MF-56

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

RECEIVED
OCT 19 1956

Date 10/18/56

DMEA Docket No. 4344
DMEA Contract No.
Commodity Thorium
Name of applicant Hall Mountain Thorite Mining Co.
Name of property Hall Mountain No. 1
Location of property Boundary County, Idaho
Estimated cost of project $47,307

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

Subject: Review of Field Team Report
(Application, Field Team Report, etc.)

1. Date of subject document: _____. 2. Date received by reviewer: 10/12/56.

3. Prior reports on this property known to reviewer: Yes ☐, No ☐.

4. Prior reports on nearby properties known to reviewer: Yes ☐, No ☐.

5. Information available on past production: Yes ☐, No ☐.

6. Other pertinent factors known to reviewer: Yes ☐, No ☐.

7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location ☐
   b. Ownership ☐
   c. Evidence of mineralization ☐
   d. Geology ☐
   e. Proposed exploration method ☐
   f. Alternate exploration method ☐
   g. Costs ☐
   h. _____ ☐

9. Action advised:
   a. Obtain information from applicant ☒
   b. Refer to Field Team ☐
   c. Denial ☐
   d. Agree with Field Team ☒
   e. Disagree with Field Team ☐
   f. Suggest alternate plan ☐
   g. Request another review ☐
   h. Approval ☐
   i. Consult with Mr. _____ at _____ this office.

10. Remarks: (Use back of page if necessary)

Applicant will forward results of additional prospecting. Mr. J. O. Hosted, Washington representative of the Atomic Energy Commission, assisted in the review.

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d. Agree with Field Team ☒
i. Consult with Mr. _____ at _____ BMM office.
e. Disagree with Field Team ☐
f. Suggest alternate plan ☐
g. Request another examination ☐
h. Approval ☐

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   h. _____ ☐

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   c. Denial ☐
   d. Agree with Field Team ☒
   e. Disagree with Field Team ☐
   f. Suggest alternate plan ☐
   g. Request another reconnaissance ☐
   h. Approval ☐
   i. Consult with Mr. _____ at _____ DMEA office.

10. Remarks: (Use back of page if necessary)

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700

FILE COPY

Surname:

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

OCT 17 1956

Mr. Bruce R. Berringer, President
Hall Mountain Thorite Mining Company
Pacific Hotel
Spokane, Washington

Re: Docket No. DMEA-4344 (Thorium)
Hall Mountain No. 1 Property
Boundary County, Idaho

Dear Mr. Berringer:

In accordance with your letter, received September 5, 1956, by our Spokane office, we will consider the above-docketed application withdrawn and will place it in our inactive file.

In the event you submit a new application based on the additional property and the preliminary work you mentioned, you may, if necessary, refer to the exhibits submitted with the present application.

Sincerely yours,

C. O. Mittendorf

Administrator

FMMurphy/izm 10-17-56
cc to: Docket
Code 700-Mr. Murphy
Admr.'s Reading File
DMEA Field Team, Reg. 1, NW Dist. (2)
Messrs. XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
FDLamb, Rm. 3649
THKiilsgaard, Rm. 5224

10-18-56

IN REPLY REFER TO:

RECEIVED
OCT 18 1956

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

October 16, 1956

Memorandum

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

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of D. F. Kellum's report, DMEA Docket 4344, Hall Mountain Thorite Mining Company, Boundary County, Idaho.

Mr. Kellum has presented a good report on the Hall Mountain property in which he describes the thorite occurrences, while at the same time noting that although thorium mineralization is distributed over the property at no place is it present in sufficient amount to warrant an exploration project. He calls attention to the fact that the applicant wishes to withdraw his application. He also recommends that if additional prospecting discloses a target suitable for exploration, the application should be reconsidered.

I recommend that the applicant be advised by letter that his application has been withdrawn. He might also be informed that if he should resubmit another application on the same property he should refer to the present docket number. Such reference would acquaint future commodity and DMEA reviewers with the evidence presented in Kellum's report.

T. H. Kiilsgaard

T. H. Kiilsgaard

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THKiilsgaard:iml
G-10/16/56

T. H. Kiilsgaard

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
Frank D. Lamb, 3649

IN REPLY REFER TO:

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

RECEIVED
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G-10/16/56

T. H. Kiilsgaard

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
Frank D. Lamb, 3649

OCT 15 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
OCT - 8 1956

October 3, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4344 (Thorium)
Hall Mountain Thorite Mining Co.
Hall Mountain No. 1
Boundary County, Idaho

Dear Mr. Selfridge:

Enclosed are four copies of a memorandum examination report by Donald F. Kellum of the Geological Survey, on the referenced application.

On and near the applicant's claims are small areas of anomalous radioactivity. Most of these areas are covered by slide rock and, although they seemed to follow fairly definite lines, none of them could be traced for more than a few tens of feet. Only one outcrop on the applicant's claim showed any anomalous radioactivity and this was limited in areal extent. Therefore, Kellum concludes that no adequate target for exploration has been shown to exist.

On September 5, 1956, the applicant requested by letter that his request for DMEA assistance be withdrawn until completion of additional prospecting that might indicate the presence of a suitable target.

Kellum recommends that this property be reconsidered should sufficient prospecting disclose a suitable target for exploration.

By Field Team, Region I, NW Dist.

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

Wing G. Agnew
Wing G. Agnew, ~~Acting~~ Exec. Officer
U. S. Bureau of Mines

Donald R. MacLaren
Donald R. MacLaren, Acting Member
U. S. Geological Survey

Enclosures

cc: USBM (2).
Kellum

RECEIVED
OCT - 8 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

September 4, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: Donald F. Kellum, Geologist, U. S. Geological Survey

Subject: Application examination report, Docket No. DMEA-4344 (Thorium), Hall Mountain Thorite Mining Co., Hall Mountain No. 1, Boundary County, Idaho

APPLICANT

Hall Mountain Thorite Mining Co.
Pacific Hotel
Spokane, Wash.

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

INTRODUCTION

An examination of the property and surrounding area was made July 23 and 24, 1956, by D. R. MacLaren and D. F. Kellum, Geologists, Geological Survey, and Almon F. Robertson, Mining Engineer, Bureau of Mines. Mr. Bruce R. Berringer, company president-manager and part holder of the claims, accompanied the examining team.

SUMMARY

The property is on the east side of the Purcell Trench on the west slope of Hall Mountain. Rocks in the area are quartzites of the Precambrian Belt series that have been intruded by Precambrian basic sills and Cretaceous granites. Well-bedded quartzites, which underlie the applicant's and other claims in most of the Hall Mountain area, dip gently to the east.

Limited prospecting on the steep slopes which are covered by talus and overburden has shown the presence of several small, discontinuous radioactivity anomalies some of which appear to follow stratigraphically controlled lines within the quartzites. Thorium-bearing structures also occur as steeply dipping veins within a sill, and as small replacement bodies within the overlying quartzite.

On the applicant's T.M.U. Claim No. 1, an open cut, started in quartzite, has partially exposed a replacement breccia about

40 feet long and 10 feet wide. Portions of this breccia contain small irregular patches of high-grade thorium. The breccia is within a well-bedded quartzite outcrop exposed for about 80 feet along the strike. Other small radioactive areas occur along the apparent strike of the breccia, but no further prospecting has been done to show that they are related structurally or stratigraphically either with the exposed breccia or with each other.

On August 13, 1956, at the Spokane field office Messrs. Berringer and Kellum discussed the feasibility of the proposed exploration in view of the lack of a suitably definable target. Mr. Berringer stated that he would request that his application be withdrawn until completion of further work that might indicate the presence of a suitable target. This request was received September 5, 1956.

RECOMMENDATION

Because the areas of anomalous radioactivity are small and apparently discontinuous and because the area has not been sufficiently prospected, it is concluded that no adequate target for exploration has been shown to exist. It is possible, however, that additional work might indicate such targets. It is therefore recommended that this property be reconsidered if and when sufficient prospecting has been completed.

LOCATION AND ACCESSIBILITY

The property consists of five claims, collectively known as Hall Mountain No. 1, in secs. 12 and 13, T. 65 N., R. 1 W., in the Moyie-Yaak Mining District, Boundary County, Idaho (fig. 3). The property can be reached from Chet Baker's farm, which is approximately 5 miles southeast of Porthill on Idaho State Highway No. 1, by following an old logging road that extends, in a series of switchbacks, up the west side of Hall Mountain for a distance of about 3½ miles. Due to severe winters, the property, about 1,500 feet above the valley floor, is accessible for about 8 months of the year beginning in March.

