: Ambrose, J. W., 4.
 Dudswell, Wolfe, Richmond, Compton Cos., geol. map: Cooke, H. C., 3.
 General: Dresser, J. A., 1.
 Gold belts, Little Long Lac-Sturgeon River dist.: Tyson, A. E., 1.
 Highgate Springs Ord. rocks: Kay, G. M., 6.
 Hincks Tp., Gatineau Co.: Tanton, T. L., 1.
 La Motte area, Abitibi Co.: Norman, G. W. H., 4.
 Louvicourt area, geol. map: Norman, G. W. H., 6.
 Malartic gold mine: Halet, R. A., 1.
 Matemec Lake area, Saguenay Co.: Greig, E. W., 1.
 Mineral resources: Dufresne, A. O., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Molybdenite, La Corne mine: McLaren, D. C., 4.
 Montmorency fault, Lottainville-Loretteville: Putman, H. M., 1.
 Montreal area: Clark, T. H., 1.
 Moulton Hill deposits, Eastern Tps.: Hawley, J. E., 1; Rowe, R. C., 1.
 Noranda dist. ore deposits: Wilson, M. E., 2.

- Opaoka River area, Abitibi Terr.: Freeman, B. C., 2.
 Orford area: Fortier, Y. O., 1.
 Pre-Trenton Ord. secs.: Sinclair, G. W., 7.

- Province of Quebec: Quebec Bur. Mines, 1.

- Romaine River, lower: Retty, J. A., 1.
 Rouyn-Beauchastel area: Wilson, M. E., 1.

- Rouyn-Malartic-Destor area: Norman, G. W. H., 3.

- Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.

- Sept-Iles area: Faessler, C., 1.
 Shippaw area Pleist.: Legget, R. F., 2.
 Sillery group: Rasetti, F., 3.

- Stanstead, Brome and Stanstead Cos.: Ambrose, J. W., 2.

- Wakeham Lake area, Saguenay Co.: Claveau, J., 1.

Mineralogy.

- Beattie gold mine: Davidson, S. C., 1.
 Bourlemaque Tp.: Norman, G. W. H., 1.
 Calumet Is. area: Osborne, F. F., 1.
 Chromite, Eastern Tps.: Stockwell, C. H., 1.
 Economic minerals: Quebec Bur. Mines, 1.

Quebec—Continued.

Mineralogy—Continued.

- Gold belts, Little Long Lac-Sturgeon River dist.: Tyson, A. E., 1.
 Hematite, Hincks Tp.: Tanton, T. L., 1.
 La Motte area, Abitibi Co.: Norman, G. W. H., 4.
 Malartic gold mine: Halet, R. A., 1.
 Melonite, Montbray mines: Peacock, M. A., 4.
 Mineral resources: Dufresne, A. O., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Molybdenite, La Corne mine: McLaren, D. C., 4.
 Montbrayite, gold telluride, Montbray: Peacock, M. A., 3.
 Moulton Hill deposit: Hawley, J. E., 1.
 Nematite, form birefringence: Donnay, J. D. H., 1.
 Noranda dist. ore deposits: Wilson, M. E., 2.
 Opaoka River area, Abitibi Terr.: Freeman, B. C., 2.
 Petroleum, residuals, Gaspé volcanic rocks: Alcock, F. J., 7.
 Romaine River area, lower: Retty, J. A., 1.
 Surface erosion zinc and lead minerals, Federal mine: Auger, P. E., 2.

Palaeontology.

- Age, sponge beds at Little Metis: Howell, B. F., 1.
 Brachiopoda, lingulid, Ord.: Sinclair, G. W., 5.
 Bryozoa show Gaspé ss. Mid. Dev.: Fritz, M. A., 4.
 Cephalopoda, Arthropoda, Ord.: Kindle, C. H., 2.
 Breviconic, Ord., Pont Rouge: Flower, R. H., 5.
 Ceratocephala, Sil., Gaspé: Kindle, C. H., 4.
 Escharopora hogbeni Fritz, distrib.: Kay, G. M., 3.
 Escharopora, Hull beds: Fritz, M. A., 2.
 Faunas, Camb., Sillery fm.: Rasetti, F., 4.
 Cambrian, Mid., Upper, Gaspé: Rasetti, F., 9.
 Ordovician: Sinclair, G. W., 2.
 Fleurantia dentition, Dev., Scaumenc Bay: Bystrow, A. P., 1.
 General: Dresser, J. A., 1.
 Loganopeltoides, Loganopeltis, facial suture devel.: Rasetti, F., 2.
 Sillery group: Rasetti, F., 3.
 Trilobota, Sil., Port Daniel: Kindle, C. H., 3.
 Upper Camb., Lévis conglom.: Rasetti, F., 1, 5, 6.

Petrology.

- Beattie gold mine: Davidson, S. C., 1.
 Bourlamaque Tp.: Norman, G. W. H., 1.
 Calumet Is. area: Osborne, F. F., 1.
 Châteauguay Co.: Morin, L. G., 1.

Quebec—Continued.

Petrology—Continued.

- Dasserat area: Auger, P. E., 5.
 General: Dresser, J. A., 1.
 Hincks Tp., Gatineau Co.: Tanton, T. L., 1.
 La Motte area, Abitibi Co.: Norman, G. W. H., 4.
 Matemec Lake area, Saguenay Co.: Greig, E. W., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Molybdenite, La Corne mine: McLaren, D. C., 4.
 Pegmatites, Preissac-La Corne area: Norman, G. W. H., 5.
 Noranda dist. ore deposits: Wilson, M. E., 2.
 Opaoka River area, Abitibi Terr.: Freeman, B. C., 2.
 Romaine River area, lower: Retty, J. A., 1.
 Rouyn-Malartic-Destor area: Norman, G. W. H., 3.
 Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
 Stanstead, Brome and Stanstead Cos.: Ambrose, J. W., 2.
 Wakeham Lake area, Saguenay Co.: Claveau, J., 1.

Physical geology.

- Beattie gold mine: Davidson, S. C., 1.
 Bourlamaque Tp.: Norman, G. W. H., 1.
 Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
 Cadillac-Bourlamaque area: Norman, G. W. H., 2.
 Calumet Is. area: Osborne, F. F., 1.
 Châteauguay Co.: Morin, L. G., 1.
 Chromite, Eastern Tps.: Stockwell, C. H., 1.
 Dasserat area: Auger, P. E., 5.
 Dudswell, Wolfe, Richmond, Compton Cos., geol. map: Cooke, H. C., 3.
 General: Dresser, J. A., 1.
 Gold belts, Little Long Lac-Sturgeon River dist.: Tyson, A. E., 1.
 Highgate Springs Ord. rocks: Kay, G. M., 6.
 La Motte area, Abitibi Co.: Norman, G. W. H., 4.
 Louvicourt area, geol. map: Norman, G. W. H., 6.
 Malartic gold mine: Halet, R. A., 1.
 Matemec Lake area, Saguenay Co.: Greig, E. W., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Molybdenite, La Corne mine: McLaren, D. C., 4.
 Montmorency fault, Lottainville-Loretteville: Putman, H. M., 1.
 Montreal area: Clark, T. H., 1.
 Moulton Hill deposits, Eastern Tps.: Hawley, J. E., 1; Rowe, R. C., 1.

Quebec—Continued.

Physical geology—Continued.

- Noranda dist. ore deposits: Wilson, M. E., 2.
 Orford area: Fortier, Y. O., 1.
 man, B. C., 2.
 Orford area: Fortier, Y. O., 1.
 Pebbles, rounded, Salmon River: Cooke, H. C., 2.
 Replacement and igneous intrus.: Reid, J. A., 1.
 Romaine River area, lower: Retty, J. A., 1.
 Rouyn-Beauchastel area: Wilson, M. R., 1.
 Rouyn-Malartic-Destor area: Norman, G. W. H., 3.
 Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
 Sept-Iles area: Faessler, C., 1.
 Stanstead, Brome and Stanstead Cos.: Ambrose, J. W., 2.
 Surface erosion zinc and lead minerals, Federal mine: Auger, P. E., 2.
 Wakeham Lake area, Saguenay Co.: Calveau, J., 1.

Physiographic geology.

- Buteux area, Abitibi Co. and Terr.: Freeman, B. C., 1.
 Châteauguay Co.: Morin, L. G., 1.
 General: Dresser, J. A., 1.
 Glacial relief: Dagenais, P., 1.
 Glaciation, Gaspé: Alcock, F. J., 6.
 Lake Jacques Cartier area: Faessler, C., 3.
 La Motte area, Abitibi Co.: Norman, G. W. H., 4.
 Matamac Lake area, Saguenay Co.: Greig, E. W., 1.
 Moisie area, Saguenay Co.: Faessler, C., 2.
 Opaoka River area, Abitibi Terr.: Freeman, B. C., 2.
 Polished gravels, Ile St. Bernard: Morin, L. G., 2.
 Romaine River area, lower: Retty, J. A., 1.
 St. Maurice River, pre-glacial channel: Laverdière, J. W., 1.
 Sept-Iles area: Faessler, C., 1.
 Shawinigan area: Faessler, C., 4.
 Wakeham Lake area, Saguenay Co.: Claveau, J., 1.

Quicksilver.

- Alaska: Joesting, H. R., 1.
 Southwest: Cady, W. M., 3.
 British Columbia, Omineca dist.: Armstrong, J. E., 4.
 Mercurian silver: Nuffield, E. W., 2.
 Pinchi Lake area: Armstrong, J. E., 1.
 Takla, Cassiar dist.: Armstrong, J. E., 6.
 Tyaughton Lake area: Cairnes, C. E., 1.

Quicksilver—Continued.

- California: Lisle, T. O., 2.
 Diablo Range: Yates, R. G., 1.
 Knoxville dist.: Averitt, P., 1.
 Canada mineral industry: Moore, E. S., 4.
 Cinnabar, colloidal deposition: Pollock, J. P., 1.
 Mexico, Colotlipa-Quechultenango min. dist.: González Reyna, J., 3.
 Huitzuco: Salazar, J. B., 1.
 Huitzuco-Guerrero area: McAllister, J. F., 1.
 Nevada: Bailey, E. H., 1.
 Ore deposits: York, B., 1.
 United States min. reserves: Joralemon, I. B., 1.
 Washington, Morton cinnabar dist.: Mackin, J. H., 1.
 Radio exploration for buried valleys, Ohio: Higgy, R. C., 1.
 Radio transmission, earthquake records: Stratton, R. J., 1.
 Radioactive eruptivity theory: Willis, B., 3.
 Radioactivity.
 Batholith, S. and Lower Calif., crystallization: Larsen, E. S., 2.
 Colorado, Ft. Collins anticline soil-air ions: Tripp, R. M., 3.
 Drilling, application: Sawdon, W. A., 1.
 Gamma-ray activity, sed. rock: Russell, W. L., 1.
 Geiger-Muller counter, geol. applications: Press, F., 1.
 Geologic calendar by lead-uranium method: Elias, M. K., 5.
 Lead isotopes as tracers: Lane, A. C., 1.
 Maine, Norway area pollucite: Ahrens, L. H., 1.
 Marine organic materials and oil: Mead, W. J., 1.
 Massachusetts, Chelmsford granite-migmatite: Keevil, N. B., 3.
 Mexico, minerals: Blau, M., 1.
 Montana, columbium, cerium minerals: Cooke, S. R. B., 1.
 Unusual pegmatite minerals: Cooke, S. R. B., 1.
 New Hampshire, Paleozoic minerals: Billings, M. P., 4.
 Ruggles mine uraninite: Shaub, B. M., 1.
 North America, Paleozoic shales: Beers, R. F., 2.
 Variations in data: Keevil, N. B., 1.
 North Carolina, Spruce Pine monazite: Bliss, A. D., 1.
 Nuclear radiation effect on radioactivity logs: Fearon, R. E., 2.
 Oceans: Rona, E., 1.
 Petroleum origin: Sheppard, C. W., 1.
 Radioactive eruptivity theory: Willis, B., 3.
 Radiometric determination of potassium: Beers, R. F., 3.

Radioactivity—Continued.

- Radium content, ocean-bottom sediments: Piggot, C. S., 1.
- Scope and use of logs: Barclow, J. C., 1.
- Texas, radon emanations in oil explor.: Sterrett, E., 1.
- Thorium-uranium ratios, rocks, minerals: Keevil, N. B., 2.
- United States, rocks: Beers, R. F., 1.
- Volcanic heat: Graton, L. C., 2.
- Well logging: Fearon, R. E., 1; Jackson, W. J., 1; Mercier, V. J., 1.
- Radioactivity and earth temperature: Blau, M., 2.
- Radioactivity and petroleum genesis: Sheppard, C. W., 1.
- Radioactivity, organic content, sedimentation: Russell, W. L., 2.
- Radiolaria.
- California, Cret.: Campbell, A. S., 2.
- Kreyenhagen fm., Los Banos area: Clark, B. L., 2.
- Mount Diablo shs.: Clark, B. L., 3.
- Southern, Miocene: Campbell, A. S., 1.
- Cuba: Palmer, R. H., 1.
- Marine ecology as related to paleontology: Ladd, H. S., 3.
- New York faunas, Catskill quad.: Ruedemann, R., 5, 6.
- Coxsackie quad.: Goldring, W., 3.
- North America, W., index fossils, marine Cenozoic fms.: Weaver, C. E., 2.
- Oklahoma, Dev.: Miser, H. D., 1.
- Radiometric determination of potassium: Beers, R. F., 3.
- Radium. See also Carnotite.
- Content, ocean-bottom sediments: Piggot, C. S., 1.
- Mexico, radioactive minerals: Castro, C., 1.
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- North America, uranium: Vanderwilt, J. W., 1.
- Rain drops, effect on erosion and infiltration: Ellison, W. D., 1.
- Rain prints, Perm., Ariz.: Lauder milk, J. D., 5.
- Rainbow Bridge, Utah: Anonymous, 80.
- Raleigh and plane waves: Fu, C. Y., 2.
- Rangely oil and gas field, Rocky Mts., Colo.: Thomas, C. R., 1; U. S. G. S., 1.
- Rare elements, occurrence, Mich.: Snelgrove, A. K., 4.
- Sulfur minerals: Auger, P. E., 3.
- Reading the book of rocks: Bell, O. J., 1.
- Recent sedimentation and search for oil: Krumbein, W. C., 2.
- Recent trends in geology: Bevan, A. C., 2.
- Reciprocal reinforcement glacial theory: Boon, J. D., Sr., 1.
- Reconsideration, Morrison fm. in type area, Colo.: Waldschmidt, W. A., 1.
- Red beds, U. S., Anadarko Basin, Perm.: Gould, C. N., 1.

Reefs or bioherms.

- Bermuda: Livingston, W., 1.
- Bioherms, other reefs: Ladd, H. S., 3, 4.
- Canada, Canol invs., Mackenzie River area: Hume, G. S., 8.
- Colorado, Maxwell reef area, Boulder Co.: MacCornack, R. J., 1.
- Coral reefs, antecedent-platform origin theory: Hoffmeister, J. E., 1.
- Georgia, Coastal Plain: Cooke, C. W., 1.
- Mexico, Cacahuamilpa area: Mullerried, 7.
- Northwest Territories, Mackenzie River Valley: Stewart, J. S., 2.
- Pacific Basin, late geol. history: Stearns, H. T., 3.
- Photo-geology, military application: Dirmeyer, R. D., Jr., 1.
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- Texas, algal reefs, Cret., Austin chalk, Brewster Co.: Johnson, J. H., 2.
- Anahuac Oligocene fm.: Ellisor, A. C., 1.
- Texas-New Mexico, Delaware Basin, Perm.: Adams, J. E., 2.
- United States, Llano Estacado, Ogallala fm.: Price, W. A., 5.
- Reflection data, oblique, analysis: Horton, C. W., 3.
- Reflection seismograph prosp., Gulf Coast, U. S.: Rosaire, E. E., 1.
- Refraction waves reflected at fault zone: Robinson, W. B., 1.
- Reklaw Eocene Ostracoda, Tex.: Stephenson, M. B., 2.
- Relief maps.
- Aerial photos.: Levings, W. S., 1.
- Airplane photos. in oil industry: Gaty, J. P., 1.
- Arizona, East Kaibab monocline, Grand Canyon area: Strahler, A. N., 1.
- California, Santa Lucia Range: Tallafarro, N. L., 1.
- Santa Maria oil dist.: U. S. G. S., 1.
- Chesapeake Bay, upper: Gottschalk, L. C., 1.
- Florida: Cooke, C. W., 3.
- Mexico, Gulf of Calif. area: Osorio Tallafall, B. F., 1.
- Montana, Gravelly Range Eocene moraine: Atwood, W. W., 1.
- New York, Cayuta Lake, "Lost Gorge": Engeln, O. D. von, 1.
- Northwest Territories, Yellowknife area: Jolliffe, A. W., 3.
- Pennsylvania, County descriptions: Ashley, G. H., 1.
- Mineral res. areas: Ashley, G. H., 1.
- Plastic relief models: Gill, W. H., 1.
- Third-dimensional maps: Gill, W. H., 3.
- United States, Green, White, Adirondack Mts.: Balk, R., 2.

- Replacement and igneous intrusions: Reid, J. A., 1.
- Reptilia.
- Alberta, Red Deer, Rosebud area: Allan, J. A., 1; Sanderson, J. O. G., 1.
- Drinnan to Brûlé Lake area: Lang, A. H., 1.
- Blanco fauna, Pleist., Tex.: Meade, G. E., 2.
- Brachyuranochampsia, Eocene, Wyo.: Zangerl, R., 2.
- Colorado, Morrison fm., Colo. Plateau area: Stokes, W. L., 1.
- Diadectes, Perm., Tex.: Romer, A. S., 2.
- Dinosaurs, Cret., Canada: Sternberg, C. M., 1; Missouri, Gilmore, C. W., 1.
- Jurassic, Utah: Stokes, W. L., 2.
- Kanab, Utah: Lauder milk, J. D., 7.
- Tracks, Trias., Pa.: Ashley, G. H., 5.
- Extinction: Cowles, R. B., 1.
- Faunas, Como Bluff anticline, Wyo.: Dunbar, R. O., 1.
- Pleistocene, Neb.: McGrew, P. O., 1.
- Tatman fm., Wyo.: Van Houten, F. B., 1.
- Gwyneddosaurus, Trias., Pa.: Bock, W., 1.
- Kansas, mid-Penn.: Lane, H. H., 2.
- Southwest, Pleist.: Hibbard, C. W., 2.
- Life calendar: Colbert, E. H., 3.
- Lizard, Eocene, Wyo.: Gilmore, C. W., 2.
- Macrochelys, Tert., U. S.: Zangerl, R., 3.
- Martinique, vertebrate fauna: Chabaud, P., 1.
- New Jersey check list: Colbert, E. H., 2; Rapp, W. F., Jr., 1.
- Oral cavity and jaws, evolution: Gregory, W. K., 1.
- Pachycephalosauridae, dome-headed dinosaurs: Sternberg, C. M., 2.
- Pachycephalosaurus, bonehead dinosaur: Colbert, E. W., 1.
- Parrosaurus for Neosaurus Gilmore: Gilmore, C. W., 4.
- Pterosaurs, fish-catchers: Gudger, E. W., 1.
- Stegoceras, dome-headed dinosaur, Alberta: Sternberg, C. M., 2.
- Texas, Bandera Co., Brontosaurus tracks: Bird, R. T., 1.
- Trinacromerum, Cret. pleiosaur, Kans.: Riggs, E. S., 1.
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- Vertebrata, Burkeville: Miocene, Tex.: Stenzel, E. B., 1.
- Washington, NW., Oligocene: Durham, J. W., 1.
- Winged fish-catchers: Gudger, E. W., 1.
- Research Committee Program: Lowman, S. W., 1.
- Research in exploration: Morse, R. R., 1.
- Research in physical sciences: Miller, A. K., 11.
- Research on Carolina Bays: Johnson, D. W., 1.
- Reservoirs, genetic, morphologic classn.: Pirson, S. J., 2.
- Subsurface, fundamental data: Donoghue, D., 2.
- Resins in coal: Selvig, W. A., 1.
- Resistivity prosp. for gravel: Moore, R. W., 1.
- Restorations. See also Paleontology.
- Buettneria, Trias., Tex.: Sawin, H. J., 1.
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- Mexico, radioactivity: Blau, M., 1.
- Washington, Olympic Penin.: Green, S. H., 1.
- Rhodonite, Costa Rica: Roberts, R. J., 1.
- Rhyolite.
- California, Big Pine volcanic field: Mayo, E. B., 1.
- Idaho, Birch Creek area: Anderson, A. L., 1.
- Quebec, Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
- Wyoming, Yellowstone Park rhyolite-basalt complex: Fenner, C. N., 1; Hawkes, L., 1; Wilcox, R. E., 1.
- Riebeckite and crocidolite the same: Bjareby, G., 1.
- Ring dikes.
- New Hampshire, Oliverian magma ser., Mt. Washington quad.: Chapman, C. A., 1.
- Winnepesaukee area: Quinn, A. W., 2.
- Rio Bravo oil field, Kern Co., Calif.: Salvatore, H., 1.
- Rio Vista gas field, Calif.: Frame, R. G., 1.
- Ripple marks.
- Arizona, Coconino ss. markings: Decker, B. L., 1.
- Small-scale structures: McKee, E. D., 2.
- Permian, Trias.: Lauder milk, J. D., 5.
- Criteria, wave-formed vs. current-formed: Evans, O. F., 1.
- Kansas, SW. Pleist.: Hibbard, C. W., 2.
- Ohio, N. Berea sand: U. S. G. S., 1.
- Tennessee, Douglas Dam area: Laurence, R. A., 1.
- Texas, Irving area concretions: Loving, G., 1.
- Virginia, Burkes Garden quad.: Cooper, B. N., 1.
- Lick Mtn. dist.: Stead, F. W., 1.

- River-sand deposits, eng. aspects: Krynine, D. P., 1.
- Rivers.
- Alaska, Porcupine Valley: Fitzgerald, G., 1.
 - Arizona, Grand Canyon, Colorado River: Cueto Rui-Díaz, E., 1.
 - Kentucky Dam, solution channel: Mon-eymaker, B. C., 3.
 - Kentucky River, Drennon abandoned channel: Jillson, W. R., 5.
 - Pliocene Elkhorn channel: Jillson, W. R., 4.
 - Pot Ripple abandoned channel: Jillson, W. R., 3.
 - Measure of velocity, suspended sedi-ment by statistical theory: Kal-linske, A. A., 2.
 - Mexico, Yucatan Penin., underground: Anonymous, 70.
 - Sand deposits, eng. aspects: Krynine, D. P., 1.
 - Streams, drainage basins, erosional devel.: Horton, R. E., 1.
 - Velocity, load of: Quirk, T. T., 1.
 - Texas, Quat. river systems: Price, W. A., 3.
 - United States, cent., Teays Tert. River: Ver Steeg, K., 4.
- Road materials.
- Loess, highway uses: Bollen, R. E., 1.
 - Michigan, Marquette iron range: Seaman, W. A., 1.
 - Mississippi Valley indust. minerals: Voskuil, W. H., 1.
 - Kansas res.: Landes, K. K., 1.
 - Ohio, Maxville ls.: Lamborn, R. E., 1.
 - Texas, Anderson Co.: Whitcomb, B., 2.
 - Baylor Co.: Evans, G. L., 4.
 - Fayette Co.: Sedlmeyer, J. J., 1.
 - Henderson Co.: Evans, G. L., 3.
 - Lee Co.: Harris, G. D., 1.
 - Limestone Co.: Broman, I. J., 1.
 - Wichita Co.: Lyle, W. M., 1.
 - Williamson Co.: Leedy, D., 1.
 - Uinta Basin, Utah-Colo. hydrocarbons: Barb, C. F., 1.
 - Virginia, Glade Mtn. dist.: Miller, R. L., 1.
- Rock colors: DeFord, R. K., 1.
- Chart: DeFord, R. K., 2.
- Rock-forming minerals, melting, crystalliza-tion: Schairer, J. F., 1.
- Rock Island gas field, Okla.: Knechtel, M. M., 1.
- Rock wool.
- Canada, W.: Hutt, G. M., 4.
 - Kansas, Marmaton Penn. group: Jewett, J. M., 2.
 - Mississippi: Morse, W. C., 7.
 - Texas, Carb.: Plummer, F. B., 2.
 - Limestone for: Plummer, F. B., 6.
- Rocks and rivers: Shuler, E. W., 2.
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- Romance of mining: Rickard, T. A., 3.
- Rose Hill oil field, Lee Co., Va.: U. S. G. S., 1.
- Rounding of sand grains: Twenhofel, W. H., 3.
- Rubidium.
- Maine, Norway area pollucite: Ahrens, L. H., 1.
- Rubies. See also Gems; Precious stones.
- Cathodoluminescence of gems: De Ment, J. A., 2.
 - United States, S. Atlantic gems: Bar-clay, G. C., 1.
- Rudistids, Tex. N. Comanchean fauna: Lozo, F. E., Jr., 1.
- Rush Creek Glacier, Calif.: Putnam, W. C., 1.
- Rushton gas field, Lincoln Parish, La.: Kamb, H. R., 1.
- Rutile.
- Arkansas, geol. occurrence: Ross, C. S., 3.
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 - Indiana, Mansfield ss. minerals: Gault, H. R., 1.
 - Maryland, Harford Co.: Tomlinson, W. H., 2.
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- St. Jacob pool, Dev., Ill.: Bell, A. H., 1.
- Salinas, Death Valley, Calif.: Blackford, J. L., 1.
- Salt. See also Salt domes.
- Alberta: Irwin, J. L., 1.
 - Arizona, Paleozoic, cent., NE.: U. S. G. S., 2.
 - California, Death Valley: Bagg, R. M., 3.
 - Searles Lake, San Bernardino Co.: Anonymous, 76.
 - Dominican Republic: Anonymous, 18.
 - Kansas, res.: Landes, K. K., 1.
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 - Avery ls. mine: Fuller, R. T., 1.
 - Future oil fields: Howe, H. V., 1.
 - 1942 wildcat wells: Blanpied, R. W., 4.
 - Southern oil fields: Wallace, W. E., Jr., 1.
- Mexico, Baja Calif.: Antúñez Eche-garay, F., 3.
- Neuvo León: Mullerried, 8.
- Rio Puerco area: Wright, H. E., Jr., 1.
- Michigan: Martin, H. M. M., 1, 3.
- Michigan Basin, Salina, Bass ls. rocks: U. S. G. S., 1.
- Nevada, Salt Cave: Harrington, M. R., 1.
- New Mexico, Estancia Valley area: U. S. G. S., 1.
- Northwest Territories, Mackenzie River Valley: Stewart, J. S., 2.
- Nova Scotia, indust. minerals: Cam-eron, A. E., 3.
- Ohio, min. res.: Ohio Devel. Pub. Com., 1; White, G. W., 1.

