Surname copy 700

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Nelson
Gehen
Selfridge
Fjelsman

MAR 30 1956

Surprise Corporation
1615 Broadway, Room 605
Oakland 12, California

Re: Docket No. DMEA-4102 (Uranium)
Surprise Claim
Kern County, California

Gentlemen:

Reference is made to your application for Government aid in an exploration project on the above-named claim.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting some uranium mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation in an exploration program. We regret to advise you that, under these circumstances, your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

FMMurphy/gla
3-29-56
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Murphy
DMEA Field Team, Region II (2)

DOCKET COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

March 29, 1956

Summary of Proposed Project

Object: Denial of application for exploration aid.

Docket No.: DMEA-4102

Commodity: Uranium

Applicant: Surprise Corporation
1615 Broadway, Room 605
Oakland 12, California

Property: Applicant is Lessee of Surprise Nos. 1 and 2 claims. The claims are situated in parts of Lots 5 and 6, sec. 3, T. 30 S., R. 21 E., Kern County, California.

Date of application: December 12, 1955, received December 19, 1955.

Referred to Region II: January 4, 1956

Field Team Report recd.: March 16, 1956

Work Proposed and Costs:

Stripping overburden with dozer and skip hoist, 40 hours @ $13.50/hr.	$ 680.00	
Project geologist 7 days @ $75/day	525.00	
Living and travel expenses	150.00	
Assay work	170.00	
6 holes totaling 1200 feet @ $2.00/ft.	2,400.00	
Grading locations	150.00	
Miscellaneous (adjusted)	105.00	
Total estimated cost of project		$4,180.00

Excerpts from Field Team Report:

The property is situated on the northeast flank of the Temblor range, at an altitude of approximately 1,400 feet.

The area is underlain by the Miocene McLure shale member of the Monterey shale which has slid or been thrust over Pliocene Tulare fresh water shale.

The McLure shale is cut by numerous fractures and faults. Along the fractures and faults the shale is altered and contains iron oxides, clay minerals, and small amounts of uranium-bearing minerals, mainly uranophane and autunite. The principal zone containing uranium is between two northwest trending faults that dip 70° SW to vertical and is exposed in an open cut. Two other zones, one 400 feet east and one 600 feet northeast, contain even less U_3O_8 than the zone in the cut.

The exposed zone was sampled by the A.E.C. with the following results (in part):

				U_3O_8 percent
Shale	0.6	feet	width	0.11
"	1.0	"	"	0.09
Center Main Zone	2.0	"	"	0.105
" " "	2.0	"	"	0.13
Bank, S.E. end	6.0	"	"	0.065
Ore pile				0.034
" "				0.15

About 500 tons of material containing 0.1 percent U_3O_8 may be inferred to a depth of 50 feet in a zone 50 feet long and 3 feet wide.

The Applicant's proposal to explore the deposit at dpeth has no geologic justification and no suitable exploration target exists. There is no surface indication that the uraniferous zone continues to the southwest. None of the material in place constituted ore, and even the hand-sorted "ore" pile did not come up to minimum specifications (0.20 percent U_3O_8). There is no geologic reason to infer a change in tenor of the material at depth.

The Field Team recommends denial of the application. It notes that testing the area at depth would yield valuable information on occurrence of uranium in the district; however, the work to obtain this type of scientific data may probably fall within the province of the USGS, AEC, or the USBM.

Commodity Members' Comments (excerpts):

U. S. Geological Survey, W. P. Williams, March 21, 1956.

A review of the Field Team's report indicates that the prospects of discovering significant amounts of uranium ore does not appear likely, and therefore I concur in the Field Team's recommendation for denial.

U. S. Bureau of Mines, J. E. Crawford, March 28, 1956.

Mr. Crawford concurs in the Field Team's recommendation that the subject application be denied.

Rare and Miscellaneous Metals Division, F. M. Murphy, March 29, 1956.

The uranium mineralization occurs in fractures or possibly local faults in a distorted Mieocene shale 300-800 feet thick which rests on an uneven eroded surface of upper Miocene Monterey shale and Plicene Etchegoin and Tulare shale and sand strata.

The subject property lies in the north part of the McKittrick oil region. Thousands of productive oil wells have been drilled in the region. Data in USGS Bull. 406 indicate that a few wells were drilled on the subject property; therefore, the geologic structure of the area has been worked out. However, there is a difference of opinion as to whether the Miocene shale was thrust over the Pliocene by faulting or was the result of an avalanche type of movement of saturated porous shale. In any case, data presented in USGS Bull. 406 and by Taff in Vol. 17, pg. 1-15, Bull. Am. Soc. of Petrol. Geol., indicate that traces of a major fault in the claim area do not exist. A strong transverse fault, normal to the St. Andres fault, occurs about two miles southeast of the claim area.

It appears that the uranium minerals in the claim area are the result of secondary enrichment in local fractures; therefore, there is no reason to infer that the deposits will be extensive laterally or persist to great depths. As no significant structural target can be inferred to exist, this Division concurs in the Field Team's recommendation to deny the application.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Mis. Metals Division

3/29/56 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
MAR 28 1956

March 28, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 4102, Surprise Corporation, Surprise Claim, Kern County, California

I have reviewed the report of examination, Surprise Corporation, DMEA Docket 4102, dated March 14 and received in this office March 20. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Field Team, upon examination of the subject property, concluded that the probability of making a significant discovery is poor and that the uranium content of the mineralized area is too low to constitute ore-grade material; therefore, they recommend that the request for DMEA assistance be denied.

I concur in the recommendation for denial. Mr. Hosted, however, in spite of great uncertainties, suggests that an exploration program be considered to determine if the uraniferous shear zone is enriched in depth.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E. Crawford

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
MAR 28 1956

March 28, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 4102, Surprise Corporation, Surprise Claim, Kern County, California

I have reviewed the report of examination, Surprise Corporation, DMEA Docket 4102, dated March 14 and received in this office March 20. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Field Team, upon examination of the subject property, concluded that the probability of making a significant discovery is poor and that the uranium content of the mineralized area is too low to constitute ore-grade material; therefore, they recommend that the request for DMEA assistance be denied.

I concur in the recommendation for denial. Mr. Hosted, however, in spite of great uncertainties, suggests that an exploration program be considered to determine if the uraniferous shear zone is enriched in depth.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E. Crawford

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
MAR 28 1956

March 28, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 4102, Surprise Corporation, Surprise Claim, Kern County, California

I have reviewed the report of examination, Surprise Corporation, DMEA Docket 4102, dated March 14 and received in this office March 20. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Field Team, upon examination of the subject property, concluded that the probability of making a significant discovery is poor and that the uranium content of the mineralized area is too low to constitute ore-grade material; therefore, they recommend that the request for DMEA assistance be denied.

I concur in the recommendation for denial. Mr. Hosted, however, in spite of great uncertainties, suggests that an exploration program be considered to determine if the uraniferous shear zone is enriched in depth.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E. Crawford

3/22/56

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
MAR 21 1956

March 21, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4102, Surprise Corporation, Surprise Claim, Kern County, California.

The examining team recommends denial of the subject application because the uranium mineralization present is of low grade and no geological reasons are present to indicate that the grade would become better with depth.

An open cut trench about 30 feet deep, 250 feet long, and 50 feet wide, has been dug on the property. According to the report about 10 tons of selected material had been stockpiled from the pit. A sample of the selected ore assayed 0.15 percent U_3O_8.

Prospects for a successful exploration project on the property are not promising. The discovery of significant amounts of uranium ore does not appear likely, and I, therefore, concur with the examining team's recommendation for denial.

W. P. Williams

W. P. Williams

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
MAR 21 1956

March 21, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4102, Surprise Corporation, Surprise Claim, Kern County, California.

The examining team recommends denial of the subject application because the uranium mineralization present is of low grade and no geological reasons are present to indicate that the grade would become better with depth.

An open cut trench about 30 feet deep, 250 feet long, and 50 feet wide, has been dug on the property. According to the report about 10 tons of selected material had been stockpiled from the pit. A sample of the selected ore assayed 0.15 percent U_3O_8.

Prospects for a successful exploration project on the property are not promising. The discovery of significant amounts of uranium ore does not appear likely, and I, therefore, concur with the examining team's recommendation for denial.

W. P. Williams

WPWilliams:iml
G-3/21/56
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
MAR 21 1956

March 21, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4102, Surprise Corporation, Surprise Claim, Kern County, California.

The examining team recommends denial of the subject application because the uranium mineralization present is of low grade and no geological reasons are present to indicate that the grade would become better with depth.

An open cut trench about 30 feet deep, 250 feet long, and 50 feet wide, has been dug on the property. According to the report about 10 tons of selected material had been stockpiled from the pit. A sample of the selected ore assayed 0.15 percent U_3O_8.

Prospects for a successful exploration project on the property are not promising. The discovery of significant amounts of uranium ore does not appear likely, and I, therefore, concur with the examining team's recommendation for denial.

W. P. Williams

WPWilliams:iml
G-3/21/56
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
MAR 21 1956

March 21, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4108, Surprise Corporation, Surprise Claim, Kern County, California.

The examining team recommends denial of the subject application because the uranium mineralization present is of low grade and no geological reasons are present to indicate that the grade would become better with depth.

An open cut trench about 30 feet deep, 250 feet long, and 50 feet wide, has been dug on the property. According to the report about 10 tons of selected material had been stockpiled from the pit. A sample of the selected ore assayed 0.15 percent U_3O_8.

Prospects for a successful exploration project on the property are not promising. The discovery of significant amounts of uranium ore does not appear likely, and I, therefore, concur with the examining team's recommendation for denial.

W. P. Williams

WPWilliams:iml
G-3/21/56
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Kosted, 3210

DZ, EA 3/22/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
MAR 16 1956

1605 Evans Avenue
Reno, Nevada

March 14, 1956

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4102 (Uranium)
Surprise Corporation
Surprise Claim
Kern County, California

Reference is made to your letter of January 4, 1956 requesting a field investigation of the subject property.

Attached are four copies of a report by B. H. Sheahan and R. G. Reeves in which it is concluded that an exploration project is not warranted because ore of commercial grade cannot be inferred.

Although this is the kind of long range exploration we would like to encourage, we concur that the proposal does not qualify for DMEA assistance and recommend that the application be denied.

Roscoe M Smith
for S. Ricker

Attach.

Reviewed by
DMEA OPERATING COMMITTEE
3-21-56
(date)

RECEIVED
MAR 16 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA 4102 (uranium)
Surprise Corporation
Surprise claims
Kern County, California

by

B. H. Sheahan
Mining Engineer
U. S. Bureau of Mines

R. G. Reeves
Geologist
U. S. Geological Survey

March 12, 1956

Reviewed by
DMEA OPERATING COMMITTEE
3-21-56
(date)

RECEIVED
MAR 16 1956

CONTENTS

	Page
INTRODUCTION	1
CONCLUSIONS AND RECOMMENDATIONS	2
LOCATION, ACCESSIBILITY, AND LOCAL RESOURCES	3
HISTORY AND PRODUCTION	3
PROPERTY AND OWNERSHIP	4
DEVELOPMENT	5
GEOLOGY	5
ORE DEPOSITS	6
SAMPLING	7
ORE RESERVES	8
EXPLORATION PROJECT	8
APPENDIX I	

ILLUSTRATIONS

Figure 1 . . . . . Location map

2 . . . . . Geologic map

INTRODUCTION

The Surprise Corporation, 1615 Broadway, Room 605, Oakland 12, California, applied to the Defense Minerals Exploration Administration for Government assistance in a $4,180 program to explore for uranium at the Surprise claims, Kern County, California.

The property was examined by B. H. Sheahan, mining engineer, U. S. Bureau of Mines, and R. G. Reeves, geologist, U. S. Geological Survey, on January 25 and 26, 1956. Mr. Ernest E. Thurlow, Chief, Salt Lake Exploration Branch, Atomic Energy Commission, furnished a Preliminary Reconnaissance Report (File SC-SL-139) which described the property, and replied to a request for information on possible exploration targets (Appendix I). In addition, a conference was held with Mr. William A. Bowes, Section Chief, Atomic Energy Commission, 558 Haberfelde Building, 1706 Chester Avenue, Bakersfield, California, who has frequently visited and examined the deposit since its discovery in 1954.

The sections on Geology, Ore Deposits, Sampling, and Ore Reserves were largely compiled from information obtained from AEC and reports by private consultants as the deposit could not be adequately mapped and sampled owing to several feet of muck in the bottom of the main open cut trench.

Mr. George Wolff, president of Surprise Corporation; Mr. L. L. Vaughn, a promoter; and Messrs. L. L. Barker and Kenneth Hitchcock, owners, accompanied the examiners on January 26, 1956. Mr. George Wolff stated that the corporation would consider any reasonable alternate exploration proposal that was made by the examiners.

The Corporation had employed Mr. George Crerar, consulting engineer, Briceland, California; William Ross Cabeen and Associates, geologists and engineers, 12426 Ventura Blvd., North Hollywood, California; and Mr. Peter Joralemon, geologist and mining engineer, 315 Montgomery Street, San Francisco 4, California. Reports by these consultants were included with the application.

CONCLUSIONS AND RECOMMENDATIONS

The uranium content of the mineralized area is too low grade to constitute ore. Work completed indicates that the geologic probability of making a significant discovery is poor, and the proposal does not qualify for DMEA assistance because no ore grade material can be inferred. It is recommended, therefore, that the request for DMEA assistance be denied.