GEOLOGY

General

The applicant's property is on the steep west slopes of Hall Mountain which form the east side of the Purcell Trench. In

this area rocks of the Belt series consist of light- to dark-, well-bedded, impure quartzites which are intruded by two thick basic sills called the Purcell or Moyie sills. These rocks are assigned to the Aldridge-Prichard formation by Virgil R. D. Kirkham and Ernest W. Ellis (Geology and Ore deposits of Boundary County, Idaho: Idaho Bureau of Mines and Geology, Bull. 10, p. 21, November 1926). On Plate III, accompanying Bulletin 10, Section D-D shows the structure of the area along an east-west line about $1\frac{1}{4}$ miles south of the applicant's property. In the area of Section D-D the quartzites and sills strike northerly and dip about 12° E. The surface on the applicant's claims is estimated to be at least 500 feet above the uppermost sill. Cretaceous(?) granitic rocks intrude the Belt series several miles to the west and southwest of the applicant's claims. A number of large, northerly trending faults are the dominant structural elements in the region. The presence of some smaller, northerly striking, steeply dipping, normal faults on the west slopes of Hall Mountain are definitely shown by displacements in a Moyie or Purcell sill exposed in workings of the Golden Sceptre mine about 1,500 feet lower in altitude and slightly west of the applicant's property (H. B. Nickelson, personal communication) and may be reflected by bench and cliff topography in the area adjacent to the applicant's claims.

Hi Cpo

Thorium deposits

Thorium-bearing bodies occurring in the Golden Sceptre mine and on the Wawa and T.M.U. claims have been described briefly by Paul L. Weis, Geological Survey, in a trace elements preliminary reconnaissance report dated June 14, 1955. The known thorium-bearing bodies consist of steeply dipping, northerly striking, quartz veins within dioritic rocks of one of the Purcell sills, a northerly striking breccia, and several replacement zones apparently parallel to the bedding in quartzites overlying the sill. Some of the above-mentioned surface exposures were seen during the examination. Although not on land held by the applicant, two of these--a replacement zone in quartzite and a near-vertical vein in underlying diorite--merit further description.

The replacement zone is the same as that described by Weis, and is exposed in a small discovery pit on Wawa Claim No. 1. Here, dark impure quartzites which strike N. 35° W. and dip 5°-15° E. overlie and underlie the following sequence described from the base

upward: 10-24 inches of nonradioactive, bleached quartzite containing small casts and crystals of pyrite and a carbonate mineral; 18 inches of dark, fine-grained quartzite, having a maximum radiation count of 6 mr/hr, which contains evenly disseminated pyrite cubes up to 1 mm in size; 18-24 inches of medium gray, thin-banded quartzite, having a maximum radiation count of 4 mr/hr, which contains small casts and crystals of pyrite and a carbonate mineral, possibly ankerite. No radioactive minerals could be identified megascopically, but a chemical assay of 4.44 percent thorium was reported by Mr. Berringer to have been obtained from a sample taken by him in this zone. Thin sections of these rocks show that they are recrystallized. Quartz and feldspar form a fine-grained mosaic in which there are lesser amounts of a chlorite mineral, an estimated 2-3 percent sphene (in radioactive specimens only), and accessory amounts of apatite and ankerite(?). Pyrite, where present, may be altered to magnetite or more commonly to hematite and limonite. However, no minerals have been identified which would account for the radioactivity. It may be that the thorium is either adsorbed to or is associated with one of the minerals present, possibly pyrite or sphene.

This replacement zone apparently continues from the discovery pit southward for a distance of about 500 feet as there are a number of small, less radioactive exposures of similar character. Whether or not these exposures represent a continuous zone or only local radioactive zones at approximately the same lithologic horizon could not be determined. At the southern end of this zone is a poorly exposed series of steeply dipping fractures in quartzite along which weak radioactivity was detected.

Near the common endline of Wawa Claims No. 1 and 2, approximately 400 feet lower in elevation and about 600 feet to the southwest of the southern end of the replacement zone, is an exposed thorium-bearing vein within fresh Purcell sill diorite. The contact of the sill with overlying quartzites is not exposed but is estimated to be no more than 200 feet and probably closer to 150 feet above the exposed vein. The vein strikes nearly north-south, dips to the west at about 80°, and consists of about 3-7 feet of limonite-stained quartz in a finely divided matrix of chlorite and carbonates. Maximum radiation recorded was 8 mr/hr. Portions of the matrix contain some reddish material which may be thorite. Mr. Berringer reported that material from portions of this exposure assayed 17.5 percent chemical thorium. A radioactivity anomaly, inferred by the applicant to represent the continuation of this vein, occurs in talus and overburden on his Doris L claim approximately 1,800 feet south of the above-described vein exposure. Diamond drilling by another company to test the projected position of the vein at a point on the Wawa Claim No. 2 between the Doris L anomaly and the vein exposure did not intersect the vein.

For the most part the thorium-bearing areas in the quartzite are exposed in small outcrops and prospect pits beyond which they cannot be traced. This is due to an apparent discontinuity of mineralization and to the heavy covering of talus and overburden. No work has yet been done to determine fully the persistence or the character of the thorium-bearing structures within the quartzites, or to determine the relationships, if any, between these various structures in the quartzites and veins in the underlying sill. Radioactivity anomalies occurring in talus and overburden between some of the exposures may or may not be indicative of a concealed extension of the exposed structures. None of the anomalies have been adequately prospected to determine either their cause or structural setting.

APPLICANT'S PROPERTY

A thorium-bearing breccia on the applicant's T.M.U. Claim No. 1 (fig. 1) is the only structure exposed on the five claims which have been included in the exploration proposal. A geologic map of this exposure (fig. 2) accompanies this report. Radioactivity anomalies occurring in the talus and overburden on T.M.U. No. 3 and Doris L claims could not be related to bedrock structures except by projection from excessively distant exposed structures. The Nita P and T.M.U. No. 2 claims apparently contain no anomalies.

The thorium-bearing breccia, composed of quartzite fragments in a chlorite-quartz-carbonate matrix, is exposed in a quartzite outcrop which is approximately 25 feet in height and 80 feet in length. The quartzite is fine grained, dark to medium gray in color, strikes NS.-N. 10° W., and dips from 12° to 20° E. The breccia itself is exposed for about 40 feet along a N. 10° W. strike and terminates sharply at its northern end amid a number of closely spaced, steeply dipping joints striking about N. 60° E. These northeast-striking joints are prominent north of the breccia's termination but are not apparent south of this point. It is the applicant's belief that the northeast-striking fractures represent a fault which has offset the breccia; however, since there is no evidence of movement on these fractures and no surface evidence of a continuation of the breccia in the quartzite north of its termination, it is unlikely that the breccia extended further north than is now indicated. A number of steeply dipping well-developed fractures also occur at and parallel to the breccia margin. These northerly striking fractures continue beyond the north end of the breccia. The southern extension of the breccia is concealed by debris from a cut above the breccia and by quartzite talus further south.

An 8-foot cut across the northern end of the breccia does not expose its full thickness. The small exposed portion of the east contact of the breccia in the cut face is almost vertical and is quite sharp. Quartzite immediately east of this contact dips from 35° to 40° eastward. For a distance of several feet west of its east contact the breccia consists of disoriented, bleached, and partially corroded quartzite blocks up to 6 inches in diameter in a green to brown, chlorite-quartz carbonate matrix. The remaining thickness of the breccia exposed in the cut consists of bleached, flaggy quartzite slabs 1-3 inches thick, lying in an essentially undisturbed position. The matrix of this portion of the breccia has apparently corroded and replaced portions of the quartzite along bedding planes and small fractures perpendicular to the bedding, forming an irregular west boundary to what appears to be a replacement breccia. The portion of the exposed breccia zone south of the cut contains bedding-accordant breccia across its full thickness. Here, bedding within the breccia at the top of the outcrop dips 40° E. Toward the base of the outcrop the dip of the bedding decreases. At the base of the outcrop the bedding west of the brecciated zone dips 12° E. Two area sections of the breccia zone accompany the geologic map (fig. 1).

Thorium contained in the breccia zone is restricted to certain portions of the matrix. No radioactive minerals could be identified, and no visual distinction could be made between either the essentially barren areas or the high-grade portions outlined with a geiger counter. In general the highest-grade thorium-bearing material occurs in elongate and probably irregularly shaped pods along a zone, 1-3 feet thick, at the eastern contact. Counter readings, ranging from 4 to 8 mr/hr, were obtained at several points along this zone. Thorium-bearing material at the east contact in the cut face does not extend down to sill level. Elsewhere in the breccia, judging from counter reaction, the thorium content is evenly distributed, but decreases markedly in grade toward the west contact.

Five samples were taken along the east contact of the breccia from surface exposures, and from the cut face at the north end of the breccia (fig. 1).

Sample 568A (2', 1.70 percent ThO_2) was a chip sample taken at the top of the outcrop about 25 feet above and 15 feet south of the cut; the material in this sample consisted of brecciated quartzite and enclosing green to brown amorphous matrix. Sample 569A

(3', 8.60 percent $_eThO_2$) was a chip sample taken at the top of the breccia outcrop about 17 feet above and 5 feet south of the cut; the material sampled was the same type as that in the previous sample. Sample 570A (5', 2.12 percent $_eThO_2$) was a channel sample in the cut face 10 feet above the sill and of the same type material taken in the two previous samples. High radioactivity was not indicated across the whole intercept of this sample nor did it continue below the sample channel for more than 4 feet. Two samples, 571A (2', 0.10 percent $_eThO_2$) and 572A (3', 0.03 percent $_eThO_2$) were contiguous channel samples taken across the cut face 4 feet above the sill level; the sampled material had the same appearance as the high-grade material taken in the previous samples.

