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DMA Docket No. 3388

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Surname copy 700

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

Ching
Ellis
Hedges
Newcomb
Selfridge

NOV 1 0 1954

Messrs. Carlos J. Bassler, Jr.
and Francis E. Bassler, Partnership
P. O. Box 1164
Twentynine Palms, California

Re: Docket No. DMEA-3388 (Uranium)
Uranus Claims
Riverside County, California

Gentlemen:

Your application for aid in an exploration project and other information available to us in Washington concerning your subject property have been reviewed.

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 a small amount of uranium mineralization on your property, indicates to us that the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that 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,

[illegible] (for)

Administrator

MChing/gla
cc to: Admr. Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

R.E.S.

Docket copy

Ching

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

November 4, 1954

SUMMARY OF PROPOSED PROJECT

Docket No. DMEA-3388

Applicant: Carlos J. Bassler, Jr. and
Francis E. Bassler, a partnership
P. O. Box 1164
Twentynine Palms, California

Object: Denial of application for an exploration project

Commodity: Uranium

Property: Uranus Nos. 1, 2, 3, 4 and 5 unpatented lode claims
Washington Mining District, Riverside County, Calif.
Owned by applicants.

Date of application: May 31, 1954

Amount of application: $12,037.50

Work Proposed:

Sink a vertical shaft 250 feet on a radioactive vein located on the Uranus #4 claim.

Est. Cost - 250 ft. @ $48.15/ft = $12,037.50

Field Team Report: Dated October 13, 1954. W. T. Benson, U. S. B. M., Hal G. Stephens, U. S. G. S.

Radioactive minerals containing both uranium and thorium are present in biotite-rich portions of a dark greenish-gray quartz-biotite schist. The ore minerals probably include thorium bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified.

Assay results show that the radioactivity is chiefly thorium, and that the uranium content is practically nil. It is most unlikely that additional exploratory work would disclose radioactive sections sufficiently high in uranium content to be profitably worked. It is recommended that the application be denied.

Commodity Committee Members' Comments

Geological Survey: E. L. Newcomb, November 2, 1954

Average grade of 6 samples taken by the field examiners was less than 0.005% U_3O_8 and 0.027% Th O_2. It is unlikely that exploration at greater depths will disclose higher grade U_3O_8 material. I recommend this application be denied.

Bureau of Mines: John E. Crawford, November 2, 1954

After discussing with representative of the AEC I concur with the Field Team's recommendation that the application be denied.

Rare & Misc. Metals Div. Engineer: Michael Ching, November 5, 1954

While anomalous radioactivity was rather widespread along a greenish-gray quartz biotite schist on the claims, representative samples assayed less than 0.005% U_3O_8, and there were no geological indications to justify the belief that better values will be found at depth. A DMEA exploration project on this property is not justified.

Conclusions and Recommendations:

Nothing in the surface showings encourage further work on this property. It is recommended that the application be denied.

Ernest Wm. Ellis

Ernest Wm. Ellis

11/4/54 gla

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 3 - 1954

November 2, 1954

Re: DMEA-3388
Carlos J. Bassler, Jr.
(Uranus Claims)
Riverside Co., Calif.
$12,037.72
Uranium

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of field examination report

The applicant proposed to sink a 250 foot shaft to determine the depth of radioactive mineralization on the Uranus 1-5 claims.

The Field Team has recommended the application be denied.

Radioactive material in biotite-rich portions of a dark greenish-gray quartz-biotite schist contains thorium-bearing allanite and/or monzonite. No uranium minerals were identified. Average grade of 6 samples taken by the field examiners was less than 0.005% U_3O_8 and 0.027% ThO_2.

It is unlikely that exploration at greater depths will disclose higher grade U_3O_8 material.

I recommend this application be denied.

E. L. Newcomb

E. L. Newcomb

IN REPLY REFER TO:

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

NOV 3 - 1954

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It is unlikely that exploration at greater depths will disclose higher grade U_3O_8 material.

I recommend this application be denied.

E. L. Newcomb

ELNewcomb:hlm
G-11/2/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Minerals Administration
RECEIVED
NOV 3 - 1954

November 2, 1954

Re: DMEA-3388
Carlos J. Baesler, Jr.
(Uranus Claims)
Riverside Co., Calif.
$12,037.72
Uranium

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From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of field examination report

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E. L. Newcomb

ELNewcomb:hlm
G-11/2/54

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DMEA (3)
Docket file
J. E. Crawford, 3641

IN REPLY REFER TO:

DEPT. OF THE INTERIOR
Defense Minerals Adm.
RECEIVED
NOV 3 - 1954

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

November 2, 1954

Re: DMEA-3388
Carlos J. Baesler, Jr.
(Uranus Claims)
Riverside Co., Calif.
$12,037.72
Uranium

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From: E. L. Newcomb, U. S. Geological Survey

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I recommend this application be denied.

E. L. Newcomb

ELNewcomb:hlm
G-11/2/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641

11/2/54 glu

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 2 - 1954

November 2, 1954

Memorandum

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

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

Subject: DMEA Docket 3388 (Uranium), Carlos J. Bassler, Jr., and Francis E. Bassler, Uranus Claims, Riverside County, Calif.

I have reviewed the subject report and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

We concur with the recommendation of the Field Team that the application involved under the subject docket be denied.

The report has been forwarded to the Chief, Minerals Division, in accord with the routing slip attached thereto.

John E. Crawford

John E. Crawford

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 2 - 1954

November 2, 1954

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

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John E. Crawford

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

Department of the Interior
Defense Minerals Administration
RECEIVED
NOV 2 - 1954

November 2, 1954

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

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

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The report has been forwarded to the Chief, Minerals Division, in accord with the routing slip attached thereto.

John E. Crawford

10/25/54 gla

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

420 Custom House
555 Battery Street
San Francisco 11, California

October 20, 1954

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3388 (Uranium)
Carlos J. Bassler, Jr. and
Francis E. Bassler
Uranus Claims
Riverside County, California

Relative to the subject docket, we are enclosing the original and three copies of a joint field team report by W. T. Benson, Mining Engineer, U. S. Bureau of Mines, and Hal G. Stephens, Geologist, U. S. Geological Survey, dated October 13, 1954.

The engineer and geologist are in agreement that a DMEA loan is not warranted. The examination disclosed that radio-active minerals containing both uranium and thorium are present in biotite-rich portions of a dark greenish-gray quartz-biotite schist. The ore minerals probably include thorium-bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified. The assay results for uranium on this property average less than 0.005 percent U_3O_8.

Based on study of the report, Mr. Roscoe Smith and I are in agreement with the recommendation that the request for an exploration loan be denied.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Enclosures

Copy to: A. C. Johnson, Reno
R. M. Smith, USGS

Reviewed by
DMEA OPERATING COMMITTEE
10-29-54
(date)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 25 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-3388, Uranus Claims

Riverside County, California

(Uranium-Thorium)

W. T. Benson, Mining Engineer
U. S. Bureau of Mines

Hal G. Stephens, Geologist
U. S. Geological Survey

October 13, 1954

Reviewed by
DMEA OPERATING COMMITTEE
10-29-54
(date)

EXAMINATION REPORT

Defense Minerals Administration
RECEIVED
OCT 25 1954

Docket No.: DMEA-3388 (Uranium-Thorium)

Name and address of applicant: Carlos J. Bassler, Jr., et al
P. O. Box 1164
Twentynine Palms, California

Name and location of property: Uranus Claims
Riverside County, California

SUMMARY

Mr. Carlos J. Bassler, Jr., P. O. Box 1164, Twentynine Palms, Calif., applied to the Defense Minerals Exploration Administration, for Government assistance to explore for uranium on the Uranus group of claims located on the west side of Music Valley, Riverside County, Calif., about 14 miles southeast of Twentynine Palms.

A field examination was requested by the Executive Officer, DMEA Field Team, Region III, to determine whether the uranium showings on the property were sufficient to justify the project proposed by the applicant. Accordingly, a field examination was made on July 21, 1954 by an engineer of the Bureau of Mines and a geologist of the Geological Survey.

The applicant proposed to explore the deposit by sinking a shaft to a depth of 250 feet for the purpose of determining if the radioactive materials improved with depth. Total cost of the project is estimated at $12,037.72.

As a result of the examination, it was determined that radioactive minerals containing both uranium and thorium are present in biotite-rich

portions of a dark greenish-gray quartz-biotite schist. The ore minerals probably include thorium-bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified.

Assay results show that the radioactivity is chiefly thorium, and that the uranium content is practically nil. It is most unlikely that additional exploratory work would disclose radioactive sections sufficiently high enough in uranium content to be profitably worked. It is recommended that the application for exploration assistance be denied.

INTRODUCTION

In connection with an application for exploration assistance, docket DMEA-3388, the Bassler Uranium prospect, known as the Uranus group, was examined on July 21, 1954 by an engineer of the Bureau of Mines and a geologist of the Geological Survey for the purpose of inspecting development openings that pertained to Carlos J. Bassler, Jr.'s application for aid in exploring showings of uranium found on the Uranus group of claims.

DESCRIPTION OF PROPERTY

Property holdings comprise five unpatented lode mining claims, known as the Uranus group 1 to 5, situated on the south side of Music Valley, sec. 6, T. 2 S., R. 10 E., S.B.B.&M., Riverside County, Calif., about 14 miles southeast of Twentynine Palms, the supply base and 57 miles south of Amboy, the shipping point on the Santa Fe Railroad.

ACCESSIBILITY

To reach the property from Twentynine Palms, the main east road out of town is followed to the Utah Trail road. The Utah Trail road is then traveled south three miles to the mine road turnoff. An unimproved road is then followed southeast through a sandy wash, 10 miles to the property, which lies near the crest of low hills on the south side of Music Valley.

HISTORY

The Music Valley area in which the property is located has been of interest for a number of years, primarily for gold. From time to time, small productions of gold have been made.

Radioactive materials within the area are recent discoveries. The Uranus claims were located about a year ago, and only location work has been done. The owners report chemical assays of 0.08 to 0.10 percent U_3O_8 from the two prospect cuts. No shipments of radioactive material have been made from the property.

PHYSICAL FEATURES

The claims are located near the crests and on the east side of a group of low hills at an elevation of about 2500 feet. The topography is characterized by a series of north-south trending low ridges which bound Music Valley on the west and south. Climate in the area is typical of the southwestern desert country with long hot summers and moderate winters. Precipitation as rain averages less than 4.5 inches per year. Varieties

of desert grass and small shrubs constitute the vegetation on the property. Water is scarce; for domestic and mining use it is supplied in drums by truck from Twentynine Palms. Transmitted electric power is not available. For powering Diesel engines, fuel oil is supplied in drums by truck from Twentynine Palms, 14 miles northwest.

COMPETENCY OF APPLICANT

The two Hassler brothers have from time to time worked with their father in his gold mine, and should be competent to perform the work requested.

HOUSING FACILITIES

There are no housing facilities on the property. A house on their father's property, about two miles north, is sufficient to accommodate a crew of four men.

EQUIPMENT

Equipment on the property comprises an 80 cubic foot portable compressor, a compression drill with hose and steel, and a small assortment of hand tools. The equipment presently available is suitable for exploratory needs.

GEOLOGY

The Bassler claims, Uranus Nos. 1-5, southwest of Pinto Basin are underlain by the Pinto Gneiss, a metamorphic complex consisting chiefly of granite gneiss, gabbro-diorite, and quartz-biotite schist. Pegmatite dikes

and quartz veins are fairly common in the area. The foliation of the rocks is pronounced and in the vicinity of the Uranus claims strikes northwest and has a moderate to steep southwest dip.

ORE DEPOSITS

Radioactive minerals occur in biotite-rich portions (as much as 80 percent biotite) of a dark greenish-gray quartz-biotite schist. Ore minerals probably include thorium-bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified. No secondary uranium minerals were observed. The radioactive material seemed to be concentrated in a zone about 2 feet thick parallel to the plane of foliation in the Uranus No. 2, but appeared to be more uniformly distributed over a greater thickness (as much as 10 feet) in the Uranus No. 4 cut. The two prospect cuts (Uranus No. 2 and 4), about 1/2-mile apart, are in the same rock unit of greenish-gray quartz-biotite schist, although there are local variations in mineral composition from feldspar-quartz-biotite schist to biotite schist. The strike of the foliation is N. 30-35 W. and the dip is 50 to 60 degrees SW. Anomalous radioactivity was detected at several outcrops of this unit between the two prospect cuts.

Uranus No. 2 claim. --The radioactive deposit or "vein" exposed in the prospect cut on this claim is about 2 feet thick, is exposed for 20 feet along strike and as much as 8 feet along dip. The deposit apparently has a tabular shape. About 50 tons of rock have been taken out of the cut

and dumped, of which 15 to 20 tons is believed to be anomalously radioactive.

The most highly radioactive material consists of a biotite schist containing as much as 80 percent biotite locally with quartz as the remaining important constituent. Seams of white powdery calcium carbonate are common. Radioactivity values measured with a scintillation counter were as high as 1.8 milliroentgens per hour in the biotite schist and probably averaged 0.7 MR/hr in the adjacent quartz-biotite schist on the hanging wall side of the "vein".

Rock of the hanging wall contained a less amount of biotite and correspondingly more quartz. Traces of chlorite and possibly epidote are responsible for the slightly greenish cast to the rock. This material averaged about 0.25 MR/hr in radiation intensity. The readings made over the dump averaged between 0.4 and 0.5 MR/hr.

The footwall comprised a coarsely crystalline granite or pegmatitic rock with minor amounts of biotite and traces of chlorite. Radioactivity readings on exposures of this rock in the prospect cut averaged about 0.4 MR/hr, but much of this value may be due to the high background, as specimens removed from the locality showed little or no count.

Readings made on the talus-covered slope in the vicinity of the cut (not closer than 20 to 30 feet from the cut) showed a general background count of about 0.05 MR/hr. Country rock in the general vicinity appears

to be granite gneiss alternating with greenish-gray quartz-biotite schist, with the gneiss predominating.

Uranus No. 4 claim.--The prospect cut on this claim is about 2,400 feet southeast from the cut on the Uranus No. 2 claim. Granite gneiss and pegmatitic granite is exposed near the cut, and talus material covers the slope above and around the cut to a depth of 2 to 4 feet. Radioactive feldspar-quartz-biotite schist with abundant seams and fracture fillings of white powdery calcium carbonate is exposed in the cut for about 10 feet along strike, for about 6-8 feet along dip, and for about 20 feet in a crosscutting trench that is 2-3 feet wide and 2-3 feet deep. The thickness of the radioactive zone may be as much as 10 feet, as the highly radioactive material does not appear to be concentrated along a narrow zone of highly foliated biotite schist as in the case of the Uranus No. 2 claim. The rock in the No. 4 cut contains much less biotite and has a more blocky fracture owing to the higher feldspar-quartz content. The strike of the foliation in the No. 4 cut is N. 30 W. and the dip is about 60 degrees SW.

Radioactivity values range from 0.3 MR/hr on the NE face of the cut to 0.8 MR/hr in the NE trending trenches. Readings over the dump were from 0.2 to 0.4 MR/hr. In general, the readings appeared to be fairly uniform over exposures in the cut. The highest reading of 1.0 MR/hr was taken near the access road about 60 feet southwest of the cut.

