E. J. LONGYEAR COMPANY
General Offices, 76 South 8th St.
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 9-7631 • CABLE LONGCO

March 7, 1959

United States Department of the Interior
Office of Minerals Exploration
224 New Customhouse
Denver 2, Colorado

OME
DEPARTMENT OF THE INTERIOR
MAR 11 1959
DENVER, COLORADO

Attention: J. W. Townsend, Executive Officer
OME Field Team, Region III

Final Report (March, 1959)

Re: Docket No. 4842 (Uranium)
Contract No. Idm-E1183
San Mateo Dome Project
E. J. Longyear Company, Agent
(San Mateo Dome Project)
McKinley County, New Mexico

Gentlemen:

The following is submitted as a Final Report on results of work completed on the San Mateo Dome Project, McKinley County, New Mexico, under DMEA Contract Idm-E1183.

INTRODUCTION

An application for assistance on a drilling program was first submitted to the Defense Minerals Exploration Administration in October of 1957. The application was approved in April, 1958 and a Contract with the Government was signed allowing for some 23 holes to be drilled in two stages of drilling, Stage II (10 holes) to be drilled only if Stage I results warranted and Government approval was given in writing. Government participation was to be at 75%. The approved program covered drilling in sections 27, 33, and 34, T. 14N., R. 8W., and sections 3 and 4, T. 13 N., R. 8W., NMPM, McKinley County, New Mexico.

In April, 1958 a second DMEA application was submitted covering a drilling program in the E $\frac{1}{2}$ of section 32, T. 14 N., R. 8 W., NMPM, McKinley County, New Mexico. The drilling covered all of the area in the E $\frac{1}{2}$ of the section south of the mesa slope, on a spacing of approximately 700 feet. Government participation was to be at 50%.

On June 28, 1958, an Amendment was made to the existing Contract (Idm-E1183), providing for additional work and funds as requested in the application of April, 1958. The Government Contract, as amended, covered

drilling 40 exploratory holes at an estimated cost of $176,770.00, of which the Government would contribute up to $114,235.00. The additional work allowed drilling up to 17 holes in the E ½ of section 32 in two stages of drilling.

The overall program (40 holes) was to be carried out in four stages of drilling. Stages I and III were to be drilled first, Stages II and IV to be drilled only if results of drilling in Stages I and III warranted, and Government approval was given in writing. Drilling under the Contract commenced May 13, 1958.

GENERAL GEOLORY

For details of straigraphy and structure in the area of which the San Mateo Dome Project is a part, reference is made to V. C. Kelley's Report on Geology and Uranium Possibilities of the San Mateo Dome Area, McKinley County, New Mexico. Mr. Kelley's Report was previously submitted to DMEA as Appendices to the applications for DMEA assistance which resulted in the Contract covered by this report. A general picture of the geology follows.

Stratigraphy

The rocks exposed in the San Mateo Dome area are the Mesaverde Group of Upper Cretaceous age. The broad valleys throughout the area and the steep canyons on the west and south are in the Mulatto shale member of the Crevasse Canyon formation. Covering most of the center and the western edge of the area steep cliffs occur, composed in ascending order, of the flat-lying Dalton sandstone and Gibson coal members of the Crevasse Canyon formation, and capped by the Point Lookout sandstone. Unexposed but lying below the Mulatto shale, in descending order, are the Dilco coal members of the Crevasse Canyon formation, Gallup sandstone, Mancos shale, and Dakota sandstone (Upper Cretaceous); Brushy Basin member of the Morrison formation (Jurrasic), the Westwater Canyon member of the Morrison (an upper Westwater Canyon sandstone lens intertongues with the overlying Brushy Basin shale in parts of the area, and is locally known as the Poison Canyon sandstone); and the Recapture Creek member of the Morrison formation.

The uranium ore deposits of the Ambrosia Lake area occur in the main body of the Westwater Canyon member of the Morrison formation and also in the Poison Canyon sand-tongue. In the San Mateo Dome area mineralization has been noted only in the Poison Canyon sand-tongue.

Structure

Reconnaissance drilling on the San Mateo Dome has confirmed the existence of an assymmetrical dome of post-Cretaceous age. Offset drilling in section 32 suggests that the axis of the dome passes through the center

of that section in a northeast direction. The dome is broken by numerous northeast-trending faults. Other faults with a different trend, not apparent on the surface, are indicated by drill hole information, as is pre-Cretaceous folding in the Morrison formation.

EXPLORATION

On May 13, 1958, drilling on the San Mateo Dome Project, under DMEA Contract Idm-E1183 was initiated. Drilling was continuous through October 24, 1958, at which time Stages I and III were completed. Results of drilling in Stages I and III did not justify completing Stages II and IV; however, a request was made on November 1, 1958 for an amendment to the Contract to allow for further drilling in the W $\frac{1}{2}$ of section 32 (see Fig. 1 attached). The request was for 6 holes. On December 9, 1958, tentative approval was given by the Government to drill 2 of the requested holes, with the provision to be made for additional holes should either of the first 2 penetrate ore-grade material. Because executed Consents to Lien forms covering additional ground to be subordinated under the Contract could not be obtained from all parties concerned, the request of November 1, 1958, was withdrawn on February 17, 1959.

During the term of the Contract, 45,016 feet were drilled in 22 completed holes. Total cost of the project was approximately $98,147.79, of which the Government contributed approximately $63,294.50.

Details of drilling, probing, and sampling under each Stage of the work follows.

Drilling

All holes were drilled by Scott Bros. Drilling Company of Grants, New Mexico, with a Failing truck-mounted Model 1500 drill rig and using 4 3/4 inch bits. When coring, a 4 inch bit was used to get a 2 5/16 inch core. Samples of drill cuttings indicated that all holes penetrated the Recapture member of the Morrison formation at least 20 feet.

Of the 45,016 feet drilled only 44,851 feet were submitted to the Government for reimbursement. The difference is explained by the fact that some of the holes penetrated the Recapture more than 20 feet and the Government only recognized depths up to 20 feet into the Recapture member.

Stage I - Drilling commenced May 13, 1958 and was completed September 10, 1958. A total of 26,376 feet were drilled in 13 completed holes (see Drill Hole Data Sheet attached). One hole was drilled in section 33, 5 in section 4, 2 in section 3, 4 in section 27, and 1 in section 34 (see attached Fig. 1 for hole locations).

Two holes, G-1-33 and G-9-27, were cored through the Westwater member. Total feet cored were 591; 334 feet in hole G-1-33, and 257 feet in hole G-9-27.

A total of 25,500 feet of non-core drilling and 700 feet of core drilling was allowed by the Contract. Of the 26,376 feet drilled, 26,261 feet were submitted to DMEA for reimbursement. The excess footage turned in was approved by DMEA by letter of November 10, 1958, to the San Mateo Dome Project from Mr. J. W. Townsend; the footage being covered by a transfer from that footage allowed under Stage II drilling.

Stage II - Results of Stage I drilling did not justify continuing with Stage II drilling, therefore no work was done under Stage II.

Stage III - Drilling started September 8, and was completed October 24, 1958. A total of 18,640 feet were drilled in 9 completed holes (see Drill Hole Data Sheet attached). All holes were drilled in the E ½ of section 32, spacing between holes being approximately 1000 feet north to south and 2000 feet east to west. None of the holes were cored. Of the 18,640 feet drilled, 18,590 feet were submitted to DMEA for reimbursement. The footage not submitted was deducted from the total because certain of the holes were drilled more than 20 feet into the Recapture member.

None of the holes penetrated ore-grade material.

Stage IV - Because Stage IV holes were to be drilled as offsets to Stage III holes that penetrated ore-grade material, no work was done under Stage IV.

Probing

All holes were probed by Century Geophysical Corporation of Tulsa, Oklahoma, using a truck-mounted Logging Control Unit, Model 2201. In each hole, there were recorded (when possible) three logs, gamma-ray, resistivity, and self-potential.

The geophysical logs indicated that all holes except one were drilled into the Recapture member at least 20 feet. The log on hole G-7-3 indicates that the Recapture was penetrated only 11 feet. The Drill Hole Date Sheet attached is a compilation of all data obtained from an interpretation of the gamma-ray, resistivity, and self-potential curves recorded on the geophysical logs. Because of their bulk (they are each 20 feet long) and the cost of reproduction, plus the fact that 5 copies of each log have previously been submitted, no logs will be submitted with this report. Should it be necessary that copies of the logs are needed arrangements can be made to submit them at a later date.

A total of 44,930 feet were probed in 22 completed holes. Of the total feet only 44,756 feet were submitted to DMEA for reimbursement. The difference is explained by the fact that some of the holes could not be probed to their entire depth because of caving, and by the fact that

some of the holes were drilled more than 20 feet into the Recapture but the Government only recognized depths up to 20 feet into the Recapture member.

Stage I - a total of 26,377 feet were logged in 13 completed holes. No above background radioactivity was recorded in any of the holes and all are considered barren (see Drill Hole Data Sheet attached).

The Westwater member ranges in thickness from 73 feet in hole G-7-3 to 202 feet in hole G-1-33. Average thickness is 132 feet. The Poison Canyon sand is thought to be present only in holes G-3-4 and G-4-4. In most of the other holes there exists several shale splits within what is interpreted as the Westwater and it is possible that the upper sand beds could be the Poison Canyon sand; however, this cannot be determined because of the distance between holes which makes correlation difficult, and the entire interval is called the Westwater member.

Of the total feet probed, only 26,166 feet were submitted for reimbursement.

Stage II - No holes were drilled under Stage II.

Stage III - A total of 18,653 feet were logged in 9 completed holes. No above background radioactivity was recorded in 7 of the 9 holes probed, indicating that they are barren. Two of the holes, G-15-32 and G-16-32, contained above background radioactivity and are considered mineralized. The indicated mineralization is in the Poison Canyon sand at a depth of approximately 1880 feet. Only slight mineralization, amounting to an estimated 1 - 3 feet of 0.03 -0.04% eU308 is indicated (see Drill Hole Data Sheet attached).

The Westwater member ranges in thickness from 106 feet in hole G-16-32 to 211 feet in hole G-22-32. Average thickness is 151 feet. The Poison Canyon sand unit is present in all but 3 holes. Average thickness of the Poison Canyon sand is approximately 50 feet. Thickness of the sand has no noticeable effect on the mineralization.

Of the total feet probed, only 18,590 feet were submitted to DMEA for reimbursement.

Stage IV - No holes were drilled under Stage IV.

Sampling

Dust and/or sludge samples were collected from every 10 feet of hole drilled. The samples were logged by a geologist and those through the Westwater were checked for radioactivity with a geiger counter. None

of the samples checked showed radioactivity above background. Samples through the Westwater were sacked and saved for study by the Government.

Contacts cannot be definitely determined from samples because of contamination. Therefore, there exists some discrepancies between contacts picked from a study of the sludge samples and those picked from the geophysical logs. This difference is not great; however, contacts used as reference points are taken from geophysical logs because of their greater accuracy. In all holes drilled sludge samples indicated that the Recapture member had been penetrated at least 20 feet.

When core drilling, all core was checked for radioactivity, stored in core boxes, and saved for future study. No samples were deemed worthy of chemical assay.

Stage I - Core and sludge samples from the holes indicate that bleached Westwater sand in excess of 100 foot thicknesses is present, and that coarse grained sand zones exist in the Westwater. In spite of these favorable conditions, gamma-ray logs show that all holes contain no above background radioactivity.

Stage II - No samples taken.

Stage III - As in Stage I sampling, sludge samples indicate that bleached Westwater sand in excess of 100 feet thicknesses is present, and that coarse grained sand zones exist in the Westwater. However, 7 of 9 holes are shown to be barren by the geophysical logs. In none of the holes were samples deemed worthy of chemical assay. Neither the samples from the barren holes nor the mineralized holes showed any above background radioactivity when checked with a geiger counter.

Stage IV - No samples taken.

Summary of Costs

Actual Costs (Stage I)

Category (1) Independent Contracts	Cost to SMDP	Cost submitted to DMEA
19,500 feet of non-core drilling 0-1,500 ft. depths, @ $1.50/ft.	$29,250,00	$29,250.00
6,285 ft. of non-core drilling,1,500 -2,200 ft. depths, @ $2.25/ft.	14,141.25	13,882.50
591 feet core drilling,1,600-2,200 ft. depths, @ $13.00/ft.	7,683.00	7,683.00

Category (1) Independent Contracts	Cost to SMDP	Cost submitted to DMEA
5.5 hours drill crew standby time @ $15.00/hr.	82.50	82.50
26,377 feet probing and logging @ $ 0.115/ft.	2,971.55	2,958.95
18.6 logging crew stand-by time @ $10.00/hr.	186.00	186.00
Cost of lost circulation material in excess of $100.00/hole (13 holes)	497.10	82.00
42 hrs. bulldozing @ $14.00/hr.	630.00	570.00
Categories (2) through (6) None		
Category (7) Miscellaneous		
70 cardboard core boxes @ $1.17 each	82.13	82.13
Chemical analyses - none taken		
Fixed Unit Costs		
Incidental allowance for each foot of hole drilled, 26,376 feet @ $0.18/ft.	4,747.68	4,726.98
TOTAL COST OF STAGE I	$60,271.21	$59,404.06

Actual Costs (Stage III) Category (1) Independent Contracts	Cost to SMDP	Cost submitted to DMEA
13,500 feet non-core drilling 0-1,500 ft. depths @ $1.50/ft.	20,250.00	20,250.00
5,140 feet non-core drilling 1,500-2,200 ft. depths, @ $2.25/ft.	11,565.00	11,452.50
22.5 hrs. drill crew stand-by time @ $15.00/hr.	337.50	135.00
18,653 feet probing and logging @ $ 0.115/ft.	2,055.98	2,045.23
9 hrs. logging crew stand-by @ $10.00/hr. & $17.00/hr.	102.90	74.00

	Cost to SMDP	Cost submitted to DMEA
Cost for lost circulation material in excess of $100.00/hole - none		
14 hrs. bulldozing @ $15.00/hr.	210.00	180.00
Categories (2) through (6) None		
Fixed Unit Costs		
Incidental allowance for each foot of hole drilled, 18,640 ft. @ $0.18/ft.	3,355.20	3,346.20
TOTAL COST OF STAGE III	$ 37,876.58	$37,482.93
TOTAL COST STAGE I & STAGE III.....	$ 98,147.79	$96,886.99
GOVERNMENT PARTICIPATION.....		$63,294.50

SUMMARY AND CONCLUSIONS

A total of 45,016 feet were drilled in 22 completed holes, in two stages of drilling. Stage I drilling was distributed over an area covering approximately three land sections with holes being drilled in each of five different sections. An evaluation of results of Stage I drilling indicate that all of the holes are barren and that there is no justification for further drilling in that area. Stage III drilling was distributed over an area covering only ½ section. An evaluation of results show two holes to be mineralized and seven holes to be barren. The two mineralized holes are 1000 feet apart with no holes between them, and although the mineralization encountered cannot be considered ore-grade, it does indicate the presence of near by ore-grade material. However, mineralization noted in holes SM 2-32 and SM 29-32, located immediately to the west and on the northeast end of a presently known ore zone where the known ore appears to be thinning out, indicates that the mineralization noted in holes G-15-32 and G-16-32 is probably a halo around the known ore to the west rather than mineralization on the sides of an eastern extension of that ore.

Sincerely yours,

E. J. LONGYEAR COMPANY

B. F. Sorensen

B. F. Sorensen
Project Engineer

BFS/emr

E. J. LONGYEAR COMPANY, AGENT
SAN MATEO DOME PROJECT

DRILL HOLE DATA — JOB NO.

FMEA Docket No. 4842 Sections 33, 34, 27 T14N, R8W and 3, 4, T13N, R8W
CONTRACT Idm-E1183
STAGES I & III
SECTION ___, T ___ N, R ___ W
McKINLEY COUNTY, NEW MEXICO

HOLE NO	Stage	COLLAR ELEV	COORDINATES	DEPTH DRILLED	DEPTH LOGGED	DATE COMP	Kd D	Kd E	Kd T	Jmbb D	Jmbb E	Jmbb T	JmPc D	JmPc E	JmPc T	JmPc (Base) D	JmPc (Base) E	JmPc (Base) T	Jmwc D	Jmwc E	Jmwc T	Jmrc D	Jmrc E	MINERALIZATION Depth of Top-Base	Elev. of Top-Base	Thickness cps, grade product	Rock Type B'k-Sill	Depth of Top-Base	Elev of Top-Base	Thickness cps, grade product	Rock Type B'k-Sill	Depth of Top-Base	Elev of Top-Base	Thickness cps, grade product	Rock Type B'k-Sill	Depth of Top-Base	Elev of Top-Base	Thickness cps, grade product	Rock Type B'k-Sill
STAGE I			N																																				
Sec. 33, T14N, R8W			E																																				
G-1-33	P.C.	7426.6	311,221 N 564,854 E	2036	2040	6/11/58	1602	5825	45	1647	5780	150	Missing			—	—	—	1828	5599	202	2030	5397	Barren															
Section 4 T13N, R8W			N E																																				
G-2-4	P	7383.4	304 200 N 564,800 E	2020	2012	7/3/58	1604	5779	39	1643	5740	157	Missing			—	—	—	1800	5583	199	1999	5384	Barren															
G-3-4	P	7444.5	307 200 N 564,800 E	2030	2027	7/17/58	1625	5820	38	1663	5782	191	1816	5629	25	1841	5604	—	1854	5591	124	1978	5467	Barren															
G-4-4	P	7353.2	309,635 N 566,908 E	2020	2025	7/31/58	1613	5740	46	1659	5694	201	1828	5525	20	1848	5505	—	1860	5493	120	1980	5373	Barren															
G-5-4	P	7383.3	307,539 N 566,831 E	2060	2073	7/31/58	1703	5680	47	1750	5633	135	Missing			—	—	—	1885	5498	135	2020	5363	Barren															
G-6-4	P	7289.7	308,200 N 568,800 E	2050	2034	8/7/58	1655	5635	49	1704	5586	150	Missing			—	—	—	1854	5436	160	2014	5276	Barren															
Section 3 T13N, R8W			N E																																				
G-7-3	P	7277.8	307,700 N 570,800 E	2070	2081	8/13/58	1801	5477	45	1846	5432	151	Missing			—	—	—	1997	5281	73	2070	5208	Barren															
G-8-3	P	7354.7	308,500 N 572,600 E	2295	2295	8/16/58	1929	5426	42	1971	5384	155	Missing			—	—	—	2126	5229	114	2240	5115	Barren															
Section 27 T14N, R8W			N E																																				
G-9-27	P.C.	7419?	317,400 N 571,200 E	1907	1905	9/6/58	1506	5913	43	1549	5870	171	Missing			—	—	—	1720	5699	180	1900	5519	Barren															
G-10-27	P	7410?	316,200 N 569,200 E	1940	1950	8/20/58	1600	5810	42	1642	5768	118	Missing			—	—	—	1760	5650	128	1888	5522	Barren															
G-12-27	P	7370?	315,900 N 573,200 E	2090	2090	8/31/58	1707	5663	38	1745	5625	151	Missing			—	—	—	1896	5474	131	2027	5343	Barren															
G-13-27	P	7447?	317,900 N 573,200 E	1970	1970	9/10/58	1527	5920	38	1565	5882	195	Missing			—	—	—	1760	5687	151	1911	5536	Barren															
Section 34 T14N, R8W			N E																																				
G-11-34	P	7380?	315,400 N 571,200 E	1880	1875	8/25/58	1509	5871	44	1553	5827	104	Missing			—	—	—	1657	5723	181	1838	5542	Barren															
STAGE III			N E																																				
Section 32 T14N, R8W			N E																																				
G-14-32	P	7516.0	314,302 N 561,190 E	2080	2090	9/15/58	1690	5826	41	1731	5785	198	1863	5653	57	1920	5596	—	1929	5587	129	2058	5458	Barren															
G-15-32	P	7501.2	313,303 N 561,188 E	2070	2070	9/15/58	1682	5819	34	1716	5785	206	1857	5644	38	1895	5606	—	1922	5579	123	2045	5456	1876 -1877	5625 -5624	1 X 300 = 300													
G-16-32	P	7485.9	312,304 N 561,187 E	2080	2073	9/25/58	1641	5845	47	1688	5798	225	1822	5664	64	1886	5600	—	1913	5573	137	2050	5436	1884 -1885	5602 -5601	1 X 96 = 96													
G-17-32	P	7509.3	311,305 N 561,186 E	2070	2049	9/25/58	1656	5853	44	1700	5809	235	1842	5667	73	1915	5594	—	1935	5574	106	2041	5468	Barren															
G-18-32	P	7457.6	312,303 N 562,188 E	2050	2066	10/1/58	1632	5826	44	1676	5782	170	1784	5674	51	1835	5623	—	1846	5612	211	2057	5401	Barren															
G-19-32	P	7517.4	313,301 N 562,189 E	2080	2090	10/1/58	1699	5818	41	1740	5777	189	1887	5630	15	1902	5615	—	1929	5588	149	2078	5439	Barren															
G-20-32	P	7496.9	313 300 N 563,188 E	2100	2100	10/24/58	1689	5808	40	1729	5768	191	Missing			—	—	—	1920	5577	164	2084	5413	Barren															
G-21-32	P	7456.4	312,301 N 563,187 E	2090	2080	10/12/58	1648	5808	44	1692	5764	171	Missing			—	—	—	1863	5593	178	2041	5415	Barren															
G-22-32	P	7428.1	311,303 N 563,186 E	2030	2035	10/24/58	1620	5808	40	1660	5768	174	Missing			—	—	—	1834	5594	186	2020	5408	Barren															

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-5-4

SAN MATEO DOME PROJECT

Exploration at Sect. 4, T 13N, R 8W (mine, prospect, or place), Mc Kinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 7-19-58 Completed 7-31-58

Driller Scott Bros

Sampler Don S. Fratto

Collar elevation 7383.30

Coordinates (or bearing and distance from a reference point) N-307,539.19 E-566,831.15

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
0	40	40	Dust		4-3/4	Light brown sandy overburden			
40	70	30	Dust		"	Light brown to white medium to fine grained sandstone	Dalton SS (?)		
70	370	300	Dust & Sludge		"	Light to dark gray mudstone siltstone & shale	Mulatto shale		
						(Started using mud at 260)			
370	560	190	Sludge		"	Dark gray carbonaceous shale	Dilco (?)		
560	650	90	Sludge		"	Light gray to white, medium to fine grained sandstone	Gallup SS (?)		
650	1710	1060	Sludge		"	Dark gray mudstone, siltstone & shale	Mancos shale		
						(Sandstone members from 710-720 and 1040 to 1060)			
1710	1760	50	Sludge		"	Gray to tan, medium to fine grained sandstone	Dakota SS		
1760	1900	140	Sludge		"	Gray & green shale with local sand units	Brushy Basin		
1900	2040	140	Sludge		"	Light to dark gray, medium to fine grain arkosic sandstone	Westwater		
2040	2060	20	Sludge		"	Green & red shale	Recapture (?)		
			Bottom at 2060 feet						
					Note:	All samples through the Westwater sandstone were checked with a geiger counter & no radioactivity above the base count was noted.			
It is hereby certified that this is a true copy of the original log.									

B. Brenner
Project Engineer

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-4-4

SAN MATEO DOME PROJECT

Exploration at Sect. 4, T 13N, R 8W (mine, prospect, or place), Mc Kinley (county), New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 7-4-58 Completed 7-31-58

Driller Scott Brosl

Sampler Dan S. Fratto

Collar elevation 7353.24

Coordinates (or bearing and distance from a reference point) N 309,635.35 E 566,908.11

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled From	To	Feet	Core Recovery Feet	%	Bit Size	Character of Material and Remarks	Sample Record No.	From	To
0	40	40	Sludge		4-3/4	Light brown sandy Overburden			
40	60	20	Sludge		"	Light brown medium to fine grained sandstone		Dalton SS	(?)
60	350	290	Sludge		"	Light to dark gray mudstone siltstone & shale		Mulatto Shale	
350	510	160	Sludge		"	Dark gray, carbonaceous shale and mudstone		Dilco (?)	
510	570	60	Sludge		"	Light gray to white, medium to fine grained sandstone		Gallup SS	(?)
570	1620	1050	Sludge		"	Dark gray mudstone, shale & siltstone		Mancos	
					"	(Sandstone beds from 790-800 & from 1320-1340)		Shale	
1620	1650	30	Sludge		"	Gray to tan medium to fine grained sandstone		Dakota SS	
1650	1800	150	Sludge		"	Gray & green shale		Brushy Basin	
1800	2000	200	Sludge		"	Light to dark gray medium to fine grained sandstone		Westwater	
2000	2020	20	Sludge		"	Green and red shale		Recapture	(?)
			Bottom at 2020 feet		Note:	All samples through the Westwater were checked with a geiger counter & no radio-activity above the base count was noted.			
It is hereby certified that this is a true copy of the original log.									
		B. F. Sorensen							
		B. F. Sorensen Project Engineer							

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-3-4

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
1670	1790	120	Sludge		4-3/4	Dark gray to green shale silt & Mudstone	Brushy Basin (?)		
					"	Sandstone member from 1700 to 1720			
1790	2010	220	Sludge		"	Light tan to dark red medium to coarse grained arkosic sandstone	Westwater Sandstone(?)		
2010	2030	20	Sludge		"	Dark gray to green shale silt and mudstone	Recapture		
			Hole bottom at 2030 feet						
			Geiger counter readings were taken on all samples thru the Westwater member. No above background radioactivity was noted.						
It is hereby certified that this is a true copy of the original log.									
	B. F. Sorensen Project Engineer								

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-3-4

SAN MATEO DOME PROJECT

Exploration at Sect. 4, T. 14N. R 8W (mine, prospect, or place), Mc Kinley- (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 7-1-58 Completed 7-17-58

Driller Scott Bros.

Sampler D. S. Fratto

Collar elevation 7444.52

Coordinates (or bearing and distance from a reference point) N 307,200 E564,800

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
0	40	40	Started with Air		4-3/4	Light brown sandy Overburden			
40	80	40	Dust		"	Light gray to white, fine	Dalton (?)		
						grained sandstone with small	Mulatto Shale		
						amounts of dary gray shale, siltstone & mudstone			
80	340	260	Dust		"	Dark gray carbonaceous mudstone shale & siltstone.			
						Shale & siltstone - s nd-			
						stone bed from 170' to 190'			
340	480	140	Dust		"	Dark gray carbonaceous shale, mudstone & siltstone	Dilco Coal Member (?)		
480	570	90	Dust		"	Light gray to white, slightly arkosic, Medium to fine	Gallup		
						grained sandstone	Sandstone		
			Dust to 780						
570	1590	1020	Sludge		"	Light to dark gray shale, mudstone & siltstone, Calcite			
						& light green shale abundant	Mancos		
						from 790 to 850'. Sandstone	Shale		
						members at 1340-1350 & 1390-			
						1400'.			
1590	1670	80	Sludge		"	Light gray to tan, medium	May be		
						to fine grained, slightly	Dakota		
						arkosic sandstone.	Sandstone		

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-2-4

SAN MATEO DOME PROJECT

Exploration at Section 4, T 13N, R 8W (mine, prospect, or place), Mc Kinley (county) New Mexico (state)

For San Mateo Dome Project (E. J. Longyear Co. - Agent) (company, group, or individual)

Date started 6-16-58 Completed 7-3-58

Driller Scott Bros.

Sampler D. S. Frotto

Collar elevation 7383.39

Coordinates (or bearing and distance from a reference point) 309,200N 564,800E

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled			~~Core Recovery~~		Bit	Character of	Sample Record		
From	To	Feet	~~Feet~~	~~%~~	Size	Material and Remarks	No.	From	To
0	60	60	Sludge		4-3/4	Light Brown sandy overburden			
60	80	20	Sludge		"	Dark fine grained to medium grained sandy shale and Siltstone.			
80	380	300	Sludge		"	Dark grey silt, shale and mudstone.			
380	410	30	Sludge		"	Light fine grained sandstone			
410	450	40	Sludge		"	Dark grey shale silt and Mudstone.			
450	540	90	Sludge		"	Light grey medium to fine grained arkosic sandstone	(Gallup ss.)		
540	1600	1060	Sludge		"	Dark gray shale silt and mudstone. Sand zone at	(Mancos Shale)		
1600	1650	50	Sludge		"	1300 ft, 1500 ft and 1550 ft. Light grey fine grained	(Dakota ss.)		
						Sandstone			
1650	1810	160	Sludge		"	Dark grey and green shale Silt and mudstone	(Brushy Basin Shale)		
1810	2000	190	Sludge		"	Fine to medium grained arkosic sandstone. Local	(Westwater		
						red zones to local coarse grained zones.	Sandstone)		
2000	2020	20	Sludge		"	Dark grey to green to red shale and mudstone			
			Hole bottom at			2020 feet			
						No above background radioactivity was			
						noted on samples thru the Westwater.			

It is hereby certified that this is a true ~~copy of the original log.~~

B F Lorenzen
Project Engineer.

FORM A

[redacted]

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-1-33

SAN MATEO DOME PROJECT

Docket No. DMEA 4842
(Uranium)
Contract Idm-E1183
San Mateo Dome Project
E.J.Longyear Company, Agent
(San Meteo Dome Project)
McKinley County, New Mex.