Both the distribution of the ore-grade pods and the replacement features evident in the breccia suggest that the breccia was probably localized in a zone of weakness, perhaps expressed by some premineralization brecciation, along a local flexure in the quartzite. The degree of thorium mineralization may have been largely controlled by such premineral brecciation resulting in high-grade material being localized in an existing breccia near the east contact and lower grade material being deposited as bedding-accordant replacement in adjacent but less fractured quartzite. The fact that bedding replacement occurs only along the west side of the breccia zone may be due to a relative ease of access afforded by bedding dipping into a channelway rather than away as in the case on the east side of the breccia zone.

APPLICANT'S PROPOSAL

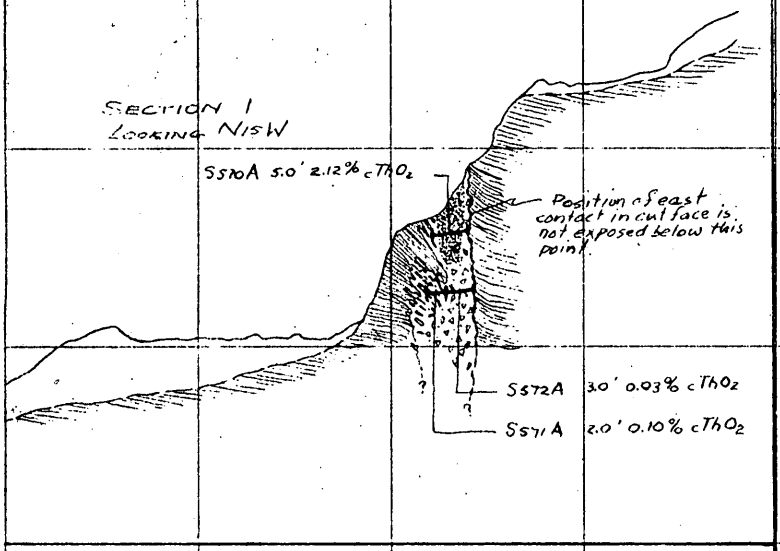
The applicant proposes a two-stage program which includes 1,000 feet of drifting and crosscutting, and 2,600 feet of diamond drilling at an estimated total cost of $47,307 (Government's share 75 percent or $35,480.25).

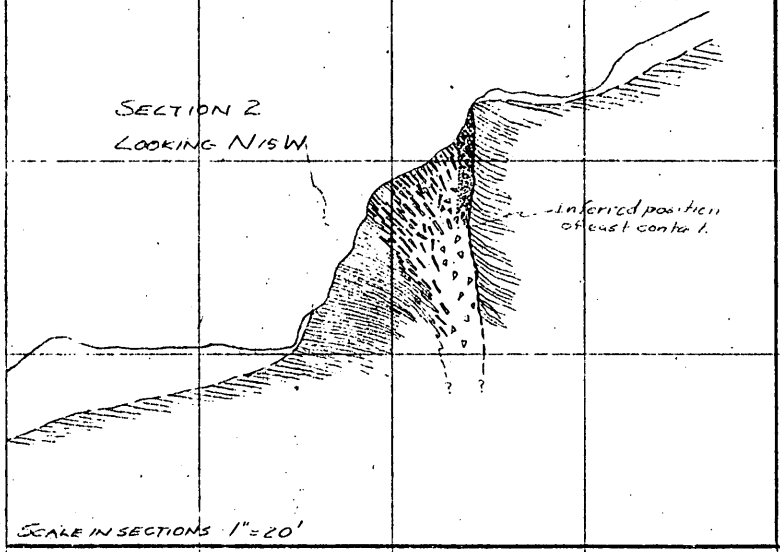
Attachment: 3

Distribution:
DMEA (4)
USBM (2)
USGS(SRO)
Docket
Kellum
AEC, Spokane
AEC, SLC

RECEIVED
OCT - 8 1956

DOCKET NO. DMEA 4344





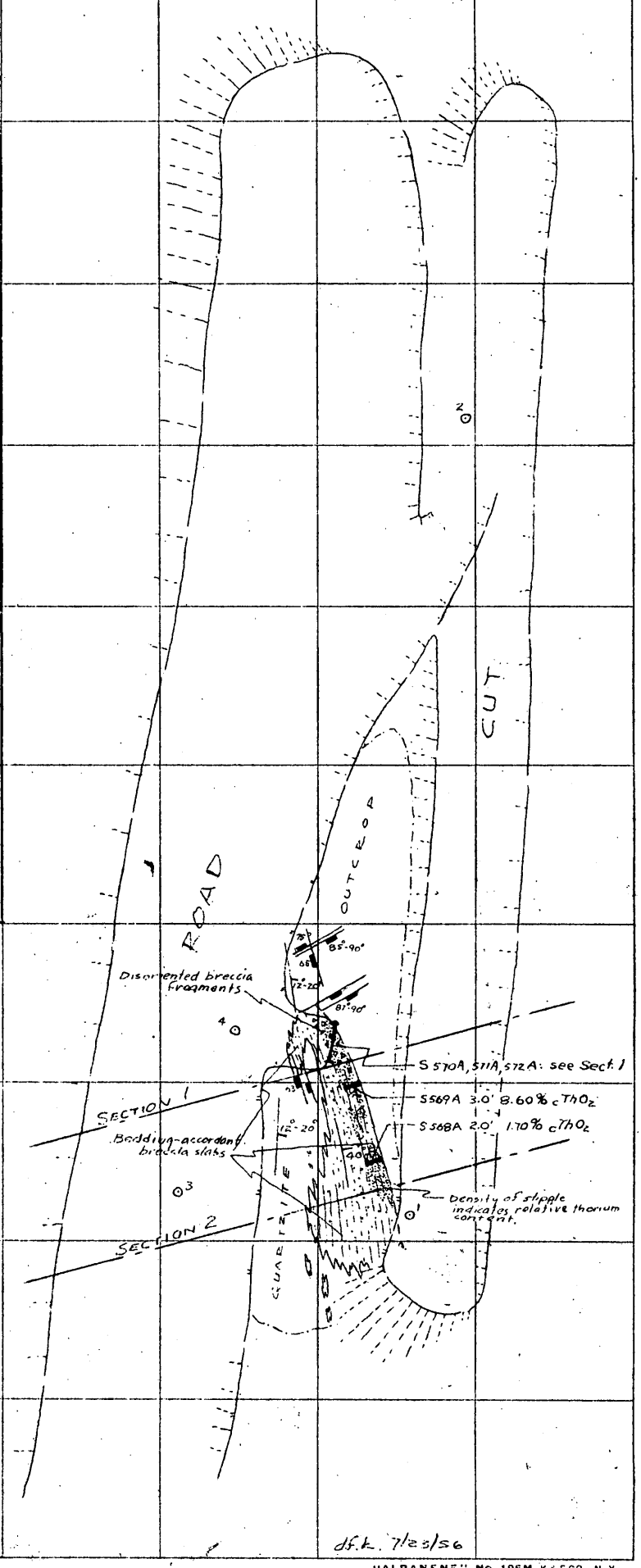


FIGURE 1

HALL MTN. THORITE MINING CO.

BRECCIA EXPOSURE
TMU CLAIM NO. 1
SEC. 13, T65N, R.1W.
BOUNDARY CO., IDAHO
1" = 20'

