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| To: | Appeal Comm | Date | 12-19-52 |
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2730

DEC 19 1952

Mr. William H. Frazee
Lime Dyke Tungsten
1239 Orange Street
San Bernardino, California

Re: Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
Lime Dyke Claims 1 to 21, inclusive
Kern County, California

Dear Mr. Frazee:

Your application for exploration assistance and other reports concerning the Lime Dyke tungsten claims on the east slope of the Piute Mountains available to us in Washington have been carefully reviewed. These reports include the data from both the original and the second field examinations of your property.

This information, although substantiating the occurrence of a small amount of low grade tungsten mineralization on your property, indicates to us that the probability of disclosing mineable ore reserves is not sufficiently promising to justify Government participation. We regret, therefore, to inform you that your amended application for exploration assistance is also denied.

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

Sincerely yours,

C. O. Mittenderf

Administrator

Enclosures - 10 Photographs

FARutledge/ls 12/18/52

cc: Docket
Admn. Read. File
Field Team, Reg. 3
F. A. Rutledge
C. C. Selfridge
D. H. Lemmon, USGS
R. W. Geehan, USBM

Administrator, DMEA

Dec. 18, 1952

Iron and Ferro-Alloy Division, DMEA

Denial of application for exploration assistance in the amount of $32,392.02. Previously denied under Docket No. DMEA 2450.
Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
Lime Dyke Claims 1 to 21, inclusive
Kern County, California

The denial of the subject application by this Division is based on the following information:

(1) The deposits are typical of the Weldon district. Scheelite is found disseminated in scattered tactite bodies and lenses in a series of interbedded schist, tactite, and marble that has been intruded by granitic rock.

No significant production or discovery of tungsten has been made in the Weldon district to date. Scheelite was sparse in all of the tactite bodies investigated during the referenced field team examinations.

(2) The subject application for exploration assistance was divided into seven separate units or projects. Only one of the deposits contained scheelite in quantities approaching 0.5 percent $WO_3$.

This deposit, on Claim No. 20, consisted of small lenses of tactite in a triangular wedge-shaped body of marble in contact with quartz diorite. One lense is 5½ feet thick at the center and the other 1½ feet thick. The tactite beds pinch out 6 to 10 feet away from the quartz diorite-marble contact. The average grade of the tactite appears to be considerably less than 0.5 percent $WO_3$.

(3) Work to date by the applicant has consisted of a small amount of trenching and road work which has exposed no tungsten mineralization of importance.

(4) The results of the Field Team examination indicated that exploration of the property with Government funds is not warranted.

(5) The Field Team recommends denial of the application.

(6) The Commodity Division of the U. S. Geological Survey concurred in the denial.

FARutledge/ls

cc: Docket
Admn. Read. File
F. A. Rutledge
G. C. Selfridge

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

COPY 400 COPY

Geo. C. Selfridge 12-12-52

H. D. Crittenden, Jr.

DMEA 2673 - Tungsten
2730 - Tungsten

Rejection sustained.

/s/ Max D. Crittenden, Jr.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

December 4, 1952

Memorandum

To: Frank E. Johnson, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2730 (Tungsten), Lime Dyke Tungsten Company, Lime Dyke Claims 1 to 21 Incl., Kern County, California

Reference is made to your request, dated October 16, requesting a reexamination of the subject group of tungsten claims for which a prior application, Docket DMEA-2450, was denied on August 14, 1952 because of inadequate evidence of a worthwhile target.

Since the examination of the property by John D. Warne of the Bureau of Mines on June 4 and 5, 1952, the applicants completed some additional work which they believed warranted reconsideration of their application for a DMEA Loan. Accordingly, the claims were reexamined on October 21, 1952 by W. P. Irwin and J. F. Robertson of the Geological Survey, who report that the property consists of several small bodies of rock that contain scattered showings of scheelite, which, however, are small and too low grade to constitute ore. Exploration of the deposits, they report, would prove a negligible tonnage of ore, and it is their recommendation that the applicant's request for Government aid be denied.

Four copies of the report, entitled DMEA-2730, Lime Dyke Tungsten Company, Kern County, California by J. F. Robertson and W. P. Irwin, Geologists, U. S. Geological Survey, dated November 25, 1952, are attached.