Exploration at Sec. 33, T.14 N., R. 8 W., McKinley (county) New Mexico (state)
(mine, prospect, or place)

For SAN MATEO DOME PROJECT
(company, group, or individual)

Date started 5/13/58 Completed 6/10/58

Coordinates (or bearing and distance from a reference point) 311,200 N 564,800 E

Driller Scott Bros.

Sampler B. F. Sorensen (Project Engineer)

Inclination from horizontal Vertical

Collar elevation 7425 (?)

Bearing

(Specific gravity of core from ____ ft.= ____; ____ ft.= ____; ____ ft.= ____; ____ ft.= ____.)

Interval Drilled From	To	Feet	Core Recovery Feet	%	Bit Size	Character of Material and Remarks	Sample Record No.	From	To
0	250	250	Sludge		4-3/4	light to dark gray shale & silt-mudstone		Mancos shale	
250	290	40	Sludge		4-3/4	gray fine to medium grained sandstone.			
			(drilled on air to 460 feet.)						
290	520	230	Sludge		4-3/4	dark gray shale & mudstone.		Dilco	
520	610	90	Sludge		"	light gray fine to medium grained sandstone.		Gallup sand	
610	1580	970	Sludge		"	light to dark gray siltstone shale & mudstone sand beds at 1460 - 1480.		Mancos shale	
1580	1640	60	Sludge		"	fine to medium grained light colored sandstone.		Dakota (?)	

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-20-32

SAN MATEO DOME PROJECT

Exploration at Section 32, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 10/1/58 Completed 10/22/58

Driller Scott Brothers

Sampler Bruce Russell

Collar elevation 7496.92

Coordinates (or bearing and distance from a reference point) N 313,300 E 563,188

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
0	30	30	Sludge		4-3/4	Buff sandy overburden.			
30	410	380	Sludge		"	Gray shale, siltstone and mudstone.		Mulatto	
410	560	150	Sludge		"	Gray carbonaceous shale with local sandstone beds.		Dilco?	
560	670	110	Sludge		"	Gray to white, medium to fine grained sandstone.		Gallup	
670	1690	1020	Sludge		"	Gray shale, siltstone and mudstone. Sandstone lenses		Mancos	
						at: (1400-1430), (1530-1560), and (1600-1620).			
1690	1730	40	Sludge		"	Tan to gray, medium to fine grained sandstone.		Dakota	
1730	1860	130	Sludge		"	Gray and green shale.		Brushy Basin	
1860	2070	210	Sludge		"	Gray to white, medium to fine grained arkosic sandstone.		Westwater	
						(with some local coarse zones).			
2070	2090	20	Sludge		"	Red and green shale		Recapture	
	CERTIFIED TRUE COPY								
					Note:	All samples through the Westwater sand were checked with a Model 107B Geiger			
	E. F. Sorensen Project Engineer					counter and no above-background radio-activity was recorded.			

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-19-32

SAN MATEO DOME PROJECT

Exploration at Sect. 32, T14N, R8W (mine, prospect, or place), McKinley (county), New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 9/25/58 Completed 10/1/58

Driller Scott Brothers

Sampler Bruce Russell

Collar elevation 7517.39

Coordinates (or bearing and distance from a reference point) N 313,301 E 562,189

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from _____ ft.= _____; _____ ft.= _____; _____ ft.= _____; _____ ft.= _____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
0	60	60	Sludge		"	Buff sandy overburden			
60	390	330	Sludge		"	Gray shale, sandstone, siltstone and mudstone.		Mulatto	
390	540	150	Sludge		"	Gray carbonaceous shale with some local sandstone beds.		Dilco?	
540	660	120	Sludge		"	Gray to white, medium to fine grained sandstone.		Gallup	
660	1700	1040	Sludge		"	Gray shale, siltstone & Mudstone. Sandstone lenses		Mancos	
						at 1410-1440, 1540-1560, and 1620-1660.			
1700	1740	40	Sludge		"	Tan to gray, medium to fine grained sandstone.		Dakota	
1740	1890	150	Sludge		"	Variegated red, green, and gray shale.		Brushy Basin	
1890	2060	170	Sludge		"	White to gray, medium to fine grained arkosic sandstone.		Westwater	
						(With some local coarse zones.)			
2060	2080	20	Sludge		"	Red and green shale.		Recapture?	
	CERTIFIED TRUE COPY				Note:	All samples through the Westwater sand were checked with a Model 107B Geiger			
						counter and no above-background radio-			
						activity was recorded.			
	PROJECT ENGINEER								

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. 0-18-32

SAN MATEO DOME PROJECT

Exploration at Sect. 32, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 9/25/58 Completed 10/1/58

Driller Scott Brothers

Sampler Bruce Russell

Collar elevation 7457.62

Coordinates (or bearing and distance from a reference point) N 312,303 E 562,188

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from ____ ft.= ____; ____ ft.= ____; ____ ft.= ____; ____ ft.= ____.)

Interval Drilled			Core Recovery		Bit Size	Character of Material and Remarks	Sample Record		
From	To	Feet	Feet	%			No.	From	To
0	50	50	Sludge		4-3/4	Buff sandy overburden			
50	370	320	Sludge		"	Gray shale, sandstone, siltstone and mudstone.		Mulatto	
370	520	150	Sludge		"	Gray carbonaceous shale with some local sandstone beds.		Dilco?	
520	620	100	Sludge		"	Gray to white, medium to fine grained sandstone.		Gallup	
620	1640	1020	Sludge		"	Gray shale, siltstone & mudstone. Sandstone lenses at 1340-1360, and 1550-1580.		Mancos	
1640	1680	40	Sludge		"	Tan to gray, medium to fine grained sandstone.		Dakota	
1680	1810	130	Sludge		"	Variegated red, green, and gray shale.		Brushy Basin	
1810	2020	210	Sludge		"	White to gray, medium to fine grained arkosic sandstone. (With some local coarse zones.)		Westwater	
2020	2050	30	Sludge		"	Red and green shale.		Recapture?	
					Note:	All samples through the Westwater sand were checked with a Model 107B Geiger counter and no above-background radioactivity was recorded.			

CERTIFIED TRUE COPY

[redacted]

PROJECT ENGINEER

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-17-32

SAN MATEO DOME PROJECT

Exploration at Sect. 32, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 9/16/58 Completed 9/25/58

Coordinates (or bearing and distance from a reference point) N 311,305 E 561,186

Driller Scott Brothers

Sampler Bruce Russell

Inclination from horizontal Vertical

Collar elevation 7509.25

Bearing

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
0	35	35	Sludge		4-3/4	Buff sandy overburden			
35	370	335	Sludge		"	Gray shale, sandstone, siltstone, & mudstone.		Mulatto	
370	520	150	Sludge		"	Gray carbonaceous shale with some local sandstone beds.		Dilco?	
520	630	110	Sludge		"	Gray to white, medium to fine grained sandstone.		Gallup	
630	1680	1050	Sludge		"	Gray shale, siltstone, & mudstone. Sandstone lens at 1350-1390.		Mancos	
1680	1720	40	Sludge		"	Tan to gray, medium to fine grained sandstone.		Dakota	
1720	1850	130	Sludge		"	Variegated red, green, and gray shale.		Brushy Basin	
1850	2050	200	Sludge		"	White to gray, medium to fine grained arkosic sandstone. (With some local coarse zones)		Westwater	
2050	2070	20	Sludge		"	Red and green shale		Recapture?	
	CERTIFIED TRUE COPY				Note:	All samples through the Westwater sand were checked with a Model 107B Geiger counter and no above-background radioactivity was recorded.			
	PROJECT ENGINEER								

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-16-32

SAN MATEO DOME PROJECT

Exploration at Sect. 32, T14N, R8W (mine, prospect, or place), McKinely (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 9/15/58 Completed 9/25/58

Coordinates (or bearing and distance from a reference point) N 312,804 E 561,187

Driller Scott Brothers

Sampler Bruce Russell

Inclination from horizontal Vertical

Collar elevation 7485.86

Bearing

(Specific gravity of core from _____ft.= ____; _____ft.= ____; _____ft.= ____; _____ft.=_____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
0	50	50	Sludge		4-3/4	Buff sandy overburden			
50	350	300	Sludge		4-3/4	Gray shale, sandstone, siltstone, & mudstone		Mulatto	
350	500	150	Sludge		"	Gray carbonaceous shale with some local sandstone beds.		Dilco?	
500	600	100	Sludge		"	Gray to white, medium to fine grained sandstone.		Gallup	
600	1660	1060	Sludge		"	Gray shale, siltstone, & mudstone. Sandstone lenses at 1360-1380 and 1560-1600.		Mancos	
1660	1700	40	Sludge		"	Tan to gray, medium to fine grained sandstone.		Dakota	
1700	1830	130	Sludge		"	Variegated red, green and gray shale.		Brushy Basin	
1830	2050	220	Sludge		"	White to gray, medium to fine grained arkosic sandstone.		Westwater	
2050	2080	30	Sludge		"	Red and green shale		Recapture	
	CERTIFIED TRUE COPY				Note:	All samples through the Westwater sand were checked with a Model 107B Geiger counter and no above-background radioactivity was recorded.			
	B. Hoover PROJECT ENGINEER								

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-15-32

SAN MATEO DOME PROJECT

Exploration at Sect. 32, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 9/10/58 Completed 9/15/58

Coordinates (or bearing and distance from a reference point) N 313,303 E 561,188

Driller Scott Brothers

Sampler Bruce Russell

Inclination from horizontal Vertical

Collar elevation 7501.17

Bearing

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled			Core Recovery		Bit Size	Character of Material and Remarks	Sample Record		
From	To	Feet	Feet	%			No.	From	To
0	40	40	Sludge		4-3/4	Buff sandy overburden			
40	380	340	Sludge		"	Gray shale, sandstone, siltstone & mudstone.		Mulatto	
380	530	150	Sludge		"	Gray carbonaceous shale with some local sandstone beds.		Dilco?	
530	630	100	Sludge		"	Gray to white, medium-fine grained sandstone.		Gallup	
630	1690	1060	Sludge		"	Gray shale, siltstone, mudstone. Sandstone lenses at 770-800, 820-870, and 1380-1400.		Mancos	
1690	1730	40	Sludge		"	Tan to gray, medium to fine grained sandstone.		Dakota	
1730	1860	130	Sludge		"	Variegated red, green and gray shale.		Brushy Basin	
1860	2040	180	Sludge		"	White to gray, medium to fine grained arkosic sandstone		Westwater	
2040	2070	30	Sludge		"	Red and green shale.		Recapture?	
	CERTIFIED TRUE COPY				Note:	All samples were checked through the Westwater sand with a Model 107B			
						Geiger counter and no above-background radioactivity was recorded.			
	PROJECT ENGINEER								

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-14-32

SAN MATEO DOME PROJECT

Exploration at Sect. 32, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 9/8/58 Completed 9/15/58

Driller Scott Brothers

Sampler Bruce Russell

Collar elevation 7515.95

Coordinates (or bearing and distance from a reference point) N 314,302 E 561,190

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from ____ft.= ____; ____ft.= ____; ____ft.= ____; ____ft.= ____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
0	80	80	Sludge		4-3/4	Buff sandy overburden			
80	370	290	Sludge		4-3/4	Gray shale, sandstone, siltstone, & mudstone.		Mulatto	
370	520	150	Sludge		4-3/4	Gray carbonaceous shale with some local sandstone beds.		Dilco?	
520	620	100	Sludge		4-3/4	Gray to white, medium-fine grained sandstone.		Gallup	
620	1690	1070	Sludge		4-3/4	Gray shale, siltstone, & mudstone. Sandstone lenses		Mancos	
						at 740-750, 760-770, 1180-1220, and 1490-1530.			
1690	1730	40	Sludge		4-3/4	Tan to gray, medium-fine grained sandstone.		Dakota	
1730	1880	150	Sludge		4-3/4	Variegated red, green and gray shale.		Brushy Basin	
1880	2060	180	Sludge		4-3/4	White to gray, medium-fine grained arkosic sandstone.		Westwater	
2060	2080	20	Sludge		4-3/4	Red and green shale.		Recapture?	
	CERTIFIED TRUE COPY				Note:	All samples were checked through the Westwater sand with a Model 107B Geiger			
						counter and no above-background radioactivity was recorded.			
	PROJECT ENGINEER								

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-13-27

SAN MATEO DOME PROJECT

Exploration at Sect. 27, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 9/2/58 Completed 9/10/58

Driller Scott Brothers

Sampler B. S. Pratto

Collar elevation 7447

Coordinates (or bearing and distance from a reference point) N 317,900 E 573,200

Inclination from horizontal Vertical

Depth 1970 feet

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.=_____.)

Interval Drilled			Core Recovery		Bit Size	Character of Material and Remarks	Sample Record		
From	To	Feet	Feet	%			No.	From	To
0	40	40	Sludge		4-3/4	Tan sandy overburden			
40	360	320	Sludge		4-3/4	Gray shale, siltstone, and mudstone	Mulatto		
360	510	150	Sludge		4-3/4	Gray carbonaceous shale with local sandstone beds	(Dilco?)		
510	580	70	Sludge		4-3/4	Gray to white, medium to fine grained sandstone	Gallup		
580	1500	920	Sludge		4-3/4	Gray shale, siltstone, and mudstone. (Sandstone	Mancos		
						beds at 1230-1250, 1430-1440, and 1480-1490)			
1500	1540	40	Sludge		4-3/4	Tan to gray, medium to fine grained sandstone	(Dakota?)		
1540	1720	180	Sludge		4-3/4	Gray and green shale	Brushy Basin		
1720	1930	210	Sludge		4-3/4	Gray to white, medium-fine grained arkosic sandstone.	Westwater		
						(With some local coarse zones)			
1930	1970	40	Sludge		4-3/4	Red and green shale.	(Recapture?)		
	CERTIFIED TRUE COPY				Note:	All samples through the Westwater section were checked with a model 10TB Geiger			
						counter and no above-background radioactivity was recorded.			
	PROJECT ENGINEER								

FORM A

(Minimum for core data. Use form [illegible] when sludge is saved.)

[illegible]

[illegible]

[illegible] PROJECT

Exploration at _____, _____ _____
(mine, prospect, or place) (county) (state)

For _____
(company, group, or individual)

Date started _____ Completed _____

Driller _____

Sampler _____

Collar elevation _____

Coordinates (or bearing and distance from a reference point) _____

Inclination from horizontal _____

Bearing _____

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To

Page ____ of ____

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. [illegible]

SAN MATEO DOME PROJECT

Exploration at Sect. 34, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 8/17/58 Completed 8/25/58

Driller Scott Brothers

Sampler [illegible]

Collar elevation

Coordinates (or bearing and distance from a reference point) N. 315,400 E. 571,200

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from ____ ft.= ____ ; ____ ft.= ____ ; ____ ft.= ____ ; ____ ft.= ____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. [illegible]

SAN MATEO DOME PROJECT

Exploration at [illegible] (mine, prospect, or place); McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 8/12/58 Completed 8/20/58

Coordinates (or bearing and distance from a reference point) N 316,200 E 569,200

Driller [illegible]

Sampler D. S. Frantz

Inclination from horizontal Vertical

Collar elevation

Bearing

(Specific gravity of core from ____ ft.= ____; ____ ft.= ____; ____ ft.= ____; ____ ft.= ____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To

B. J. LONGYEAR COMPANY

DRILL HOLE NO. G-9-27

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
						contact gradational.		(Recapture	
						3.9'- Red shale with inter-		Contact	
						bedded calcareous material,		possibly	
						mudstone & pink sandstone.		at 1888)	
1892	1907	15	13.8	92.0		13.8'- Mottled red & green			
						shale with interbedded pink			
						& white sandstone and mudstone.			
					Note:	The entire core was checked with a			
						model 107B Geiger counter and no above			
						background radioactivity was recorded.			
			Contacts Picked ---			Dakota - 1510			
						Brushy Basin - 1550			
						Westwater - 1705			
						Recapture - 1888			
			Total feet cored ---			257'			
			Total feet recovered ---			234.2'			
			Per cent recovery ---			91%			
	CERTIFIED TRUE COPY								
	PROJECT ENGINEER								

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-9-27

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit Size	Character of Material and Remarks	Sample Record		
From	To	Feet	Feet	%			No.	From	To
					4"	7.1'- Mottled red & green shale with gray calcareous material & interbedded mudstone.			
1806	1821	15	12	80.0		10.5'- Gray-white, med-fine grained, poorly sorted, arkosic sandstone with some coarse grained zones.			
						0.6'- Mottled red & green shale.			
						1.0'- Gray-white, med-fine grained arkosic sandstone with abundant red & green silt particles.			
1821	1836	15	13	87.0		3.5'- Sandstone same as above.			
						0.4'- Red shale & mudstone.			
						9.2'- Gray-white, med-fine grained arkosic sandstone with zones which are bleached white.			
						2.0'- No core, must have dropped from barrel.			
1836	1849	13	11.6	89.0		5.4'- Bleached zones are absent.			
						6.2'- Bleached zones are present.			
1849	1863	14	10.3	73.6		4.1'- Sand contains interbedded thin zones of red silt.			
						3.7'- Sandstone contains no silt.			
						2.5'- Red & green sandy, porous shale.			
1863	1877	14	13.6	97		3.6'- Red & green shale with white calcareous material & interbedded mudstone.			
						6.0'- Gray-white, med-fine grained slightly arkosic sandstone with bleached zones and zones containing red silt.			
						4.0'- Sand contains streamers of limonite after pyrite.			
1877	1892	15	15	100		6.7'- Sandstone fine grained & laminated.			
						0.5'- Sand not laminated			
						1.4'- Pink, med-fine grained arkosic, poorly sorted sandstone with abundant red silt particles.			
						1.2'- Gray-white, med-fine grained, fairly well sorted sandstone.			
						1.3'- Sandstone and shale			

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-9-27

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
1732	1745	13	13	100	4"	11.5'- Gray to white, med-fine grained, poorly sorted, arkosic			
						sandstone with particles of green silt.			
						1.5'- Same as above except coarse grained & contains calcareous			
						material.			
1745	1757	12	12	100		7.9'- Gray-white, med-coarse grained, poorly sorted, arkosic			
						sandstone. 2.6'- Sandstone med-fine grained			
						& contains streaks of carbonaceous material.			
						0.4'- Sandstone coarse grained contains large green siltstone			
						nodules. 1.1'- Sandstone med-fine grained.			
1757	1772	15	14.9	99.0		7.7'- Sandstone same as above medium-fine grained.			
						1.6'- Sandstone coarse grained. 1.6'- Sandstone med-fine grained.			
						3.0'- Sandstone coarse grained & has interbedded green & red			
						siltstone & large silt nodules. 1.0'- Sandstone med-fine grained.			
						1.0'- Sandstone is med-coarse grained and is porous.			
1772	1785	13	6	46.0		5.0'- Sandstone same as above. 1.0'- Green shale with inter-			
						bedded mudstone. 7.4'- No core-must have dropped			
						out of barrel.			
1785	1796	11	10.9	99.0		3.0'- Mottled red & green shale 0.9'- Shale grades into sand-			
						stone. 3.5'- Gray-white, med-fine			
						grained sandstone. 3.5'- Green shale with calcareous			
						material & interbedded silt & sandstone.			
1796	1806	10	10	100		3.1'- Gray-white, med-fine grained, poorly sorted laminated			
						sandstone. 0.8'- Sandstone is coarser grained.			

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-9-27

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
					4"	5.5'- Light green to gray, medium to fine grained, slightly			
						arkosic sandstone with inter-			
						bedded green mudstone and some			
						calcareous material.			
1673	1687	14	13.5	96.0		1.0- Same as above.			
						2.1- Mottled red and green shale			
						with interbedded mudstone.			
						0.8'- Green sandy shale.			
						0.6'- Green to gray, medium-fine			
						grained arkosic sandstone with			
						interbedded streamers of green			
						silt.			
						8.3'- Gray to white, medium to			
						fine grained, medium sorted,			
						arkosic sandstone with flecs of			
						green silt disseminated			
						throughout core.			
						0.7'- Gray-white, med-coarse			
						grained, poorly sorted, loosely			
						compacted arkosic sandstone			
						with green silt.			
1687	1702	15	15	100		4.6'- Same as above.			
						4.0'- Gray-white, med-fine			
						grained, porous, arkosic sand-			
						stone with particles of green			
						silt & white calcareous material.			
						6.4'- Green & mottled red & green			
						shale with white calcareous			
						material & interbedded mudstone.			
1702	1717	15	13.6	91.0		1.1'- Same as above.			
						Contact between green shale &		(Westwater	
						gray sandstone is gradational.		Contact at	
						10.3'- Gray-white, med-fine		1705 feet)	
						grained, medium sorted sandstone			
						with particles green silt.			
						2.2'- No core-must have dropped			
						out of barrel.			
1717	1732	15	15	100		4.4'- Gray to white, med.-coarse			
						grained, poorly sorted, loosely			
						compacted arkosic sandstone with			
						abundant green silt.			
						10.6'- Same as above except sand-			
						stone is med-fine grained and			
						more compacted.			

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-9-27

SAN MATEO DOME PROJECT

Exploration at Sect. 27, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 8/20/58 Completed 9/6/58

Coordinates (or bearing and distance from a reference point) N 317,400 E 571,200

Driller Scott Brothers

Sampler D. S. Fratto

Inclination from horizontal Vertical

Collar elevation 7419

Depth 1907 feet

(Specific gravity of core from _____ft.= _____; _____ft.= _____; _____ft.= _____; _____ft.= _____.)

Interval Drilled			Core Recovery		Bit Size	Character of Material and Remarks	Sample Record		
From	To	Feet	Feet	%			No.	From	To
0	370	370	Sludge		4-3/4	Light to dark gray mudstone, siltstone & shale.	Mulatto		
370	520	150	Sludge		4-3/4	Gray carbonaceous shale & mudstone with local ss beds.		Dilco	
520	590	70	Sludge		4-3/4	Gray to white, medium-fine grained sandstone		Gallup?	
590	1510	920	Sludge		4-3/4	Gray mudstone, shale, & siltstone, (Sandstone beds at 760-770 and 1350-1370)		Mancos	
1510	1550	40	Sludge		4-3/4	Tan to gray, medium to fine grained sandstone.		Dakota?	
1550	1650	100	Sludge		4-3/4	Gray and green shale	Brushy Basin		
Started coring at 1650 feet using a 15-foot core barrel, a 4" bit to get 2 5/16" core									
1650	1658	8	7.3	91.0	4"	2.7' Red, mottled red and green shale with interbedded mudstone.			
						0.3' Gray carbonaceous material. 4.3' Mottled red, green shale			
						with interbedded mudstone and			
						some calcareous nodules.			
1658	1673	15	13.7	91.0	4"	3.0'-Mottled red & green shale with interbedded mudstone.			
						1.7'-Light green to gray, fine grained sandstone.			
						0.6'-Mottled red & green shale 0.5'-Light green to gray, fine			
						grained sandstone. 2.2'-Red & green sandy shale.			
						with interbedded mudstone			

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. ___

SAN MATEO DOME PROJECT

Exploration at _____, _____ _____
(mine, prospect, or place) (county) **(state)**

For _____
(company, group, or individual)

Date started _____ Completed _____

Driller _____

Sampler _____

Collar elevation _____

Coordinates (or bearing and distance from a reference point) _____

Inclination from horizontal _____

Bearing _____

(Specific gravity of core from ft.= ; ft.= ; ft.= ; ft.= _____.)

Interval Drilled			Core Recovery		Bit Size	Character of Material and Remarks	Sample Record		
From	To	Feet	Feet	%			No.	From	To

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. [illegible]

SAN MATEO DOME PROJECT

Exploration at [illegible] (mine, prospect, or place), [illegible] (county) New Mexico (state)

For [illegible] (company, group, or individual)

Date started [illegible] Completed [illegible]

Coordinates (or bearing and distance from a reference point) N. 307,700.00 [illegible] 800.00

Driller [illegible]

Sampler ______

Inclination from horizontal Vertical

Collar elevation ______

Bearing ______

(Specific gravity of core from ____ ft.= ____; ____ ft.= ____; ____ ft.= ____; ____ ft.= ____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. C-6-4

SAN MATEO DOME PROJECT

Exploration at Sect. 4 T12N, R9W **(mine, prospect, or place)**, McKinley **(county)** New Mexico **(state)**

For San Mateo Dome Project **(company, group, or individual)**

Date started 8/1/55 **Completed** 8/7/55

Driller [illegible] Brother

Sampler [illegible] Trafto

Collar elevation _____

Coordinates (or bearing and distance from a reference point) N 368,200.00 E 363,800.00

Inclination from horizontal Vertical

Bearing _____

(Specific gravity of core from _____ **ft.=** ____ **;** _____ **ft.=** ____ **;** _____ **ft.=** ____ **;** _____ **ft.=** _____**.)**

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To

B. Larson

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-1-33

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit	Character of	Sample Record	
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From
		Contacts picked as follows: (Continued)						
			Brushy Basin		-	1640 - 1804		
			Westwater		-	1804 - 2022		
			Recapture		-	2022 - 2027		
			Total footage ~~drilled~~ cored		-	336 feet		
			Total core recovered		-	299 feet		
			% core recovery = 89%					
			% core recovery through Westwater = 95 %					
	IT IS HEREWITH CERTIFIED THAT THIS IS A TRUE COPY							
	OF THE ORIGINAL LOG.							
						B. F. Sorensen		
						B. F. Sorensen		
						Project Engineer		

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-1-33

SAN MATEO DOME PROJECT

Interval Drilled From	To	Feet	Core Recovery Feet	%	Bit Size	Character of Material and Remarks	Sample Record No.	From	To
1907	1922	15	14.5	97	4"	fine to medium grained			
						greenish gray ss. to			
						1917'			
						5' green to red very			
						fine grained shaly ss.			
1922	1937	15	14.7	98	"	fine grained varigated			
						red to gray-green ss.			
1937	1952	15	15	100	"	fine to medium grained			
						gray-green arkosic ss.			
1952	1967	15	15	100	"	fine to medium grained			
						unsorted gray-green			
						arkosic ss, some local			
						coarse grained beds.			
1967	1982	15	7.5	50	"	same as above			
1982	1997	15	15	100	"	same as above			
1997	2012	15	14.9	99	"	same as above			
2012	2027	15	13.5	90	"	same as above to 2022			
						5' interbedded ss and			
						red & green shale			
						possibly Recapture.			
2027	2036	9	9	100	"	red and green shale			
						Recapture.			
		Contacts picked as follows:							
				Dakota	-	1580 - 1640			

All core was checked with a Model 107B Geiger Counter - No above background radioactivity was noted.

(Continued on Page 5)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-1-33

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
						fine grained ss.			
						4.7' fine to med.			
						grained dark gray			
						dirty ss.			
1818	1832	14	13.6	97	4"	3' fine grained greenish			
						ss-arkosic, 1' medium			
						to coarse grained green			
						ss, 9 .6' fine grained			
						arkosic ss.			
1832	1847	15	14.3	95	"	fine grained greenish			
						arkosic ss. Some			
						medium grained zones			
						shaly zone at 1835,			
						possible fault, very			
						calcareous.			
1847	1862	15	14.9	99	"	fine grained greenish ss.			
1862	1877	15	15	100	"	6' unsorted coarse			
						grained arkosic green ss.			
						9' fine grained vari-			
						gated red, white & green			
						ss.			
1877	1892	15	10.7	71	"	fine grained greenish ss.			
1892	1907	15	13.3	89	"	fine grained greenish			
						gray ss.			

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-1-33

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
						grained unsorted ss.			
						arkosic with 1/4"			
						pebbles.			
						2.3 ft. light gray			
						fine grained ss.			
						5 ft.green shale mudstone.			
1760	1775	15	14	93	4"	green shale & mudstone.			
1775	1790	15	14.7	98	"	green shale & mudstone			
1790	1805	15	15.0	100	"	3' fine grained dark			
						gray greenish ss. Some			
						Carbonate zones. 11'			
						dark red shale and			
						mudstone. 1' fine			
						grained reddish-green ss.			
1805	1818	13	13	100	"	2.5' fine grained gray-			
						green to reddish arkosic			
						ss.			
1805	1818	13	13	100	"	2.5' fine grained gray-	Westwater		
						green to reddish	sand	at 1804'	
						arkosic ss.			
						1' coarse grained un-			
						sorted arkosic ss.			
						4.8' green-reddish			

(Continued on Page 4)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-1-33

SAN MATEO DOME PROJECT

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
1640	1700	60	Sludge		4-3/4	gray-green shale	Brushy Basin		
						Brushy Basin (?)	shale at 1640		
Started coring at 1700 ft. using a 15' core barrel-2 5/16" core -4" bit.									
1700	1715	15	9.1	61	4"	1700-1703.5 fine grained			
						gray-green ss. well			
						sorted non-calcareous.			
						1703.5-1707 fine to			
						medium grained gray			
						arkosic ss. Some			
						calcareous material.			
						1707-1709.1 gray-green			
						shale to mudstone.			
						Calcareous material			
						present.			
1715	1730	15	14.8	99	4"	gray-green shale with			
						interbedded mudstones.			
						Some reddish inter-			
						bedded shales.			
1730	1745	15	3	20	"	core dropped out of			
						the core barrel - gray			
						mudstone.			
1745	1760	15	14.3	95	"	6 ft. light gray fine			
						grained ss. 1 ft. coarse			

(continued Page 3)

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-21-32

SAN MATEO DOME PROJECT

Exploration at Section 32, T14N, R8W (mine, prospect, or place), McKinley (county) New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 10/1/58 Completed 10/12/58

Driller Scott Brothers

Sampler Bruce Russell

Collar elevation 7456.37

Coordinates (or bearing and distance from a reference point) N 312,301 E 563,187

Inclination from horizontal Vertical

Bearing

(Specific gravity of core from ____ ft.= ____; ____ ft.= ____; ____ ft.= ____; ____ ft.= ____.)