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 Texas, Anderson Co.: Whitcomb, B., 2.
 Apache Mts., Culberson Co. well: Maley, V. C., 1.
 Depth by seismograph: Hoylman, H. W., 2.
 Grand Saline salt dome: Peters, J. W., 1.
 Mineral res.: Sellards, E. H., 2.
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 Salt domes. See also Salt.
 Allen dome, Miss.: Miss. G. Soc., 1.
 Bruinsberg dome, Miss.: Miss. G. Soc., 1.
 Byrd dome, Miss.: Miss. G. Soc., 1.
 Carson dome, Miss.: Miss. G. Soc., 1.
 Grand Saline salt dome, Tex.: Peters, J. W., 1.
 Gulf Coast, La.-Tex., heaving shale: Wade, G., 1.
 Lampton dome, Miss.: Miss. G. Soc., 1.
 Leedo dome, Miss.: Miss. G. Soc., 1.
 Louisiana, Cameron Meadows dome: McGuckin, G. M., 1.
 Erath gas field: Anonymous, 78.
 Future oil fields: Howe, H. V., 1.
 1942 discoveries: Blanpied, B. W., 5.
 1942 wildcat wells: Blanpied, B. W., 4.
 Southern oil fields: Wallace, W. E., Jr., 1.
 Mississippi, Heidelberg field: McCullough, R. A., 1.
 Oil and gas fields: Ives, G. O., 2; Morse, W. C., 5; Todd, J. D., 1; Williams, N., 1.
 Monticello dome, Miss.: Miss. G. Soc., 1.
 Moselle dome, Miss.: Miss. G. Soc., 1.
 New Home dome, Miss.: Miss. G. Soc., 1.
 North America, Gulf, Caribbean areas: Seismog. Serv. Corp., 1.
 Nova Scotia, indust. minerals: Cameron, A. E., 3.
 Oakvale dome, Miss.: Miss. G. Soc., 1.
 Petroleum, migration, origin: Plummer, F. B., 4.
 Prentiss dome, Miss.: Miss. G. Soc., 1.
 Ruth dome, Miss.: Miss. G. Soc., 1.
 Sardis Church dome, Miss.: Miss. G. Soc., 1.
 Significance to petroleum: Lloyd, J., 1.

Salt domes—Continued.

- Texas, Anahuac field: Carpenter, C. B., 1.
 Anderson Co.: Whitcomb, B., 2.
 Concord dome, Anderson Co.: Alexander, C. I., 2.
 Damon Mound: Barton, D. C., 2; Hurlbut, E. M., Jr., 1.
 Grand Saline dome, Van Sandt Co.: Peters, J. W., 1.
 Nash, Damon Mounds: Barton, D. C., 2.
 South Houston oil field: Eby, J. B., 1.
 South Tyler field, Smith Co.: Weirich, T. E., 1.
 Woodbine sand waters: Horton, C. W., 2.
 United States, E. Gulf area, oil poss.: Kornfeld, J. A., 1.
 Eastern Gulf Coast area: Hanna, M. A., 1.
 Gulf Coastal Plain, structure from gravimetric data: Barton, D. C., 5.
 Rocky Mts. oil poss. in: Harrison, T. S., 1.
 Salt-water encroachment in lss., Miami, Fla.: Brown, R. H., 1.
 Sand. See also Glass sand; Silica.
 Alabama res.: Anonymous, 25.
 Southwest: SE. Geol. Soc., 1.
 Tertiary fms.: Toulmin, L. D., Jr., 1.
 Arkansas, Schuler field: Kaveler, H. H., 1.
 British Columbia, molding sand: Smith, W., 1.
 California: Lauder milk, J. D., 2.
 Elk Hills oil field: Bunch, E. S., 1.
 Canada, engine sands: Hutt, G. M., 18.
 Winnipeg to Edmonton: Hutt, G. M., 13.
 Clastic sediments, fine-grained, orientation analysis: Dapples, E. C., 1.
 Earth resistivity method of prospecting: Wilcox, S. W., 1.
 Errors of sampling: Rittenhouse, G., 2.
 Florida, Daytona Beach: Fineron, W. W., 1.
 Petroleum poss.: Gunter, H., 1.
 Southern: Parker, G. F., 2.
 Flotation transp., marine beaches: Emery, K. O., 7.
 General: Lauder milk, J. D., 2.
 Georgia, Coastal Plain: Cooke, C. W., 1.
 Southwest: Herrick, S. M., 1.
 Tertiary fms.: MacNeill, F. S., 2.
 Illinois, rotary drilling cores: Mylius, L. A., 1.
 Illinois and surrounding States, Dev.: Weller, J. M., 2.
 Indiana, Dev.: Sutton, A. H., 1.
 Iowa, Dev.: Stainbrook, M. A., 1.
 Kansas, res.: Lacodes, K. K., 1.
 Kentucky, W., Dev.: Freeman, L. B., 1.
 Kentucky River, Drennon abandoned channel: Jillson, W. R., 5.
 Pot Ripple abandoned channel: Jillson, W. R., 3.

Sand—Continued.

- Louisiana, Camp Polk, North Camp
Polk areas: Maher, J. C., 3.
Southern oil fields: Wallace, W. E., Jr., 1.
Maine, Kennebec Valley esker: Trefethen, J. M., 2.
Mississippi: Morse, W. C., 2.
Camp Shelby area: Brown, G. F., 1.
Heidelberg field: McCollough, R. A., 1.
Monroe Co.: Vestal, F. E., 1.
Mississippi Valley indust. minerals: Voskuil, W. H., 1.
Missouri, NW. recent oil invs.: Greene, F. C., 1.
Montana, Little Rocky Mts. plains: U. S. G. S., 1.
Nevada, non-metallics: York, B., 1.
New Jersey, Middlesex Co.: Barksdale, H. C., 1.
New Mexico, Rio Grande Valley sand source: Rittenhouse, G., 3.
Rio Puerco area: Wright, H. E., Jr., 1.
New York, Catskill quad.: Cook, J. H., 2; Newland, D. H., 1.; Ruedemann, R., 5.
Coxsackie quad.: Cook, J. H., 3; Goldring, W., 3.
North America, radioactivity: Beers, R. F., 2.
Recent sediments, Gulf Coast region: Rolshausen, F. W., 1.
North Carolina, Cape Fear Penin.: Wells, B. W., 1.
North Dakota, White River fm.: Powers, W. E., 1.
North Texas area: Lozo, F. E., Jr., 1.
Ohio: Stout, W. E., 7.
Mineral res.: Ohio Devel. Pub. Com., 1; White, G. W., 1.
Oklahoma, Apache field: Scott, V. C., 1.
West Edmond oil field: McGee, D. A., 1; Taylor, F. B., 1.
Ontario, Bigwater Lake area: Berry, L. G., 1.
Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
Grimsthorpe-Barrie area: Meen, V. B., 1.
Kaladar, Kennebec Tps.: Harding, W. D., 1.
Rennie, Leeson area: Bruce, E. L., 1.
Stover Tp.: Horwood, H. C., 1.
Pennsylvania, Hanover-York dist.: Stose, A. J., 1.
Resources: Ashley, G. H., 1.
Puerto Rico, glass: Meyerhoff, H. A., 2.
Quebec, econ. res.: Quebec Bur. Mines, 1.
Matemac Lake area, Saguenay Co.: Greig, E. W., 1.
River sand deposits, eng. aspects: Krynine, D. P., 1.

Sand—Continued.

- Rounding sand grains: Twenhofel, W. H., 3.
South Carolina res.: Taber, S., 1; Anonymous, 20.
South Dakota, Missouri Valley, Little Bend-White River: Rothrock, E. P., 2.
Resources: Rothrock, E. P., 1.
Texas, Anahuac Oligocene fm.: Ellisor, A. C., 1.
Anderson Co.: Whitecomb, B., 2.
Baylor Co.: Evans, G. L., 4.
Clay Co. terraces: Evans, G. L., 2.
Coastal Plain, Brazos-Rio Grande Rivers: Weeks, A. W., 1.
Damon Mound ls.: Hurlbut, E. M., Jr., 1.
Falls, Robertson Cos. mixture: Hoeman, E. C., 1.
Fayette Co.: Sedlmeyer, J. J., 1.
Gonzales Co.: Chelf, C. R., 2.
Hidalgo Co. soils: Wynd, F. L., 1.
High Plains: Evans, G. L., 5.
Houston Co.: Harrington, H., 1.
Lee Co.: Harris, G. D., 1.
Leon Co.: Crow, D., 1.
Resources: Sellards, E. H., 2.
Travis Co.: Nickell, C. O., 4.
Wichita Co.: Lyle, W. M., 1.
United States, E. Gulf area, oil poss.: Kornfeld, J. A., 1.
Gulf Coastal Plain, structure from gravimetric data: Barton, D. C., 5.
High Plains dunes: Hefley, H. M., 1.
Rocks: Beers, R. F., 1.
Southeast: MacNeill, F. S., 3.
Western: Keller, W. D., 2.
Virginia, Coastal Plain well logs: Cederstrom, D. J., 2.
Glade Mtn. dist.: Miller, R. L., 1.
West Virginia: Martens, J. H. C., 1.
Wyoming, Willwood, Tatman fms.: Van Houton, F. B., 1.
Sand dunes. See also Dunes.
Arizona, Coconino ss. small-scale structures: McKee, E. D., 2.
Bermuda: Livingston, W., 1.
California, Death Valley: Bagg, R. M., 3.
Santa Maria oil dist.: U. S. G. S., 1.
Florida, heavy minerals: Miller, R., III, 1.
Southern: Parker, G. G., 2.
Indiana, geol. story: Freeman, O. W., 4.
Sand Flat oil and gas fields, Tex.: Bartell, L. D., 1.
United States, High Plains: Hefley, H. M., 1.
Western: Keller, W. D., 2.
Sand Flat oil and gas field, Smith Co., Tex.: Bartell, L. D., 1.
Sandoval pool, Marion Co., Ill.: Hoover, W. F., 1.
San Miguelito oil field, Calif.: Barnes, K. B., 2.

Sandstone. See also Building stone.

- Alabama res.: Anonymous, 25.
 Southwestern: SE. Geol. Soc., 1.
 Tertiary fms.: Toulmin, L. D., Jr., 1.
 Alaska, Matanuska coal field: Payne, T. G., 1.
 Moose Creek dist., Matanuska coal fields: Apell, G. A., 1.
 Alberta, Alexo area: Crombie, G. P., 1.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Cowley area: Hage, C. O., 1.
 Drinnan to Brûlé Lake area: Lang, A. H., 1.
 Dyson Creek area: Hage, C. O., 2.
 Stimson Creek area: Hume, G. S., 1.
 Tay River area: Henderson, J. F., 1.
 Arizona, Grand Canyon, Colorado River: Cueto Rui-Díaz, E., 1.
 Oak Creek Canyon: McKee, E. D., 3.
 Arkansas, Batesville area: Gordon, M., Jr., 1.
 Devonian: Miser, H. D., 1.
 Schuler field: Kaveler, H. H., 1.
 British Columbia, Ainsworth area: Rice, H. M. A., 1.
 Dunlevy-Portage Mtn. area: Beach, H. H., 1.
 Fort Nelson area: Kindle, E. D., 1.
 Lone Mtn. area: McLearn, F. H., 1.
 Mt. Hulcross-Commotion Creek area: Wickenden, R. T. D., 1; Williams, M. Y., 2.
 Peace River Foothills: McLearn, F. H., 2.
 Turner Valley area fields: Hume, G. S., 6.
 California, coast, Point Arena-Fort Ross: Weaver, C. E., 3.
 San Luis Obispo Co.: Smith, C. T., 1.
 Bituminous sands: U. S. G. S., 1.
 Santa Catalina Is. marine sed.: Clements, T. D., 2.
 Canada, Canol Invs., Mackenzie River area: Hume, G. S., 8.
 Manitoba dist.: Hutt, G. M., 15.
 Pouce Coupé-Peace River area: Crickmay, C. H., 1.
 Colorado, Morrison fm., Colorado Plateau area: Stokes, W. L., 1.
 Costa Rica, El General area: Dóndoli, C., 2.
 Illinois: Workman, L. E., 1.
 Cave in Rock dist.: Currier, L. W., 2.
 Centralia-Salem, Dev.: Caylor, G. W., 1.
 Devonian fms.: Cooper, G. A., 2.
 Hardin Co. fluor spar areas: Currier, L. W., 1.
 Sandoval pool area: Hoover, W. F., 1.
 Water res.: Gerber, W. D., 1.
 Illinois and surrounding states, Dev.: Weller, J. M., 2.
 Indiana, Dev.: Sutton, A. H., 1.

Sandstone—Continued.

- Kansas, McLouth gas and oil field: Lee, W., 1.
 Marmaton Penn. group: Jewett, J. M., 2.
 Kentucky, W., Dev.: Freeman, L. B., 1.
 Louisiana, Camp Polk, North Camp Polk areas: Maher, J. C., 3.
 Michigan, Berea ss.: U. S. G. S., 1.
 Mississippi, Camp Shelby area: Brown, G. F., 1.
 Monroe Co.: Vestal, F. E., 1.
 Missouri, Bourbon High oil field: Cullison, J. S., 2.
 Northeast, Dev.: Branson, E. B., 2.
 Southeast: Cronels, C. G., 1.
 Montana, Little Rocky Mts. plains: U. S. G. S., 1.
 Sweetgrass arch marine Juras.: Cobban, W. A., 2.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 North America, radioactivity: Beers, R. F., 2.
 North Carolina, Cape Fear Penin.: Wells, B. W., 1.
 North Dakota, White River fm.: Powers, W. E., 1.
 Northwest Territories, Mackenzie River Valley: Stewart, J. S., 1.
 Nova Scotia, North Grant area: Douglas, G. V., 1.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Westworth dist.: Bancroft, M. F., 1.
 Ohio: Stout, W. E., 7, 8.
 Barberton ls. mine: Stauffer, C. R., 1.
 Berea sand: U. S. G. S., 1.
 Blackhand Missn. ss.: Ver Steeg, K., 5.
 Blaine Hill, Belmont Co. sec.: White, G. W., 4.
 Franklin Co. and Columbus area: Harker, D. H., 2.
 Resources: Ohio Devel. Pub. Com., 1; White, G. W., 1.
 Rock water: Stout, W. E., 4.
 Oklahoma, barite: Ham., W. E., 1.
 Black Knob Ridge area: U. S. G. S., 1.
 Devonian: Miser, H. D., 1.
 Oregon, Coos Bay Tert. fms.: Weaver, C. E., 4.
 Pennsylvania, Buck Hill area: Myers, R. E., 2.
 Central-eastern: Hersey, J. B., 1.
 Conemaugh Gorge Missn.: Fetteke, C. R., 2.
 Everett syncline area: Foose, R. M., 1.
 Huntington area: Willard, B., 2.
 Point Pleasant area: McLaughlin, D. B., 1.
 Resources: Ashley, G. H., 1.
 Quebec, Highgate Springs sequence: Kay, G. M., 6.

Sandstone—Continued.

- Quitman fault zone, Ala.-Miss.: U. S. G. S., 1.
- Texas, Baylor Co.: Evans, G. L., 4.
- Coastal Plain, Oakville, Cuero, Goliad fms.: Weeks, A. W., 2.
- Elm Creek ground ss. balls: Ray, C. N., 1.
- Erath Co.: Nickell, C. O., 3.
- Grimes Co.: Ramsay, G. D., 1.
- Irving area concretions: Loving, G., 1.
- Lee Co.: Harris, G. D., 1.
- Leon Co.: Crow, D., 1.
- Wichita Co.: Lyle, W. M., 1.
- Texas-New Mexico, Delaware Basin Perm.: Adams, J. E., 2.
- United States, Appalachian Basin, Berea sand: U. S. G. S., 1.
- Cotton Valley beds, N. Gulf Coastal Plain: Swain, F. M., 1.
- Rocks: Beers, R. F., 1.
- Southeast: MacNeil, F. S., 3.
- Manganese, cobalt-bearing: Pierce, W. G., 2.
- Stockton, Lockatong fms. type secs.: McLaughlin, D. B., 2.
- Western: Keller, W. D., 2.
- Vermont, Highgate Springs sequence: Kay, G. M., 6.
- Virginia, Bland, Giles Cos.: Ladd, H. S., 2.
- Glade Mtn. dist.: Miller, R. L., 1.
- Washington, Blewett-Cle Elum fm.: Luper, R. L., 1.
- Morton cinnabar dist.: Mackin, J. H., 1.
- West Virginia, rocks, minerals: Erwin, J. P., 1.
- Wyoming, Willow Creek coal area: Andrews, D. A., 1.
- Willwood, Tatman fms.: Van Houten, F. B., 1.

Sapphires.

- Cathodoluminescence of gems: De Ment, J. A., 2.
- United States, S. Atlantic, gems: Barclay, G. C., 1.

Saskatchewan.

Economic geology.

- Northern, min. res.: Anonymous, 105.
- Petroleum explor.: Anonymous, 35, 48.
- Petroleum, nat. gas devel., 1944: Swain, E., 1.
- Drilling for: Edmunds, F. H., 2.
- Possibilities: Edmunds, F. H., 1.
- Prospecting poss.: Mawdsley, J. B., 1; Anonymous, 48.
- Southern: Hutt, G. M., 17.

Historical geology.

- Cypress Lake area, geol. map: Canada G. S., 1.
- Kindersley area: Wickenden, R. T. D., 2.
- Petroleum, nat. gas, prosp., drilling poss.: Edmunds, F. H., 1, 2.
- Southern: Hutt, G. M., 17.

Saskatchewan—Continued.

Mineralogy.

- Northern, min. res.: Anonymous, 105.
- Prospecting poss.: Mawdsley, J. B., 1.

Paleontology.

- Baculites, Cret.: Robinson, H. R., 1.

Physical geology.

- Petroleum, nat. gas, drilling: Edmunds, F. H., 2.

Physiographic geology.

- Saline lakes: Rawson, D. S., 1.
- Southern: Hutt, G. M., 17.

- Sauconite, zinc-clay mineral, Pa.: Ross, C. S., 4.

- Saxonite, Glenn Co., Calif.: Ryneanson, G. A., 1.

Scandium.

- Montana, SW.: Cooke, S. R. B., 1.

Scaphopoda. See also Mollusca.

- California Mollusca: Keen, A. M., 2.
- Colorado, Morrison fm., Colo. Plateau area: Stokes, W. L., 1.

- Faunas, Kaibab Perm., fm. Ariz.: Nicol, D., 2.

- Marginal marine Perm. strata, U. S.: Clifton, R. L., 1.

- Marine Tert. fms., Wash., Oreg.: Weaver, C. E., 1.

- Mesabi iron range, Minn.: Bergquist, H. R., 1.

- Mexico, NE., Tert. fms. Mollusca: Gardner, J. A., 3.

- New Jersey, Brandywine Lighthouse boring: Richards, H. G., 2.

- Oregon, Coos Bay Tert. fms.: Weaver, C. E., 4.

- San Diego area, Calif.: Hertlein, L. G., 1.

- Washington, NW., Oligocene: Durham, J. W., 1.

Scapolite.

- New York, Monroe, Bear Mtn. Park min. locs.: Ayres, V. L., 2.

Scarps.

- Geology applied to Imbrian Plain of the moon: Spurr, J. E., 1.

Scenic Kansas: Landes, K. K., 2.

Scheelite.

- Alaska: Joesting, H. R., 1.
- Arizona, Borianna dist. and Aquarius Range: Hobbs, S. W., 1.
- British Columbia, Whitesail Lake area: Holland, S. S., 3.

- Cuba, Isla de Pinos tungsten deposits: Page, L. R., 1.

- Effect on molybdenum minerals, Utah: Crawford, A. L., 6.

- Mexico, Sierra de Juarez, Baja Calif.: Fries, C., Jr., 1.

- Sonora: Wiese, J. H., 1.

- Montana, Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.

- Nevada, Rye Patch area: Vitaliano, C. J., 1.

- New Mexico, Iron Mtn. dist., beryllium, tungsten deposits: Jahns, R. H., 1.

Scheelite—Continued.

- Ontario, Hollinger mine: Allen, C. C., 1.
 Northwest, prosp. poss.: Horwood, H. C., 4.
 Saskatchewan, N.: Anonymous, 105.
 Ultra-violet light in prosp.: Warren, T. S., 1.
 Utah, Beaver Co.: Hobbs, S. W., 2.
 Cottonwood-American Fork dists.: Crawford, A. L., 6.
 Reaper mine pipe: Crawford, A. L., 5.

Schists.

- Alabama, flake graphite belt: Pallister, H. D., 1.
 Pinckneyville complex: Gault, H. R., 2.
 Ton belt: Hunter, F. R., 1.
 Arizona, Borianna dist. and Aquarius Range: Hobbs, S. W., 1.
 Superior mining area: Short, M. N., 1.
 British Columbia, Ainsworth area: Rice, H. M. A., 1.
 Britannia mine No. 8 orebodies: Irvine, W. T., 1.
 California, Big Pine volcanic field: Mayo, E. B., 1.
 Crestmore minerals: Woodford, A. O., 1.
 Eclogite in: Switzer, G., 1.
 Glenn Co.: Rynearson, G. A., 1.
 Carolina Piedmont: Kesler, T. L., 1.
 Cuba, Isla de Pinos tungsten deposits: Page, L. R., 1.
 Edison oil field, Calif. production: Stockman, L. P., 2.
 Greenland, Franz Josef Fjord area: Odell, N. E., 1.
 Maine, Kennebec Valley esker: Trefethen, J. M., 2.
 Mount Desert Is.: Chadwick, G. H., 1.
 Manitoba, Mikanagan Lake area: Bateman, J. D., 1.
 Snow Lake area: Ebbutt, F., 1.
 Massachusetts, Chester-Blandford State Forest: Billings, M. P., 1.
 Shelburne Falls gneiss dome: Balk, R., 3.
 Mexico, Taxco mining dist.: Fowler, G. M., 2.
 New Hampshire, Monadnock quad.: Billings, K. S. F. L., 1.
 Oliverian magma ser., Mt. Wash. quad.: Chapman, C. A., 1.
 Winnepesaukee area: Quinn, A. W., 2.
 New York, east Adirondack area: Balk, R., 1.
 Ontario, Kenogamis River area: MacDonald, R. D., 1.
 Pennsylvania, Hanover-York dist.: Stose, A. J., 1.
 Triassic diabase derivatives: Tomlinson, W. H., 3.
 Wissahickon fm.: Postel, A. W., 1.
 Quebec, La Corne molybdenite mine: McLaren, D. C., 4.
 Malartic gold mine: Halet, R. A., 1.
 Wakeham Lake area: Claveau, J., 1.

Schists—Continued.

- South Dakota, Beecher Rock basin: Gwynne, C. S., 2.
 Texas, Llano Co.: Zapp, A. D., 1.
 Wyoming, vermiculite deposits: Hagner, A. F., 1.
 Yukon, Upper McQuesten River area: Bostock, H. S., 1.
 Schooley peneplain, N. J., superposition on: Strahler, A. N., 3.
 Schuler oil and gas field, Ark.: Elliott, G. R., 1; Kaveler, H. H., 1.
 Science in the Univ.: California Univ. Faculty, 1.
 Science of seven seas: Stommel, H., 1.
 Scientific contrib. to research: Dufresne, A. O., 2.
 Scolecodonts.
 Michigan, Dev., Kawkawlin: Eller, E. R., 2.
 New York, Ontario, Sil. Manitoulin dolomite fauna: Eller, E. R., 1.
 Sedimentary maps and oil explor.: Krumbein, W. C., 1.
 Sedimentary rocks. See also Petrology: Sedimentation.
 Abyssal vs. magmatic theory of ore genesis: White, C. H., 1.
 Alabama: Lloyd, S. J., 1.
 Pinckneyville complex: Gault, H. H., 2.
 Southwestern: SE. Geol. Soc., 1.
 Tertiary fms.: Toulmin, L. D., Jr., 1.
 West-central, Cret.: McGlamery, W., 1.
 Alaska, Agattu Island, Aleutians: Sharp, R. P., 1.
 Katalla area: Miller, D. J., 1.
 Lemesurier Is.: Fisher, R. B., 1.
 Matanuska Valley coal field: Tuck, R., 1.
 Moose Creek dist.: Matanuska coal fields: Apell, G. A., 1.
 Yakataga area: Spieker, E. M., 1.
 Alberta, Alexo area: Crombie, G. P., 2.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Cowley area: Hage, C. O., 1.
 Drinnan to Brûlé Lake area: Lang, A. H., 1.
 Entrance area: Lang, A. H., 2.
 Fall Creek area: Henderson, J. F., 2.
 Jumpingpound oil field: Beach, F. K., 1.
 Pedley area: Irish, E. J. W., 1.
 West of 5th meridian: Canada G. S., 1.
 Red Deer, Rosebud area: Allan, J. A., 1; Sanderson, J. O. G., 1.
 Saunders map area: Erdman, O. A., 1.
 Southern, structure drilling for oil: Furnival, G. M., 1.
 Tay River area: Henderson, J. F., 1.
 West of 5th meridian: Canada G. S., 1.
 Wawa Creek area: MacKay, B. R., 2.

Sedimentary rocks—Continued.

- Air trapped in beach sands: Emery, K. O., 5.
- Arizona, N., Uinkaret Plateau: Koons, E. D., 1.
- Oak Creek Canyon: McKee, E. D., 3.
- Paleozoic, cent., NE.: U. S. G. S., 2.
- Salt River Valley: Lund, P. H., 1.
- Superior mining area: Short, M. N., 1.
- Arizona-Utah, East Kaibab monocline: Babenroth, D. L., 1.
- Arkansas, bauxite area: Thoenen, J. R., 1.
- Bellows Falls quad., N.H.-Vt.: Kruger, F. C., 1.
- Bermuda: Livingston, W., 1.
- British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.
- Bralorne mines: Gibson, S., 1.
- Britannia mine No. 8 orebodies: Irvine, W. T., 1.
- Central-southern area: Hedley, M. S., 1.
- China Creek area: Stevenson, J. S., 4.
- Coast: Gunning, H. C., 2.
- Coast Range batholith, Bridge River-Whitesail Lake: Joubin, F. R., 1.
- Cobalt area: Warren, H. V., 4.
- Fort Nelson area: Kindie, E. D., 1.
- Greenwood-Phoenix area: McNaughton, D. A., 1.
- Hasler Creek area: Spivak, J., 1.
- Hazleton, Cassiar dists.: Armstrong, J. E., 3.
- Little Billie mine, Texada Is.: Stevenson, J. S., 5.
- Manson Creek area: Armstrong, J. E., 5, 7.
- Nickel Plate Mtn. area: Dolmage, V., 1.
- Nicola area: Cockfield, W. E., 2.
- Omineca dist.: Armstrong, J. E., 4.
- Pinchi Lake area: Armstrong, J. E., 1.
- Premier mine deposits: Langille, E. G., 1.
- Smithers area: Armstrong, J. E., 2.
- Sullivan mine area: Swanson, C. O., 1.
- Taku River, Cassiar dist.: Kerr, F. A., 1.
- Tuya-Teslin area: Watson, K. D., 1.
- Twin "J" Mine: Stevenson, J. S., 3.
- Tyaughton Lake area: Cairnes, C. E., 1.
- California, Barstow quad., San Bernardino Co.: Miller, W. J., 2.
- Coast, Point Arena-Ft. Ross: Weaver, C. E., 3.
- Diablo Range quicksilver deposits: Yates, R. G., 1.
- Fresno, Merced, Stanislaus Cos.: U. S. G. S., 2.
- Imperial Valley, west side: Tabet, L. A., 1.
- Ione area: Bates, T. F., 1.