"ALBANENE" No. 196M K&E CO., N.Y.
REG. U.S. PAT. OFF

Docket No DMEA 4344

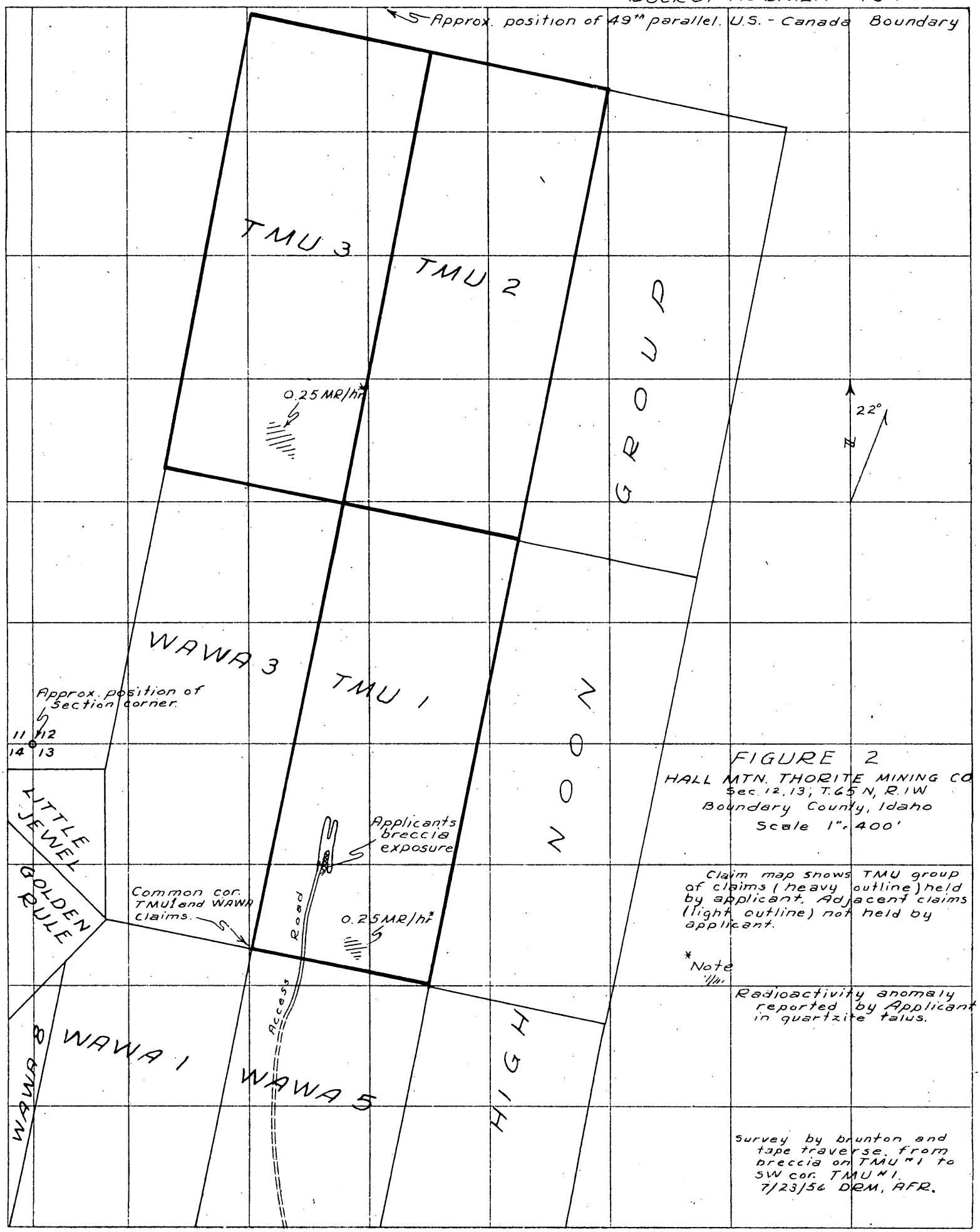


FIGURE 2
HALL MTN. THORITE MINING CO
Sec. 12, 13; T. 65 N, R. 1W
Boundary County, Idaho
Scale 1" = 400'

Claim map shows TMU group of claims (heavy outline) held by applicant. Adjacent claims (light outline) not held by applicant.

*Note

Radioactivity anomaly reported by Applicant in quartzite talus.

Survey by brunton and tape traverse from breccia on TMU #1 to SW cor. TMU #1.
7/23/56 DRM, AFR.

"ALBANENE" No. 195M K&E CO., N.Y.
REG. U.S. PAT. OFF

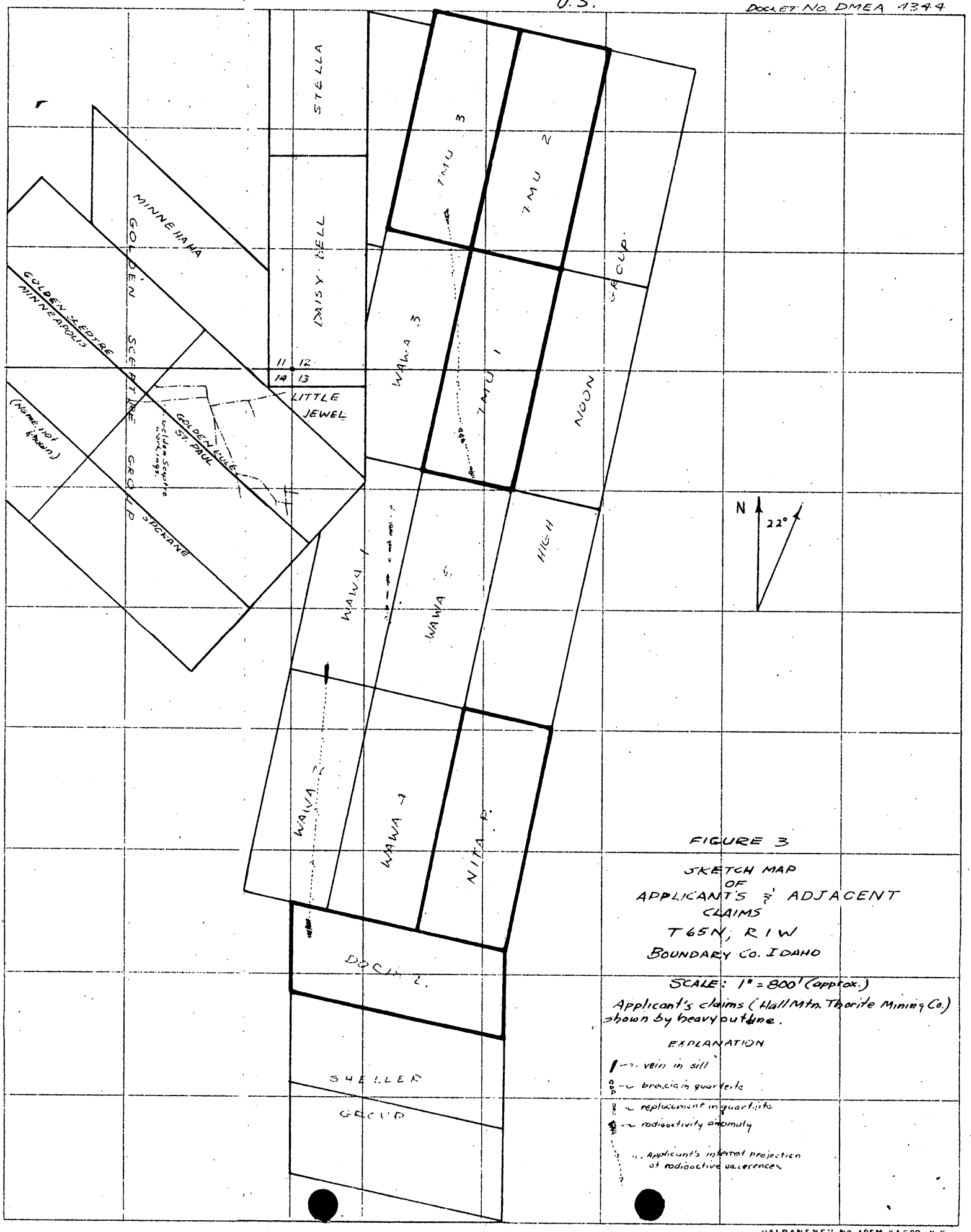


FIGURE 3

SKETCH MAP OF APPLICANT'S & ADJACENT CLAIMS

T65N, R1W

BOUNDARY CO. IDAHO

SCALE: 1" = 800' (approx.)

Applicant's claims (Hall Mtn. Thorite Mining Co.) shown by heavy outline.

EXPLANATION

- vein in sill
- breccia in quartzite
- replacement in quartzite
- radioactivity anomaly
- Applicant's interpret projection of radioactive occurrences

"ALBANENE" No. 195M K&E CO., N.Y.
REG. U.S. PAT. OFF

RECEIVED
OCT - 8 1956

Spokane, Wn.

Defense Minerals Exploration
Spokane, Wn.

Re DMEA #4344

Dear Sirs:

Due to acquisition of additional property and a change in working plans I hereby request a withdrawal of my application until such time as further work can be done and this can be submitted for re-examination.

Sincerely,

/s/ Bruce R. Berringer
President
Hall Mt. Thorite Mining Co.

RECEIVED
SEP 5 1956
U. S. G. S.
SPOKANE, WASH.

C O P Y

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

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

ADDRESS REPLY TO

[illegible]

[illegible]

[illegible] 1956

Re: Docket No. DMEA-[illegible]
Hall Mountain Thorite Mining Co.
Hall Mountain No. 1
Boundary County, Idaho

Mr. Wing G. Agnew
Acting Operations Officer
DMEA Field Team, Region I
Northwest District
[illegible] Second Street
[illegible], Washington

DMEA

Dear Mr. Agnew:

In reply to your letter of July [illegible] regarding Dmea [illegible] (Hall Mountain Thorium) submitted by the Hall Mountain Thorite Mining Company.

[illegible] there is but limited sale for thorium-bearing minerals [illegible] high defined sale and [illegible] for experimental purposes [illegible] present existing contracts assure an adequate supply for the [illegible] market. The price of $[illegible] per pound, reported [illegible] bearing upon the value of thorite [illegible] The figure $[illegible] per ounce is the price [illegible] AEC [illegible] buyers for pure (refined) thorium metal.

[illegible] the merits of the property, [illegible] would be [illegible] with [illegible], therefore, [illegible] from [illegible] at this time. If exploration is justified [illegible] of [illegible] and drilling [illegible] particular, if phase I were successful [illegible] be [illegible].