Interval Drilled			Core Recovery		Bit	Character of	Sample Record		
From	To	Feet	Feet	%	Size	Material and Remarks	No.	From	To
0	40	40	Sludge		4-3/4	Buff, sandy overburden			
40	350	310	Sludge		"	Gray shale, siltstone and mudstone.		Mulatto	
350	500	150	Sludge		"	Gray carbonaceous shale with local sandstone beds.		Dilco?	
500	600	100	Sludge		"	Gray to white, medium to fine grained sandstone.		Gallup	
600	1650	1050	Sludge		"	Gray shale, siltstone, and mudstone. Sandstone lenses		Mancos	
						at: 1340-1380, 1480-1500, and 1610-1630.			
1650	1690	40	Sludge		"	Tan to gray, medium to fine grained sandstone.		Dakota	
1690	1850	160	Sludge		"	Gray and green shale.		Brushy Basin	
1850	2050	200	Sludge		"	Gray to white, medium to fine grained arkosic sandstone.		Westwater	
						(With some local coarse zones).			
2050	2090	40	Sludge		"	Red and green shale.		Recapture	
CERTIFIED TRUE COPY									
					Note:	All samples through the Westwater sand were checked with a Model 107B Geiger			
						counter and no above-background radioactivity was recorded.			

R. F. Sorensen
Project Engineer

FORM A

(Principally for core data. See Form B when sludge is saved.)

E. J. LONGYEAR COMPANY

DRILL HOLE NO. G-22-32

SAN MATEO DOME PROJECT

Exploration at Section 32, T14N, R8W (mine, prospect, or place), McKinley (county), New Mexico (state)

For San Mateo Dome Project (company, group, or individual)

Date started 10/12/58 Completed 10/24/58

Driller Scott Brothers

Sampler Bruce Russell

Collar elevation 7428.08

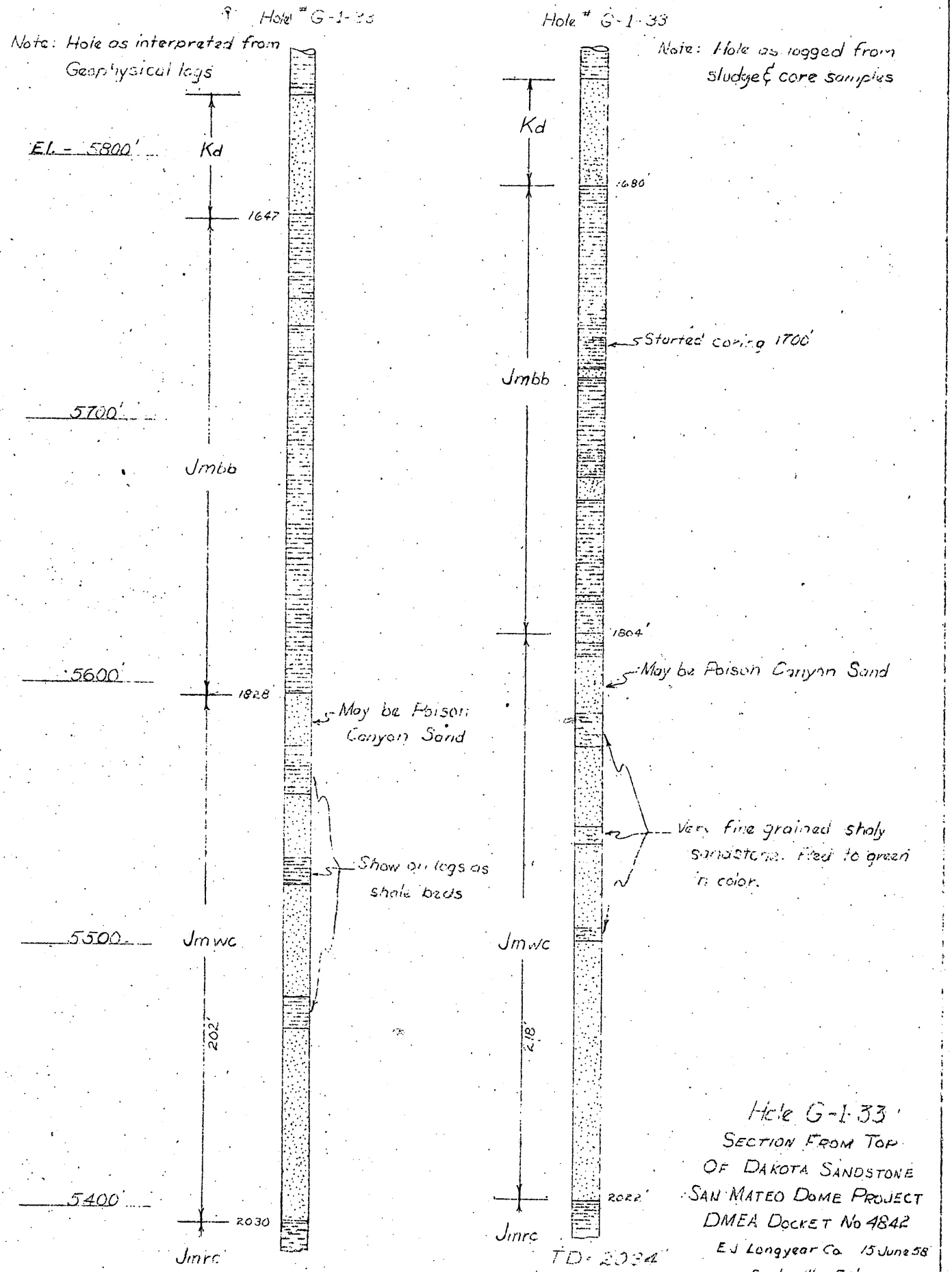
Coordinates (or bearing and distance from a reference point) N 311,303 E 563,186

Inclination from horizontal Vertical

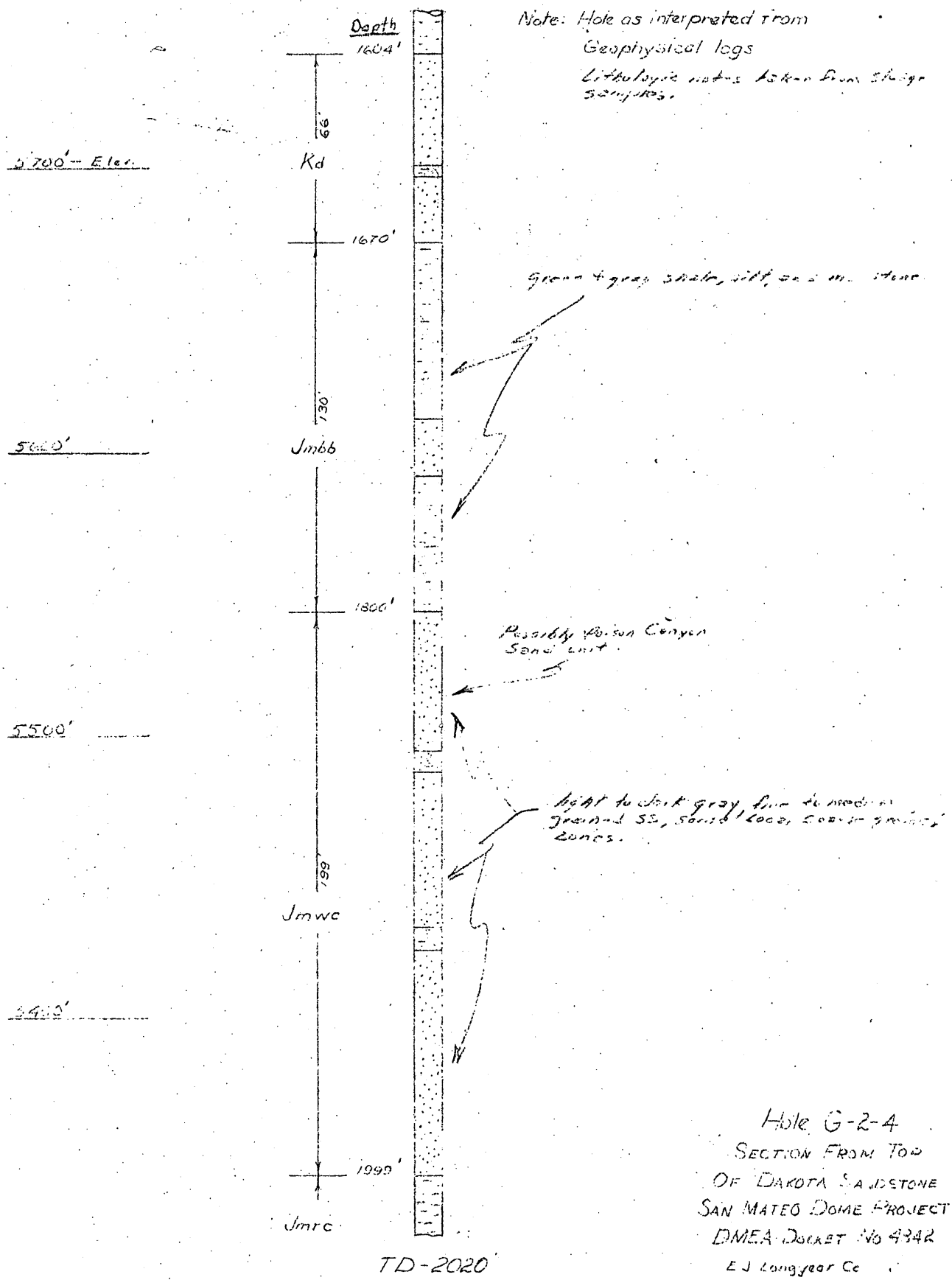
Bearing

(Specific gravity of core from _____ft.= ____; _____ft.= ____; _____ft.= ____; _____ft.= ____.)

Interval Drilled From	To	Feet	Core Recovery Feet	%	Bit Size	Character of Material and Remarks	Sample Record No.	From	To
0	50	50	Sludge		4-3/4	Buff sandy overburden			
50	320	270	Sludge		"	Gray shale, siltstone, and mudstone.		Mulatto	
320	470	150	Sludge		"	Gray carbonaceous shale with local sandstone beds.		Dilco?	
470	580	110	Sludge		"	Gray to white, medium to fine grained sandstone.		Gallup	
580	1620	1040	Sludge		"	Gray shale, siltstone and mudstone. Sandstone lenses		Mancos	
						at: (1340-1360) and (1530-1550).			
1620	1660	40	Sludge		"	Tan to gray, medium to fine grained sandstone.		Dakota	
1660	1800	140	Sludge		"	Gray and green shale.		Brushy Basin	
1800	2010	210	Sludge		"	Gray to white, medium to fine grained arkosic sandstone.		Westwater	
						(with some local coarse zones).			
2010	2030	20	Sludge		"	Red and green shale.		Recapture	
	CERTIFIED TRUE COPY				Note:	All samples through the Westwater sand			
						were checked with a Model 107B Geiger counter and no above-background radio-			
	B. F. Sorenson Project Engineer					activity was recorded.			


Hole # G-1-33
Note: Hole as interpreted from Geophysical logs
El. - 5800'
Kd
1647
5700'
Jmbb
5600'
1828'
May be Poison Canyon Sand
Show on logs as shale beds
5500
Jmwc
202'
5400'
2030
Jmrc
Hole # G-1-33
Note: Hole as logged from sludge & core samples
Kd
1680'
Started coring 1700'
Jmbb
1804'
May be Poison Canyon Sand
Very fine grained shaly sandstone. Tied to green in color.
Jmwc
218'
2022'
Jmrc
TD - 2034'
Hole G-1-33
Section From Top Of Dakota Sandstone
San Mateo Dome Project
DMEA Docket No 4842
E J Longyear Co. 15 June 58
Scale 1" = 50'

Hole No. G-2-4

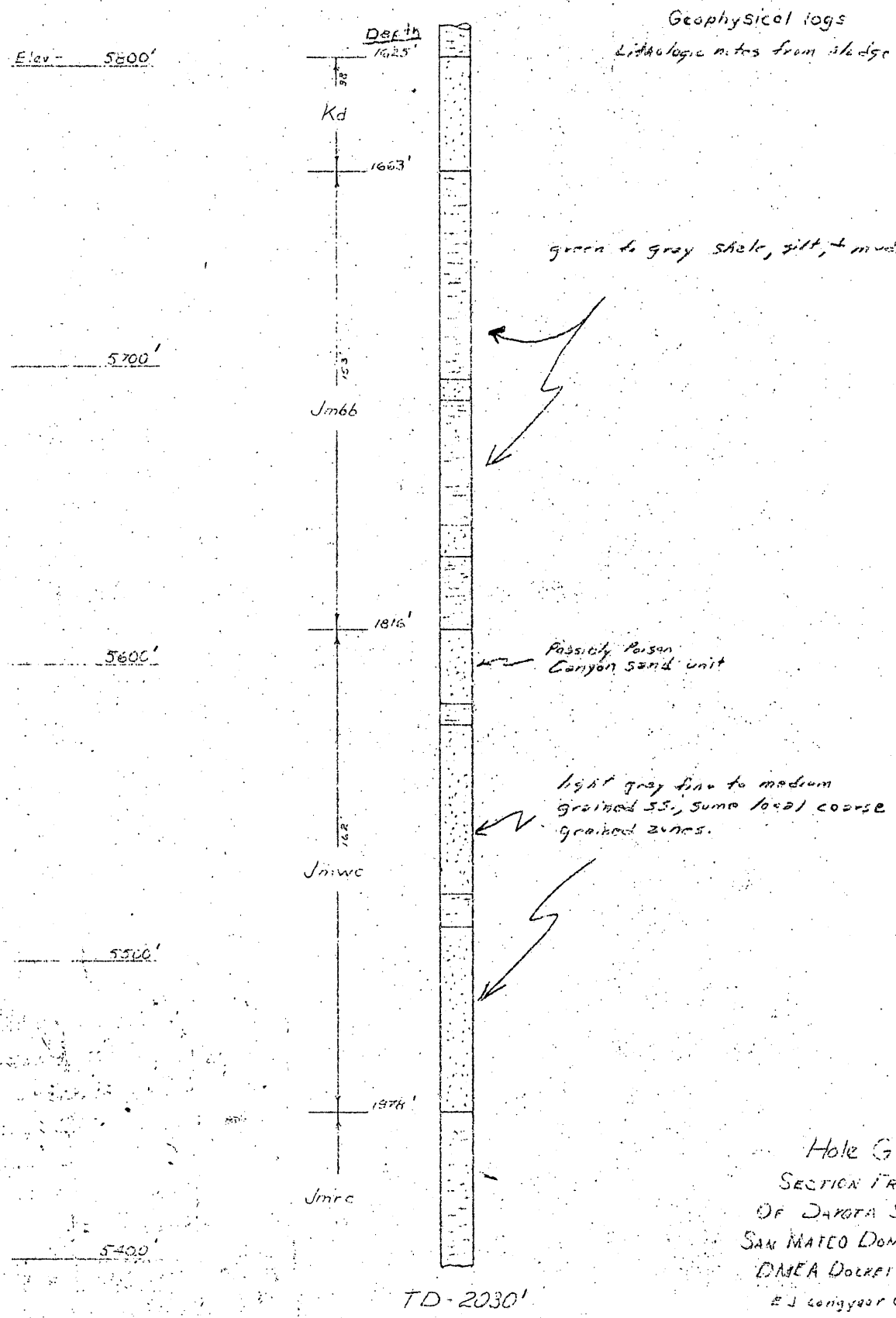


Hole G-2-4
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA DOCKET No 4342
E J Longyear Co
Scale 1" = 50'

E. Fratto

Hole No. G-3-4

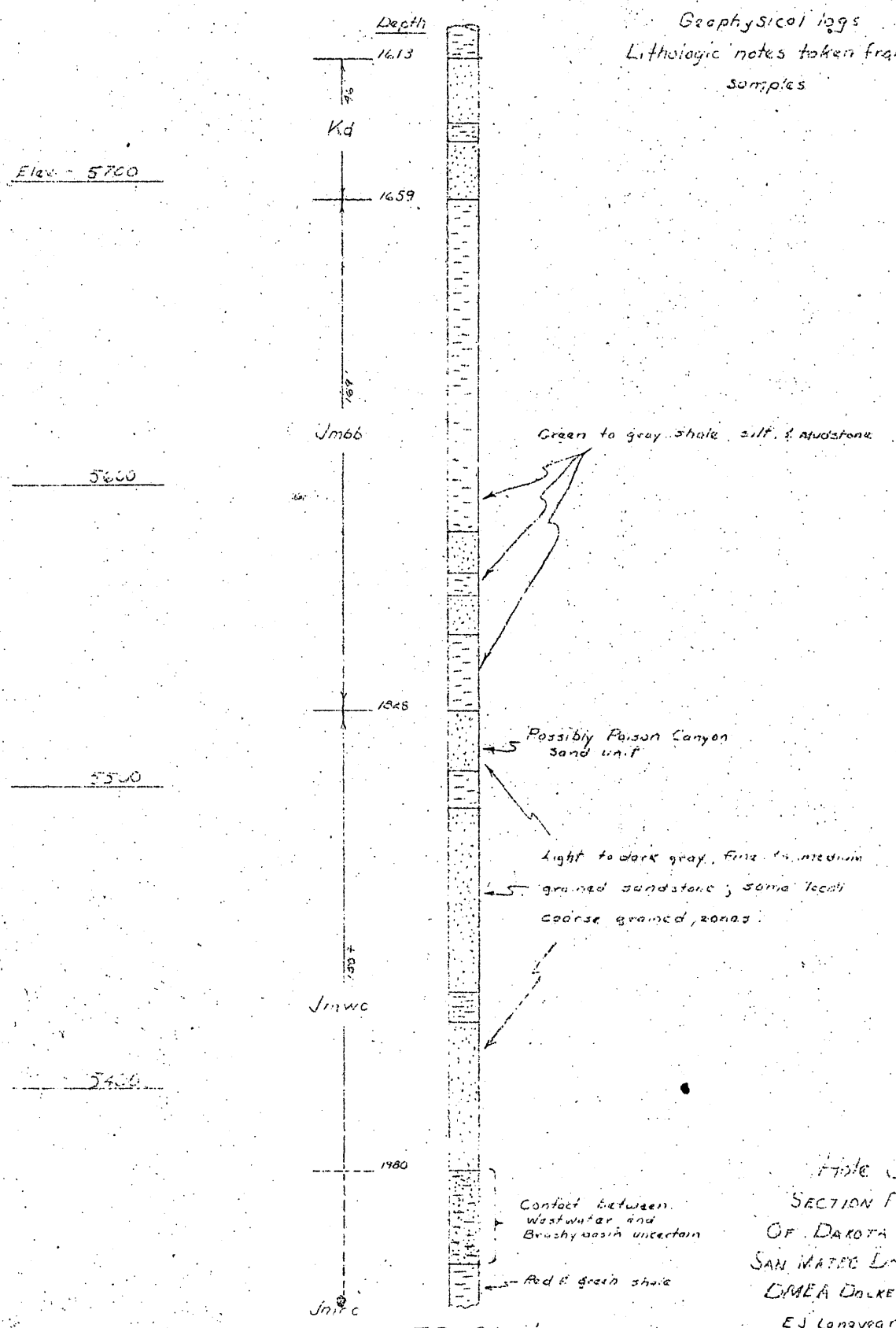
Note Contacts as interpreted from Geophysical logs
Lithologic notes from sludge samples



Hole G-3-4
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA DOCKET No 4842
E J Longyear Co 17 June 58
Scale 1" = 50'

Hole No. G-4-4

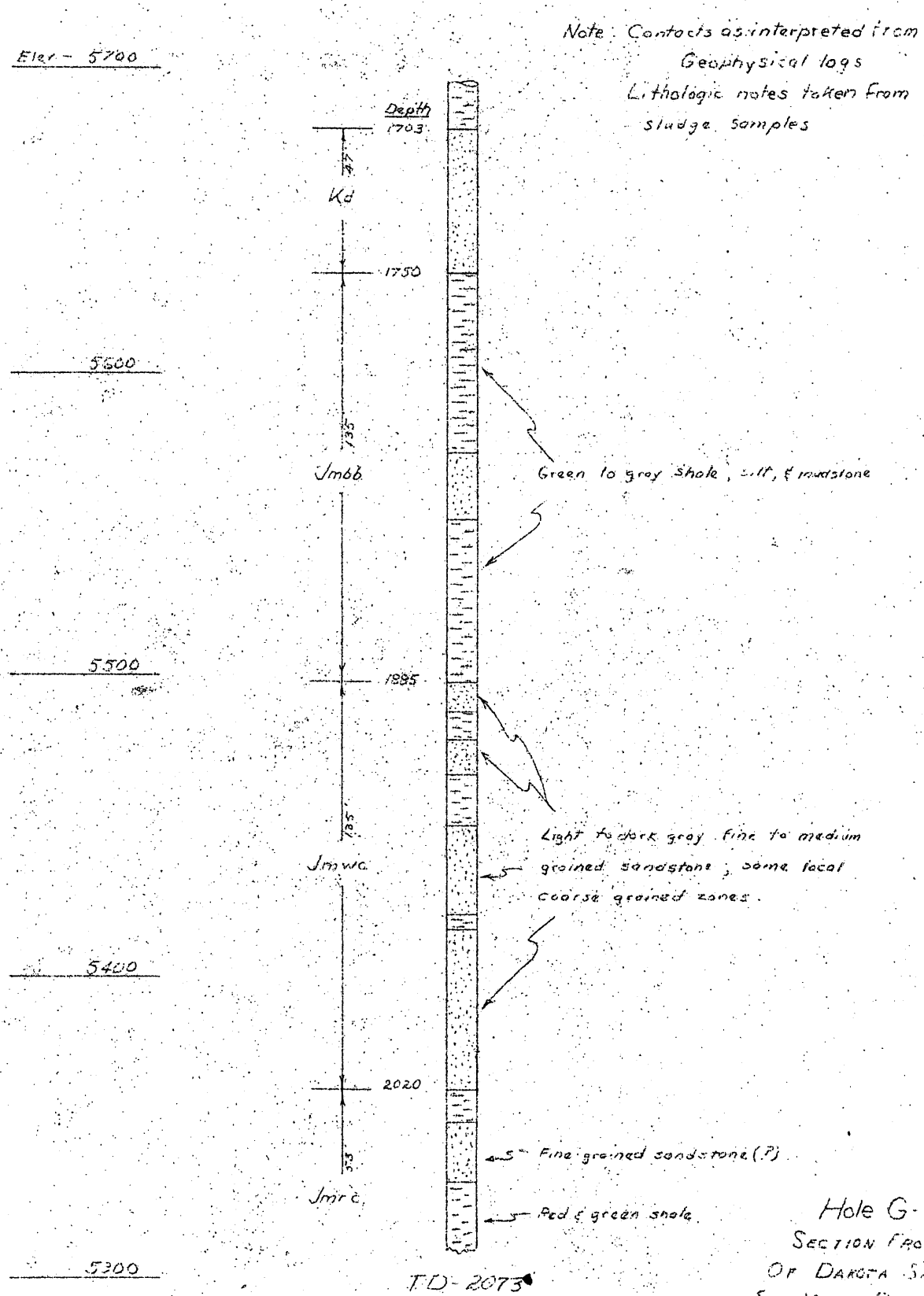
Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from samples



Hole G-4-4
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
OMEA DOCKET No 4842
E.J. Longyear Co 7/14/78
Scale 1" = 50'

D. Frotz

Hole No G-5-4

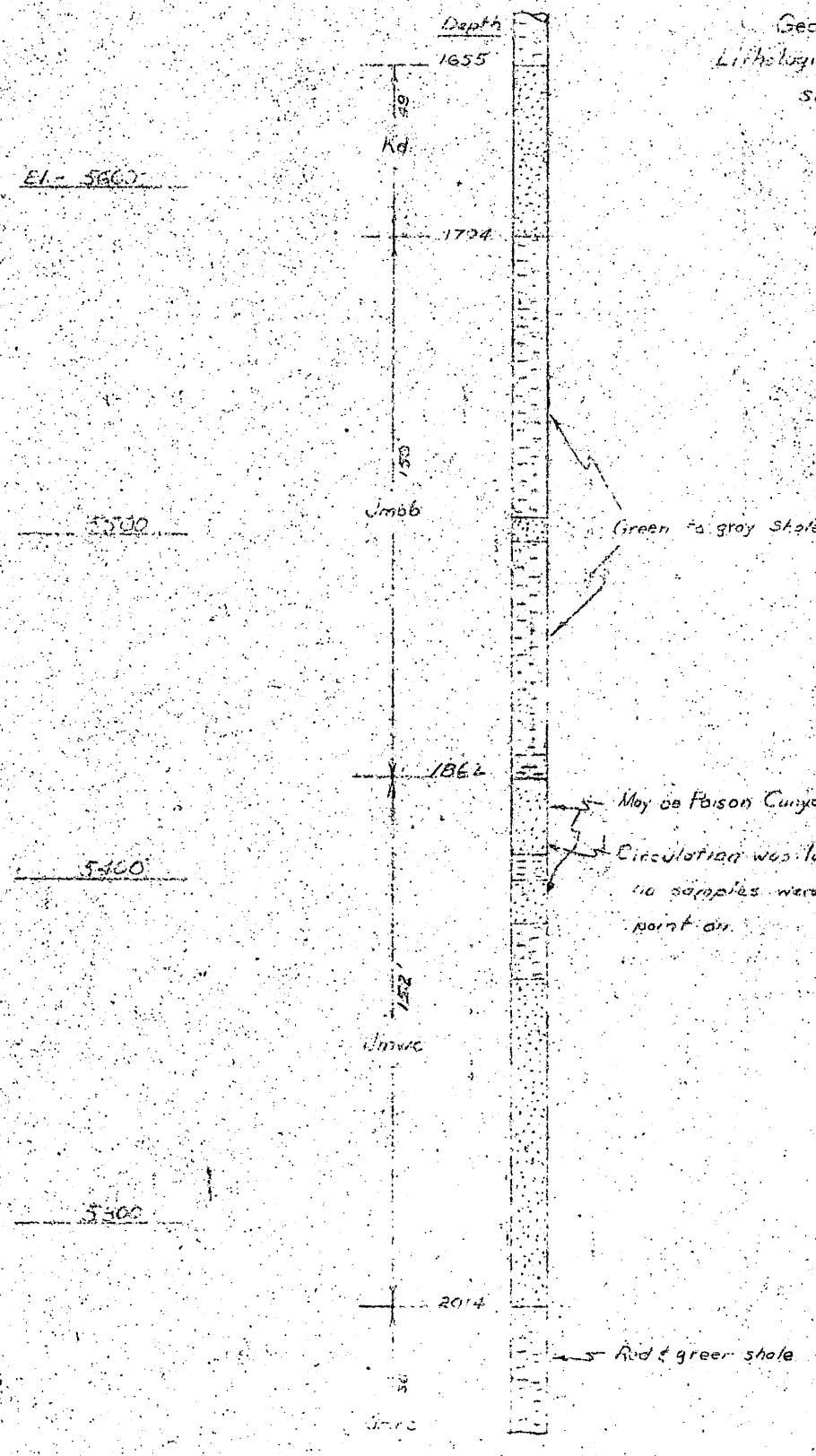


Hole G-5-4
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA DOCKET No 1842
E J Longyear Co. 7/31/58
Scale 1" = 50'

D. Frantz

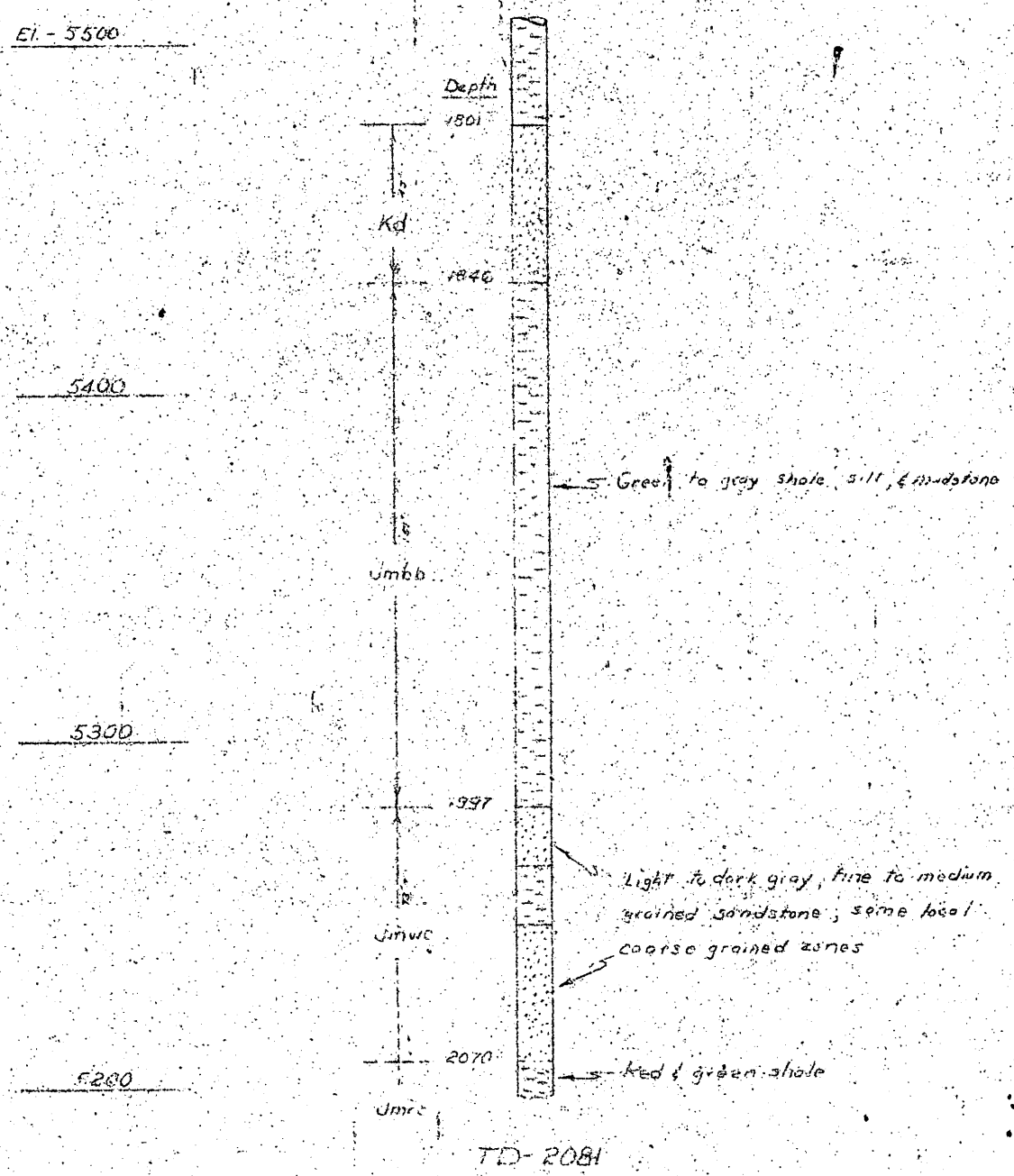
Hole No G-6-4

Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from sludge samples.