Sedimentary rocks—Continued.

- California—Continued.
- Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.
- Knoxville quicksilver dist.: Averitt, P., 1.
- Knoxville ser.: Anderson, F. M., 1.
- Los Angeles area, subsidence, elevation: Grant, U. S. IV, 1.
- Los Angeles Basin area: U. S. G. S., 2.
- McKittrick dist. bituminous deposits: U. S. G. S., 1.
- Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.
- Newhall-Potrero, Aliso Canyon, Del Valle, Oak Canyon oil fields: Hodges, F. C., 1.
- Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
- Petroleum poss.: Gregersen, A. I., 1.
- Playa del Rey oil field: Hodges, F. C., 3.
- Puente, San Jose Hills: U. S. G. S., 1.
- Salinas Valley: U. S. G. S., 1.
- San Diego area: Hertlein, L. G., 1.
- San Juan Bautista quad.: Allen, J. E., 2.
- San Luis Obispo Co.: Smith, C. T., 1.
- Bituminous sands: U. S. G. S., 1.
- Santa Ana Mts., Paleocene, Eocene: U. S. G. S., 2.
- Santa Catalina Is. marine sed.: Clements, T. D., 2.
- Santa Cruz area: U. S. G. S., 1.
- Santa Lucia Range: Taliaferro, N. L., 1.
- Santa Maria oil dist.: U. S. G. S., 1.
- Santa Rosa Hills-Purisima Hills dists.: U. S. G. S., 1.
- Sea floor rocks off coast: Emery, K. O., 4.
- Canada: MacKay, B. R., 3.
- Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
- Watson Lake-Teslin River: Lord, C. S., 1.
- Arctic, eastern: Robinson, J. L., 1.
- Calgary to Golden: Hutt, G. M., 6.
- Canol invs., Mackenzie River area: Hume, G. S., 8.
- Canol project: Laudon, L. R., 1.
- Dominion Atlantic Ry. area: Hutt, G. M., 16.
- Duparquet-Larder Lake-Rouyn area: Ambrose, J. W., 1.
- Flin Flon-Sherridon-Herb Lake area: Stockwell, C. H., 2.
- Fort Nelson-Liard-Beaver Rivers area: Kindie, E. D., 1.
- Gold deposits: Anonymous, 50.
- Lake Consolation area: Mathews, W. H., 1.
- Lower Cret.: McLearn, F. H., 4.

Sedimentary rocks—Continued.

Canada—Continued.

- Lower Liard River area: Hage, C. O., 5.
 Lytton to Vancouver: Hutt, G. M., 12.
 Medicine Hat to Vancouver: Hutt, G. M., 14.
 Port Arthur to Winnipeg: Hutt, G. M., 11.
 Pouce Coupé-Peace River area: Crickmay, C. H., 1.
 Structure and relief: Brouillette, B., 1.
 Stull Lake area: Spector, I. H., 1.
 Trans-Canada Highway, Hearst-Longlac sec.: Evans, J. E. L., 2.
 Western, oil devel.: Hume, G. S., 9.
 Central America, Selva Lacandona, Mex., Guatemala: Mullerried, 4.
 Coal, origin: Hixon, H. W., 1.
 Colorado, Canon City area: Blum, V. J., 1.
 Morrison fm., Colo. Plateau: Stokes, W. L., 1.
 Northwestern: U. S. G. S., 2.
 Rocky Mtn. Nat. Park: Wegemann, C. H., 1.
 Sawatch Range area: Johnson, J. H., 3.
 Vasquez overthrust, Middle Park: Tweto, O., 1.
 White River Plateau: MacQuown, W. C., Jr., 1.
 Columbia Basin, Wash-Idaho: Lupper, R. L., 2.
 Costa Rica: Roberts, R. J., 1.
 El General area: Dóndoli, C., 2.
 Meseta Central: Dóndoli, C., 3.
 Cuba: Palmer, R. H., 1.
 Guisa-Los Negros area: Woodring, W. P., 1.
 Isla de Pinos tungsten deposits: Page, L. R., 1.
 Sierra Maestra area: Park, C. F., Jr., 1.
 Earths, mechanical analysis: Planas, J. I., 1.
 Florida: Cooke, C. W., 3.
 Duval, Nassau Cos.: Cooper, H. H., Jr., 1.
 Petroleum poss.: Gunter, H., 1.
 Southern: Parker, G. G., 2.
 Fossil pigments: Fox, D. L., 2.
 Gamma-ray activity: Russell, W. L., 1.
 Georgia: Peyton, G., 2.
 Prospecting, oil and gas: Peyton, G., 2.
 Southwest: Furcron, A. S., 2; Her-
 rick, S. M., 1; SE. Geol. Surv., 2.
 Tertiary fms.: MacNeil, F. S., 2.
 Grain analyses, sand size minerals: Al-
 ling, H. L., 1.
 Greenland: Shaw, V., 3.
 East, between 74°-75°, and islands:
 Vischer, G. A., 1.

Sedimentary rocks—Continued.

Greenland—Continued.

- Franz Josef Fjord area: Odell, N. E., 1.
 Hawaii, Mauna Kea Mtn.: Stearns, H. T., 1.
 Idaho, Birch Creek area: Anderson, A. L., 1.
 Illinois, Cave in Rock dist.: Currier, L. W., 2.
 Decorah, Galena fms.: Bieber, C. L., 1.
 Hardin Co. fluorspar areas: Currier, L. W., 1.
 Northwestern, zinc-lead deposits: Willman, H. B., 1.
 Indiana, Harrodsburg ls., mineraliza-
 tion: Fix, G. F., 1.
 Pennsylvanian: Franklin, D. W., 1.
 Iowa, ceramic shales and clays: Gwynne, C. S., 1.
 Devonian: Stainbrook, M. A., 1.
 Jurassic fms., sou. U. S.: Imlay, R. W., 8.
 Kansas, Barton Co. buried hills: Wal-
 ters, R. F., 1.
 Cross-section, geol. subsurface, Ford-
 Wallace Cos.: Edson, F. C., 1.
 Eastern, oil and gas fields: Jewett, J. M., 1.
 Finney, Gray Cos.: Latta, B. F., 1.
 Outcropping rocks: Moore, R. C., 4.
 Pennsylvanian Morrowan rocks: Thompson, M. L., 2.
 Thomas County: Frye, J. C., 1-a.
 West central, Pleist.: Frye, J. C., 1.
 Kentucky, Union Co.: Jillson, W. R., 2.
 Labrador, central, iron ore poss.: Retty, J. A., 2.
 Lithification and diagenesis: Krynine, P. D., 4.
 Llanoria geosyncline, Penn.: Barton, J. M., 1.
 Louisiana, Erath gas field: Anonymous, 78.
 Holly field, De Soto Parish: Spofford, H. N., 1.
 Natchitoches area: Maher, J. C., 1.
 1942 wildcat wells: Blanpied, B. W., 4.
 Southern oil fields: Wallace, W. E., Jr., 1.
 Louisiana-Texas, Midway-Wilcox fms.: Murray, G. E., Jr., 1.
 Mojave, Mount Desert Is.: Chadwick, G. H., 1.
 Manitoba, E. of Flin Flon: Bateman, J. D., 5.
 Gurney gold mine area: Hage, C. O., 4.
 Island Lake area: McMurphy, R. C., 1.
 Mikanagan Lake area: Bateman, J. D., 1.
 Sherridon area: Bateman, J. D., 6.

Sedimentary rocks—Continued.

Manitoba—Continued!

Snow Lake area : Ebbutt, F., 1; Harrison, J. M., 3, 4, 5.

Mexico, Amarilla mine, Guerrero :

Acosta del Campo, C., 1.

Antimony deposits : White, D. E., 2.

Colotlipa-Quechultenango min. dist. :

González Reyna, J., 3.

Concepción Penih, Baja Calif. : Antúñez Echegaray, F., 1.

El Estado de Morelos : N. de Parrés, F., 1.

Guadalajara Valley : Díaz, S., 1.

Gulf of Calif. area : Osorio Tafall, B. F., 1.

Lower California : Beal, C. H., 1.

Manganese : Rodríguez Cabo, J., Jr., 1.

Northern : Kellum, L. B., 1.

Nuevo León : Mullerried, 8.

Pacific Coast : González Reyna, J., 1.

Permian area NW. of Las Delicias :

King, R. E., 1, 2.

Sonora tungsten deposits : Wiese, J. H., 1.

Taxco mining dist. : Fowler, G. M., 2.

Valley of the Lerma : Waitz, P., 1.

Valley of Tixtla : Mullerried, 3.

Michigan : Martin, H. M. M., 3.

Ishpeming gold range : Snelgrove, A. K., 3.

Lake Michigamme area : Seaman, W. A., 2.

Marquette, Baraga Cos. : Snelgrove, A. K., 2.

Republic area : Ayres, V. L., 1.

Spruce River-Peshekee River areas : Seaman, W. A., 3.

Sylvania, Bois Blanc fms. : U. S. G. S., 1.

Michigan Basin, U. S., Trenton, Black River lss. : U. S. G. S., 2.

Microolithologies, use : Alling, H. L., 2.

Minnesota, S. : Thiel, G. A., 1.

Mississippi, Camp Shelby area : Brown, G. F., 1.

Geologic map : Mississippi G. Soc., 2.

Monroe Co. : Vestal, F. E., 1.

Missouri : Branson, E. B., 3.

Bourbon High oil field : Cullison, J. S., 2.

Northwestern, recent oil invs. : Greene, F. C., 1.

Southeast : Croneis, C. G., 1.

Montana, Gage dome oil field : Perry, E. S., 2.

General : U. S. G. S., 1.

Hungry Horse Dam, Flathead Co. : Erdmann, C. E., 1.

Jardine-Crevasse Mtn. dist. : Seager, G. F., 1.

Ore bodies, strat. control : Perry, E. S., 3.

Sedimentary rocks—Continued.

Nevada, Comstock Lode area : Calkins, F. C., 1.

Groom dist., Lincoln Co. : Humphrey, E. L., 1.

Ore deposits : York, B., 1.

Quicksilver deposits : Bailey, E. H., 1.

Rye Patch area : Vitaliano, C. J., 1.

New Brunswick, Musquash area : Alcock, F. J., 4.

St. George area : Alcock, F. J., 3.

Newfoundland, fluorspar deposits : Van Alstine, R. E., 1.

New Hampshire, Monadnock : Billings, K. S. F. L., 1.

New Jersey, Cape May Canal area : Richards, H. G., 3.

Copper deposits : Woodward, H. P., 1.

Middlesex Co. : Barksdale, H. C., 1.

Schooley peneplain : Strahler, A. N., 3.

New Mexico, Boston Hill deposits : Entwistle, L. P., 2.

Curry, Roosevelt Cos. : Theis, C. V., 1.

Devonian : Stevenson, F. V., 1.

Estancia Valley area : U. S. G. S., 1.

Iron Mtn. dist. : Jahns, R. H., 1.

Lea Co. : Nye, S. S., 1.

Mesozoic, Upper Paleozoic, NE : Read, C. B., 1.

Red River min. area : Sidwell, R., 1.

Silver City area : Entwistle, L. P., 1.

New York, Adirondack iron rea : Anderson, S. A., 1.

Genesee group : Grossman, W. L., 1.

Hudson Valley area : Ruedemann, R., 3.

Manhattan Borough : Murphy, J. J., 1.

North America, Alaska Highway : Lord, C. S., 2.

Gulf Coast : Richardson, C. R., 1.

Mines : Townsend, H., 1.

Mississippian : Cheney, M. G., 1.

Pennsylvanian : Cheney, M. G., 1.

Tectonic devel. E. edge of Pacific : Stille, H. W., 1.

North Carolina, Townsville area : White, W. A., 3.

North Texas area : Lozo, F. E., Jr., 1.

Northwest Territories : Jolliffe, A. W., 2.

Mackenzie River Valley : Stewart, J. S., 2.

Prosperous Lake area : Jolliffe, A. W., 4.

Yellowknife area : Jolliffe, A. W., 3.

Aerial prosp. : Jolliffe, A. W., 5.

Nova Scotia, Bass River area : Weeks, L. J., 3.

Lake Ainslie area : Douglas, G. V., 7.

Londonderry deposits : Weeks, L. J., 1, 2.

Mabou coal area : Douglas, G. V., 6.

Sedimentary rocks—Continued.

Nova Scotia—Continued.

- Petroleum poss.: MacNeil, D. J., 1.
 Shinimikas area: Bell, W. A., 4.
 Wentworth dist.: Bancroft, M. F., 1.
 Ohio, Blaine Hill, Belmont Co. sec.:
 White, G. W., 4.
 Franklin Co. and Columbus area:
 Harker, D. H., 2.
 Fulton Co.: Harker, D. H., 3.
 Geology of water supply: Ohio Water
 Sup. Bd., 1.
 Summit Co. and Akron: Harker, D.
 H., 5.
 Wood Co.: Harker, D. H., 6.
 Oklahoma, Arbuckle Mts.: Lehman, R.
 P., 1.
 Black Knob Ridge area: U. S. G. S., 1.
 Bromide area: Ham, W. E., 2.
 Devonian: Miser, H. D., 1.
 Northeast: U. S. G. S., 2.
 Sulphur asphalt area: U. S. G. S., 1.
 Ontario, Beatty-Munro area: Satterly,
 J., 1.
 Bigwater Lake area: Berry, L. G., 1.
 Bruce ser., Falconbridge-Dryden Tps.:
 Fairbairn, H. W., 2.
 Central Patricia mine: Hicks, H. B.,
 1.
 Dome mine, porphyry-sediment con-
 tact: Holmes, T. C., 1.
 Flack Lake area: Harding, W. D., 2.
 Fort Hope area: Prest, V. K., 1.
 Gas fields: Brant, A. A., 2.
 Gauthier Tp., Kirkland Lake area:
 Thomson, Jas. E., 1.
 Grimsthorpe-Barrie area: Meen, V.
 B., 1.
 Kaladar, Kennebec Tps.: Harding, W.
 D., 1.
 Kam Kotia mine mineralized zone:
 Ferguson, S. A., 1.
 Kenogamis River area: Macdonald,
 R. D., 1.
 Little Long Lac Hardrock porphyry:
 Reid, J. A., 3.
 North Spirit Lake area: Bateman, J.
 D., 7.
 Northwest: Horwood, H. C., 4.
 Porcupine dist.: Evans, J. E. L., 1.
 Red Lake area: Horwood, H. C., 2, 3.
 Rennie-Leeson area: Bruce, E. L., 1.
 Ross mine, Ramore area: Jones, W.
 A., 1.
 Sudbury-Bruce ser. relations: Fair-
 bairn, H. W., 1.
 Whitefish Bay area: Fraser, N. H.
 C., 1.
 Oregon, Coast: Stephenson, E. L., 1.
 Coos Bay Tert. fms.: Weaver, C. E., 4.
 Geology: Weaver, C. E., 3.
 Hovart Butte, Lane Co.: Iverson, H.
 G., 1.
 Clay pellets, origin: Allen, V. T., 1.
 Northwestern: U. S. G. S., 1.
 Southern coast: Baldwin, E. M., 1.

Sedimentary rocks—Continued.

- Ozark uplift, Ark.-Mo.: Cullison, J. S.,
 1.
 Pennsylvania, Buck Hill area: Myers,
 R. E., 2.
 Central eastern: Hersey, J. B., 1.
 Hanover-York dist.: Stose, A. J., 1.
 High-alumina clays: Foosse, R. M., 3.
 Possible future oil pools: Sherrill,
 R. E., 1.
 Petrofabrics: Ingerson, F. E., 1.
 Petroleum, origin: Nevin, C. M., 1.
 Reservoir descriptions: Plummer, F.
 B., 5.
 Source beds: Willcox, O. W., 1.
 Québec: Dresser, J. A., 1: Dufresne,
 A. O., 1.
 Beattie mine: Davidson, S. C., 1.
 Buteux area, Abitibi Co. and Terr.:
 Freeman, B. C., 1.
 Cadillac-Bourlamaque area: Norman,
 G. W. H., 2.
 Dasserat area structure: Auger, P.
 E., 5.
 Dudswell, Wolfe, Richmond, Comp-
 ton Cos.: Cooke, H. C., 3.
 Highgate Springs sequence: Kay, G.
 M., 6.
 La Corne molybdenite mine: McLaren,
 D. C., 4.
 La Motte area: Norman, G. W. H., 4.
 Louvicourt area: Norman, G. W. H., 6.
 Lower Romaine River area: Retty,
 J. A., 1.
 Malartic gold mine: Halet, R. A., 1.
 Matemec Lake area, Saguenay Co.:
 Greig, E. W., 1.
 Moisie area, Saguenay Co.: Faessler,
 C., 2.
 Montreal area: Clark, T. H., 1.
 Opaoka River area: Freeman, B. C., 2.
 Orford area: Fortier, Y. O., 1.
 Scotstown, Wolfe, Compton, Fronte-
 nac, Cos.: Cooke, H. C., 1.
 Sept-Iles area: Faessler, C. 1.
 Stanstead area, Brome and Stanstead
 Co.: Ambrose, J. W., 2.
 Wakeham Lake area: Claveau, J., 1.
 Radioactivity and petroleum genesis:
 Sheppard, C. W., 1.
 Radioactivity, organic content, sedi-
 mentation: Russell, W. L., 2.
 Rock colors: DeFord, R. K., 1.
 Sand, marine beach, transp. by flota-
 tion: Emery, K. O., 7.
 Saskatchewan, N.: Mawdsley, J. B., 1.
 Sedimentary maps and oil explor.:
 Krumbein, W. C., 1.
 Sedimentary variation: Allen, P., 1.
 Sedimentation, differential, products in
 1 cycle: Krynine, P. D., 1.
 Sediments and the search for oil: Kry-
 nine, P. D., 3.
 Silica in natural waters, true solution:
 Roy, C. J., 2.

Sedimentary rocks—Continued.

- South Dakota : Rothrock, E. P., 1.
 Beecher Rock Basin : Gwynne, C. S., 2.
 Dewey, Corson Cos. : Morgan, R. E., 1.
 Sweet Springs dist., Va.-W. Va. : Ladd, H. S., 1.
 Tennessee, Hales Bar Dam ls. solution : Frink, J. W., 2.
 Northeast : King, P. B., 4.
 Norris area : Hall, G. M., 1.
 Zinc deposits : Crawford, J., 1.
 Texas, Apache Mts., Culbertson Co. well : Maley, V. C., 1.
 Damon Mound ls. : Hurlbut, E. M., Jr., 1.
 East, south : U. S. G. S., 2.
 Hueco Mts., El Paso, Hudspeth Cos. : U. S. G. S., 1.
 Irving area concretions : Loving, G., 1.
 Lower Rio Grande Valley : Wynd, F. L., 2.
 Pennsylvanian : Scott, G., 1.
 Permian, Pease River group : Roth, R. I., 1.
 Rise of water levels in wells : Rose, N. A., 2.
 Sierra Diablo area : U. S. G. S., 1.
 South Guadalupe Mts. : U. S. G. S., 1.
 Tyler Basin : Bailey, T. L., 1.
 West, pre-Perm. axes of deposition : Barton, J. M., 1.
 United States, Anadarko Basin : Gibbon, A., 1.
 Appalachian Basin, Berea sand : U. S. G. S., 1.
 Basin-and-Range prov. : Longwell, C. R., 8.
 Green, White, Adirondack Mts. : Balk, R., 2.
 Helium gas fields : Baden, M. W., 1.
 Michigan Basin, Lower Ord., Camb. : U. S. G. S., 2.
 Rangely field, Rocky Mts. : Thomas, C. R., 1.
 South, Permian Basin : Adams, J. E., 3.
 Southeast : MacNeil, F. S., 3.
 Southern Appalachians, clastic sediments : Moneymaker, B. C., 6.
 Southwest, aquifers : Dott, R. H., 3.
 Correlation : U. S. G. S., 2.
 Triassic, W. Tex.-E. N. Mex. : Sidwell, R., 2.
 Western, fluorspar : Gillson, J. L., 1.
 Utah, Beaver Co. : Hobbs, S. W., 2.
 Iron Peak ores : Crawford, A. L., 2.
 Northeastern : U. S. G. S., 2.
 Southwest, Post-Wasatch fms. : Gregory, H. E., 2.
 Uinta Basin : Walton, P. T., 1.
 Upper Sevier River Valley : Gregory, H. E., 1.
 Zion Canyon : Grater, R. K., 1.

Sedimentary rocks—Continued.

- Vermont, Highgate Springs sequence : Kay, G. M., 6.
 West-central : Cady, W. M., 2.
 Western, N. end Taconic thrust sheet : Kaiser, E. P., 1.
 Virginia, Burkes Garden quad. : Cooper, B. N., 1.
 Coastal Plain : Cederstrom, D. J., 1, 2.
 Glade Mtn. dist. : Miller, R. L., 1.
 Rose Hill oil field : U. S. G. S., 1.
 Shenandoah Nat. Park : Rickard, H. L., 1.
 Waihu fanglomerate, Hawaii : Stearns, H. T., 1.
 Washington, Blewett-Cle Elum' fm. : Lupher, R. L., 1.
 Geology : Weaver, C. E., 3.
 King Co. coal fields : Warren, W. C., 1.
 Metaline Falls area : Huttli, J. B., 1.
 Morton cinnabar dist. : Mackin, J. H., 1.
 Olympic Penin. : Green, S. H., 1.
 Stevens Co. Camb. : Campbell, O. D., 1.
 Stevens-Okanogan Cos., magnetite deposits : Broughton, W. A., 2.
 West Virginia, Kanawha-Jackson-Campbells Creek fields : Headlee, A. J. W., 1.
 Ohio Valley, aquifers : Jeffords, R. M., 1.
 Rocks, minerals : Erwin, J. P., 1.
 Wisconsin, Brûlé River Basin : Bean, E. F., 1.
 Wyoming : La Fleiche, P., 2.
 Lance Creek oil and gas field : U. S. G. S., 3.
 Western, Missn., Penn. : Wanless, H. R., 1.
 Willow Creek coal area : Andrews, D. A., 1.
 Wind River Mts., NW. end : U. S. G. S., 1.
 Wyoming-Colorado, Washakie Basin : U. S. G. S., 1.
 Wyoming-Montana, Elk Basin field : U. S. G. S., 4.
 Yukon, Canol Road, Teslin River-Macmillan Pass : Kindie, E. D., 2.
 Selwyn River area : Bostock, H. S., 2.
 Upper McQuesten River area : Bostock, H. S., 1.
 Whitehorse dist. : Cockfield, W. E., 1.
 Sedimentary variations : Allen, P., 1.
 Sedimentation. See also Conglomerates ; Erosion ; Sedimentary rocks.
 Air trapped in beach sands : Emery, K. O., 5.
 Bacterial oxidation, hydrocarbons in marine sediments : Novelli, G. D., 1.

Sedimentation—Continued.

- Beach cusps, revised classn.: Evans, O. F., 5.
 Canada, clays: Hutt, G. M., 10.
 Carotenoid pigments in ocean floor: Fox, D. L., 3.
 Challenger Expedition, Atlantic deep-sea sediments: Emery, K. O., 3.
 Chesapeake Bay, upper: Gottschalk, L. C., 1.
 Control, reservoir silting: Brown, C. B., 1.
 Density, sediments in reservoirs: Lane, E. W., 1.
 Differential products in 1 cycle: Kry-nine, P. D., 1.
 Earths, mechanical analysis: Planas, J. I., 1.
 Heavy minerals in sediment-transportation studies: Rittenhouse, G., 1.
 Illinois, pool 15, Rock Island: Péwé, T. L., 1.
 Kinetic theory, origin orogenic forces: Fisher, J. E., 1.
 Maine, wave modification of eskers: Lougee, R. J., 10.
 Mexico, Gulf of Calif. area: Osorio Ta-fall, B. F., 1.
 Microorganisms and petroleum hydrocarbons: ZoBell, C. E., 5.
 Mine waste in Galena River bed sedi-ments, Wis., Ill.: Adams, C., 1.
 Nebraska, Pleist. loess: Schultz, C. B., 1.
 New Mexico, Rio Grande Valley sand sources: Rittenhouse, G., 3.
 North America, Gulf Coast recent sedi-ments: Rolshausen, F. W., 1.
 Oklahoma, Canadian River: Lane, E. W., 2.
 Oregon, Hobart Butte clay pellets, ori-gin: Allen, V. T., 1.
 Organic material into petroleum: Zo-Bell, C. E., 3.
 Origin, energy of oscillatory earthquake waves: Fu, C. Y., 1.
 Pacific Ocean, marine bottom samples: Revelle, R. R. D., 1.
 Radium content, ocean-bottom sedi-ments: Piggot, C. S., 1.
 Recent, and search for oil: Krumbein, W. C., 2.
 Research, physical sciences: Miller, A. K., 11.
 Rivers, measure, velocity, suspended sediment by statistical method: Kalinski, A. A., 2.
 Sand, marine beach, transp. by nota-tion: Emery, K. O., 7.
 Sediment, movement, deposition, near debris-barriers: Johnson, J. W., 1.
 Sediment size distribution code: Em-ery, K. O., 6.
 Sedimentary maps and oil explor.: Krumbein, W. C., 1.
 Sedimentary variation: Allen, P., 1.