Very truly yours,

Arthur F. Grangen, Area Manager
Salt Lake Area Office
Division of Raw Materials

cc: Mr. L. Hetland

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

7-16-56

RECEIVED
JUL 13 1956

xxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

July 12, 1956

Mr. Arthur A. Granger
U. S. Atomic Energy Commission
P. O. Box 2136
Salt Lake City, Utah

Re: Docket No. [illegible]-1344 (Thorium)
Hall Mountain Thorite Mining Co.
Hall Mountain No. 1
Boundary County, Idaho

Dear Mr. Granger:

Enclosed is an application received from Bruce R. Berringer on the Hall Mountain claims in Boundary County, Idaho.

We would appreciate receiving any comments you might have as to the merits of the proposed exploration program. An examination is contemplated during the week of July 16.

Sincerely yours,

King G. Agnew
Acting Executive Officer
DMA Field Team, Region 1
Northwest District

Enclosure
cc: DMA (2)
[illegible] (2)

[illegible]

700

FILE COPY
Surname:

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

Hall Mountain Therite Mining Company
Pacific Hotel
Spokane, Washington

Re: Docket No. DMEA-434 (Thorium)
Hall Mountain No. 1 Property
Boundary County, Idaho

Gentlemen:

The application for assistance in exploring your property, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred to:

Mr. A. E. Weissenborn
Executive Officer, DMEA Field Team
Region 1, Northwest District
South 157 Howard Street
Spokane 4, Washington

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

Sincerely yours,

R. D. Mittenbühler

Administrator

FMMurphy/izm 6-29-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
DMEA Field Team, Reg. I NW Dist. (2)

700

FILE COPY
Surname:

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

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region I
Northwest District
South 157 Howard Street
Spokane 4, Washington

JUN 2 1956

Re: Docket No. DMEA-434 (Thorium)
Hall Mountain Thorite Mining Company
Hall Mountain No. 1 Property
Boundary County, Idaho

Dear Mr. Weissenborn:

The captioned application is referred to Region I, Northwest District, Field Team for investigation, a field examination if deemed advisable, and recommendation.

Enclosed are copies of memoranda, dated June 22 and 26, 1956, by James Paone, USBM, and T. H. Kiilsgaard, USGS, respectively, relating to the application.

We note that the Applicant does not control the Wawa and Sheller claims which would apparently benefit by exploration work on the five claims mentioned under 3(f) of the supplementary information submitted. However, the Applicant does mention the possibility of leasing that portion of Wawa Nos. 3 and 5 covered by the vein.

In the event the Field Team believes a project on the subject property is warranted, it should advise the Applicant that we will require copies of the lease agreements if executed. Also, that we will require six copies of the Owner's Consent to Lien on any leased land applicable to the proposed project.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

Enclosures

APPROVED:

P. F. Yopes
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

FMMurphy/izm 6-29-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
Messrs. EDLamb, Rm. 3649
THKiilsgaard, Rm. 5224

R.C.L.

6/27/56

IN REPLY REFER TO:

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

June 26, 1956

RECEIVED
JUN 27 1956

Memorandum

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

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of application submitted by Hall Mountain Thorite Mining Co., Boundary Co., Idaho, DMEA Docket 4344.

The applicant proposes to explore for thorite by a rather indefinitely proposed program, the estimated cost of which is $38,500.

The applicant's property and the nearby area has been the site of active exploration during recent years, all of it directed at searching for thorite or possible rare earth minerals. Little is known of the geology of the deposits except that they occur in ultrabasic sills (Purcell or Moyie sills), or in veins at the contact of these sills, with enclosing quartzite of the Aldridge-Prichard formation, the lowermost formation of the Belt Series.

The writer examined the adjoining Golden Sceptre mine in 1948, and again in 1953 when that property was referred to the Spokane office as a possible DMEA cobalt application. The property had been explored as a gold mine prior to 1926 but had never been productive. Earlier exploration had been on a strong quartz vein that followed a contact with quartzite on the footwall and diorite sill on the hangingwall. There were trace amounts of galena, sphalerite, and chalcopyrite in the quartz, and parts of the vein were reported to contain some gold although 2 samples that we took were essentially barren. Cobalt bloom was to be seen on the outcrop but in minute amounts. No radioactive studies were made on either of these examinations.

The Field Team is known to have considerable information on this property and it is recommended that the application be referred to them for further appraisal. They should also contact Mr. L. D. Jarrard of the AEC Butte Sub-Office for additional information on the property.

T. H. Kiilsgaard

T. H. Kiilsgaard

WASHINGTON, D.C.
JUN 27 1 21 PM '56

6-26-56

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

RECEIVED
JUN 26 1956

June 22, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: James Paone, Bureau of Mines Alternate Member
Uranium Commodity Committee

Subject: Application for Assistance, DMEA Docket 4344 (Thorium)
Hall Mountain Thorite Mining Co., Boundary County, Idaho

I have reviewed the attached application, DMEA Docket 4344, Hall Mountain Thorite Mining Co., Boundary County, Idaho, dated June 6 and received in this office June 19, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant is desirous of exploring for uranium and thorium on five unpatented mining claims located in Sections 12 and 13, T. 65 N., R. 1 W., Boundary County, Idaho. The project includes 1,000 feet of crosscut tunneling and drifting at a unit cost of $30 per foot and 600 and 2,000 feet of diamond drilling at a unit cost of $6 and $4 per foot, respectively. The total estimated cost of the project is $47,307.

A copy of a letter from an AEC representative to the applicant indicates that a possibility exists of finding a substantial amount of ore-grade material.

Inasmuch as the Commission has examined the property, it is recommended that the application be referred to the field and the field team consult with A. E. Granger, Salt Lake Exploration Branch, AEC.

James Paone

James Paone

Attachment

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
JUN 18 1956

RECEIVED
JUN 8 1956
U.S. G.S.
SPOKANE, WASH.

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

Not to be filled in by applicant

Docket No. DMEA-4344
Metal or Mineral Thorium
Date Received 6/18/56
Estimated Cost $38,500.00
Participation (Government %)

$47,307.00 Jm

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: HALL MOUNTAIN THORITE MINING CO.PACIFIC HOTEL SPOKANE WASH. A WASHINGTON IDAHO CORPORATION BRUCE R. BERRINGER PRES. MANAGER GEORGE HEAFFORD PACIFIC HOTEL SPOKANE WASH. AND NITA BERRINGER E2022XXX 1st SPOKANE WASH BOARD MEMBERS.

(*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 5 UNPATENTED MINING CLAIMS IN BOUNDRY CO IDAHO. SEE ATTACHED LISTING, A

(*b*) State any mine name by which the property is known. HALL MT #1

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

(*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 NONE

(*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 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 30 days and be completed within 24 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 6 June, 1956

Hall Mt Thorite Mining Co
(Applicant)

By Bruce R. Berringer
President Manager

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

RECEIVED
JUN 1 8 1956

DMEA1 HAIL MT. THORITE
Boundry Co Idaho

3 (f)	Book	Page	Reg #
THE MAN UPSTAIRS (TMU) #1	6	251	66607
THE MAN UPSTAIRS (TMU) #2	6	250	66606
THE MAN UPSTAIRS (TMU) #3	6	249	66605
DORIS L	6	338	66992
NITA	6	339	66993

4(~~e~~ (a)
Am at present conducting exploration by dozeing and radiometric survey and am starting work herein described in project 1 within the limited rescourses at present available

5(d)
President manager has eight years mining experience three years mining engineering school five years as construction superintendant (kaiser Engineers Morrison Knudson andH.H.Robertson,) and Norman Lindsley consultant engineer has fifty two years as mine manager and engineer.

7 (a)
Both equiptment and money to be furnished by the company to meet any and all obligations not covered by allowances set forth under this schedule and contract.

5 b

Proposed work scedual and cost estimates for work to be performed on the TMU#1 lode of the Hall Mt. Thorite Mining C.

Project 1 Immediate

As shown on accompanying charts.

100'Tunneling and-or drifting from outcrop	$30 per ft.	$	3000.00
600' Diamond drilling at or near outcrop	$ 6per ft.		3600.00
Access road improvement 32 hrs dozer	$15 hr		480.00
Labor picking stone on road 32 hrs.	2 hr		64 00
Improve spring on Nita P. claim and pipe	Labor		48.00
to road for water haulage	Pipe		105.00
Build compressor shed and shop			300.00
Assays 10 THo2	$15		150.00
2 complete	30		60.00
Consulting Engineer 10 days	30 day		300.00
General supervision costs			500.00
Insurance State Industrial and liability	aprox.		200.00
	Total Project No. 1		8807.00

Project 2 subject to findings of project 1

1500ft new access road along vein 30 hrs	$15	$	450.00
30 hrs crosscut dozeing on vein	15		450.00
300ft crosscut tunnel and 200's.s.e and 400' n.n.w. drifting on vein	30		27000.00
2000' diamond drilling	4		8000.00
Assays 30 THo2	15		450.00
5 general	30		150.00
General supervision and engineering			2000.00
	Project 2 Total	$	38500.00
	grand Total 1 & 2	$	47,307.00

Company will furnish all tools and machinery (except dozer) to be used on this project as a part of the company obligation.