DEVELOPMENT

In addition to discovery cuts, the principal workings comprise a pit

on the Uranus claim No. 2, 15 feet long, 6 feet wide, and 6 feet deep.

On the Uranus No. 4 claim there is a cut 24 feet long, which in places has been excavated to a depth of 3 to 4 feet.

SAMPLING

A series of samples were taken from exposed areas. Their positions are shown on the sketch map attached. Details regarding them follows:

Sample No.	%, U_3O_8	ThO_2	Description
1703	*0.005	0.003	Cut across 2.5 feet hanging wall fraction; discovery cut No. 2 claim.
1704	*0.005	0.027	Cut across 2.5 feet footwall fraction; discovery cut No. 2 claim.
1705	*0.005	0.002	Cut across 7 feet, east fraction; discovery cut No. 4 claim.
1706	*0.005	0.003	Cut across 7 feet center fraction; discovery cut No. 4 claim.
1707	*0.005	0.002	Cut across 7 feet west fraction; discovery cut No. 4 claim.
1708	*0.005	0.002	Cut across 5 feet altered limestone on road 60 feet west of discovery cut No. 4 claim.

*Less than.

ORE RESERVES

On the Uranus No. 2 claim, indicated and inferred reserves of radioactive material containing less than 0.005 percent U_3O_8 and 0.015 percent ThO_2 are estimated at not more than 50 tons.

The maximum radioactivity readings made in the Uranus No. 4 claim are not as high as those in the No. 2 claim, but the readings appear to be more uniform from place to place and probably represent a larger quantity

of radioactive material. Indicated and inferred reserves of radioactive rock containing less than 0.005 percent U_3O_8 and 0.002 percent ThO_2 are estimated at about 100 tons.

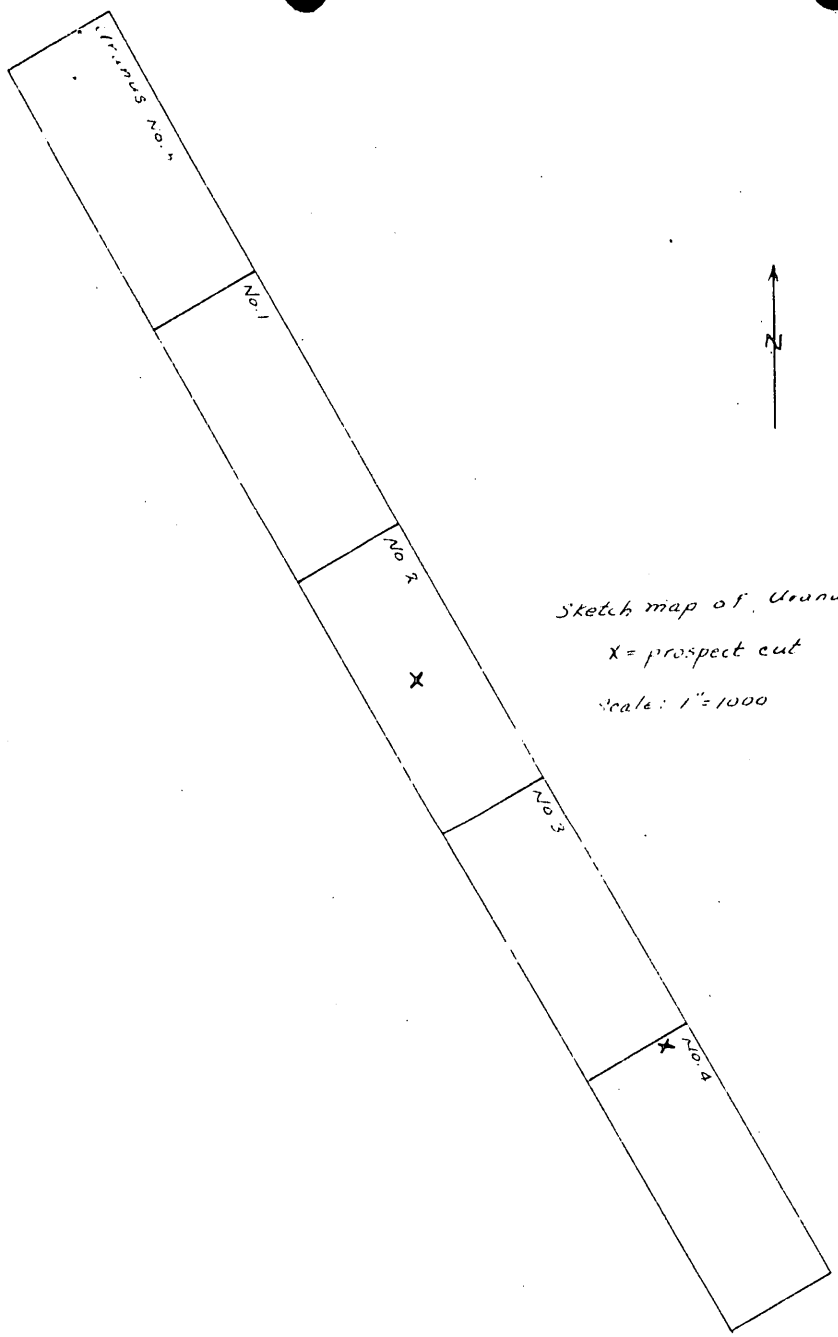
PROPOSED EXPLORATION

Plans for sinking a 250-foot shaft on the No. 4 claim as proposed by the property owners is not recommended, as there is no indication that the rocks are more radioactive with increasing depth. A 100-foot adit and about 50 feet of crosscutting would explore the deposit as effectively and with less expense, but the property owners should realize that there is no present market for thorium, and that such a venture is likely to be unprofitable.

CONCLUSIONS AND RECOMMENDATIONS

Radioactive minerals occur in biotite-rich portions of a dark greenish gray quartz-biotite schist. Ore minerals probably include thorium-bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified.

Assay results show that the radioactivity is chiefly thorium and that the uranium content is practically nil. It is most unlikely that additional exploratory work would disclose radioactive sections sufficiently high enough in uranium content to be profitably worked. It is recommended that the application for exploration assistance be denied.

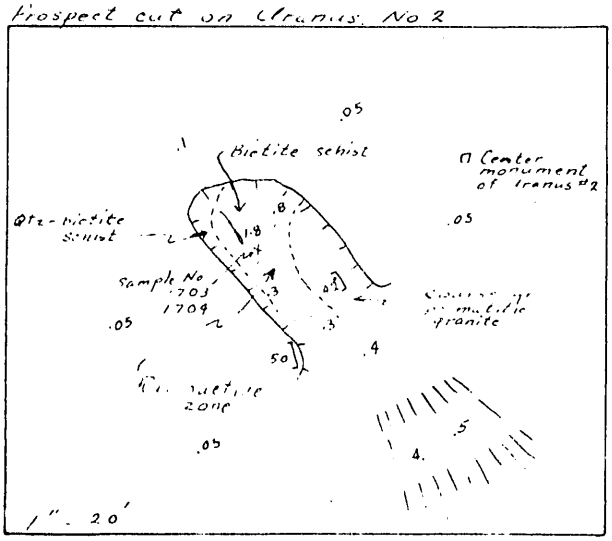


Sketch map of Uranus Nos. 1-5 claims

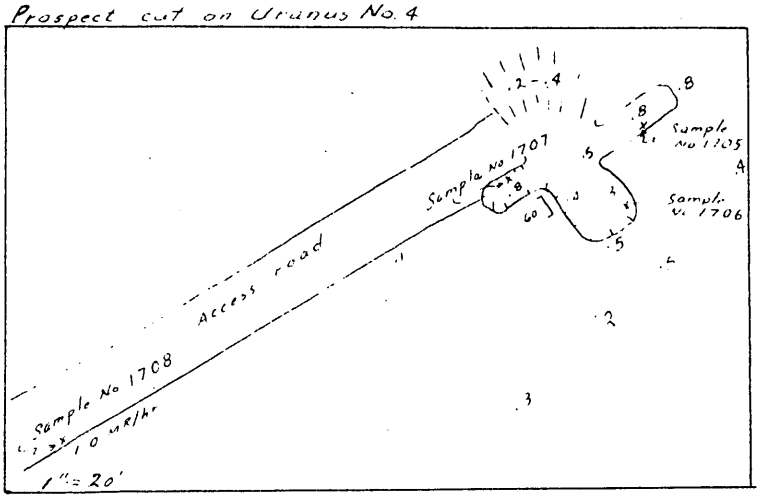
X = prospect cut

Scale: 1" = 1000

Prospect cut on Uranus No 2



Prospect cut on Uranus No. 4



Radioactivity Values in MR/hr

"/.1/5-4gla

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

420 Custom House
555 Battery Street
San Francisco 11, California

October 20, 1954

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3388 (Uranium)
Carlos J. Bassler, Jr. and
Francis E. Bassler
Uranus Claims
Riverside County, California

Relative to the subject docket, we are enclosing the original and three copies of a joint field team report by W. T. Benson, Mining Engineer, U. S. Bureau of Mines, and Hal G. Stephens, Geologist, U. S. Geological Survey, dated October 13, 1954.

The engineer and geologist are in agreement that a DMEA loan is not warranted. The examination disclosed that radio-active minerals containing both uranium and thorium are present in biotite-rich portions of a dark greenish-gray quartz-biotite schist. The ore minerals probably include thorium-bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified. The assay results for uranium on this property average less than 0.005 percent U_3O_8.

Based on study of the report, Mr. Roscoe Smith and I are in agreement with the recommendation that the request for an exploration loan be denied.

H. C. MILLER

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Enclosures

Copy to: A. C. Johnson, Reno
R. M. Smith, USGS

Reviewed by
DMEA OPERATING COMMITTEE
10-29-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-3388, Uranus Claims

Riverside County, California

(Uranium-Thorium)

W. T. Benson, Mining Engineer
U. S. Bureau of Mines

Hal G. Stephens, Geologist
U. S. Geological Survey

October 13, 1954

Reviewed by
DMEA OPERATING COMMITTEE
10-29-54
(Date)

EXAMINATION REPORT

Docket No.: DMEA-3388 (Uranium-Thorium)

Name and address of applicant: Carlos J. Bassler, Jr., et al
P. O. Box 1164
Twentynine Palms, California

Name and location of property: Uranus Claims
Riverside County, California

SUMMARY

Mr. Carlos J. Bassler, Jr., P. O. Box 1164, Twentynine Palms, Calif., applied to the Defense Minerals Exploration Administration, for Government assistance to explore for uranium on the Uranus group of claims located on the west side of Music Valley, Riverside County, Calif., about 14 miles southeast of Twentynine Palms.

A field examination was requested by the Executive Officer, DMEA Field Team, Region III, to determine whether the uranium showings on the property were sufficient to justify the project proposed by the applicant. Accordingly, a field examination was made on July 21, 1954 by an engineer of the Bureau of Mines and a geologist of the Geological Survey.

The applicant proposed to explore the deposit by sinking a shaft to a depth of 250 feet for the purpose of determining if the radioactive materials improved with depth. Total cost of the project is estimated at $12,037.72.

As a result of the examination, it was determined that radioactive minerals containing both uranium and thorium are present in biotite-rich

portions of a dark greenish-gray quartz-biotite schist. The ore minerals probably include thorium-bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified.

Assay results show that the radioactivity is chiefly thorium, and that the uranium content is practically nil. It is most unlikely that additional exploratory work would disclose radioactive sections sufficiently high enough in uranium content to be profitably worked. It is recommended that the application for exploration assistance be denied.

INTRODUCTION

In connection with an application for exploration assistance, docket DMEA-3388, the Bassler Uranium prospect, known as the Uranus group, was examined on July 21, 1954 by an engineer of the Bureau of Mines and a geologist of the Geological Survey for the purpose of inspecting development openings that pertained to Carlos J. Bassler, Jr.'s application for aid in exploring showings of uranium found on the Uranus group of claims.

DESCRIPTION OF PROPERTY

Property holdings comprise five unpatented lode mining claims, known as the Uranus group 1 to 5, situated on the south side of Music Valley, sec. 6, T. 2 S., R. 10 E., S.B.B.&M., Riverside County, Calif., about 14 miles southeast of Twentynine Palms, the supply base and 57 miles south of Amboy, the shipping point on the Santa Fe Railroad.

ACCESSIBILITY

To reach the property from Twentynine Palms, the main east road out of town is followed to the Utah Trail road. The Utah Trail road is then traveled south three miles to the mine road turnoff. An unimproved road is then followed southeast through a sandy wash, 10 miles to the property, which lies near the crest of low hills on the south side of Music Valley.

HISTORY

The Music Valley area in which the property is located has been of interest for a number of years, primarily for gold. From time to time, small productions of gold have been made.

Radioactive materials within the area are recent discoveries. The Uranus claims were located about a year ago, and only location work has been done. The owners report chemical assays of 0.08 to 0.10 percent U_3O_8 from the two prospect cuts. No shipments of radioactive material have been made from the property.

PHYSICAL FEATURES

The claims are located near the crests and on the east side of a group of low hills at an elevation of about 2500 feet. The topography is characterized by a series of north-south trending low ridges which bound Music Valley on the west and south. Climate in the area is typical of the southwestern desert country with long hot summers and moderate winters. Precipitation as rain averages less than 4.5 inches per year. Varieties

of desert grass and small shrubs constitute the vegetation on the property. Water is scarce; for domestic and mining use it is supplied in drums by truck from Twentynine Palms. Transmitted electric power is not available. For powering Diesel engines, fuel oil is supplied in drums by truck from Twentynine Palms, 14 miles northwest.

COMPETENCY OF APPLICANT

The two Bassler brothers have from time to time worked with their father in his gold mine, and should be competent to perform the work requested.

HOUSING FACILITIES

There are no housing facilities on the property. A house on their father's property, about two miles north, is sufficient to accommodate a crew of four men.

EQUIPMENT

Equipment on the property comprises an 80 cubic foot portable compressor, a compression drill with hose and steel, and a small assortment of hand tools. The equipment presently available is suitable for exploratory needs.

GEOLOGY

The Bassler claims, Uranus Nos. 1-5, southwest of Pinto Basin are underlain by the Pinto Gneiss, a metamorphic complex consisting chiefly of granite gneiss, gabbro-diorite, and quartz-biotite schist. Pegmatite dikes

and quartz veins are fairly common in the area. The foliation of the rocks is pronounced and in the vicinity of the Uranus claims strikes northwest and has a moderate to steep southwest dip.

ORE DEPOSITS

Radioactive minerals occur in biotite-rich portions (as much as 80 percent biotite) of a dark greenish-gray quartz-biotite schist. Ore minerals probably include thorium-bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified. No secondary uranium minerals were observed. The radioactive material seemed to be concentrated in a zone about 2 feet thick parallel to the plane of foliation in the Uranus No. 2, but appeared to be more uniformly distributed over a greater thickness (as much as 10 feet) in the Uranus No. 4 cut. The two prospect cuts (Uranus No. 2 and 4), about 1/2-mile apart, are in the same rock unit of greenish-gray quartz-biotite schist, although there are local variations in mineral composition from feldspar-quartz-biotite schist to biotite schist. The strike of the foliation is N. 30-35 W. and the dip is 50 to 60 degrees SW. Anomalous radioactivity was detected at several outcrops of this unit between the two prospect cuts.