Hole G-6-4
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA DOCKET NO. 1842
E.J. Longyear Co. 8/7/58
Scale 1" = 50'

E. FRATIS

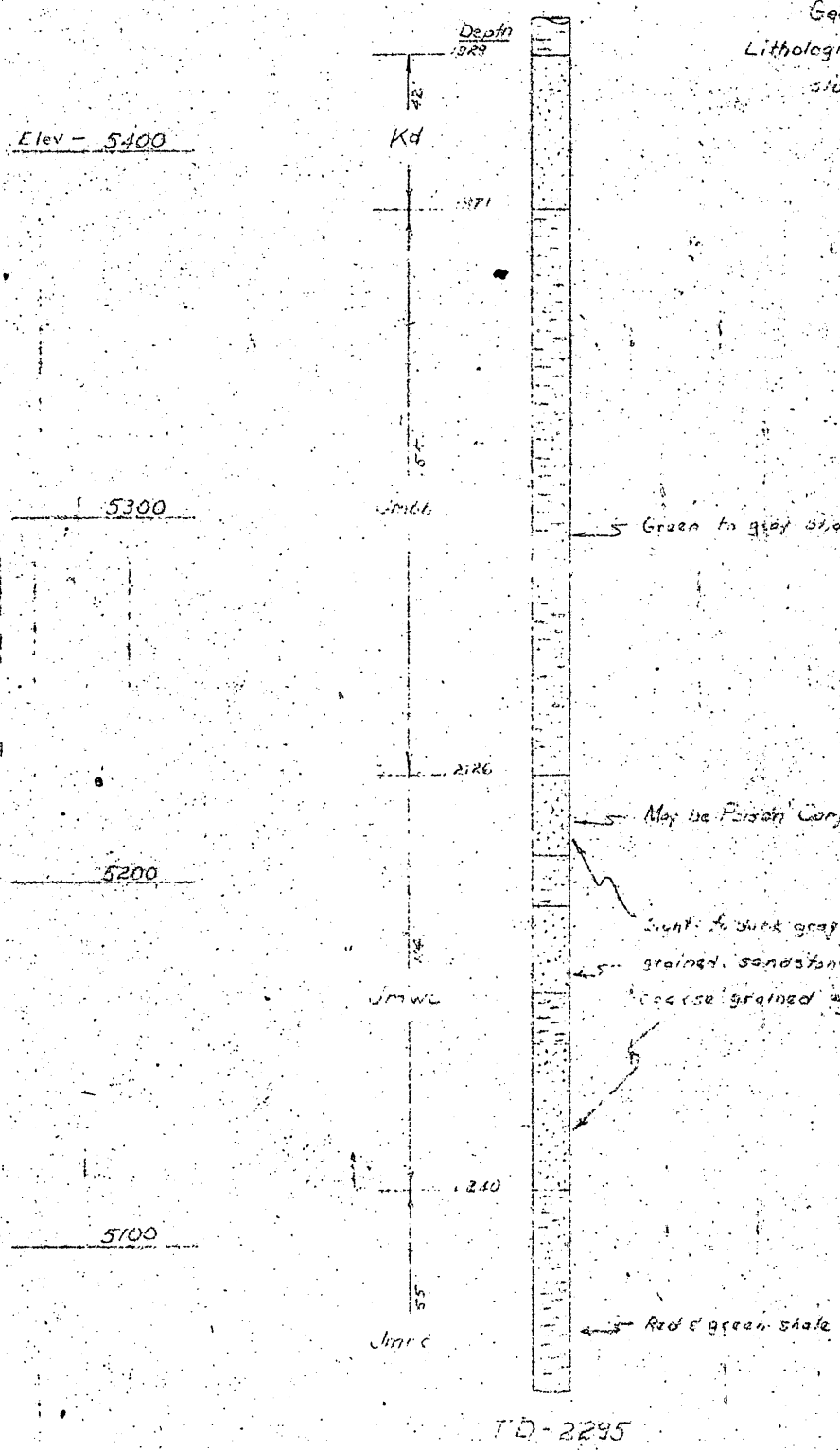


Hole G-7-3
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA DOCKET No. 4842
B.J. Longyear Co. 8/18/58
Scale 1" = 50'

D. Fratto

Hole No. G-8-3

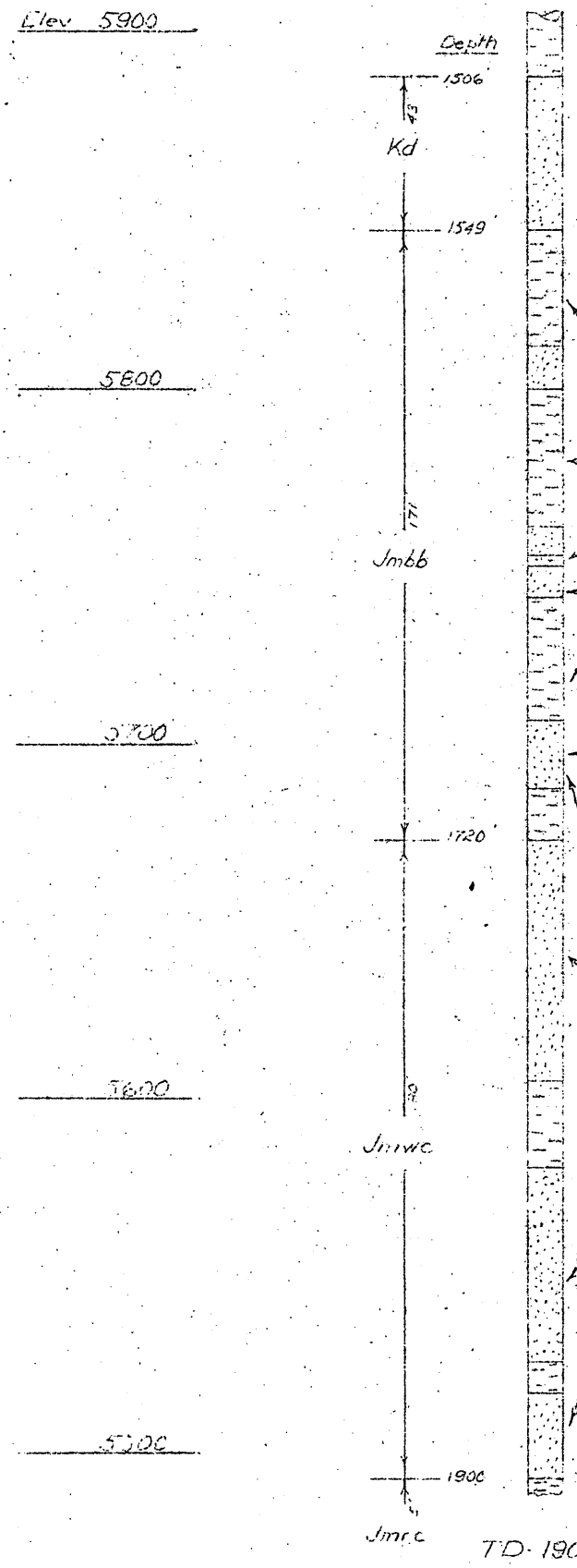
Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from sludge samples



Hole G-8-3
Section From Top
Of Dakota Sandstone
San Mateo Dome Project
DMEA Docket No. 4842
E.J. Longyear Co. 8/16/58
Scale 1" = 50'

D. Frotha

Hole No. G-9-27



Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from sludge samples & core

Green to gray shale, silt, & mudstone

Started coring at 1650'

May be Poison Canyon sand unit

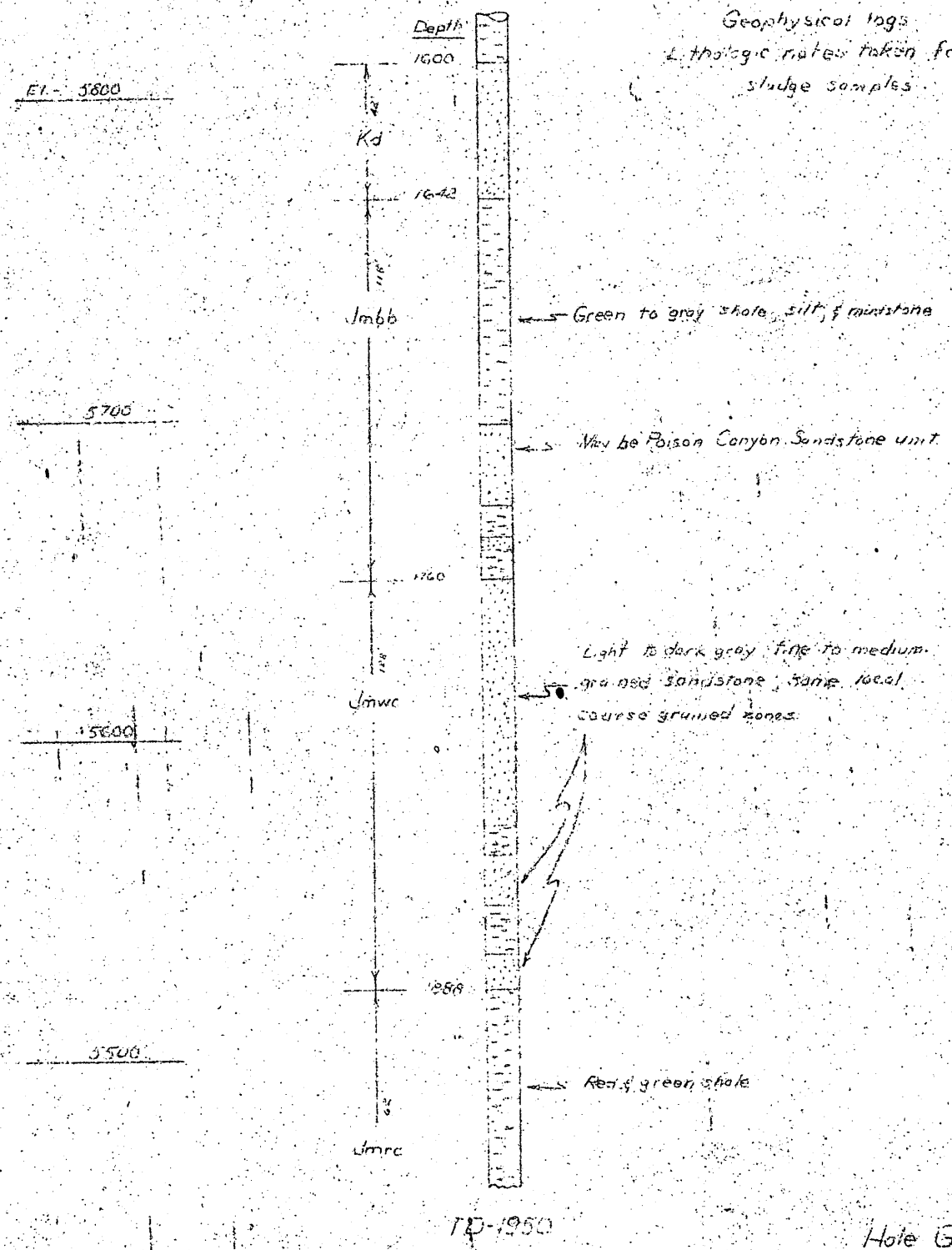
Light to dark gray, fine to medium grained sandstone; some local coarse grained zones

Red & green shale

Hole G-9-27
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA DOCKET No 4842
E J Longyear Co. 9/6/78
Scale 1" = 50'

Hole No. G-10-27

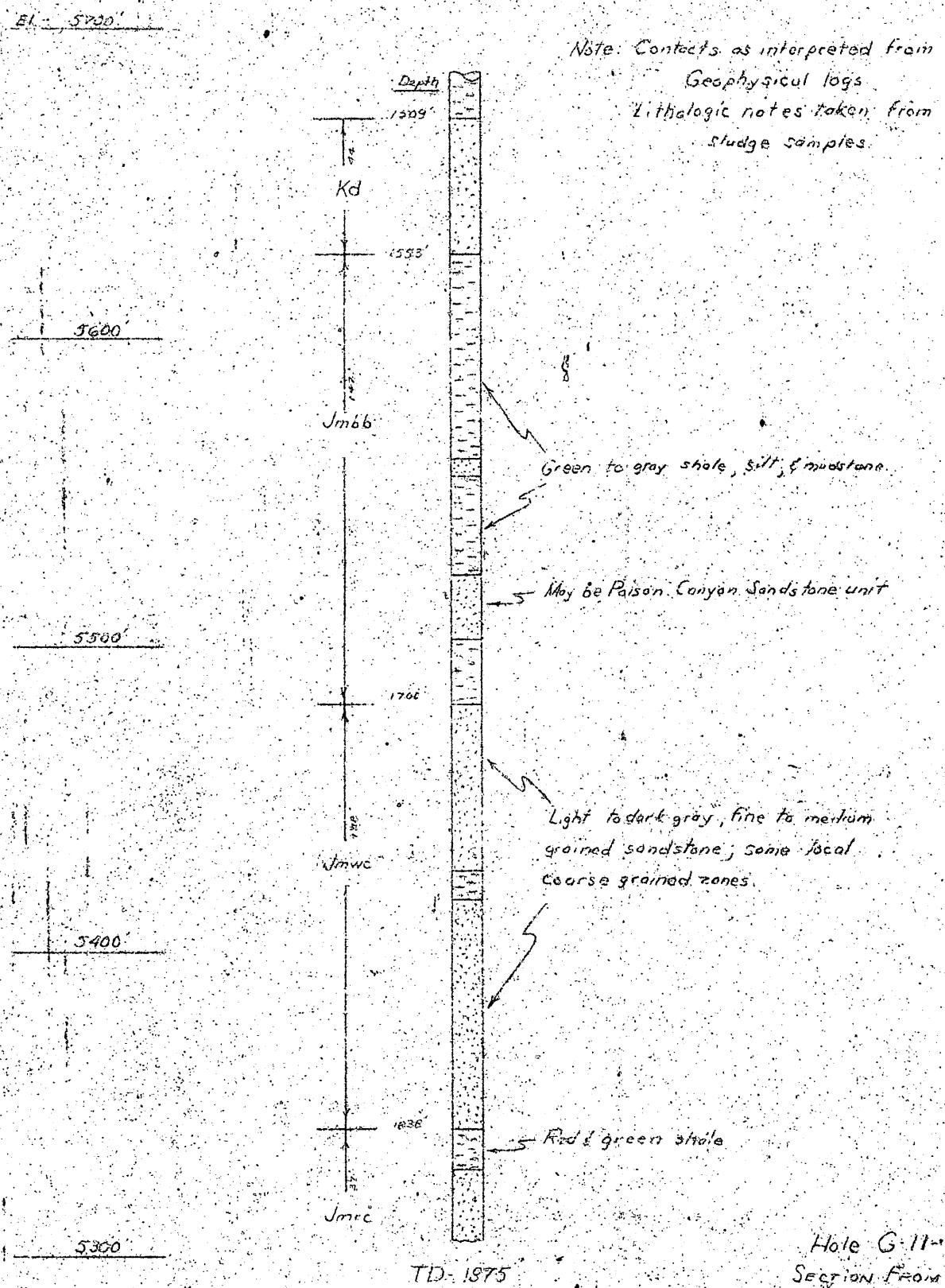
Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from sludge samples.



Hole G-10-27
Section From Top
Of Dakota Sandstone
San Mateo Dome Project
D.V.E.A. Docket No. 4846
E J Longyear Co 8/19/58
Scale 1" = 50'

D. Fratto

Hole No. G-11-34

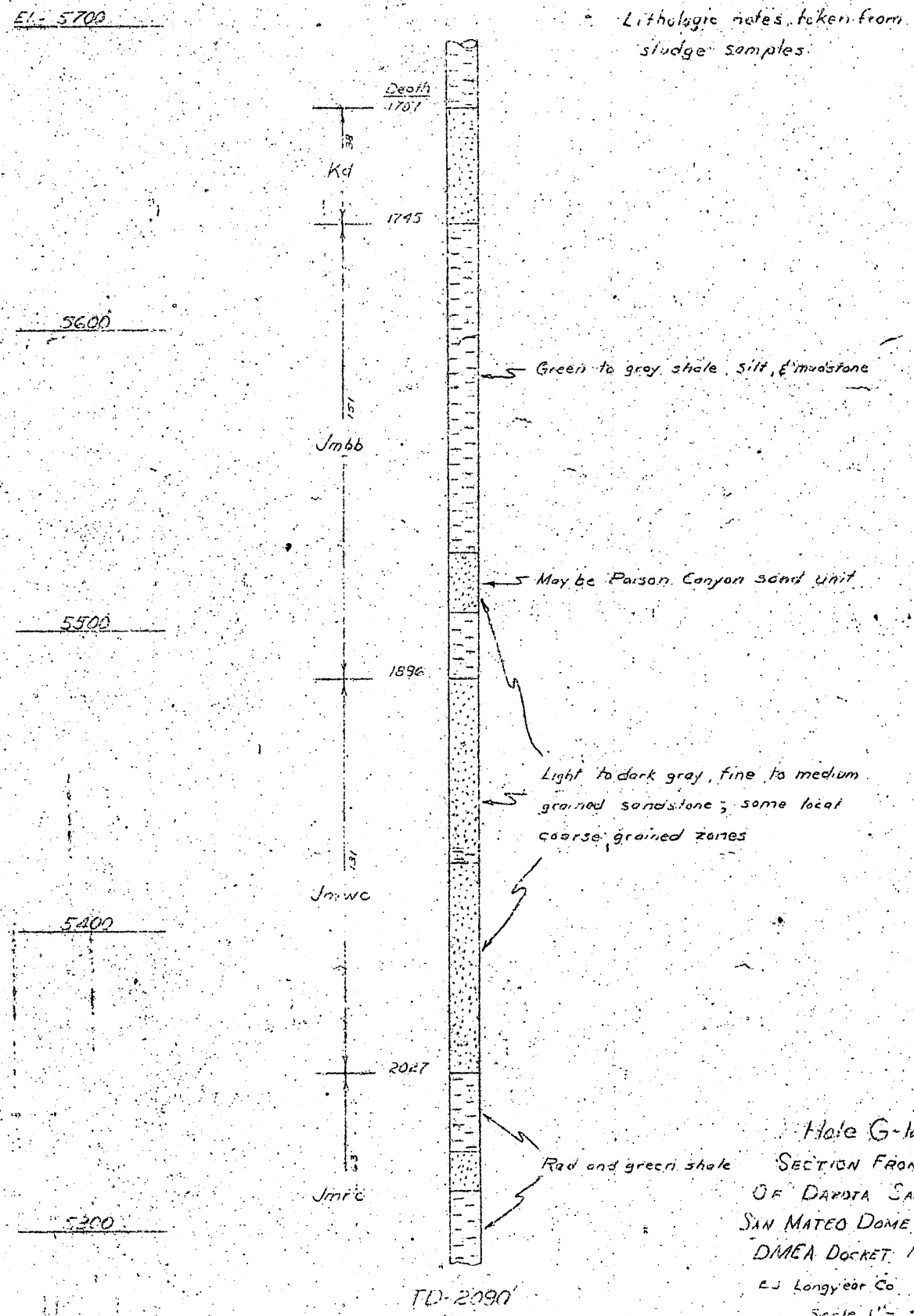


Hole G-11-34
Section From Top
Of Dakota Sandstone
San Mateo Dome Project
DMEA Docket No. 9842
E.J. Longyear Co. 8/25/78
Scale 1" = 50'

C. Fratto

Hole No G-12-27

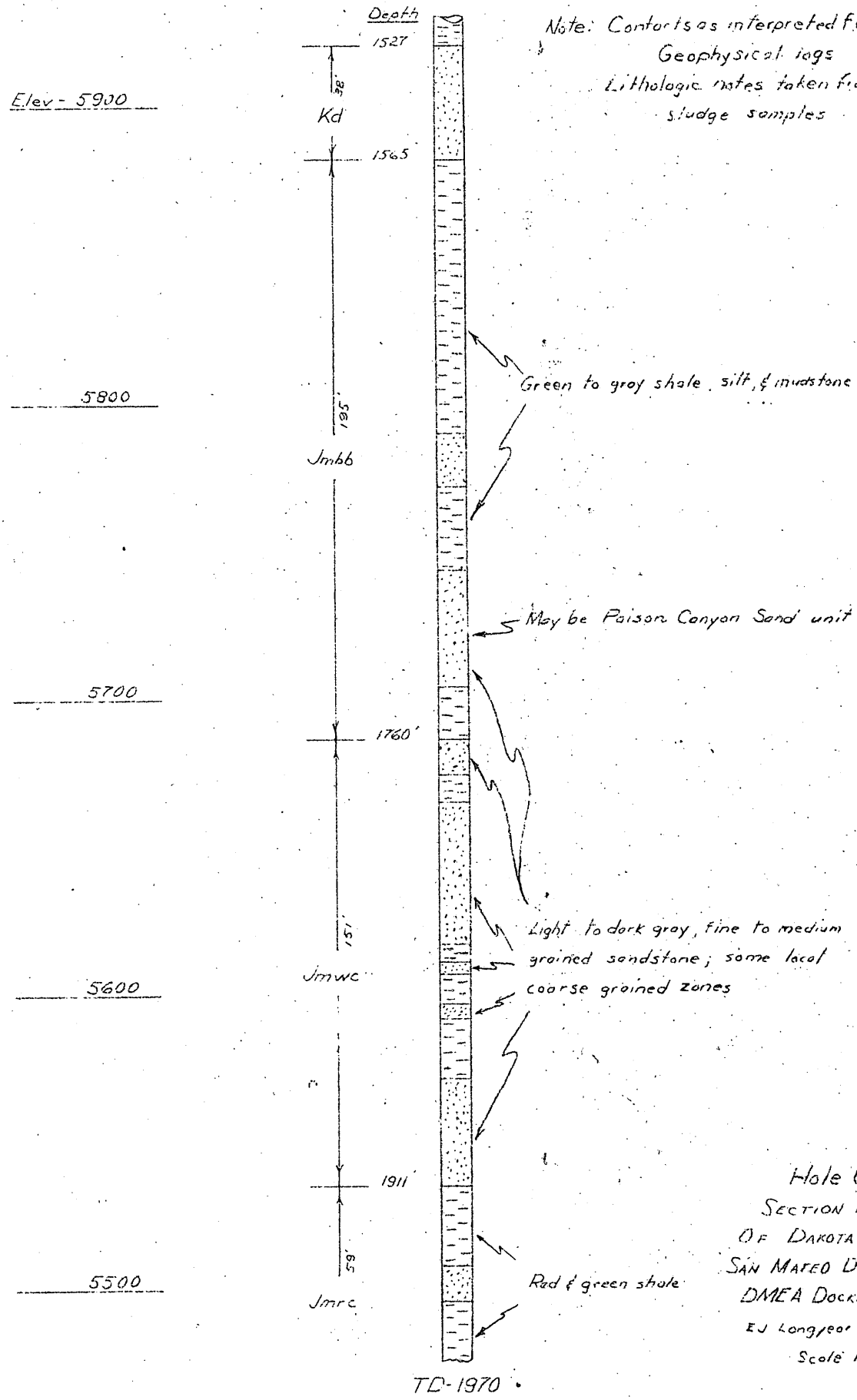
Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from sludge samples



Hole G-12-27
SECTION FROM TOP OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA DOCKET No. 4842
E.J. Longyear Co. 8/31/58
Scale 1" = 50'

D. Fantto

Hole No G-13-27



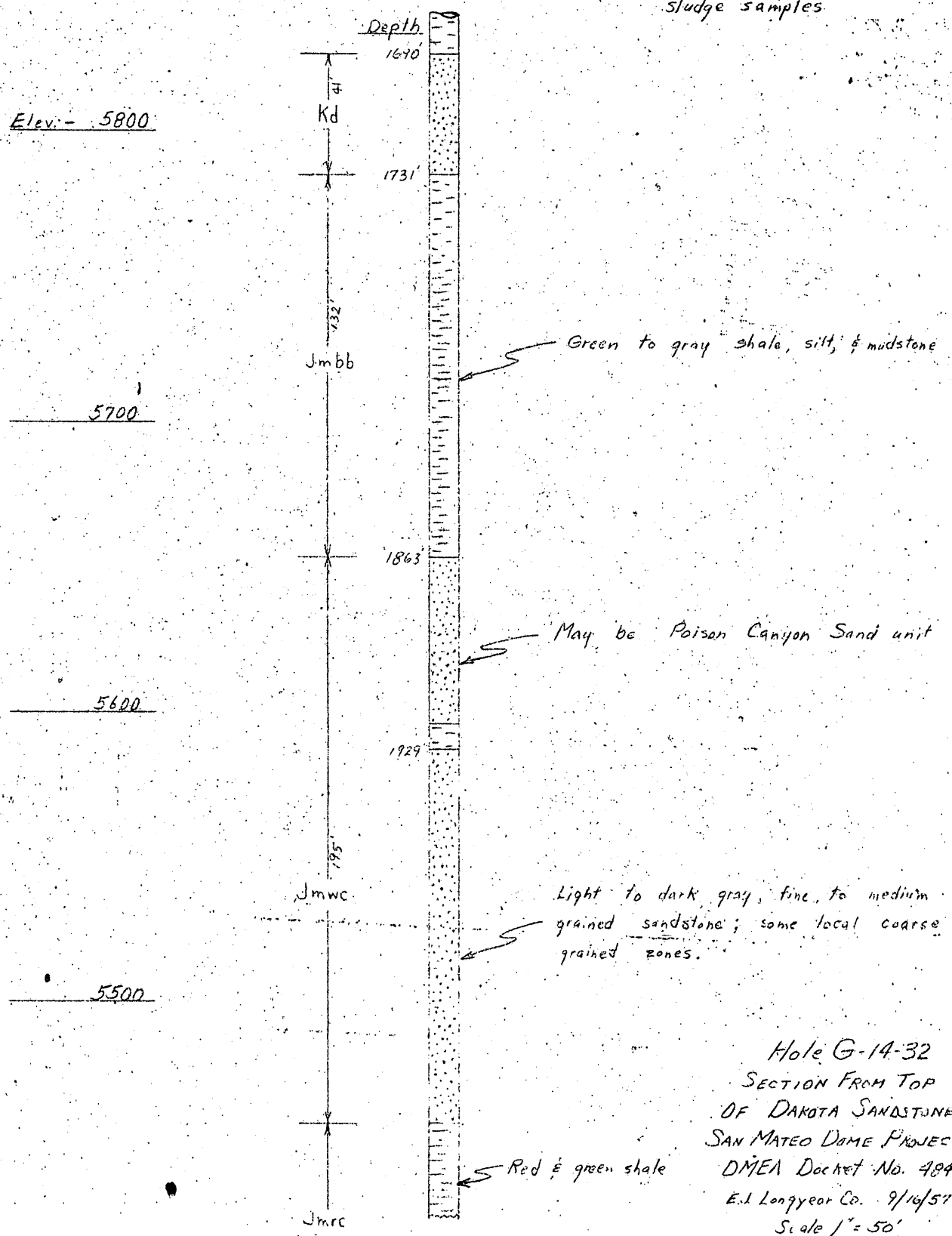
Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from sludge samples