Reviewed by
DMEA OPERATING COMMITTEE
12-12-52
(date)

H. C. MILLER

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

Attachment
Copy to: E. H. Bailey, USGS
A. C. Johnson, Reno, Nev. (with copy of report)

RCS
12/15/52

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

# REPORT OF EXAMINATION BY FIELD TEAM
# REGION III

## DMEA 2730, Lime Dyke Tungsten Company

## Kern County, California


J. F. Robertson, Geologist
W. P. Irwin, Geologist
U. S. Geological Survey


November 25, 1952

Reviewed by
DMEA OPERATING COMMITTEE

12-12-52
(Date)

## Introduction

The tungsten claims of the Lime Dyke Tungsten Company were examined by W. P. Irwin and J. F. Robertson of the Geological Survey on October 21, 1952 in response to a request from the Defense Minerals Exploration Administration. Members of the Company present during the examination were O. W. Atkins, W. N. Frasee, R. M. Gray, Jr., and R. L. Gray. Discovery pits and outcrops pertinent to the Company's exploration proposals, with exception of those on Claim No. 3, were inspected during the day and re-examined with ultra-violet lamp at night. One sample was taken from each of Claims Nos. 1 and 18-A, the two best showings of scheelite.

The Company's exploration proposal is mainly for underground work at a cost of $32,392.02. With the exception of the deposit on Claim No. 1, none of the deposits is exposed sufficiently to be at a stage of development requiring underground work. A systematic program of relatively inexpensive surface trenching would be more in order than the applicant's proposal, but even this does not appear to be warranted owing to the indicated low grade of the deposits.

It is recommended that the applicant be denied Go ernment aid.

## Location and Description

The Lime Dyke Tungsten Company claims are on the east slope of the Piute Mountains between 4000 and 6000 feet in altitude, approximately 6 miles south of Weldon in Kern County, California. They are in the Sequoia National Forest Reserve, in parts of sections 13,14,15,23 and 24, T. 27 S., R. 34 E., Kernville quadrangle. All of the claims relevant to the DMEA application are on a northwest-trending spur-ridge of the Piute Mountains.

The property is readily accessible from Weldon by automobile over 7½ miles of paved road and about 2 miles of fair dirt road. Most of the claims and prospect pits are reached by 2 miles of steep dirt road built by the company. Claim Nos. 1 and 3, however, are 2/3 miles beyond, and 500 to 1000 feet higher than the end of the mine road. No trail to these claims exists.

Topography is steep and bed rock exposures are good. Vegetation on the property is sparse owing to an arid climate. A creek that issues from the range and passes through the property is reported to provide a year-around supply of water.

## General Geology

The claims are along the southeast limb of a syncline in metamorphic rocks. The metamorphic rocks consist of interbedded schist, calc-silicate rock, and marble, and have been intruded by granitic rock of

probable granodiorite and quartz dioritic composition. In some places, the metamorphic rocks occur as discontinuous masses in the granitic rocks. Aplitic and pegmatitic dikes are numerous and widespread, crosscutting the other rocks; their intrusion appears to have followed the period of granitic intrusion. Migmatite and calc-silicate rock have been developed locally near the contacts between granitic or pegmatitic and metamorphic rocks.

The calc-silicate rock occurs as irregular patches and lenses in the marble and schist, and consists of garnet, epidote, amphibole, and quartz and calcite. In some favorable places the tactite contains the tungsten-bearing mineral scheelite. Scheelite, however, was sparse in the tactite bodies examined.

The exploration proposals in the DMEA application are listed as units, with separate consideration of each claim or prospect. A similiar system has been used in the following discussion of the property.

## Unit No. 1, Claim No. 18

Prospect No. 18 is at the upper end of the mine road, at an altitude of 5000 feet, and on the north side about 50 feet below the crest of the northwest-trending ridge. The prospect is a cut 45 feet long and 12 feet deep that crosses two beds of calc-silicate rock. Each bed is about 2 feet thick, and the beds are separated from each other by 18 feet of schist. Two beds strike N.40°W. and are nearly vertical. The southeasterly bed is 8 feet from a conformable contact between granodiorite and schist.