The AEC and DMEA examiners agree that drilling to test the area at depth would yield valuable information on the occurrence of uranium in the district and on the possible similarity in uranium and oil accumulations. For this type of scientific data, the work proposed may fall within the province of the Geological Survey or Atomic Energy Commission, possibly in cooperation with the Bureau of Mines.

LOCATION, ACCESSIBILITY, AND LOCAL RESOURCES

The Surprise claims are in lots 5 and 6, sec. 3, T. 30 S., R. 21 E., M.D.B.&M., Kern County, California, and at an altitude of 1,400 feet in the low foothills of the eastern slope of the Temblor Range (fig. 1).

To reach the deposit from Bakersfield, California, follow paved State Highway 178 westerly 40 miles to McKittrick, California, turn right at "E" Street and follow paved road 3.6 miles northwesterly, turn right near Reward and follow a graded dirt road northerly 2.7 miles through Frazer Valley to the Surprise No. 1 open pit.

Transmitted electric power and water are available near Reward. McKittrick, California is the nearest post office, railhead, and source of small supplies. Skilled miners are very scarce in this section of California.

HISTORY AND PRODUCTION

Messrs. Kenneth Hitchcock, L. L. Barker, J. F. Taylor, and W. G. Boardman discovered uranium occurrences and the Surprise claim was located September 10, 1954. Mr. L. L. Vaughn, uncle of L. L. Barker, interested Mr. George Wolff, who in turn leased the property on July 21, 1955 and organized the Surprise Corporation.

There has been no production from the deposit, but 10 tons of select material mined from the main open cut trench was stockpiled on the claim.

Several years ago the Standard Oil Company drilled a hole (54-3) on the ground now covered by the Surprise claim (fig. 2). The evident purpose of the hole was to explore for oil beneath the McKittrick thrust fault. The hole was dry and was consequently plugged and abandoned.

PROPERTY AND OWNERSHIP

The Surprise Corporation property includes the Surprise No. 1 and Surprise No. 2 unpatented mining claims which are owned by Messrs. Kenneth Hitchcock, L. L. Barker, J. F. Taylor, and W. G. Boardman. Location certificates are recorded at Bakersfield, California.

Officers of the corporation are Mr. George Wolff, president; Mr. Morse Erskine, attorney; and Mr. Osgood Murdock, secretary-treasurer. No equipment is owned and the corporation planned to provide their share of an exploration loan with money.

The lease is for a fifteen-year period. Royalty on production would amount to about 60 percent, with payments applying on a $100,000 purchase price. Mr. George Wolff lacks practical mining experience. He is engaged in the beverage manufacturing business but has been interested in speculative mining ventures for many years. He retained several consulting mining engineers and geologists prior to the request for exploration assistance.

DEVELOPMENT

The main open cut trench is about 30 feet deep, 250 feet long, and 50 feet wide. A pit was sunk an additional 10 feet in the bottom of this trench but was later filled with muck from extensions of the cut. The only other excavation is a 30-foot trench on the Surprise No. 2 claim.

This work was supervised by Mr. Kenneth Hitchcock, branch manager of Shaffer Tool Works at Taft, California, and by Mr. L. L. Barker, an oilfield workman.

GEOLOGY

The Surprise uranium prospect is on the crest of low hills on the northeast flank of the Temblor range, at an altitude of approximately 1,400 feet.

The mine area is underlain by the Miocene McLure shale member of the Monterey shale which has slid or been thrust over Pliocene Tulare fresh water shale. According to Taff[1] the

---

[1] Taff, J. A., 1933, Geology of McKittrick oil field and vicinity, Kern County, California: Bull. Am. Assn. Petrol. Geol., vol. 17, p 1-15.

McLure shale has slid over the younger sedimentary strata by gravity; according to Arnold and Johnson[1], the McLure shale was

---

[1] Arnold, Ralph and Johnson, H. R., 1910, Preliminary report on the McKittrick-Sunset oil region, Kern and San Luis Obispo Counties, California: U. S. Geol. Sur. Bull. 406, p 98.

---

thrust over the younger strata "along a plane making a very low angle with the horizontal". Both Taff and Arnold and Johnson agree that the McLure shale was broken up; it is cut by numerous fractures and faults that allowed the circulation of ground water. The shale is altered along the fractures and faults with the formation of iron oxides and clay minerals, probably by low temperature ground water.

ORE DEPOSITS

Small amounts of uranium-bearing minerals, mainly uranophane and autunite, were deposited along and between fractures and faults in the McLure shale. The main zone containing uranium minerals is between two northwest-trending faults that dip 70° SW to vertical. This zone, as mapped by Bowes[1], is from 1 to 6 feet

---

[1] Bowes, W. A., U. S. Atomic Energy Commission, Bakersfield, California: map in files of AEC.

---

wide and 50 feet long, and was exposed in the bottom of an open cut (fig. 2). At the time of the examination the floor of the cut was covered by waste from enlarging the cut, and only a small section along one wall could be seen. Two other zones, one 400 feet east and one 600 feet northeast, contain even less U_3O_8 than the zone in the cut.

SAMPLING

Only one sample, S-429, was taken by the examining engineer. This sample was cut across six feet of radio-active fractured siliceous shale on the east side of the trench. A radiometric analyses of the material showed 0.03 percent U_3O_8.

The U_3O_8-bearing zone in the pit was sampled by Mr. W. A. Bowes of the Atomic Energy Commission; the results of his sampling are:

Sample No.	Type and Width, feet	Equivalent $_eU_3O_8$	Chemical $_cU_3O_8$
388	shale 0.6	0.08	0.11
389	shale 1.0	0.08	0.09
390	shale 4.0	0.04	--

Additional samples by the AEC are:

Width, feet	U_3O_8 content	Description
2	0.105	Center, main zone
2	0.13	Center, main zone
2	0.098	Split off main zone, near center
6	0.065	Bank, southeast end.
	0.034	Ore pile

RECEIVED
MAR 16 1956

U_3O_8 content	Description
0.15	Ore pile

A sample of the main zone taken during the examination assayed 0.03 percent eU_3O_8.

ORE RESERVES

There are no ore reserves; none of the material yet found contains sufficient uranium to meet the 0.2 percent minimum required for purchase by the AEC. A few selected specimens that have been analyzed by the applicants contain as much as 0.75 percent U_3O_8. but these represent only a few pounds of material. About 500 tons of material containing 0.1 percent U_3O_8 may be inferred to a depth of 50 feet in a zone 50 feet long and averaging 3 feet wide.

EXPLORATION PROJECT

The applicants propose to explore the deposit to a depth of several hundfed feet by six or more core drill holes totaling 1,200 feet. Six holes were staked out on 50 foot centers in two rows 50 feet apart to explore the southeast extension of the uranium-bearing zone. An additional five holes were contemplated in the pit in the hanging wall of the fault zone.

A suitable exploration target for either set of holes does not exist. There is no surface indication of the uraniferous

material continuing to the southeast. None of the material in place constituted ore, and even the hand sorted "ore" pile did not come up to minimum specifications. There is no geologic reason to infer a change in tenor of the material at greater depth.

RECEIVED
MAR 5 1956
MINERAL DEPOSITS BRANCH
U. S. GEOLOGICAL SURVEY
MENLO PARK, CALIFORNIA

APPENDIX I

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF RAW MATERIALS
Salt Lake Exploration Branch

Refer to
R. M. SMITH — 3/5
Reeves ✓ 3/5
Answered

ADDRESS REPLY TO:

U. S. Atomic Energy Commission
P. O. Box 2196
Salt Lake City, Utah

AND REFER TO:

SLEB:EET:af

March 1, 1956

Mr. Roscoe M. Smith
U. S. Geological Survey
4 Homewood Place
Menlo Park, California

MAR 16 1956

Dear Roscoe:

Your letter to Bill Bowes of our Bakersfield office has been referred to this office with appropriate data for our reply.

It is unfortunate that the Surprise #1 prospect was in poor condition for an examination at the time of the visit of the field team. However, even had the examining team been able to see all that had previously been exposed, it is doubtful that they would infer ore-grade material at depth. The geologic setting is unique, and there has been no deep exploration for uranium in the area. The surface and near-surface showings are not impressive in grade but their alignment along a major structure could be considered encouraging, and we feel they should be investigated at depth.

Marginal surface showings have apparently discouraged deep exploration by private operators, and it would appear to be appropriate for the Government to assist in determining the nature of the deposits at depth. Further geologic information concerning possible similarities in the origin of uranium and oil accumulations may also result from deeper exploration. The results of this exploration should benefit a number of similar deposits in the Taft-McKittrick area.

It should be possible to use a rotary rig with a vacuum-type sample collector and drill vertically in the mineralized zone. The zone dips approximately 70 degrees so that in order to drill vertically and obtain a complete section to perhaps 400 feet, it may be necessary to drill two or more holes on offset from the surface. The mineralized zone (0.05% or more U_3O_8) is about 10 feet wide at the surface.

Consideration might also be given to drilling large diameter holes (30 inches which can be reamed to four feet or more) with an oil well "rat-hole" rig or a cesspool digger. Mr. Bowes reports that such holes have been drilled to depths of 40 feet in this material at a cost of less than 30¢ per foot. The driller estimated that it would be possible to drill to 100 feet. At least part of the exploration should go deeper than 100 feet but this would make a shaft-size opening for close examination of the deposit which is certainly desirable.

Please feel free to use any of this information in whatever way it may prove useful to you. We are also attaching a sketch map of the Surprise #1 diggings.

Sincerely yours,

Ernest E. Thurlow, Chief
Salt Lake Exploration Branch
Division of Raw Materials

Enclosure:
Sketch map as above

cc: Bill Bowes, Bakersfield

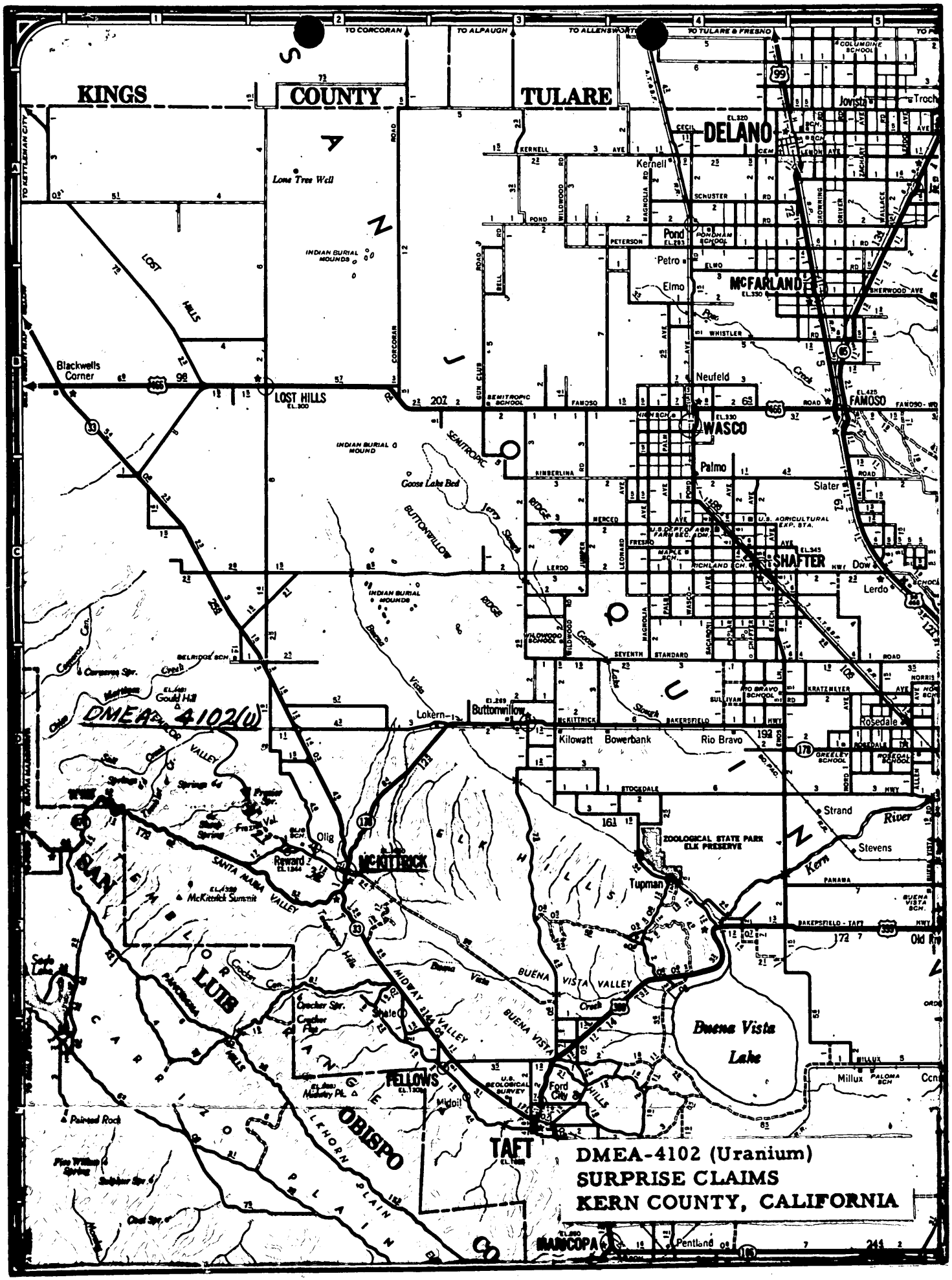
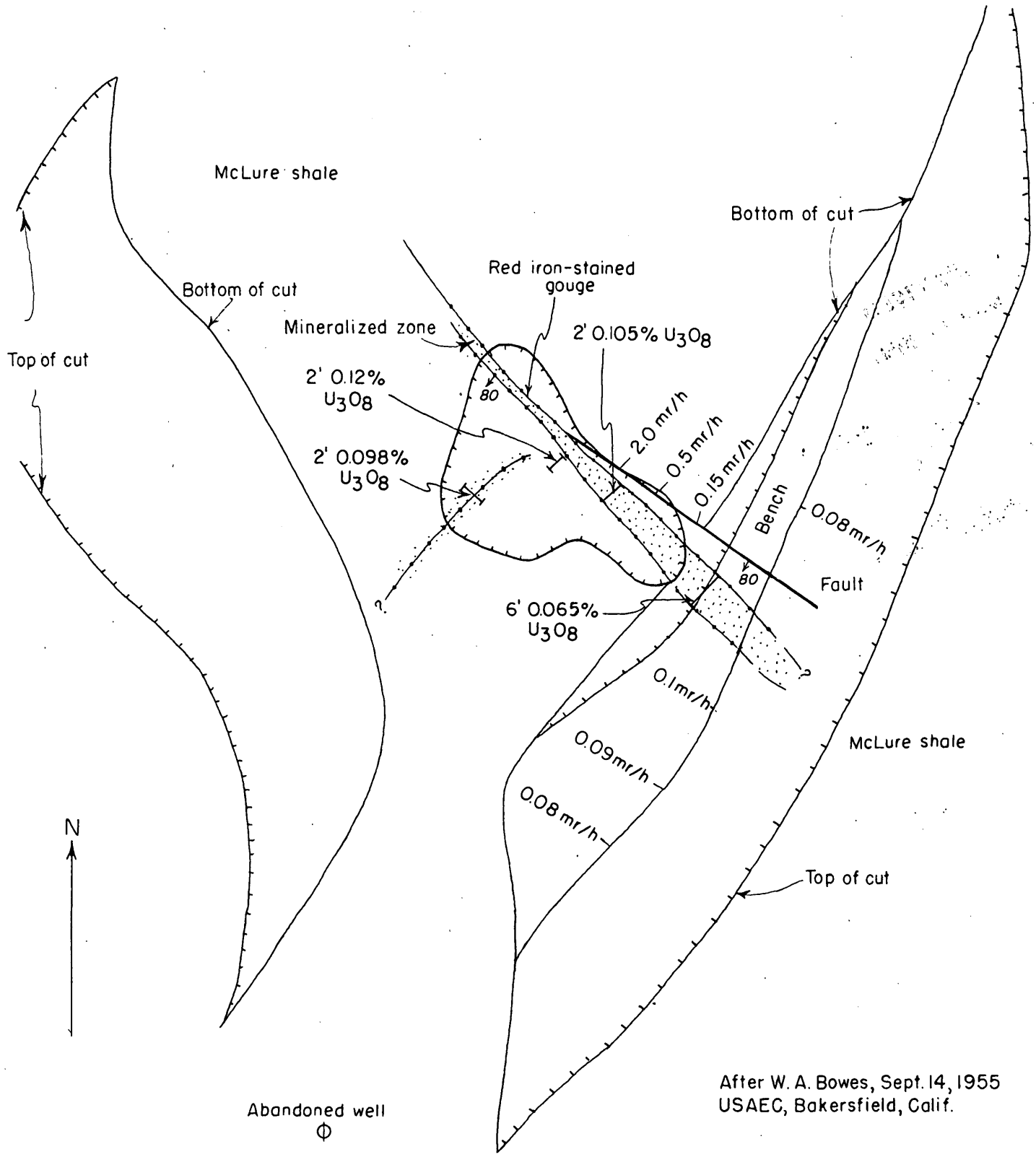