Uranus No. 2 claim. -- The radioactive deposit or "vein" exposed in the prospect cut on this claim is about 2 feet thick, is exposed for 20 feet along strike and as much as 8 feet along dip. The deposit apparently has a tabular shape. About 50 tons of rock have been taken out of the cut

and dumped, of which 15 to 20 tons is believed to be anomalously radioactive.

The most highly radioactive material consists of a biotite schist containing as much as 80 percent biotite locally with quartz as the remaining important constituent. Seams of white powdery calcium carbonate are common. Radioactivity values measured with a scintillation counter were as high as 1.8 milliroentgens per hour in the biotite schist and probably averaged 0.7 MR/hr in the adjacent quartz-biotite schist on the hanging wall side of the vein.

Rock of the hanging wall contained a less amount of biotite and correspondingly more quartz. Traces of chlorite and possibly epidote are responsible for the slightly greenish cast to the rock. This material averaged about 0.25 MR/hr in radiation intensity. The readings made over the dump averaged between 0.4 and 0.5 MR/hr.

The footwall comprised a coarsely crystalline granite or pegmatitic rock with minor amounts of biotite and traces of chlorite. Radioactivity readings on exposures of this rock in the prospect cut averaged about 0.4 MR/hr, but much of this value may be due to the high background, as specimens removed from the locality showed little or no count.

Readings made on the talus-covered slope in the vicinity of the cut (not closer than 20 to 30 feet from the cut) showed a general background count of about 0.05 MR/hr. Country rock in the general vicinity appears

to be granite gneiss alternating with greenish-gray quartz-biotite schist, with the gneiss predominating.

Uranus No. 4 claim.--The prospect cut on this claim is about 2,400 feet southeast from the cut on the Uranus No. 2 claim. Granite gneiss and pegmatitic granite is exposed near the cut, and talus material covers the slope above and around the cut to a depth of 2 to 4 feet. Radioactive feldspar-quartz-biotite schist with abundant seams and fracture fillings of white powdery calcium carbonate is exposed in the cut for about 10 feet along strike, for about 6-8 feet along dip, and for about 20 feet in a crosscutting trench that is 2-3 feet wide and 2-3 feet deep. The thickness of the radioactive zone may be as much as 10 feet, as the highly radioactive material does not appear to be concentrated along a narrow zone of highly foliated biotite schist as in the case of the Uranus No. 2 claim. The rock in the No. 4 cut contains much less biotite and has a more blocky fracture owing to the higher feldspar-quartz content. The strike of the foliation in the No. 4 cut is N. 30 W. and the dip is about 60 degrees SW.

Radioactivity values range from 0.3 MR/hr on the NE face of the cut to 0.8 MR/hr in the NE trending trenches. Readings over the dump were from 0.2 to 0.4 MR/hr. In general, the readings appeared to be fairly uniform over exposures in the cut. The highest reading of 1.0 MR/hr was taken near the access road about 60 feet southwest of the cut.

DEVELOPMENT

In addition to discovery cuts, the principal workings comprise a pit

on the Uranus claim No. 2, 15 feet long, 6 feet wide, and 6 feet deep.

On the Uranus No. 4 claim there is a cut 24 feet long, which in places has been excavated to a depth of 3 to 4 feet.

SAMPLING

A series of samples were taken from exposed areas. Their positions are shown on the sketch map attached. Details regarding them follows:

Sample No.	%, U_3O_8	ThO_2	Description
1703	*0.005	0.003	Cut across 2.5 feet hanging wall fraction; discovery cut No. 2 claim.
1704	*0.005	0.027	Cut across 2.5 feet footwall fraction; discovery cut No. 2 claim.
1705	*0.005	0.002	Cut across 7 feet, east fraction; discovery cut No. 4 claim.
1706	*0.005	0.003	Cut across 7 feet center fraction; discovery cut No. 4 claim.
1707	*0.005	0.002	Cut across 7 feet west fraction; discovery cut No. 4 claim.
1708	*0.005	0.002	Cut across 5 feet altered limestone on road 60 feet west of discovery cut No. 4 claim.

*Less than.

ORE RESERVES

On the Uranus No. 2 claim, indicated and inferred reserves of radioactive material containing less than 0.005 percent U_3O_8 and 0.015 percent ThO_2 are estimated at not more than 50 tons.

The maximum radioactivity readings made in the Uranus No. 4 claim are not as high as those in the No. 2 claim, but the readings appear to be more uniform from place to place and probably represent a larger quantity

of radioactive material. Indicated and inferred reserves of radioactive rock containing less than 0.005 percent U_3O_8 and 0.002 percent ThO_2 are estimated at about 100 tons.

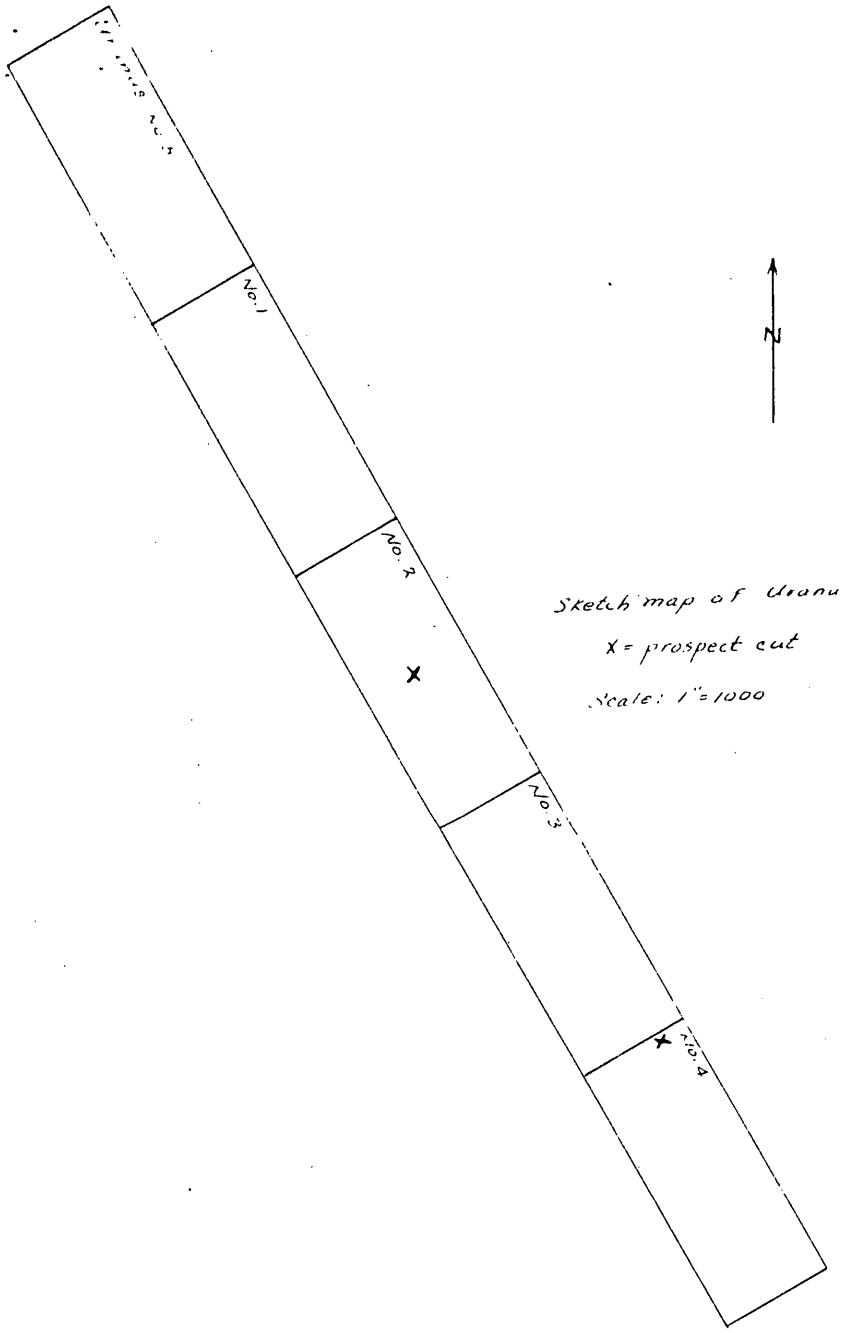
PROPOSED EXPLORATION

Plans for sinking a 250-foot shaft on the No. 4 claim as proposed by the property owners is not recommended, as there is no indication that the rocks are more radioactive with increasing depth. A 100-foot adit and about 50 feet of crosscutting would explore the deposit as effectively and with less expense, but the property owners should realize that there is no present market for thorium, and that such a venture is likely to be unprofitable.

CONCLUSIONS AND RECOMMENDATIONS

Radioactive minerals occur in biotite-rich portions of a dark greenish gray quartz-biotite schist. Ore minerals probably include thorium-bearing allanite and/or monazite and one or more primary uranium minerals, although none were identified.

Assay results show that the radioactivity is chiefly thorium and that the uranium content is practically nil. It is most unlikely that additional exploratory work would disclose radioactive sections sufficiently high enough in uranium content to be profitably worked. It is recommended that the application for exploration assistance be denied.

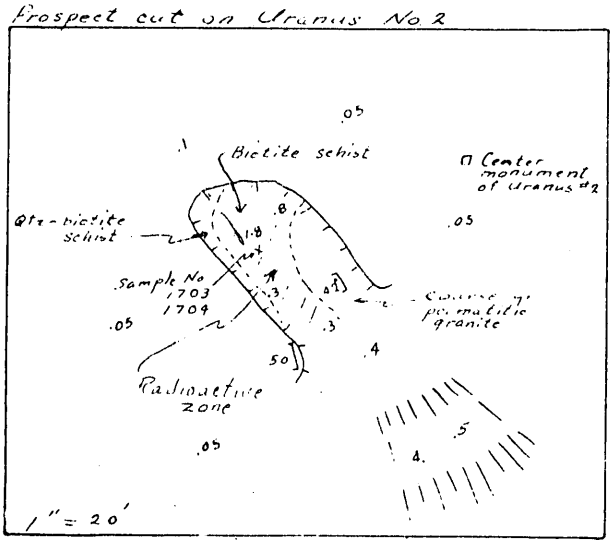


Sketch map of Uranus Nos. 1-5 claims

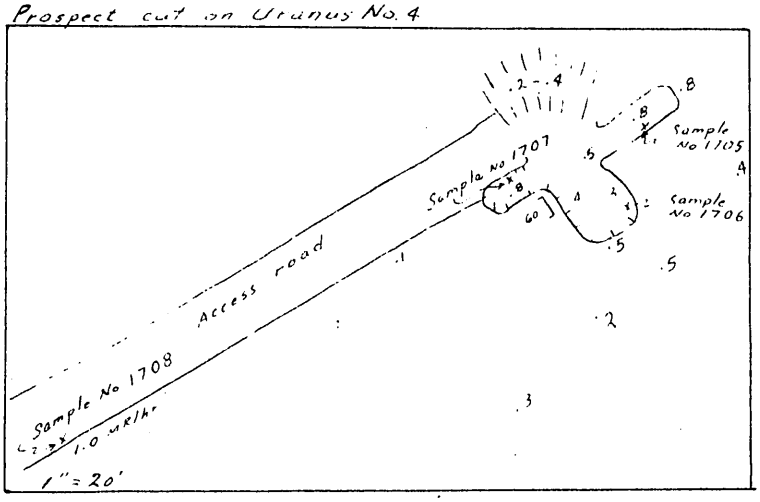
X = prospect cut

Scale: 1" = 1000

Prospect cut on Uranus No 2



Prospect cut on Uranus No. 4



Radioactivity Values in MR/hr

Surname 700

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

Ching
Elf
Selfridge
Johnson

JUN 30 1954

Mr. H. C. Miller
Executive Officer
DMEA Field Team, Region III
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA-3388 (Uranium)
Carlos J. Bassler, Jr., and
Francis E. Bassler
Uranus Claims
Riverside County, California

Dear Mr. Miller:

The subject application is being referred to you for investigation and recommendation. A copy of the application is already in your files.

Enclosed are two copies each of comments and recommendations relative to the application by H. D. Keiser, Member, and W. S. Twenhofel, Acting Member, Uranium Commodity Committee, dated June 16 and June 23, 1954, respectively.

Your attention is called to the fact that the assay reports by the A.E.C. in Salt Lake City and by Ed Eisenhauer, referred to by the Applicant as accompanying the application, were not received in Washington.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GHS)

Enclosures (2)

MChing/am
6-28-54

APPROVED:

J. H. Hedges
Member, Bureau of Mines (JHH)

Philip W. Guild
Member, Geological Survey (PWG)

cc to: Admr. Reading File
Operating Committee
Docket
Messrs. A.P.Butler,Jr., Rm. 3212, GSA
J.O.Hosted, Rm. 3210, GSA
H.D.Keiser, Rm. 3641
Code 700
Mr. Ching

R.C.S.

Surname 700

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

Ching
Ellis
Guild
Hedges
Sutredge
Fleishman

JUN 30 1954

Messrs. Carlos J. Bassler, Jr.
and Francis E. Bassler
P. O. Box 1164
Twentynine Palms, California

Re: Docket No. DMEA-3388 (Uranium)
Uranus Claims
Riverside County, California

Gentlemen:

The application for assistance in exploring your property in Riverside County, California, under the above-captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred for a field examination to the Executive Officer of Region III at the following address:

Mr. H. C. Miller
Executive Officer, Region III
DMEA Field Team
420 Custom House
555 Battery Street
San Francisco 11, California

The Regional Office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

MChing/am
6-28-54
cc to: Admr. Reading File
Docket
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

R.C.S.

STANDARD FORM NO. 64

6/25/54 gla

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. Wm. Ellis, DMEA Member, Uranium Commodity Committee

DATE: June 23, 1954

FROM : W. S. Twenhofel, USGS Acting Member, Uranium Commodity Committee

SUBJECT: Application, DMEA Docket 3388 (Uranium and Thorium), Carlos J. Bassler, Jr., and Francis E. Bassler, partnership, applicant, P. O. Box 1164, Twentynine Palms, California; Sec. 6, T. 2 S., R. 10 E., S.B.B.M., Washington Mining District, Riverside County, California

I have reviewed the subject application and have the following comments.

Proposed Exploration

The applicants propose to explore, by means of shaft-sinking, vein or veins (as the case may be), to a depth of at least 250 feet. At the time the application was made there were only natural outcrops and a few old prospect pits, none more than 10 feet deep. The outcrops and exposure show "green rock schist", of which certain zones paralleling the schistosity are anomalously radioactive. The applicants propose to sink their shaft at the best surface location, which, apparently, is not yet determined.

The estimated total cost of the project is $12,038, of which the Government's share would be $9,028.50.

Comment

The application refers to an analytical report, said to accompany the application; none was attached to the copy I received. However, five analyses were given in the text of the application. They range from 0.005 percent to 0.10 percent U_3O_8.

No maps accompanied the application.