Hole G-13-27
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA DOCKET No. 4842
EJ Longyear Co. 9/10/57
Scale 1" = 50'

D. FRATTA

Hole No G-14-32

Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from sludge samples

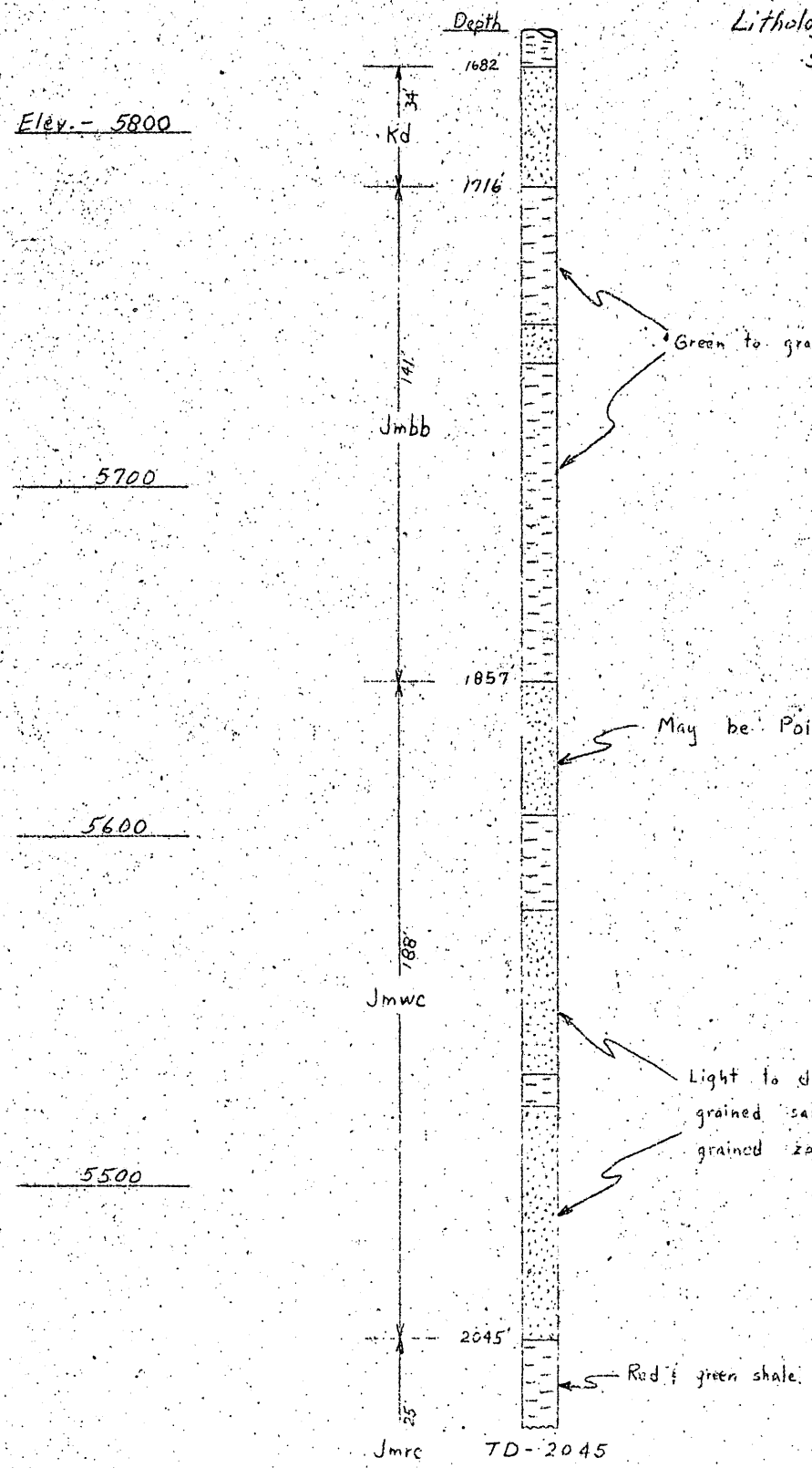


Hole G-14-32
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA Docket No. 4842
E.J. Longyear Co. 9/16/57
Scale 1" = 50'

B. Russell

Hole No G-15-32

Note: Contacts as interpreted from Geophysical logs
Lithologic notes taken from sludge samples

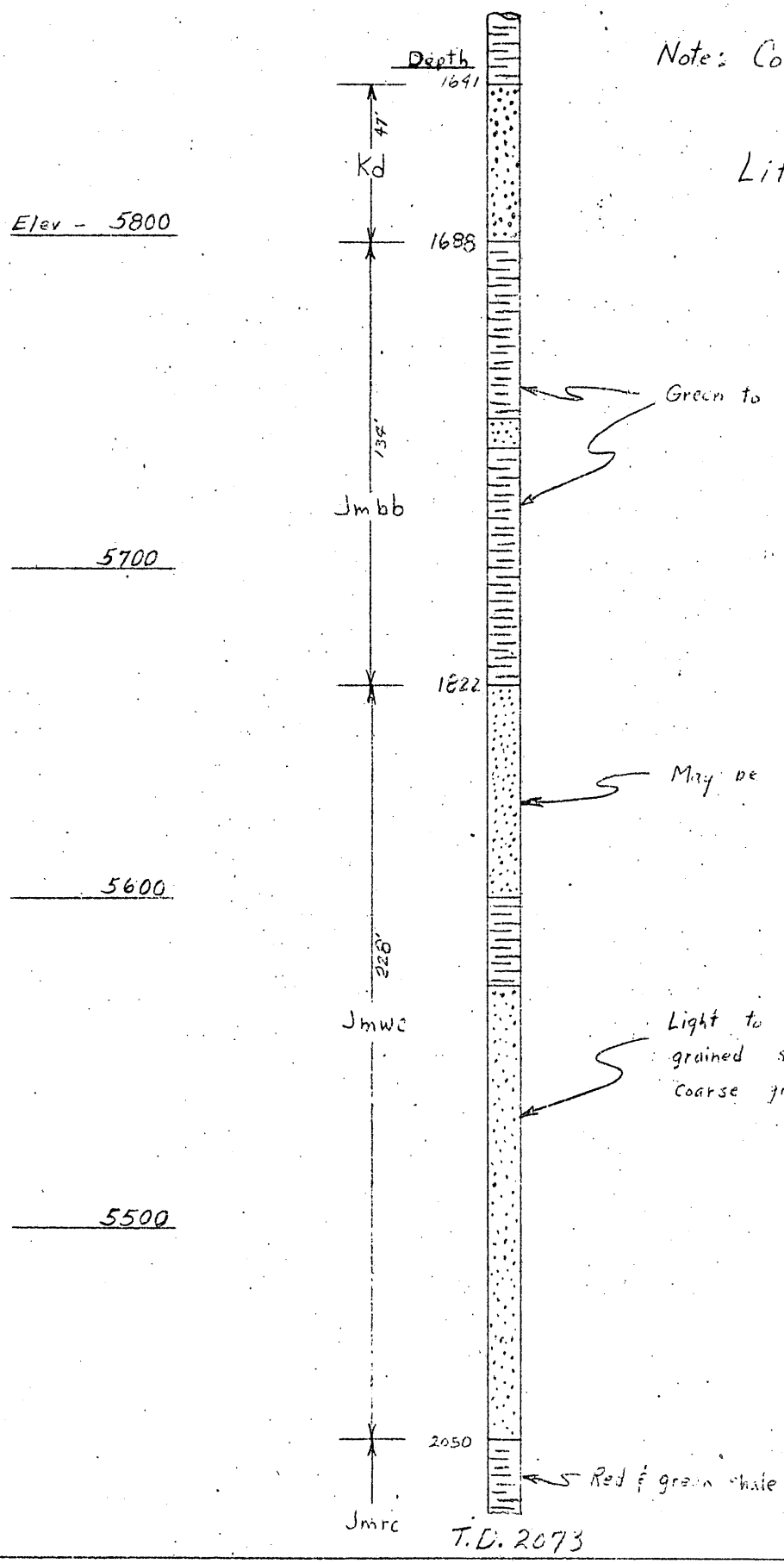


Green to gray shale, silt, & mudstone

Hole G-15-32
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA Docket No. 4842
EJ Longyear Co. 9/16/57
Scale 1" = 50'

A. Russell

Hole No. G-16-32



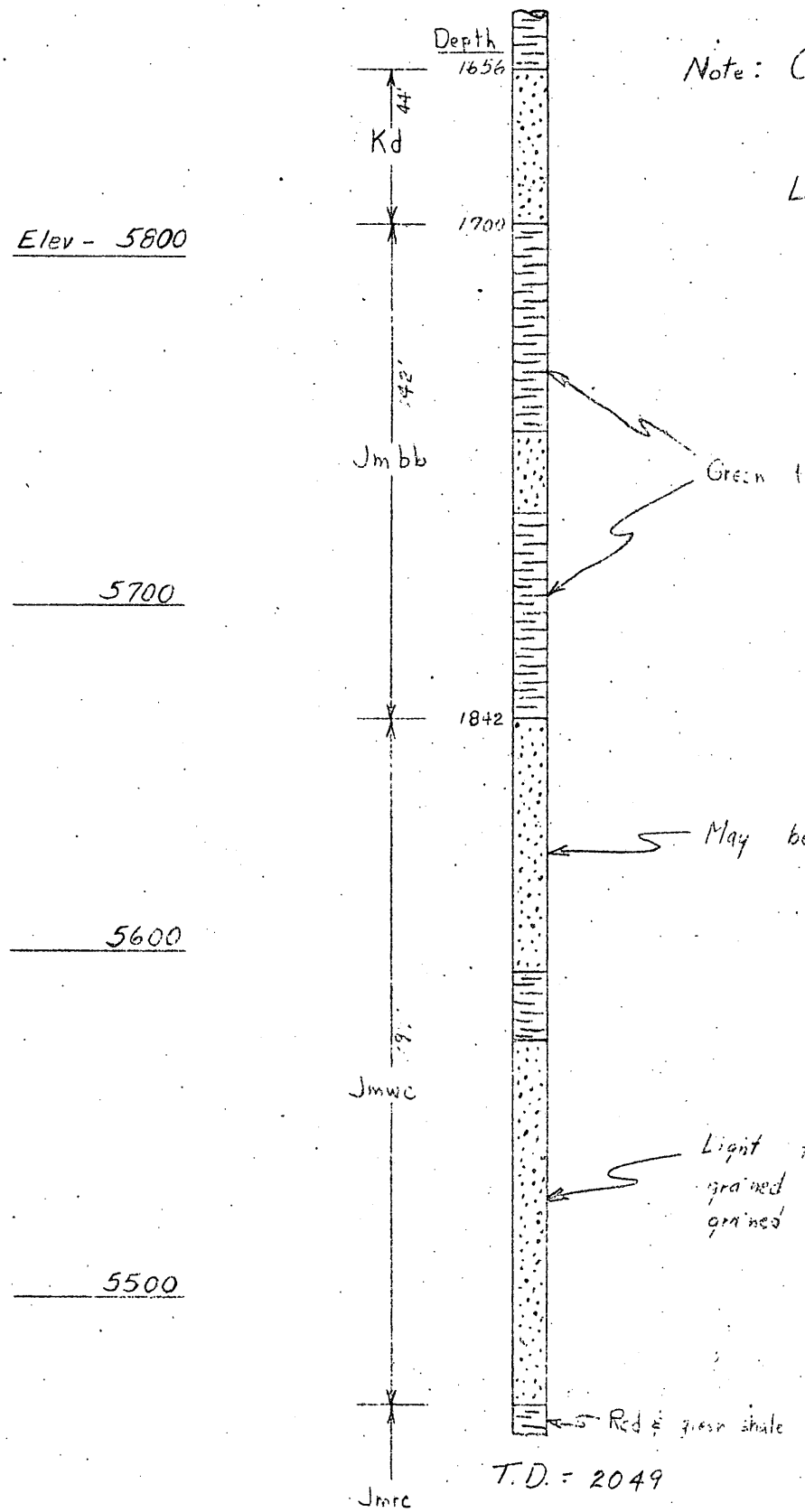
Note: Contacts as interpreted from Geophysical logs

Lithologic notes taken from sludge samples.

Hole G-16-32
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA Contract No. 4942
E.J. Longyear Co. 9/25/59
Scale 1" = 50'

S. Kiss

Hole No. G-17-32



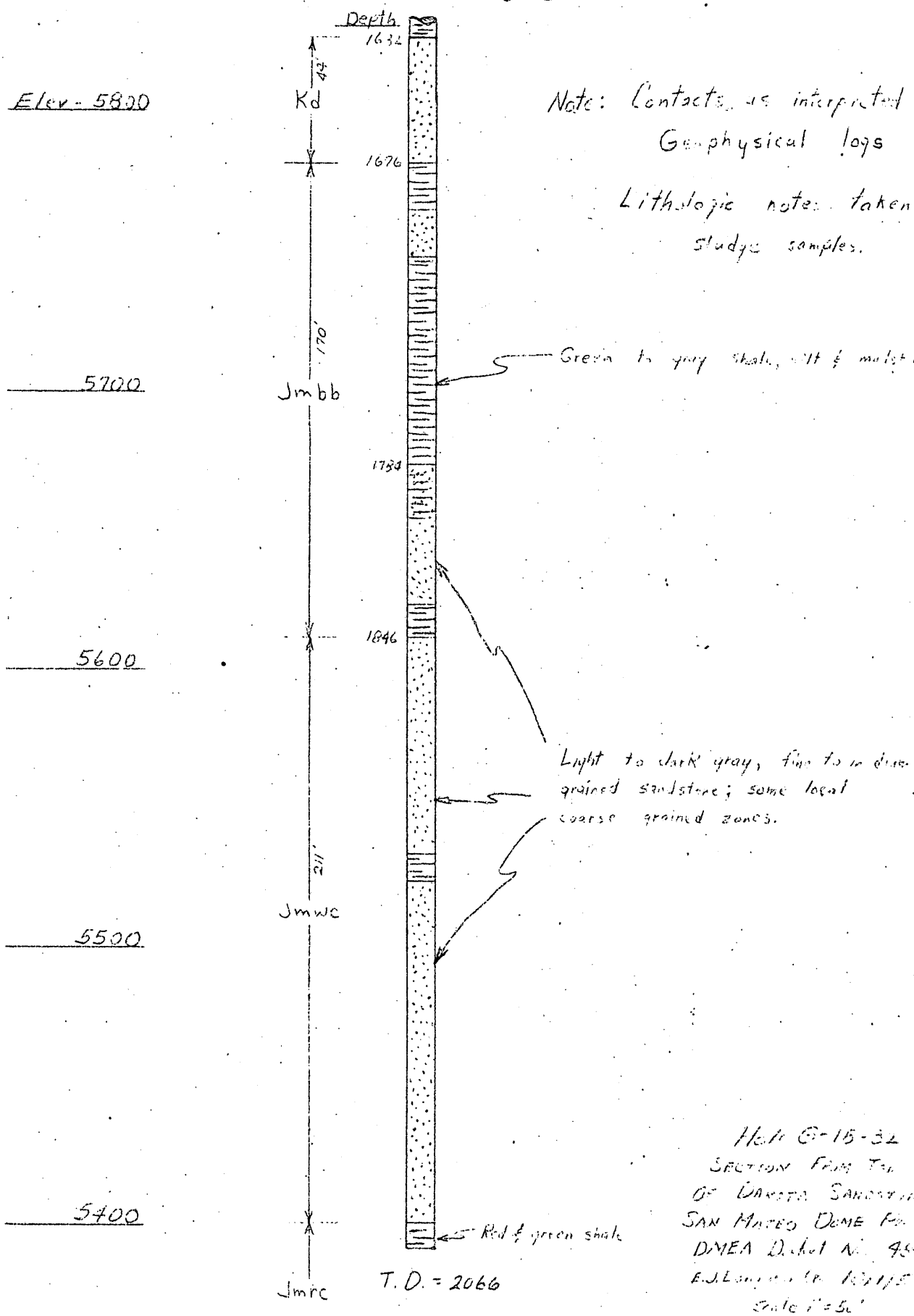
Note: Contacts as interpreted from Geophysical logs

Lithologic notes taken from sludge samples

Hole G-17-32
SECTION FROM TOP OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
UMEA Docket No. 4842
E.J. Langyel Jr. 9/25/78
Scale 1"=50'

B. Russell

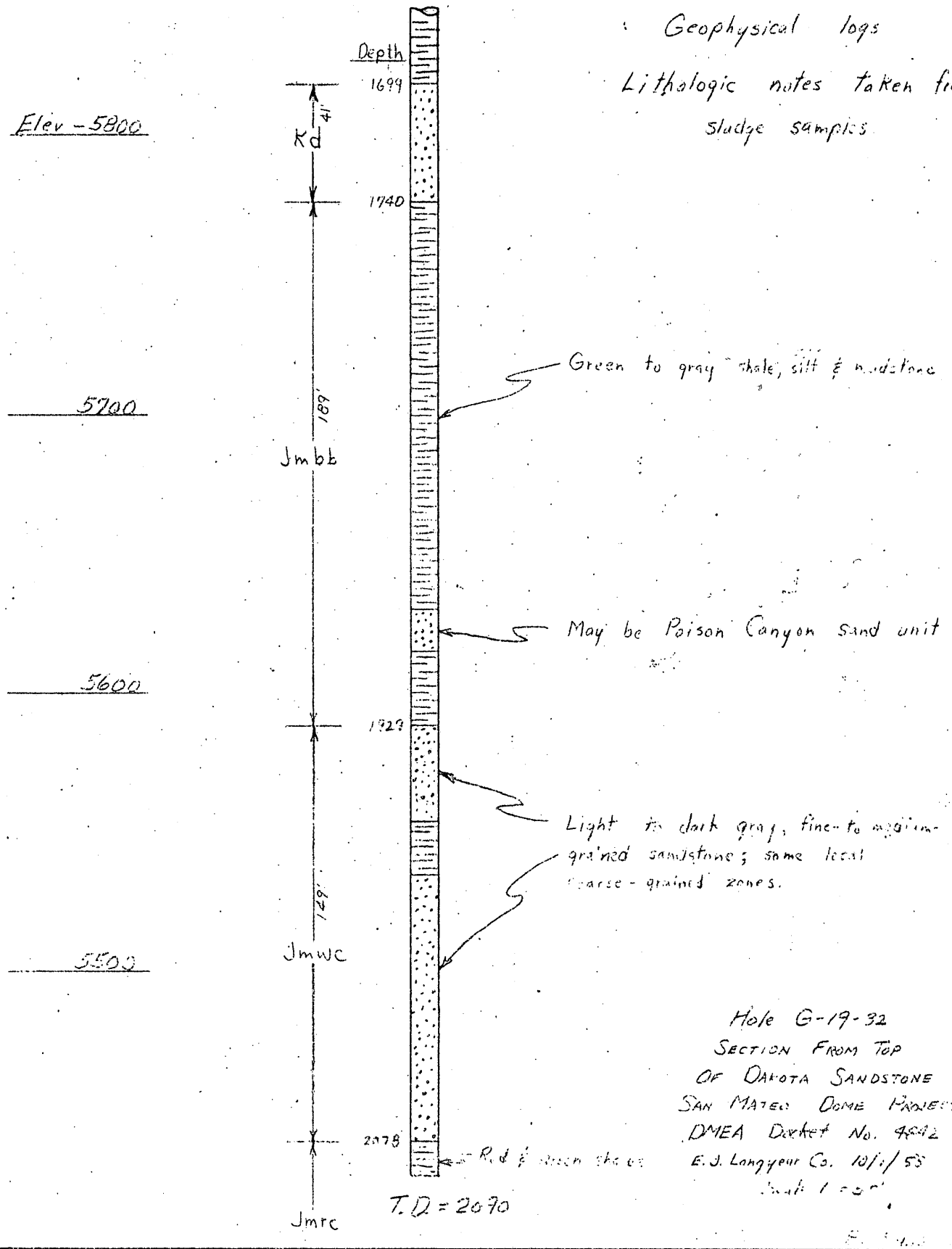
Hole No. G-18-32



Hole No. G-19-32

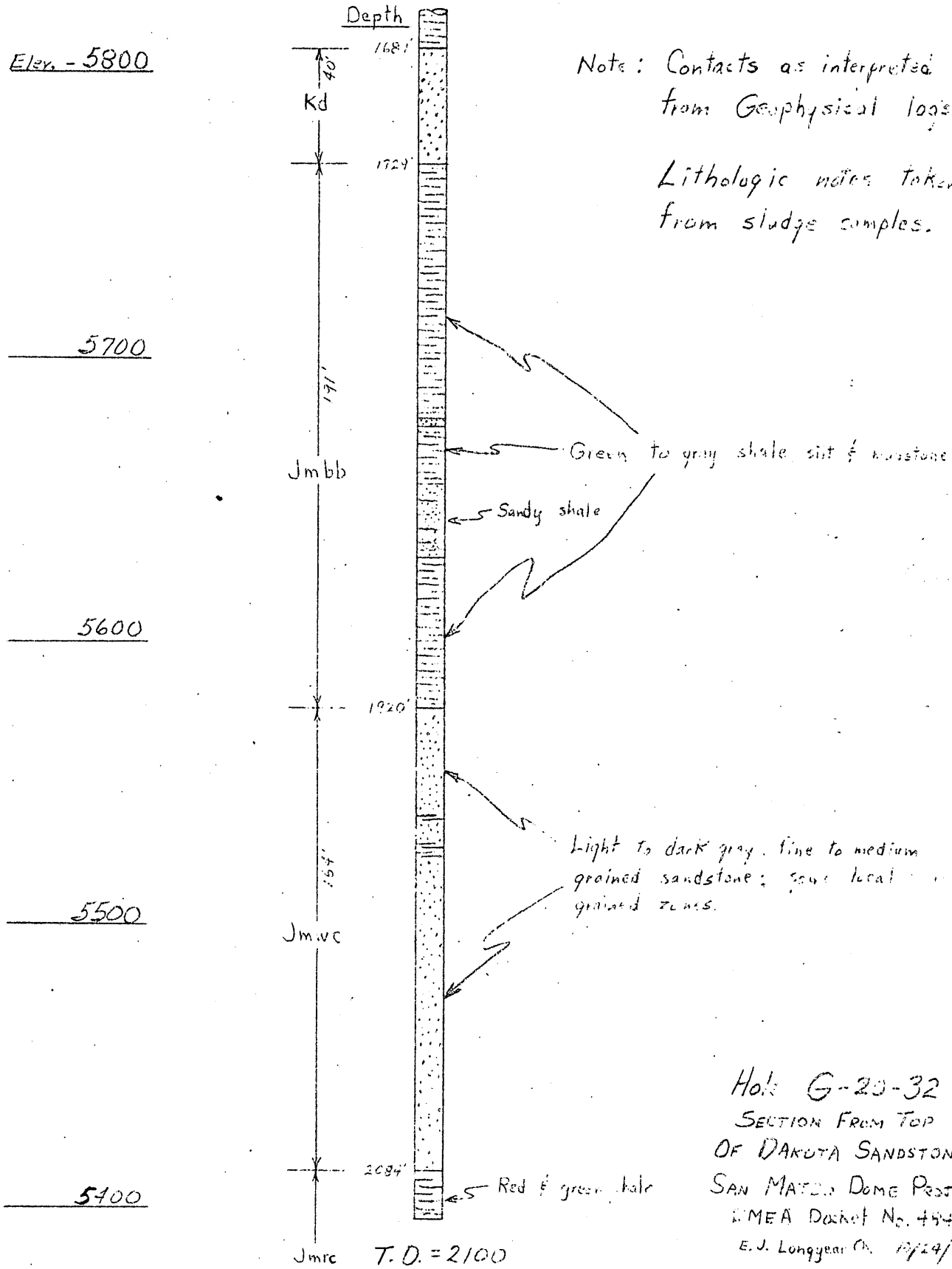
Note: Contacts as interpreted from Geophysical logs

Lithologic notes taken from sludge samples



Hole G-19-32
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
DMEA Docket No. 4542
E. J. Langyeur Co. 10/1/55

Hole No. G-20-32



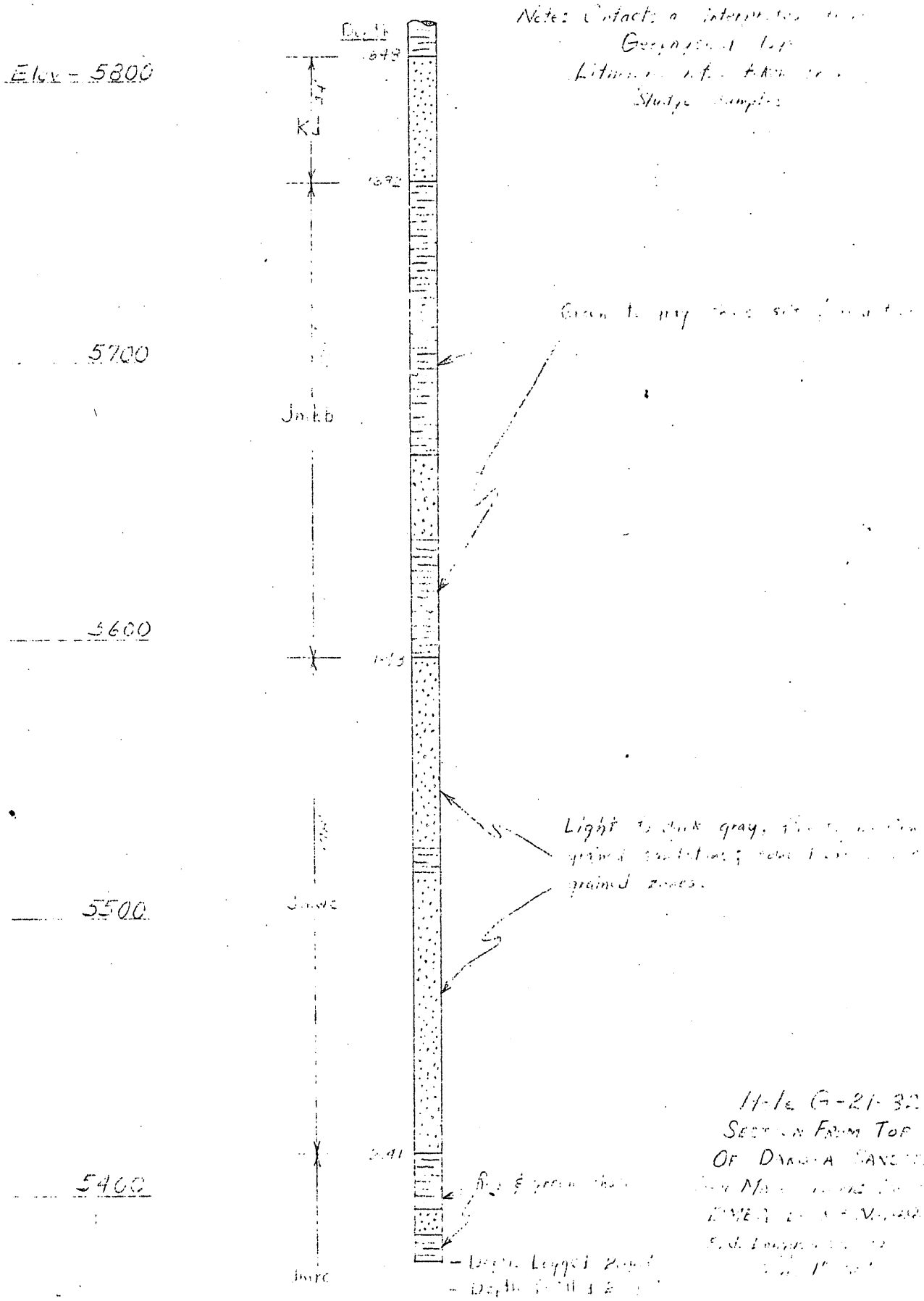
Note: Contacts as interpreted from Geophysical logs.

Lithologic notes taken from sludge samples.