Figure 1 LOCATION MAP CALIFORNIA



OPEN CUT, SURPRISE NO. 1 CLAIM
SURPRISE URANIUM PROSPECT, KERN COUNTY, CALIFORNIA

25 0 25 50 FEET

Figure 2.

3/19/56 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

COPY

1605 Evans Avenue
Reno, Nevada

March 14, 1956

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-4102 (Uranium)
Surprise Corporation
Surprise Claim
Kern County, California

Reference is made to your letter of January 4, 1956 requesting a field investigation of the subject property.

Attached are four copies of a report by B. H. Sheahan and R. G. Reeves in which it is concluded that an exploration project is not warranted because ore of commercial grade cannot be inferred.

Although this is the kind of long range exploration we would like to encourage, we concur that the proposal does not qualify for DMEA assistance and recommend that the application be denied.

/s/ ROSCOE M. SMITH
for S. Ricker

Attach.

Reviewed by
DMEA OPERATING COMMITTEE
3-21-56
(date)

RECEIVED
MAR 16 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA 4102 ([illegible])
[illegible]
[illegible]
[illegible], California

by

B. H. Sheahan
Mining Engineer
U. S. Bureau of Mines

R. G. Reeves
Geologist
U. S. Geological Survey

March 12, 1956

Reviewed by
DMEA OPERATING COMMITTEE
3-21-56
(date)

CONTENTS

	Page
INTRODUCTION	1
CONCLUSIONS AND RECOMMENDATIONS	2
LOCATION, ACCESSIBILITY, AND LOCAL RESOURCES	3
HISTORY AND PRODUCTION	3
PROPERTY AND OWNERSHIP	4
DEVELOPMENT	5
GEOLOGY	5
ORE DEPOSITS	6
SAMPLING	7
ORE RESERVES	8
EXPLORATION PROJECT	8
APPENDIX I	

ILLUSTRATIONS

Figure 1 . . . . . Location map

2 . . . . . Geologic map

RECEIVED
MAR 16 1956

INTRODUCTION

The Surprise Corporation, 1615 Broadway, Room 605, Oakland 12, California, applied to the Defense Minerals Exploration Administration for Government assistance in a $4,180 program to explore for uranium at the Surprise claims, Kern County, California.

The property was examined by B. H. Sheahan, mining engineer, U. S. Bureau of Mines, and R. G. Reeves, geologist, U. S. Geological Survey, on January 25 and 26, 1956. Mr. Ernest E. Thurlow, Chief, Salt Lake Exploration Branch, Atomic Energy Commission, furnished a Preliminary Reconnaissance Report (File SC-SL-139) which described the property, and replied to a request for information on possible exploration targets (Appendix I). In addition, a conference was held with Mr. William A. Bowen, Section Chief, Atomic Energy Commission, 558 Haberfelde Building, 1706 Chester Avenue, Bakersfield, California, who has frequently visited and examined the deposit since its discovery in 1954.

The sections on Geology, Ore Deposits, Sampling, and Ore Reserves were largely compiled from information obtained from AEC and reports by private consultants as the deposit could not be adequately mapped and sampled owing to several feet of muck in the bottom of the main open cut trench.

Mr. George Wolff, president of Surprise Corporation; Mr. L. L. Vaughn, a promoter; and Messrs. L. L. Barker and Kenneth Hitchcock, owners, accompanied the examiners on January 26, 1956. Mr. George Wolff stated that the corporation would consider any reasonable alternate exploration proposal that was made by the examiners.

The Corporation had employed Mr. George Crerar, consulting engineer, Bricelend, California; William Rose Cabeen and Associates, geologists and engineers, 1[illegible]26 Ventura Blvd., North Hollywood, California; and Mr. Peter Jorulemon, geologist and mining engineer, 315 Montgomery Street, San Francisco 4, California. Reports by these consultants were included with the application.

CONCLUSIONS AND RECOMMENDATIONS

The uranium content of the mineralized area is too low grade to constitute ore. Work completed indicates that the geologic probability of making a significant discovery is poor, and the proposal does not qualify for DMEA assistance because no ore grade material can be inferred. It is recommended, therefore, that the request for DMEA assistance be denied.

The AEC and DMEA examiners agree that drilling to test the area at depth would yield valuable information on the occurrence of uranium in the district and on the possible similarity in uranium and oil accumulations. For this type of scientific data, the work proposed may fall within the province of the Geological Survey or Atomic Energy Commission, possibly in cooperation with the Bureau of Mines.

LOCATION, ACCESSIBILITY, AND LOCAL RESOURCES

The Surprise claims are in lots 5 and 6, sec. 3, T. 30 S., R. 21 E., M.D.B.&M., Kern County, California, and at an altitude of 1,400 feet in the low foothills of the eastern slope of the Tehachapi Range (fig. 1).

To reach the deposit from Bakersfield, California, follow paved State Highway 178 westerly 40 miles to McKittrick, California, turn right at "E" Street and follow paved road 3.6 miles northwesterly, turn right near Reward and follow a graded dirt road northerly 2.7 miles through Fraser Valley to the Surprise No. 1 open pit.

Transmitted electric power and water are available near Reward. McKittrick, California is the nearest post office, railhead, and source of small supplies. Skilled miners are very scarce in this section of California.

HISTORY AND PRODUCTION

Messrs. Kenneth Hitchcock, L. L. Barker, J. F. Taylor, and W. G. Boardman discovered uranium occurrences and the Surprise claim was located September 10, 1954. Mr. L. L. Vaughn, uncle of L. L. Barker, interested Mr. George Wolff, who in turn leased the property on July 21, 1955 and organized the Surprise Corporation.

There has been no production from the deposit, but 10 tons of select material mined from the main open cut trench was stockpiled on the claim.

Several years ago the Standard Oil Company drilled a hole (54-3) on the ground now covered by the Surprise claim (fig. 2). The evident purpose of the hole was to explore for oil beneath the McKittrick thrust fault. The hole was dry and was consequently plugged and abandoned.

PROPERTY AND OWNERSHIP

The Surprise Corporation property includes the Surprise No. 1 and Surprise No. 2 unpatented mining claims which are owned by Messrs. Kenneth Hitchcock, L. L. Barker, J. F. Taylor, and W. G. Boardman. Location certificates are recorded at Bakersfield, California.

Officers of the corporation are Mr. George Wolff, president; Mr. Morse Erskine, attorney; and Mr. Osgood Murdock, secretary-treasurer. No equipment is owned and the corporation planned to provide their share of an exploration loan with money.

The lease is for a fifteen-year period. Royalty on production would amount to about 60 percent, with payments applying on a $100,000 purchase price. Mr. George Wolff lacks practical mining experience. He is engaged in the beverage manufacturing business but has been interested in speculative mining ventures for many years. He retained several consulting mining engineers and geologists prior to the request for exploration assistance.

DEVELOPMENT

The main open cut trench is about 30 feet deep, 250 feet long, and 50 feet wide. A pit was sunk an additional 10 feet in the bottom of this trench but was later filled with muck from extensions of the cut. The only other excavation is a 30-foot trench on the Surprise No. 2 claim.

This work was supervised by Mr. Kenneth Hitchcock, branch manager of Shaffer Tool Works at Taft, California, and by Mr. L. L. Barker, an oilfield workman.

GEOLOGY

The Surprise uranium prospect is on the crest of low hills on the northeast flank of the Temblor range, at an altitude of approximately 1,400 feet.

The mine area is underlain by the Miocene McLure shale member of the Monterey shale which has slid or been thrust over Pliocene Tulare fresh water shale. According to Taff[1] the

---

[1] Taff, J. A., 1933, Geology of McKittrick oil field and vicinity, Kern County, California: Bull. Am. Assn. Petrol. Geol., vol. 17, p 1-15.

McLure shale has slid over the younger sedimentary strata by gravity; according to Arnold and Johnson[1], the McLure shale was

---

[1] Arnold, Ralph and Johnson, H. R., 1910, Preliminary report on the McKittrick-Summit oil region, Kern and San Luis Obispo Counties, California: U. S. Geol. Sur. Bull. 406, p 98.

---

thrust over the younger strata "along a plane making a very low angle with the horizontal". Both Taff and Arnold and Johnson agree that the McLure shale was broken up; it is cut by numerous fractures and faults that allowed the circulation of ground water. The shale is altered along the fractures and faults with the formation of iron oxides and clay minerals, probably by low temperature ground water.

ORE DEPOSITS

Small amounts of uranium-bearing minerals, mainly uranophane and autunite, were deposited along and between fractures and faults in the McLure shale. The main zone containing uranium minerals is between two northwest-trending faults that dip 70° SW to vertical. This zone, as mapped by Bowes[1], is from 1 to 6 feet

---

[1] Bowes, W. A., U. S. Atomic Energy Commission, Bakersfield, California: map in files of AEC.

---

wide and 50 feet long, and was exposed in the bottom of an open cut (fig. 2). At the time of the examination the floor of the cut was covered by waste from enlarging the cut, and only a small section along one wall could be seen. Two other zones, one 400 feet east and one 600 feet northeast, contain even less U_3O_8 than the zone in the cut.

SAMPLING

Only one sample, S-429, was taken by the examining engineer. This sample was cut across six feet of radio-active fractured siliceous shale on the east side of the trench. A radiometric analysis of the material showed 0.03 percent U_3O_8.

The U_3O_8-bearing zone in the pit was sampled by Mr. W. A. Bowes of the Atomic Energy Commission; the results of his sampling are:

Sample No.	Type and Width, feet	Equivalent U_3O_8	Chemical U_3O_8
388	shale 0.6	0.08	0.11
389	shale 1.0	0.08	0.09
390	shale 4.0	0.04	—

Additional samples by the AEC are:

Width, feet	U_3O_8 content	Description
2	0.105	Center, main zone
2	0.13	Center, main zone
2	0.098	Split off main zone, near center
6	0.065	Bank, southeast end.
	0.034	Ore pile

U_3O_8 content	Description
0.15	Ore pile

A sample of the main zone taken during the examination assayed 0.03 percent eU_3O_8.