The application is well prepared but it lacks details as to the justification for exploration and the proposed exploration plan. This situation probably arises from the fact that the area to which the application pertains is not thoroughly prospected.

So far as I have been able to determine, the files of the Geological Survey contain no data pertinent to the area covered by the application.

Recommendation

Because of the lack of data on which to make an evaluation of the property, I recommend that the application be referred to the Field Team for field examination.

Copies to: E. Wm. Ellis (2)

W. S. Twenhofel

6/18/54 gla

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

June 16, 1954

RECEIVED JUN 16 1954

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: DMEA Docket No. 3388, Carlos J. Bassler, Jr., and Francis E. Bassler, P. O. Box 1164, Twentynine Palms, California.

I have reviewed the application included in the subject docket and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

It is recommended that the application be referred to the Field Team for investigation and report, and that the Field Team be requested to discuss the application with Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

H. D. Keiser

H. D. Keiser

Attachment

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

June 14, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III.

DMEA-3388 Bassler, Carlos J., Jr. & Francis E. Bassler

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

June 14, 1954
Subject: DMEA-3388
Re: Exploration Assistance

Messrs. Carlos J. Bassler, Jr.
& Francis E. Bassler
P. O. Box 1164
Twentynine Palms, Calif.

Gentlemen:

The receipt of your application dated May 31, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3388 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to in any future correspondence relating to your application.

Sincerely yours,

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 14 1954

420 Custom House
555 Battery Street
San Francisco 11, Calif.

June 8, 1954

Memorandum

To: Defense Minerals Exploration Administration
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Application Forms MF-103 - Uranium and Thorium
Carlos J. Bassler, Jr. and Francis E. Bassler, Partnership
P. O. Box 1164, Twentynine Palms, California

Attached are three sets of MF-103 forms received in our mail from Carlos J. Bassler, Jr. and Francis E. Bassler, making application for an exploration loan on Uranus claims in Riverside County, California. The fourth set has been retained for our records.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachment

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

Defense Minerals
RECEIVED
JUN 14 1954

420 Custom House
555 Battery Street
San Francisco 11, Calif.

June 8, 1954

Memorandum

To: Defense Minerals Exploration Administration
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Application Forms MF-103 - Uranium and Thorium
Carlos J. Bassler, Jr., and Francis E. Bassler, Partnership
P. O. Box 1164, Twentynine Palms, California

Attached are three sets of MF-103 forms received in our mail from Carlos J. Bassler, Jr. and Francis E. Bassler, making application for an exploration loan on Uranus claims in Riverside County, California. The fourth set has been retained for our records.

H. C. MILLER

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachment

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 14 1954

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. 3388
Metal or Mineral Uranium & Thorium
Date Received
Estimated Cost $12,038
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Carlos J. Bassler, Jr. and Francis E. Bassler, Partnership.
P. O. Box 1164, Twentynine Palms, California.
(Residence--Corner of Wainwright and El Paseo, Twentynine Palms, Calif.)

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Five unpatented lode claims named Uranus No's. 1, 2, 3, 4, and 5. Description of land on paper attached.

(*b*) State any mine name by which the property is known. None

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Claimants

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Uranium and thorium.

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 14 days and be completed within 9 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☒ Use of equipment owned by you ☒ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, 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 May 31, 1954

Carlos J. Bassler, Jr. and Francis E. Bassler
(Applicant)

By Carlos J. Bassler Jr.
Francis E. Bassler

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Carlos J. Bassler, Jr. and Francis E. Bassler
Twentynine Palms, California

3(a) Applicant's property rights:

Uranus No. 1

Situated in the vicinity of Gold Park Camp in the Washington Mining District, Riverside County, State of California, T2S, R10E, S.B.B.M., Sec. 6. Claim is located approximately 5,000 feet in an easterly direction from center monument of Carlos, Jr. claim which is a surveyed location and approximately 3,000 feet southerly from the edge of Music Valley. Recorded at the Riverside County Courthouse, Book 1556, Page 12.

Uranus No. 2

Contiguous with Uranus No. 1 in a southeasterly direction. Recorded at the Riverside County Courthouse, Book 1565, Page 43.

Uranus No. 3

Contiguous with Uranus No. 2 in a southeasterly direction. Recorded at the Riverside County Courthouse, Book 1570, Page 65.

Uranus No. 4

Contiguous with Uranus No. 3 in a southeasterly direction. Recorded at the Riverside County Courthouse, Book 1570, Page 61.

Uranus No. 5

Contiguous with Uranus No. 1 in a northwesterly direction. Recorded at the Riverside County Courthouse, Book 1570, Page 63.

Total length of all five claims is 7500 feet in a northwesterly and southeasterly direction.

Carlos J. Bassler, Jr., and Francis E. Bassler
Twentynine Palms, Calif.

4. PHYSICAL DESCRIPTION:

(a) The property to be explored is a group of unpatented claims, located, recorded, and held by the two applicants as partners. There is at the present time, five claims in the group, layed out end to end along the mineralized veins. The only work that has been done on any of the said claims amounts to four prospect holes left by prospectors years ago, none of which have exposed more than 10 ft. of depth. None of these holes are located in the vein material being explored by the applicants at the present time.

The claims being newly acquired by the applicants have allowed them to accomplish only their necessary location work on each of the claims. To sum it up, this property is virgin ground, practically untouched thus far. Examination of the proposed exploration workings could be carried out with ease and safety as the applicants believe mining should be carried out according to the safety code as prescribed by the State of California with intervals of inspection by the State Division of Mines.

(b) There has been no evidence of any past production from this area.

(c) The mineral seems to occur within a green rock schist that extends for an unknown distance beyond the extremeties of the five claims in either direction. The band of greenish rock is approximately 800 to 900 ft. in width, occurring in a Northwest and Southeast direction. Around the area of which the five claims are located, the Southwest edge is bordered by a very dark colored igneous rock which also forms a path some hundreds of feet in width. When broken open, this rock appears as a granular quartz with an aqua marine blue to green, and some are grayish in color. Along the Northeasterly edge is a sandstone colored porphyry.

The mineral is found in veins of Silicon and Feldspar interlaced and impregnated by a black Biotite Mica. There seems to be three general occurrances of these veins paralleling each other along the path of the greenish schist formation.

The veins were first determined as mineral bearing rock by the use of a Geiger Counter. Samples were taken where the counter responded the best in certain original areas. Three separate samples were sent to the A.E.C. in Salt Lake City, Utah, and the test showed that the majority of the radioactivity was from Thorium rather than Uranium, however Uranium was present to the degree of, Sample #1--.005%, #2--.009%, and #3--.029% U_3O_8, as can be verified by accompanying report being sent along with this application.

Cont'd.

In the area of which Sample #3 was taken, applicants commenced one of the location works for the purpose of location and testing the underground occurrence of the exposed veins. It was found that the Biotite Mica occurred in a vein of small width about 3 to 4 inches, and within the vein of Mica occurred a hard grayish black rock appearing as a possible Uraninite type rock. The assays of this rock were .09% U_3O_8. The assay of the latter test accompanies this application and appears on the assay report of Ed Eisenhauer as Test #1.

The third test shown on this same report marked "Concentrates" was a concentrate taken from 20# of rock occurring as the massive veins of Silicon and Feldspar impregnated by the Biotite Mica. The rock was taken from the same location asthe one of which sample #1 was taken. The concentrate gave a test of .14% U_3O_8.

Sample #2 on the same assay report which gave .08% U_3O_8 as the result of the test is the most encouraging of reports to date as this sample was taken from a location 2000 ft. in a Southeasterly direction from the place where Sample #1 was taken.

The area from which Sample #2 was taken gives a large ground count of radioactivity taking in a small hill top and extending several hundred feet from that point in either direction along the occurrence of the veins. The ground count occurs about 100 ft. in width in this area. There has not been enough work performed in this area as yet to tell very much about the underground vein system.

This area is located about a half mile from the regular road up on a hillside and is not too accessible to work until a road is graded into the area to afford the passage of trucks and drilling equipment.

Upon the strength of the assay report, and the amount of radioactivity in this area, the partners feel this would be the best location for an exploration project to locate commercial Uranium.

(d) One partner, Carlos J. Bassler, Jr., has a home owned by him in the town of Twentynine Palms, Calif., a distance of 12 miles from the claims located by him and his brother, the other partner in the project. Francis E. Bassler lives in Alhambra, Calif., presently, but would move to his brother's residence at Twentynine Palms should a full scale activity begin.

The roads leading to the area are easily accessible for small trucks or passenger vehicles. After leaving the paved roads

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of the Twentynine Palms area, there is approximately 10 miles of dirt road to travel in order to reach the claims. This road winds its way up a fairly wide flat bottom canyon which is quite passable except in a few, not more than three, narrow places between rocks.

The closest railroad shipping point from the claims would be at Amboy, California, a distance of 57 miles from the claims. The road is paved from Twentynine Palms to Amboy, leaving only 10 miles of dirt road to be reckoned with when it comes to the problem of shipping ore from mine to railroad.

(e) Manpower for this project would be supplied by the applicants themselves.

Materials are available in Twentynine Palms and Los Angeles.

Supplies would also be available in Twentynine Palms and in Los Angeles.

Equipment is now in the general area of the claims, such as the 1 ton Le Roi hoist owned by the applicants which is set up on a gold mining claim, which is not producing at the present time, so partners will be pleased to make it available for the exploration project.

Water would have to be trucked to property if any amount should be needed. Partners own a tank truck which was used to supply a gold mine mill with water.

Electric power would have to be produced from an individual generator plant on the property, as none being available, and too far distant from Electric Power Company supply.

The partners do not possess such a plant. This is the only piece of equipment lacking that would be urgently needed.

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The partners do not possess such a plant. This is the only piece of equipment lacking that would be urgently needed.

5. THE EXPLORATION PROJECT:

(a) The mineral for which the partners wish to explore is Uranium.

(b) The proposed project would be located on the claim named Uranus #4, where the location of the largest amount of radioactivity and where the exposure of at least two separate veins are quite massive. Also, because samples taken from very close to the surface tested very near to minimum commercial ore.

The applicants realize that quantity as well as quality must exist before a production could result from the ore. It is the belief of the applicants that the value of the Uranium content will undoubtedly increase with depth. As to whether or not the quantity will be sufficient remains a problem to be solved by the project.

It is therefore proposed that a vertical shaft be sunk at the best surface location, and follow the vein or veins such as the case may be, to a depth of at least 250 ft.

(d) Both applicants are veteran Marines of World War II and experienced with the handling of explosives. Have been mining an 80 ft. deep gold mine for the past three years. Know how to use and operate the necessary equipment of which they themselves own and also have a thorough knowledge of timbering and shoring a mining project. The applicants are 35 years old and 33 years old, respectively, and feel that they are as capable of carrying out the proposed project with the same results as if done by anyone else. They have been acquainted with and near this type of work since the year 1930, although neither one has ever been hired as a miner due to the following of other types of work as a trade.

6. ESTIMATE OF COST (See schedules following)

(a)	Independent Contracts	None
(b)	Estimate of Wages for Operators	$8,640.00
(c)	Estimate of Materials and Supplies	1,639.61
(d)	Estimate of Equipment, Use and Cost	1,658.11
(e)	Rehabilitation and repairs	None
(f)	New Buildings, Improvements, Installations	None
(g)	Estimate of Miscellaneous	100.00
(h)	Contingencies	None
	250 Feet of Shaft — Total cost	$12,037.72
	Unit Cost per foot of Shaft	$48.15

6(a) None

6(b) Estimate of Wages for Operators.

Total time of 9 months.
20 Working days per month = 180 Working days.
180 Working days x 8 hours per day = 1,440 hours per man.
1,440 hours x 2 men = 2,880 hours.
2,880 hours x $3.00 per hour = $8,640.00.

Cost of assays, any outside engineering or geological work would be paid for by applicants.

6(c) Estimate of Materials and Supplies

Quan.	Item	Price
1	Carbide tip Drill Steel 2' lg.	$ 16.50
1	Carbide tip Drill Steel 4' lg.	17.50
2	Carbide tip Drill Steel 6' lg.	18.50
10	Cases Dynamite 40% @ $18.00 per case	180.00
5	Boxes of Detonating Caps @ $2.00 per box	10.00
12	Rolls of fuse @ $2.00 per roll	24.00
1800	Gallons of Gasoline @ .30 per gal.	96.00
20#	Lubricating Grease @ $1.00 per lb.	20.00
200'	1½" Pipe @ .30 per foot	60.00
1	Estimate of Engine Repair Parts	200.00
2100	Bd. ft. of 2 x 12 Lumber @$120.00M	252.00

Continued on next page

6(c) Continued from Page 5.

3000	Bd. ft. of 6 x 6 Timber @ $130.00 M	$ 390.00
500	Linear ft. 2 x 4 @ $110.00 M	36.74
250	Linear ft. 1 x 4 @ $110.00 M	18.37
200#	Assorted nuts and bolts, washers, etc. @ .40 per lb.	80.00
1"x1½"	Pipe fittings valves, etc.	30.00
100#	1/2"x 8" lg. lag screws @ .40 per lb.	40.00
1000'	5/8 Ø hot rolled reinforcing steel @ .15¢ per ft.	150.00
		$ 1,639.61

6(d) Estimate of Equipment, Use and Cost.

Quan.	Description	Name or Model	Estimated Value	Estimated time of usefulness	Nine months Depreciation
1	Air Compressor	Sullivan 80 C.F.M.Used	$900.00	18 Months	$450.00
1	Jack Hammer	Ingersoll Rand, Used	200.00	12 Months	150.00
1	Jack Hammer	Ingersoll Rand, Used	40.00	2 Months	40.00
100'	H.P. Air Hose		100.00	24 Months	37.50
1	Drill Column and Slide	Coches make	80.00	24 Months	30.00
1	1-Ton Hoist (W 400' Cable)	Le Roi, Used	400.00	12 Months	300.00
3000'	#8 Electric Wire	Used	35.00	24 Months	13.11
1	Pick-up truck	1946 Studebaker	450.00	18 Months	225.00
1	Arc Welding Mach.	Westinghouse, Used	100.00	36 Months	25.00
1	Acetylene Gas Welding Outfit & Cutting torch		150.00	36 Months	37.50
1	Geiger Counter	Detectron	100.00	24 Months	37.50
1	Water tank truck	1931 Chevrolet	150.00	12 Months	112.50
			Total Allowance for Depreciation		$1,458.11

Equipment needed to be Purchased

1	2 or 3 KW, 120 Volt Electric Generator Plant	Estimated	$ 200.00
		Total Cost	$1,658.11

6(e) Rehabilitation and Repairs.

None are needed at this property.

6(f) New Buildings, Improvements, Installations.

Allowances are made for the erection of a head frame, and a small building to house Hoisting Equipment in the estimate of time for the total job and in Supplies needed.

6(g) Miscellaneous

A road must be graded to allow movement of equipment to project location. This can be done for approximately $100.00 for one day's use of bulldozer.

6(h) Contingencies

None estimated.

7(a) Applicants believe they will qualify for 75% loan.

7(b) Applicants believe the allowance on their equipment plus sharing the labor expense would furnish their share of the costs.