The calc-silicate beds can be traced by following discontinuous outcrops to the ridge crest approximately 100 feet southwest of the open cut. The northwesterly bed has been explored by open cutting along the strike for 35 feet. Lamping over 50 feet of fresh exposure revealed no scheelite, although the applicants claimed that considerable $WO_3$ ore had been mined from the northwesterly bed.

The applicants want assistance to explore this prospect by driving a 150 foot adit southwesterly from a point on the ridge slope below the opencut bank exposure. Two 50 foot crosscuts from the adit are proposed to explore laterally for scheelite-bearing beds. The total cost is to be $7,475.20.

Bodies or shoots of scheelite-bearing rock may be present in the calc-silicate beds, but the barren exposures suggest that such bodies if present, are separated by considerable quantities of barren rock. It is doubtful that a sufficient quantity of scheelite-bearing rock is present to warrant the cost of the proposed exploration. Trenching on the surface at intervals along the strike of the calc-silicate beds would be a much cheaper method of prospecting, but even this is not warranted.

## Unit No. 2, Claim No. 18-A

Prospect No. 18-A, at the southeast corner of claim No. 18, is a 50-foot cut along the north side of the mine road and is on the south side of the spur ridge at an elevation of about 4900 feet. It exposes a calc-silicate bed for a length of 18 feet. The bed is in schist, and is at the crest of a small anticlinal fold that pitches steeply northeast. At the crest of the fold the calc-silicate bed is 1 to 2 feet thick, but within a few feet thickens to 3½ feet on the west limb and 3 feet on the east limb. Two feet east of the calc-silicate bed in the east limb of the anticline granodiorite is in contact with the schist. The east limb strikes N.5°W., and is vertical; the west limb strikes west and dips 60°W.

Scheelite is disseminated throughout some of the calc-silicate rock in both limbs of the fold, but none was seen at the crest of the fold. In the east limb, one area of 2 square feet lamps 1 percent $WO_3$, but in other places it is barren. The distribution of scheelite is more uniform in the west limb. A sample taken across the west limb for a width of 2.5 feet was assyed by the Bureau of Mines at Reno, Nevada and contained 0.09% $WO_3$.

The applicants propose to sink a shaft in the calc-silicate bed to a depth of 60 feet, from which an 80 foot drift northward with a 40 foot crosscut at the end would be driven. They estimate the total cost to be $3,927.99. The proposal does not seem reasonable to explore the steeply-plunging anticlinal structure indicated by the surface exposures. Considering the small amount of surface prospecting, a more reasonable proposal would consist of trenching across the inferred extensions of both limbs of the folded calc-silicate bed to determine its extent down the hillside on the south side of the road. Trenching would determine whether more costly underground exploration is justified, and would provide a point for drifting in the bed rather than sinking and crosscutting.

## Unit No. 3, Claim No. 20

A triangular wedge-shaped body of marble with interbedded calc-silicate and minor schist is exposed about 1200 feet south of the road on the south slope of the ridge. The bedding strikes N.50°W., and dips 80° S., and is truncated on the southeast by a 6-foot-thick pegmatite dike that strikes N.75°W. The dike dips 55°NW and bounds the wedge for 50 feet. Quartz diorite bounds the west and north sides of the wedge.

An 8-by-6-foot pit exposes a part of the contact between the pegmatite and wedge of bedded rock. Calc-silicate rock occurs at intervals along this contact as semi-lenticular bodies that are interbedded with marble and schist, and lie nearly at right angles to the contact. The calc-silicated beds pinch out 6 to 10 feet away from the contact. Two such beds are exposed in the pit. One is 5½ feet thick with a 1½-foot-thick shear zone at the center, and the other is 1½ feet thick. Other such beds may be present along the concealed parts of the contact between the pegmatite and wedge.

Lamping of the beds exposed in the pit showed scheelite distributed in small patches and discontinuous streaks in the calc-silicate beds. These patches and streaks may contain as much as 1 percent $WO_3$, but the average grade of the calc-silicate rock appears to be considerable less than 0.5 percent $WO_3$.