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- Sediments and the search for oil: Kry-nine, P. D., 3.
 Soils, classn. devels.: Thorp, J., 1.
 Deltas, eolian mantles: Price, W. A., 4.
 South Carolina, Mountain Creek bed-load: Epstein, H. A., 1.
 Piedmont Valleys: Happ, S. C., 3.
 Stream, velocity, load of: Quirke, T. T., 1.
 Streams, drainage basins, erosional de-vel.: Horton, R. E., 1.
 Susceptibility of sediments: Hoylman, H. W., 1.
 Texas, Hidalgo Co., soils: Wynd, F. L., 1.
 Transportation of fine sediments by flowing water: Kalinske, A. A., 1.
 United States, Gulf Coast: Storm, L. W., 1.
 Gulf Coastal Plain, origin, small mounds: Dietz, R. S., 1.
 Lake Erie sediments: Cuthbert, F. L., 1.
 Lower Klamath Lake: Hansen, H. P., 1.
 Pacific Coast area: Hansen, H. P., 2.
 Southern Permian Basin: Adams, J. E., 3.
 Southwest: Brown, C. B., 2.
 Utah, Mt. Timpanogas caves: Bullock, K. C., 1.
 Wave-formed vs. current-formed ripple marks: Evans, O. F., 1.
 Wisconsin, Green Lake bottom sedi-ments: Twenhofel, W. H., 6.
 Kickapoo Valley, floods: Happ, S. C., 1.
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 Wyoming, Rocky Mts., evolution: Knight, S. H., 1.
 Sediments, sedimentation and the search for oil: Krumbein, W. C., 3; Kry-nine, P. D., 3.
 Seeligson gas and oil field, Tex.: Deegan, C. J., 6.
 Seismic cross section, new type: Gaby, P. P., 1.
 Seismic data, review, analysis: Alcock, E. D., 1.
 Seismic exploration: Bazzoni, C. B., 1.
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 Hawaii, volcanic, seismic phenomena, 1944: Wingate, E. G., 2.
 Lake Mead, area, Nev., earthquake magnitudes: Jones, A. E., 1.
 Magnitude determination for deep-focus earthquakes: Gutenberg, B., 9.
 Mexico, Central America: Sánchez, P. C., 1; Swainson, O. W., 1.
 Oceanography and earthquakes: Buen, O. de, 1.
 Ontario, rockburst research, Lake Shore mines: Hodgson, E. A., 2.
 Parícutin, Mex., volcanic phenomena: Covarrubias, L. F., 2, 3; Westland, A. J., 1.
 Period-amplitude analyses of strong-motion records: Neumann, F., 1.
 Polymorphic transitions and geol. phenomena: Bridgman, P. W., 1.
 Progress report, Jesuit Seismol. Assoc.: Macelwane, J. B., 1.
 Radio transmission, earthquake records: Stratton, R. J., 1.
 Seismic data, review, analysis: Alcock, E. D., 1.
 Seismic waves, reflection, refraction: Dana, S. W., 1, 2.
 Shallow earthquakes, amplitudes, magnitudes: Gutenberg, B., 5.
 Seismicity of the earth: Gutenberg, B., 8.
 Seismograms and ground motion: Walter, E. J., 1.
 Seismograph, 3-component portable for measuring vibrations: Leet, L. D., 2.
 United States Coast and Geodetic Survey prog. rept.: Bodle, R. R., 2.
 Earthquakes, 1942-43: Bodle, R. R., 1.
 Variations in crustal layers: Gutenberg, B., 7.

Seismology—Continued.

- Waves, seismic, reflected, refracted: Dana, S. W., 1, 2.
 Well-shot data, interpretation: Dix, C. H., 1.
 Selenite.
 Kansas: Carpenter, A. C., 1.
 Diamond Hill area: Zumwalt, F. M., 1.
 Utah, desert crystals: Kelly, C., 3.
 Selenium.
 Quebec: Dufresne, A. O., 1.
 Serpentine.
 Arizona: Anonymous, 64.
 British Columbia, Greenwood-Phoenix area: McNaughton, D. A., 1.
 Cuba, gravity prosp.: Hammer, S. I., 1.
 Georgia, Columbia Co.: Furcron, A. S., 1.
 Ontario, Porcupine dist.: Evans, J. E. L., 1.
 Quebec, Eastern Tps., chromite: Stockwell, C. H., 1.
 Washington, Blewett-Cle Elum fm.: Lupper, R. L., 1.
 Wyoming, vermiculite deposits: Hagner, A. F., 1.
 Shale.
 Alabama, resources: Anonymous, 25.
 Alaska, Moose Creek dist., Matanuska coal fields: Apell, G. A., 1.
 Alberta, Alexo area: Crombie, G. P., 1.
 Athabaska-Barrhead area: Feniak, M. W., 1.
 Cowley area: Hage, C. O., 1.
 Drinnan to Brûlé Lake area: Lang, A. H., 1.
 Dyson Creek area: Hage, C. O., 2.
 Stimson Creek area: Hume, G. S., 1.
 Tay River area: Henderson, J. F., 1.
 Vermilion area: Nauss, A. W., 1.
 Wainwright field: Hume, G. S., 5.
 Arizona, Grand Canyon, Colo. River: Cueto Rui-Díaz, E., 1.
 Oak Creek Canyon: McKee, E. D., 3.
 Arkansas, Batesville area: Gordon, M., Jr., 1.
 Devonian: Miser, H. D., 1.
 Schuler field: Kaveler, H. H., 1.
 British Columbia, Dunlevy-Portage Mtn. area: Beach, H. H., 1.
 Fort Nelson area: Kindle, E. D., 1.
 Lone Mtn. area: McLearn, F. H., 1.
 Mt. Hulcross-Commotion Creek area: Williams, M. Y., 2.
 Peace River Foothills: McLearn, F. H., 2.
 Turner Valley area fields: Hume, G. S., 6.
 California, coast, Point Arena-Fort Ross: Weaver, C. E., 3.
 Elk Hills oil field: Bunch, E. S., 1.
 Mount Diablo, radiolarian: Clark, B. L., 3.
 San Luis Obispo Co.: Smith, C. T., 1.
 South Mtn. field: Bailey, W. C., 1.

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- Canada, Canol invs., Mackenzie River area: Hume, G. S., 8.
 Colorado, Morrison fm., Colo. Plateau area: Stokes, W. L., 1.
 Differential thermal analysis: Grim, R. E., 2.
 Gulf Coast, La.-Tex., heaving shale: Wade, G., 1.
 Illinois: Workman, L. E., 1.
 Cave in Rock dist.: Currier, L. W., 2.
 Centralia-Salem, Dev.: Caylor, G. W., 1.
 Clay-shale mortar mix: Hursh, R. K., 1.
 Devonian fms.: Cooper, G. A., 2.
 Hardin Co. fluorspar areas: Currier, L. W., 1.
 Sandoval pool area: Hoover, W. F., 1.
 Southern: Weller, J. M., 1.
 Illinois and surrounding States, Devonian: Weller, J. M., 2.
 Indiana, Dev.: Sutton, A. H., 1.
 Iowa: Gwynne, C. S., 1.
 Devonian: Stainbrook, M. A., 1.
 Independence sh.: Stainbrook, M. A., 2.
 Kansas, McLouth gas and oil field: Lee, W., 1.
 Marmaton Penn. group: Jewett, J. M., 2.
 Kentucky, W., Dev.: Freeman, L. B., 1.
 Louisiana, Camp Polk, North Camp Polk areas: Maher, J. C., 3.
 Southern oil fields: Wallace, W. E., Jr., 1.
 Maine, Kennebec Valley esker: Trefethen, J. M., 2.
 Marine ecology as related to paleontology: Ladd, H. S., 3.
 Mexico, Perm. area NW. of Las Delicias: King, R. E., 2.
 Michigan, SW., Traverse group, Dundee fm.: U. S. G. S., 2.
 Mississippi, Camp Shelby area: Brown, G. F., 1.
 Monroe Co.: Vestal, F. E., 1.
 Missouri, NE. Dev.: Branson, E. B., 2.
 Montana, Gage dome oil field: Perry, E. S., 2.
 Little Rocky Mts. plains: U. S. G. S., 1.
 North Big Belt Range: Lyons, J. B., 1.
 Sweetgrass arch marine Juras.: Cobban, W. A., 2.
 New Mexico, Boston Hill deposits: Entwistle, L. P., 2.
 New York, Genesee group: Grossman, W. L., 1.
 Hudson Valley area: Ruedemann, R., 3.
 Microlithologies sed. rocks, use: Alling, H. L., 2.
 Salamanca re-entrant area: MacClintock, P., 1.

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- North America, radioactivity: Beers, R. F., 2.
 North Texas area: Lozo, F. E., Jr., 1.
 Northwest Territories, Mackenzie River Valley: Stewart, J. S., 1.
 Nova Scotia, North Grant area: Douglas, G. V., 1.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Wentworth dist.: Bancroft, M. F., 1.
 Ohio: Stout, W. E., 8.
 Barberton ls. mine: Stauffer, C. R., 1.
 Berea sand: U. S. G. S., 1.
 Blaine Hill, Belmont Co. sec.: White, G. W., 4.
 Franklin Co. and Columbus area: Harker, D. H., 2.
 Fulton Co.: Harker, D. H., 3.
 Oklahoma, Apache field: Scott, V. C., 1.
 Barite: Ham, W. E., 1.
 Black Knob Ridge area: U. S. G. S., 1.
 Devonian: Miser, H. D., 1.
 West Edmond field: McGee, D. A., 1.
 Oregon, Coos Bay Tert. fms.: Weaver, C. E., 4.
 Ozark uplift, Ark.-Mo.: Cullison, J. S., 1.
 Pennsylvania, Buck Hill area: Myers, R. E., 2.
 Central, Ord.: Kay, G. M., 2.
 Central-eastern: Hersey, J. B., 1.
 Conemaugh Gorge Missn.: Fettke, C. R., 2.
 Everett syncline area: Foose, R. M., 1.
 Huntingdon area: Willard, B., 2.
 Point Pleasant area: McLaughlin, D. B., 1.
 Quebec, Rouyn-Malartic-Destor area: Norman, G. W. H., 3.
 Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
 South Dakota, Dewey, Corson Cos.: Morgan, R. E., 1.
 Tennessee, W.-cent.: Born, K. E., 2.
 Texas, Anahuac Oligocene fms.: Ellis, A. C., 1.
 Baylor Co.: Evans, G. L., 4.
 Big Spring area: Livingston, P. P., 1.
 Erath Co.: Nickell, C. O., 3.
 Gonzales Co.: Chelf, C. R., 2.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Lee Co.: Harris, G. D., 1.
 Permian Pease River group: Roth, R. I., 1.
 United States, Cotton Valley beds, N. Gulf Coastal Plain: Swain, F. M., 1.
 Rocks: Beers, R. F., 1.
 Stockton, Lockatong fms. type secs.: McLaughlin, D. B., 2.
 Vermont, W., N. end Taconic thrust sheet: Kaiser, E. P., 1.

Shale—Continued.

- Virginia, Bland, Giles Cos.: Ladd, H. S., 2.
 Lick Mtn. dist.: Stead, F. W., 1.
 Rose Hill oil field: U. S. G. S., 1.
 Washington, Blewett-Cle Elum fm.: Lupper, R. L., 1.
 Morton cinnabar dist.: Mackin, J. H., 1.
 West Virginia: Martens, J. H. C., 1.
 Wyoming, Willow Creek coal area: Andrews, D. A., 1.
 Willwood, Tatman fms.: Van Houten, F. B., 1.
 Yukon, Whitehorse dist.: Cockfield, W. E., 1.
 Sheep Springs oil field, Calif.: Gregersen, A. I., 3.
 Shore lines. See also Beaches; Changes of level; Glacial lakes; Terraces.
 Beach cusps, fm.: Evans, O. F., 3, 4.
 Revised classn.: Evans, O. F., 5.
 Beach markings made by sand hoppers, Calif.: Emery, K. O., 1.
 British Columbia, Tuya-Teslin area: Watson, K. D., 1.
 California, Long Beach ground subsidence: Anonymous, 100.
 Los Angeles area, subsidence, elevation: Grant, U. S. IV, 1.
 San Diego marine Pliocene: Hertlein, L. G., 1.
 Sierra Nevada, Mono Lake area: Putnam, W. C., 1.
 Canada: MacKay, B. R., 3.
 Cuba: Palmer, R. H., 1.
 Pliocene, Pleist. terraces: Corral y Alemán, J. I. del, 1.
 Florida, Daytona Beach: Fineren, W. W., 1.
 General: Cooke, C. W., 3.
 Southern: Parker, G. G., 2.
 Pleistocene effect: Parker, G. G., 5.
 Massachusetts, Boston coast stability: Marmer, H. A., 1.
 Mexico, Atlantic Coast: Muñoz Lumbier, M., 1.
 Ohio, Lake Erie shore: White, G. W., 2.
 Oregon, S. coast: Baldwin, E. M., 1.
 Pennsylvania: Graham, J. B., 1.
 Mineral resources areas: Ashley, G. H., 1.
 Terrace correlation: Johnson, D. W., 2.
 United States, Gulf Coast: Storm, L. W., 1.
 Utah, Escalante Bay of Lake Bonneville: Dennis, P. E., 1.
 Siderite.
 Nova Scotia, Bridgeville area: Messervy, J. P., 2.
 Pennsylvania fire clays, minerals in: Leatham, E., 1.
 New Brighton area: Anonymous, 65.
 Texas, Irving area concretions: Loving, G., 1.
 West Virginia: Martens, J. H. C., 1.

Significant trends in geology: Bevan, A. C., 3.

Silica. See also Quartz; Sand.

- Canada, ceramics, industrial minerals: Worcester, W. G., 1.
 Crystalloid vs. colloid, in natural waters: Roy, C. J., 2.
 Hawaii, Kilauea Volcano solfataric rock alteration: Macdonald, G. A., 4.
 Hydrothermal solubility: Kennedy, G. C., 1.
 In natural waters, true solution: Roy, C. J., 2.
 Ontario, Central Patricia mine: Hicks, H. B., 1.
 Pennsylvania, Trias. diabase derivatives: Tomlinson, W. H., 3.
 Solubility of: Hitchen, C. S., 1.
 Solubility, hydrothermal of: Kennedy, G. C., 1.

Silica gel and Warsaw fm. geodes: Robertson, P., 1.

Silicon carbide, crystallography: Thibault, N. W., 1.

Type VI, crystal structure: Ramsdell, L. S., 2.

Sillimanite.

- Georgia: Furcron, A. S., 4.
 Group of minerals: Jeffery, J. A., 1.
 New Hampshire: Anonymous, 31.
 Monadnock quad.: Billings, K. S. F. L., 1.
 South Carolina, Piedmont deposits: Smith, L. L., 1.
 United States, SE.: Hudson, W. C., 1.
 Sills. See also intrusions.

Alaska, Groundhog Basin: Gault, H. R., 4.

Arizona, Superior mining area: Short, M. N., 1.

British Columbia, Ainsworth areas: Rice, H. M. A., 1.

Nickel Plate Mtn. area: Dolmage, V., 1.

Sullivan mine area: Swanson, C. O., 1.

Twin "J" Mine: Stevenson, J. S., 3.

California, Santa Cruz area: U. S. G. S., 1.

Mexico, Taxco mining dist.: Fowler, G. M., 2.

Montana: U. S. G. S., 1.

Big Belt Range: Lyons, J. B., 1.

New Mexico, Iron Mtn. dist.: Jahns, R. H., 1.

North America, mines: Townsend, H., 1.

Ontario, Dogpatch-Kakagi Lakes area: Thomson, R., 1.

Oregon, Ashland area, magmatic differentiation: Merriam, R. H., 1.

Quebec, Bourlamaque Tp.: Norman, G. W. H., 1.

Eastern Tps., chromite: Stockwell, C. H., 1.

Sills—Continued.

- Utah, House Range Mts.: Crawford
A. L., 1.
Washington, Blewett-Cle Elum fm.:
Broughton, W. A., 1.

Silt.

- California, South Mtn. field: Bailey,
W. C., 1.
Canada, Pouce Coupé-Peace River area:
Crickmay, C. H., 1.
Illinois: Workman, L. E., 1.
Louisiana, S. oil fields: Wallace, W. E.,
Jr., 1.

Siltstone.

- British Columbia, Dunlevy-Portage Mtn.
area: Beach, H. H., 1.
Peace River Foothills: McLearn, F.
H., 2.
Kansas, McLouth gas and oil field: Lee,
W., 1.
Mississippi, Camp Shelby area: Brown,
G. F., 1.
Montana, Sweetgrass arch marine Ju-
ras.: Cobban, W. A., 2.
Nova Scotia, St. Rose-Chimney Corner
coal field: Bell, W. A., 1.
Washington, Morton cinnabar dist.:
Mackin, J. H., 1.

Silurian. See also Paleontology, Silurian.

- For Lower Silurian see Ordovician.
Alabama-Mississippi Basin: Carroll, D.
L., 1.
Arkansas, Batesville dist.: U. S. G. S.,
1.
Bellows Falls quad., N. H.-Vt.: Kruger,
F. C., 1.
Canada, Alaska Highway, Ft. Nelson-
Watson Lake: Williams, M. Y., 1.
Arctic, E.: Robinson, J. L., 1.
Canol invs., Mackenzie River area:
Hume, G. S., 8.
Canol project: Laudon, L. R., 1.
Lower Liard River area: Hage, C. O.,
5.
Manitoba dist.: Hutt, G. M., 15.
Oil and gas fields: Hume, G. S., 2.
Structure and relief: Brouillette, B.,
1.
Western, oil devel.: Hume, G. S., 9.
Geologic calendar, periods, time, lengths:
Elias, M. K., 5.
Illinois: Workman, L. E., 1.
Chicago area dolomites: Willman, H.
B., 1.
Northeastern: Bays, C. A., 5.
Indiana, Clifty Falls State Park: Free-
man, O. W., 2.
Iowa: Gwynne, C. S., 1.
Kansas, rock fms.: Moore, R. C., 1.
Kentucky: McFarlan, A. C., 2.
Corniferous fm.: Irvine, Eastill Co.:
McFarlan, A. C., 3.
Maine, Mount Desert Is.: Chadwick, G.
H., 1.
Manitoba, Winnipeg area: Hutt, G. M.,
2.

Silurian—Continued.

- Michigan, Bay City brine: Case, L. C., 1.
Marquette iron range: Seaman, W.
A., 1.
Petroleum, gas devel., 1943: Wasson,
T., 1.
Rapid River well: Bagg, R. M., 2.
South-central: U. S. G. S., 1.
Michigan Basin, Salina, Bass Is. rocks:
U. S. G. S., 1.
Missouri: Branson, E. B., 3.
Northwestern, recent oil invs.: Greene,
F. C., 1.
New Brunswick, Musquash area: Alcock,
F. J., 4.
St. George area: Alcock, F. J., 3.
Sussex area: Alcock, F. J., 1.
New Hampshire, Monadnock quad.: Bil-
lings, K. S. F. L., 1.
Mt. Washington area: Billings, K. S.
F. L., 2.
Paleozoic magma ser.: Billings, M.
P., 4.
New Jersey copper deposits: Woodward,
H. P., 1.
New Mexico, Boston Hill deposits: Ent-
wistle, L. P., 2.
Silver City area: Entwistle, L. P., 1.
New York, Catskill quad.: Ruedemann,
R., 5, 6.
Coxsackie quad.: Goldring, W., 3.
Nested folds, Kalk Berg Range: Chad-
wick, G. H., 3.
North America, Foraminifera-formed
lss.: Johnson, J. H., 9.
Geosynclines in continental devel.:
Kay, G. M., 1.
North Dakota, Emerado quad.: Laird,
W. M., 1.
Northwest Territories, Mackenzie River
Valley: Stewart, J. S., 1, 2.
Oil and gas poss.: Stewart, J. S., 1.
Nova Scotia, Bridgeville area: Messer-
vey, J. P., 2.
Ohio: Stour, W. E., 8.
Barberton ls. mine: Stauffer, C. R., 1.
Franklin Co. and Columbus area:
Harker, D. H., 2.
Geology of water: Stout, W. E., 1.
Gypsum: Lintner, E. J., 1.
Rock fms.: Stout, W. E., 4.
Summit Co. and Akron: Harker, D.
H., 5.
Wood Co.: Harker, D. H., 6.
Oklahoma, Arbuckle Mts.: Ham, W. E.,
3; Lehman, R. P., 1.
Black Knob Ridge area: U. S. G. S., 1.
Bromide area: Ham, W. E., 2.
Dougherty asphalt area: U. S. G. S., 1.
Ground water: Dott, R. H., 4.
Sulphur asphalt area: U. S. G. S., 1.
West Edmond oil field: Atkinson, W.
H., 1.
Ontario, Owen Sound area: Caley, J. F.,
2.

Silurian—Continued.

- Pennsylvania, central-eastern : Hersey, J. B., 1.
 Folded Appalachians, stream devel. : Strahler, A. N., 5.
 Huntingdon area : Willard, B., 2.
 Mineral res., areas : Ashley, G. H., 1.
 Quebec : Dresser, J. A., 1.
 Moulton Hill deposit : Hawley, J. E., 1.
 Stanstead area, Brome and Stanstead Cos. : Ambrose, J. W., 2.
 Sandstones, Ohio : Stout, W. E., 7.
 Sweet Springs dist., Va.-W. Va. : Ladd, H. S., 1.
 Tennessee, Norris area : Hall, G. M., 1.
 Texas, Moore Co. : Fosshage, E. W., 1.
 Permian Basin oil fields : Osborne, P. F., 1.
 Sierra Diablo area : U. S. G. S., 1.
 West, pre-Perm. axes of deposition : Barton, J. M., 1.
 United States, Anadarko Basin : Gibbon, A., 1.
 Basin-and-Range prov. : Longwell, C. R., 8.
 Southeast, manganese, cobalt-bearing : Pierce, W. G., 2.
 Tennessee, Cumberland Plateau fields : Born, K. E., 4.
 Virginia, Bland, Giles Cos. : Ladd, H. S., 2.
 Burkes Garden quad. : Cooper, B. N., 1.
 Dolomites, lss., New-Roanoke Rivers area : Cooper, B. N., 3.
 Rose Hill oil field : U. S. G. S., 1.
 Shenandoah Nat. Park : Rickard, H. L., 1.
 West Virginia, deep wells : Tucker, R. C., 1.
 Rocks, minerals : Erwin, J. P., 1.
 Wyoming : La Fleiche, P., 2.

Silver.

- Alaska, Groundhog Basin : Gault, H. R., 4.
 1941-42 : Smith, P. S., 1.
 Arizona, Superior mining area : Short, M. N., 1.
 British Columbia, Ainsworth area : Rice, H. M. A., 1.
 Alaska Highway area min. poss. : Thomas, L. O., 1.
 Central-southern area : Hedley, M. S., 1.
 China Creek area : Stevenson, J. S., 4.
 Greenwood-Phoenix area : McNaughton, D. A., 1.
 Hazelton Cassiar dist. : Armstrong, J. E., 3.
 Island Mtn. mine : Benedict, P. C., 1.
 Manson Creek area : Armstrong, J. E., 5, 7.
 Mercury-bearing : Nuffield, E. W., 2.
 Nicola area : Cockfield, W. E., 2.
 Omineca dist., poss. : Armstrong, J. E., 4.

Silver—Continued.

- British Columbia—Continued.
 Premier mine deposits : Langille, E. G., 1.
 Smithers area : Armstrong, J. E., 2.
 California, Riverside Co. : Tucker, W. B., 2.
 Canada, W., sphalerites : Warren, H. V., 5.
 Colorado, Maxwell reef area, Boulder Co. : MacCormack, R. J., 1.
 Mineral res. : Pearl, R. M., 2.
 Identification in polished sections : Yagoda, H., 1.
 Mexico, El Oro y Tlalpujahua mining camp : Bracho V., F., 1.
 Pachuca-Real del Monte dist. : Thornburg, C. L., 1.
 Taxco mining dist. : Fowler, G. M., 2.
 Michigan, Keweenaw Penin. nuggets : Luoma, H. L., 2.
 Montana, ore bodies, strat. control : Perry, E. S., 3.
 Nevada, Comstock Lode area : Calkins, F. C., 1.
 Goldfield epithermal deposits : Wilson, H. D. B., 1.
 Groom dist., Lincoln Co. : Humphrey, F. L., 1.
 Mineralization : Bichan, W. J., 3.
 Mining dists. : Ferguson, H. G., 1.
 Ore deposits : York, B., 1.
 New Mexico, Boston Hill deposits : Entwistle, L. P., 2.
 Silver City area : Entwistle, L. P., 1.
 North America, Alaska Highway poss. : Lord, C. S., 2.
 Tetrahedrite ores : Michell, W. D., 2.
 Ontario : Rickard, T. A., 2.
 Northwest, prosp. poss. : Horwood, H. C., 4.
 Ross mine, Ramore area : Jones, W. A., 1.
 Quebec : Dufresne, A. O., 1.
 Calumet Island : Osborne, F. F., 1.
 Moulton Hill deposit : Hawley, J. E., 1 ; Rowe, R. C., 1.
 Saskatchewan, N. : Anonymous, 105.
 South Dakota, min. res. : Rothrock, E. P., 1.
 Texas, Burnet Co. poss. : Barnes, V. E., 1.
 Sierra Diablo area : U. S. G. S., 1.
 United States, min. reserves : Joralemon, I. B., 1.
 Yukon, Upper McQuesten River area : Bostock, H. S., 1.
 Whitehorse dist. : Cockfield, W. E., 1.
 Sink holes. See also Subsidence.
 Arizona, Kaibab, Coconino plateaus : Strahler, A. N., 4, 6.
 Canada, Dominion Atlantic Ry. area : Hutt, G. M., 16.
 Florida, Duval, Nassau Cos. : Cooper, H. H., Jr., 1.
 Southern : Parker, G. G., 2.

Sink holes—Continued.