MI-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
JUN 14 1954

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. 3388
Metal or Mineral Uranium & Thorium
Date Received
Estimated Cost $12,038
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Carlos J. Bassler, Jr. and Francis E. Bassler, Partnership.
P. O. Box 1164, Twentynine Palms, California.
(Residence—Corner of Wainwright and El Paseo, Twentynine Palms, Calif.)

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Five unpatented lode claims named Uranus No's. 1, 2, 3, 4, and 5. Description of land on paper attached.

(*b*) State any mine name by which the property is known. None

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Claimants

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Uranium and thorium.

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 14 days and be completed within 9 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor; supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☒ Use of equipment owned by you ☒ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, 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 May 31, 1954

Carlos J. Bassler, Jr. and Francis E. Bassler
(Applicant)

By Carlos J. Bassler Jr.
Francis E. Bassler

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

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Twentynine Palms, California

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Total length of all five claims is 7500 feet in a northwesterly and southeasterly direction.

Carlos J. Baesler, Jr., and Francis H. Baesler
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(d)	Estimate of Equipment, Use and Cost	1,658.11
(e)	Rehabilitation and repairs	None
(f)	New Buildings, Improvements, Installations	None
(g)	Estimate of Miscellaneous	100.00
(h)	Contingencies	None
	250 Feet of Shaft — Total cost	$12,037.72
	Unit Cost per foot of Shaft	$48.15

6(a) None

6(b) Estimate of Wages for Operators.

Total time of 9 months.
20 Working days per month = 180 Working days.
180 Working days x 8 hours per day = 1,440 hours per man.
1,440 hours x 2 men = 2,880 hours.
2,880 hours x $3.00 per hour = $8,640.00.

Cost of assays, any outside engineering or geological work would be paid for by applicants.

6(c) Estimate of Materials and Supplies

Quan.	Item	Price
1	Carbide tip Drill Steel 2' lg.	$ 16.50
1	Carbide tip Drill Steel 4' lg.	17.50
2	Carbide tip Drill Steel 6' lg.	18.50
10	Cases Dynamite 40% @ $18.00 per case	180.00
5	Boxes of Detonating Caps @ $2.00 per box	10.00
12	Rolls of fuse @ $2.00 per roll	24.00
1800	Gallons of Gasoline @ .30 per gal.	96.00
20#	Lubricating Grease @ $1.00 per lb.	20.00
200'	1½" Pipe @ .30 per foot	60.00
1	Estimate of Engine Repair Parts	200.00
2100	Bd. ft. of 2 x 12 Lumber @$120.00M	252.00

Continued on next page

6(c) Continued from Page 5.

3000	Bd. ft. of 6 x 6 Timber @ $130.00 M	$ 390.00
300	Linear ft. 2 x 4 @ $110.00 M	36.74
230	Linear ft. 1 x 4 @ $110.00 M	18.37
200#	Assorted nuts and bolts, washers, etc. @ .40 per lb.	80.00
1"x1½"	Pipe fittings valves, etc.	30.00
100#	1/2"x 8" lg. lag screws @ .40 per lb.	40.00
1000'	5/8 Ø hot rolled reinforcing steel @ .15¢ per ft.	150.00
		$ 1,639.61

6(d) Estimate of Equipment, Use and Cost.

Quan.	Description	Name or Model	Estimated Value	Estimated time of usefulness	Nine months Depreciation
1	Air Compressor	Sullivan 60 C.F.M. Used	$900.00	18 Months	$450.00
1	Jack Hammer	Ingersoll Rand, Used	200.00	12 Months	150.00
1	Jack Hammer	Ingersoll Rand, Used	40.00	2 Months	40.00
100'	H.P. Air Hose		100.00	24 Months	37.50
1	Drill Column and Slide	Cochoo make	80.00	24 Months	30.00
1	1-Ton Hoist (w 400' Cable)	Le Roi, Used	400.00	12 Months	300.00
3000'	#8 Electric Wire	Used	35.00	24 Months	13.11
1	Pick-up truck	1936 Studebaker	450.00	18 Months	225.00
1	Arc Welding Mach.	Westinghouse, Used	100.00	36 Months	25.00
1	Acetylene Gas Welding Outfit & Cutting torch		150.00	36 Months	37.50
1	Geiger Counter	Detectron	100.00	24 Months	37.50
1	Water tank truck	1931 Chevrolet	150.00	12 Months	112.50
				Total Allowance for Depreciation	$1,458.11

Equipment needed to be Purchased

1	2 or 3 KW, 120 Volt Electric Generator Plant	Estimated	$ 200.00
		Total Cost	$1,658.11

6(e) Rehabilitation and Repairs.

None are needed at this property.

6(f) New Buildings, Improvements, Installations.

Allowances are made for the erection of a head frame, and a small building to house Hoisting Equipment in the estimate of time for the total job and in Supplies needed.

6(g) Miscellaneous

A road must be graded to allow movement of equipment to project location. This can be done for approximately $100.00 for one day's use of bulldozer.

6(h) Contingencies

None estimated.

7(a) Applicants believe they will qualify for 75% loan.

7(b) Applicants believe the allowance on their equipment plus sharing the labor expense would furnish their share of the costs.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Administration
RECEIVED
JUN 14 1954

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. 3388
Metal or Mineral Uranium & Thorium
Date Received
Estimated Cost $12,038
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Carlos J. Bessler, Jr. and Francis E. Bessler, Partnership.
P. O. Box 1164, Twentynine Palms, California.
(Residence—Corner of Wainwright and El Paseo, Twentynine Palms, Calif.)

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Five unpatented lode claims named Uranus No's. 1, 2, 3, 4, and 5. Description of land on paper attached.

(*b*) State any mine name by which the property is known. None

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Claimants

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Uranium and thorium.

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 14 days and be completed within 9 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☒ Use of equipment owned by you ☒ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, 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 May 31, 1954

Carlos J. Bassler, Jr. and Francis E. Bassler
(Applicant)

By Carlos J. Bassler Jr.
Francis E. Bassler

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Carlos J. Sandlor, Jr. and Francis H. Sandlor
Sunnymead Ranch, California

3(a) Applicant's property rights:

Granite No. 1

Situated in the vicinity of Gold Park Camp in the Washington Mining District, Riverside County, State of California, T2S, R10E, S.B.B.M., Sec. 6. Claim is located approximately 9,000 feet in an easterly direction from center monument of Carlos, Jr. claim which is a surveyed location and approximately 3,000 feet southerly from the edge of Music Valley. Recorded at the Riverside County Courthouse, Book 1936, Page 12.

Granite No. 2

Contiguous with Granite No. 1 in a southeasterly direction. Recorded at the Riverside County Courthouse, Book 1969, Page 43.

Granite No. 3

Contiguous with Granite No. 2 in a southeasterly direction. Recorded at the Riverside County Courthouse, Book 1970, Page 63.

Granite No. 4

Contiguous with Granite No. 3 in a southeasterly direction. Recorded at the Riverside County Courthouse, Book 1970, Page 61.

Granite No. 5

Contiguous with Granite No. 1 in a northwesterly direction. Recorded at the Riverside County Courthouse, Book 1970, Page 63.

Total length of all five claims is 7500 feet in a northwesterly and southeasterly direction.

Carlos J. Baeder, Jr., and Francis T. Baeder
Twentynine Palms, Calif.

4. TECHNICAL DESCRIPTION:

(a) The property to be explored is a group of unpatented claims, located, recorded, and held by the two applicants as partners. There is at the present time five claims in the group, layed out end to end along the mineralized veins. The only work that has been done on any of the said claims amounts to four prospect holes left by prospectors years ago, none of which have exposed more than 10 ft. of depth. None of these holes are located in the vein material being explored by the applicants at the present time.

The claims being newly acquired by the applicants have allowed them to accomplish only their necessary location work on each of the claims. To sum it up, this property is virgin ground, practically untouched thus far. Examination of the proposed exploration workings could be carried out with ease and safety as the applicants believe mining should be carried out according to the safety code as prescribed by the State of California with intervals of inspection by the State Division of Mines.

(b) There has been no evidence of any past production from this area.

(c) The mineral seems to occur within a green rock schist that extends for an unknown distance beyond the extremeties of the five claims in either direction. The band of greenish rock is approximately 800 to 900 ft. in width, occuring in a Northwest and Southeast direction. Around the area of which the five claims are located, the Southwest edge is bordered by a very dark colored igneous rock which also forms a path some hundreds of feet in width. When broken open, this rock appears as a granular quartz with an aqua marine blue to green, and some are grayish in color. Along the Northeasterly edge is a sandstone colored porphyry.

The mineral is found in veins of Silicon and Feldspar interlaced and impregnated by a black Biotite Mica. There seems to be three general occurrences of these veins paralleling each other along the path of the greenish schist formation.

The veins were first determined as mineral bearing rock by the use of a Geiger Counter. Samples were taken where the counter responded the best in certain original areas. Three separate samples were sent to the A.E.C. in Salt Lake City, Utah, and the test showed that the majority of the radioactivity was from Thorium rather than Uranium, however Uranium was present to the degree of, Sample #1 - .005%, #2 - .009%, and #3 - .029% U_3O_8 as can be verified by accompanying report being sent along with this application.

Cont'd.

In the area of which Sample #3 was taken applicants commenced one of the location works for the purpose of location and testing the underground occurance of the exposed veins. It was found that the Biotite Mica occured in a vein of small width about 3 to 4 inches, and within the vein of Mica occured a hard grayish black rock appearing as a possible Uraninite type rock. The assays of this rock were .03% U_3O_8, and one of more depth than the first showed .10% U_3O_8. The assay of the latter test accompanies this application and appears on the assay report of Ed Eisenhauer as Test #1.

The third test shown on this same report marked "Concentrates" was a concentrate taken from 20% of rock occurring as the massive veins of Silicon and Feldspar impregnated by the Biotite Mica. The rock was taken from the same location as the one of which sample #1 was taken. The concentrate gave a test of .14% U_3O_8.

Sample #2 on the same assay report which gave .08% U_3O_8 as the result of the test is the most encouraging of reports to date as this sample was taken from a location 3000 ft. in a Southeasterly direction from the place where Sample #1 was taken.

The area from which Sample #3 was taken gives a large ground count of radioactivity taking in a small hill top and extending several hundred feet from that point in either direction along the occurance of the veins. The ground count occurs about 100 ft. in width in this area. There has not been enough work performed in this area as yet to tell very much about the underground vein system.

This area is located about a half mile from the regular road up on a hillside and is not too accessible to work until a road is graded into the area to afford the passage of trucks and drilling equipment.

Upon the strength of the assay report, and the amount of radioactivity in this area, the partners feel this would be the best location for an exploration project to locate commercial Uranium.

(d) One partner, Carlos J. Baesler, Jr., has a home owned by him in the town of Twentynine Palms, Calif., a distance of 18 miles from the claims located by him and his brother, the other partner in the project. Francis E. Baesler lives in Alhambra presently, but would move to his brothers residence at Twentynine Palms should a full scale activity begin.

The roads leading to the area are easily accessible for small trucks or passenger vehicles. After leaving the paved roads

of the Twentynine Palms area, there is approximately 10 miles of dirt road to travel in order to reach the claims. This road winds its way up a fairly wide flat bottom canyon which is quite passable except in a few, not more than three narrow places between rocks.

The closest railroad shipping point from the claims would be at Amboy, Calif., a distance of 57 miles from the claims. The road is paved from Twentynine Palms to Amboy, leaving only 10 miles of dirt road to be reckoned with when it comes to the problem of shipping ore from mine to railroad.

(e) Manpower for this project would be supplied by the applicants themselves.

Materials are available in Twentynine Palms and Los Angeles.

Supplies would also be available in Twentynine Palms and in Los Angeles.

Equipment is now in the general area of the claims, such as the 1 ton Le Roi hoist owned by the applicants which is set up on a gold mining claim, which is not producing at the present time, so partners will be pleased to make it available for the exploration project.

Water would have to be trucked to property if any amount should be needed. Partners own a tank truck which was used to supply a gold mine mill with water.

Electric power would have to be produced from an individual generator plant on the property, as none being available, and too far distant from Electric Power Company supply.

The partners do not possess such a plant. This is the only piece of equipment lacking that would be urgently needed.

6. THE EXPLORATION PROJECT:

(a) The mineral for which the partners wish to explore is Uranium.

(b) The proposed project would be located on the claim named Uranus #4, where the location of the largest amount of radioactivity and where the exposure of at least two separate veins are quite massive. Also because samples taken from very close to the surface tested very near to minimum commercial ore.

The applicants realize that quantity as well as quality must exist before a production could result from the ore. It is the belief of the applicants that the value of the Uranium content will undoubtedly increase with depth. As to whether or not the quantity will be sufficient remains a problem to be solved by the project.

It is therefore proposed that a vertical shaft be sunk at the best surface location, and follow the vein or veins such as the case may be, to a depth of at least 250 ft.

(d) Both applicants are veteran Marines of World War II and experienced with the handling of explosives. Have been mining an 80 ft. deep gold mine for the past three years. Know how to use and operate the necessary equipment of which they themselves own and also have a thorough knowledge of timbering and shoring a mining project. The applicants are 35 years old and 35 years old respectively and feel that they are as capable of carrying out the proposed project with the same results as if done by anyone else. They have been acquainted with and near this type of work since the year 1950, although neither one has ever been hired as a miner due to the following of other types of work as a trade.

6. ESTIMATE OF COST (See schedules following)

(a)	Independent Contracts	None
(b)	Estimate of Wages for Operators	$8,640.00
(c)	Estimate of Materials and Supplies	1,639.61
(d)	Estimate of Equipment, Use and Cost	1,690.11
(e)	Rehabilitation and repairs	None
(f)	New Buildings, Improvements, Installations	None
(g)	Estimate of Miscellaneous	100.00
(h)	Contingencies	None
	250 Feet of Shaft — Total cost	$12,057.72
	Unit Cost per foot of Shaft	$48.15

6(a) None

6(b) Estimate of Wages for Operators.

Total time of 9 months.
20 Working days per month = 180 Working days.
180 Working days x 8 hours per day = 1,440 hours per man.
1,440 hours x 2 men = 2,880 hours.
2,880 hours x $3.00 per hour = $8,640.00.

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Continued on next page

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1"x1½"	Pipe fittings valves, etc.	30.00
100	1/2"x 6" lg. lag screws @ .08 per lb.	40.00
1000'	5/8 ø hot rolled reinforcing steel @ .15¢ per ft.	150.00
		$ 1,659.51

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1	Pick-up truck	1946 Studebaker	450.00	18 Months	225.00
1	Arc Welding Mach.	Westinghouse, Used	100.00	36 Months	25.00
1	Acetylene Gas Welding Outfit & Cutting torch		150.00	36 Months	37.50
1	Geiger Counter	Detectron	100.00	24 Months	37.50
1	Water tank truck	1931 Chevrolet	150.00	12 Months	112.50
			Total Allowance for Depreciation		1,496.11

Equipment needed to be Purchased

1	2 or 3 KW, 120 Volt Electric Generator Plant	Estimated	$ 200.00
		Total Cost	$1,658.11

6(e) Rehabilitation and Repairs.

None are needed at this property.

6(f) New Buildings, Improvements, Installations.