The applicants proposed to drive a 100 foot adit into the wedge of the bedded rock. They then plan to drive two crosscuts, one midway along the adit and the other at the face to explore laterally. The proposed cost of $3,373.03 for this program is not warranted by the meager showings of scheelite in the pit or by the indicated small size of the body of bedded rock. Surface exploration by trenching to expose the contact zone of the marble along the pegmatite dike is more to be recommended. It is doubtful however that sufficient scheelite-bearing rock of commercial grade would be discovered by either method to make exploration worthwhile.

## Unit No. 4, Claim No. 3

This prospect is at an elevation of about 5500 feet on a spur ridge where the hill slope exceeds 30 degrees. It is 500 feet higher and nearly 1/2 mile distant from the end of the road. There was insufficient time to visit this outcrop during the examination.

According to the applicants, it consists of calc-silicate rock at the contact between steeply dipping marble and granitic rocks. No exploratory work has been done, but questioning of the applicants indicates that the calc-silicate rock contains no higher values of $WO_3$ than at the other prospects and contains lower values than Claim No1 described under Unit No. 5 below/

The applicants propose to explore Claim No. 3 by driving a 100 foot adit into the ridge slope to crosscut the calc-silicate rock and marble, then drift 50 feet in opposite directions from a point 75 feet in from the portal. The cost is to be $4,233.82. The plan is not warranted considering the probable low grade of the calc-silicate rock and lack of surface prospecting. Efficient surface prospecting, however, would require the building of trails, considered under Unit No. 8 below.

## Unit No. 5, Claim No. 1

Claim No. 1, at over 6000 feet altitude is the highest prospect on the property to be considered. It is 1000 feet above and 3000 feet airline distant from the end of the mine road. No trail exists from the road to this prospect.

The deposit consists of a zone of calc-silicate rock along a contact that strikes N.20°W and dips 80 SW between marble and pegmatite. At the north end of the claim the zone of calc-silicate rock is 10.5 feet wide, and is truncated on the north by pegmatite. The zone is progressively narrower to the southeast; at 85 feet it is 4 feet wide; at 100 feet it is 3 feet wide; and at 120 feet it is 1 foot wide. From the 120-foot point

it extends southward as a thin, more or less continuous sliver, pinching and swelling from 6 inches to 2 feet in thickness, until it pinches out at about 2'5 feet.

Scheelite is fairly well distributed in the calc-silicate rock for a length of about 20 feet at the north end of the zone. A sample was cut across 10.5 feet of the zone at a point about 12 feet from the north end. The sample was assayed by the Bureau of Mines at Reno, Nevada and contained 0.15 percent $WO_3$. South of the 20-foot length, scheelite is considerable less abundant and less uniformly distributed. The southern half of the zone of calc-silicate rock is nearly barren of scheelite.

The applicants proposed to sink a 50 foot shaft in the zone of calc-silicate rock near the north end, then drift along the zone 50 feet both to the north and south. At the face of the drifts they propose to crosscut 20 feet. The applicants estimate the program to cost $4,669.42. In addition to this cost, a road approximately a mile long from the present road would have to be built to the prospect over which to carry mining equipment to perform the underground work. The road building is considered under Unit No. 8, below, but it is an important factor to include in balancing cost against possible reserves blocked out by exploration of units No. 4 and 5.

Exploration of this deposit would involve either tunneling or diamond drilling, as the deposit is ~~not~~ well exposed at the surface. Diamond drilling would be difficult from the standpoint of supplying water and establishing suitable foundations for the drill rig on the steep hillside. An adit driven westward from a point on the steep slope below the outcrop near the north end is preferrable to sinking a shaft. Drifts could then be driven north and south along the calc-silicate rock from the face of the adit to effectively explore the zone of calc-silicate rock. The small amount of marginal ore indicated by the outcrops, however, does not seem to warrant expensive underground exploration.

## Unit No. 6, Claim No. 17, North end

This prospect is on the crest of the ridge about 100 feet north of the road at an altitude of 4500 feet. A shallow 3-by-6-foot pit in a 30-foot-wide area of no outcrop between a pegmatite dike and marble constitutes the prospect. A few pieces of scheelite-bearing calc-silicate float were uncovered by the pit, but no bedrock was exposed.