Joe Hosted says the minimum is still 0.1% U_3O_8

ORE RESERVES

There are no ore reserves; none of the material yet found contains sufficient uranium to meet the 0.2 percent minimum required for purchase by the AEC. A few selected specimens that have been analyzed by the applicants contain as much as 0.75 percent U_3O_8, but these represent only a few pounds of material. About 500 tons of material containing 0.1 percent U_3O_8 may be inferred to a depth of 50 feet in a zone 50 feet long and averaging 3 feet wide.

EXPLORATION PROJECT

The applicants propose to explore the deposit to a depth of several hundred feet by six or more core drill holes totaling 1,200 feet. Six holes were staked out on 50 foot centers in two rows 50 feet apart to explore the southeast extension of the uranium-bearing zone. An additional five holes were contemplated in the pit in the hanging wall of the fault zone.

A suitable exploration target for either set of holes does not exist. There is no surface indication of the uraniferous

material continuing to the southeast. None of the material in place constituted ore, and even the hand sorted "ore" pile did not come up to minimum specifications. There is no geologic reason to infer a change in tenor of the material at greater depth.

RECEIVED
MAR 5 1956
MINERAL DEPOSITS BRANCH
U. S. GEOLOGICAL SURVEY
MENLO PARK, CALIFORNIA

APPENDIX I

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF RAW MATERIALS
Salt Lake Exploration Branch

Refer to		Date
R. M. SMITH	—	3/5
Reevs	✓	3/5
Answered		

ADDRESS REPLY TO:

U. S. Atomic Energy Commission
P. O. Box 2196
Salt Lake City, Utah

AND REFER TO:

SLEB:EET:af

March 1, 1956

MAR 16 1956

Mr. Roscoe M. Smith
U. S. Geological Survey
4 Homewood Place
Menlo Park, California

Dear Roscoe:

Your letter to Bill Bowes of our Bakersfield office has been referred to this office with appropriate data for our reply.

It is unfortunate that the Surprise #1 prospect was in poor condition for an examination at the time of the visit of the field team. However, even had the examining team been able to see all that had previously been exposed, it is doubtful that they would infer ore-grade material at depth. The geologic setting is unique, and there has been no deep exploration for uranium in the area. The surface and near-surface showings are not impressive in grade but their alignment along a major structure could be considered encouraging, and we feel they should be investigated at depth.

Marginal surface showings have apparently discouraged deep exploration by private operators, and it would appear to be appropriate for the Government to assist in determining the nature of the deposits at depth. Further geologic information concerning possible similarities in the origin of uranium and oil accumulations may also result from deeper exploration. The results of this exploration should benefit a number of similar deposits in the Taft-McKittrick area.

It should be possible to use a rotary rig with a vacuum-type sample collector and drill vertically in the mineralized zone. The zone dips approximately 70 degrees so that in order to drill vertically and obtain a complete section to perhaps 400 feet, it may be necessary to drill two or more holes on offset from the surface. The mineralized zone (0.05% or more U_3O_8) is about 10 feet wide at the surface.

Consideration might also be given to drilling large diameter holes (30 inches which can be reamed to four feet or more) with an oil well "rat-hole" rig or a cesspool digger. Mr. Bowes reports that such holes have been drilled to depths of 40 feet in this material at a cost of less than 30¢ per foot. The driller estimated that it would be possible to drill to 100 feet. At least part of the exploration should go deeper than 100 feet but this would make a shaft-size opening for close examination of the deposit which is certainly desirable.

Please feel free to use any of this information in whatever way it may prove useful to you. We are also attaching a sketch map of the Surprise #1 diggings.

Sincerely yours,

Ernest E. Thurlow, Chief
Salt Lake Exploration Branch
Division of Raw Materials

Enclosure:
Sketch map as above

cc: Bill Bowes, Bakersfield

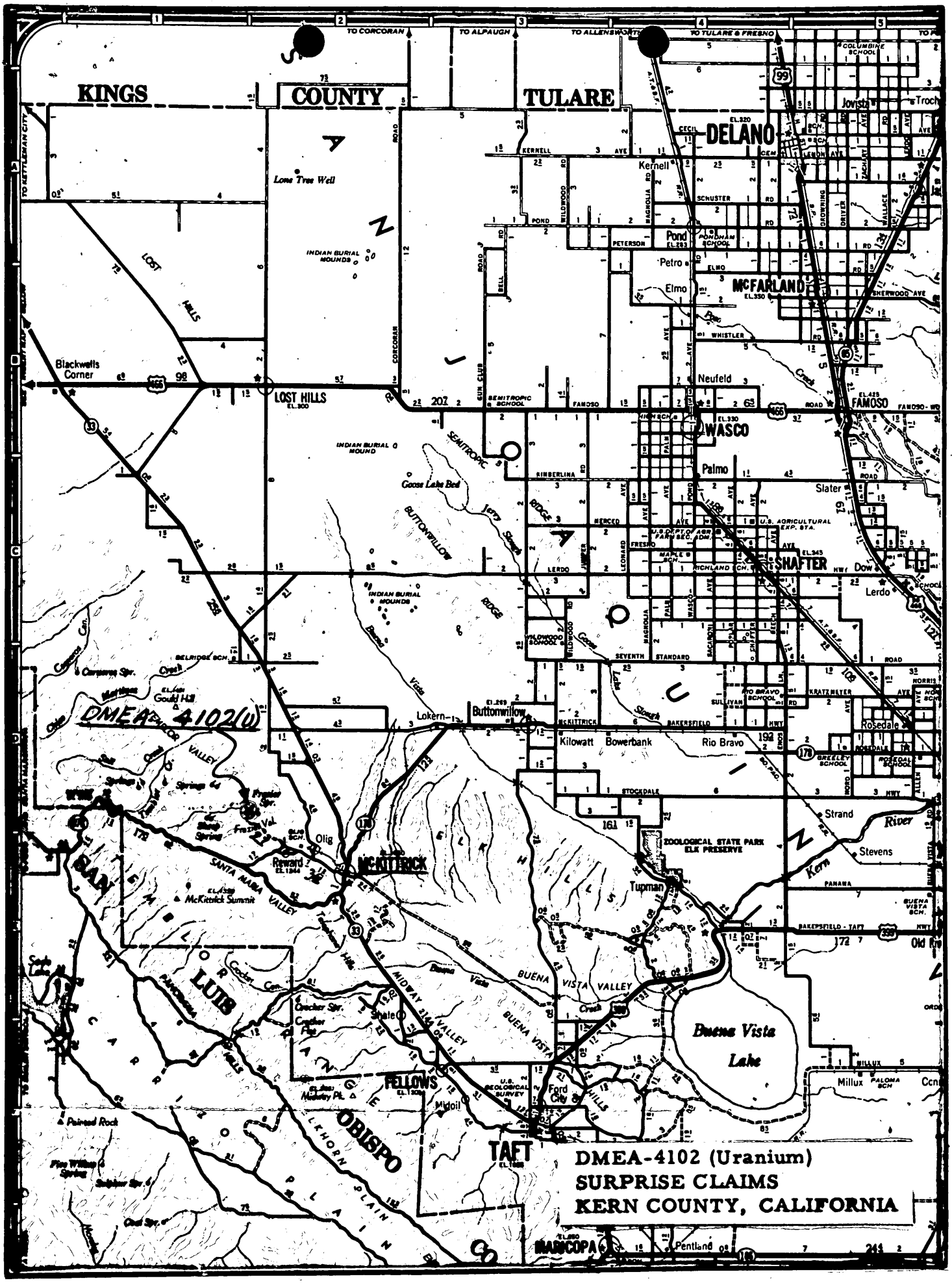
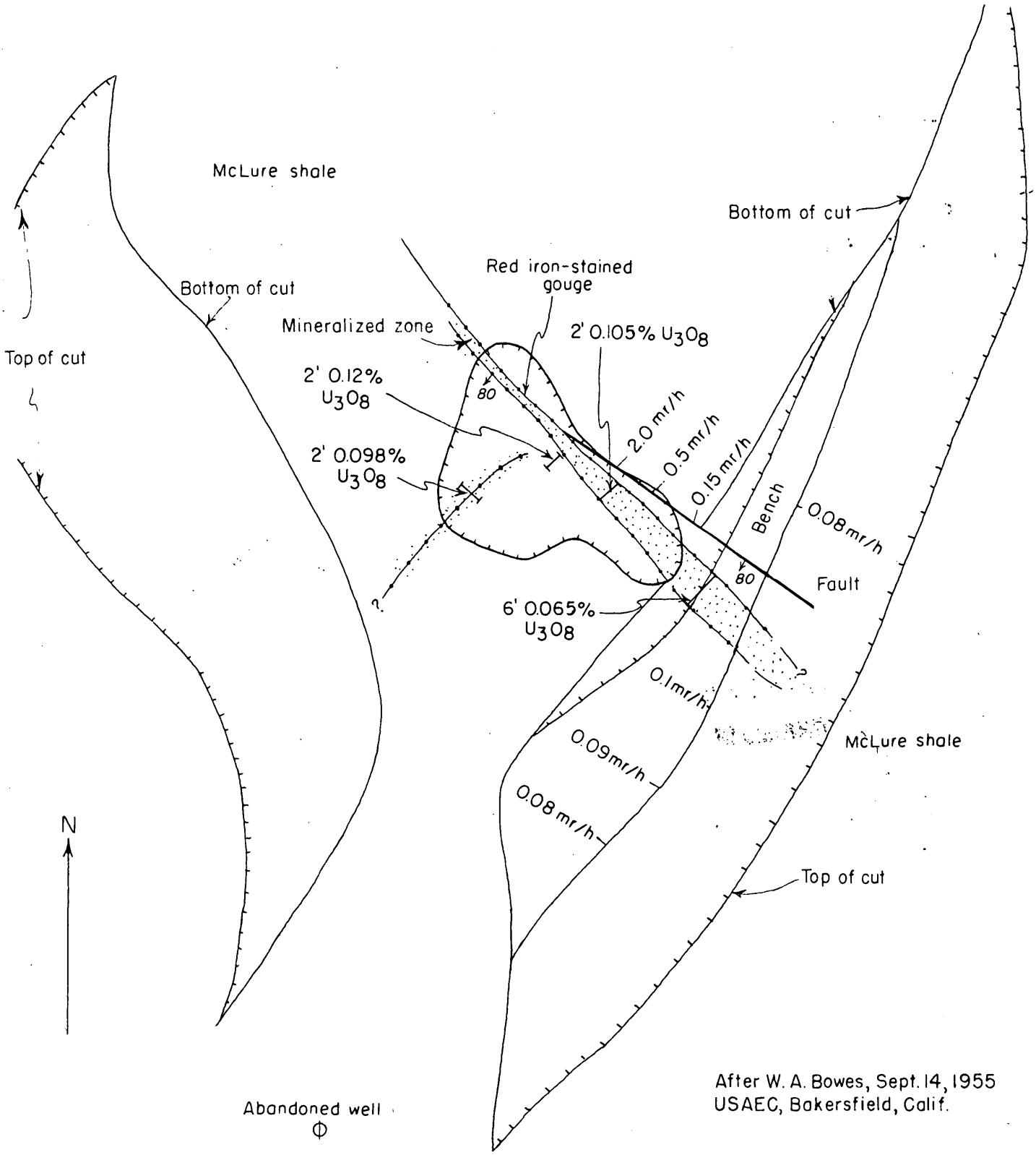


Figure 1 LOCATION MAP CALIFORNIA



OPEN CUT, SURPRISE NO. 1 CLAIM
SURPRISE, URANIUM PROSPECT, KERN COUNTY, CALIFORNIA

25 0 25 50 FEET

Figure 2.

700

Murphy
Selfridge
Johnson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Spangler Rickar
Executive Officer
DMEA Field Team, Region II
U. S. Bureau of Mines
Rare and Precious Metals Experiment Station
1605 Evans Avenue
Reno, Nevada

JAN 6 1956

Re: Docket No. DMEA-4102 (Uranium)
Surprise Corporation
Surprise Claim
Kern County, California

Dear Mr. Rickar:

The captioned application is referred to Region II Field Team for investigation, a field examination if deemed advisable, and recommendation. A copy of the application was forwarded to your office December 21, 1955.

Enclosed are copies of memoranda, dated December 22 and 29, 1955, by N. E. Nelson, USGS, and J. E. Crawford, USBM, respectively, relating to the subject application.

In the event the Field Team concludes a project on the property is warranted, it should advise the Applicant that we will require six copies of the Owners' Consent to Lien signed by L. L. Barker, Kenneth Hitchcock, J. F. Tayler, and W. G. Boardman.

Also, if the Applicant owns or has control of any lands adjacent to the Surprise Claim which might benefit by the proposed exploration work, then such lands should be included with the Surprise Claim. In this case, the Applicant should submit the data showing the Surprise Corporation's rights of possession.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

/s/ Robert W. Geehan (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

FMMurphy/izm 12-30-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Code 700
Mr. Murphy
Messrs. JECrawford, THKiilsgaard, Hosted

700

FILE COPY
Surname:
Murphy
Gerhart
Kilpatrick
Selfridge
Stephenson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

JAN 4 1956

Surprise Corporation
1615 Broadway, Room 605
Oakland 12, California

Re: Docket No. DMEA-4102 (Uranium)
Surprise Claim
Kern County, California

Gentlemen:

The application for assistance in exploring the subject claim in Kern County, California, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred to the Executive Officer of Region II at the following address:

Mr. Spangler Richer
Executive Officer
DMEA Field Team, Region II
U. S. Bureau of Mines
Rare and Precious Metals Experiment Station
1605 Evans Avenue
Reno, Nevada

The Regional Office will contact you in regard to your project if additional information is required.