- Illinois, Dev. fms.: Cooper, G. A., 2.
 Indiana, S. karst area: Malott, C. A., 1.
 Iowa, Dev.: Stainbrook, M. A., 1.
 Kentucky, Roaring Spring. Jillson, W. R., 7.
 Missouri, Silver Hollow, Newbauer, Coleman iron deposits: Kreamalmeyer, K. L., 1.
 New Mexico, Zuni Dam: Eckel, E. B., 1.
 Ohio, Franklin Co. and Columbus area: Harker, D. H., 2.
 Tennessee, Douglas Dam area: Laurence, R. A., 1.
 Texas, Big Spring area: Livingston, P. P., 1.
 High Plains, Quat.: Evans, G. L., 6.
 Virginia, Burkes Garden quad.: Cooper, B. N., 1.
 Waynesboro area: McGill, W. M., 1.
- Slate.**
 California, Cooperopolis mine: Lisle, T. O., 5.
 Canada, Dominion Atlantic Ry. area: Hutt, G. M., 16.
 Maine, Kennebec Valley esker: Trefethen, J. M., 2.
 Mexico, El Oro y Tlalpujahua mining camp: Bracho V., F., 1.
 Taxco mining dist.: Fowler, G. M., 2.
 Micaceous minerals in: Bates, T. F., 2.
 Michigan, Menominee iron range: Lamey, C. A., 1.
 New Jersey, Martinsburg slate: Broughton, J. G., 2.
 North Carolina, Fontana Dam site: Moneymaker, B. C., 1.
 Nova Scotia, Upper Musquodoboit area: Messervey, J. P., 1.
 Ontario, Dome mine, porphyry-sediment contact: Holmes, T. C., 1.
 Porcupine dist.: Evans, J. E. L., 1.
 Pennsylvania, Hanover-York dist.: Stose, A. J., 1.
 Micaceous minerals in: Bates, T. F., 2.
 Resources: Ashley, G. H., 1.
 Quebec, Moulton Hill deposit: Hawley, J. E., 1.
 Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
 Stanstead area, Brome and Stanstead Cos.: Ambrose, J. W., 2.
- South Dakota, Beecher Rock Basin:**
 Gwynne, C. S., 2.
 Vermont, W., N. end Taconic thrust sheet: Kaiser, E. P., 1.
 Washington, Metalline dist. drill-hole deviation: Sampson, E., 1.
 Slick-Wilcox oil field, Tex.: Spice, W. H., Jr., 1.
 Smoky quartz, N. H.: Vorrow, H. J., 1.
 Soapstone.
 Canada, Port Arthur to Winnipeg: Hutt, G. M., 11.
 Quebec: Quebec Bur. Mines, 1.
- Sodium sulphate, Diamond Valley, Nev.: Blanchard, R., 2.
 Soil, most valuable min. res.: Twenhofel, W. H., 1.
 Soil resources, Tex.: Carter, W. T., 1.
 Soil-air ions over Ft. Collins, anticline, Colo.: Tripp, R. M., 3.
 Soils, deltas, eolian mantles: Price, W. A., 4.
 Fauquier Co., Va.: Petro, J. H., 1.
 Origin, Central America: Pendleton, R. L., 1.
 Erosion, preservation: Twenhofel, W. H., 1.
 Solid hydrocarbon survey, Fort Collins anticline, Colo.: Tripp, R. M., 1.
 Solution channel, deep, Kentucky Dam, W. Ky.: Moneymaker, B. C., 3.
 Soso gas field, Miss.: Anonymous, 88.
- South Carolina.**
 Mountain Creek bed-load transp.: Einstein, H. A., 1.
 Resources, general: Anonymous, 20.
- Economic geology.**
 Mineral resources: Taber, S., 1.
 Resources, general: Anonymous, 20.
 Sillimanite deposits: Smith, L. L., 1.
- Historical geology.**
 Metamorphic rocks, correl., Carolina Piedmont: Kesler, T. L., 1.
- Mineralogy.**
 Mineral resources: Taber, S., 1.
 Resources, general: Anonymous, 20.
- Paleontology.**
 Pleistocene forests, late: Buell, M. F., 1.
 Pollen analysis of buried soils: Cain, S. A., 1.
- Petrology.**
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- Mineral shape factors in quantitative microscopic analysis: Foster, W. R., 1.
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- Nevada, Goldfield epithermal deposits: Wilson, H. D. B., 1.
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- Plastic relief models: Gills, W. H., 1.
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- Radioactivity and drilling: Sawdon, W. A., 1.
- Radioactivity logs, scope and use: Barcklow, J. C., 1.
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- Reflection seismograph prosp., Gulf Coast, U. S.: Rosaire, E. E., 1.
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 Diamond drilling, Mascot zinc deposits: Oder, C. R. L., 2.
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 Gold, Coker Creek: Anonymous, 81.
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 Shady, dolomite, Bumpass Cove: Rodgers, J., 1.
 Mascot-Jefferson City zinc dist.: Oder, C. R. L., 1.
 Ore bodies, Jefferson City area, struc-tural control: Brokaw, A. L., 1.
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Greene County: Snyder, F. G., 1;

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Mascot, Jefferson dists.: Oder, C. R.

L., 2; Ziemke, P. C., 1.

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Cumberland Plateau gas and oil fields:

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Manganese, cobalt-bearing deposits:

Pierce, W. G., 2.

Mascot-Jefferson City zinc dist.: Oder,

C. R. L., 1.

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Possibilities, oil and gas: Born, K. E.,

3.

Sink-hole deposits, volcanic ash, Ord.:

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Zinc deposits, E.: Crawford, J., 1;

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Manganese deposits, NE.: King, P. B.,

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Cobalt-bearing: Pierce, W. G., 2.

Shady dolomite, Bumpass Cove:

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Ore bodies, Jefferson City area, struc.

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Resources, general: Anonymous, 56.

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F., 1.

Eastern Tenn.: Crawford, J., 1;

Oder, C. R. L., 3.

Greene Co.: Snyder, F. G., 1; Stock-

dale, P. B., 2.

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Sink-hole deposits, volcanic ash, Ord.:

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Bentonites, Ord.: Fox, F. P., 2.

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Devonian, W.-cent. Tenn.: Born, K. E.,

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Manganese deposits, cobalt-bearing:

Pierce, W. G., 2.

Shady dolomite, Bumpass Cove:

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Mascot-Jefferson City zinc dist.: Oder,

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Zinc deposits, Greene Co.: Snyder,

F. G., 1.

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Breccia, Missn. ls.: Frink, J. W., 1.

Caves, fm., Sewanee area: Templeton,

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Cherokee, Douglas Dam sites, explor.:

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Ross, R. M., 1.

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Igneous intrusions, Norris area: Hall,

G. M., 1.

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Northeastern Tenn.: King, P. B., 4.

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Sink-hole deposits, volcanic ash, Ord.:

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Sweetwater barite dist. structure:

Dunlap, J. C., 1.

Tennessee River, geol. profiles: Fox,

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Underthrusting, Chamberlain syncline:

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Zinc, Camb., Ord., E. Tenn.: Kent,

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Eastern Tenn.: Crawford, J., 1.

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Northeastern Tenn.: King, P. B., 4.

Tennessee River, geol. profiles: Fox,

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Alaska, Moose Creek dist., Matanuska

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Arizona, Grand Canyon, Colorado River:

Cueto Rui-Diaz, E., 1.

North Unkaret Plateau: Koons, E.

D., 1.

California, Jamesburg quad., Monterey

Co.: Fiedler, W. M., 1.

Los Angeles area, subsidence, eleva-

tion: Grant, U. S. IV, 1.

San Diego marine Pliocene: Hert-

lein, L. G., 1.

Santa Cruz area: U. S. G. S., 1.

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Santa Monica Mts.: Cotton, C. A., 1.
Sierra Nevada, Mono Lake area:
Putnam, W. C., 1.

Canada, Alaska Highway, Ft. Nelson-
Watson Lake: Williams, M. Y., 1.
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M., 14.

Colorado, Rocky Mtn. Nat. Park:
Jones, W. D., 1.

Cuba: Palmer, R. H., 1.

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del, 1.

Florida, S.: Parker, G. G., 2.

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Kansas, Neosho River Valley near Par-
sons: Williams, C. C., 1.

West-central, Pleist.: Frye, J. C., 1.

Kentucky: McFarlan, A. C., 2.

Louisiana, Tex., Midway-Wilcox fms.:
Murray, G. E., Jr., 1.

Mexico, quicksilver-antimony deposits,
Huitzuco, Guerrero: McAllister,
J. F., 1.

Mississippi, Camp Shelby area: Brown,
G. F., 1.

Coastal area: Brown, G. F., 3.

Monroe Co.: Vestal, F. E., 1.

Nebraska, Pleist. loess: Schultz, C. B.,
1.

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New England, upland: Adams, G. F., 1.

New York, Catskill quad.: Cook, J. H.,
2; Ruedemann, R., 5.

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Goldring, W., 3.

Salamanca re-entrant area: Mac-
Clintock, P., 1.

North Carolina, Cape Fear Penin.:
Wells, B. W., 1.

North Dakota, Emerado quad.: Laird,
W. M., 1.

Ohio, structural features: Ver Steeg, K.,
1.

Oregon coast: Baldwin, E. M., 1; Steph-
enson, E. L., 1.

Coos Bay quad.: Allen, J. E., 1.

Pennsylvania, Hanover-York dist.:
Stose, A. J., 1.

Quebec, Lake Jacques Cartier area:
Faessler, C., 3.

Lower Romaine River area: Retty,
J. A., 1.

Shawinigan area: Faessler, C., 4.

South Dakota, Missouri Valley: Roth-
rock, E. P., 2.

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Bell Co.: Nickell, C. O., 1.

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Rivers: Weeks, A. W., 1.

Collingsworth Co.: Baldwin, B. F., 1.

Colorado River: Mathis, R. W., 1.

Falls Co.: Hatch, J., 1.

Henderson Co.: Evans, G. L., 3.

Polk, San Jacinto Cos.: Shafer, G.
H., 1.

Travis Co.: Nickell, C. O., 4.

United States, Citronelle Pleistocene
fm.: Fisk, H. N., 2.

Northwest, Pleist. stage: Lupher, R.
L., 3.

Utah, Escalante Bay of Lake Bonneville:
Dennis, P. E., 1.

Traverse Mts. manganese deposits:
Crawford, A. L., 3.

Wasatch Mts., N.-cent.: Eardley, A.
J., 1.

Washington, Chelan Lake glaciation:
Freeman, O. W., 1.

Wisconsin, Brûlé River Basin: Bean, E.
F., 1.

Terrain appreciation: Fryxell, F. M., 4;
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tions: King, P. B., 5.

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Alabama fms.: Toulmin, L. D., Jr., 1.

Limestone solution: MacNeil, F. S., 4.

Midway-Wilcox contact area: Toul-
min, L. D., Jr., 2.

Southwestern: SE. Geol. Soc., 1.

Tuscaloosa, Cottondale quads.: U. S.
G. S., 1.

Alabama-Mississippi Basin: Carroll, D.
L., 1.

Alaska, Agattu Island, Aleutians: Sharp,
R. P., 1.

Aleutian Islands: Freiday, D., 1.

Independence mine area: Stoll, W.
C., 1.

Katalla area: Miller, D. J., 1.

Matanuska Valley coal field: Payne,
T. G., 1; Tuck, R., 1.

Moose Creek dist., Matanuska coal
fields: Apell, G. A., 1.

Wide Bay anticline area: Kellum, L.
B., 4.

Yakutaga area: Spieker, E. M., 1.

Alberta, Alexo area: Crombie, G. P., 2.

Athabaska-Barrhead area: Feniak,
M. W., 1.

Central area, foothills: MacKay,
B. R., 1.

Cowley area: Hage, C. O., 1.

Drinnan to Brûlé Lake area: Lang,
A. H., 1.

Entrance area: Lang, A. H., 2.

Pedley area: Irish, E. J. W., 1.

West of 5th meridian: Canada.
G. S., 1.

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- Red Deer, Rosebud area: Allan, J. A., 1, 2; Sanderson, J. O. G., 1.
 Saunders map area: Erdman, O. A., 1.
 Stimson Creek area: Hume, G. S., 1.
 Tay River W. of 5th meridian: Canada G. S., 1.
 Vermilion area: Nauss, A. W., 1.
 Wawa Creek area: MacKay, B. R., 2.
 Appalachian area, Ala.-Ga.: Cloud, P. E., Jr., 3.
 Arizona, Kaibab, Coconino plateaus: Strahler, A. N., 4.
 San Manuel copper deposit: Schwartz, G. M., 3.
 Superior mining area: Short, M. N., 1.
 Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.
 Arkansas, bauxite area: Malamphy, M. C., 1; Thoenen, J. R., 1.
 Schuler field: Kaveler, H. H., 1.
 Big Horn Basin oil and gas fields, Mont.-Wyo.: U. S. G. S., 1.
 British Columbia, Fort Nelson-Watson Lake area: Williams, M. Y., 3.
 Greenwood-Phoenix area: McNaughton, D. A., 1.
 Hazelton, Cassiar dist.: Armstrong, J. E., 3.
 Manson Creek area: Armstrong, J. E., 7.
 Nicola area: Cockfield, W. E., 2.
 Omineca dist.: Armstrong, J. E., 4.
 Premier mine deposits: Languille, E. G., 1.
 Princeton area: Rice, H. M. A., 2.
 Smithers area: Armstrong, J. E., 2.
 Sullivan mine area: Swanson, C. O., 1.
 Tuya-Teslin area: Watson, K. D., 1.
 Tyaughton Lake area: Cairnes, C. E., 1.
 California, Barstow quad., San Bernardino Co.: Miller, W. J., 2.
 Big Pine volcanic field: Mayo, E. B., 1.
 Blairsden area: Durrell, C., 1.
 Casmalia area: U. S. G. S., 1.
 Central, Pliocene: Axelrod, D. I., 5.
 Chowchilla field: Hodges, F. C., 2.
 Coalinga anticline, Eocene: U. S. G. S., 2.
 Coast, Point Arena-Port Ross: Weaver, C. E., 3.
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 Diablo Range quicksilver deposits: Yates, R. G., 1.
 Dry well, 16,246 ft. deep: Cavins, O., 1.
 Elk hills oil field: Bunch, E. S., 1.
 Fresno Co.: U. S. G. S., 2; Zimmerman, J. J., 1.
 Great Basin area: Axelrod, D. I., 7.
 Imperial Valley, west side: Tarbet, L. A., 1.
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- Jamesburg quad., Monterey Co.: Fiedler, W. M., 1.
 Knoxville quicksilver dist.: Averitt, P., 1.
 Los Angeles Basin area: U. S. G. S., 2.
 Lost Hills oil field: Barton, D. C., 3.
 McKittrick dist., bituminous deposits: U. S. G. S., 1.
 Merced, Stanislaus Cos.: U. S. G. S., 2.
 Midway-Sunset oil field, SE. part: U. S. G. S., 1.
 Mulholland flora: Axelrod, D. I., 2.
 Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.
 Newhall-Potrero, Aliso Canyon, Del Valle, Oak Canyon oil fields: Hodges, F. C., 1.
 Oil fields: Gregersen, A. I., 1.
 Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
 Playa del Rey oil field: Hodges, F. C., 3.
 Puente, San Jose Hills: U. S. G. S., 1.
 Rio Vista gas field: Frame, R. G., 1.
 Salinas Valley: U. S. G. S., 1.
 San Diego area, marine Pliocene: Hertlein, L. G., 1.
 San Juan Bautista quad.: Allen, J., E., 2.
 San Luis Obispo Co.: Smith, C. T., 1; U. S. G. S., 1.
 Santa Ana Mts., NW., Paleocene, Eocene: U. S. G. S., 2.
 Santa Catalina Is. marine sed.: Clements, T. D., 2.
 Santa Cruz area: U. S. G. S., 1.
 Santa Lucia Range: Taliaferro, N. L., 1.
 Santa Maria oil dist.: U. S. G. S., 2.
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 Sea-floor rocks off coast: Emery, K. O., 4.
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 Tesla area: Campbell, A. S., 2.
 Tumey fm., Fresno Co.: Cushman, J. A., 3.
 Under-ocean oil wells, Huntington Beach: Barnes, K. B., 3.
 Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
 Alaska Highway, Watson Lake-Teslin River: Lord, C. S., 1.
 Arctic, Eastern: Robinson, J. L., 1.
 Canol inves., Mackenzie River area: Hume, G. S., 8.
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- Medicine Hat to Vancouver: Hutt, G. M., 14.
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 Clay minerals, photometric interpretation: Hellman, N. N., 1.
 Colorado, Rangely field and Uinta Basin: Bench, B. M., 1.
 Sawatch Range area: Johnson, J. H., 3.
 Selected well logs: Barb, C. F., 2.
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 Vasquez overthrust, Middle Park: Tweto, O., 1.
 White River Plateau, Glenwood Springs area: MacQuown, W. C., Jr., 1.
 Costa Rica: Roberts, R. J., 1.
 Cuba: Brodermann, J., 1; Palmer, R. H., 1.
 Guisa-Los Negros area: Woodring, W. P., 1.
 Terraces, Pliocene: Corral y Alemán, J. I., del, 1.
 Eggs, fossil: Dunkle, D. H., 2.
 Elk Basin oil, gas field area, Wyo-Mont.: U. S. G. S., 4.
 Estimating ore masses in gravity prosp.: Hammer, S. I., 2.
 Exploration for oil: Illing, V. C., 1.
 Florida: Cooke, C. W., 3.
 City of Tallahassee wells: Cole, W. S., 1.
 Duval, Nassau Cos.: Cooper, H. J., Jr., 1.
 Gulf Hammock fm.: Ericson, D. B., 1.
 Pennsylvanian oil wells, poss.: Gunter, H., 3.
 Petroleum poss.: Gunter, H., 1, 2, 3.
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 Well studies: Cole, W. S., 1.
 Florida-south Ga. stratigraphy: Applin, P. L., 1.
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 Georgia: Peyton, G., 2.
 Coastal Plain: Cooke, C. W., 1; MacNeil, F. S., 1.
 Limestone solution: MacNeil, F. S., 4.
 Prospecting for oil and gas: Peyton, G., 2.
 Southeast coast: Warren, M. A., 1.
 Southwest: Furcron, A. S., 2; Herrick, S. M., 1; SE. Geol. Soc., 2.
 Greenland: Shaw, V., 3; Anonymous, 32.
 Eastern, between 74°-75°, and islands: Vischer, G. A., 1.

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- Gulf Coast, La.-Tex., heaving shale: Wade, G., 1.
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 Idaho, Birch Creek area: Anderson, A. L., 1.
 Latah Co.: Tullis, E. L., 1.
 Kansas: Lane, H. J., 1.
 Aldrich oil field: Carpenter, E. G., 1.
 Cheyenne ss., Russell Co.: Swineford, A., 1-a.
 Eastern oil and gas fields: Jewett, J. M., 1.
 Finney, Gray Cos.: Latta, B. F., 1.
 Outcropping rocks: Moore, R. C., 4.
 Pleistocene-Pliocene boundary problem: Frye, C. J., 1.
 Rock fms.: Moore, R. C., 1.
 Thomas County: Frye, J. C., 1-a.
 Kentucky: McFarlan, A. C., 2.
 Roaring Spring: Jillson, W. R., 7.
 Kentucky Dam, solution channel: Money-maker, B. C., 3.
 Kentucky River, Drennon abandoned channel: Jillson, W. R., 5.
 Elkhorn Pliocene channel: Jillson, W. R., 4.
 Pot Ripple abandoned channel: Jillson, W. R., 3.
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 Alexandria area: Maher, J. C., 2.
 Camp Polk, North Camp Polk areas: Maher, J. C., 3.
 Erath gas field: Anonymous, 78.
 Future oil fields: Howe, H. V., 1.
 Jefferson Davis, Acadia Parishes: Stanley, T. B., Jr., 1.
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 1942 wildcat wells: Blanpied, B. W., 4.
 Southern oil fields: Wallace, W. E., Jr., 1.
 Louisiana-Texas, Midway-Wilcox fms.: Murray, G. E., Jr., 1.
 Marine fms., Wash.-Oreg.: Weaver, C. E., 1.
 Mexico, Baja Calif.: Antúñez Echegaray, F., 3; Beal, C. H., 1.
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 Colotlipa-Quechultenango min. dist.: González Reyna, J., 3.
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 Gulf of Calif. area: Osorio Tafall, B. F., 1.
 Highway profiles: Muñoz Lumbier, M., 2.
 Huasteca fm., Oligocene: Hanzawa, S., 1.
 Northern: Kellum, L. B., 2.
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- Pacific Coast: González Reyna, J., 1.
 Parícutin Volcano area: Williams, H., 2.
 Permian area NW. of Las Delicias: King, R. E., 2.
 Plateau: Nye, S. S., 2.
 Poza Rica area, Veracruz: Arellano, A. R. V., 1.
 Sonora tungsten deposits: Wiese, J. H., 1.
 Valley of the Lerma: Waitz, P., 1.
 Valley of Tixtla: Mullerried, 3.
 Mississippi: McGlothlin, T., 1.
 Artesian aquifers: Brown, G. F., 2.
 Camp Shelby area: Brown, G. F., 1.
 Coastal area: Brown, G. F., 3.
 Embayment area, Upper: Cooper, C. L., 1.
 Geologic map: Miss. G. Soc., 2.
 Monroe Co.: Vestal, F. E., 1.
 Oil and gas fields: Williams, N., 1.
 Missouri: Branson, E. B., 3.
 Montana: U. S. G. S., 1.
 Columbium, cerium minerals: Cooke, S. R. B., 1.
 Gage dome oil field: Perry, E. S., 2.
 Gravelly Range Eocene moraine: Atwood, W. W., 1.
 Hungry Horse Dam, Flathead Co.: Erdmann, C. E., 1.
 Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
 Ore bodies, strat. control: Perry, E. S., 3.
 Nebraska, soil profiles in loess: Williams, B. H., 1.
 Nevada, Comstock Lode area: Calkins, F. C., 1.
 Current Creek dist.: Faust, G. T., 1.
 Mineralization: Bichan, W. J., 3.
 Mining dists.: Ferguson, H. G., 1.
 Ore deposits: York, B., 1.
 Quicksilver deposits: Bailey, E. H., 1.
 Sloan Hill, Las Vegas area: Deiss, C. F., 1.
 New Jersey, Monmouth Co.: Hawkins, A. C., 2.
 New Mexico, Curry, Roosevelt Cos.: Theis, C. V., 1.
 Estancia Valley area: U. S. G. S., 1.
 Iron in collapse breccia: Kelley, V. C., 1.
 Iron Mtn. dist.: Jahns, R. H., 1.
 Lea Co.: Nye, S. S., 1.
 Pecos River-Rio Galisteo area: U. S. G. S., 1.
 Red River min. area: Sidwell, R. 1.
 Rio Puerco area: Wright, H. E., Jr., 1.
 New York, Salamanca re-entrant area: MacClintock, P., 1.
 North America, Foraminifera-formed lss.: Johnson, J. H., 9.

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- North America, Gulf, Caribbean areas: Seismog. Serv. Corp., 1: Anonymous, 107.
 Sedimentation: Richardson, C. B., 1.
 Tectonic devel., E. edge of Pacific: Stille, H. W., 1.
 Western, marine Cenozoic fms.: Weaver, C. E., 2.
 North Carolina, Coastal Plain: Munderoff, M. J., 1.
 Miocene, Pliocene: Mansfield, W. C., 1.
 North Dakota, Fox Hills-Hell Creek Cannonball fms.: Lindberg, M. L. L., 2.
 Stratigraphy and structure: Laird, W. M., 2.
 White River fm.: Powers, W. E., 1.
 Northwest Territories, Mackenzie River Valley: Stewart, J. S., 1, 2.
 Petroleum and gas poss., Mackenzie River Valley: Stewart, J. S., 1.
 Nova Scotia, Lake Ainslie area: Douglas, G. V., 7.
 Wentworth dist.: Bancroft, M. G., 1.
 Ohio, E.: Ver Steeg, K., 2.
 Oil fields, Alberta, British Columbia: Hume, G. S., 7.
 Oklahoma, ground water: Dott, R. H., 4.
 West Edmond oil field: Atkinson, W. H., 1; McGee, D. A., 1.
 Oregon, Ashland area: Merriam, R. H., 1.
 Coast: Stephenson, E. L., 1.
 Coos Bay fms.: Weaver, C. E., 4.
 Coos Bay quad.: Allen, J. E., 1.
 The Dalles area: Chaney, R. W., 4.
 Geology: Weaver, C. E., 3.
 Hobart Butte clay pellets, origin: Allen, V. T., 1.
 Northwest: U. S. G. S., 1.
 Troutdale area: Chaney, R. W., 5.
 Volcanoes of Three Sisters region: Williams, H., 1.
 Washington Co. iron deposits: Libbey, F. W., 1.
 Pacific Basin, late geol. history: Stearns, H. R., 3.
 Pennsylvania, min. res. areas: Ashley, G. H., 1.
 Powder River Basin, Wyo.-Mont.: U. S. G. S., 1.
 Plant microfossils in W. coals: Schopf, J. M., 6.
 Puerto Rico, glass sand: Meyerhoff, H. A., 2.
 Quitman fault zone, Ala.-Miss.: U. S. G. S., 1.
 Saskatchewan, oil and gas poss.: Edmunds, F. H., 1.
 Southern: Hutt, G. M., 17.
 South Dakota: Rothrock, E. P., 1.

Tertiary—Continued.

- Tennessee, NE.: King, P. B., 4.
 Tertiary mammals and continental drift: Du Toit, A. L., 1.
 Texas: Sellards, E. H., 2.
 Anahuac field: Carpenter, C. B., 1.
 Anahuac Oligocene fm.: Ellisor, A. C., 1.
 Anderson Co.: Whitcomb, B., 2.
 Artesian aquifers: Guyton, W. F., 1.
 Balcones, Luling, Mexia fault zones: Weeks, A. W., 3.
 Big Spring area: Livingston, P. P., 1.
 Burkeville Miocene fauna, strat. meanings: Stenzel, H. B., 1.
 Coastal Plain, Oakville, Cuero, Goliad fms.: Weeks, A. W., 2.
 Freestone Co.: Whitcomb, B., 1.
 High Plains: Evans, G. L., 5.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Lee Co.: Harris, G. D., 1.
 Lower Rio Grande Valley: Wynd, F. L., 2.
 Moore Co.: Fosshage, E. W., 1.
 Seeligson field: Deegan, C. J., 6.
 Sierra Diablo area: U. S. G. S., 1.
 Southeast, Miocene, brackish and non-marine: Stenzel, H. B., 2.
 South Guadalupe Mts.: U. S. G. S., 1.
 South Houston oil field: Eby, J. B., 1.
 West Ranch oil field, Jackson Co.: Bauernschmidt, A. J., Jr., 1.
 Trinidad: Seismog. Serv. Corp., 1.
 Uinta Basin, Utah, Colo., hydrocarbons: C. F., 1.
 United States, Anadarko Basin: Gibson, A., 1.
 Atlantic Coastal Plain, N. J.-Ga.: Richards, H. G., 5.
 Blancan deposits, cent. Great Plains: Elias, M. K., 2.
 Cenozoic facies, Rocky Mtn. area: Van Houten, F. B., 2.
 Eastern Gulf area, oil poss.: Kornfield, J. A., 1.
 Floras, W.: Chaney, R. W., 2.
 Fluorspar, W.: Gillson, J. L., 1.
 Gulf Coastal Plain: Brankstone, H. R., 1; Storm, L. W., 1.
 Structure from gravimetric data: Barton, D. C., 5.
 Rocky Mtn. deformation, basement control: Chamberlin, R. T., 4.
 Southeastern: MacNeill, F. S., 3.
 Western: Eisner, A., 1; Wimpler, N. L., 1.
 Yellowstone-Bighorn area: Thom, W. T., Jr., 2.
 Utah, Beaver Co.: Hobbs, S. W., 2.
 Conville drill-core study: Hasler, J. W., 1.
 Sevier River Valley, upper: Gregory, H. E., 1.
 Southwest, post-Wasatch fms.: Gregory, H. E., 2.