Marble crops out north of the pit. The bedding of the marble strikes north and dips 80° E. South of the pit the pegmatite dike crops out and ranges in thickness from 10 to 15 feet. It strikes N.50°W and dips 50°NE. A zone of calc-silicate rock is inferred to be at the contact between the marble and pegmatite.

An 80-foot shaft with two 20-foot crosscuts is proposed by the applicants to explore the inferred bed of calc-silicate rock. The cost is to be $3,365.03. The proposal is not practical, considering how little

is known of the size and grade of the inferred bed. Much data could be obtained by a far less expensive program of surface trenching.

## Unit No. 7, Claim No. 17, South end

This prospect consists of three small pits along the northeast side of the road at an altitude of about 4450 feet. The two end pits are 90 feet apart, and the middle pit is 40 feet southeast of the northernmost pit.

The two northern pits expose a calc-silicate bed that strikes N.30°W. and dips 70°SW. The bed is in biotite schist and migmatite, and is a maximum of 2 feet thick. In places it appears to pinch out.

The southern pit is approximately in line with the northern pits. There, three calc-silicate beds are exposed. Two are a foot thick and the third is 8 inches thick. The three beds are cut by a foot-thick pegmatite dike that strikes N.50°W and dips 45° NE. A pegmatite body 6 feet northeast of the beds is about 5 feet thick and appears to be a sill. Scheelite occurs as small grains disseminated throughout a few small areas in the calc-silicate beds, but at no place does the calc-silicate rock contain sufficient scheelite to constitute ore. The average grade of the rock is probably less than 0.1 percent $WO_3$.

The applicants propose to sink a shaft 80 feet in the calc-silicate beds, and crosscut 20 feet in two directions from the bottom of the shaft. The proposed cost is $3,565.03. This proposal is not warranted, as the small surface showings of low grade scheelite-bearing rock give no indication of there being a concealed body of ore of sufficient value to pay for the exploration.

## Unit No. 8, Trail

The applicants propose to build a crude road or trail from the end of the mine road to connect with claims No. 1 and 3. The purpose of the trail is to facilitate transportation of men and equipment for exploration of work. The trail is to be 2400 feet long, and is to be built at a cost of $1782.50.

The estimated length and cost appears to be considerably in error. According to the applicant's map, as well as the field examination, the road would need to be about a mile long. The cost appears to be too low; a cost of $10,000 would be more nearly correct. About one-third of the road would require drilling and blasting of solid bedrock, as the hillside is steep and the overburden shallow.

FARutledge:lm
10/9/52



cc: Admn. Reading File
Docket
R. W. Gesham, USBM
D. M. Lemmon, USGS
Field Team Reg. III
Operating Committee
O. C. Selfridge
F. A. Rutledge

Mr. H. C. Miller
Executive Officer, Region III
101E Flood Building
870 Market Street
San Francisco 2, California

OCT 1 61952

Re: Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
Lime Dyke Claims 1 to 21 incl.
Kern County, California

Dear Mr. Miller:

The subject docket is an amended application for exploration assistance on the Lime Dyke group of claims, Kern County, California. A prior application on part of the same property, Docket No. DMEA 2450, was denied August 14, 1952, because of inadequate evidence of a worthwhile target.

A field team examination of the property was made June 4 and 5, 1952, by John D. Warne, Bureau of Mines. The applicants now state that since this examination, they have completed a large amount of work and believe their exploratory project should be reconsidered. The application, therefore, is referred to your office for a field team examination to evaluate the new proposed projects.

Copies of the applicants' letter of transmittal and a memorandum by T. P. Thayer, U. S. Geological Survey, are enclosed for your information.

Sincerely yours,

(Signed) FRANK E. JOHNSON

Chairman, Operating Committee

Enclosures

Approved:

J. H. Heages
Member, Bureau of Mines

O. R. Fisher Jr.
Member, Geological Survey

OCT 1 6 1952

Mr. William H. Frasee
Lime Dyke Tungsten Company
1239 Arrowhead Street
San Bernardino, California

Re: Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
Lime Dyke Claims 1 to 21 Incl.
Kern County, California

Dear Mr. Frasee:

Your amended application for assistance in exploring the Lime Dyke group of claims in Kern County, California, has been reviewed by the Iron and Ferro-Alloy Division of the Defense Minerals Exploration Administration and has been referred to Mr. H. C. Miller, Executive Officer, DMEA Field Team, Region III, 1012 Flood Building, 870 Market Street, San Francisco 2, California, for a field examination.