Sincerely yours,

N. G. Millenbrett (for)

Administration

FMMurphy/izm 12-30-55
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region II (2)

C

12-29-55 dgm

RECEIVED
DEC 29 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

December 29, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Application for assistance, DMEA Docket 4102, Surprise Corporation, Surprise Claim, Kern County, California

I have reviewed the attached application of the Surprise Corporation, DMEA Docket 4102, dated December 12 and received in this office December 21. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant has requested Federal participation in the amount of $4,180 to explore for uranium on the Surprise Claim in Kern County, California. The proposed exploration project consists of 48 hours of overburden stripping at $680, and $3,500 worth of drilling of an unspecified footage.

The application does not present as specific an exploration program as would be desirable for evaluation purposes and doubts exist whether such a program has been thoroughly considered by the applicant prior to submitting the request to DMEA. Inasmuch as the AEC representative in the area is familiar with the subject property, it would be advisable for the field team to consult with the AEC to determine whether or not an examination is warranted.

We recommend that the application be sent to the field team and that the field team be requested to consult with E. E. Thurlow, Chief, Exploration Branch, AEC, Salt Lake City, regarding the feasibility of a field examination.

John E Crawford
John E. Crawford

Attachment

12/27/55-gla

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
DEC 23 1955

December 22, 1955

Re: DMEA 4102
Surprise Corporation
Surprise claim
Kern Co., California
$4,180.00 - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests aid in exploring a uranium-bearing breccia or fault zone from which samples showing ore grade material have been taken. The information supplied by the application does not say what the samples represent, but with two exceptions it is inferred they were selected. Two ore sample assays "from files of Atomic Energy Commission, Bakersfield" show 0.15% and 0.13% across 2 feet and one from a dump shows 0.15% and another 0.034% U_3O_8. Reports by engineers and geologists are reserved in tone as:-- "Nothing found to date can be considered of even marginal importance. Therefore the only opportunity for ore discovery is at depth." Peter Joralemon, November 18, 1955. A map bearing the signature of George Crerar locates two "hot spots" and a clam shell pit with a "U_3O_8 ore" notation.

The application says $8,700 have been expended to date. The proposed work consists of and is estimated to cost:

Bulldozing	$ 680.00
Core or rotary drilling	3,500.00
Total	$4,180.00

The opinions concerning this showing vary greatly. Probably the Field Team can appraise the opinions and the application without an examination. At any rate it's opinion is necessary

Referral is recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
DEC 23 1955

December 22, 1955

Re: DMEA 4102
Surprise Corporation
Surprise claim
Kern Co., California
$4,180.00 - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests aid in exploring a uranium-bearing breccia or fault zone from which samples showing ore grade material have been taken. The information supplied by the application does not say what the samples represent, but with two exceptions it is inferred they were selected. Two ore sample assays "from files of Atomic Energy Commission, Bakersfield" show 0.15% and 0.13% across 2 feet and one from a dump shows 0.15% and another 0.03½% U_3O_8. Reports by engineers and geologists are reserved in tone as:-- "Nothing found to date can be considered of even marginal importance. Therefore the only opportunity for ore discovery is at depth." Peter Juralemon, November 18, 1955. A map bearing the signature of George Crerar locates two "hot spots" and a clam shell pit with a "U_3O_8 ore" notation.

The application says $8,700 have been expended to date. The proposed work consists of and is estimated to cost:

Bulldozing	$ 680.00
Core or rotary drilling	3,500.00
Total	$4,180.00

The opinions concerning this showing vary greatly. Probably the Field Team can appraise the opinions and the application without an examination. At any rate it's opinion is necessary

Referral is recommended.

N. E. Nelson

NENelson:iml
G-12/22/55
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3); Docket file; J. K. Crawford, 3641; J. O. Hosted, 3210

December 21, 1955
Subject: DMEA-4102
Re: Exploration Assistance
Surprise Claim

Surprise Corporation
1615 Broadway, Room 605
Oakland 12, California

Gentlemen:

The receipt of your application dated December 12, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4102 and referred to the Rare & Misc. Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

DEC 19 1955

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-4102
Metal or Mineral Uranium
Date Received 12-19-55
Estimated Cost $4,180.00
Participation (Government %)

1. Name of applicant (a) Surprise Corporation, 1615 Broadway, Room 605, Oakland 12, California

(b) Corporation, California

(c) President, George Wolff, 1615 Broadway, Room 605, Oakland 12, California; Secretary-Treasurer, Osgood Murdock, 1615 Broadway, Room 605, Oakland 12; Attorney, Morse Erskine, 625 Market Street, San Francisco, California

2.

3. (a) Lessee of Surprise Claim on records of the Bureau of Mines in San Francisco

(b) Claim is located for the most part in Lot 6 and in part of Lot 5 of Section 3, Township 30S, R 21E, No. 1 Surprise and No. 2 Surprise

(c) Lessee

(d) Copy of lease attached. Lease is recorded in Kern County.

(e)

(f)

4. (a) Before signing of present lease, July 21, 1955, lessors had expended approximately $2,500 in removal of over-burden and surface cuts to uncover veins. Between August 1 and October 10, lessees expended approximately $6,200 in field wages, equipment rental, supplies, taxes, insurance, blasting, travel and telephone for further surface exploration, removing of over-burden and clamshell digging to follow and explore veins.

(b) No production, but 10 to 12 tons of marginal and partially segregated ore stockpiled on property.

(c) Note copy of George Crerar's report of August 22 attached. Note also attached hand transit survey by Crerar and surface sketch map and geologic sketch map by R. G. Mead of William Ross Cabeen and Associates.

(d) Mine is located northwest of McKittrick, California, distant 5 miles by county road and 1½ miles by private access road. Southern Pacific Railway spur at McKittrick is 7 miles distant from property by easily passable roads.

(e) Abundant manpower, materials, supplies, equipment and residence at Taft, 12 to 15 miles distant. Water and power not on property but within a few miles.

5. (a) Uranium oxide

(b) It is proposed to clean up the over-burden to uncover surface veins where extensive earth removal was preformed in the fall. We also propose core or rotary drilling as determined and conforming to counsel of our consultants.

(c) The work will start within 30 days and will be completed within three to four months from date of an exploration project contract.

(d) Corporation has consulted and will continue to be guided by the following counsel: George Crerar, consulting engineer, Briceland, California; William Ross Cabeen & Associates, geologists and engineers, 12426 Ventura Blvd, No. Hollywood, California; Peter Joralemon, geologist and mining engineer, 315 Montgomery St., San Francisco 4, California. Field work will be under the direction of Kenneth Hitchcock, branch manager of Shaffer Tool Works at Taft and L. L. Barker, both lessors and owners of the claim and both practical field men thoroughly familiar with earth moving and drilling.

(6) Proposed maximum 30 day exploration budget as follows:

Complete removal of overburden to uncover surface veins, estimated maximum 6 days work with dozer and skip hoist, 8 hours @ $17.50; 40 hours @ $13.50	$ 680.00
Core or rotary drilling as determined	3,500.00
	$4,180.00

William Ross Cabeen & Associates estimated a 7 day drilling budget as follows:

Project geologist 7 days at $75/day	$ 525.00
Living and travel expenses	150.00
Assay work	170.00
Rotary drilling 1200 feet at $2.00/foot	2,400.00
Grading locations	150.00
Miscellaneous	50.00 -105
	$ 3,445.00

Peter Joralemon proposed diamond core drilling, a first hole not to exceed 300 feet, with a probable cost of about $3,000.

(a) Work will be contracted if satisfactory arrangements can be made. Hitchcock proposes purchase of drilling rig which he proposes to handle and operate.

(b) Covered above

(c) Covered above

RECEIVED
DEC 19 1955

(d) Covered above

(e) None necessary

(f) None contemplated

(g) No additional necessary

(h) None contemplated

7 (a) Corporation prepared to furnish its share of the cost of project, both in money and in contributed services

CERTIFICATION

The undersigned, as corporate officer, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated December 12, 1955

SURPRISE CORPORATION

By Gwood Kuerdel

Secretary-Treasurer

SURPRISE CORPORATION
1615 Broadway, Room 605
Oakland 12, California
TWinoaks 3-2832

RECEIVED
DEC 19 1955

December 15, 1955

Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Gentlemen:

Enclosed original and three copies of application for aid are in accordance with your Form MF-103. This application is forwarded after conference with Mr. Roscoe M. Smith, Mineral Deposits Branch, U. S. Geological Survey, 4 Homewood Place, Menlo Park, California.

For your further information, Mr. W. A. Bowes, regional representative for the U. S. Atomic Energy Commission, Haberfelde Bldg., 1706 Chester Avenue, Bakersfield, California, is thoroughly familiar with this property, has followed our previous operations and has been anxious that further exploratory work be done to determine the possibilities and extent of minerals in this claim.

It will be greatly appreciated if you can advise us when we may expect action or decision on this application. It is our understanding that no aid would be granted or no funds would be eventually available from the Government if we proceed with the contemplated work before your decision in connection with this application. Is that correct?

Very truly yours,

SURPRISE CORPORATION

Osgood Murdock
Secretary-Treasurer

OM:dm
Enclosures

THIS LEASE made this 21st day of May, 1955, by and between L. L. BARKER, KENNETH HITCHCOCK, J. F. TAYLOR, W. G. BOARDMAN, hereinafter referred to as "lessors", and SURPRISE CORPORATION, hereinafter referred to as "lessee",

RECEIVED
DEC 19 1955

WITNESSETH:

WHEREAS: Lessors are the owners of a claim described in Exhibit A attached hereto and hereby referred to and made a part hereof. Lessee desires to lease said claim for the purpose of mining thereon uranium and whatever other minerals it may contain.

NOW, THEREFORE, lessors, for and in consideration of the covenants herein on the part of lessee to be performed, do hereby lease unto lessee said mining claim upon the terms and conditions stated herein.

1. Unless this lease pursuant to the provisions thereof is terminated at an earlier date, its term shall be for fifteen (15) years commencing on the date hereof and as long thereafter as lessee, in accordance with the provisions hereof, continues to mine uranium or other minerals on said claim.

2. Within sixty (60) days from the date hereof, lessee shall expend $2,500.00 in development work on said claim which shall consist either in taking pores from said claim or the sinking of a shaft thereon, or shipping ore therefrom. Lessee, before undertaking said development work and without limiting its freedom of action in any respect, shall consult with regard to the development of said claim with whatever official of the Atomic Energy Commission whom it may contact and who

will be willing to give advice with respect to such development.

3. Lessee shall have thirty (30) days after the expiration of said first sixty (60) day period within which to analyze the results of its exploratory work. If within said period of ninety (90) days (said sixty (60) day period to do such exploratory work and said additional thirty (30) days for analysis) lessee concludes that it does not consider that it will be profitable for it to mine said claim, lessee shall notify lessors to that effect and lessee shall thereupon surrender this lease to lessors and neither lessors nor lessee shall have any further liability hereunder. Lessee shall have the full period of said ninety (90) days within which to determine whether it shall go forward with the mining of said claim regardless of the fact that it may complete its exploratory work and its analysis thereof prior to the expiration of said ninety (90) days.

4. If lessee, after said exploratory work and said analysis, determines not to surrender this lease, lessee shall then have eight (8) months within which to commence mining operations on the claim. During the last six (6) months of said eight (8) month period, lessee shall pay lessors rent in the sum of $200.00 per month, provided that if during said eight (8) month period lessee shall have commenced mining operations on the claim, its obligation to thereafter pay said cash rental shall cease.

5. If during said period of eight (8) months lessee determines not to commence mining operations on

the claim, it shall have the right to surrender this lease and neither lessors nor lessee shall have any further obligation hereunder.

6. If lessee within said eight (8) months period elects to commence mining operations on said claim, it shall thereafter work and mine said claim steadily and continuously; it being understood and agreed that any failure by lessee to work said claim as provided in the next sentence for the space of thirty (30) consecutive days may by lessors be considered a violation of this covenant. Lessee shall be deemed to be working said claim within the meaning of the next preceding sentence if it has three (3) men employed in the actual mining thereof each of whom shall be employed not less than forty (40) hours per week.

7. Anything contained in paragraph 6 to the contrary notwithstanding, if lessee commences mining operations on the claim and if thereafter such operations are interrupted by strikes, other labor troubles, inability to secure equipment, storms, or other acts of God, or other causes beyond the control of lessee, whether or not of a similar character, lessee's failure to continue mining operations for any of said reasons, shall not be deemed a breach of lessee's covenants contained in paragraph 6.

8. If lessee elects to commence mining operations on the claim, it shall thereafter have the right at any time to surrender this lease and if the lessee exercises such right, neither lessors nor lessee shall have any further obligation thereunder.

9. While lessee is continuing mining operations on the claim, it shall pay lessors royalties as follows:

(a) It shall pay lessors fifty per cent (50%) of its net income from said claim until lessors shall have received $100,000.00; it being understood and agreed, however, that lessee in determining said fifty per cent (50%) to go to lessors shall not deduct more than $1,000.00 per month for its administration expenses and that if lessee's administration expenses exceed $1,000.00 per month, the excess shall not be deducted from lessors' fifty per cent (50%); and it being also understood and agreed that in determining lessee's net income there shall be deducted the five per cent (5%) payable to L. L. VAUGHN, and the five per cent (5%) payable to GEORGE WOLF as herein provided; and it being finally understood and agreed that the term net income as used herein shall be deemed lessee's net income before taxes.