On hand at property now are the following

Jeep,120 cu ft compressor,I.R.7/8 jack hammer with steel and accessories and trailer and tanks for water.

On order a used Hoffman hydraulic feed A.X.drill.

This work may be reduced or confined to T.M.U.1 claim pending actual course of vein and-or lease of that portion of Wawa 3 and Wawa5 covered by this vein.

Bruce R Berringer

Bruce R. Berringer
President Manager
Hall Mt. Thorite.

REPORT ON TMU LODE NO. 1
HALL MOUNTAIN MINING CO., INC.

RECEIVED
JUN 18 1956

SUMMARY

Marked anomalies of high radioactivity occur in the Belt series of pre-Cambrian sediments, into which have been injected dioritic sills. Radioactive minerals may have been introduced concurrently with the sills, or may have followed at a later period along the same zones of weakness followed by the igneous rocks.

This report treats only of those readings made accessible by the cleaning of the rock exposure on the TMU Lode No. 1.

The presence of thorium, rather than uranium, is indicated as the principal mineral of value.

CONCLUSIONS

This prospect certainly justifies a vigorous campaign of exploration and development, on its own merits as shown, with added corroboration by the fact that it lies adjacent to the Golden Scepter and Wawa groups, which have already demonstrated thorium and uranium deposits within the same Belt series.

RECOMMENDATIONS

Conduct further exploratory work, preferably by diamond drilling, to the eastward in the area showing the best readings as indicated by red circlings of the better counts. In this manner ascertain the trend and limits of the ore body, and follow up with drifting, as shown by dotted lines on the sketch herewith. Never forget RULE ONE OF MINING: STAY WITH THE ORE.

LOCATION

The Hall Mountain property is located in sections 12 and 13, in Twonship 65 North, Range 1 West, about 4 miles easterly of Porthill, Idaho.

ACCESSIBILITY

The nearest railhead is at Porthill, which is served by the Great Northern Railroad. A blacktop highway--State No. 1, and US 95, leads to Bonner's Ferry, and Sandpoint, Idaho, where connections are made with paved roads to the east, west and south. Low standard dirt roads lead from State highway No. 1 to the mine.

TIME SPENT ON THE PROPERTY

Time spent on the property was parts of two days. However, the writer spent about three weeks in the area (on the Golden Scepter and Wawa groups) in the spring of 1955.

TOPOGRAPHY

The Kootenai Valley is very wide with slightly undulating hills and level farmlands. The mountains rise abruptly and soon change to a series of very steep and rugged cliffs, which continue practically to the summits.

Doris L. = 5' fragment

CLAIMS

7 (1)

Claims are four in number: the Nita B, which lies to the east of, and shares a common side line with Wawa No. 4; TMU No.'s 1, 2 and 3. The major axis of all four claims is N 10° E.

TITLE

Title is possessory, and is maintained by annual assessment work.

HISTORY

Claims were staked in the spring of 1955 by Bruce Berringer, President and General Manager of the newly organized Hall Mountain Mining Company, the present owner of the claims.

STRUCTURES AND EQUIPMENT

There are no structures on the property at present.

Equipment consists of a compressor having a capacity of 120 cubic feet of free air per minute, with drill, steel, hose and other accessories, and an army Jeep.

WATER

Water from springs flowing from a point above the discovery is deemed sufficient for drilling and domestic purposes.

TIMBER

A plentiful supply of larch, fir and Ponderosa pine is present on all four claims. Sawed lumber is available from several mills in the Kootenai Valley.

POWER

Electric power is available from lines in the valley.

ECONOMIC GEOLOGY

At present, the size and shape of the ore deposit is not sharply defined. In the adjacent Wawa lodes, the strike of the mineralized zones seems to conform roghly to the line of outcropping of the dioritic dikes or sills.

GENERAL CONSIDERATIONS

The future of thorium will be decided in the research laboratory. At present the government has fixed the price at $43,00 per kilogram, or about $19.50 per pound (avoirdupois). Sales are restricted, however, to very special uses. Indications are that thorium may be a future chief source of industrial power.

Respectfully submitted,

Norman D. Lindsley
Registered Professional Engineer
Mining Engineer

Colville Washington
May 25 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

RECEIVED
JUN 18 1956

June 13, 1956

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: New Application (Thorium)
Hall Mountain Thorite Mining Co.
Hall Mountain No. 1
Boundary County, Idaho

Dear Mr. Selfridge:

Enclosed are three copies of an application from the Hall Mountain Thorite Mining Co. We have retained one for our files.

The property has been visited by geologists from this office and the Atomic Energy Commission, and there is no doubt that ore-grade material exists. More details are needed before we could recommend an exploration program but available information suggests that there may be a promising prospect -- assuming that there is or will be a market for thorium ore.

By Field Team, Region I, NW Dist.

A. E. Weissenborn
A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew
Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosure

cc: USBM (2)
Alvord

June 18, 1956

Hall Mountain Thorite Mining Co.
Pacific Hotel
Spokane, Washington

Subject: DMEA 4344
Re: Exploration Assistance
Hall Mountain #1

Gentlemen

The receipt of your application dated June 6, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA 4344 and referred to the Rare & Misc. Metals Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

June 18, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region I,NW

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 I,NW.

DMEA
-4344 Hall Mountain Thorite Mining Co.

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

AGREEMENT TO INCORPORATE

RECEIVED
JUN 18 1956

We, the undersigned, do hereby agree to form a Corporation to be known as and under the name of Hall Mountain Thorite Mining Company, Inc., with a total authorized capital not to exceed Three Hundred Thousand Dollars ($300,000.00) for the purpose of exploring and developing the following described claims:

The Doris L, The Rita F, and The Man Upstairs numbers 1, 2 and 3, all located in Section 12 and 13, Township 65 North, Range 1 West, about four miles Easterly of Porthill, Boundry County, Idaho.

and such other and further claims and mining properties in such State or other States, as may appear to be to the advantage of such Company.

The above described claims are presently owned by Bruce R. Berringer and Rita F. Berringer, two of the subscribers hereto, as tenants in common, and it is understood and agreed by and between the Incorporators, and the owners hereby covenent to sell, convey and transfer unto said Corporation when formed, the above described mining claims, for and in consideration of the transfer to them of $180,000.00 worth of the Corporate stock of said Company, $40,000.00 worth of said stock to be issued to Rita F. Berringer and $60,000.00 worth to Bruce R. Berringer.

In order to raise a sufficent Capital with which to incorporate said Company, the Incorporators do hereby contribute and subscribe to the Capital with which said Compnay will be organized and commence business, the amounts set opposit their respective names hereinbelow.

The Incorporators have agreed to employ Larry T. Keegan to represent them and act as their attorney in the formation of said Company, at an agreed fee of $1,000.00, $750.00 of which will be paid by the issuance of Corporate stock. $200.00 of the subscribed Capital of said Company has been turned over to said attorney for the purpose of starting said incorporation.

Bruce R. Berringer	Pacific Hotel, Spokane, Washington	$160.00
George	" " "	400.00

It is further agreed by and between the Incorporators that the said George because of his time and assistance in helping organize said Co pany will be issued stock in the Corporatuon, when formed, in the amount of two dollars for each dollar invested up to and including the date of incorporation.

June 6, 1956

Bruce R. Berringer

George L. Keegan

LINDSAY CHEMICAL COMPANY

FOUNDED 1906

WEST CHICAGO, ILLINOIS

CHARLES G. LINDSAY II - President
HERE W. SCHWELKNOER - Vice President-Treasurer
CLIFFORD W. STRAGHAN - Secretary
WILLIAM D. VERMILYE - Chemist-in-Charge

February 6, 1956

Mr. Bruce R. Barringer
Room 338
Pacific Hotel
Spokane, Washington

Dear Mr. Barringer:

Thank you for your recent letter addressed to Mr. Gene Tho

Unfortunately Gene is on an extended leave of absence so I am taking the liberty of answering it for him.

The sample which Gene collected from the TNT claim showed 1.16% TiO_2. This is the only record we have of an analysis for a sample taken by Gene from your property.

If you care to contact Gene directly, we suggest you write to him at 1 South Division, Centerville, Illinois. It is possible that he may have some further suggestions to give you in this matter.

Sincerely yours,

LINDSAY CHEMICAL COMPANY

Enclosure: Personal Letterhead to the President

THIS IS A REPRESENTATIVE SAMPLE OF THE CONTENT OF ALONG THE LINE

BR

DAVISON CHEMICAL COMPANY
DIVISION OF W. R. GRACE & CO
BALTIMORE 3 · MARYLAND

RECEIVED
JUN 18 1956

September 30, 1955

Mr. C. W. Greear, Agent
Northwest Prospecting and Development Co.
North 2124 Division Street
Spokane 21, Washington

Dear Mr. Greear:

We have now received the results of a chemical analysis of the four samples of ore which you sent to our Mr. H. H. Graham. The analytical results are as follows:

	Sample No.	% ThO_2	% Ce_2O_3
FMU 1	(1)	[illegible].97	0.36
wave 8	(2)	[illegible].93	0.51
wave 1	(3)	[illegible].04	0.62
tunnel	(4)	[illegible].54	0.39

As you undoubtedly know our plant operates on monazite and we have not yet evaluated the possibility of it operating on crude thorium ore. We will appreciate being kept advised of your progress in developing your claims and success in producing a high grade thorium concentrate.