Allowances are made for the erection of a head frame, and a small building to house Pointing Equipment in the estimate of time for the total job and in Supplies needed.

6(g) Miscellaneous

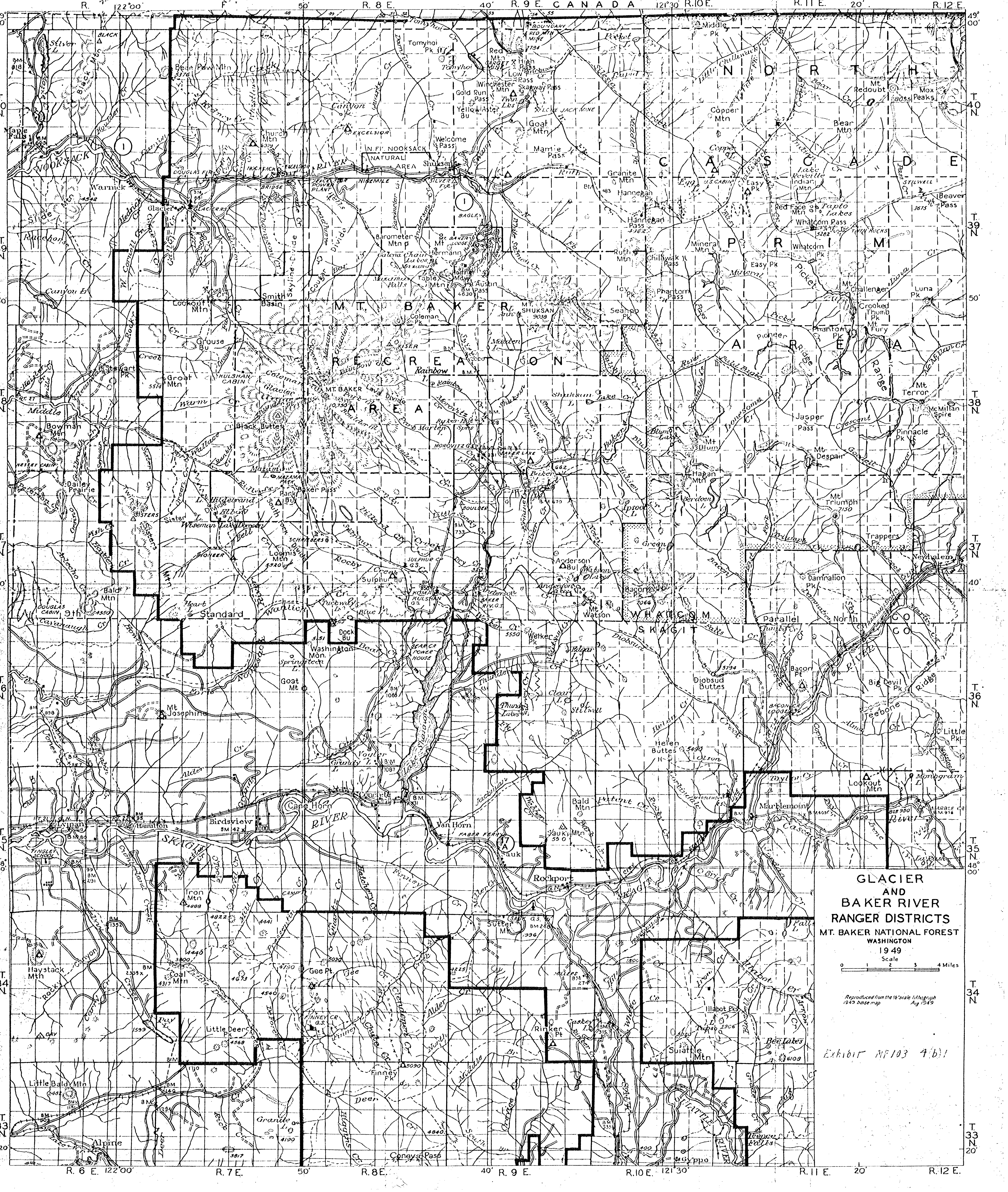
A road must be graded to allow movement of equipment to project location. This can be done for approximately $100.00 for one day's use of bulldozer.

6(h) Contingencies

None estimated.

7(a) Applicants believe they will qualify for 75% loan.

7(b) Applicants believe the allowance on their equipment plus sharing the labor expense would furnish their share of the costs.


GLACIER
AND
BAKER RIVER
RANGER DISTRICTS
MT. BAKER NATIONAL FOREST
WASHINGTON
1949
Scale
0 1 2 3 4 Miles
Reproduced from the ½" scale lithograph 1949 base map Aug 1949
Exhibit MF103 4(b)1
CANADA
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R. 9 E.
R.10 E.
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NORTH CASCADE PRIMITIVE AREA
MT. BAKER RECREATION AREA
WHATCOM CO
SKAGIT CO
N. FK. NOOKSACK NATURAL AREA
NOOKSACK
SKAGIT RIVER
Maple Falls
Glacier
Warnick
Shuksan
Bagley
Mt. Baker 10,750
Mt. Shuksan 9038
Coleman Pk
Church Mtn
Bear Paw Mtn
Tomyhoi Pk
Red Mtn
Goat Mtn
Barometer Mtn
Mt Hermann
Table Mtn
Austin Pass
Lookout Mtn
Smith Basin
Grouse Bu
Groat Mtn
Stewart Pk
Bowman Mtn
Black Buttes
Dailey Prairie
Sisters
Loomis Mtn
Bald Mtn
Standard
Sulphur Bu
Koma Kulshan G.S.
Baker Riv. G.S.
Dock Bu
Washington Mon.
Goat Mt
Mt Josephine
Concrete
Cape Horn
Birdsview
Hamilton
Lyman
Van Horn
Sauk
Rockport
Marblemount
Sauk Mtn
Lookout Mtn
Copper Mtn
Bear Mtn
Mt Redoubt
Mox Peaks
Easy Pk
Whatcom Pass
Whatcom Pk
Mt Challenger
Luna Pk
Crooked Thumb Pk
Mt Fury
Phantom Pk
Mt Terror
McMillan Spire
Jasper Pass
Pinnacle Pk
Mt Despair
Mt Blum
Hagan Mtn
Mt Triumph 7150
Trappers Pk
Newhalem
Damnation Pk
Bacon Pk 7066
Mt Watson
Anderson Bu
Welker Pk
Diobsud Buttes
Bacon Pt
Big Devil Pk
Teebone Ridge
Little Pk
Helen Buttes 5490
Iron Mtn 4888
Coal Mtn
Haystack Mtn
Little Deer Pk
Gee Pt
Finney Pk
Sutter Mtn
Rinker Pt
Illabot Pks
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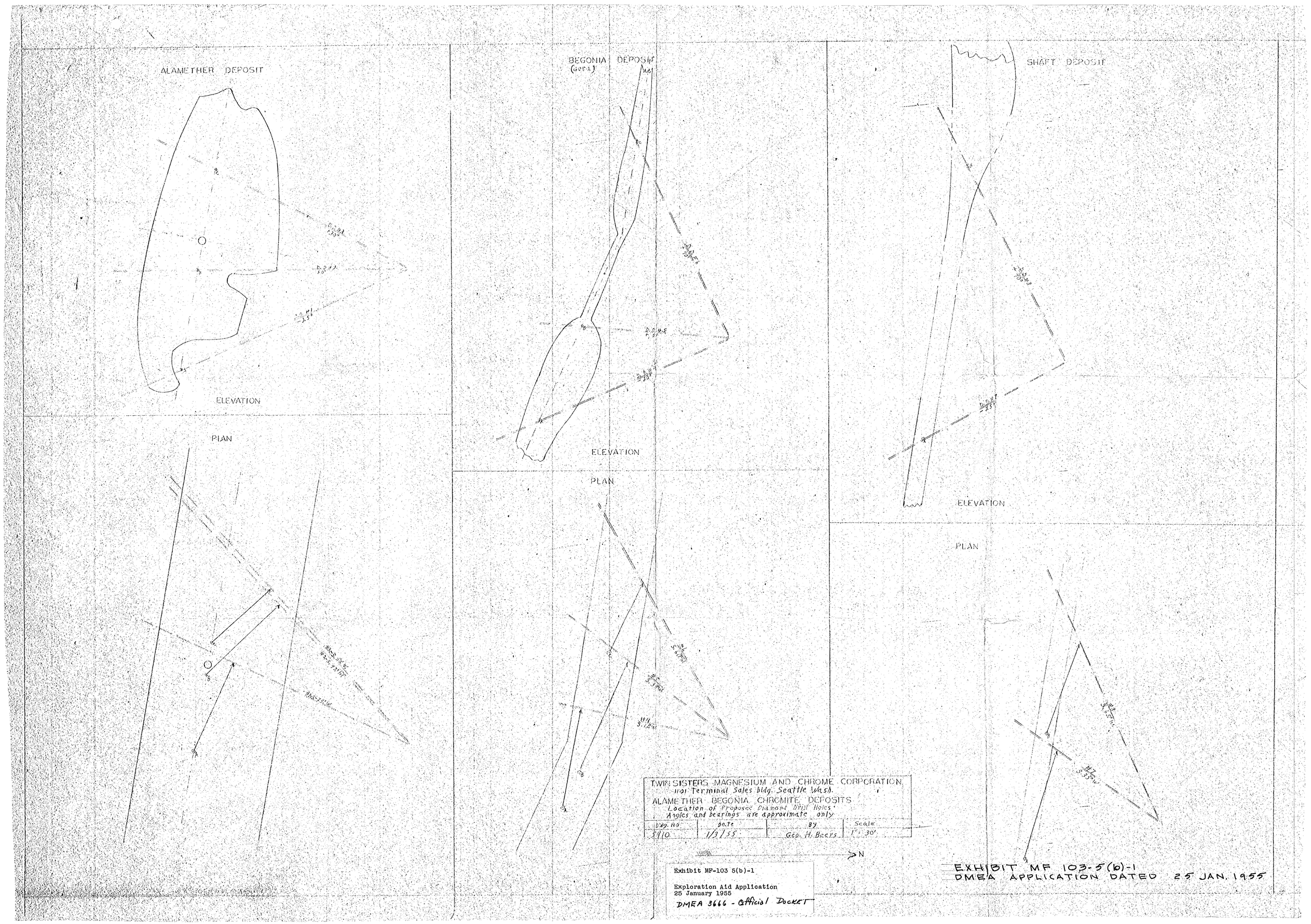
Bee Lakes
Little Bald Mtn
Alpine
Coney Pass
Gyppo
Teepee Falls
SUIATTLE RIVER


ALAMETHER DEPOSIT
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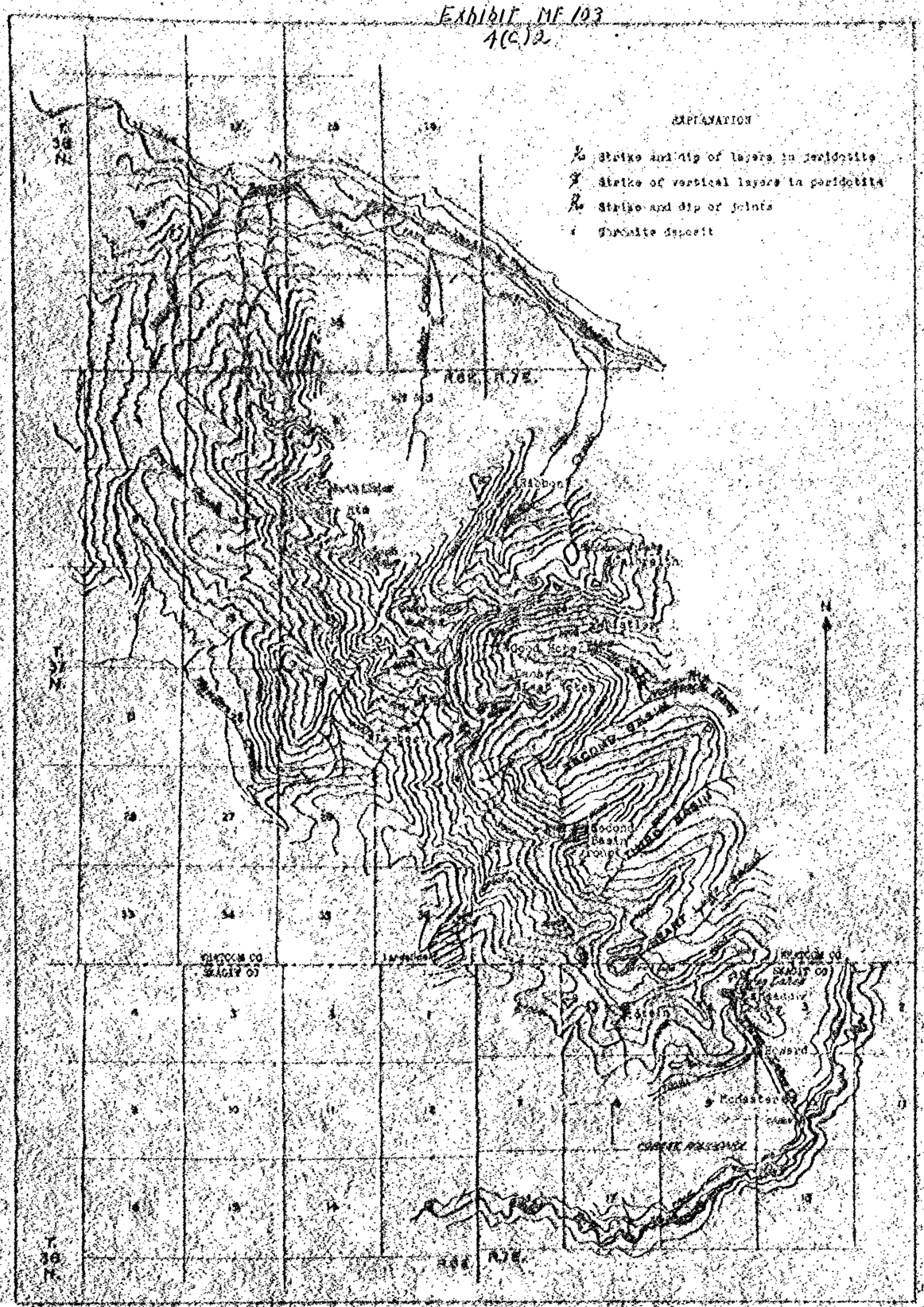
TWIN SISTERS MAGNESIUM AND CHROME CORPORATION
1101 Terminal Sales bldg. Seattle Wash.
ALAMETHER BEGONIA CHROMITE DEPOSITS
Location of Proposed Diamond Drill Holes
Angles and bearings are approximate only
DWG. NO
3110
DATE
1/3/55
BY
Geo. H. Beers
Scale
1" = 30'
N
Exhibit MF-103 5(b)-1
Exploration Aid Application
25 January 1955
DMEA 3666 - Official Docket
EXHIBIT MF 103-5(b)-1
DMEA APPLICATION DATED 25 JAN. 1955

EXHIBIT MF 103
4(C)2



Geology and topography by F. P. Thayer and A. W. Ortega

Contour interval 200 feet

Figure 2. PRINCIPAL CHROMITE DEPOSITS OF THE TWIN SISTERS MOUNTAINS, WASHINGTON

The principal chromite deposits of the Twin Sisters Mountains, shown on the accompanying maps, were examined and mapped by the Geological Survey, United States Department of the Interior, in 1940 and 1941, to ascertain their importance as a source of chromium, one of the strategic and critical metals. The reconnaissance topographic map of the higher parts of the mountains (fig. 2) was made in 1940, and deposits on the Leader and Falcon claims (figs. 3 and 4) were mapped in detail in 1941. With a relief of 4,000 to 5,500 feet, the region is accessible by forest trails only, and most of the deposits are in rocky places that can only be reached afoot. Cliffs 100 to 500 feet high are characteristic of the ridges between the glaciated valleys. Heavy timber covers the slopes below 3,500 feet.