The Regional Office will contact you at an early date in regard to the examination of your property. Any assistance that you can render the field team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

FARutledge:lm
10/10/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. III
H. C. Selfridge
F. A. Rutledge

IN REPLY REFER TO:

G-MD-CF

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

400

October 8, 1952

Memorandum

To: George C. Selfridge

From: T. P. Thayer

Subject: DMEA 2730, amending DMEA 2450
Lime Dyke Tungsten Co., Kern County, Calif.

After a field examination by J. D. Warne of the Bureau of Mines, the previous application was denied on the grounds of inadequate evidence of a worthwhile target and incompetence of the operators.

The only new information indicates that an inexperienced oil geologist (his drawings indicate his inexperience in tungsten) has been hired, some roads have been built, and some tunnels started. The applicants have not submitted a geologic map to document the merits of their exploration proposals for a $32,392.02 project.

Recommendation:

Refer the new application to the field for checkup on recent activities, and further evidence regarding competence of the applicants.

T. P. Thayer

TPThayer:gt

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 13 1952

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

October 7, 1952

Mr. William N. Frazee
1239 Esperanza
San Bernardino, California

Re: Docket DMEA 2450 (Tungsten)
Lime Dyke Tungsten Co.
Kern County, California

Dear Mr. Frazee:

We acknowledge your letter of October 1 to which you attached copy of a letter, addressed to Mr. C. O. Mittendorf, Acting Administrator, Defense Minerals Exploration Administration, Washington, D. C., together with copy of amended application for an exploration loan, map, assay sheets, and other documents relating to the Lime Dyke Tungsten property in Kern County, California.

When advised by the Washington Office of DMEA to make a field examination of your property, you will be advised of the time our engineers and geologists will visit your property.

We appreciate being advised that you are reopening your application for an exploration loan on your property.

Sincerely yours,

H. C. MILLER

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

Copy to DMEA, Interior Building, Washington 25, D. C.
E. H. Bailey, USGS

Docket

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 13 1952

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

October 7, 1952

Mr. William N. Frazee
1239 Esperanza
San Bernardino, California

Re: Docket DMEA 2450 (Tungsten)
Lime Dyke Tungsten Co.
Kern County, California

Dear Mr. Frazee:

We acknowledge your letter of October 1 to which you attached copy of a letter, addressed to Mr. C. O. Mittendorf, Acting Administrator, Defense Minerals Exploration Administration, Washington, D. C., together with copy of amended application for an exploration loan, map, assay sheets, and other documents relating to the Lime Dyke Tungsten property in Kern County, California.

When advised by the Washington Office of DMEA to make a field examination of your property, you will be advised of the time our engineers and geologists will visit your property.

We appreciate being advised that you are reopening your application for an exploration loan on your property.

Sincerely yours,

H. C. MILLER

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

Copy to DMEA, Interior Building, Washington 25, D. C.
E. H. Bailey, USGS

Copy retained 400
George C. Selfridge

(102)

C
O
P
Y

1239 Esperanza St.
San Bernardino, Calif.
September 30th, 1952

Mr. C. O. Mittendorf
Acting Administrator, D. M. E. A.
U. S. Dept. of the Interior
Washington 25, D. C.

Re: Docket No. DMEA 2450 (now 2730)
Tungsten
Lime Dyke Claims 1 to 21 inclusive
Kern Co., Calif.

Dear Sir:

This will acknowledge your letter of August 14th informing us that our application for exploration assistance was denied.

We fully appreciate the fact that this denial was justified on the basis of the small amount of information submitted; however, subsequent to the date of the application and also the time when your engineer, Mr. John D. Warne, of the U. S. Bureau of Mines, Reno, Nevada, made a very brief inspection of a minor portion of the property on June 5th, 1952, a large amount of work has been done, and the results, we feel certain, should justify your re-consideration of this project.