Yours very truly,

DAVISON CHEMICAL COMPANY
Division of W. R. Grace & Co.

A. T. Cole
Director of Atomic Development

ATC:rs
CC: Mr. William B. Dunbar

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF RAW MATERIALS
SALT LAKE EXPLORATION BRANCH

ADDRESS REPLY TO:
U. S. ATOMIC ENERGY COMMISSION
BUTTE SUBOFFICE
P. O. BOX 1984
BUTTE, MONTANA

AND REFER TO: SLEB:LDJ:mf

February 8, 1956

RECEIVED
JUN 18 1956

Mr. Bruce Berringer
Hall Mountain Therium
Room 338 Pacific Hotel
Spokane, Washington

Dear Bruce:

While I, of course, hope that you are able to swing a deal favorable to you on your therium bearing properties in Boundary County, Idaho, I think that you should first realize that what you call the change in the outlook for therium stems from a possible misinterpretation of the recently announced increase in the price of metallic therium from eleven to forty-three dollars per kilogram (2.2 pounds). This price is not what anyone, as far as I know, is willing to pay or must pay for the metal but rather the amount asked by the Government for any therium metal it might furnish to experimenters in that metal's use.

The general outlook for therium is no different than before, at least to my knowledge, though I must admit that several companies are apparently interested in the acquisition of therium bearing properties.

As regards the THU Claim No. 1, you will recall that Mr. Dudley Davis and I visited it in your company on June 27, 1955, and at that time examined a number of claims and underground workings in the area. The claim and test pit to which I believe you refer lie approximately 1500 feet above the underground workings and about one-half mile east of them. The pit showed brecciated quartzite cemented by quartz, calcite and chlorite and containing what I at that time thought to be a manganese mineral. Though no radioactive minerals could be recognized, maximum radioactivity in the immediate area was from two to five MR/hr on our instrument.

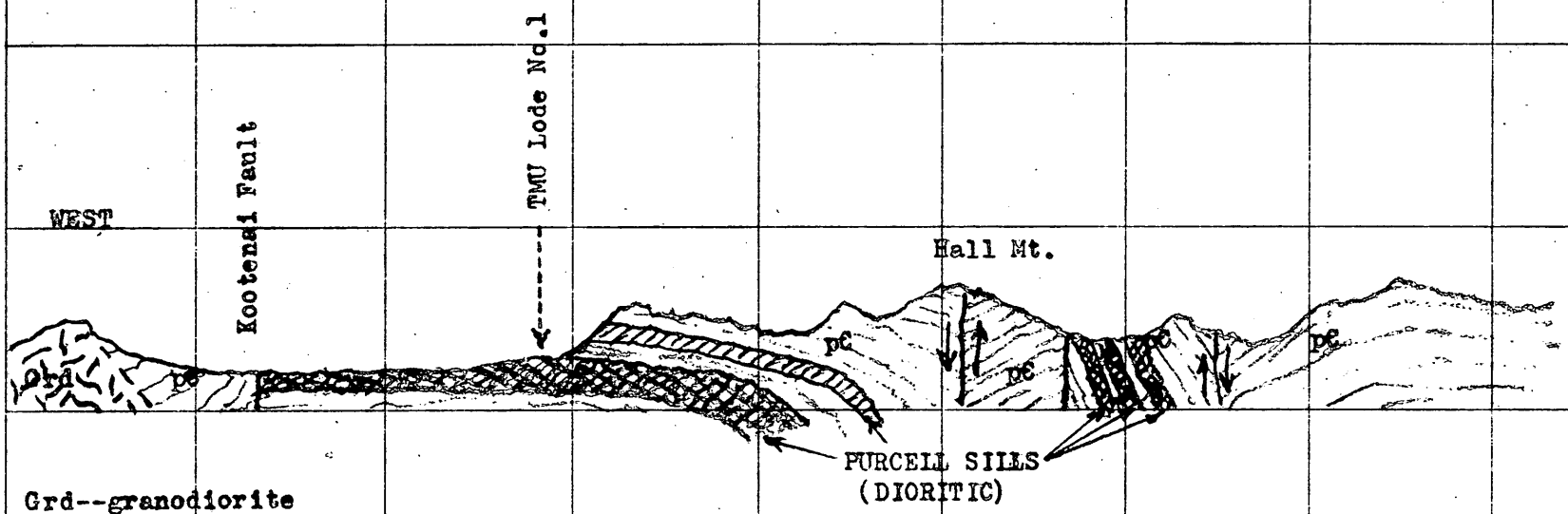
You will also recall that the exposures were quite limited and were insufficient to determine whether mineralization was confined to any particular horizon in the rocks or whether it may be due or related to

shearing intersecting certain beds. As I recall the samples were lower than had been anticipated by the intense radiation present in the pit. Since a number of such radioactive exposures may be seen on that mountainside, some of which assay rather high, I am sure that at least small tonnages of material that will be considered to be of ore grade are to be found, and it is highly possible that additional exploration would substantially increase the amount of material.

Very truly yours,

Leonard D. Jarrard
Chief, Butte Sub-Office

[redacted]



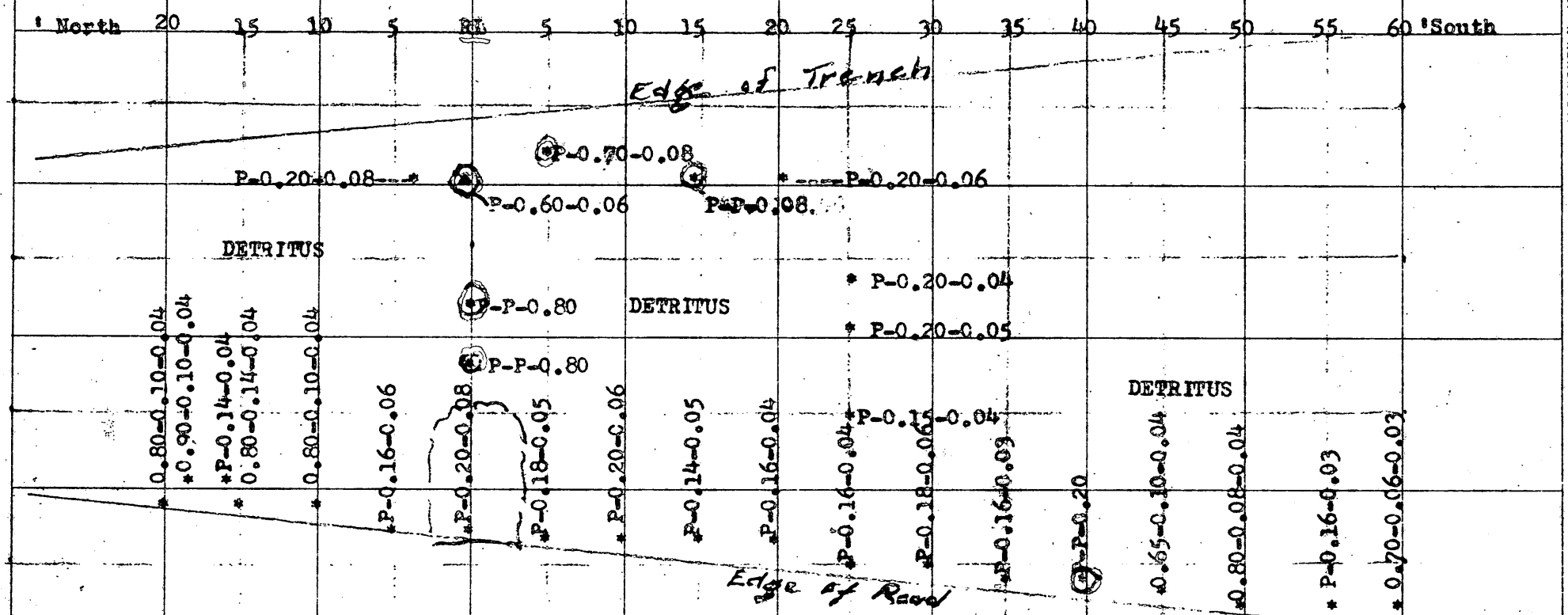
Grd--granodiorite
pЄ --pre-Cambrian sediments
Purcell Sills were so named by
~~Daly, Reginald A., of the~~
Geological Survey of Canada.

GEOLOGICAL SECTION
Showing Occuurrance of Sills
From Idaho Bureau of Mine
and Geology.

To accompany report on Hall Mountain
Mines.

Norman R. Lindsley

"ALBANENE" No. 195M KAECO., N.Y.
REG. U.S. PAT. OFF.



First figure is for reading on ore calibration scale (0 to 1.00)
Said scale is equivalent to 0 to 500 counts per minute, with full sensitivity and x1 setting.
Second figure is for x1 range and ½ sensitivity.
Third figure is for x100 range, with full sensitivity.
(P; for peg), indicator goes off the scale.
Note: second setting, x10 and ½ sensitivity comes closest to % by assay, but must be discounted for mass action.
Instrument used: Fisher Uranium Scout De Lux, Model 1.