Tertiary—Continued.

- Utah—Continued.
 Uinta Basin: Walton, P. T., 1.
 Wasatch Mts.: Eardley, A. J., 1.
 Virginia, Coastal Plain: Cederstrom, D. J., 1, 2.
 Miocene: Mansfield, W. C., 1.
 Washington, geology: Weaver, C. E., 3.
 King Co. coal fields: Warren, W. C., 1.
 Northwest, Oligocene: Durham, J. W., 1.
 Olympic Penin.: Green S. H., 1.
 Stevens, Okanogan Cos. magnetite deposits: Broughton, W. A., 2.
 West Indies, mtn.-uplift problem: Trechmann, C. T., 1.
 Wyoming: La Fleiche, P., 2.
 Coal-seam paleoecology: Wilson, L. R., 4.
 Geology and devel., oil and gas fields: La Fleiche, P., 1.
 Lance Creek oil and gas fields: U. S. G. S., 3.
 Maverick Springs area: U. S. G. S., 1.
 Oil and gas fields map: Thomas, H. D., 1.
 Rocky Mts., evolution: Knight, S. H., 1.
 Teton Basin: Gardner, L. S., 1.
 Willwood, Tatman fms.: Van Houten, F. B., 1.
 Wind River Mts., NW. end: U. S. G. S., 1.
 Yellowstone Park rhyolite-basalt complex: Fenner, C. N., 1; Wilcox, R. E., 1.
 Wyoming Basin: Knight, S. H., 2.
 Wyoming-Colorado, Washakie Basin: U. S. G. S., 1.
 Wyoming-Montana, Elk Basin field: U. S. G. S., 4.
 Oil horizons: Carroll, D. L., 2.
 Yukon, Canol Road, Teslin River-Macmillan Pass: Kindle, E. D., 2.
 Selwyn River area: Bostock, H. S., 2.
 Whitehorse dist.: Cockfield, W. E., 1.
 Tetrahedrite.
 North America, silver ores: Michell, W. D., 2.
 Texas.
 Crown-polished rock, by Indians, trans-Pecos: Adams, J. E., 4.
 Areas described.
 Big Spring area: Livingston, P. P., 1.
 Economic geology.
 Anahuac field, Chambers Co.: Carpenter, C. B., 1.
 Anderson Co., min. res.: Whitcomb, B., 2.
 Angelina, Cherokee Cos.: Johnson, J., 1.
 Barite, N. Llano Co.: Zapp, A. D., 1.
 Barnett oil shale: Plummer, F. B., 3.
 Bastrop Co., min. res.: Nickell, C. O., 2.
 Baylor Co., min. res.: Evans, G. L., 4.
 Bentonite, Houston Co.: Meade, G. E., 1.
 Bexar Co., min. res.: Jones, R. A., 1.

Texas—Continued.

Economic geology—Continued.

- Burnet Co., asphalt: Barnes, V. E., 4.
 Building stone: Barnes, V. E., 3.
 Pavitte silver-copper prosp.: Barnes, V. E., 1.
 Sheridan copper prosp.: Barnes, V. E., 2.
 Cayuga oil field: Peacock, H. B., 1.
 Geophysical history of: Peacock, E. B., 1.
 Clay, Grimes Co.: Ramsey, G. D., 2.
 Collingsworth Co., min. res.: Baldwin, B. F., 1.
 Concorn salt dome, Anderson Co.: Alexander, C. I., 2.
 Correlation-refraction seismic surveying method: Gillin, J. A., 1.
 Cretaceous fms., east, south: U. S. G. S., 2.
 Damon Mound ls., Brazoria Co.: Hurlbut, E. M., Jr., 1.
 Deep test well, Moore Co.: Fosshage, E. W., 1.
 Developments, oil and gas, 1943: Leavenworth, P. B., 2; Spice, W. H., Jr., 1.
 1944: Giesey, S. C., 1.
 East Texas, 1943-44: Alexander, C. I., 1.
 Upper Gulf Coast, 1944: Noble, H. A., 1.
 West Texas, 1943-44: N. Tex. G. Soc., 1; Winter, N. B., 1.
 West Tex.-SE. N. Mex., 1943: Winter, N. B., 1.
 Diatomite, High Plains: Evans, G. L., 5.
 Dolomite porosity, Dev. of Perm. Basin: Jones, T. S., 1.
 Elasticity, reservoir rocks and fluids, E. Tex. oil field: Donoghue, D., 1.
 Ellenburger beds, N.-cent.: Browley, A. J., 2.
 Erath Co., min. res.: Nickell, C. O., 3.
 Fayette Co., min. res.: Sedlmeyer, J. J., 1.
 Freestone Co., min. res.: Whitcomb, B., 1.
 Fullerton pool, Andrews Co.: Moore, J. H., 1.
 Geology, climate, soils: Baker, C. L., 1.
 Grand Saline salt dome, Van Zandt Co.: Peters, J. W., 1.
 Gravel, Williamson Co.: Leedy, D., 1.
 Grimes Co.: Ramsey, G. D., 1.
 Guadalupe Mts., S.: U. S. G. S., 1.
 Gypsum, Gillespie Co.: Shield, E., 1.
 Heaving shale problem: Wade, G. I.
 Henderson Co., gravels: Evans, G. L., 3.
 Houston Co., min. res.: Harrington, H., 1.
 Humble deep test, Apache Mts., Culbertson Co.: Maley, V. C., 1.
 Kavanaugh and E. Tex. oil devel.: Geiser, S. W., 2.

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Economic geology—Continued.

- Langbeinite: Johnson, B. L., 1.
 Lee Co.: Harris, G. D., 1.
 Leon Co., min. res.: Crow, D., 1.
 Limestone Co. ceramic clays: Broman, I. J., 2.
 Limestones for rock wool: Plummer, F. B., 2, 6.
 Limestones vs. ss. as reservoir rocks: Bulnes, A. C., 1.
 Magnesite, Llano Co.: Chelf, C. R., 1.
 Mason Co., tin, magnesite: McCammon, J. H., II, 1.
 Merigale oil and gas field, Wood Co.: Wright, A. C., 1.
 Mineral locality map: Sellards, E. H., 3.
 Mineral res.: Sellards, E. H., 2.
 By counties: Sellards, E. H., 1.
 Possibilities: Baker, C. L., 2.
 Nash, Damon Mounds, Ft. Bend, Brazoria Cos.: Barton, D. C., 2.
 New Hope oil field: Stehr, R. A., 1.
 Oil and gas fields, devel., 1943: Dewey, R. S., 1.
 Panhandle devels., oil and gas, 1944: Wagner, C. R., Jr., 1.
 Peat, Polk, San Jacinto Cos.: Shafer, G. H., 1.
 Bogs, Gonzales Co.: Chelf, C. R., 2.
 Permian Basin oil fields: Osborne, P. F., 1.
 Permian Ochoa ser., Delaware Basin: Adams, J. E., 2.
 Petroleum, migration, origin: Plummer, F. B., 4.
 Petroleum and gas devel., 1943: Carter, D. V., 1; Decker, H., 1; Gilmore, R. B., 1; Leavenworth, P. B., 1; Perini, V. C., Jr., 1; Spice, W. H., Jr., 2.
 Pickton oil and gas field, Hopkins Co.: Shelby, T. H., Jr., 1.
 Polyhalite deposits: Conley, J. E., 1.
 Quartz, Llano Co.: Chelf, C. R., 3.
 Radon emanations in oil explor.: Sterrett, E., 1.
 Refraction explor., W. Tex.: Harris, S., 1.
 Resistolog survey, Loma Alto-Seven Sisters area: West, T. S., 2.
 Sand-clay mixture, Falls, Robertson Cos.: Hoeman, E. C., 1.
 Sand Flat oil field, Smith Co.: Bartell, L. D., 1.
 Seeligson gas and oil field: Deegan, C. J., 6.
 Sierra Diablo region: U. S. G. S., 1.
 South Houston oil field, Harris Co.: Eby, J. B., 1.
 South Tex. oil and gas devels., 1944: Scrafford, J. B., 1.
 South Tyler field, Smith Co.: Weirich, T. E., 1.
 Terraces, Clay Co.: Evans, G. L., 2.
 River, Bell Co.: Nickell, C. O., 1.
 Falls Co.: Hatch, J., 1.

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Economic geology—Continued.

- Travis Co., min. res.: Nickell, C. O., 4.
 Waters from Frio fm., Gulf Coast: Jensen, F. W., 1.
 Well spacing and oil recovery: Clark, S. K., 1.
 West Ranch oil field, Jackson Co.: Bauernschmidt, A. J., Jr., 1.
 Wichita Co., min. res.: Lyle, W. M., 1.
 Willamar oil field: Ives, G. O., 1.

Historical geology.

- Anahuac field, Chambers Co.: Carpenter, C. B., 1.
 Anahuac Oligocene fm.: Ellisor, A. C., 1.
 Bacon ls., E. Tex.: Jones, W. V., 1.
 Baylor Co.: Evans, G. L., 4.
 Balcones, Luling, Mexia fault zones: Weeks, A. W., 3.
 Big Spring area: Livingston, P. P., 1.
 Blanco Pleist. beds, Crosby Co.: Meade, G. E., 2.
 Buda ls.: Stephenson, L. W., 1.
 Burkeville Miocene fauna, strat. meanings: Stenzel, H. B., 1.
 Burnet Co. bldg. stone: Barnes, V. E., 3.
 Cayuga oil field, geophys. history: Peacock, H. B., 1.
 Coral-bearing Lower Penn. strata: Plummer, F. B., 6-a.
 Correlation, Pecan Gap, Wolfe City and Annona fms.: Rouse, J. T., 1.
 Correlations, Penn., by ammonoids: Scott, G., 1.
 Cretaceous, Coastal Plain: U. S. G. S., 2.
 Eastern: U. S. G. S., 2.
 Lower, S. Tex.: Imlay, R. W., 6.
 Southern: Imlay, R. W., 6; U. S. G. S., 2.
 Tylor Basin: Bailey, T. L., 1.
 Deep test well, Moore Co.: Fosshage, E. W., 1.
 Ellenburger beds, N.-cent.: Crowley, A. J., 2.
 Foraminifera. Comanchean, biostratigraphic relations: Lozo, F. E., Jr., 1.
 Geology, climate, soils: Baker, C. L., 1.
 Grand Saline salt dome, Van Zandt Co.: Peters, J. W., 1.
 Ground-water res., El Paso area: Sayre, A. N., 1.
 Guadalupe Mts., S.: U. S. G. S., 1.
 Heaving shale problem: Wade, G., 1.
 Highest structural point, Franklin Mts.: Adams, J. E., 1.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Humble deep test, Apache Mts., Culberson Co.: Maley, V. C., 1.
 Igneous rocks, deep wells, W.: Patton, L. T., 2.
 Lee Co.: Harris, G. D., 1.
 Llano Co.: Chelf, C. R., 1.
 Llanooria geosyncline, Penn.: Barton, J. M., 1.

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Historical geology—Continued.

- Lower Rio Grande Valley: Wynd, F. L., 2.
 Merigale oil and gas field, Wood Co.: Wright, A. C., 1.
 Midway-Wilcox fms., Sabine uplift: Murray, G. E., Jr., 1.
 Mineral res.: Sellards, E. H., 2.
 Miocene, brackish, and non-marine, SE. Tex.: Stenzel, H. B., 2.
 North Texas area: Lozo, F. E., Jr., 1.
 Oakville, Cuero, Goliad fms., Coastal Plain: Weeks, A. W., 2.
 Ordovician-Cambrian, cent. Tex.: Crowley, A. J., 1.
 Permian Basin oil fields: Osborne, P. F., 1.
 Permian Ochoa ser., Delaware Basin: Adams, J. E., 2.
 Permian Pease River group: Roth, R. I., 1.
 Pickton oil and gas field, Hopkins Co.: Shelby, T. H., Jr., 1.
 Pre-Permian axes of deposition, W. Tex.: Barton, J. M., 1.
 Quarternary Coastal Plain, Brazos-Rio Grande Rivers: Weeks, A. W., 1.
 High Plains: Evans, G. L., 6.
 Radon emanations in oil explor.: Sterrett, E., 1.
 Sand Flat oil field, Smith Co.: Bartell, L. D., 1.
 Seeligson oil and gas field: Deegan, C. J., 6.
 Sierra Diablo region: U. S. G. S., 1.
 Smoothingiron mass: Romberg, F., 1.
 Soils series, Hidalgo Co.: Wynd, F. L., 1.
 West Ranch oil field, Jackson Co.: Bauernschmidt, A. J., Jr., 1.
 Word Perm. fm. fauna and strat. correl.: Clifton, R. L., 3.

Mineralogy.

- Calcite crystals, Mariposa mine: Duncan, F., 1.
 Colorado River terraces, heavy minerals: Mathis, R. W., 1.
 Meteorites, Fayette Co.: Sedlmeyer, J. J., 1.
 Mineral locality map: Sellards, E. H., 3.
 Mineral resources: Sellards, E. H., 2.
 By counties: Sellards, E. H., 1.
 Possibilities: Baker, C. L., 2.
 Sand-clay mixtures, Falls, Robertson Cos.: Hoeman, E. C., 1.
 Waters from Frio fm., Gulf Coast: Jensen, F. W., 1.

Paleontology.

- Algal reefs in Cret. Austin chalk, Brewster Co.: Johnson, J. H., 2.
 Amebelodon jaw, Tert., Panhandle: Gregory, J. T., 2.
 Ammonoidea, Penn., Strawn group: Scott, G., 2.

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Paleontology—Continued.

- Ammonoids, Cherry Canyon fm., Delaware Mts.: Clifton, R. L., 2.
 Pennsylvanian, Chinati Mts.: Miller, A. K., 10.
 Permian: Miller, A. K., 5.
 Finlay Mts.: Miller, A. K., 10.
 Amphibia, Dockum Trias., Howard Co.: Sawin, H. J., 2.
 Anahuac Oligocene fm.: Ellisor, A. C., 1.
 Anthozoa, tabulate, Penn.: Wells, J. W., 5.
 Big Bend area: Witte, A. H., 1.
 Big Spring area: Livingston, P. P., 1.
 Bison, fossils, and artifacts: Sellards, E. H., 4.
 Blanco Pleist. fauna, Crosby Co.: Meade, G. E., 2.
 Brontosaurus, walk on land?: Bird, R. T., 1.
 Bryozoa, Per.: Condra, G. E., 7.
 Buettneria, Trias., restorations: Sawin, H. J., 1.
 Burkeville Miocene fauna, strat. meanings: Stenzel, H. B., 1.
 Concretions, Irving area: Loving, G., 1.
 Coral, Buda ls.: Wells, J. W., 1.
 Coral-bearing Lower Penn. strata: Plummer, F. B., 6-a.
 Corals, Lower Penn.: Moore, R. C., 6.
 Correlations Penn., by ammonoids: Scott, G., 1.
 Crabs, lobsters, shrimps, Cret., Dallas: Stenzel, H. B., 5.
 Crustacea, decapod, Cret.: Stenzel, H. B., 4-a.
 Diadectes, Perm.: Romer, A. S., 2.
 Diatomite, High Plains: Evans, G. L., 5.
 Edops, Carb.: Romer, A. S., 1.
 Fauna Buda ls.: Stephenson, L. W., 1.
 Foraminifera, Anahuac Oligocene fm.: Cushman, J. A., 11.
 Colorado River sec., Penn.: Plummer, H. J., 2.
 Comanchean, biostratographic relations: Lozo, F. E., Jr., 1.
 Cretaceous, Lower: Barker, R. W., 1.
 Fusulinids, Penn.: Thompson, M. L., 6.
 Marble Falls, Smithwick, Strawn Penn. fms.: Plummer, H. J., 1.
 Pecan Gap chalk, type locality: Cushman, J. A., 4.
 Washita Cret. group: Loeblich, A. R., Jr., 1.
 Graptolites, Upper Camb., Wilberne, Mason Co.: Decker, C. E., 5-a.
 Gryphaea, Lower Cret.: Adkins, W. S., 2.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Invertebrata, Miocene, Burkeville: Stenzel, H. B., 1.
 Jellyfish, Cret.: Caster, K. E., 3; Kirkland, F., 1.
 Kirklandia, Cret. jellyfish: Caster, K. E., 3.

Texas—Continued.

Paleontology—Continued.

- Lee Co.: Harris, G. D., 1.
 Man, deep burial, Abilene area: Ray, C. N., 2.
 Microfauna, Cret., E. Tex. Embayment: Lozo, F. E., Jr., 2.
 Midway-Wilcox fms., Sabine uplift: Murray, G. E., Jr., 1.
 Miocene, brackish, non-marine, SE. Tex.: Stenzel, H. B., 2.
 Nautiloids, Perm., W. Tex.: Miller, A. K., 9.
 North Tex., Comanchean: Lozo, F. E., Jr., 1.
 Oakville, Cuero, Golaid fms., Coastal Plain: Weeks, A. W., 2.
 Ostracoda, Eocene Cook Mtn. fm.: Stephenson, M. B., 3.
 Moulting in Penn. Ectodermites: Cooper, C. L., 2.
 Reklaw Eocene, Bastrop Co.: Stephenson, M. B., 2.
 Tertiary: Stephenson, M. B., 1.
 Peat bogs, Gonzales Co.: Chelf, C. R., 2.
 Permian Pease River group: Roth, R. I., 1.
 Polk, San Jacinto Cos.: Shafer, G. H., 1.
 Quaternary, Coastal Plain, Brazos-Rio Grande Rivers: Weeks, A. W., 1.
 High Plains: Evans, G. L., 6.
 Spiroculina, Oligocene: Cushman, J. A., 4.
 Tehuacana, Paleocene: Stenzel, H. B., 3.
 Trilophosaurus, Trias., Howard Co.: Gregory, J. T., 1.
 Vertebrate, Miocene, Burkeville: Stenzel, H. B., 1.
 Pleistocene: Geiser, S. W., 3.
 Word Perm. fm. fauna and strat. correlations: Clifton, R. L., 3.
 Worms, terebellid, Penn.: Howell, B. F., 9.

Petrology.

- Alluvial deposits, Rio Grande Valley: Happ, S. C., 2.
 Anahuac Oligocene fm.: Ellisor, A. C., 1.
 Barnett oil shale: Plummer, F. B., 3.
 Baylor Co.: Evans, G. L., 4.
 Big Spring area: Livingston, P. P., 1.
 Concretions, Irving area: Loving, G., 1.
 Cretaceous, Tyler Basin: Bailey, T. L., 1.
 Damon Mound ls., Brazoria Co.: Hurlbut, E. M., Jr., 1.
 Deep well rocks, Winkler Co.: Patton, L. T., 1.
 Diatomite, High Plains: Evans, G. L., 5.
 Geology, climate, soils: Baker, C. L., 1.
 Ground ss. balls, Elm Creek gravel: Ray, C. N., 1.
 Guadalupe Mts., S.: U. S. G. S., 1.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Igneous rocks, deep wells, W.: Patton, L. T., 2.
 Lee Co.: Harris, G. D., 1.
 Limestone vs. ss. as reservoir rocks: Bulnes, A. C., 1.

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- Limestones for rock wool: Plummer, F. B., 6.
 Llano Co., N.: Zapp, A. D., 1.
 Midway-Wilcox fms., Sabine uplift: Murray, G. E., Jr., 1.
 North Texas, Comanchean: Lozo, F. E., Jr., 1.
 Ordovician-Cambrian, cent. Texas: Crowley, A. J., 1.
 Permian Ochoa ser., Delaware Basin: Adams, J. E., 2.
 Permian Pease River group: Roth, R. I., 1.
 Quaternary, Coastal Plain, Brazos-Rio Grande Rivers: Weeks, A. W., 1.
 Soil resources: Carter, W. T., 1.
 Soil series, Hidalgo Co.: Wynd, F. L., 1.
 Travertine, fm. from spring water: Plummer, F. B., 10.
 Llano area: Plummer, F. B., 7.

Physical geology.

- Anahuac field, Chambers Co.: Carpenter, C. B., 1.
 Anderson Co.: Whitcomb, B., 2.
 Balcones, Luling, Mexia fault zones: Weeks, A. W., 3.
 Big Bend area: White, A. H., 1.
 Burnet Co., Pavitte silver-copper prosp.: Barnes, V. E., 1.
 Cayuga oil field: Peacock, H. B., 1.
 Geophysical history: Peacock, H. B., 1.
 Cretaceous fms., E. south: U. S. G. S., 2.
 Lower, S. Tex.: Imlay, R. W., 6.
 Tyler Basin: Bailey, T. L., 1.
 Erath Co.: Nickell, C. O., 3.
 Guadalupe Mts., S.: U. S. G. S., 1.
 Highest structural point, Franklin Mts.: Adams, J. E., 1.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Humble deep-test, Apache Mts., Culbertson Co.: Maley, V. C., 1.
 Lee Co.: Harris, G. D., 1.
 Llano Co., N.: Zapp, A. D., 1.
 Lower Rio Grande Valley: Wynd, F. L., 2.
 Mason Co.: McCammon, J. H., II, 1.
 Midway-Wilcox fms., Sabine uplift: Murray, G. E., Jr., 1.
 Oakville, Cuero, Goliad fms., Coastal Plain: Weeks, A. W., 2.
 Permian Ochoa ser., Delaware Basin: Adams, J. E., 2.
 Permian Pease River group: Roth, R. I., 1.
 Quaternary, High Plains: Evans, G. L., 6.
 Radon emanations in oil explor.: Sterrett, E., 1.
 Refraction waves reflected at fault zone: Robinson, W. B., 1.
 Salt, depth by seismograph, SE.: Hoylman, H. W., 2.

Texas—Continued.

Physical geology—Continued.

- Sand flat oil field, Smith Co.: Bartell, L. D., 1.
 Seeligson gas and oil field: Deegan, C. J., 6.
 Sierra Diablo region: U. S. G. S., 1.
 Smoothingiron mass: Romberg, F., 1.
 South Houston oil field, Harris Co.: Eby, J., 1.
 South Tyler field, Smith Co.: Weirich, T. E., 1.
 Surface flow of heat, West Perm. Basin: Birch, A. F., 1.
 Woodbine sand saline waters: Horton, C. W., 2.

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- Baylor Co.: Evans, G. L., 4.
 Big Bend area: Witte, A. H., 1.
 Big Spring area: Livingston, P. P., 1.
 Collingsworth Co.: Baldwin, B. F., 1.
 Henderson Co., gravels: Evans, G. L., 3.
 Lower Rio Grande Valley: Wynd, F. L., 2.
 Midway-Wilcox fms., Sabine uplift: Murray, G. E., Jr., 1.
 Polk, San Jacinto Cos.: Shafer, G. H., 1.
 Quaternary, Coastal Plain, Brazos-Rio Grande Rivers: Weeks, A. W., 1.
 High Plains: Evans, G. L., 6.
 River system: Price, W. A., 3.
 Terraces, river, Bell Co.: Nickell, C. O., 1.
 Clay Co.: Evans, G. L., 2.
 Falls Co., river: Hatch, J., 1.
 Travis Co.: Nickell, C. O., 4.

Underground water.