The chromite deposits occur in the dunite parts of an elliptical intrusive mass of fresh peridotite, which forms the entire mountain range, and are found in nearly all parts of the range where bedrock is exposed. Most of the deposits are small irregular masses or lenses of massive high-grade ore, the larger ones being ill-defined bodies of dunite in which chromite is disseminated. The deposits usually show prominent interlayering of high-grade ore, low-grade ore, and barren dunite parallel to the longer dimensions of the ore bodies, and to layering in the peridotite. Although the prevalence of layering suggests that persistent chromite-rich zones might be found, none exceeding 350 feet in length was seen.

The chromite from several of the deposits in this district is richer in chromic oxide than in most other districts of the United States, as the following analyses made in the Geological Survey laboratory show.

Partial analyses of chromite from the Twin Sisters Mountains, Wash.

Name of deposit	Cleaned chromite			Crude ore	
	Cr_2O_3 (percent)	Fe (percent)	Cr/Fe	Cr_2O_3 (percent)	Chromite (percent)
Davis	53.0	12.37	3.13	51.7	88
Galbraith	50.8	12.01	2.86	44.1	88
Lambert, M.	53.58	14.69	2.85	38.58	67
Lambert, SE.	52.14	15.05	2.58	16.60	32
Leader	54.2	15.73	2.58	33.3	62
Webster	52.2	15.34	2.58	52.4	97
Meadow	54.75	13.41	2.90	46.10	85
Hilton	50.4	13.3	3.03	51.2	98
Whistler	50.4	13.34	3.00	52.8	97

The known reserves of the district are comparatively small, partly because little exploration has been done on the deposits of low-grade disseminated ore. The amount of shipping-grade ore containing 40 percent or more chromic oxide (Cr_2O_3) is probably between 2,000 and 3,000 long tons, and the reserve of milling-grade ore indicated by surface exposures is about 45,000 long tons, ranging from 15 to 35 percent Cr_2O_3. Additional possible reserves of 100,000 long tons of milling-grade ore might be revealed by surface trenching and subsurface exploration. Concentrates containing 45 to 50 percent Cr_2O_3 and having a chrome-to-iron ratio of 3.1 to 3.7 probably could be produced from the disseminated deposits unless the chromite slimes excessively during fine grinding, which may be necessary to free the finer grains of ore from the fresh dunite.

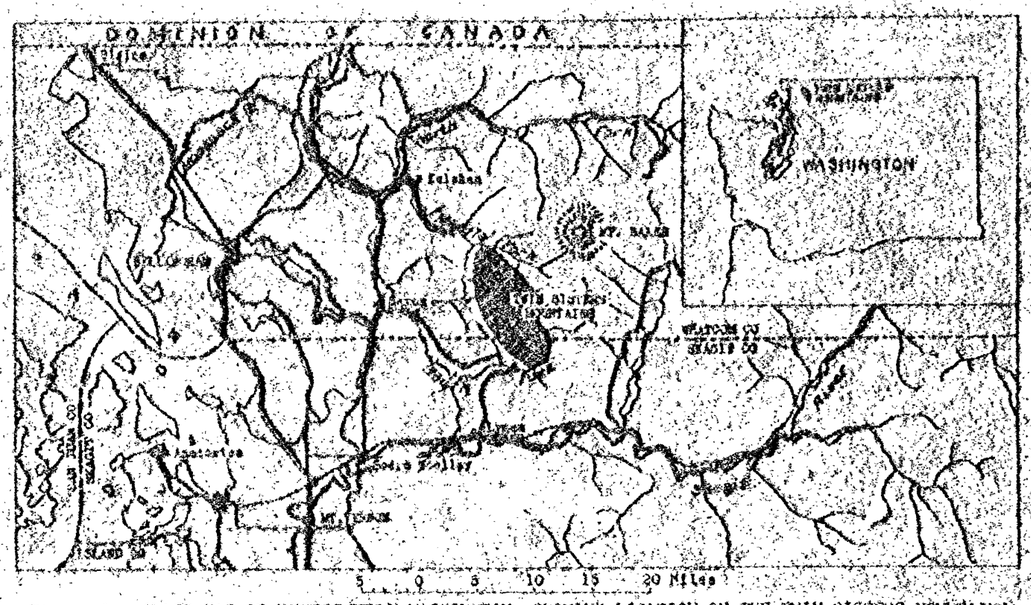
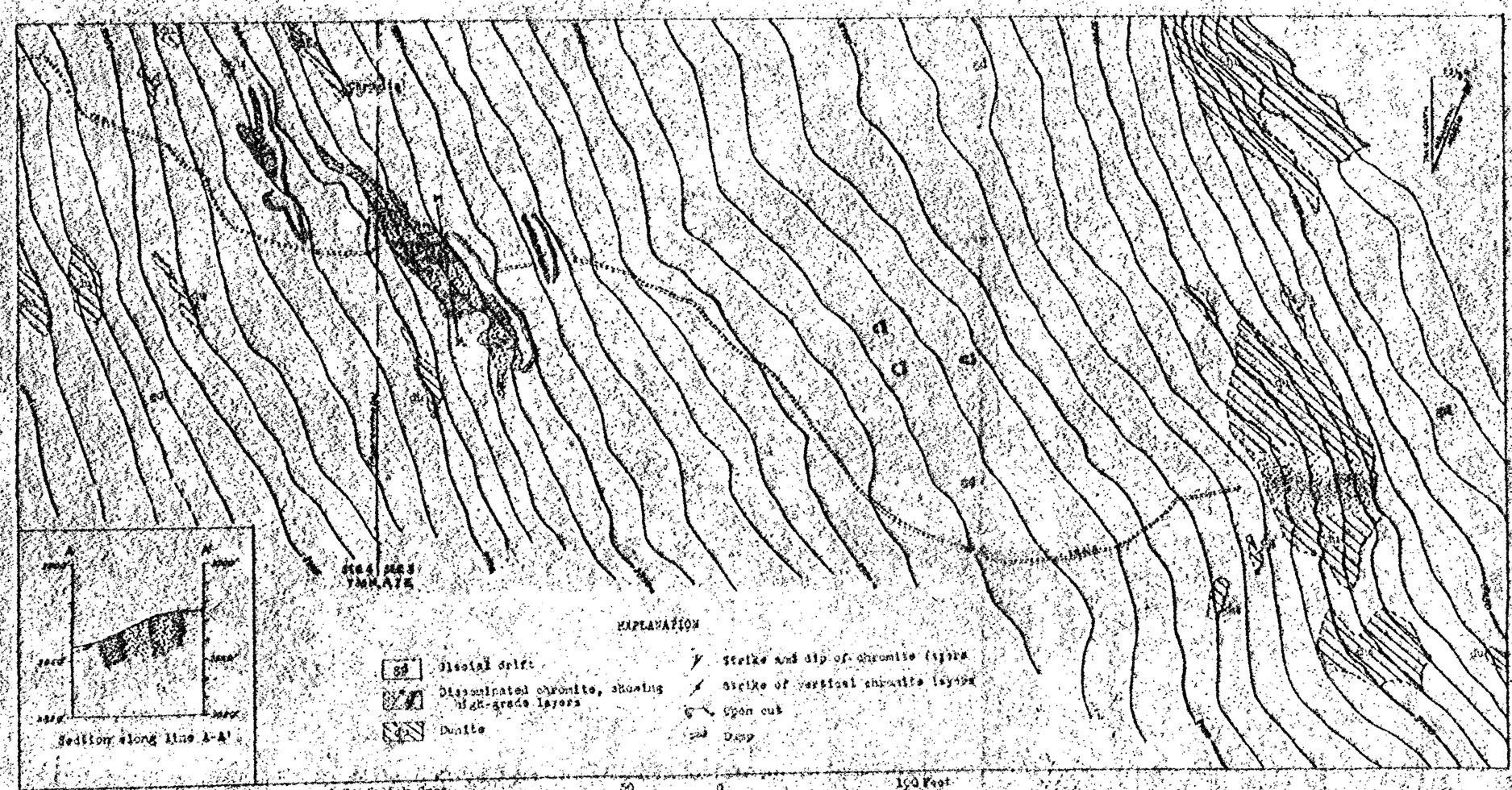


Figure 1. INDEX MAP OF NORTHWESTERN WASHINGTON, SHOWING LOCATION OF THE TWIN SISTERS MOUNTAINS

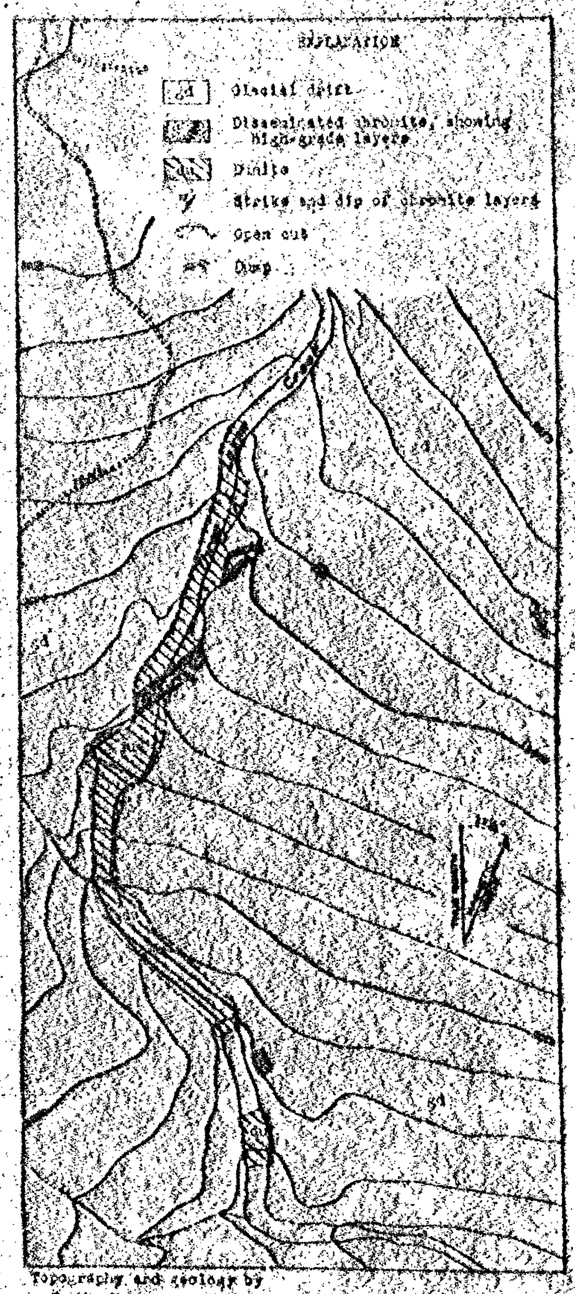


Topography and geology by R. W. Oates and Frederick Gros

50 0 100 Feet

Contour interval 10 feet

Figure 3. CHROMITE DEPOSITS ON THE FALCON CLAIM



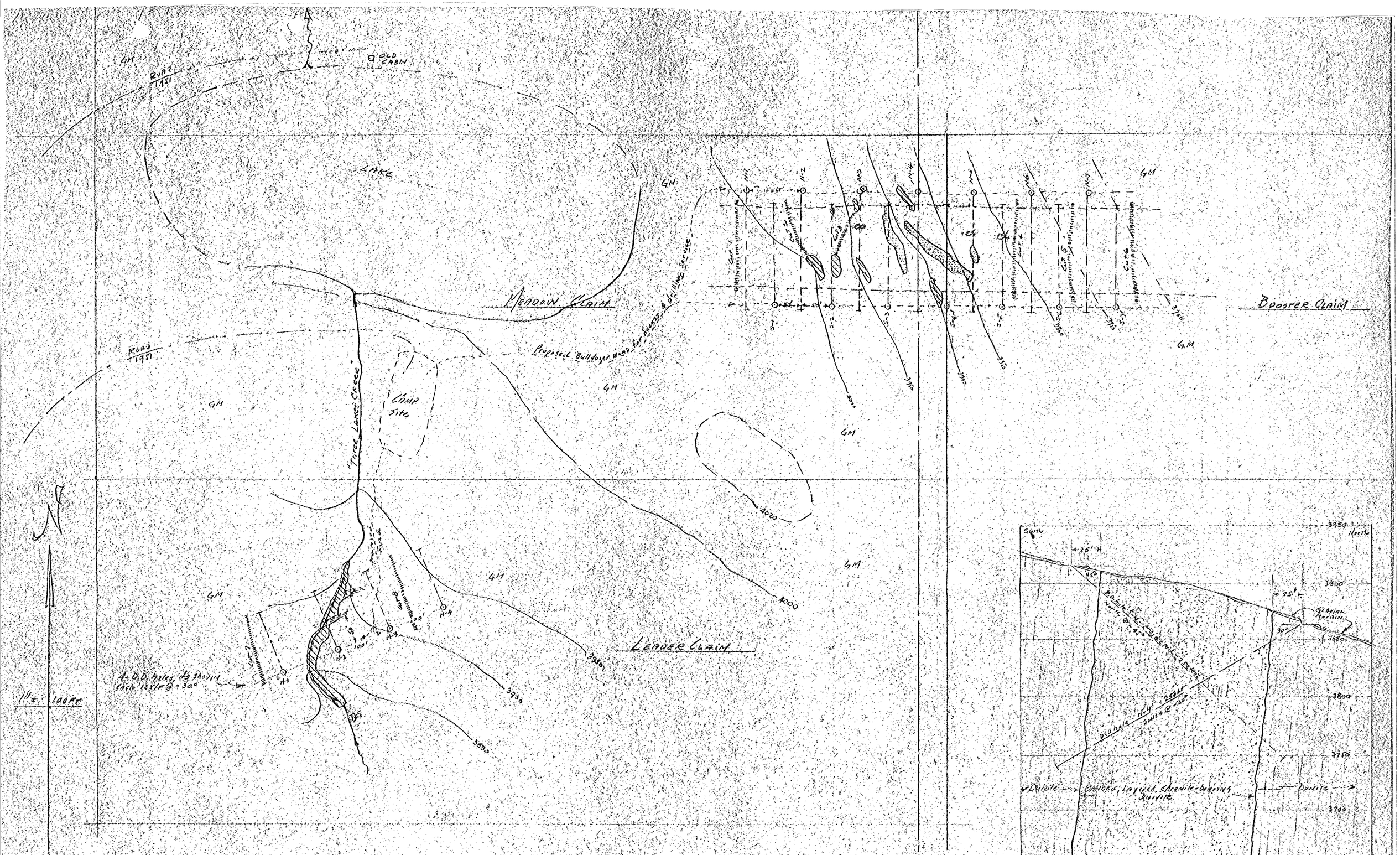
Topography and geology by R. W. Oates and Frederick Gros