(b) After lessors shall have received $100,000.00, as provided in subparagraph (a), lessee shall thereafter pay lessors a royalty of twenty per cent (20%) of its gross receipts after the deduction therefrom of transportation and milling charges.

(c) It is understood and agreed that lessee during the life of this lease, shall pay to L. L. VAUGHN five per cent (5%) and to GEORGE WOLF five per cent (5%) of its net income before taxes, but without the limitation on deductions stated in subparagraph (a).

10. Lessee shall keep books of account showing the amount of ore extracted from the mine, the expenses

incurred by lessee in the conduct of its business and its mining operations, the amount of money received from the sale of all such ore; and all other items which should be shown upon books of an enterprise like that to be carried on by lessee; and lessors, or their agents, shall at reasonable times during business hours be entitled to examine said books and to take extracts therefrom.

11. Lessors do not warrant in any way whatever that they have good title to said mining claim.

12. Lessors, or any agents appointed by them, shall have the right at all times to enter upon the said mining claim, provided, however, that they will not interfere with the mining operations of lessee being engaged in thereon.

IN WITNESS WHEREOF, on the day and year first above written, the parties hereto have hereunto subscribed their names.

_____

_____

_____

_____

Lessors

SURPRISE CORPORATION

By _____

Lessee

RECEIVED
DEC 19 1955

The mining claim referred to in the foregoing lease is a claim which is known as the "Surprise Claim" on the records of the Bureau of Mines in its office in San Francisco, California, and is described as follo[illegible]

[illegible] of Lots 5 and 6 (said claim being located for the most part in Lot 6) of Section [illegible], Township 1[illegible] South Range 21 East M.D.B.&M.

EXTRACTS FROM REPORTS OF OTHER CONSULTANTS:

RECEIVED DEC 19 1955

November 11, 1955

"It is, therefore, believed that there is no commercial ore deposit exposed at present on this property. There may possibly be greater enrichment at depth in closer proximity to the plane of the McKittrick thrust, where greater fracturing would be expected and where the major channels for hydrothermal solutions may have been located.

In order to further explore the uranium possibilities of this area, it will be necessary to drill several core holes. It would be desireable to drill completely through the thrust, but this may not be possible. It is believed that 200 feet should be sufficient to give indications of enrichment increasing at depth if such is the case.

The accompanying surface sketch map shows six locations that have been staked out. These stakes are numbered C.H.-1 through C.H.-6 and are marked with a red flag. These holes should be drilled with a rotary air type rig and dust samples taken every foot. Coreing will not be necessary if samples are taken carefully and if the hole is probed. This will reduce the cost considerably by speeding up the drilling.
.....

It would be desireable to drill a few holes in the bottom of the existing excavation, but inasmuch as several days bull-dozing would be required before a drill could operate here, it is suggested that this portion of the program await the results of the drilling presently staked out....."

WM. ROSS CABEEN & ASSOCIATES
/s/ Richard G. Mead

November 9, 1955

"Our opinion right along has been that the veins will take us to the bodies. At first he said he thought 2 holes would be sufficient to tell the story. With oil as the goal, I would agree with him whole heartedly, but I cannot possibly agree with him on that theory with reference to uranium.....

My personal opinion is that we should have a genuine old time mining specialist....."

/s/ Kenneth Hitchcock

November 18, 1955

"In review, this scattered information shows that surface exploration has revealed a zone within which small discontinuous veinlets of sub-commercial uranium occur. Nothing found to date can be considered

of even marginal importance. Therefore, the only opportunity for ore discovery is at depth.

Exploration of the third dimension of the ore zone can be done most effectively through diamond (core) drilling. In this work, the ore zone as a whole rather than individual veinlets within the zone should be considered as the exploration target. The drill holes should be collared at points south of the ore zone, drilled at a minus 45° angle in a northerly direction, so as to intersect the long dimension of the zone at a depth of from 50 to 100 feet. The first hole should be planned not to exceed 300 feet in length. Should this prove completely negative, I can see no reason for further work. This preliminary drilling will probably cost about $3000. The ore must improve radically in both size and grade with depth in order to have some commercial possibilities. Unless strong indications are found of such an improvement, the prospect may be abandoned with some certainty....."

/s/ Peter Joralemon

REPORTS OF ASSAYS - VARIOUS SAMPLES:

Abbot A. Hanks, Inc.

7/29/55 - 0.082% Uranium Oxide
8/15/55 - 0.52% " "
8/26/55 - 0.37% " "
9/21/55 - I - 0.018% Uranium Oxide
II - 0.075% " "
III - 0.025% " "

US Department of Interior
Bureau of Mines, Salt Lake City, Utah

All taken 10/3/55

0.065 % U_3O_8
0.034 "
0.158 "
0.058 "
0.105 "
0.131 "

GEORGE CRERAR
MINERAL DRESSING ENGINEER
BRICELAND, CALIFORNIA

San Francisco, California
August 22, 1955

Surprise Corporation
1615 Broadway, Room 605
Oakland 12, California

Attention: Mr. George Wolf, President

Dear Mr. Wolf:

Herewith find tracing of a Brunton Hand Transit survey of proposed tunnel sites and raises for the further development of your U_3O_8 bearing mining claims in the McKettrick District, Kern County, California.

As you already know, the main known U_3O_8 bearing zone is contained within the limits of a strong fault zone extending in a N 75 E direction and probably dipping East. However, practically all rock exposures on the claims yield more or less strong Geiger counter reactions indicating the U_3O_8 mineralization does extend beyond the limits of the main crushed zone of the fault. So far, however, there is no development to indicate the dimensions and average grade of the ore bodies.

I believe if the proposed tunnels and raises are driven U_3O_8 mineralizations will be encountered before the fault is penetrated.

It seems to me the silicified breccia now forming the outcrop of the fault lies along the hanging wall side of the fault. The underside (hanging wall) of this formation should be the most promising area for the concentration of U_3O_8 bearing minerals.

Apparently the footwall (West) side of the fault yielded to erosion and allowed the silicious and erosion resistent breccia to collapse and thus form the present outcrop. The fact that the terrain on the West slope is steep and fragments - large and small - of the silicious breccia are found all the way down to the bottom of the elevation constitutes the basis for the foregoing conclusions. The East side of the silicious breccia is a gentle slope for about 200 feet from the high point of #1 Surprise center line outcrop.

On account of the strong Geiger counter reactions found in rock outcrops at different parts of the two claims, proper development would indicate a systematic drilling of the area inside of the boundaries of the outermost "hot spots." The best equipment to do the drilling so far as I know, is the heavy Wagon Drill of the Joy Mfg. Co. which has been found satisfactory in drilling holes to 150 feet in depth. The cost of this equipment new would be approximately $14,000.00, as per detailed prices and bulletins mailed your Mr. Les Barker at Maricopa.

The cost of driving approximately 1300 feet of tunnels and raises through to the surface would cost approximately $50,000.00 if you had to buy all new equipment. The equipment would consist mainly of compressor and power, machine drills, track cars, air and water lines, water storage and some timber.

There is a possibility, and even a probability, that if shipping grade ore is found in minable tonnages, there will be a potentially large tonnage of submarginal ore that later could be graded up to shipping grade by a concentration process yet to be developed, or even chemically treated and refined in a local plant.

In the event that shipping grade ore is produced, the mine should be so operated that the low grade ore could be economically recovered later. In my opinion, the development of the mine and the mining of the ore should be in the hands of a competent professional miner. The nature of this particular deposit consisting of U_3O_8 minerals distributed in local enrichments in a wide fault shattered zone and out in the walls could constitute a complex mining problem.

If you should consider drilling the favorable areas of the Surprise claims, before going into the high cost of driving tunnels, raises and probable drifts and cross-cuts, etc., I believe you could contract the drilling job. I have heard there is a wagon drill contractor located in Bakersfield but no details as to address. I know there is one in Nevada, near Lovelock and a considerable number of them around Grand Junction and Moab, Utah.

Crawford

SURPRISE CORPORATION
1615 Broadway, Room 605
Oakland 12, California
TWinoaks 3-2832

RECEIVED
DEC 19 1955

December 15, 1955

DMEA-4102

Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Gentlemen:

Enclosed original and three copies of application for aid are in accordance with your Form MF-108. This application is forwarded after conference with Mr. Roscoe M. Smith, Mineral Deposits Branch, U. S. Geological Survey, 4 Homewood Place, Menlo Park, California.

For your further information, Mr. W. A. Bowes, regional representative for the U. S. Atomic Energy Commission, Haberfelds Bldg., 1706 Chester Avenue, Bakersfield, California, is thoroughly familiar with this property, has followed our previous operations and has been anxious that further exploratory work be done to determine the possibilities and extent of minerals in this claim.

It will be greatly appreciated if you can advise us when we may expect action or decision on this application. It is our understanding that no aid would be granted or no funds would be eventually available from the Government if we proceed with the contemplated work before your decision in connection with this application. Is that correct?

Very truly yours,

SURPRISE CORPORATION

Osgood Murdock

Osgood Murdock
Secretary-Treasurer

OM:dm
Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
DEC 19 1955

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-4102
Metal or Mineral Uranium
Date Received 12-19-55
Estimated Cost $4,180.00
Participation (Government %)

1. Name of applicant (a) Surprise Corporation, 1615 Broadway, Room 605, Oakland 12, California

(b) Corporation, California

(c) President, George Wolff, 1615 Broadway, Room 605, Oakland 12, California; Secretary-Treasurer, Osgood Murdock, 1615 Broadway, Room 605, Oakland 12; Attorney, Merse Erskine, 625 Market Street, San Francisco, California

2.

3. (a) Lessee of Surprise Claim on records of the Bureau of Mines in San Francisco

(b) Claim is located for the most part in Lot 6 and in part of Lot 5 of Section 3, Township 30S, R 21E, No. 1 Surprise and No. 2 Surprise

(c) Lessee

(d) Copy of lease attached. Lease is recorded in Kern County.

(e)

(f)

4. (a) Before signing of present lease, July 21, 1955, lessors had expended approximately $2,500 in removal of over-burden and surface cuts to uncover veins. Between August 1 and October 10, lessors expended approximately $6,200 in field wages, equipment rental, supplies, taxes, insurance, blasting, travel and telephone for further surface exploration, removing of over-burden and clamshell digging to follow and explore veins.

(b) No production, but 10 to 12 tons of marginal and partially segregated ore stockpiled on property.

(c) Note copy of George Crerar's report of August 22 attached. Note also attached hand transit survey by Crerar and surface sketch map and geologic sketch map by R. G. Head of William Ross Cabeen and Associates.

(d) Mine is located northwest of McKittrick, California, distant 5 miles by county road and 1½ miles by private access road. Southern Pacific Railway spur at McKittrick is 47 miles distant from property by easily passable roads.

(e) Abundant manpower, materials, supplies, equipment and residence at Taft, 12 to 15 miles distant. Water and power not on property but within a few miles.

5. (a) Uranium oxide

(b) It is proposed to clean up the over-burden to uncover surface veins where extensive earth removal was preformed in the fall. We also propose core or rotary drilling as determined and conferring to counsel of our consultants.

(c) The work will start within 30 days and will be completed within three to four months from date of an exploration project contract.

(d) Corporation has consulted and will continue to be guided by the following counsel: George Crerar, consulting engineer, Ridgeland, California; William Ross Cabeen & Associates, geologists and engineers, 18426 Ventura Blvd, No. Hollywood, California; Peter Jeralemon, geologist and mining engineer, 315 Montgomery St., San Francisco 4, California. Field work will be under the direction of Kenneth Hitchcock, branch manager of Shaffer Tool Works at Taft and L. L. Barker, both lessors and owners of the claim and both practical field men thoroughly familiar with earth moving and drilling.

(6) Proposed maximum 30 day exploration budget as follows:

Complete removal of overburden to uncover surface veins, estimated maximum 6 days work with dozer and skip hoist, 8 hours @ $17.50; 40 hours @ $13.50	$ 680.00
Core or rotary drilling as determined	3,500.00
	$4,180.00

William Ross Cabeen & Associates estimated a 7 day drilling budget as follows:

Project geologist 7 days at $75/day	$ 525.00
Living and travel expenses	180.00
Assay work	170.00
Rotary drilling 1200 feet at $2.00/foot	2,400.00
Grading locations	150.00
Miscellaneous	50.00
	$ 3,445.00

Peter Jeralemon proposed diamond core drilling, a first hole not to exceed 300 feet, with a probable cost of about $3,000.

(a) Work will be contracted if satisfactory arrangements can be made. Hitchcock proposes purchase of drilling rig which he proposes to handle and operate.

(b) Covered above

(c) Covered above

(d) Covered above

(e) None necessary

(f) None contemplated

(g) No additional necessary

(h) None contemplated

V (a) Corporation prepared to furnish its share of the cost of project, both in money and in contributed services

CERTIFICATION

The undersigned, as corporate officer, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated December 12, 1955

SURPRISE CORPORATION

By Guy Lucrdack

Secretary-Treasurer

EXTRACTS FROM REPORTS OF OTHER CONSULTANTS:

RECEIVED DEC 19 1955

November 11, 1955

"It is, therefore, believed that there is no commercial ore deposit exposed at present on this property. There may possibly be greater enrichment at depth in closer proximity to the plane of the McKittrick thrust, where greater fracturing would be expected and where the major channels for hydrothermal solutions may have been located.