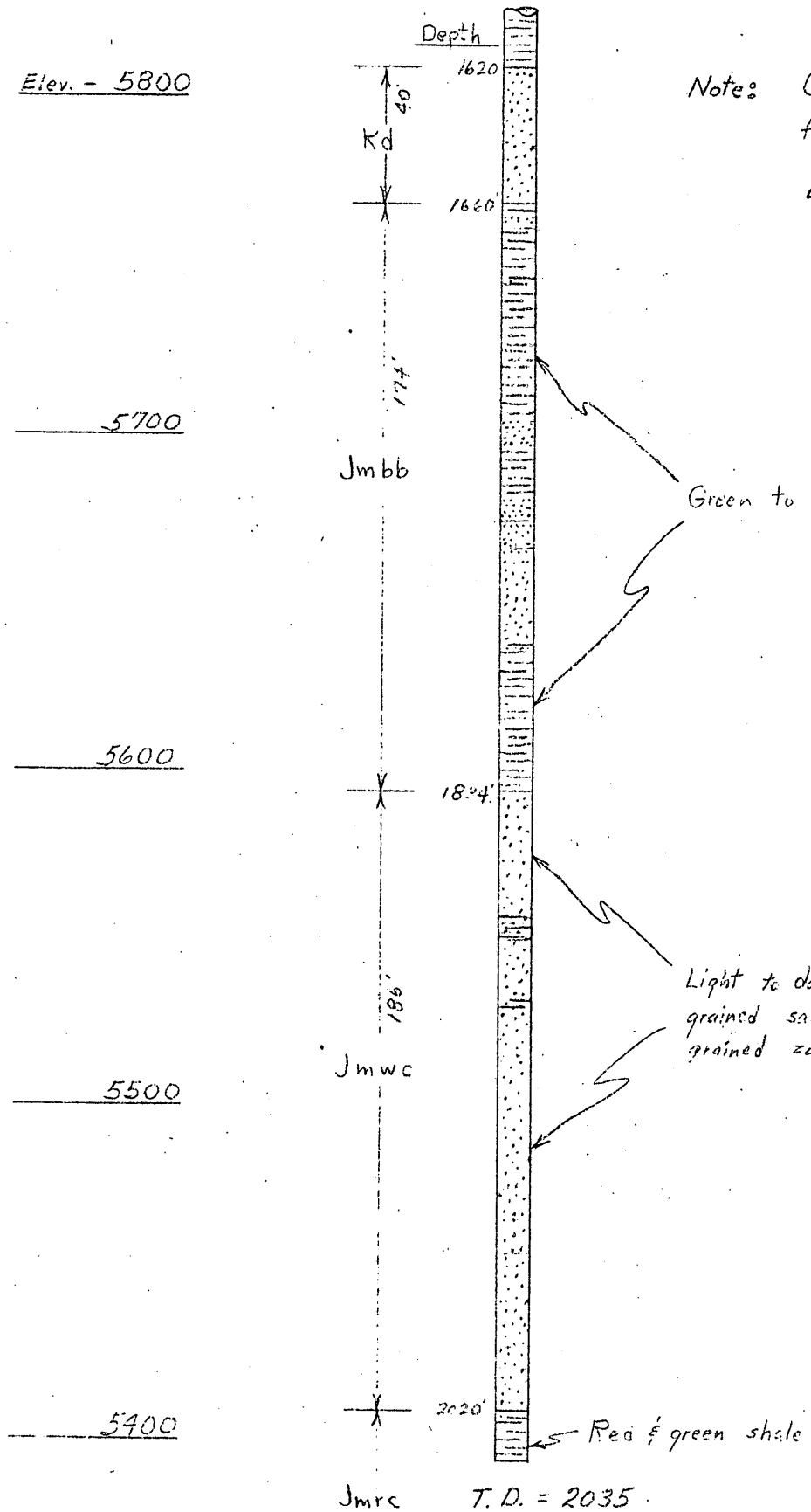
Hole G-20-32
SECTION FROM TOP
OF DAKOTA SANDSTONE
SAN MATEO DOME PROJECT
UMEA Docket No. 4942
E.J. Longyear Co. 10/24/58
Scale 1" = 50'

B. Russell

Hole No. G-21-32



Hole No. G-22-32



Note: Contacts as interpreted from Geophysical logs. Lithologic notes taken from sludge samples.

Green to gray shale, silt & mudstone.

Light to dark gray, fine to medium grained sandstone; some local coarse grained zones.

Red & green shale

Hole G-22-32
SECTION FROM TOP
OF DANETA SANDSTONE
SAN MATEO DOME PROJECT
DMEA Docket No. 4342
Field Logging 10/24/58
Scale 1" = 50'

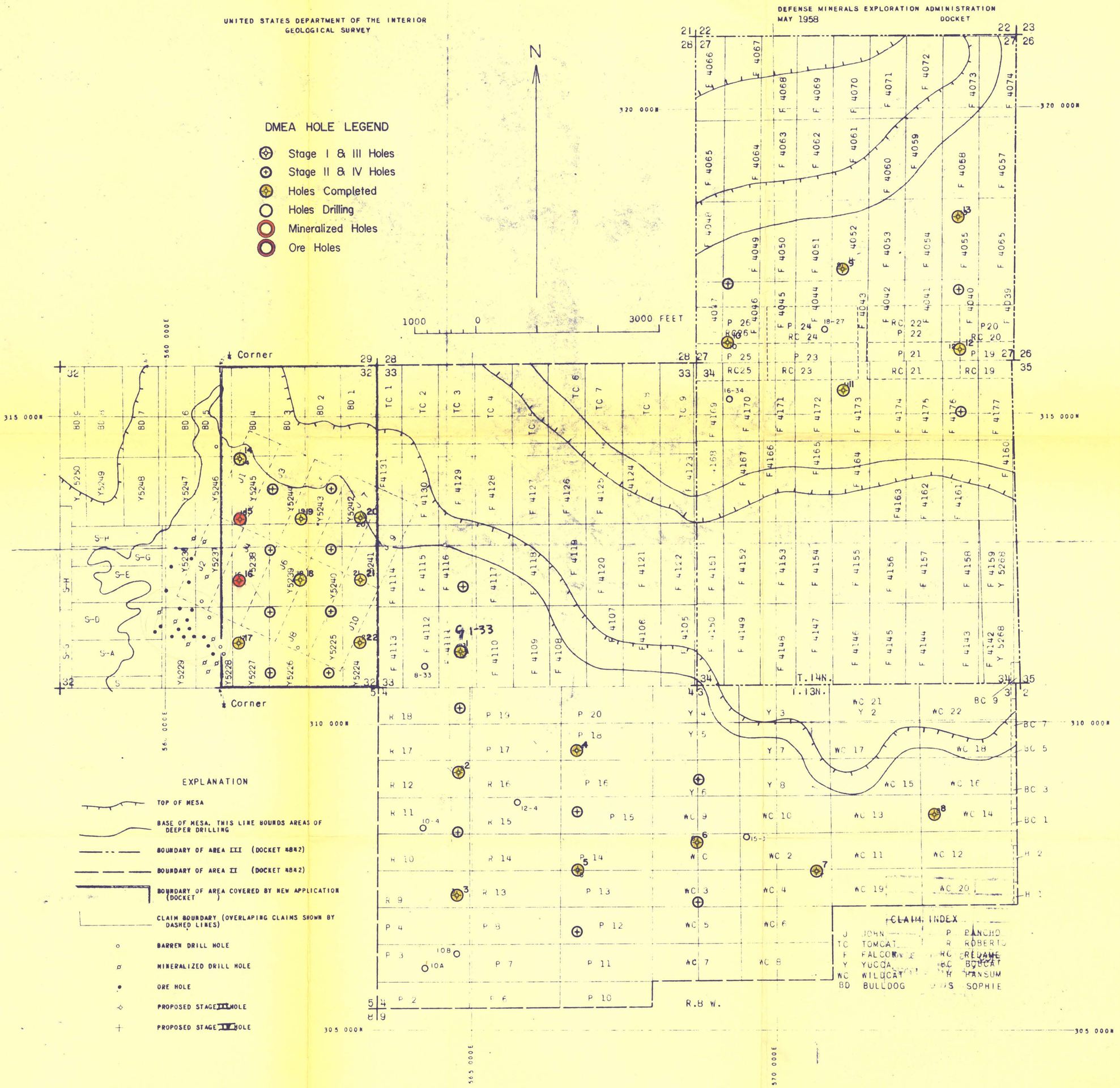


FIGURE 1.--CLAIMS AND PROPOSED DRILLING ON E½ SECTION 32, T.14 N., R.8 W., N.M.P.M., AND AREAS II AND III, SAN MATEO DOME PROJECT, MCKINLEY COUNTY, NEW MEXICO.

LOGGING DATA

PROBE SIZE: 1 7/8 CALIBRATION: 400
DATE: 7-3-58 FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G2-4						
HOLE DIA.	4 3/4 Bit						
DRILLED DEPTH	2020 FT						
LOGGED DEPTH	2012 FT				2012		
GAMMA SCALE	25 CPS						
TIME CONSTANT	4 SEC						
PAPER SPEED	10 FT/IN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	5Ω						
SELF POT SCALE	10 MV/IN		SELF POT T.D.				
BORE HOLE MEDIUM	H2O WITH						
MUD READINGS	RESISTIVITY		TYPE BASE				
	VISCOSITY		SALINITY				
	WEIGHT	LBS/GAL	LBS/CU FT				
CALIPER SCALE	INCH	LEG SIZE	PAPER SCALE				
TIME IN	5:30	CASED TO		I.D.	IN		
TIME OUT	2:16	CORE INT.		DIAM	IN		

LOCATION	TIME
SEC. 4 TWP. 14 RGE. 8	OFFICE:
COUNTY: McKinley	DRIVE: 2.6
STATE: N. Mex.	STANDBY: 20
AREA:	FIELD: 13
CLIENT: Longyear	TOTAL: 3.9
Dr. Contractor: Scott	BREAKDOWN:
LOG REC'D BY:	OPERATOR: Marsh
	PARTY NO: V-1

GEOPHYSICAL CORP.

TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E.J. Longyear Co.
BORE HOLE NO. G-2-4
FIELD San Mateo Dome Project
COUNTY McKinley
LOCATION: SEC. 4 TWP. 13N RGE. 8W

LOG MEAS. FROM ________ FILE
DRLG. MEAS. FROM ________ NO.

LOCATION OF HOLE

DATE:
FOOTAGE logged 2012
TOTAL DEPTH (DR) 2020
HOLE DIAM. 4 3/4
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

ELEVATION KB 7383.39
GL
BKGRD. COUNT
SLUSH PIT CT.

REMARKS:

58 C. 11/50 HC4

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	BED THICKNESS	K KO	CORR. CPS.	% U3O8
Disc No.	Depth	Drift	Mag Brng	True Bearing
No above background radioactivity recorded				
Barren Hole.				

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1604	38'
Brushy Basin	1643	157'
Westwater	1800	199'
Recapture	1999	

DMEA

SELF POTENTIAL

\+ 10 MV −

G-2-4

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS

G-2-4

LOGGING DATA

PROBE SIZE: 1 7/8 — CALIBRATION: 400

DATE: 7-17-58 — FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G-3-4						
HOLE DIA.	7 3/4 1660 4 1/2 TD						
DRILLED DEPTH	2030 FT						
LOGGED DEPTH	2020 FT				2027		
GAMMA SCALE	25 CPS						
TIME CONSTANT	3 SEC						
PAPER SPEED	10 FT/IN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	50 Ω						
SELF POT SCALE	10 MV/IN			SELF POT T.D.			
BORE HOLE MEDIUM	H2O	WITH					
MUD READINGS	RESISTIVITY			TYPE BASE			
	VISCOSITY			SALINITY			
	WEIGHT		LBS/GAL	LBS/CU FT			
CALIPER SCALE	INCH	LOG SIZE		PAPER SCALE			
TIME IN	1700	CASED TO				I. D.	IN
TIME OUT	1830	CORE INT.				DIAM	IN

LOCATION	TIME
SEC. 11 TWP. 14 RGE. 5	OFFICE:
COUNTY: McKinley	DRIVE: 2.5
STATE: N.M.	STANDBY: 1.0
AREA:	FIELD: 1.5
CLIENT: Longyear	TOTAL: 5.0
Dr. Contractor: Scott	BREAKDOWN:
LOG REC'D BY:	OPERATOR:
... Satts	Marsh
	PARTY NO: V-1

Century

GEOPHYSICAL CORP.

TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E.J. Longyear Company

BORE HOLE NO. G-3-4

FIELD San Mateo Dune Project

COUNTY McKinley

LOCATION: SEC. 4 TWP. 13N RGE. 8W

LOG MEAS. FROM .... FILE NO. ....

DRLG. MEAS. FROM ....

		LOCATION OF HOLE
DATE	7/17/58	
FOOTAGE	2027	
TOTAL DEPTH (DR)	2030	
HOLE DIAM.	7 3/4	
LOGGING SPEED	10'/m	
TIME CONSTANT	3 sec	ELEVATION KB 7444.52 GL
MUD TYPE		
CASED TO	Non	BKGRD. COUNT / SLUSH PIT CT.

REMARKS:

50' @ 1600' fell

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	BED THICKNESS	K KD	CORR. CPS.	% U_3O_8
Disc No.	Depth	Drift	Mag Brng	True Bearing
Mags	1838			511
Barren Hole				

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1625'	38'
Brushy Basin	1663	153'
Poison Canyon	1816	35'
Westwater	1816	162 (includes P.C.)
Recapture	1978	

DMER

DMER

SELF POTENTIAL

+ 10 MV -

G-3-4

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS

G-3-4

LOGGING DATA

PROBE SIZE: 1 3/8"
CALIBRATION: 400'F'S
DATE: 7-31-58
FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G-4-4						
HOLE DIA.	IN						
DRILLED DEPTH	2020 FT						
LOGGED DEPTH	2025 FT			2015			
GAMMA SCALE	25 CPS						
TIME CONSTANT	0 SEC						
PAPER SPEED	10 FT/IN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	50 Ω						
SELF POT SCALE	10 MV/IN		SELF POT T.D.				
BORE HOLE MEDIUM	Mud	WITH					

MUD READINGS: RESISTIVITY; TYPE BASE; VISCOSITY; SALINITY; WEIGHT LBS/GAL; LBS/CU FT

CALIPER SCALE: INCH; LEG SIZE; PAPER SCALE

TIME IN: 2015; CASED TO; I. D. IN

TIME OUT: 2200; CORE INT.; DIAM IN

LOCATION	TIME
SEC. 4 TWP. 13 RGE. 8	OFFICE:
COUNTY: McKinley	DRIVE: 0.8
STATE: New Mex	STANDBY: 2.6
AREA:	FIELD: 1.8
CLIENT: Longyear	TOTAL: 5.2
Dr. Contractor: Scott	BREAKDOWN:
LOG REC'D BY:	OPERATOR: Ralph Parker
	PARTY NO.: 114

4" @ 1001' TC 4

GEOPHYSICAL CORP.

TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E.J. Longyear Co

BORE HOLE NO. G-4-4

FIELD: San Mateo Dome Project

COUNTY: McKinley

LOCATION: SEC. 4 TWP. 13N RGE. 8W

LOG MEAS. FROM Surface FILE
DRLG. MEAS. FROM Surface NO.

		LOCATION OF HOLE
DATE:	7/31/58	
FOOTAGE	2025	
TOTAL DEPTH (DR)	2020	
HOLE DIAM.	4 3/4	
LOGGING SPEED	—	ELEVATION KB 7353.24
TIME CONSTANT	—	GL
MUD TYPE	—	BKGRD. COUNT
CASED TO	—	SLUSH PIT CT.

REMARKS: No Permeia,

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	BED THICKNESS	K KD	CORR. CPS.	% U3O8
Disc No.	Depth	Drift	Mag Brng	True Bearing
Barren Hole				

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: B.J. Sorensen

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1613	46'
Brushy Basin	1659	169
Poison Canyon	1828-1848(?)	20'
Westwater	1828	150+
Recapture	1980-1210(?)	

SELF POTENTIAL

G-4-4

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE OHMS

G-4-4

LOGGING DATA

PROBE SIZE: 1⅞ CALIBRATION: H2O

DATE: 7-31-58 FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G-5-4					
HOLE DIA.	3⅞ Bit 1⅞ ID					
DRILLED DEPTH	2060 FT					
LOGGED DEPTH	2073 FT				2073	
GAMMA SCALE	2.5 CPS					
TIME CONSTANT	3 SEC					
PAPER SPEED	10 FT/IN					
LOGGING SPEED	16 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE						
SELF POT SCALE	10 MV/IN			SELF POT T.D.		
BORE HOLE MEDIUM	H2O	WITH		TYPE BASE		
MUD READINGS	RESISTIVITY					
	VISCOSITY			SALINITY		
	WEIGHT	LBS/GAL		LBS/CU FT		
CALIPER SCALE	INCH	LEG SIZE		PAPER SCALE		
TIME IN	1100	CASED TO			I. D.	IN
TIME OUT		CORE INT.			DIAM	IN

LOCATION	TIME
SEC. 4 TWP. 13N RGE. 8W	OFFICE:
COUNTY: McKinley	DRIVE:
STATE N. Mex.	STANDBY:
AREA:	FIELD:
CLIENT: Long Year	TOTAL:
Dr. Contractor	BREAKDOWN:
LOG REC'D BY:	OPERATOR: Mach
	PARTY NO. 21-1

Century

GEOPHYSICAL CORP.

TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E. J. Longyear

BORE HOLE NO. G-5-4

FIELD San Mateo Dome Project

COUNTY McKinley

LOCATION: SEC. 4 TWP 13N RGE. 8W

LOG MEAS. FROM surface FILE

DRLG. MEAS. FROM surface NO.

		LOCATION OF HOLE
DATE:	7/31/58	
FOOTAGE	2073	
TOTAL DEPTH (DR)	3044	
HOLE DIAM.	1⅞	
LOGGING SPEED	—	
TIME CONSTANT	—	ELEVATION KB 7383.3 GL
MUD TYPE	—	
CASED TO	—	BKGRD. COUNT SLUSH PIT CT.

REMARKS:

1650 tcd

MINERALIZATION OR *DIRECTIONAL DRIFT METER*

COUNTS PER SEC.	BED THICKNESS	K KD	CORR. CPS.	% U_3O_8
Disc No.	*Depth*	*Drift*	*Mag Brng*	*True Bearing*
	Barren Hole			

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: C. J. Swenson

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1703	47'
Brushy Basin	1750	135
Westwater	1885	135
Recapture	2020 (?)	

SELF POTENTIAL

10 MV

G-5-4

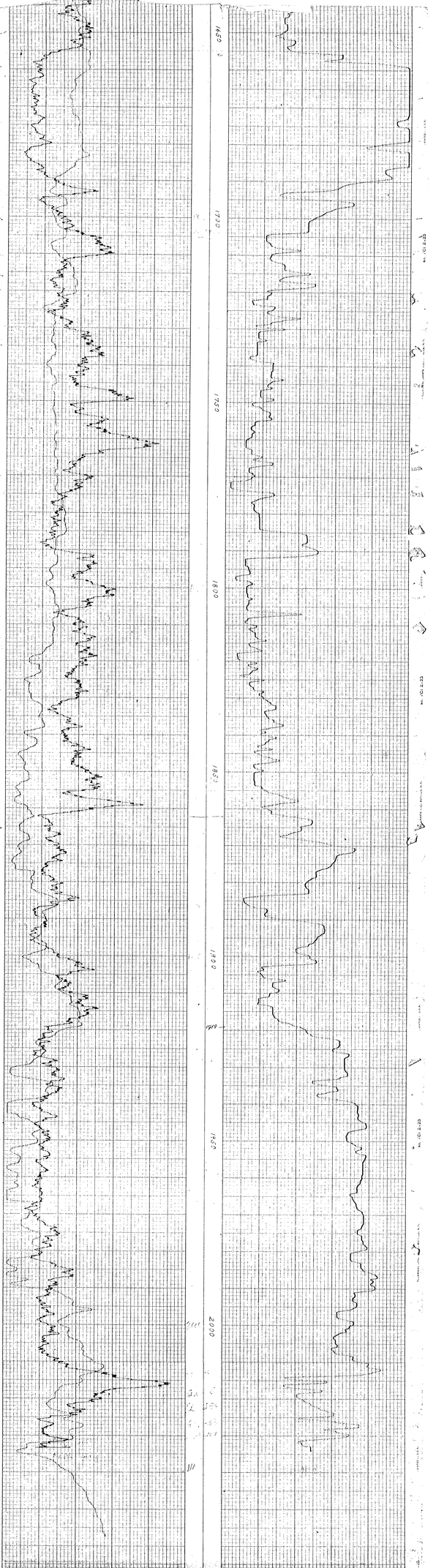
NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS

G-5-4



LOGGING DATA

PROBE SIZE: 1 3/8 — CALIBRATION: 400
DATE: 8-7-58 — FIELD HOOKUP: Grants

	INITIAL REC.	REC. 2	REC. 3	REC. 4	REC. 5	REC. 6
HOOK UP						
BOX NO.	0.9.6					
GAIN	4 Wide					
CABLE REPORT	Poson					
SPEED	20 ft					20 ft
SAMPLE	2 sec					
GAMMA	2 CPS					
CALIBRATOR	8 sec					
PAPER SPEED	10 inch					
SCANNER SPEED	10 FT/IN	FT/IN	FT/IN	FT/IN	FT/IN	FT/IN
FEEDBACK SPEED	20 FT/IN					
FIELD POT	2 MVOLTS			FIELD POT T.D.		
HOLE VOLT.	16 V		MUDE			
MUD	RESISTIVITY			FILTRATE RESISTIVITY		
MUD HARDNESS	VISCOSITY			SALINITY		
	WEIGHT		SALT GAS	SALINITY CL 22.5		
CALIPER SCALE	1 INCH	SAL. SCALE		PAPER SCALE		
TIME 1D	1800	CASED TO			T. D.	2000
CLOCK	1145	CLOCK				
TIME 2D		TIME			DIAM	2D

LOCATION		TIME	
SEC. 11	TWP. 13	RGE. 9	OFFICE:
COUNTY: McKinley			DRIVE: 2.0
STATE: N. Mex			STANDBY: 3.0
AREA:			FIELD: 4.0
CLIENT: Lonsjyer			TOTAL: 9.0
Dr. Contractor: Geo H			BREAKDOWN:
LOG REC'D BY: Don J. Scott			OPERATOR: Weeks
			PARTY NO.: 7-1

GEOPHYSICAL CORP.
TULSA, OKLA. U.S.A.
EXPLORATION LOG

COMPANY: El Longyear Co.
BORE HOLE NO. G-6-4
FIELD: San Mateo Dome Project
COUNTY: McKinley
LOCATION: SEC. 4 TWP. 13 N RGE. 8 W

LOG MEAS. FROM ..... FILE .....
DRILL MEAS. FROM ..... IND. .....

DATE:
FOOTAGE (Logged): 2036
TOTAL DEPTH (DR): 2000
HOLE DIAM.: 4 7/8
LOGGING SPEED:
TIME CONSTANT:
MUD TYPE:
CASED TO:

LOCATION OF HOLE
ELEVATION KB 7282.10
GL
INCRD. COUNT
SLUSH PIT CT.

REMARKS: Reruns:
Barren Hole
This hole blind water 750'

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTER PER SEC.	BED THICKNESS	K 1.0	CORR. COR.	% TRACE
Run No.	Depth	Depth	Mag Bing	True Bearing
No above background radioactivity recorded				
Barren Hole				

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1888	49'
Beanty Basin	1944	135'
Westwater	1146 / 1162	162'
Recapture	2018	

SELF POTENTIAL

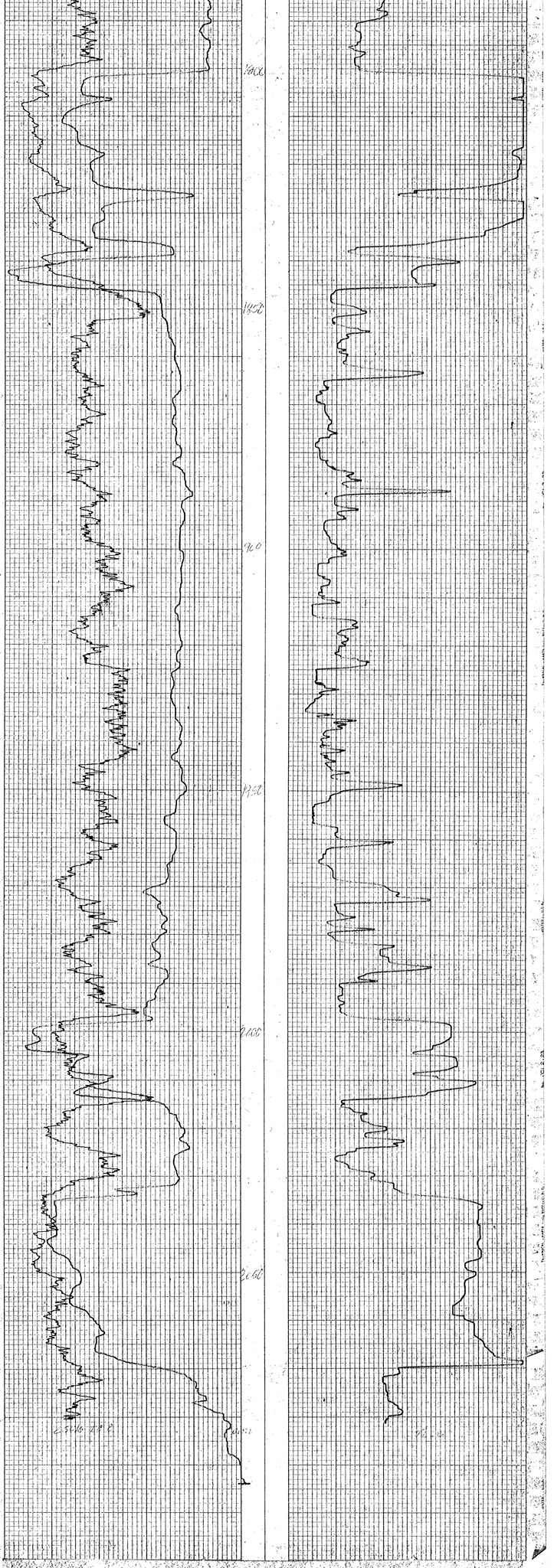
G-6-4 10 -

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9	
4	6	8	10	12	14	
4	8	12	16	20	24	

RESISTANCE
OHMS



LOGGING DATA

PROBE SIZE: 1 7/8		CALIBRATION: 1100			
DATE: 8-12-58		FIELD PHOTOS: Graphs			
	INITIAL RUN	RE. RUN	RE. RUN	RE. RUN	RE. RUN
HOLE NO.	G7-3				
HOLE DIA.	1 7/8 HO				
DRILLED DEPTH	2070 ft				
LOGGED DEPTH	2081 ft				2081
GAMMA SCALE	25 CPS				
TIME CONSTANT	8 SEC				
PAPER SPEED	10 FT/IN	FT/IN	FT/IN	FT/IN	FT/IN
LOGGING SPEED	10 FT/IN	FT/IN	FT/IN	FT/IN	FT/IN
RESISTANCE SCALE	500				
SELF POT SCALE	— MV/IN		SELF POT E.R.		
BORE HOLE RESIST.	420	WITH	TYPE BASE		
MUD RESISTIVITY					
MUD VISCOSITY			BALLINITE		
MUD WEIGHT		LOST CIR.	LOST CIR. FT		
CALIPER SCALE	INCH SIZE	LOG SIZE	PAPER SCALE		
TIME IN	1600	CASED TO		I. D.	IN
TIME OUT	1740	CORE INT.		DIAM	IN

LOCATION	TIME
SEC. 7 TWP. 13 RGE. 8	OFFICE:
COUNTY: McKinley	DRIVE: 1.5
STATE: New Mexico	STANDBY: 1.0
AREA:	FIELD:
CLIENT: Long Year	TOTAL: 1.2
Dr. Contractor: Scott	BREAKDOWN:
LOG REC'D BY: Don Fratto	OPERATOR: Mash
	PARTY NO: V-4

Century

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E J Longyear Co.
BORE HOLE NO. G-7-3
FIELD San Mateo Dome Project
COUNTY McKinley
LOCATION: SEC. 3 TWP. 13 N RGE. 8 W

LOG MEAS. FROM ..... FILE
DRLG. MEAS. FROM ..... NO.

DATE:	
FOOTAGE (logged)	2081'
TOTAL DEPTH (DR)	2070'
HOLE DIAM.	4 1/4
LOGGING SPEED	
TIME CONSTANT	
MUD TYPE	
CASED TO	

LOCATION OF HOLE

ELEVATION
RE 7277.76
GL

BKGRD. COUNT .....
SLUSH PIT CT. .....

REMARKS:

Barren Hole

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	BED THICKNESS	K EQ	CORR. CPS.	% U/Th
Disc No.	Depth	Dip	Mag Dec	True Bearing

No above background radioactivity recorded

Barren Hole

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: D.S. Fratto

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1801	48'
Grady Basin	1846	151'
Westwater	1997	73' (?)
Recapture	2070 (?)	