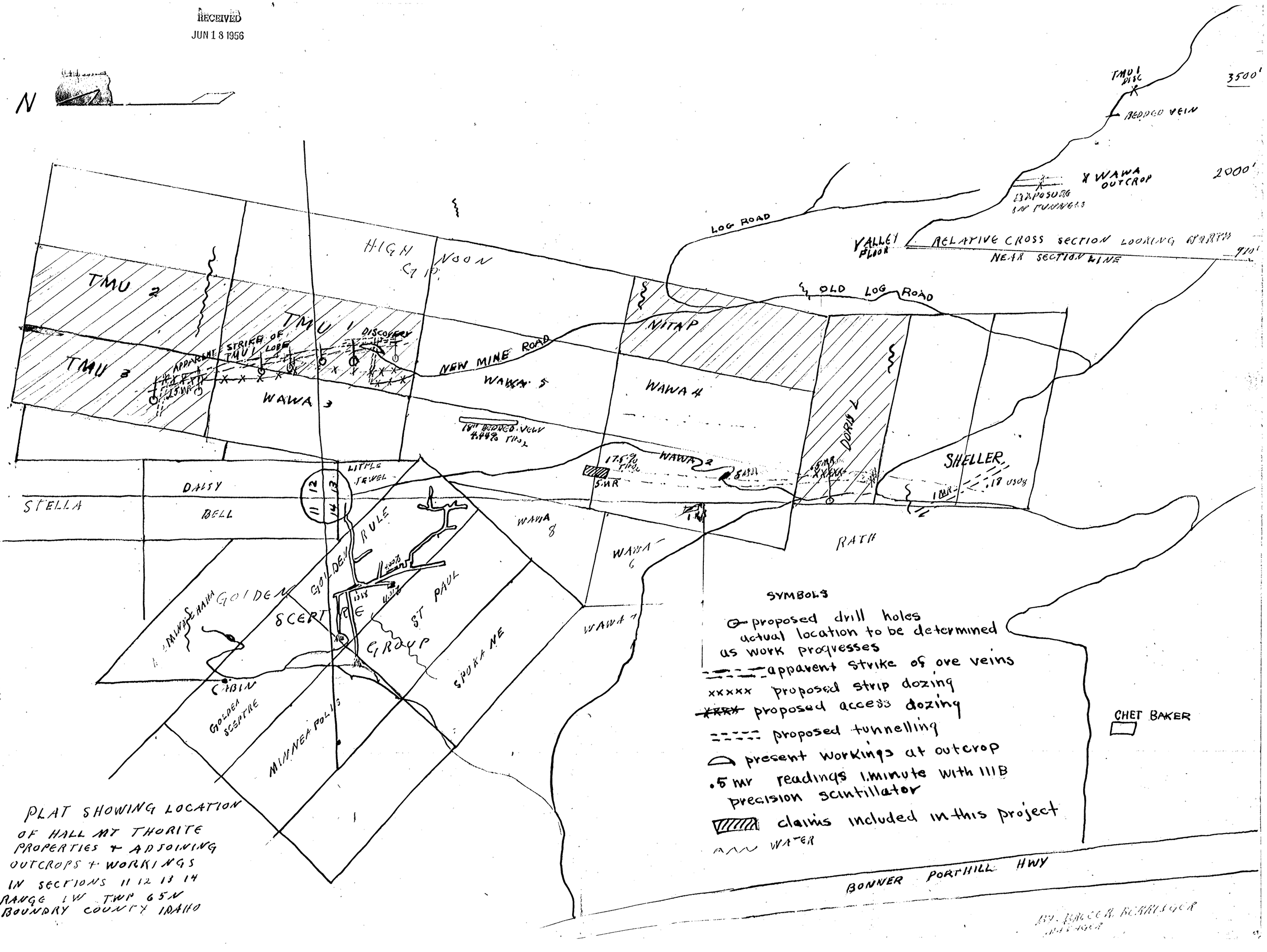
SKETCH OF ROCK EXPOSURE, SHOWING GEIGER COUNTER READINGS
Projected onto vertical plane.
TMU Lode No.1.

HALL MOUNTAIN MINING CO., INC.
Scale, 1" equals 10'
May 12 1956

Norman D. Lindsley
Norman D. Lindsley
Mining Engineer
Registered Professional Engineer

"ALBANENE" No. 195M K&E CO., N.Y. REG. U.S. PAT. OFF.

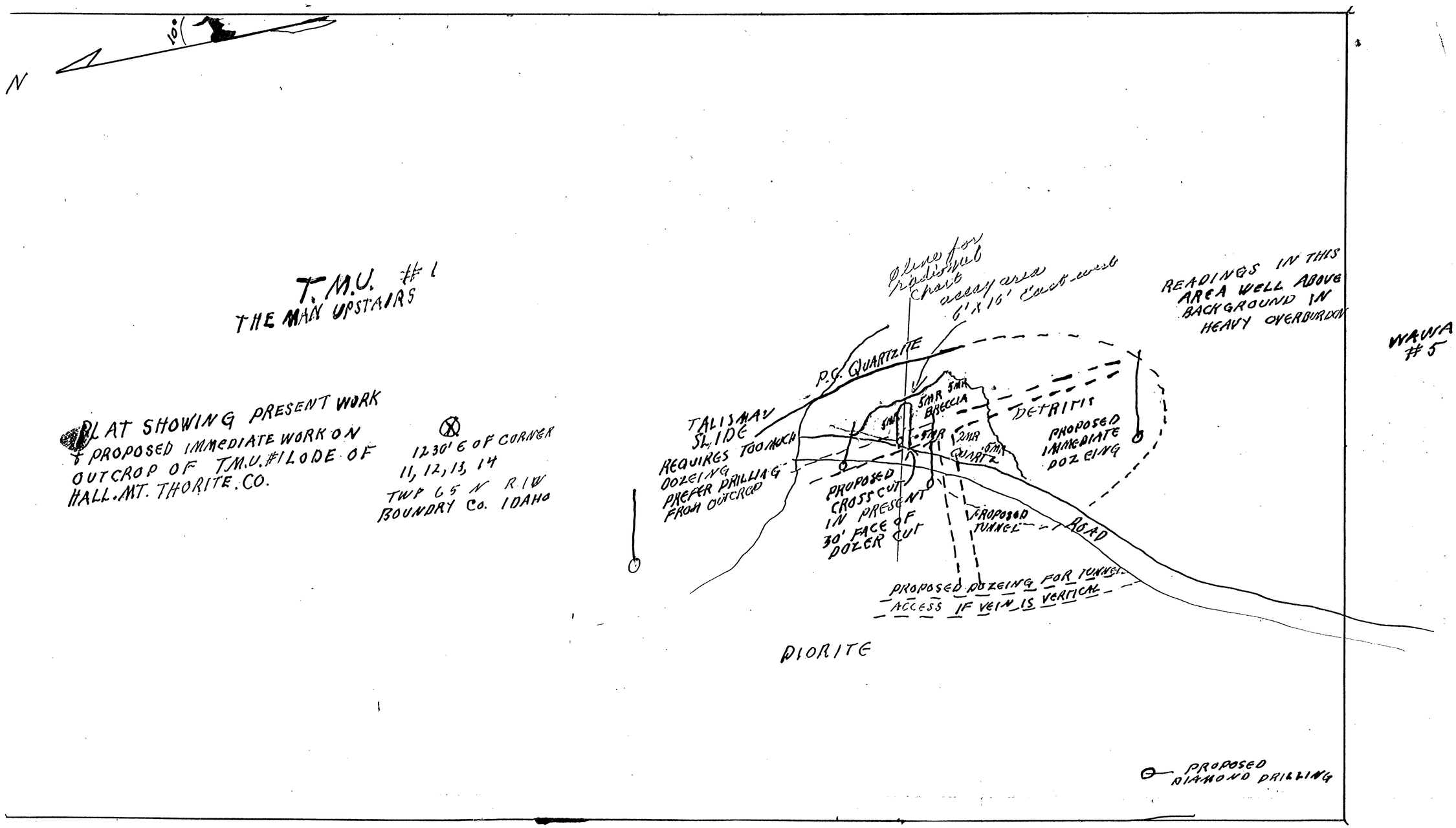
RECEIVED
JUN 18 1956



PLAT SHOWING LOCATION OF HALL MT THORITE PROPERTIES + ADJOINING OUTCROPS + WORKINGS IN SECTIONS 11 12 13 14 RANGE 1W TWP 65N BOUNDRY COUNTY IDAHO

BY BACON BERRYSON
MANAGER

RECEIVED
JUN 18 1956



Lindsay Chemical assay 1.1% THO2
Davidson " " 4.97% "

WAWA 3

USGS 3.3 U.E. thorite ident.
2.79 U.E.

SCALE 2" = 100'
SURFACE ANGLE
36° RAISE TO EAST

BY BRUCE R. BERRINGER
MANAGER.