In order to further explore the uranium possibilities of this area, it will be necessary to drill several core holes. It would be desireable to drill completely through the thrust, but this may not be possible. It is believed that 200 feet should be sufficient to give indications of enrichment increasing at depth if such is the case.

The accompanying surface sketch map shows six locations that have been staked out. These stakes are numbered C.H.-1 through C.H.-6 and are marked with a red flag. These holes should be drilled with a rotary air type rig and dust samples taken every foot. Coreing will not be necessary if samples are taken carefully and if the hole is probed. This will reduce the cost considerably by speeding up the drilling. .....

It would be desireable to drill a few holes in the bottom of the existing excavation, but inasmuch as several days bull-dozing would be required before a drill could operate here, it is suggested that this portion of the program await the results of the drilling presently staked out....."

WM. ROSS CABEEN & ASSOCIATES
/s/ Richard G. Mead

November 9, 1955

"Our opinion right along has been that the veins will take us to the bodies. At first he said he thought 2 holes would be sufficient to tell the story. With oil as the goal, I would agree with him whole heartedly, but I cannot possibly agree with him on that theory with reference to uranium.....

My personal opinion is that we should have a genuine old time mining specialist....."

/s/ Kenneth Hitchcock

November 18, 1955

"In review, this scattered information shows that surface exploration has revealed a zone within which small discontinuous veinlets of sub-commercial uranium occur. Nothing found to date can be considered

of even marginal importance. Therefore, the only opportunity for ore discovery is at depth.

Exploration of the third dimension of the ore zone can be done most effectively through diamond (core) drilling. In this work, the ore zone as a whole rather than individual veinlets within the zone should be considered as the exploration target. The drill holes should be collared at points south of the ore zone, drilled at a minus 45° angle in a northerly direction, so as to intersect the long dimension of the zone at a depth of from 50 to 100 feet. The first hole should be planned not to exceed 300 feet in length. Should this prove completely negative, I can see no reason for further work. This preliminary drilling will probably cost about $3000. The ore must improve radically in both size and grade with depth in order to have some commercial possibilities. Unless strong indications are found of such an improvement, the prospect may be abandoned with some certainty....."

/s/ Peter Joralemon

REPORTS OF ASSAYS - VARIOUS SAMPLES:

Abbot A. Hanks, Inc.

7/29/55	- 0.082%	Uranium	Oxide
8/15/55	- 0.52%	"	"
8/25/55	- 0.37%	"	"
9/21/55	- I - 0.018%	Uranium	Oxide
	II - 0.075%	"	"
	III - 0.025%	"	"

US Department of Interior
Bureau of Mines, Salt Lake City, Utah

All taken 10/3/55

0.065	U_3O_8
0.034	"
0.158	"
0.058	"
0.105	"
0.131	"

THIS LEASE made this 21st day of July, 1955, by and between L. L. BARKER, KENNETH HITCHCOCK, J. F. TAYLOR, W. G. BOARDMAN, hereinafter referred to as "lessors", and SURPRISE CORPORATION, hereinafter referred to as "lessee",

RECEIVED
DEC 19 1955

WITNESSETH

WHEREAS: Lessors are the owners of a claim described in Exhibit A attached hereto and hereby referred to and made a part hereof. Lessee desires to lease said claim for the purpose of mining thereon uranium and whatever other minerals it may contain.

NOW, THEREFORE, lessors, for and in consideration of the covenants herein on the part of lessee to be performed, do hereby lease unto lessee said mining claim upon the terms and conditions stated herein.

1. Unless this lease pursuant to the provisions thereof is terminated at an earlier date, its term shall be for fifteen (15) years commencing on the date hereof and as long thereafter as lessee, in accordance with the provisions hereof, continues to mine uranium or other minerals on said claim.

2. Within sixty (60) days from the date hereof, lessee shall expend $2,000.00 in development work on said claim which shall consist either in taking bores from said claim or the sinking of a shaft thereon, or ship ore therefrom. Lessee, before undertaking said development work and without limiting its freedom of action in any respect, shall consult with regard to the development of said claim with whatever official of the Atomic Energy Commission whom it may contact and who

will be willing to give advice with respect to such development.

3. Lessee shall have thirty (30) days after the expiration of said first sixty (60) day period within which to analyze the results of its exploratory work. If within said period of ninety (90) days (said sixty (60) day period to do such exploratory work and said additional thirty (30) days for analysis) lessee concludes that it does not consider that it will be profitable for it to mine said claim, lessee shall notify lessors to that effect and lessee shall thereupon surrender this lease to lessors and neither lessors nor lessee shall have any further liability hereunder. Lessee shall have the full period of said ninety (90) days within which to determine whether it shall go forward with the mining of said claim regardless of the fact that it may complete its exploratory work and its analysis thereof prior to the expiration of said ninety (90) days.

4. If lessee, after said exploratory work and said analysis, determines not to surrender this lease, lessee shall then have eight (8) months within which to commence mining operations on the claim. During the last six (6) months of said eight (8) month period, lessee shall pay lessors rent in the sum of $200.00 per month, provided that if during said eight (8) month period lessee shall have commenced mining operations on the claim, its obligation to thereafter pay said cash rental shall cease.

5. If during said period of eight (8) months lessee determines not to commence mining operations on

the claim, it shall have the right to surrender this lease and neither lessors nor lessee shall have any further obligation hereunder.

6. If lessee within said eight (8) months period elects to commence mining operations on said claim, it shall thereafter work and mine said claim steadily and continuously; it being understood and agreed that any failure by lessee to work said claim as provided in the next sentence for the space of thirty (30) consecutive days may by lessors be considered a violation of this covenant. Lessee shall be deemed to be working said claim within the meaning of the next preceding sentence if it has three (3) men employed in the actual mining thereof each of whom shall be employed not less than forty (40) hours per week.

7. Anything contained in paragraph 6 to the contrary notwithstanding, if lessee commences mining operations on the claim and if thereafter such operations are interrupted by strikes, other labor troubles, inability to secure equipment, storms, or other acts of God, or other causes beyond the control of lessee, whether or not of a similar character, lessee's failure to continue mining operations for any of said reasons, shall not be deemed a breach of lessee's covenants contained in paragraph 6.

8. If lessee elects to commence mining operations on the claim, it shall thereafter have the right at any time to surrender this lease and if the lessee exercises such right, neither lessors nor lessee shall have any further obligation thereunder.

9. While lessee is continuing mining operations on the claim, it shall pay lessors royalties as follows:

(a) It shall pay lessors fifty per cent (50%) of its net income from said claim until lessors shall have received $100,000.00; it being understood and agreed, however, that lessee in determining said fifty per cent (50%) to go to lessors shall not deduct more than $1,000.00 per month for its administration expenses and that if lessee's administration expenses exceed $1,000.00 per month, the excess shall not be deducted from lessors' fifty per cent (50%); and it being also understood and agreed that in determining lessee's net income there shall be deducted the five per cent (5%) payable to L. L. VAUGHN, and the five per cent (5%) payable to GEORGE WOLFF as herein provided; and it being finally understood and agreed that the term net income as used herein shall be deemed lessee's net income before taxes.

(b) After lessors shall have received $100,000.00, as provided in subparagraph (a), lessee shall thereafter pay lessors a royalty of twenty per cent (20%) of its gross receipts after the deduction therefrom of transportation and milling charges.

(c) It is understood and agreed that lessee during the life of this lease, shall pay to L. L. VAUGHN five per cent (5%) and to GEORGE WOLFF five per cent (5%) of its net income before taxes, but without the limitation on deductions stated in subparagraph (a).

10. Lessee shall keep books of account showing the amount of ore extracted from the mine, the expenses

incurred by lessee in the conduct of its business and its mining operations, the amount of money received from the sale of all such ore; and all other items which should be shown upon books of an enterprise like that to be carried on by lessee; and lessors, or their agents, shall at reasonable times during business hours be entitled to examine said books and to take extracts therefrom.

11. Lessors do not warrant in any way whatsoever that they have good title to said mining claim.

12. Lessors, or any agents appointed by them, shall have the right at all times to enter upon the said mining claim, provided, however, that they will not interfere with the mining operations of lessee being engaged in thereon.

IN WITNESS WHEREOF, on the day and year first above written, the parties hereto have hereunto subscribed their names.

_____

_____

_____

_____

Lessors

SURPRISE CORPORATION

By _____

Lessee

The mining claim referred to in the foregoing lease is a claim which is known as the "Surprise Claim" on the records of the Bureau of Mines in its office in San Francisco, California, and is described as follo[illegible]

[illegible] of Lots [illegible] and [illegible] (said claim being located for the most part in Lot [illegible]) of Section [illegible], Township [illegible] South Range [illegible] [illegible]

GEORGE CRERAR
MINERAL DRESSING ENGINEER
BRICELAND, CALIFORNIA

San Francisco, California
August 22, 1955

Surprise Corporation
1615 Broadway, Room 605
Oakland 12, California

Attention: Mr. George Wolf, President

Dear Mr. Wolf:

Herewith find tracing of a Brunton Hand Transit survey of proposed tunnel sites and raises for the further development of your U_3O_8 bearing mining claims in the McKettrick District, Kern County, California.

As you already know, the main known U_3O_8 bearing zone is contained within the limits of a strong fault zone extending in a N 75 E direction and probably dipping East. However, practically all rock exposures on the claims yield more or less strong Geiger counter reactions indicating the U_3O_8 mineralization does extend beyond the limits of the main crushed zone of the fault. So far, however, there is no development to indicate the dimensions and average grade of the ore bodies.

I believe if the proposed tunnels and raises are driven U_3O_8 mineralizations will be encountered before the fault is penetrated.

It seems to me the silicified breccia now forming the outcrop of the fault lies along the hanging wall side of the fault. The underside (hanging wall) of this formation should be the most promising area for the concentration of U_3O_8 bearing minerals.

Apparently the footwall (West) side of the fault yielded to erosion and allowed the silicious and erosion resistent breccia to collapse and thus form the present outcrop. The fact that the terrain on the West slope is steep and fragments - large and small - of the silicious breccia are found all the way down to the bottom of the elevation constitutes the basis for the foregoing conclusions. The East side of the silicious breccia is a gentle slope for about 200 feet from the high point of #1 Surprise center line outcrop.

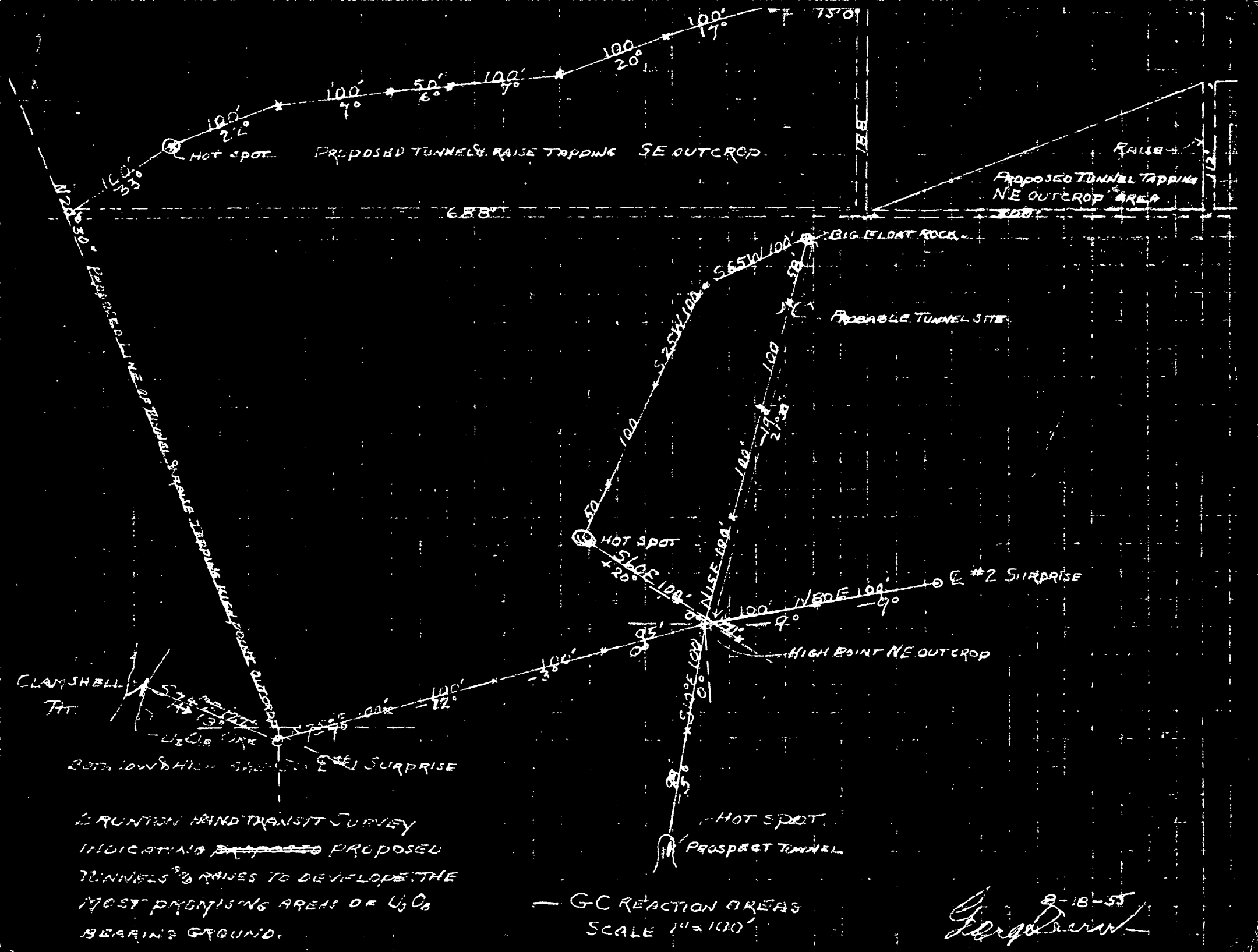
On account of the strong Geiger counter reactions found in rock outcrops at different parts of the two claims, proper development would indicate a systematic drilling of the area inside of the boundaries of the outermost "hot spots." The best equipment to do the drilling so far as I know, is the heavy Wagon Drill of the Joy Mfg. Co. which has been found satisfactory in drilling holes to 150 feet in depth. The cost of this equipment new would be approximately $14,000.00, as per detailed prices and bulletins mailed your Mr. Les Barker at Maricopa.