At the time of Mr. Warne's inspection on June 5th, only a very limited amount of work had been done and a thorough examination and sampling of the deposits was not possible. At that time he recommended that we open up these deposits in a certain manner and he indicated that he would recommend a further examination after the work was completed provided the results of our work were satisfactory. Since Mr. Warne's visit we have built approximately two miles of road extending from the camp site and crossing or contacting each of the seven deposits which are now opened and ready for your examination. We have expended approximately $5,000.00 for this work to date, practically all of which was spent on road building, and have about 15 tons of 1% to 1½% tungsten ore ready for the mill.

With reference to the geological aspects of our property, we should like to refer you to Mr. Ott F. Heiser, recognized as one of the foremost authorities on tungsten in this country, who made a three day examination of the property last April, and while this examination was not made on our behalf, we believe he would gladly furnish you with his report if requested.

The following is quoted from a report made by Mr. Russell M. Gray, Jr., graduate geologist of the University of Redlands:

"The Scheelite ore is found in epidote and quartzite, associated with granitic material. The veins are hypo-thermal in character. The epidote and tungsten appear to grade into impure granular limestone. The limestone, which has been metamorphosed to a large extent, is bounded by garnetiferous schist and granite. The granite and schist are largely decomposed near the surface and there is some evidence of leaching and secondary replacement in the ore bodies near the surface.

"On claims No. 18 and 21, outcrops of Phyllite with a 90 degree dip were observed directly above the limestone. Claim No. 1 is located directly beneath a large mass of limestone (part of the Kernville Marbelized Limestone series). This mass of limestone is exposed for approximately one third of a mile, strikes in a general North-South direction. Due to the crystalline structure and the amount of contact metamorphism, a dip was unattainable at this time.

"The strike of the ore veins appear to be roughly, a few degrees East of North. A schistosity dip was taken on the veins, but due to the decomposed material near the surface, it may not be considered accurate. No faulting was observed in the veins under discussion. Veins average two to six feet in width.

"The geological aspects of the area indicate the presence of extremely favorable conditions for a large amount of tungsten ore.

"The construction of two miles of road and the exploration of two veins on claim No. 16; one vein on No. 17, and two veins on No. 18 have already been partially completed. On No. 18 a tunnel has been started, running in below the vein. Drifts will be run off the main tunnel to the ore bodies.

"The road in the area runs by all the land and ore bodies claimed as shown on the attached map, with the exception of Claim No. 1 and No. 13.

"The map used is the Kernville Quadrangle, enlarged 16 times. One inch equals 660 feet."

We are enclosing herewith four copies of the above described map showing the location of claims No. 1, 13, 14, 16, 17, 18, 19, 20 and 21; the location of the exposed deposits; the location of the present road and the location of the proposed trail.

Also enclosed are laboratory reports from Smith-Emery Co. and Keldon Research Corp. showing the tungsten assays on the various samples of ore submitted.

The enclosed photographs are intended to give you a general idea of the appearance and topography of the property, and we will appreciate their return after they have served their purpose.

In view of the facts and conditions as outlined above, we respectfully request that you give favorable consideration to an exploration loan for this project, and we are submitting an amended application herewith.

Your prompt and favorable action will be appreciated.

Yours very truly,

LIMB DYKE TUNGSTEN CO.
by-

/s/ Wm. N. Frazee

Wm. N. Frazee, Secretary-Treasurer

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Docket No. D.M.E.A. ~~2450~~ 2730, Tungsten, AMENDED APPLICATION

# 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 2730
Metal or Mineral
Date Received 10-6-52
Estimated Cost
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 6 1952

## 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: Lime Dyke Tungsten Co. ; 1239 Esperanza Street, San Bernardino, Calif.
See attached supplement for names of partners
(A Mining Partnership)

(*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. see supplement

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 Virgin area partially located in Sections 13, 14, 15, 23 and 24 of Township 27 South, Range 34 East, M.D.B. & M., Kern County, California, approximately seven miles south of Weldon Post Office, and within the Sequoia National Forest Reserve.