- Artesian aquifers: Guyton, W. F., 1.
 Bastrop Co.: Nickell, C. O., 2.
 Big Spring area: Livingston, P. P., 1.
 Clay Co., ground water: Evans, G. L., 1.
 Elasticity, reservoir rocks and fluids, E. Tex. oil field: Donoghue, D., 1.
 Ground water, Big Spring area: Livingston, P. P., 1.
 El Paso area: Sayre, A. N., 1.
 Guadalupe Mts., S.: U. S. G. S., 1.
 Houston dist., ground-water invs.: Rose, N. A., 1.
 Ground-water res.: White, W. N., 2.
 Luling oil field water: Plummer, F. B., 1.
 Mineral res.: Sellards, E. H., 2.
 Sierra Diablo region: U. S. G. S., 1.
 Terraces, river, Falls Co.: Hatch, J., 1.
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- Aerial surveying and photo. interpretations: Abrams, T., 1.
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 Quebec, Moulton Hill deposit: Hawley, J. E., 1.
 United States, Rocky Mtn. area: Dee-gan, C. J., 3.
 Western, orogeny: Longwell, C. R., 7.
 Vermont west-central: Cady, W. M., 2.
 Thunder eggs.
 Oregon, Friday's Ranch: Colburn, L., 1.
 Quartz min. locs.: Dake, H. C., 2.
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 New York, Salamanca re-entrant area: MacClintock, P., 1.
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 Time of oil and gas accumulation: Levor-sen, A. I., 2.
 Tin.
 Alabama: Hunter, F. R., 1.
 Alaska: Joesting, H. R., 1; Anonymous, 86.
 Brooks Mtn.: Anonymous, 74.
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 British Columbia, Sullivan mine area: Swanson, C. O., 1.
 California, contact metamorphic cas-siterite: Page, L. R., 2.
 Riverside County: Tucker, W. B., 2.
 Canada, W.: Warren, H. V., 1.
 Sphalerites: Warren, H. V., 5.
 Mexico, Taxco mining dist.: Fowler, G. M., 2.
 Nevada, Goldfield epithermal deposits: Wilson, H. D. B., 1.
 Ore deposits: York, B., 1.
 New York, Lake Sanford area: Stephen-son, R. C., 1.
 North America, Alaska Highway poss.: Lord, C. S., 2.
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 Northwest Territories: Jolliffe, A. W., 2.
 Texas, Mason Co.: McCammon, J. H., II, 1.
 Yukon, Dublin Gulch: Thompson, R. M., 1.
 Upper McQuesten River area: Bos-tock, H. S., 1.
 Tinsley oil field, Miss.: Morse, W. C., 5; Anonymous, 38.
 Titanium.
 Canada, W., sphalerites: Warren, H. V., 5.
 New York, Adirondack area: Anderson, S. A., 1.
 Quebec: Dufresne, A. O., 1.
 Tonalite.
 Ontario, Rennie-Leeson area: Bruce, E. L., 1.
 Topaz. See also Gems; Precious stones.
 Colorado minerals: Pearl, R. M., 3.
 General: Drake, H. Y., 1.
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- Indiana, Mansfield ss. minerals: Gault, H. R., 1.
- Maine, Kennebec Valley esker: Trefethen, J. M., 2.
- Mexico, Baja Calif.: Antúnez, Eche-garay, F., 3.
- Yukon, Dublin Gulch: Thompson, R. M., 1.
- Tracing drill-holes by electric survey: Lundberg, H. T. F., 1.
- Tracks and trails. See also Paleontology; Vertebrata.
- Air trapped in beach sands: Emery, K. O., 5.
- Arizona, Perm. Trias.: Lauder milk J. D., 5.
- Beach markings made by sand hoppers, Calif.: Emery, K. O., 1.
- Belemnites, Cret., Mont.: Brown, B., 2.
- Dinosaurs, Cret., Canada: Sternberg, C. M., 1.
- Kanab, Utah.: Lauder milk, J. D., 7.
- Limuloid Trias. trails, Ariz. Petrified Forest: Caster, K. E., 1.
- Texas, Bandera Co. Brontosaurus tracks: Bird, R. T., 1.
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- Formation: Plummer, F. B., 8, 10.
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- Llano area: Plummer, F. B., 7.
- Utah, Mt. Timpanogos caves: Bullock, K. C., 1.
- Traverse Mts. manganese deposits: Crawford, A. L., 3.
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- Tremolite, New York, ceramic materials: Broughton, J. G., 3.
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- Alabama-Mississippi Basin: Carroll, D. L., 1.
- Alaska, Wide Bay anticline area: Kel-lum, L. B., 4.
- Alberta, cent. area foothills: MacKay, B. R., 1.
- Drinnan to Brûlé Lake area: Lang, A. H., 1.
- Arizona, Grand Canyon, Colo. River: Cueto Rui-Díaz, E., 1.
- Triassic—Continued.
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- Moenkopi fm. study: Anonymous, 101.
- North, Uinkaret Plateau: Koons, E. D., 1.
- Paleozoic, cent., NE.: U. S. G. S., 2.
- Arizona-Utah, East Kaibab monocline: Babenroth, D. L., 1.
- British Columbia: Warren, H. V., 4.
- Ainsworth area: Rice, H. M. A., 1.
- Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.
- Coast: Gunning, H. C., 2.
- Dunlevy-Portage Mtn. area: Beach, H. H., 1.
- Fort Nelson area: Kindle, E. D., 1.
- Liard River area: McLearn, F. H., 7.
- Manson Creek area: Armstrong, J. E., 7.
- Nickel Plate Mtn. area: Dolmage, V., 1.
- Nicola area: Cockfield, W. E., 2.
- Omineca dist.: Armstrong J. E., 4.
- Pinchi Lake area: Armstrong, J. E., 1.
- Premier mine deposits: Langille, E. G., 1.
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- Takla, Cassiar dist.: Armstrong, J. E., 6.
- Taku River, Cassiar dist.: Kerr, F. A., 1.
- Tyaughton Lake area: Cairnes, C. E., 1.
- California, Los Angeles Basin area: U. S. G. S., 2.
- Palm Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
- San Diego area: Hertlein, L. G., 1.
- Canada, Alaska Highway, Ft. Nelson-Watson Lake: Williams, M. Y., 1.
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- Medicine Hat to Vancouver: Hutt, G. M., 14.
- Oil and gas fields: Hume, G. S., 2.
- Rocky Mtn. area: Warren, P. S., 3.
- Structure and relief: Brouillette, B., 1.
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- Carolina Piedmont: Kesler, T. L., 1.
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- Placerville dist.: Haff, J. C., 1.
- Rangely field and Uinta Basin: Bench, B. M., 1.
- Selected well logs: Barb, C. F., 2.
- Elk Basin oil, gas field area, Wyo.-Mont.: U. S. G. S., 4.
- Florida: Cooke, C. W., 3.
- Well studies: Cole, W. S., 1.

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- Geologic calendar, periods, time, lengths: Elias, M. K., 5.
- Georgia, prosp. oil and gas: Peyton, G., 2.
- Greenland, East, between 74°–75°, and islands: Vischer, G. A., 1.
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- Kansas, Thomas Co.: Frye, J. C., 1–a.
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- Northern: Kellum, L. B., 1, 2.
- Mississippi, Monroe Co.: Vestal, F. E., 1.
- Missouri: Branson, E. B., 3.
- Montana: U. S. G. S., 1.
- Jardine-Crevasse Mtn. dist.: Seager, G. F., 1.
- South-central: U. S. G. S., 1, 2.
- Nevada mining dists.: Ferguson, H. G., 1.
- Ore deposits: York, B., 1.
- Rye Patch area: Vitaliano, C. J., 1.
- New Brunswick, Musquash area: Alcock, F. J., 4.
- St. George area: Alcock, F. J., 3.
- New Hampshire, Monadnock quad.: Billings, K. S. F. L., 1.
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- Limestones in Newark ser.: Kindle, C. H., 1.
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- New Mexico, Curry, Roosevelt Cos.: Theis, C. V., 1.
- Estancia Valley area: U. S. G. S., 1.
- Lea Co.: Nye, S. S., 1.
- Pecos River-Rio Galisto area: U. S. G. S., 1.
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- Londonerry deposits: Weeks, L. J., 1, 2.
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- Oklahoma, groundwater: Dott, R. H., 4.
- Oregon, geology: Weaver, C. E., 3.
- Pennsylvania, cent. eastern: Hersey, J. B., 1.
- Diabase derivatives: Tomlinson, W. H., 3.
- Hanover-York dist.: Stose, A. J., 1.
- Mineral res. areas: Ashley, G. H., 1.
- Point Pleasant area: McLaughlin, D. B., 1.

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- South Dakota: Rothrock, E. P., 1.
- Dewey, Corson Cos.: Morgan, R. E., 1.
- Texas, Big Spring area: Livingston, P. P., 1.
- Texas-New Mexico, Delaware Basin: Adams, J. E., 2.
- West, New Mex. E.: Sidwell, R., 2.
- United States, Stockton, Lockatong fms. type secs.: McLaughlin, D. B., 2.
- Utah, Beaver Co.: Hobbs, S. W., 2.
- Northeast: U. S. G. S., 2.
- Nomenclature: Williams, J. Stewart, 1.
- Salt Valley: Dyer, B. W., 1.
- Uinta Basin: Walton, P. T., 1.
- Upper Sevier River Valley: Gregory, H. E., 1.
- Wasatch Mts., N.-cent.: Eardley, A. J., 1.
- Zion Canyon: Grater, R. K., 1.
- Washington, geology: Weaver, C. E., 3.
- Wyoming: La Fleiche, P., 2.
- Central: Branson, E. B., 6; U. S. G. S., 2.
- Como Bluff anticline: Dunbar, R. O., 1.
- Lance Creek oil and gas field: U. S. G. S., 3.
- Little Buffalo Basin field: U. S. G. S., 8.
- Maverick Springs area: U. S. G. S., 1.
- Teton Basin: Gardner, L. S., 1.
- Wind River Mts., NW. end: U. S. G. S., 1.
- Yukon, Whitehorse dist.: Cockfield, W. E., 1.
- Trilobita. See also Crustacea.
- Alberta, Alexo area: Crombie, G. P., 1.
- Anomocarinae, Camb., Mont.: Howell, B. F., 12.
- Arctinurus, Sil., Iowa: Miller, A. K., 8.
- Arizona, Kaibab Mid. Perm. fm.: Snow, J. I., 1.
- Ceratocephala, Ord., Newfoundland: Kindle, C. H., 4.
- Silurian, Gaspé, Quebec: Kindle, C. H., 4.
- Colorado, Sawatch Range area: Johnson, J. H., 3.
- Crephicephalus edwardsi for C. oweni: Raasch, G. O., 1.
- Cybele, Ord., N. Am.: Howell, B. F., 10.
- Detroit River ls., Ohio faunas: Stumm, E. C., 2.
- Eudolaites, Sil., N. Y.: Howell, B. F., 8.
- Faunas, Clifty Falls State Park, Ind.: Freeman, O. W., 2.
- Early Upper Camb., Mont.: Lochman, C., 1.
- Flint Hills fauna, Kans.: Kennedy, M., 2.

Trilobita—Continued.

Faunas—Continued.

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- Missouri : Branson, E. B., 3.
 Ordovician, cent. Pa. : Kay, G. M., 2.
 Permian, Kaibab fm., Ariz. : Nicol, D., 2.
 Point au Gres Missn. ls., Mich. : Ehlers, F. M., 1.
 Quebec : Dresser, J. A., 1.
 Lévis, Upper Camb. : Rasetti, F., 1, 6.
 Port Daniel, Sil. : Kindle, C. H., 3.
 Sillery group, Camb. : Rasetti, F., 3.
 Ripogenus Dam, Sil., Maine : Willard, B., 1.
 Sillery Camb. group, Quebec : Rasetti, F., 3.
 Goldius, Sil., Ill. : Miller, A. K., 8.
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 Illinois, Dev. fms. : Cooper, G. A., 2.
 Thomas A. Green Silurian fossil collections : Greacen, K. F., 1.
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 Loganopeltoides, Loganopeltis, facial suture devel. : Rasetti, F., 2.
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 Nassovinae, Camb., Mont. : Howell, B. F., 12.
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 New York, Catskill quad. faunas : Ruedemann, R., 5, 6.
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 North America : Ball, J. R., 1.
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 Ozark uplift, Ark.-Mo., faunas : Cullison, J. S., 1.
 Pennsylvania, Getz quarry : Anonymous, 63.
 Lower Dev. : Swartz, F. M., 4.
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 Lévis, Camb. : Rasetti, F., 5, 6.
 Sillery group, Camb. : Rasetti, F., 4.
 Synphoriinae, Lower Dev., Pa. : Swartz, F. M., 4.
 Tennessee, W.-cent. : Born, K. E., 2.
 Terataspis, Dev., N. Y. : Reimann, I. G., 1.
 Types, Royal Ontario Mus. Paleontology : Fritz, M. A., 3.
 United States, Perm. : Weller, J. M., 1.
 Wisconsin, Camb. : Twenhofel, W. H., 4.
 Worm on Camb. trilobite, Pa. : Ruedemann, R., 1.
 Tridymite, Wyo., Yellowstone Park rhyolite-basalt complex : Fenner, C. N., 1.

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Oil zones : Seismog. Serv. Corp., 1.

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Arcidae, Tert. : Rutsch, R., 1.

Foraminifera, Cipero marl : Cushman, J. A., 9.

Mollusca, Paleocene : Rutsch, R., 2.

Trout Creek oil field, La. : Blanpied, B. W., 3.
 Tuff.

Alberta, Cowley area : Hage, C. O., 1.

British Columbia, Premier mine deposits : Langille, E. G., 1.

California, Knoxville quicksilver dist. : Averitt, P., 1.

Santa Maria oil dist. : U. S. G. S., 1.

Cuba, Guisa-Los Negros area : Woodring, W. P., 1.

Nevada, Currant Creek dist. : Faust, G. T., 1.

Magnesium in : Vitaliano, C. J., 2.

Ontario, Cunningham-Garnet area : Meen, V. B., 2.

Porcupine dist. : Evans, J. E. L., 1.

Quebec, Beattie mine : Davidson, S. C., 1.

Bourlamaque Tp. : Norman, G. W. H., 1.

Wyoming, Yellowstone Park rhyolite-basalt complex : Fenner, C. N., 1;
 Wilcox, R. E., 1.

Tungsten.

Alaska : Joesting, H. R., 1.

Arizona, Bircana dist. and Aquarius Range : Hobbs, S. W., 1.

British Columbia, Alaska Highway area min. poss. : Thomas, L. O., 1.

Hazelton Cassiar dist. : Armstrong, J. E., 3.

Tyughton Lake area : Cairnes, C. E., 1.

Whitesail Lake area : Holland, S. S., 3.

California, Riverside Co. : Tucker, W. B., 2.

Canada, Alaska Highway, Watson Lake-Teslin River : Lord, C. S., 1.

Idaho, Ima mine paragenesis : Clabaugh, S. E., 1.

Mexico : Rodriguez Cabo, J., Jr., 1.

Baja Calif. : Antúnez Echegaray, F., 3.

Pacific Coast : González Reyna, J., 1.

Sierra de Juarez, Baja Calif. : Fries, C., Jr., 1.

Sonora : Wiese, J. H., 1.

Missouri : Branson, E. B., 3.

Montana, Jardine-Crevasse Mtn. dist. : Seager, G. F., 1.

Nevada ore deposits : York, B., 1.

Rye Patch area : Vitaliano, G. J., 1.

New Mexico, Iron Mtn. dist. : Jahns, R. H., 1.

North America, Alaska Highway poss. : Lord, C. S., 2.

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- North Carolina poss.: Anonymous, 9.
 Townsville area: White, W. A., 3.
 Vance Co.: Munds, W. H., 1.
 Northwest Territories: Jolliffe, A. W., 2.
 Ontario, Hollinger mine: Allen, C. C., 1.
 Quebec: Dufresne, A. O., 1.
 Saskatchewan, N.: Anonymous, 105.
 South Dakota, min. res.: Rothrock, E. P., 1.
 Ultra-violet light in prosp.: Warren: T. S., 1.
 United States min. reserves: Joralemon, I. B., 1.
 Southwestern, manganese ores: Fleischer, M., 2.
 Utah, Beaver Co.: Hobbs, S. W., 2.
 Cottonwood-American Fork dists.: Crawford, A. L., 6.
 Reaper mine pipe: Crawford, A. L., 5.
 Yukon, Upper McQuesten River area: Bostock, H. S., 1.
 Turquoise. See also Gems.
 Colorado: Pearl, R. M., 3.
 Mexico, Baja Calif.: Antúñez Echegaray, F., 3.
 Twinning, Dauphiné, in quartz from sawing: Frondel, C., 2.
 Twinning, frequency, quartz crystals: Gault, H. R., 3.
 Types, isostatic adjustment: Jeffreys, H., 1.
 Ulexite, Calif. borate minerals: Harriman, W. R., 1.
 Ultraviolet light in min. prospecting: De Ment, J. A., 5; Warren, T. S., 1.
 Unakite, Tenn.: Anonymous, 94.
 Unconformities.
 Alabama, Cret. area: Carlston, C. W., 1.
 Midway-Wilcox contact area: Toulmin, L. D., Jr., 2.
 Southwest: SE. Geol. Soc., 1.
 Tertiary fms.: Toulmin, L. D., Jr., 1.
 Tuscaloosa, Cottondale quads.: U. S. G. S., 1.
 West-central, Cret.: McGlamery, W., 1.
 Alberta, Alexo area: Crombie, G. P., 1.
 Dyson Creek area: Hage, C. O., 2.
 Red Deer, Rosebud area: Allan, J. A., 2.
 South, structure drilling for oil: Furnival, G. M., 1.
 Vermillion area: Nauss, A. W., 1.
 Arizona, Grand Canyon, Colo. River: Cueto Rul-Díaz, E., 1.
 Superior mining area: Short, M. N., 1.
 Tombstone dist., Uncle Sam porphyry: Gilluly, J., 2.
 Arizona-Utah, East Kaibab monocline: Babenroth, D. L., 1.
 Arkansas, Batesville dist.: U. S. G. S., 1.
 British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.
 Hazelton, Cassiar dist.: Armstrong, J. E., 3.

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- California, Ione area: Bates, T. F., 1.
 Knoxville ser.: Anderson, F. M., 1.
 Lost Hills oil field: Barton, D. C., 3.
 Needles-Goffs area, San Bernardino Co.: Miller, W. J., 3.
 Palm-Springs-Blythe Strip, Riverside Co.: Miller, W. J., 1.
 Rio Vista gas field: Frame, R. G., 1.
 Santa Cruz area: U. S. G. S., 1.
 Santa Lucia Range: Taliaferro, N. L., 1.
 Canada: MacKay, B. R., 3.
 Duparquet-Larder Lake-Rouyn area: Ambrose, J. W., 1.
 Liard River area, lower: Hage, C. O., 5.
 Manitoba dist.: Hutt, G. M., 15.
 Colorado: Northwest: U. S. G. S., 2.
 Colorado, Red Creek area, Fremont Co.: Glockzin, A. R., 1.
 Rangely field and Uinta Basin: Bench, B. M., 1.
 Sawatch Range area: Johnson, J. H., 3.
 Florida, S.: Parker, G. G., 2.
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 Georgia, Coastal Plain: Cooke, C. W., 1.
 Southwest: Herrick, S. M., 1; SE. Geol. Soc. 2.
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 Southern: Weller, J. M., 1.
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 Outcropping rocks: Moore, R. C., 4.
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 Manitoba, Island Lake area: McMurchy, R. C., 1.
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 Poza Rica area, Veracruz: Arellano, A. R. V., 1.

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 Marquette iron range: Seaman, W. A., 1.
 Republic area: Ayres, V. L., 1.
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 Michigan Basin, Dundee fm., Rogers City ls.: U. S. G. S., 1.
 Minnesota, southern: Thiel, G. A., 1.
 Mississippi, Heidelberg field: McCullough, R. A., 1.
 Monroe Co.: Vestal, F. E., 1.
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 South-central: U. S. G. S., 2.
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 Londonderry area: Weeks, L. J., 2.
 Mabou coal area: Douglas, G. V., 6.
 St. Rose-Chimney Corner coal field: Bell, W. A., 1.
 Upper Musquodoboit area: Messerve, J. P., 1.
 Oklahoma, Apache field: Scott, V. C., 1.
 Arbuckle Mts.: Lehman, R. P., 1.
 Bromide area: Ham, W. E., 2.
 Velma field: Rutledge, R. B., 1.
 Ontario, Beatty-Munro area: Satterly, J., 1.
 Fort Hope area: Prest, V. K., 1.
 Gauthier Tp., Kirkland Lake area: Thomson, Jas. E., 1.
 Porcupine dist.: Evans, J. E. L., 1.
 Red Lake area: Horwood, H. C., 2, 3.
 Renfrew area: Satterly, J., 2.
 Stover Tp.: Horwood, H. C., 1.
 Whitefish Bay area: Fraser, N. H. C., 1.
 Oregon, coast S.: Baldwin, E. M., 1.
 Coos Bay quad.: Allen, J. E., 1.
 Pennsylvania, cent., Ord.: Kay, G. M., 2.
 Conemaugh Gorge Missn.: Fettke, C. R., 2.
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 Oil City quad.: Dickey, P. A., 1.
 Quebec, Beattie mine: Davidson, S. C., 1.
 Opaoka River area: Freeman, B. C., 2.

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 Scotstown, Wolfe, Compton, Frontenac Cos.: Cooke, H. C., 1.
 Stanstead area, Brome and Stanstead Cos.: Ambrose, J. W., 2.
 South Dakota, Dewey, Corson Cos.: Morgan, R. E., 1.
 Texas, Coastal Plain, Oakville, Cuero, Goliad fms.: Weeks, A. W., 2.
 Hueco Mts., El Paso, Hudspeth Cos.: U. S. G. S., 1.
 Lee Co.: Harris, G. D., 1.
 Lower Rio Grande Valley: Wynd, F. L., 2.
 Moore Co.: Fosshage, E. W., 1.
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 Smoothingiron mass: Romberg, F., 1.
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 West Ranch oil field, Jackson Co.: Bauernschmidt, A. J., Jr., 1.
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 Utah, northeast: U. S. G. S., 2.
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 Uinta Basin Cret.: Walton, P. T., 1.
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 Wyoming, central: Branson, E. B., 6.
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ganese ores: Fleischer, M., 2.

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len, V. T., 3.

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tigraphy: Richards, H. G., 5.

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Historical geology—Continued.

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 Blancon, time term : Elias, M. K., 2.
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 Clay deposits, W. : Wimmer, N. L., 1.
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 Permian, marginal marine strata : Clifton, R. L., 1.

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 Teays, Tert. River : Ver Steeg, K., 4.
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United States—Continued.

Physiographic geology—Continued.

- Citronelle fm. Pleist.: Fisk, H. N., 2.
 Clarkston stage, Pleist., NW.: Luper, R. L., 3.
 Columbia intermontane prov. divs.: Freeman, O. W., 3.
 Cordilleran glaciation, scabland, lakes: Hobbs, W. H., 7.
 Deserts: Price, W. A., 1.
 Geologic levels., SE. Gulf Coast: Brankstone, H. R., 1.
 Glacial drift, older, Middle West: Hurst, H., 1.
 Green, White, Adirondack Mts.: Peattie, R., 1.
 High Plains, dunes: Hefley, H. M., 1.
 Iowan is outwash from Des Moines lobe of Wisconsin glaciation: Hobbs, W. H., 8.
 Loess, lower Miss. Valley: Holmes, C. D., 4.
 Origin, Miss. Valley: Russell, R. J., 2.
 Map, tectonic: King, P. B., 1.
 Mississippi Valley drainage: Frye, J. C., 2.
 Mounds, small, Gulf Coastal Plain: Dietz, R. S., 1.
 Olympic-Wallowa lineament: Raisz, E. J., 1.
 Pollen analysis and history: Deevey, E. S., Jr., 1.
 Rock streams, periglacial, Blue Ridge area: Smith, H. T. U., 3.
 Sedimentation, Gulf Coast, Tex.-La. Storm, L. W., 1.
 Soil, origin, erosion, preservation: Twenhofel, W. H., 1.
 Stream selectivity, middle Appalachian Valley: Sharp, H. S., 1.
 Streams, drainage basins, erosional devel.: Horton, R. E., 1.
 Tcays, Tert. River: Ver Steeg, K., 4.
 Wisconsin valleys, Miss. River system: Fisk, H. N., 1.

Underground water.

- Atlantic Coast deep wells: Richards, H. G., 7.
 Geologic data from the war effort: Denison, A. R., 2.
 Granite soils, coloration, Piedmont: White, W. A., 1.
 Ground water: Meinzer, O. E., 1, 2.
 Chemical character, SE.: Lamar, W. L., 1.
 For war purposes: McGuinness, C. L., 1.
 Southeastern area: Belser, W. S., 1.
 Southwest: Dott, R. H., 3.
 Storage: Conkling, R., 1.
 Oil-field waters: Berger, W. R., Jr., 1.
 Rocky Mtn. oil field waters: Crawford, J. G., 1.
 U. S. Geol. Survey work on ground water supplies: McGuinness, C. L., 1.

U. S. Geol. Survey Military Unit: U. S. G. S., Mil. Geol. Unit, 2.

Uraninite.

- Colorado minerals: Pearl, R. M., 3.
 Mexico, radioactivity: Blau, M., 1.
 New Hampshire, Ruggles mine: Shaub, B. M., 1.

Uranium.

- Fluorescence test for: Sill, C. W., 1.
 Mexico, radioactive minerals: Blau, M., 1; Castro, C., 1.
 North America: Vanderwilt, J. W., 1.
 Radioactivity: Beers, R. F., 2.
 North Carolina, Spruce Pine monazite: Bliss, A. D., 1.
 Oregon: Anonymous, 87.
 United States, radioactivity in old rocks: Beers, R. F., 1.

Utah.

- Bibliography, geology, min. res.: Stringham, B. F., 1.
 Utah's rumbling mts., House Range: Kelly, C., 2.

Areas described.

- Sevier River Valley, upper: Gregory, H. E., 1.
 Uinta Basin Cret.: Walton, P. T., 1.

Economic geology.

- Asphalt-rocks: Anonymous, 62.
 Clay Basin gas field: Dobbin, C. E., 2.
 Fluorspar, Beaver Co.: Marsh, J. A., 1.
 Hydrocarbons, Uinta Basin: Barb, C. F., 1, 3.
 Iron ore, Iron Peak: Crawford, A. L., 2.
 Magnesite: Crawford, A. L., 7.
 Manganese, Traverse Mts.: Crawford, A. L., 3.
 Mesozoic, Paleozoic, NE.: U. S. G. S., 2.
 Salt Valley potash: Dyer, B. W., 1.
 Tintic dist., E.: Lovering, T. S., 3.
 Tungsten, Beaver Co.: Hobbs, S. W., 2.
 Cottonwood-American Fork dists.: Crawford, A. L., 6.
 Reaper mine pipe, Gold Hill: Crawford, A. L., 5.

Historical geology.

- Big Cottonwood Canyon, Carb.: Calkins, F. C., 2.
 Brazer-lower wells sec., Dry Lake: Williams, J. Stewart, 2.
 Clay Basin gas field: Dobbin, C. E., 2.
 Drill core study, Coalville: Hasler, J. W., 1.
 East Kaibab monocline: Babenroth, D. L., 1.
 Explorations, sci., south Utah: Gregory, H. E., 2.
 Hydrocarbons, Uinta Basin: Barb, C. F., 1.
 Mesozoic, Paleozoic, NE.: U. S. G. S., 2.
 Nonconclature, N. E. Trias rocks: Williams, J. Stewart, 1.
 Pennsylvanian rocks, fusulinids: Thompson, M. L., 4.
 Post-Wasatch Tert. fms., SW.: Gregory, H. E., 2.

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Historical geology—Continued.

Salt Valley potash deposit: Dyer, B. W., 1.

Sevier River Valley, upper: Gregory, H. E., 1.

Tintic dist., E.: Lovering, T. S., 3.

Tungsten deposits, Beaver Co.: Hobbs, S. W., 2.

Uinta Basin Cret.: Walton, P. T., 1.

Wasatch Mts., N.-cent.: Eardley, A. J., 1.

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Alunite in lavas, San Francisco dist.: Reiser, A. R., 1.

Asphalt rocks: Anonymous, 62.

Aurichalcites, Ophir: Anonymous, 92.

Bromine in carnallite, sylvite: Lindberg, M. L. L., 3.

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Drum Mts. siderite: Anonymous, 68, 69, 71, 75.

Fluorspar, Beaver Co.: Marsh, J. A., 1.

Iron ore, Iron Peak: Crawford, A. L., 2.

Manganese, Traverse Mts.: Crawford, A. L., 4.

Martite iron deposits, Twin Peaks: Crawford, A. L., 4.

Selenite crystals, desert: Kelly, C., 3.

Tintic dist., E.: Lovering, T. S., 3.

Tungsten, Beaver Co.: Hobbs, S. W., 2.

Cottonwood-American Fork dists.: Crawford, A. L., 6.

Reaper mine pipe, Gold Hill: Crawford, A. L., 5.

Zunyte, Tintic dist.: Lovering, T. S., 1.

Paleontology.

Brazer-lower wells sec., Dry Lake: Williams, J. Stewart, 2.

Dinosaurs, Juras., Emery Co.: Stokes, W. L., 2.

Kaibab: Laudermilk, J. D., 7.

Eopuntia douglassii: Laudermilk, J. D., 8.

Eopuntia, Eocene cactus: Chaney, R. W., 8.

Fuslinids, Penn. rocks: Thompson, M. L., 4.

Gastropod, Cret., Iron Co.: Yen, T.-C., 4.