The cost of driving approximately 1300 feet of tunnels and raises through to the surface would cost approximately $50,000.00 if you had to buy all new equipment. The equipment would consist mainly of compressor and power, machine drills, track cars, air and water lines, water storage and some timber.

There is a possibility, and even a probability, that if shipping grade ore is found in minable tonnages, there will be a potentially large tonnage of submarginal ore that later could be graded up to shipping grade by a concentration process yet to be developed, or even chemically treated and refined in a local plant.

In the event that shipping grade ore is produced, the mine should be so operated that the low grade ore could be economically recovered later. In my opinion, the development of the mine and the mining of the ore should be in the hands of a competent professional miner. The nature of this particular deposit consisting of U_3O_8 minerals distributed in local enrichments in a wide fault shattered zone and out in the walls could constitute a complex mining problem.

If you should consider drilling the favorable areas of the Surprise claims, before going into the high cost of driving tunnels, raises and probable drifts and cross-cuts, etc., I believe you could contract the drilling job. I have heard there is a wagon drill contractor located in Bakersfield but no details as to address. I know there is one in Nevada, near Lovelock and a considerable number of them around Grand Junction and Moab, Utah.



GRUNTON HAND TRANSIT SURVEY INDICATING ~~PROPOSED~~ PROPOSED TUNNELS & RAISES TO DEVELOPE THE MOST PROMISING AREAS OF U_3O_8 BEARING GROUND.

Geologic Sketch
Surprise Claims
Scale 1" = 100'

Surprise No 1 Lode Claim
Surface Sketch Map

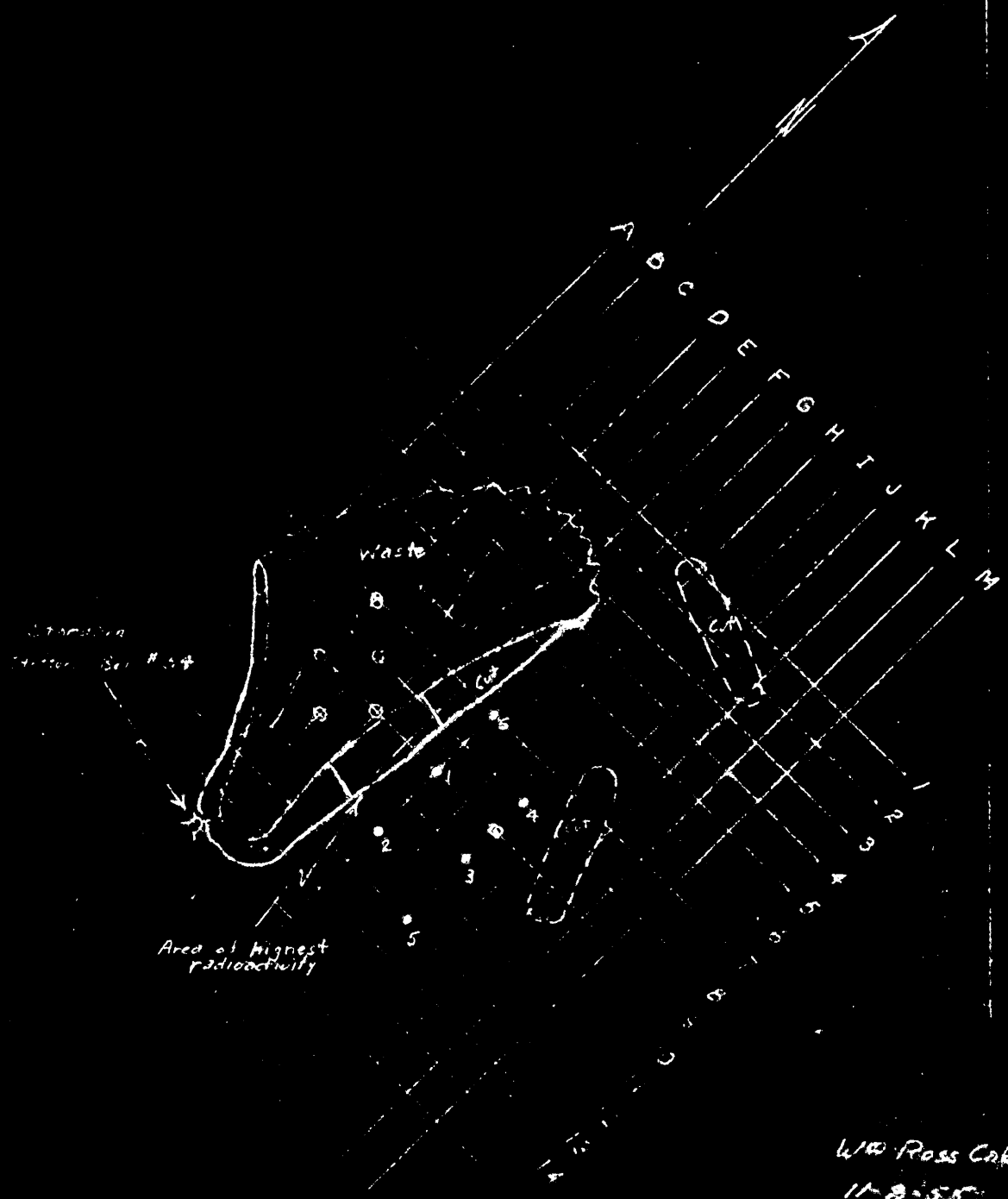
Explanation

B Location monument

● Selected drill hole stakes out

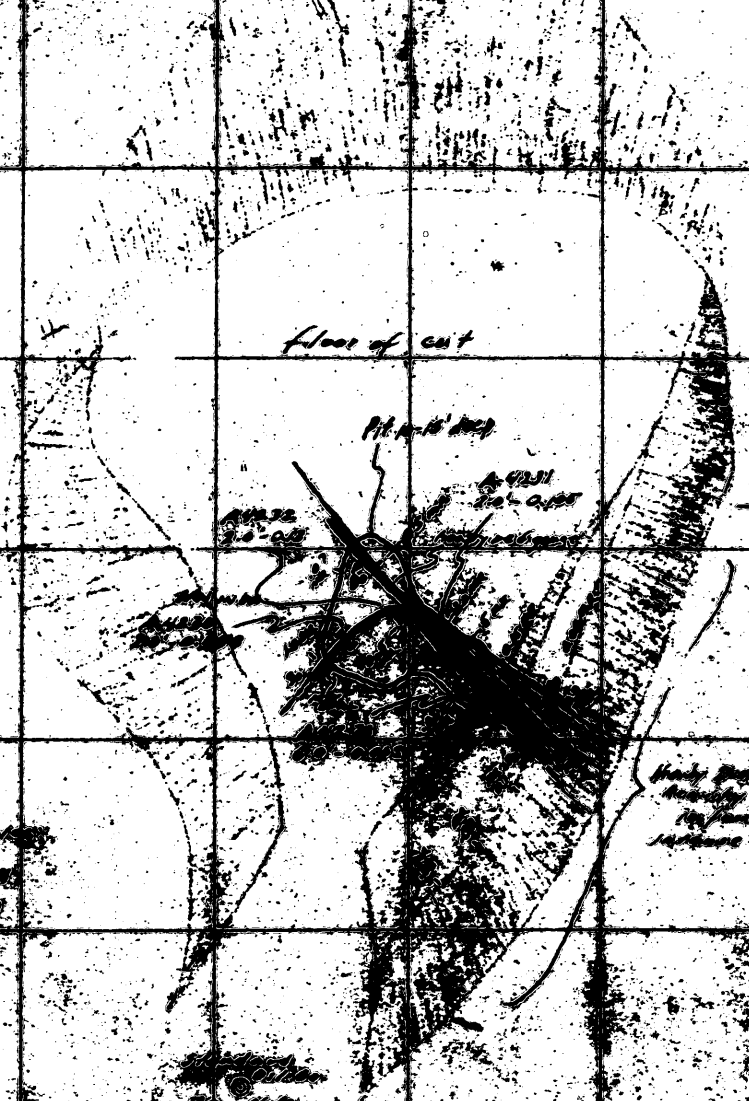
○ Other suggested locations

Scale 1" = 100'



W.M. Ross Cohen & Assoc.
11-8-55 R.G.M.

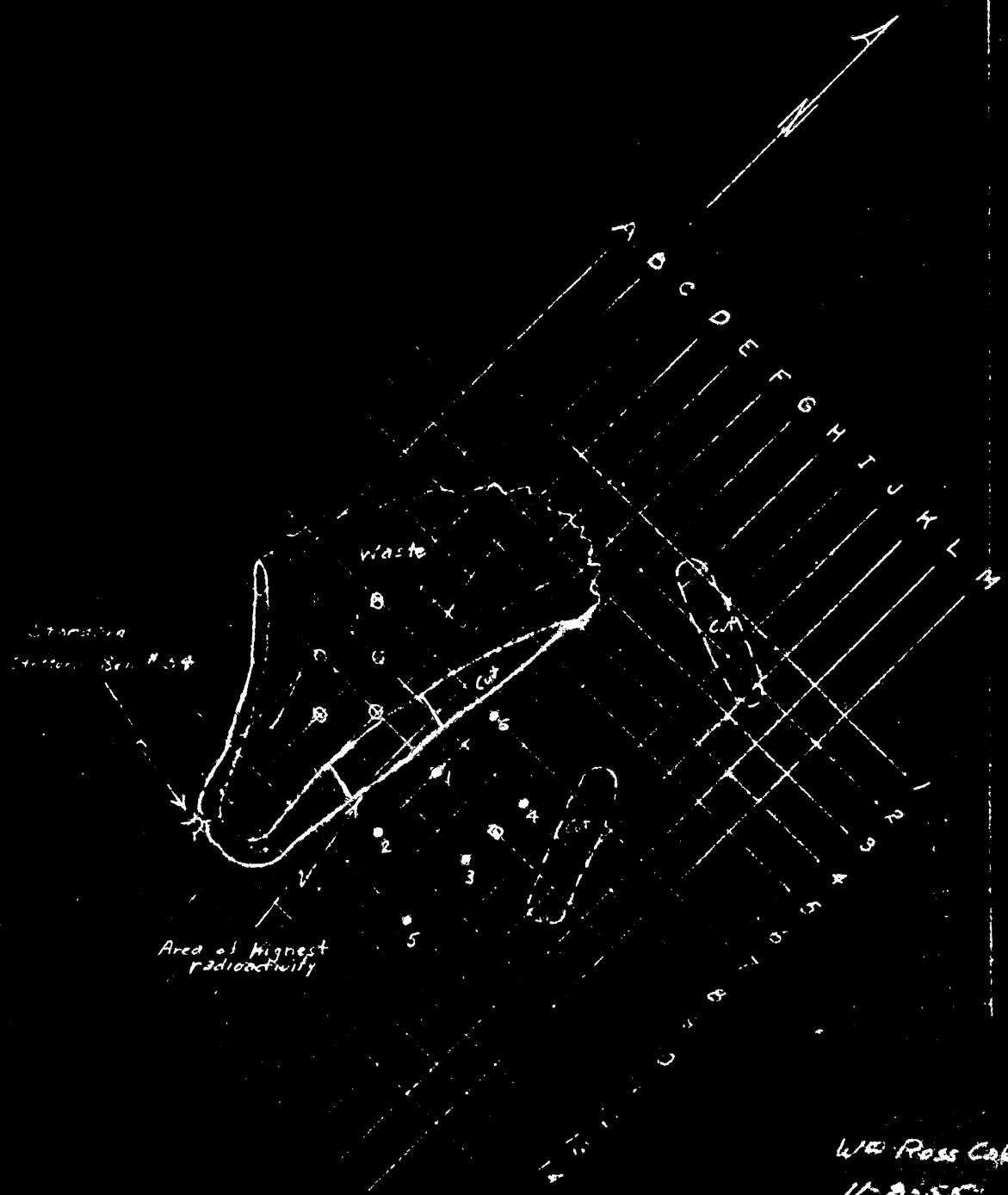
Key Map [illegible]
Showing location of [illegible]
ment readings and ore
sample assays from files of
[illegible] Energy Co[illegible]
[illegible]ld, Califo[illegible]



Surveying No 1 Lode Claim
Surface Sketch Map

Explanation

⊡ Center monument
● Selected drill holes staked out
○ Other suggested locations
Scale 1" = 100'



W. Ross Calvin & Assoc.
11-8-55 R.G.M.