50' @ 1150 KC

SELF POTENTIAL

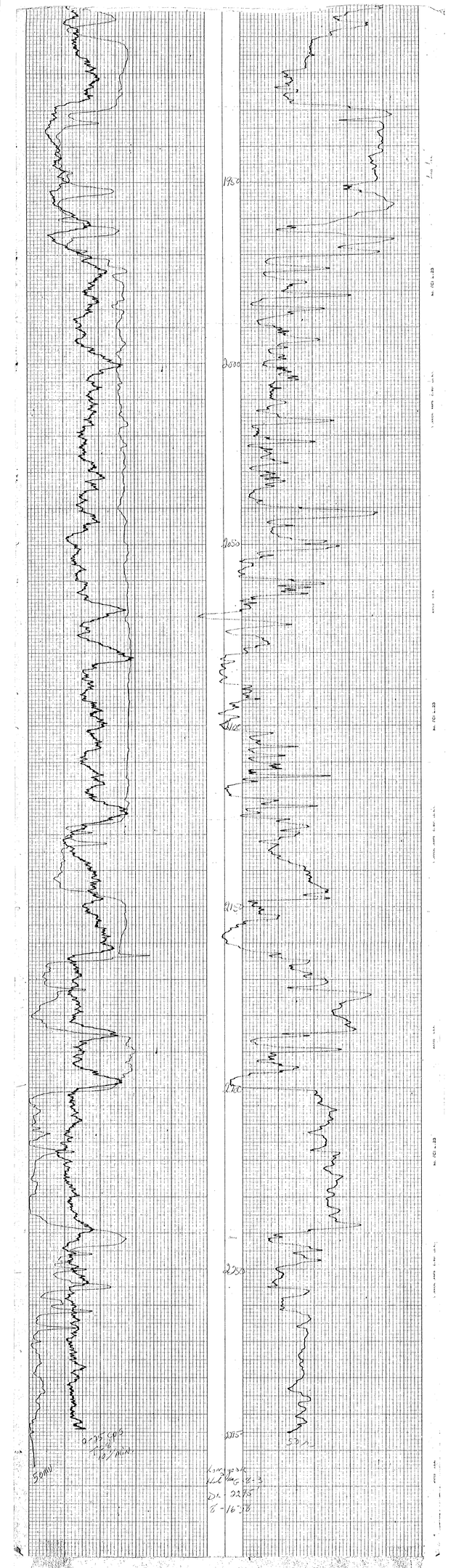
G ± 7-3 |10 -- |

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS



Long year
Hole Mag 2-3
Dr. 2275
8-16-78

LOGGING DATA

PROBE SIZE: 1 3/8"
DATE: 8-16-78
CALIBRATION: 4.5 CPS
FIELD HO/DTRS: GRANT

		BEFORE RUN	AFTER RUN	BEFORE RUN	AFTER RUN	BEFORE RUN	AFTER RUN
HOLE DIA.	8-3/4"						
HOLE DEPTH	2275						
DRILLER DEPTH	2275						
LOGGER DEPTH	2275						
CASING DIA.	8-5/8"						
CASING DEPTH	23	CEM.					
CEMENTED TO	8	SRC.					
PAPER SPEED	10	FT/HR					
LOGGER SPEED	10	FT/HR	FT/HR	FT/HR	FT/HR	FT/HR	FT/HR
DESIRABLE SPEED	10						
SELF POT.	52						
BLOCK COLOR	10 mv			SELF POT. CL.			
BOREHOLE	Water	MUD					
MUD PRESSURE	RESISTIVITY				RESIS. BORE		
	VISCOSITY				SALINITY		
		WEIGHT		SAND SAL.	22.77		
CALIPER	INCH	LEFT		PAPER TIDER			
TIME		CREW					
DATE	8-16-78	CREW			3.5		19
DATE	8-16-78	CREW			DIAM		IN

LOCATION		TIME	
SEC. 3 (TWP.)	RGE. 6	OFFICE:	
COUNTY: Mc Kinley		DRIVE:	3.0
STATE: Alaska		STANDBY:	1.0
AREA: Mt. Wilson Dome		FIELD:	1.0
CLIENT: Conoco		TOTAL:	5.0
Dr. Contractor: Yes		BREAKDOWN:	
LOG REC'D BY:		OPERATOR: Ralph Fields	
		PARTY NO: 4	

Cardinal

GEOPHYSICAL CORP.
TULSA, OKLA. U.S.A.
EXPLORATION LOG

COMPANY: Ed Lanyser Co.
BORE HOLE NO. G-8-3
FIELD: Jan Mates Dome Project
COUNTY: Mc Kinley
LOCATION: SEC. 3 TWP. 13N RGE. 8W

LOG MEAS. FROM: FILE NO.
DRLD. MEAS. FROM: NO.

DATE:
POSTAGE (Logged): 2275'
TOTAL DEPTH (DR): 2275
HOLE DIAM.: 8¾
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE
ELEVATION: KB 7359.75
GL
RKGRD. COUNT
SLUSH PIT CT.

REMARKS: Pit Removed.

Barren Hole

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	MIN THICKNESS	% ED	CORR. CPS.	% U3O4
Dia. No.	Depth	Drift	Mag Dec.	True Vertical
No above background radioactivity recorded.				
Barren Hole				

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: D.S. Fields

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Outcrop	1929	42'
Beaty Basin	1971	155'
Westwater	2126	116'
Recapture	2242	

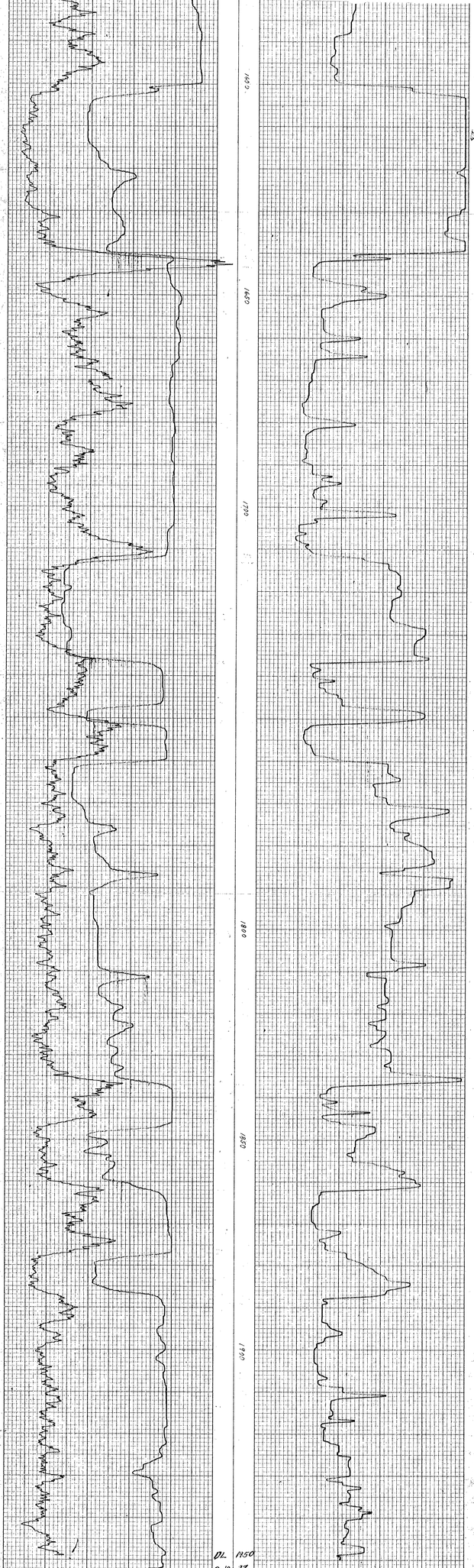
SELF POTENTIAL

G-8-3

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

RESISTANCE
OHMS



LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 400
DATE: 8-20-58 FIELD HDQTRS: Grants

	INITIAL RUN	RE. RUN	RE. RUN	RE. RUN	RE. RUN	RE. RUN	RE. RUN
HOLE NO.	G 10-27						
DATE	8/14/58						
CASING DEPTH	1962 ft						
LOGGED DEPTH	1950 ft					1950	
SURFACE SCALE	25 CPS						
TIME CONSTANT	5 SEC						
LOGGING SPEED	10 FT/MIN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
DEPTH SCALE	50 N						
SELF POT SCALE	10 MVOLTS			SELF POT E.S.			
BOREHOLE MEDIUM	H2O		WATER				
MUD HARDENED	RESISTIVITY			STICK BITS			
	VISCOSITY			BALLING			
	WEIGHT		LOST CIRC.	LOST CIRC.			
CALIPER SCALE	INCH	SEC SCALE		PAPER SCALE			
TIME IN	0230	CASED TO			I. D.	IN	
TIME OUT	0415	CODE NO.			DIAM	IN	

LOCATION

SEC. 27 TWP. 14 N RGE. 8 W
COUNTY: McKinley
STATE: N. Mex
AREA:
CLIENT: Longyear
Dr. Contractor: Scott
LOG REC'D BY: D.S. Fratt

TIME

OFFICE:
DRIVE: 3.0
STANDBY: 1.0
FIELD: 4.5
TOTAL: 8.5
BREAKDOWN:
OPERATOR: Nash
PARTY NO: 2-1

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E.J. Longyear Co.
BORE HOLE NO. G-10-27
FIELD San Mateo Dome Project
COUNTY McKinley
LOCATION: SEC. 27 TWP. 14N RGE. 8W

LOG MEAS. FROM ..... FILE
DRILL MEAS. FROM ..... NO.

DATE:	
FOOTAGE (drilled)	1989
TOTAL DEPTH (DR)	1960
HOLE DIAM.	4 3/4"
LOGGING SPEED	
TIME CONSTANT	
MUD TYPE	
CASED TO	

LOCATION OF HOLE

ELEVATION
KB
GL
BKGRD. COUNT .....
SLUSH PIT CT. .....

REMARKS:

Barren Hole

40' @ 1600 to 4

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	BED THICKNESS	E KO	CORR. CPS.	% U3O8
Dive No.	Depth	Drift	Mag Rng	Fine Reading

No above background radioactivity recorded

Barren Hole

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: D.S. Fratt

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1600'	42'
Beverly Basin	1642'	16'
Westwater	1718	176'
Recapture	1888	

SELF POTENTIAL

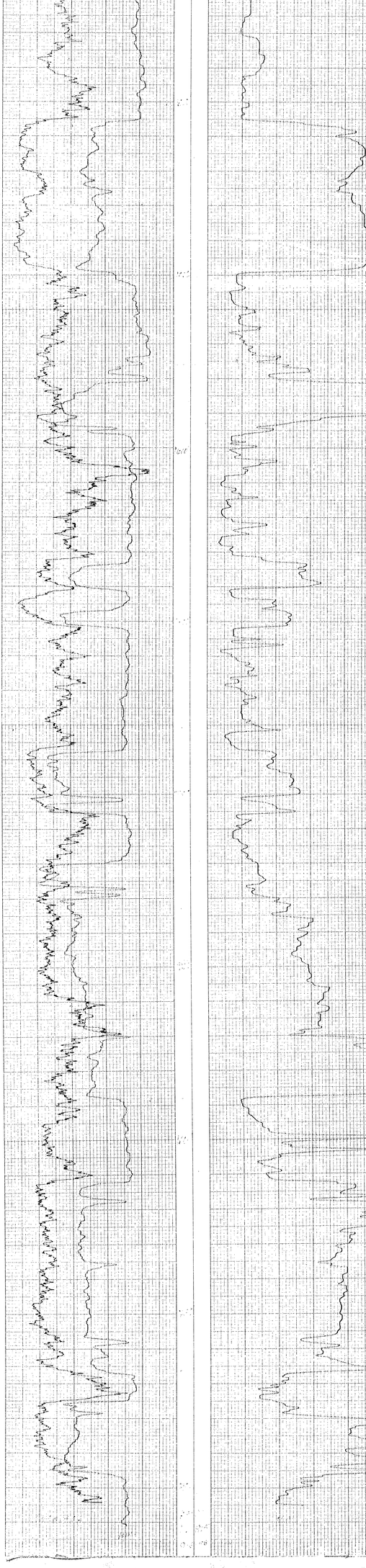
G-10-27 10 - 0

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9	
4	6	8	10	12	14	
4	8	12	16	20	24	

RESISTANCE
OHMS



LOGGING DATA

PROBE SIZE: 1 7/8 — CALIBRATION: 1.50

DATE: 4-2-55 — FIELD HOURS: 1 HR 2

	PRIOR RUN	RE RUN	RE RUN	RE RUN	RE RUN	RE RUN	RE RUN
HOLE SIZE							
T. HOLE DEPTH	1907						
CASING DEPTH	47						
CASING SIZE	7						
GAMMA SCALE	200						
TIME CONSTANT	1						
LIMITER	NO						
DRIFT DEGREE	1/2						
DRIFT DIRECTION							
RESISTIVITY SCALE	1/10	1/10	1/10	1/10	1/10	1/10	1/10
SELF POTENTIAL SCALE	2-5						
MUD TYPE	WATER				SELF POT. E.M.		
MUD HOLE RESIST.	1.25		WATER				
MUD RESISTIVITY					MUD RESIST.		
MUD PRESSURE		MUD WEIGHT			MUD VISC.		
		MUD WEIGHT		SAND CONT.	SAND CONT.		
CALIPER SCALE			INCH SIZE		PADDLE BLADE		
TIME CONST.				PADDLE PO.			I. D.	IN
TIME CONST.				CORR PO.				
				CORR			DIAM.	IN

LOCATION — TIME

SEC. 27 TWP. 16N RGE. 8W — OFFICE:
COUNTY: Mckinley — DRIVE: 8
STATE: N.M. — STANDBY:
AREA: — FIELD:
CLERK: — TOTAL:
Sc. Contractor — HEADQUARTERS:
LOG REC'D BY: — OPERATOR:
D. S. Frath — PARTY NO.:

GEOPHYSICAL CORP.

TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: El Lunggren Co.
BORE HOLE NO. G-9-27
FIELD San Mateo Dome Project
COUNTY Mckinley
LOCATION: SEC. 27 TWP. 16N RGE. 8W

LOG MEAS. FROM ____ FILE ____
DRILL MEAS. FROM ____ NO. ____

DATE: Sept. 6, 1955
ROOTAGE (logged): 1907'
TOTAL DEPTH (DR): 1907'
HOLE DIAM.: 4 7/8
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE

ELEVATION: GL 7419.0'(?)
MEGRD. COUNT ____
SLUSH PIT CK. ____

REMARKS: Hole Barren

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTER PER SEC.	BED THICKNESS	# BD	CORR. CPS.	% U3O4
Bkg. Pts.	Peak	Dist.	Bkg. Pts.	Bkg. Peaks

No above background recorded/only recorded

Hole considered Barren

RADIOMEIRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: D. S. Frath

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1306'	43'
Brushy Basin	1349'	171'
Westwater	1520'	180'
Recapture	1900	

SELF POTENTIAL

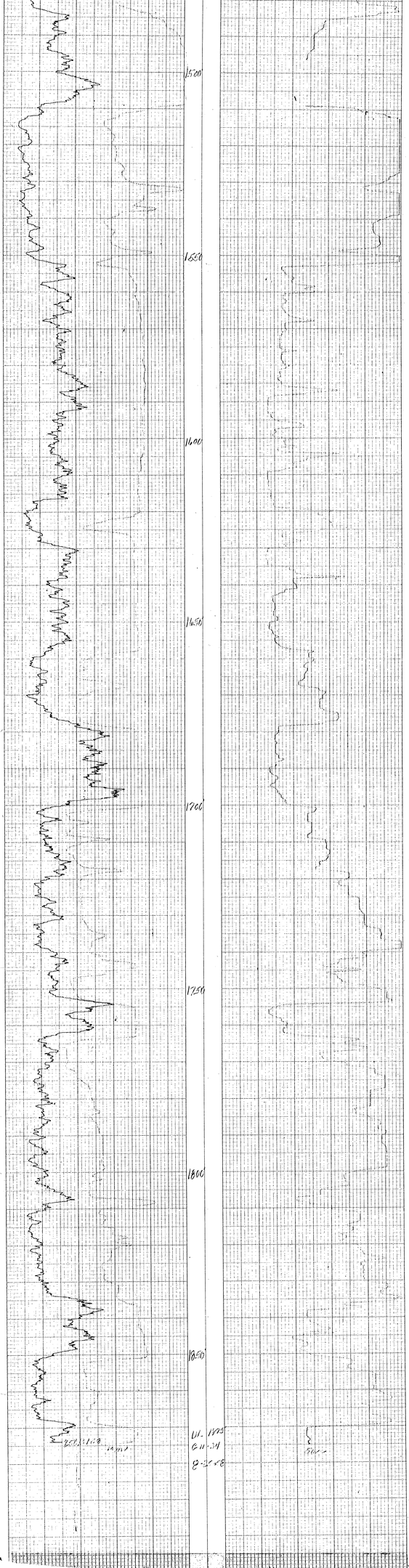
G-9-27

NATURAL GAMMA RAY
COUNTS PER SECOND

4	5	6	7	8	9
4	8	8	10	12	14
4	8	12	16	20	24

CALIPER INCHES

RESISTANCE
OHMS



LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 10C
DATE: 8-22-58 FIELD NOTES: Grants

	DATE	TIME	DEPTH	RES. SCALE	RES. SCALE	RES. SCALE	RES. SCALE	RES. SCALE
HOLE DEPTH	G-11-34							
HOLE DIA.	8-3/4							
CASING DEPTH	15.4m							
LOGGED DEPTH	18.25							1805
SCALE	2" = 25							
TIME CONSTANT	5 SEC							
SPEED	10							
GROUND RESISTANCE	10							
RESISTIVITY DEPTH	100m							
RESISTIVITY SCALE	10							
MUD RESISTIVITY	11.0							
MUD RESISTANCE								
CALIPER SCALE								
TIME CONST.	0.25							
TIME CONST.	0.25							

LOCATION: SEC. 27 TWP. 17 RGE. 8
COUNTY: McKinley
STATE: New Mex.
AREA:
CLIENT: Gen. Survey
Dr. Contractor: Scott
LOG REC'D BY: [illegible]

TIME
OFFICE:
DRIVE: 3.0
STANDBY: 1.0
FIELD: 1.0
TOTAL: 5.0
BREAKDOWN:
OPERATOR: Hisada
PARTY NO: 3-1

GEOPHYSICAL CORP.
TULSA, OKLA. U.S.A.
EXPLORATION LOG

COMPANY: Ed. Langyes Co.
BORE HOLE NO. G-11-34
FIELD San Mateo Dams Project
COUNTY McKinley
LOCATION: SEC. 34 TWP. 14 N RGE. 8W

LOG MEAS. FROM FILE
DRLG. MEAS. FROM NO.

DATE:
FOOTAGE (Logged) 1825'
TOTAL DEPTH (DR) 1870
HOLE DIAM. 7 7/8"
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE
ELEVATION
KB 7280.0
DRGRD. COUNT
SLUSH PIT CE.

REMARKS: Reruns:
Barren Hole

50' @ 1400 1:4

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTER PER SEC.	RED PACKERS	A KV	CORR. CPS.	UNCA. CPS.
Bar No.	Depth	Dip	Dip Dir.	Dir. Factor

No above background radioactivity recorded.
Barren hole.

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: D.S. Frank

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1704'	44'
Beartly Barn	1753'	114'
Westwater	1871'	181'
Recapture	1888	37'

SELF POTENTIAL

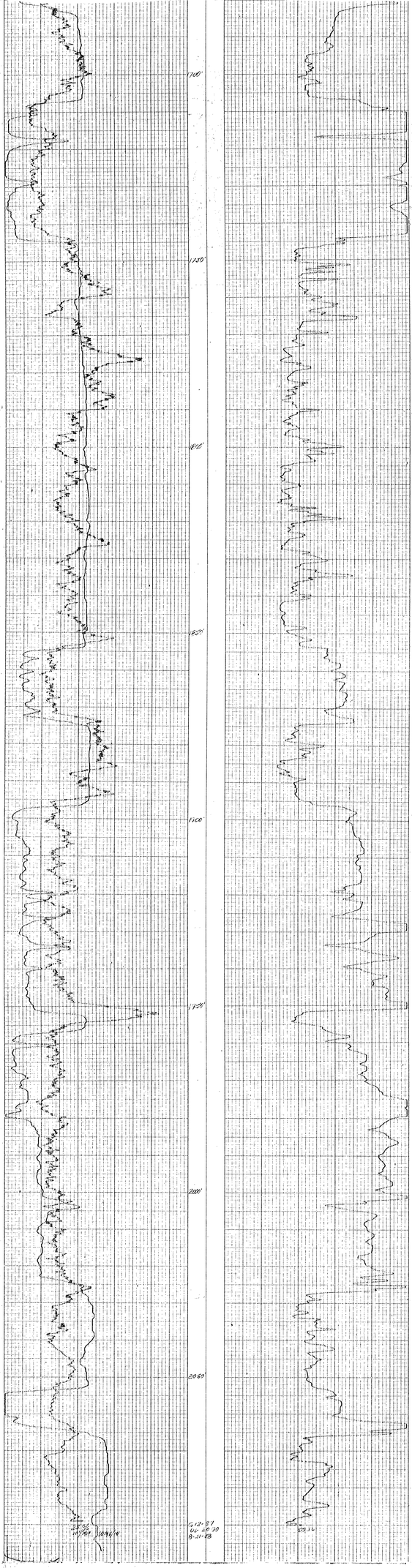
G-11-34

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9	10
4	8	12	16	20	24	

RESISTANCE
OHMS



LOGGING DATA

PROBE SIZE: 1 7/8 | CALIBRATION: 500

DATE: 8-31-28 | FIELD HOURS: 5 HOURS

	INITIAL RUN	RE. DUN	RE. DUN	RE. DUN	RE. DUN	RE. DUN
HOLE SIZE	5 1/2-27					
BOT. HOLE						
CASING	18					
CASING DEPTH	2010					
LOGGED DEPTH	2010 FT					
SCALE	50 CPM					
SCALE						
CONSTANT	8 REC					
UPPER SPIKE	10 FT/IN					
SUPPRESS						
SPEED	10 FT/IN	FT/IN	FT/IN	FT/IN	FT/IN	FT/IN
RESISTIVITY	50 Ω					
SELF POT	10 MV/IN		SELF POT S.P.	2010		
MUD RES.						
RADIUM		MV/IN				
MUD	RESISTIVITY		SLIM HOLE			
ADVANCED	VISCOSITY		BALLOONS			
	WEIGHT		LOST CIRC.	LOST		
CALIBER SCALE	INCH	INCH	LOG SCALE	PIPES OR SCALE		
TIME	1245		CASED TO			
TIME OFF	1330 01 30		CORE DIAM.		1.5 DIAM.	IN

LOCATION	TIME
SEC. 27 TWP. 22 RGE. 8	OFFICE:
COUNTY: McKinley	DRIVE: @ 2.0
STATE: New Mexico	STANDBY:
AREA: 32	FIELD: 1.0
CLIENT: Longyear	TOTAL: 3.0
Dr. Contractor Scott	BREAKDOWN:
LOG REC'D BY: Ed Lark	OPERATOR: Stuart
	PARTY NO: 4-15

GEOPHYSICAL CORP.

TULSA, OKLA. U.S.A.

EXPLORATION LOG

COMPANY: EV Longyear Co.
BORE HOLE NO. G-12-27
FIELD Zero Mesa Dome Project
COUNTY McKinley
LOCATION: SEC. 27 TWP. 14 N RGE. 8 W

LOG MEAS. FROM ..... FILE NO.
DRLD. MEAS. FROM .....

DATE:
FOOTAGE (Logged) 2090
TOTAL DEPTH (DR) 2090
HOLE DIAM. 4 3/4"
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE

ELEVATION GR 7800(?)
KB
BEGEO. COUNT
CSUSED PIT CT.

REMARKS:
No Results
Barren Hole

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	RED DISCHARGE	K KV	CORR. CPS.	U/Th
Line No.	Dash	Dash	Vis Freq	Fine Tuning

No above background radioactivity recorded

Hole Barren

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: B.F. Jernigan

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	120 ft	28'
Brushy Basin	148 ft	151
Westwater	299 ft	131'
Recadero	2047	

SELF POTENTIAL

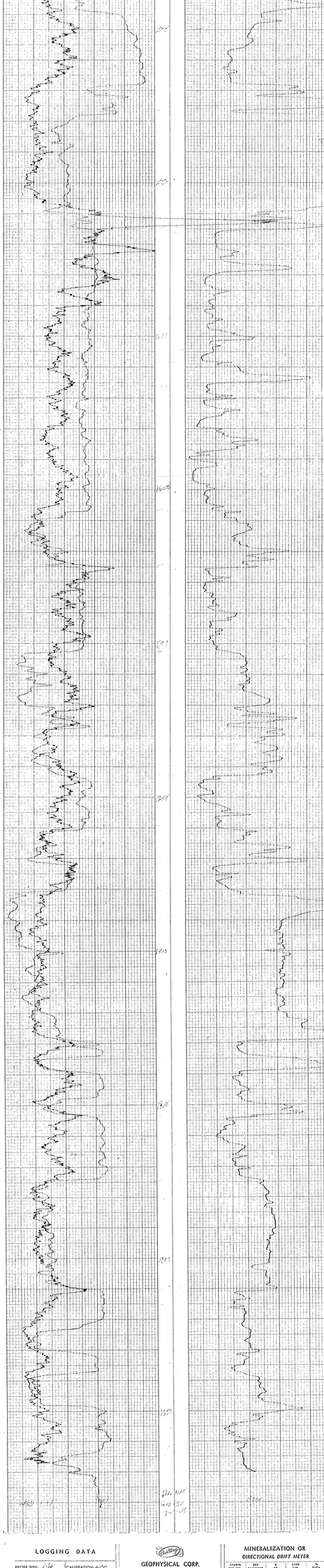
G-12-27

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS



LOGGING DATA

PROBE SIZE: 1.8	CALIBRATION: 400
DATE: 10-2-8	SEED:
	HICOTS: 1 Grade

	TRUE							
	NOM	DIA		DIA		DIA		DIA
HOLE NO.	G-13-RT							
HOLE DIAM.	4-11/16"							
SURVEY DATE	1/12/81							
SURVEY DEPTH	1755' ft							1750
SURVEY SCALE	2" = 50'							
SURVEY SPEED	2 MPS							
PRESS. SCALE	10 PSI/IN							
PRESSURE SENSITIVITY	10 PSI/IN	PSI/IN	PSI/IN	PSI/IN	PSI/IN	PSI/IN	PSI/IN	
PRESSURE SCALE	10 PSI/IN							
BOREHOLE PRESSURE	1.5							
MUD PRESSURE	10 PSI/IN		MUD			MUD PUMP S.N.		
MUD RESISTIVITY	12.5					MUD TEMP.		
	RESISTIVITY					ROUNDS		
					TAKE UP		TAKE UP	
		MEASURE			REEL		REEL	
CALIPER SCALE			SEE INCH SCALE					
TIME SCALE	1" = 1 MIN			TIME CHECK				C.D. 18
TIME	1750			TIME CHECK				DIAM 18

LOCATION	TIME
SEC. 5 TWP. 14 RGE. 8	OFFICE:
COUNTY: Beaver	DRIVE: 6-12
STATE: Utah	STANDBY: 1-15
AREA:	FIELD: 4-5
CLIENT: Kerr-McGee	ROTAT: 4-5
Dr. Contractor:	BREAKDOWN:
LOG SECN BY: Don J Seth	OPERATOR: Gaddis
	PARTY NO: 5-1

GEOPHYSICAL CORP.
TULSA, OKLA. U.S.A.

EXPLORATION LOG

COMPANY: Ed. Langyar Co.
BORE HOLE NO. G-13-RT
FIELD Sun Marks Dome Project
COUNTY Mc Kinley
LOCATION: SEC. 5 TWP. 14N RGE. 8 W

LOG MEAS. FROM: RIG
DRILL MEAS. FROM: NO.

DATE:	4/6/78
POSTAGE Capped	1875
TOTAL DEPTH (DR)	1875
HOLE DIAM.	4 3/4"
LOGGING SPEED	
TIME CONSTANT	
MUD TYPE	
CASED TO	

LOCATION OF HOLE

ELEVATION: 7287 (K)

SEGRS. COUNT
SECRS PER CC.

REMARKS: REFERENCE

Hole Barren

10°E 1000 1cm

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	MED. DEGREES	%	CORR. DIR.	% DIFF.
Dim. No.	Dirch	Dirch	Dim. Dirch	Dim. Dirch.

No above background radioactivity recorded.

Hole considered barren.

RADIOMETRIC "S" VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: D.S. Fratto

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1287'	38'
Brushy Basin	1325'	195'
Westwater	1750'	181'
Recapture	1911'	

SELF POTENTIAL

G-13-RT

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS

LOGGING DATA

PROBE SIZE: 1 3/8
CALIBRATION: 40 c
DATE: 9-15-58
FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G 14-32						
HOLE DIA.	4 3/4 FD						
DRILLED DEPTH	2080 FT						
LOGGED DEPTH	2090 FT				2090		
GAMMA SCALE	5 CPS						
TIME CONSTANT	5 SEC						
PAPER SPEED	10 FT/IN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	50						
SELF POT SCALE	10 MV/IN		SELF POT T.D.				
BORE HOLE MEDIUM	H2O	WITH					

MUD READINGS: RESISTIVITY — TYPE BASE; VISCOSITY — SALINITY; WEIGHT LBS/GAL — LBS/CU FT
CALIPER SCALE: INCH; LEG SIZE; PAPER SCALE
TIME IN: 1845; CASED TO; I. D. IN
TIME OUT: 2030; CORE INT.; DIAM IN

LOCATION	TIME
SEC. 32 TWP. 14 RGE. 8	OFFICE:
COUNTY: McKinley	DRIVE: 1.0
STATE: N. Mex.	STANDBY: 1.4
AREA:	FIELD: 1.8
CLIENT: Longyear	TOTAL: 4.2
Dr. Contractor	BREAKDOWN:
LOG REC'D BY:	OPERATOR: Mouks
	PARTY NO: U-1

Century
GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.
EXPLORATION LOG

COMPANY: E.J. Longyear Company
BORE HOLE NO. G-14-32
FIELD San Mateo Dome Project
COUNTY McKinley
LOCATION: SEC. 32 TWP. 14N RGE. 8 W

LOG MEAS. FROM Surface FILE
DRLG. MEAS. FROM Surface NO.