Hederella, Penn.: Condra, G. E., 4.

Mammalia, Duchesne River Oligocene: Scott, W. B., 1.

Rhombotrypella, Penn.: Condra, G. E., 2.

Syrphidae, Tert.: Hull, F. M., 1.

Uinta Basin Cret.: Walton, P. T., 1.

Wah Wah Valley fossils: Kelly, C., 1.

Wasatch Mts., N.-cent.: Eardley, A. J., 1.

Petrology.

Amazon stone feldspar, House Range Mts.: Crawford, A. L., 1.

Drill core study, Coalville: Hasler, J. W., 1.

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Petrology—Continued.

East Kaibab monocline: Babenroth, D. L., 1.

Iron ore, Iron Peak: Crawford, A. L., 2.

Mesozoic, Paleozoic, NE.: U. S. G. S., 2.

Post-Wasatch Tert. fms., SW.: Gregory, H. E., 2.

Sevier River Valley, upper: Gregory, H. E., 1.

Tungsten, Beaver Co.: Hobbs, S. W., 2.

Reaper mine pipe, Gold Hill: Crawford, A. L., 5.

Uinta Basin Cret.: Walton, P. T., 1.

Wasatch Mts., N.-cent.: Eardley, A. J., 1.

Physical geology.

Amazon stone feldspar, House Range Mts.: Crawford, A. L., 1.

Big Cottonwood Canyon, Carb.: Calkins, F. C., 2.

Caves, Mt. Timpanogas: Bullock, K. C., 1.

Drill core study, Coalville: Hasler, J. W., 1.

East Kaibab monocline: Babenroth, D. L., 1.

House Range, rumbling mts.: Kelly, C., 2.

Iron Peak, iron ores: Crawford, A. L., 2.

Landslide, Zion Canyon: Grater, R. K., 1.

Logan Cave origin, devel.: Church, V., 1.

Manganese deposits, Traverse Mts.: Crawford, A. L., 3.

Mesozoic, Paleozoic, NE.: U. S. G. S., 2.

Salt Valley potash beds: Dyer, B. W., 1.

Sevier River Valley, upper: Gregory, H. E., 1.

Southwest Tert. fms.: Gregory, H. E., 2.

Tintic dist., E.: Lovering, T. S., 3.

Tungsten deposits, Beaver Co.: Hobbs, S. W., 2.

Cottonwood-American Fork dists.: Crawford, A. L., 6.

Reaper mine pipe, Gold Hill: Crawford, A. L., 6.

Uinta Basin Cret.: Walton, P. T., 1.

Wasatch Mts., N.-cent.: Eardley, A. J., 1.

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East Kaibab monocline: Babenroth, D. L., 1.

Escalante Bay of Lake Bonneville, shorelines: Dennis, P. E., 1.

Manganese deposits, Traverse Mts.: Crawford, A. L., 3.

Rainbow Bridge: Anonymous, 80.

Sevier River Valley, upper: Gregory, H. E., 1.

Wasatch Mts., N.-cent.: Eardley, A. K., 1.

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Underground water.

Logan Cave, origin, devel.: Church, V., 1.

Post-Wasatch Tert. fms., SW.: Gregory, H. E., 2.

Wasatch Mts., N.-cent.: Eardley, A. J., 1.

Utility, geod. control surveys: Garner, C. L., 1.

Valleys.

South Carolina, erosion in: Happ, S. C., 3.

South Dakota, Beecher Rock Basin: Gwynne, C. S., 2.

Streams, drainage basins, erosional devel.: Horton, R. E., 1.

Vanadinite, Apache mine, Ariz., Gila Co.: Keithley, H. S., 1.

Vanadium.

Arizona, Apache mine, Gila Co.: Keithley, H. S., 1.

British Columbia, coast: Gunning, H. C., 2.

Depth relations: Warren, H. V., 3.

Canada, W., sphalerites: Warren, H. V., 5.

Determination, vanadium in chromite: Husted, J. E., 1.

Oregon, black sand: Allen, J. E., 3.

United States: Johnson, A. C., 1.

Mineral reserves: Joralemon, I. B., 1.

Southwestern, manganese ores: Fleischer, M., 2.

Variations in crustal layers: Gutenberg, B., 7.

Varves, varved clays.

Canada, Port Arthur to Winnipeg: Hutt, G. M., 11.

North America, late-glacial clay chronology: Antevs, E. V., 1.

Quebec, Moisie area, Saguenay Co.: Faessler, C., 2.

Vaughan-Pickens oil field, Miss.: Morse, W. C., 5; Anonymous, 38.

Vaughanite, Ord. bentonite beds, SE. U. S.: Fox, P. P., 2.

Velma oil and gas fields, Okla.: Rutledge, R. B., 1.

Velocity, correction method: Daly, J. W., 1.

Load, of stream: Quirke, T. T., 1.

Ventifacts. See also Wind work.

Indiana, wind-polished pebbles, Newton Co.: Fidler, M. M., 1.

Selva Lacandona, Mex., Guatemala: Mullerried, 5.

Vermes. See also Invertebrata (general).

Colorado, Paleozoic faunas: Johnson, J. H., 7.

Conodonts related to worms?: Denham, R. L., 1.

Fauna, Eocene Santee ls., N. Car.: Harbison, A., 1.

Marine Tert. fms., Wash.-Oreg.: Weaver, C. E., 1.

Vermes—Continued.

Mexico, NE., Tert. fms.: Gardner, J. A., 3.

Mollusca, Cret., Ripley fm., Dumas area, Miss.: Harbison, A., 2.

New Mexico, Sandia fm. fauna: Northrop, S. A., 1.

New York, Cocksackie quad. faunas: Goldring, W. 3.

Nova Scotia, St. Rose-Chimney Corner coal field: Bell, W. A., 1.

Quebec faunas: Dresser, J. A., 1.

Terebellid, Penn., Tex.: Howell, B. F., 9.

Teredo wood, Oreg.: Wharton, J. R., 1.

Texas, Irving area concretions: Loving, G., 1.

Worm on Camb. trilobite, Pa.: Ruedemann, R., 1.

Vermiculite.

South Carolina: Taber, S., 1.

Wyoming: Hagner, A. F., 1.

Vermont.

Economic geology.

Barre dist.: Mould, W. P., 1.

Historical geology.

Bellows Falls quad.: Kruger, F. C., 1.

Highgate Springs Ord. rocks: Kay, G. M., 6.

Taconic thrust sheet, N. end: Kaiser, E. P., 1.

West-central: Cady, W. M., 2.

Petrology.

Bellows Falls quad.: Kruger, F. C., 1.

Granite, Barre dist.: Mould, W. P., 1.

Taconic thrust sheet, N. end: Kaiser, E. P., 1.

West-central: Cady, W. M., 2.

Physical geology.

Bellows Falls quad.: Kruger, F. C., 1.

Highgate Springs Ord. rocks: Kay, G. M., 6.

Taconic thrust sheet, N. end: Kaiser, E. P., 1.

West-central: Cady, W. M., 2.

Physiographic geology.

West-central: Cady, W. M., 2.

Vertebrata (general). See also Amphibia, Aves, etc.

Arizona, Perm., Trias.: Laudermilk, J. D., 5.

British Columbia, Alaska Highway, Ft. St. John-Ft. Nelson: Hage, C. O., 3.

Burkeville Miocene fauna, Tex.: Stenzel, H. B., 1.

Ecology of marine organisms: Ladd, H. S., 3.

Fauna, Quat., High Plains, Tex.: Evans, G. L., 6.

Georgia, Coastal Plain: Cooke, C. W., 1.

Huff, W. P., collector, Pleist, Tex.: Geiser, S. W., 3.

Iowa, Illinoian and post-Illinoian Pleist.: Kay, G. F., 2.

John Day area, Oreg.: Merriam, J. C., 1.

Vertebrata (general)—Continued.

- Kansas: Lane, H. H., 1.
 North-central, Pleist.: Hibbard, C. W., 1.
 Loess, lower Miss. Valley, U. S.: Russell, R. J., 1.
 Mankind so far: Howells, W. W., 1.
 New Jersey, Brandywine Lighthouse boring, fauna: Richards, H. G., 2.
 Oral cavity and jaws, evolution: Gregory, W. K., 1.
 Paleontology: Romer, A. S., 3.
 Texas, Quat., High Plains: Evans, G. L., 6.
 Tracks, Coconino ss., Grand Canyon: McKee, E. D., 1.
 Vertical control surveys for reconnaissance maps: Fueschel, C. F., Jr., 1.
 Vertical source in oil and gas accumulation. Gardner, J. H., 1.
 Vibrations from blasting: Leet, L. D., 1.
 Violarite.

Canada, nickel sulphide oxidation: Michener, C. E., 1.

Nickel sulphide oxidation: Buddington, A. F., 1.

Virginia.

- Minerals in war: Bevan, A. C., 1.
 Mineral resources into mineral industries: Bevan, A. C., 4.

Areas described.

- Burkes Garden quad.: Cooper, B. N., 1.
 Coastal Plain: Cederstrom, D. J., 1.
 Glade Mtn. dist.: Miller, R. L., 1.

Economic geology.

- Appalachian area, oil and gas, 1943-44: Appalachian G. Soc., 2.
 Bauxite deposits, geomorphic relations: Bevan, A. C., 5.
 Burkes Garden quad.: Cooper, B. N., 1.
 Glade Mtn. dist.: Miller, R. L., 1.
 Ilmenite deposit, sludge sampling: Davidson, D. M., 1.
 Kaolinized pegmatites: Brown, W. R., 2.
 Limestone: Cooper, B. N., 3.
 Limestones, dolomites, industrial, New-Roanoke Rivers dist.: Cooper, B. N., 3.
 Manganese, Bland, Giles Cos.: Ladd, H. S., 2.
 Manganese and quartzite, Lick Mtn. dist.: Stead, F. W., 1.
 Mineral resources into mineral industries: Bevan, A. C., 4.
 Minerals in war: Bevan, A. C., 1.
 Rose Hill oil field: U. S. G. S., 1.
 Rutile, geol. occurrence: Ross, C. S., 3.
 Sweet Springs dist. manganese deposits: Ladd, H. S., 1.

Historical geology.

- Burkes Garden quad.: Cooper, B. N., 1.
 Coastal Plain stratigraphy: Cederstrom, D. J., 1.
 Well logs: Cederstrom, D. J., 2.
 Facies variation, Ord., Appalachian Valley: Cooper, B. N., 4.

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Historical geology—Continued.

- Geomorphic relations, bauxite deposits: Bevan, A. C., 5.
 Glade Mtn. dist.: Miller, R. L., 1.
 Limestones, dolomites, industrial, New-Roanoke Rivers area: Cooper, B. N., 3.
 Manganese, Bland, Giles Cos.: Ladd, H. S., 2.
 Manganese and quartzite, Lick Mtn. dist.: Stead, F. W., 1.
 Miocene: Gardner, J. A., 2; Mansfield, W. C., 1.
 Ordovician, Middle, lss., Va.-Ky.: Huffman, G. G., 1.
 Rose Hill oil field: U. S. G. S., 1.
 Shenandoah Nat. Park: Rickard, H. L., 1.
 Sweet Springs dist. manganese deposits: Ladd, H. S., 1.

Mineralogy.

- Bauxite deposits, geomorphic relations: Bevan, A. C., 5.
 Beryl occurrences: Brown, W. R., 1.
 Burkes Garden quad.: Cooper, B. N., 1.
 Glade Mtn. dist.: Miller, R. L., 1.
 Ilmenite deposit, sludge sampling: Davidson, D. M., 1.
 Kaolinized pegmatites: Brown, W. R., 2.
 Manganese, Bland, Giles Cos.: Ladd, H. S., 2.
 Manganese and quartzite, Lick Mtn. dist.: Stead, F. W., 1.
 Mineral resources into mineral industries: Bevan, A. C., 4.
 Minerals in war: Bevan, A. C., 1.
 Pegmatites: Pegau, A. A., 1.
 Punch Jones diamond: Holden, R. J., 1.
 Rutile, geol. occurrence: Ross, C. S., 3.
 Sweet Springs dist. manganese deposits: Ladd, H. S., 1.
 Wavellite, Rorer mine: Holden, R. J., 2.
 Weinschenkite, Rockbridge Co.: Milton, C., 1.

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- Burkes Garden quad.: Cooper, B. N., 1.
 Coastal Plain: Cederstrom, D. J., 1.
 Foraminifera, Aquia fm.: Cushman, J. A., 4.
 Graptolites, Camb.: Decker, C. E., 8.
 Miocene: Gardner, J. A., 2; Mansfield, W. C., 1.
 Ordovician, Middle, lss., Va.-Ky.: Huffman, G. G., 1.
 Paleozoic fossil homonyms: Flower, R. H., 2.
 Pelecypoda, Miocene, Pliocene: Gardner, J. A., 2.
 Yorktown fm.: McGavock, C. B., Jr., 1.
Petrology.
 Burkes Garden quad.: Cooper, B. N., 1.
 Facies variation, Ord., Appalachian Valley: Cooper, B. N., 4.
 Glade Mtn. dist.: Miller, R. L., 1.

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- Limestone: Cooper, B. N., 3.
 Covington-Staunton-Buchanan area:
 Edmundson, R. S., 1.
 Limestones, dolomites, industrial, New-
 Roanoke Rivers dist.: Cooper, B.
 N., 2.
 Ordovician, Middle, Va.-Ky.: Huff-
 man, G. G., 1.
 Manganese and quartzite, Lick Mtn.
 dist.: Stead, W. F., 1.
 Rose Hill oil field: U. S. G. S., 1.
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 1.
 Soils, Fauquier Co.: Petro, J. H., 1.

Physical geology.

- Burkes Garden quad.: Cooper, B. N., 1.
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 Erosion, upper Chesapeake Bay area:
 Gottschalk, L. C., 1.
 Faults, overthrust: Miller, R. L., 2.
 Glade Mtn. dist.: Miller, R. L., 1.
 Kaolinized pegmatites: Brown, W. R., 2.
 Manganese, Bland, Giles Cos.: Ladd,
 H. S., 2.
 Manganese and quartzite, Lick Mtn.
 dist.: Stead, W. F., 1.
 Ordovician, Middle, lss., Va.-Ky.: Huff-
 man, G. G., 1.
 Rose Hill oil field: U. S. G. S., 1.
 Sallings Mtn. area: Bloomer, R. O., 1.
 Shenandoah Nat. Park: Rickard, H. L.,
 1.
 Sinks, Waynesboro area: McGill, W.
 M., 1.

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- Burkes Garden quad.: Cooper, B. N., 1.
 Coastal Plain well logs: Cederstrom, D.
 J., 2.
 Erosion, upper Chesapeake Bay area:
 Gottschalk, L. C., 1.

Underground water.

- Burkes Garden quad.: Cooper, B. N., 1.
 Coastal Plain well logs: Cederstrom, D.
 J., 2.

Virginia minerals in war: Bevan, A. C., 1.

Viscosity of lava: Wentworth, C. K., 3.

Vivianite, Monmouth Co., N. J.: Hawkins,

A. C., 2.

Volcanic ash. See also Volcanism; Vol-
 canoes; Volcanoes, extinct.Arizona, Sunset Crater: Cotton, H. S.,
 1.Colorado, Specimen Mtn.: Wahlstrom,
 E. E., 2.Hawaii, Kilauea Volcano solfataric rock
 alteration: Macdonald, G. A., 4.Kansas, Pleist. SW.: Hibbard, C. W.,
 2.Pleistocene cf. Pliocene: Swineford,
 A., 2.West-central, Pleist.: Frye, J. C., 1.
 Mexico City, Parícutin, ashes, grit:
 Hernández Velasco, J. A., 1.Nebraska, Pleist. loess: Schultz, C. B.,
 1.

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Oklahoma, Dev.: Miser, H. D., 1.

Parícutin volcano, Mex.: Flores, T., 3;
 Hernández Velasco, J. A., 1; Milton,
 C., 2.Tennessee, Douglas Dam area: Laurence,
 R. A., 1.Texas, Collingworth Co.: Baldwin, B.
 F., 1.

Fayette Co.: Sedlmeyer, J. J., 1.

Grimes Co.: Ramsey, G. D., 1.

Volcanic heat: Graton, L. C., 2.

Parícutin, Mex.: Graton, L. C., 3.

Volcanism. See also Volcanic ash; Vol-
 canoes; Volcanoes, extinct.Arizona, Uinkaret Plateau: Koons,
 E. D., 1.British Columbia coast: Gunning, H. C.,
 2.

Cuba: Palmer, R. H., 1.

Geology applied to Imbrian Plain of the
 moon: Spurr, J. E., 1.

Hawaiian Islands: Daly, R. A., 1.

AA lava flow structure: Macdonald,
 G. A., 7.Memilite-nepheline basalts: Stearns,
 H. T., 2.Mexico, El Oro y Tlalpujahua mining
 camp: Bracho V., F., 1.Parícutin volcano area: Williams, H.,
 2.New Hampshire, Mt. Washington area:
 Billings, K. S. F. L., 2.Ontario, Kerr Addison gold mine: Mc-
 Laren, D. C., 2.Pacific Basin, late geol. history:
 Stearns, H. T., 3.

Parícutin, Mex.: Covarrubias, L. F., 2, 3.

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 ism; Volcanoes, extinct.Alaska, Aleutian Islands: Freiday, D.,
 1.Akutan, Aleutian Is., Alaska: Freiday,
 D., 1.

Central America: Durham, H. W., 1.

El Nuevo, Nicaragua, 1850: Hobbs,
 W. H., 3.Hawaii, AA lava flow structure: Mac-
 donald, G. A., 7.

Honolulu ser.: Winchell, H., 1.

Mauna Kea Mtn.: Stearns, H. T., 1.

Melilite-nepheline basalts: Stearns,
 H. T., 2.Volcanic, seismic phenomena, 1944:
 Wingate, E. G., 2.Isalco, El Salvador, 1769: Durham,
 H. W., 1; Hobbs, W. H., 3.

Jorullo, Mex., 1759: Hobbs, W. H., 3.

Katmai, Alaska: Jaggar, T. A., Jr., 2.

Kilauea, Hawaii: Jaggar, T. A., Jr., 2.

1840 eruption: Macdonald, G. A., 2.

Steam vents: Fagerlund, G. O., 1.

Lassen Peak, Calif., Jaggar, T. A., Jr., 2.
 Makushan, Aleutian Is., Alaska: Frei-
 day, D., 1.Mauna Kea, Hawaii: Macdonald, G. A.,
 6.

Volcanoes—Continued.

- Mauna Loa, Hawaii: Lane, F. W., 1.
 1942 eruption: Macdonald, G. A., 1.
 Summit eruption, 12-8-43: Wingate, E. G., 1.
 Mexico eruptions: Flores, T., 1.
 Mexico and Central America: Sánchez, P. C., 1; Swainson, O. W., 1.
 Mt. Cleveland, Alaska, June 1944 eruption: Freiday, D., 1; Anonymous, 26.
 Mt. Pelée, Martinique: Anonymous, 43.
 Parícutin, Mex., 1943: Bodle, R. R., 3; Bullard, F. M., 3; Castigliola, J., 1; Covarrubias, L. F., 1, 2, 3; Flores, T., 3, 4; Foshag, W. F., 1; Fuller, R. E., 1; Graton, L. C., 1, 3; Green, J. A., 1; Hobbs, W. H., 3; Jaggard, T. A., Jr., 2; Killinger, P. E., 1; Lane, F. W., 1; Lawrence, D. B., 1, 2; Mullerried, F. K. G., 6; Nat. Research Council Comm., 1; Ordóñez, E., 1, 2, 3; Pough, F. H., 1; Trask, P. D., 1, 2; Valencia, R. F., 1, 2; Westland, A. J., 1; White, D. E., 1; Wickett, W. A., 1; Anonymous, 10, 14, 19.
 Cyclic activity: White, W. A., 1.
 Helicopter expedition: Graton, L. C., 4.
 1945: Eggler, W. A., 1.
 Origin and development: Bullard, F. M., 3.
 Pochutla, Mex., 1870: Hobbs, W. H., 3.
 Shishaldin, Aleutian Is., Alaska: Freiday, D., 1.
 Soufrière, St. Vincent, West Indies: Anonymous, 42.
 Viscosity of lava: Wentworth, C. K., 3.
 Volcanic heat: Graton, L. C., 2.
 West Indies, mtn.-uplift problem: Trechmann, C. T., 1.
 Volcanoes, extinct. See also Volcanic ash; Volcanism; Volcanoes.
 Alaska, Aleutian Islands: Freiday, D., 1.
 Arizona, Sunset Crater: Cotton, H. S., 1; Nichols, T., 1.
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Britannia mine No. 8 orebodies: Irvine, W. T., 1.

Hazleton Cassiar dist.: Armstrong, J. E., 3.

Manson Creek area: Armstrong, J. E., 5.

Nicola area: Cockfield, W. E., 2.

Omineca dist., poss.: Armstrong, J. E., 4.

Princeton area: Rice, H. M. A., 2.

Smithers area: Armstrong, J. E., 2.

Sullivan mine area: Swanson, C. O., 1.

Canada, W., sphalerites: Warren, H. V., 5.

Idaho, Birch Creek area: Anderson, A. L., 1.

Illinois, Galena dist.: Lincoln, F. C., 1.

Northwest: Willman, H. B., 1.

Kansas, resources: Landes, K. K., 1.

Manitoba, Sherridon area: Bateman, J. D., 6.

Sherritt Gordon mine area: Bateman, J. D., 2.

Mexico, Nuevo León: Mullerried, S.

Pacific Coast: González Reyna, J., 1.

Missouri: Branson, E. B., 3.

Montana, ore bodies, strat. control: Perry, E. S., 3.

Zinc—Continued.

- Nevada, Groom dist., Lincoln Co.:
Humphrey, F. L., 1.
Mining dists.: Ferguson, H. G., 1.
Ore deposits: York, B., 1.
- Newfoundland, Rambler mine area:
Quinn, H. A., 1.
- New Mexico, Silver City area: Entwistle, L. P., 1.
- North America, Alaska Highway poss.:
Lord, C. S., 2.
- Northwest Territories: Jolliffe, A. W., 2.
- Ontario, Kam Kotia mine mineralized zone: Ferguson, S. A., 1.
Owen Sound poss.: Caley, J. F., 2.
- Pennsylvania, Saucon Valley: Myers, R. E., 1.
- Quebec: DuFresne, A. O., 1.
Bourlamaque Tp.: Norman, G. W. H., 1.
- Economic minerals: Quebec Bur. Mines, 1.
- Federal mine area: Auger, P. E., 2.
- Moulton Hill deposits, E. Tps.: Hawley, J. E., 1; Rowe, R. C., 1.
- Saskatchewan min. poss.: Mawdsley, J. B., 1.
- Northern: Anonymous, 105.
- Sauconite: Ross, C. S., 4.
- Tennessee, eastern: Crawford, J., 1;
Kent, D. F., 1; Oder, C. R. L., 3.

Zinc—Continued.

- Tennessee—Continued.
- Greene Co.: Snyder, F. G., 1; Stockdale, P. B., 2.
- Jefferson City area ore bodies: Brokaw, A. L., 1.
- Mascot area: Oder, C. R. L., 2.
- Mascot-Jefferson City dists.: Oder, C. R. L., 1; Ziemke, P. C., 1.
- Northeast: King, P. B., 4.
- Tri-State dist., ore deposits: Fowler, G. M., 1.
- United States min. res.: Joralemon, I. B., 1.
- Upper Mississippi Valley dist.: Heyl, A. V., Jr., 1.
- Virginia, Glade Mtn. dist.: Miller, R. L., 1.
- Washington, Metaline Falls area: Huttli, J. B., 1.
- Zincite, Franklin Furnace, N. J.: Henderson, E. P., 3.
- Zircon.
- Colorado minerals: Pearl, R. M., 3.
- Indiana, Mansfield ss. minerals: Gault, H. R., 1.
- Massachusetts, Chelmsford granite-migmatite: Keevil, N. B., 3.
- Mexico, radioactivity: Blau, M., 1.
- New York, Monroe, Bear Mtn. Park min. locs.: Ayres, V. L., 2.
- Zunyite, Tintic dist., Utah: Lovering, T. S., 1.

Corrections for Bibliographies—Bulletins 937, 938, and 949

Bulletin 937, Bibliography of North American geology, 1929-39:

Page 1032:

Under Wilson, James Tinley:

In the reference following the name, change comma at end of first line to a period. Cancel the second line, "Canada G. S., 1."

Entries 1 to 3 are correct.

Following entry 3 of Wilson, James Tinley, insert new heading, "Wilson, John Tuzo. See also Canada G. S., 1."

Renumber entries 4 to 9, now erroneously listed under Wilson, James Tinley, so that they will stand as entries 1 to 6 under Wilson, John Tuzo.

Bulletin 938, Bibliography of North American geology, 1940-41:

Page 283:

Under Williams, James Steele:

Transfer last entry, "4. Correlation of the Bledsoe limestone . . ." to page 284, to stand as entry 4 under Wilson, Charles William, Jr.

Page 285:

After Wilson, James Tinley:

Cancel "also Canada G. S., 1;" leaving reference to read, "See Macelwane, J. B., 3."

Following the entry for Wilson, John Human:

Insert "Wilson, John Tuzo. See also Canada G. S., 1."

Transfer entries 1 and 2 now under Wilson, James Tinley, to stand under Wilson, John Tuzo.

Bulletin 949, Bibliography of North American geology, 1942-43:

Page 32:

Under Brown, Roland Wilbur:

Cancel entry 8. (NOTE.—This article is not by Brown and Salter but by Alexander Wetmore, and it is correctly entered on page 206, under Wetmore, entry 4.)

Page 168 :

Cancel the reference, "Salter, William Everett. See Brown, R. W., 8."

Page 33 :

Following entry 1 under Buckham, A. F., insert the name "Buckhannan, W. H."
Transfer to stand under Buckhannan the entry now under Buch, Jose Antonia,
"1. (and Ham, William Eugene). Preliminary investigations of heavy mineral
criteria . . ."

Pages 85, 309, 366, 367 :

Correct spelling of name to Buckhannan, W. H., from "Buchanan," in the following places :

Page 85, reference from Ham, William Eugene.

Page 309, column 1, under Heavy minerals, Oklahoma.

Page 366, column 2, under Oklahoma, Mineralogy, Heavy minerals.

Page 367, column 1, under Oklahoma, Petrology, Heavy minerals.

Page 134 :

(NOTE.—There are two different authors named John Charles Miller. Insert new heading and transfer reference to Dobbin so that the entries will read as shown below.)

Miller, John Charles. See Dobbin, C. E., 1.

Miller, John Charles.

1. Well spacing and production interference . . .



Here