50 0 100 Feet

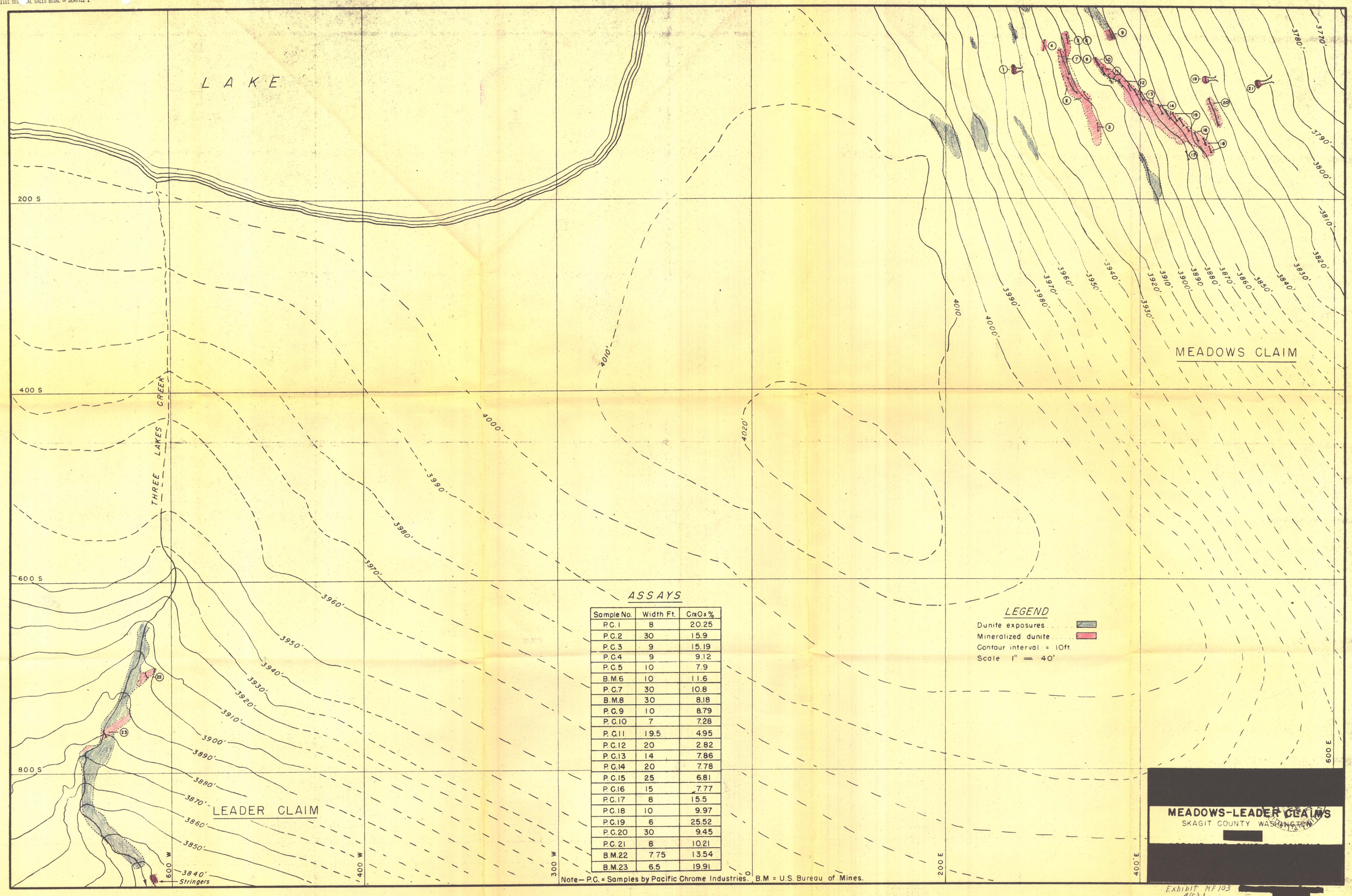
Contour interval 10 feet

Figure 4. CHROMITE DEPOSITS ON THE LEADER CLAIM

CHROMITE DEPOSITS OF THE TWIN SISTERS MOUNTAINS, WASHINGTON


Road 1951
Old Cabin
Lake
GM
Meadow Claim
Booster Claim
Proposed Bulldozer road for drilling service
Road 1951
Three Lake Creek
Camp Site
Leader Claim
4000
3950
3900
3850
4-D.D. holes, dip shown each 125 ft @ +30°
1" = 100 ft.
Glacial Moraine, (Bro 30 feet)
Exposed Dunite
Exposed Chromite Segregation Bands in Dunite.
Bulldozer Cuts (or trenches) to Expose underlying Bedrock
Map Showing proposed Work to Accompany
Application for Aid for Exploration Project
TWIN SISTERS MAGNESIUM AND CHROME CORPORATION
1101 TERMINAL SALES BLDG. SEATTLE 1, WASH.
MF 103
5(b)
SECTION 4
SECTION 5
T 30 N, R 2 E, W.M.
South
North
3950
3900
3850
3800
3750
3700
3650
Glacial Moraine
Dunite
Banded, layered chromite-bearing Dunite
Dunite
Vertical Section thru D.D. hole N-4, along section line
Scale 1" = 50 ft.

TWIN SISTERS MAGNESIUM AND CHROME CORPORATION
1101 TERMINAL SALES BLDG. — SEATTLE 1

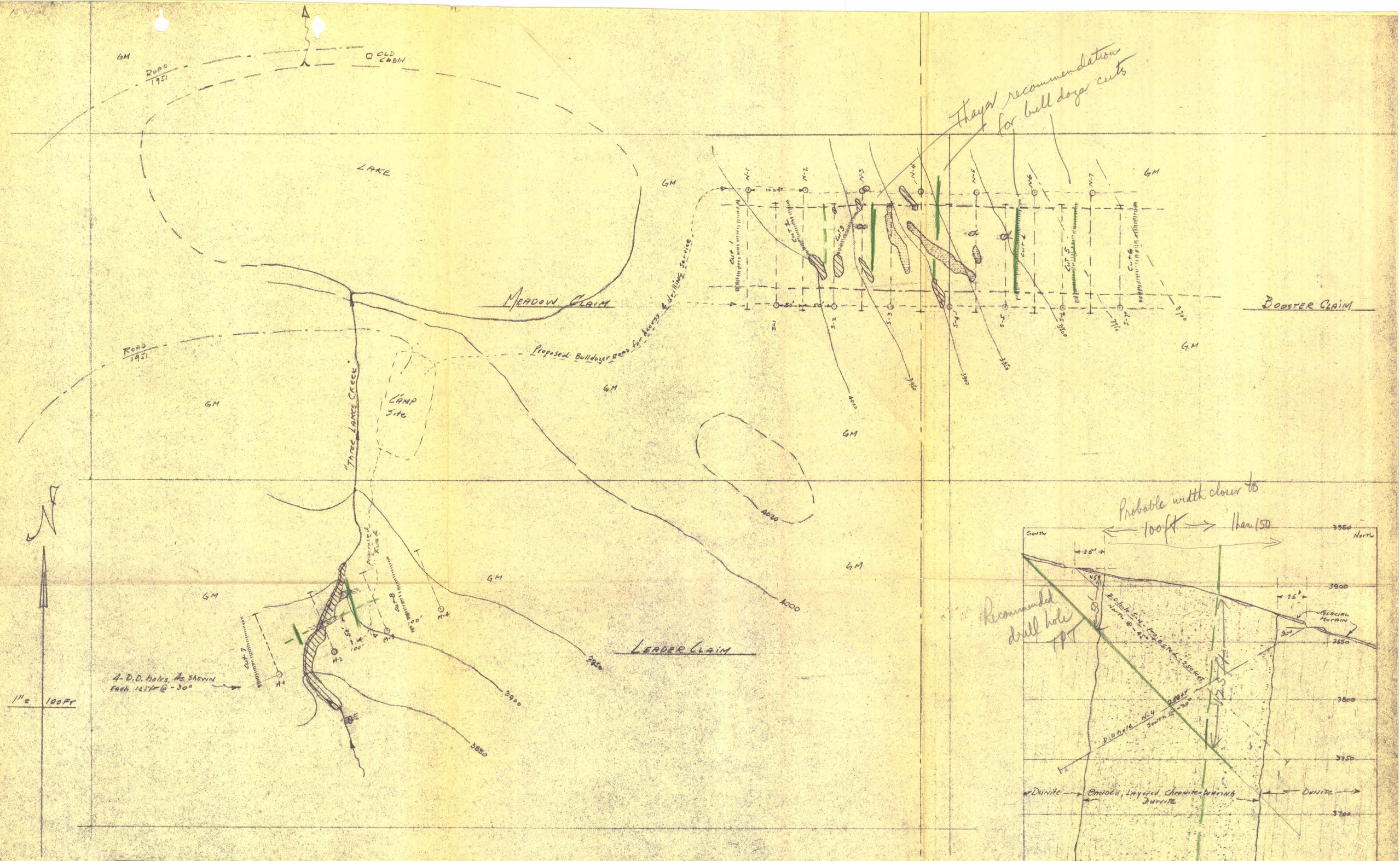


ASSAYS

Sample No.	Width Ft.	Cr_2O_3 %
P.C.1	8	20.25
P.C.2	30	15.9
P.C.3	9	15.19
P.C.4	9	9.12
P.C.5	10	7.9
B.M.6	10	11.6
P.C.7	30	10.8
B.M.8	30	8.18
P.C.9	10	8.79
P.C.10	7	7.28
P.C.11	19.5	4.95
P.C.12	20	2.82
P.C.13	14	7.86
P.C.14	20	7.78
P.C.15	25	6.81
P.C.16	15	7.77
P.C.17	8	15.5
P.C.18	10	9.97
P.C.19	6	25.52
P.C.20	30	9.45
P.C.21	8	10.21
B.M.22	7.75	13.54
B.M.23	6.5	19.91

Note— P.C. = Samples by Pacific Chrome Industries. B.M = U.S. Bureau of Mines.

Exhibit MF 103
4(c) 1
[redacted]



Vertical Section thru D.D. hole N-4, along section line

Scale 1" = 50 ft.

GM — Glacial Moraine, (5 to 20 feet)

Exposed Dunite

Exposed Chromite Segregation Bands. see Dunite.

Bulldozer Cuts (or trenches) to Expose underlying Bedrock.

Map Showing proposed Work. To Accompany

Application for Aid for Exploration Project

TWIN SISTERS MAGNESIUM AND CHROME CORPORATION

1101 TERMINAL SALES BLDG. SEATTLE 1, WASH.

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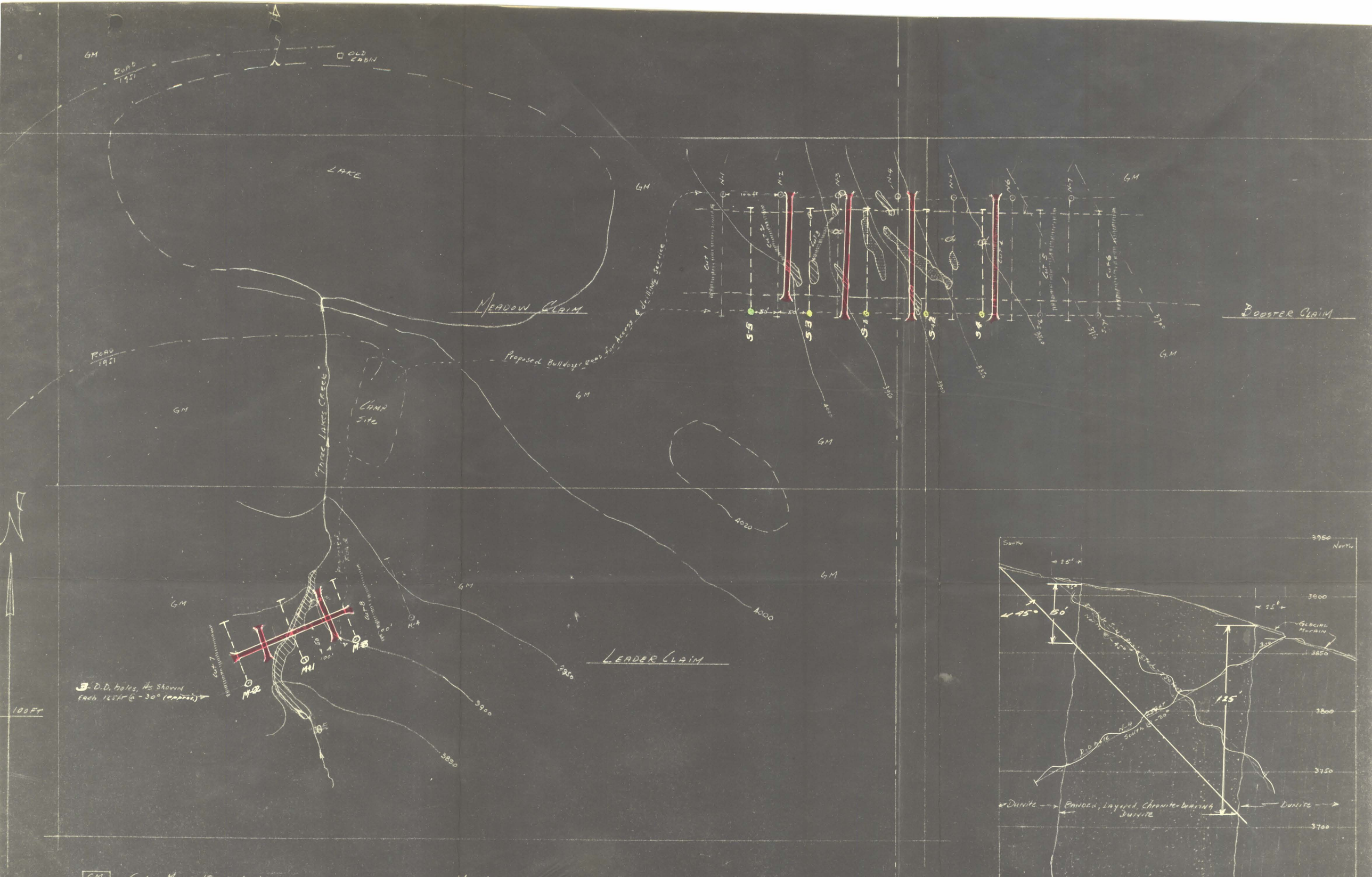
5(b)

Section 4
Section 5
T36N; R7E; W.M.



Vertical Section, Thru D.D. hole S-2, Along Section Line

Scale 1" = 50 ft.

Map Showing proposed Work. To Accompany

Application for Aid for Exploration Project

TWIN SISTERS MAGNESIUM AND CHROME CORPORATION

1101 TERMINAL SALES BLDG. SEATTLE 1, WASH.

MF 103
5(b)

Section 4
Section 9
T 36 N; R 7 E; W.M.