		LOCATION OF HOLE
DATE:	9/15/58	
FOOTAGE	2090	
TOTAL DEPTH (DR)	2080	
HOLE DIAM.	4 3/4	
LOGGING SPEED	—	
TIME CONSTANT	—	ELEVATION KB 7515.9
MUD TYPE	—	GL
CASED TO	—	BKGRD. COUNT SLUSH PIT CT.

REMARKS:
Barren Hole

50' @ 1650 fc4

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC. / Disc No.	BED THICKNESS / Depth	K KD / Drift	CORR. CPS. / Mag Brng	% U3O8 / True Bearing
Double background count noted at 1915 feet - Not significant				

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: B.S. Sorensen

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1690	41'
Brushy Basin	1731	132'
Westwater	1863	195' (of which the top 57' is the Poison Canyon ss.
Recapture	2058	

SELF POTENTIAL
+ 10 MV −

NATURAL GAMMA RAY
COUNTS PER SECOND

G-14-32

CALIPER INCHES
4 5 6 7 8 9
4 6 8 10 12 14
4 8 12 16 20 24

RESISTANCE
OHMS

LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 400
DATE: 9-15-58 FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G 15-32						
HOLE DIA.	4 3/4 KB						
DRILLED DEPTH	2070 FT						
LOGGED DEPTH	2070 FT	10	10			2090	
GAMMA SCALE	25 CPS	250	250				
TIME CONSTANT	8 SEC	2	2				
PAPER SPEED	10 FT/IN	5	5				
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	50						
SELF POT SCALE	10 MV/IN			SELF POT T.D.			
BORE HOLE MEDIUM	H₂O	WITH		TYPE BASE			
MUD READINGS	RESISTIVITY			SALINITY			
	VISCOSITY						
	WEIGHT	LBS/GAL		LBS/CU FT			
CALIPER SCALE	INCH	LEG SIZE		PAPER SCALE			
TIME IN	2140	CASED TO			I D	IN	
TIME OUT	2325	CORE INT.			DIAM	IN	

LOCATION	TIME
SEC. 32 TWP. 14 RGE. 8	OFFICE:
COUNTY: McKinley	DRIVE: 1.0
STATE: N. Mex.	STANDBY: 1.3
AREA:	FIELD: 1.8
CLIENT: Longyear	TOTAL: 4.1
Dr. Contractor	BREAKDOWN:
LOG REC'D BY:	OPERATOR: Marks
	PARTY NO: 3-1

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E.J. Longyear Co.
BORE HOLE NO. G-15-32
FIELD San Mateo Dome Project
COUNTY McKinley
LOCATION: SEC. 32 TWP. 14N RGE. 8W

LOG MEAS. FROM Surface FILE
DRLG. MEAS. FROM Surface NO.

DATE: 9/15/58
FOOTAGE 2070
TOTAL DEPTH (DR) 2070
HOLE DIAM. 4 3/4
LOGGING SPEED —
TIME CONSTANT —
MUD TYPE —
CASED TO —

LOCATION OF HOLE
ELEVATION KB 7501.17 GL
BKGRD. COUNT 5-10 cps
SLUSH PIT CT.

REMARKS: Reruns:
1897 — 1832 250 TCE
1881 — 1871 250 "

Mineralized Hole

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC. / Disc No.	BED THICKNESS / Depth	Dr.	CPS. / Mag Brng	% eU₃O₈ / True Bearing
	1876-1877	(1 foot)	300 cps	0.09

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: B.J. Sorensen

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1682	34'
Brushy Basin	1716	141'
Westwater	1857	188' of which the top 38' is thought to be Poison Canyon ss.
Recapture	2045	

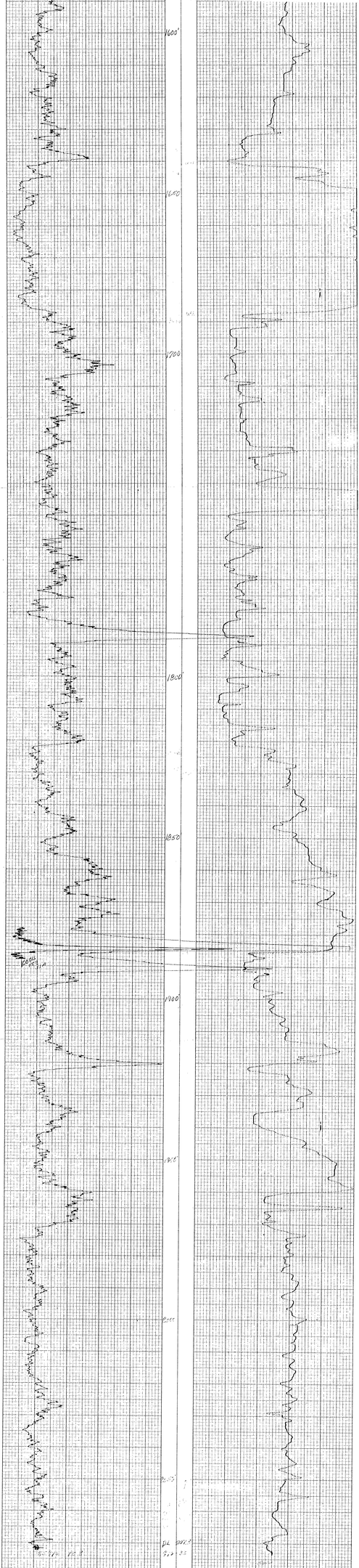
SELF POTENTIAL
+ 10 MV −

NATURAL GAMMA RAY
COUNTS PER SECOND

G-15-32

CALIPER INCHES
4 5 6 7 8 9
4 6 8 10 12 14
4 8 12 16 20 24

RESISTANCE
OHMS



LOGGING DATA

PROBE SIZE: 1-7/8	CALIBRATION: 400
DATE: 7-15-58	FIELD RECORDS: Gowler
HOLE SIZE	8 3/4	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8
CASING SIZE	8 5/8	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
CASING DEPTH	61'-12"	1048'	1428'	1622'-10"	1-1-1-1-1	2055'	
CASING WEIGHT	5	15.5	17	20			
CASING TYPE	10	8RT					
MUD WEIGHT	9.0						
MUD VISCOSITY	50						
MUD LEVEL							
MUD PRESSURE							
MAXIMUM TEMP.	16.0						
RECORDED BY	Gowler						
WITNESSED BY	Brown						

COLLAR OFFSET	INCH	LEN.	FEET
ZERO OFFSET	17.5	CABLE TYPE	
SPL. OFF.	11.0	CABLE DIAM.	L.B. 18

LOCATION	TIME
SEC. 32 TWP. 14 N RGE. 8 W	OFFICE
COUNTY: McKinley	DRIVE: 1.5
STATE: New Mexico	STANDBY: 4.5
AREA: Dome	FIELD: 1.0
CLIENT: Continental Oil Company	TOTAL: 7.0
Dr. Coulter	BREAKDOWN:
LOG REC'D BY:	OPERATOR: Brown
	PARTY NO: 11

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.
EXPLORATION LOG

COMPANY: E. H. Lonsyser Company
BORE HOLE NO. G-16 L-32
FIELD: San Mateo Dome Project
COUNTY: McKinley
LOCATION: SEC. 32 TWP. 14 N RGE. 8 W

ELEV. REFL. FROM: Surface RIG
ERIG. MEAS. FROM: Surface RIG

DATE:	9/25/58
FOOTAGE	2073
TOTAL DEPTH (DR)	2080
HOLE DIAM.	4 3/4"
LOGGING SPEED	—
TIME CONSTANT	—
MUD TYPE	—
CASED TO	—

LOCATION OF HOLE

ELEVATION GL 7485.8ft

SEISMIC COUNT TO USGS BIT CK.

REMARKS: Returns: 1888 - 1828 100 100

Slightly Mineralized Hole

10.0 1600 1.11

MINERALIZATION OR DIRECTIONAL DRIFT MEETER

DRIFT FAC.	DIR.	THICKNESS	%	MINER. CPS.	% EQ. U3O8
Ft.	Deg.	Feet	Ft.	Ma. Eq.	Eq. Conc.
1884 - 1885		(1 foot)		76 cps	0.03

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: Bruce Russell

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1641	47
Beashy Basin	1688	134
Westwater	1822	228 (of which the top 64' is believed to be Poison Canyon ss.)
Recapture	2050	

SELF POTENTIAL

+ 10 — 0

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4 5 6 7 8 9
4 6 8 10 12 14
8 12 16 20 24

RESISTANCE
OHMS

LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 400

DATE: 9-25-58 FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G-17-32						
HOLE DIA.	4 1/4 IN						
DRILLED DEPTH	2070 FT						
LOGGED DEPTH	2049 FT				2049		
GAMMA SCALE	25 CPS						
TIME CONSTANT	8 SEC						
PAPER SPEED	10 FT/IN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	80Ω						
SELF POT SCALE	10 MV/IN			SELF POT T.D.			
BORE HOLE MEDIUM	H2O	WITH					
MUD				TYPE BASE			
READINGS	RESISTIVITY						
	VISCOSITY			SALINITY			
	WEIGHT	LBS/GAL		LBS/CU FT			
CALIPER SCALE	INCH	LEG SIZE		PAPER SCALE			
TIME IN	1530	CASED TO			I. D.	IN	
TIME OUT	1705	CORE INT.			DIAM	IN	

LOCATION	TIME
SEC. 32 TWP. 14 RGE. 8	OFFICE:
COUNTY: McKinley	DRIVE: 1.0
STATE N. Mex.	STANDBY: 1.0
AREA:	FIELD: 1.2
CLIENT: Longyear	TOTAL: 3.2
Dr. Contractor	BREAKDOWN:
LOG REC'D BY:	OPERATOR: Marsh
	PARTY NO: U-1

Century

GEOPHYSICAL CORP.

TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E.J. Longyear Company
BORE HOLE NO. G-17-32
FIELD San Mateo Dome Project
COUNTY McKinley
LOCATION: SEC. 32 TWP. 14 N RGE. 8 W

LOG MEAS. FROM Surface FILE
DRLG. MEAS. FROM Surface NO.

		LOCATION OF HOLE
DATE:	9/25/58	
FOOTAGE	2049	
TOTAL DEPTH (DR)	2070	
HOLE DIAM.	4 1/4"	
LOGGING SPEED	—	
TIME CONSTANT	—	ELEVATION KB 7509.25 GL
MUD TYPE	—	BKGRD. COUNT
CASED TO	—	SLUSH PIT CT.

REMARKS:

Barren Hole

40'C 1650 FC4

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	BED THICKNESS	K KD	CORR. CPS.	% U3O8
Disc No.	Depth	Drift	Mag Brng	True Bearing

No above background radioactivity recorded.

Hole considered Barren

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: Bruce Russell

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1656	44'
Brushy Basin	1700	142'
Westwater	1842	199' (of which the top 73' is the Poison Canyon sandstone)
Recapture	2041	

SELF POTENTIAL

\+ 10 MV −

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS

LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 400
DATE: 10-1-58 FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G 18-32						
HOLE DIA.	4 3/4 AD						
DRILLED DEPTH	2050 FT						
LOGGED DEPTH	2066 FT				2066		
GAMMA SCALE	25 CPS						
TIME CONSTANT	5 SEC						
PAPER SPEED	10 FT/IN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	50						
SELF POT SCALE	10 MV/IN		SELF POT T.D.				
BORE HOLE MEDIUM	H2O	WITH					

MUD READINGS: RESISTIVITY — TYPE BASE — VISCOSITY — SALINITY — WEIGHT — LBS/GAL — LBS/CU FT
CALIPER SCALE — INCH — LEG SIZE — PAPER SCALE
TIME IN: 1430 — CASED TO — I.D. — IN
TIME OUT: 1620 — CORE INT. — DIAM — IN

LOCATION		TIME	
SEC. 32 TWP. 14 RGE. 8		OFFICE:	
COUNTY: McKinley		DRIVE:	2.0
STATE: N Mex		STANDBY:	1.0
AREA:		FIELD:	1.8
CLIENT: Longyear		TOTAL:	4.8
Dr. Contractor: Scott		BREAKDOWN:	
LOG REC'D BY:		OPERATOR:	Mash
		PARTY NO:	2-1

Century
GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.
EXPLORATION LOG

COMPANY: E. J. Longyear Company
BORE HOLE NO. G-18-32
FIELD San Mateo Dome Project
COUNTY McKinley
LOCATION: SEC. 32 TWP. 14 N RGE. 8W
LOG MEAS. FROM Surface FILE
DRLG. MEAS. FROM Surface NO.

		LOCATION OF HOLE
DATE:	10/1/58	
FOOTAGE	2066	
TOTAL DEPTH (DR)	2050	
HOLE DIAM.	4 3/4"	
LOGGING SPEED	—	ELEVATION KB 7457.6
TIME CONSTANT	—	GL
MUD TYPE	—	BKGRD. COUNT
CASED TO	—	SLUSH PIT CT.

REMARKS:
Barren Hole

40' @ 1400 tc 4

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC. / Disc No.	BED THICKNESS / Depth	K KD / Drift	CORR. CPS. / Mag Brng	% U3O8 / True Bearing
	Barren Hole			

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: Bruce Russell

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1632	44
Brushy Basin	1676	170
Westwater	1846	211
Recapture	2057	

SELF POTENTIAL
+ 10 MV. −
NATURAL GAMMA RAY
COUNTS PER SECOND

G-18-32

CALIPER INCHES
4 5 6 7 8 9
4 6 8 10 12 14
4 8 12 16 20 24
RESISTANCE
OHMS

LOGGING DATA

PROBE SIZE: 1 3/8
CALIBRATION: 400 CPS
DATE: 10-1-58
FIELD HDQTRS: GRANTS, N.M.

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G-19-32					
HOLE DIA.	4 3/4 IN					
DRILLED DEPTH	2080 FT					
LOGGED DEPTH	2090 FT					
GAMMA SCALE	25 CPS					
TIME CONSTANT	8 SEC					
PAPER SPEED	10 FT/IN					
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	50Ω					
SELF POT SCALE	15 MV/IN					

(2090)

SELF POT T.D.				
BORE HOLE MEDIUM	WATER	WITH 65L. AQUA GEL	TYPE BASE	65L.
MUD READINGS	RESISTIVITY		SALINITY	
	VISCOSITY		LBS/CU FT	
	WEIGHT	LBS/GAL		
CALIPER SCALE	INCH	LEG SIZE	PAPER SCALE	
TIME IN	0300	CASED TO	I.D.	IN
TIME OUT	0510	CORE INT.	DIAM	IN

LOCATION	TIME
SEC. 32 TWP. 14 RGE. 8	OFFICE:
COUNTY: McKINLEY	DRIVE: 3.
STATE: NEW MEXICO	STANDBY:
AREA: SAN MATEO	FIELD: 2.2
CLIENT: E.J. LONGYEAR	TOTAL: 5.2
Dr. Contractor: SCOTT	BREAKDOWN:
LOG REC'D BY:	OPERATOR: GENE CLARKSON
	PARTY NO: U-3

Century

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E. J. Longyear Company
BORE HOLE NO. G-19-32
FIELD San Mateo Dome Project
COUNTY McKinley
LOCATION: SEC. 32 TWP. 14 N RGE. 8 W

LOG MEAS. FROM Surface FILE
DRLG. MEAS. FROM Surface NO.

DATE:	10/1/58
FOOTAGE	2090
TOTAL DEPTH (DR)	2080
HOLE DIAM.	4 3/4"
LOGGING SPEED	
TIME CONSTANT	
MUD TYPE	
CASED TO	

LOCATION OF HOLE

ELEVATION KB 7517.4 GL

BKGRD. COUNT
SLUSH PIT CT.

REMARKS:

Barren Hole

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC. (Disc No.)	BED THICKNESS (Depth)	K KO (Drift)	CORR. CFS. (Mag Brng)	% U3O8 (True Bearing)
Barren Hole				

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: Bruce Russell

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1699	41
Brushy Basin	1740	189
Westwater	1929	149
Recapture	2078	

SELF POTENTIAL

+ 15 MV −

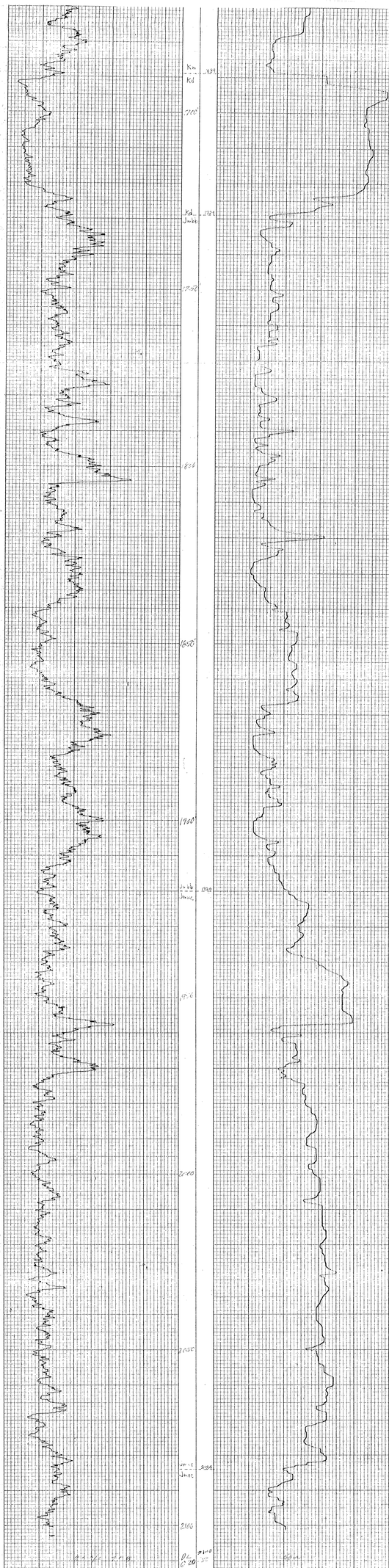
NATURAL GAMMA RAY
COUNTS PER SECOND

G-19-32

CALIPER INCHES

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS



LOGGING DATA

PROBE SIZE: 1 7/8 CALIBRATION: 4.00

DATE: 10-29-58 FIELD HOOTAS: 6.00 MA

	INDIVID. RES.	RES.	RES.	RES.	RES.	RES.
HOLE SIZE	6 3/4					
BIT SIZE	6 3/4					
CASING DIA						
CASING DEPTH	2100					
DRILLER DEPTH	2100				2100	
LOGGER DEPTH	2100					
SPUD DATE	2-7-58					
COMP. DATE	2-7-58					
LIQUID LEVEL						
PAPER SPEED	10	FT/M	FT/M	FT/M	FT/M	FT/M
CHART SPEED	10	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTIVITY	20					
SELF POT.	10 MV	10 SP		SELF POT.		
MUD TYPE	WATER					
MUD WEIGHT	10.0	MUD				
MUD RESISTIVITY		RESISTIVITY		BOREHOLE SALINITY		
MUD VISCOSITY		VISCOSITY				
CASING WEIGHT		WEIGHT		LINE SIZE		
CASING SIZE		CASING SIZE		LOG SIZE		
RUN NO.	15-90		CASED HOLE			
TIME ON	10-30		TIME ON		A.M.	P.M.
TIME OFF	16-30		TIME OFF		A.M.	P.M.

LOCATION

SEC. 32 TWP. 14N RGE. 8W
COUNTY: McKinley
STATE: New Mexico
AREA:
CLIENT: Sun Oil Co.
Dr. Contractor: Scott
Log Received and Approved By

TIME

OFFICE:
DRIVE:
STANDBY:
FIELD:
TOTAL:
BREAKDOWN:
OPERATOR:

PARTY NO:

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.
EXPLORATION LOG

COMPANY: E. L. Lagoyer Company
BORE HOLE NO. G-20-32
FIELD: San Mateo Dome Project
COUNTY: McKinley
LOCATION: SEC. 32 TWP. 14-N RGE. 8W

LOG. MEAS. FROM: Surface FILE
DRILL. MEAS. FROM: Surface DOD.

		LOCATION OF HOLE
DATE:	10/29/58	
FOOTAGE (LOGGED)	2100	
TOTAL DEPTH (DR)	2100	
HOLE DIAM.	6 3/4	
LOGGING SPEED		
TIME CONSTANT		
MUD TYPE		
CASED TO		

ELEVATION: KB 7496.9 GL
NEARS: COUNTY / TOWN PT. CT.

REMARKS: Barren Hole

No S.P. Washout and Hole to Core. 10-30 1600 E.L.

MINERALIZATION OR *DIRECTIONAL DRIFT METER*

COUNTS PER SEC.	BED THICKNESS	K MD	CORR. CPS.	% SHALE
Positive	Depth	Dip	Dip Dirn	Pore Pressure
Hole	Considered	Barren		

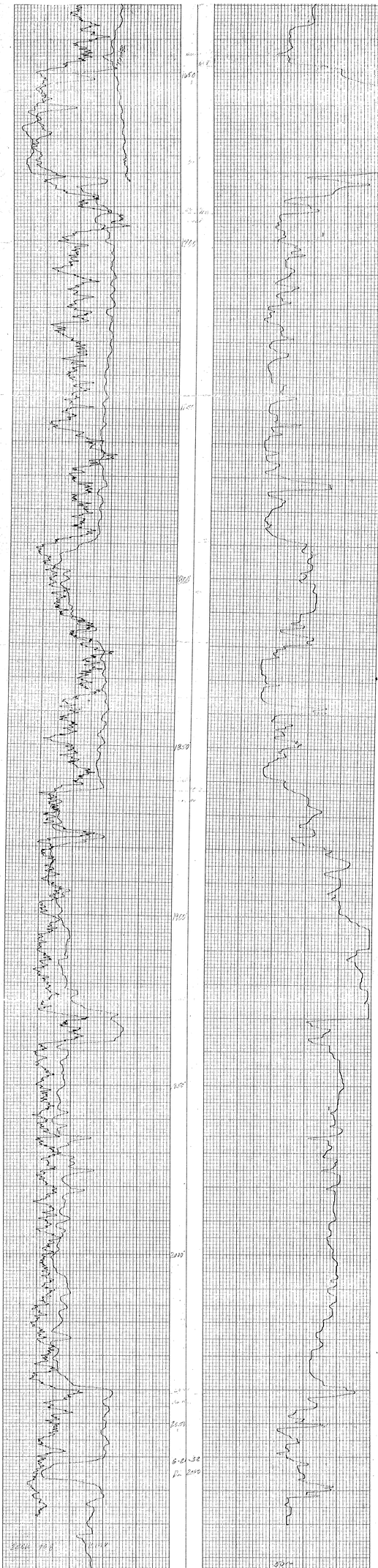
RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR.

INTERPRETATION BY: Bruce Russell

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1689	40
Brushy Basin	1729	171
Westwater	1920	164
Recapture	2084	

G-20-32



LOGGING DATA

PROBE SIZE: 1 1/8
CALIBRATION: 400
FIELD HIGH'S: 6 mmh
DATE: 10-12-58

	TRACE	SC	SC	SC	SC	SC	SC
HOLE	8 11-32						
BIT	4 3/4 IN						
CASING	2 3/4 IN						
CASING SHOE	2050 FT						2050
MUD	8.7 LB/GAL						
MUD VISCOSITY	38 SEC						
PAPER SPEED	10 FT/HR						
SENSITIVITY	10 FT/IN						
DEVIATION	0-2 DEG						
HOLE DIAM.	14.00 IN						
WEIGHT	140 LB						

	FROM	TO	FROM	TO	FROM	TO	FROM	TO
MUD RESISTIVITY								
BIT								
CASING								
CASING SHOE								
TUBING								
TUBING SHOE								

MUD RESISTIVITY: ____ OHMS AT ____ °F
BIT: ____ IN
CASING: ____ IN
CASING SHOE: ____ FT
TUBING: ____ IN
TUBING SHOE: ____ FT

LOCATION
SEC. 32 TWP. 14 N RGE. 8 W
COUNTY: McKinley
STATE: N. Mex.
AREA:
CLIENT: Langwell
Sr. Contactor: Scott
LOG REC'D BY:

TIME
OFFICE: 2.5
DRIVE: 2.5
STANDBY: 0.5
FIELD: 2.0
TOTAL: 5.5
BREAKDOWN:
OPERATOR: Moore

PARTY NO: 21-1

50'C 1450 1C1

SELF POTENTIAL: + 10 - 0 -

NATURAL GAMMA RAY COUNTS PER SECOND

G-21-32

CALIPER INCHES: 4 5 6 7 8 9 / 4 6 8 10 12 14 / 4 8 12 16 20 24

RESISTANCE OHMS

Baker

GEOPHYSICAL CORP.
TULSA, OKLA. U.S.A.

EXPLORATION LOG

COMPANY: E. J. Longyear Company
BORE HOLE NO. G-21-32
FIELD: San Mateo Dome Project
COUNTY: McKinley
LOCATION: SEC. 32 TWP. 14 N RGE. 8W.

LOG MEAS. FROM: Surface ELE. ____
DRILL MEAS. FROM: Surface ELE. ____

DATE: 10/12/58
FOOTAGE LOGGED: 2000
TOTAL DEPTH (DR): 2000
HOLE DIAM.: 4 3/4
LOGGING SPEED: ____
TIME CONSTANT: ____
MUD TYPE: ____
CASED TO: ____

LOCATION OF HOLE

ELEVATION: KB 7456 GL
DEGREE COUNT / FLUSH PIT CT.: ____

REMARKS: Arrows!

Barren Hole

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	PER THICKNESS	K	KD	CLAY CFR.	% TiO2
Min. Pk.	Min.	Min.	Max. Pk.	Pyr. Hydro.	

No above-background radioactivity recorded.

Hole considered Barren.

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: B. F. Sorensen

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1848	44'
Brushy Basin	1892	171'
Westwater	1963	178'
Recapture	2041	

LOGGING DATA

PROBE SIZE: 1⅞ CALIBRATION: 400
DATE: 10-24-58 FIELD HDQTRS: Grants

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	G22-32						
HOLE DIA.	4¾ & 0						
DRILLED DEPTH	2030						
LOGGED DEPTH	2035					2035	
GAMMA SCALE	25 CPS						
TIME CONSTANT	5 SEC						
PAPER SPEED	20 FT/IN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	50						
SELF POT SCALE	MV/IN None		SELF POT T.D.				
BORE HOLE MEDIUM	H₂O	WITH					

MUD READINGS: RESISTIVITY — TYPE BASE —; VISCOSITY — SALINITY —; WEIGHT — LBS/GAL
CALIPER SCALE — INCH; LEG SIZE —; PAPER SCALE —
TIME IN: 1300; CASED TO —; I.D. — IN
TIME OUT: 1330; CORE INT. —; DIAM — IN

LOCATION	TIME
SEC. 32 TWP. 14 RGE. 8	OFFICE:
COUNTY: McKinley	DRIVE: 2.2
STATE: N. Mex	STANDBY: 1.0
AREA:	FIELD: 2.0
CLIENT: Longyear	TOTAL: 4.2
Dr. Contractor: Scott	BREAKDOWN:
Log Received and Approved By	OPERATOR: Mack
	PARTY NO: 2-1

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY: E. J. Longyear Company
BORE HOLE NO. G-22-32
FIELD: San Mateo Dome Project
COUNTY: McKinley
LOCATION: SEC. 32 TWP. 14 N RGE. 8 W

LOG. MEAS. FROM Surface FILE
DRLG. MEAS. FROM Surface NO.

DATE:	10/24/58
FOOTAGE (LOGGED)	2035
TOTAL DEPTH (DR)	2030
HOLE DIAM.	4¾"
LOGGING SPEED	—
TIME CONSTANT	—
MUD TYPE	—
CASED TO	—

LOCATION OF HOLE
ELEVATION KB 7428.1 GL
BKGRD. COUNT
SLUSH PIT CT.

REMARKS: Barren Hole

SP. trouble
ME 1800' to 2035'

MINERALIZATION OR DIRECTIONAL DRIFT METER

COUNTS PER SEC.	BED THICKNESS	K KD	CORR. CFS.	% U₃O₈
Reading	Depth	Drift	Mag Brng	True Bearing
Hole Considered Barren				

RADIOMETRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

INTERPRETATION BY: Bruce Russell

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS
Dakota	1620	40
Brushy Basin	1660	174
Westwater	1834	186
Recapture	2020	

SELF POTENTIAL

− MV +

NATURAL GAMMA RAY
COUNTS PER SECOND

G-22-32

CALIPER

RESISTANCE
OHMS