(*b*) State any mine name by which the property is known. Lime Dyke Tungsten Co.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
Owner of mineral rights by virtue of contract in articles of partnership

(*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. See attached "Articles of Partnership"

(*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. See Supplement

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. See supplement

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

(*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. see supplement

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

5. *The exploration project.*—State the mineral or minerals for which you wish to explore Tungsten

(*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. See attached sketches of proposed work and supplement

(*c*) The work will start within 10 days and be completed within 5 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. see attached supplement

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: see supplement

(*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.). none

(*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. See supplement

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

(*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. see supplement

(*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. see supplement

(*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. see supp.

(*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. see supplement

(*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. see supplement

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)? yes

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

[x] Money [x] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper. see supplement

## 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 September 27th, 1952

LIME DYKE TUNGSTEN CO.
(Applicant)

By Wm R. Frazee
Russell M. Gray
O. W. Atkins

**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

SUPPLEMENT TO FORM MF-103

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

D.M.E.A. Docket No. 2450
Amended application

(a)

1. Name of Applicant: Lime Dyke Tungsten Co., (Mining partnership),
Mailing Address: 1239 Esperanza St., San Bernardino, Calif.

(b) - not applicable
(c) - not applicable
(d) - Names and addresses of all partners:

Partner "A" - O. W. Atkin, 3343 Otono Court, San Bernardino, Calif.

Partner "B" - Garrold E. Atkin, 3343 Otono Court, San Bernardino, Calif.

Partner "C" - Ray C. Harmer, Weldon, Calif.

Partner "D" - Wm. N. Frazee, 1239 Esperanza, San Bernardino, Calif.

Partner "E" - Alan E. Guhin, 2780 Ladera Road, San Bernardino, Calif.

Partner "F" - W. R. Frazee, 6724 Lake Circle, Dallas, Texas.

Partner "G" - Carl Lang, 3608 52nd St., Maywood, Calif.

Partner "H" - Josephine Coulter, 1542 "E" Street, San Bernardino, Calif.

Partner "K" - Josephine Snyder, 2856 Patterson Way, San Bernardino, Calif.

Partner "L" - William E. Brandes, 6724 Lake Circle, Dallas, Texas.

Partner "M" - Russell M. Gray, M.D., 1600 "E" Street, San Bernardino, Calif.

Partner "N" - Russell M. Gray, Jr., 1600 "E" Street, San Bernardino, Calif.

Partner "P" - Robert L. Gray, 1600 "E" Street, San Bernardino, Calif.

Partner "Q" - Major Paul Hardy and Ann Hardy, 1600 E Street, San Bernardino.

2. General - DMEA Order 1, "Government Aid in Defense Projects," has been carefully read.

3. Applicants Property Rights.

(a) Legal description of land upon which we wish to explore: Virgin area partially located in Sections 13, 14, 15, 23 and 24 of Township 27 South, Range 34 East, M.D.B. & M., Kern County, California, approximately seven miles South of the town of Weldon, and within the Sequoia National Forest Reserve.

(b) Name by which property is known: Lime Dyke Tungsten Co.

(c) Interest in land: Owner of mineral rights.

(d) See attached "Articles of Partnership"

(e) Liens or encumbrances: None

(f) Unpatented claims, book and page numbers for each recorded locat[illegible] notice: (Continued on page 2)

Lime Dyke Claims notices of location for claims Numbers 1, 2, 3, 4, 5 and 6 are recorded in Book No. 1875, Pages 217 to 224 inclusive, Kern County, Calif.
Claims number 7, 8, 9, 10, 11, and 12 are recorded in Book No. 1881, pages 347 to 352 inclusive, Kern County, Calif.
Claims number 13, 14, 15, 16, are recorded in Book No. 1920, pages 334 to 340 inclusive, Kern County, Calif.
Claims No. 17 and 18 are recorded in Book No. 1947, pages 350 to 352 inclusive, Kern County, Calif.
Claims No. 19, 20, and 21 are recorded in Book No. 1983, pages 209 to 213 inclusive, Kern County, California.
Claims number 1 to 16 inclusive were originally recorded in the names of O. W. Atkin, G. E. Atkin, R. C. Harmer, J. A. Di Giorgio and V. P. Di Giorgio. Quit Claim Deeds signed by J. A. Di Giorgio and V. V. Di Giorgio deeding rights to O. W. Atkin are recorded in Book No. 1923, Page 459, Kern Co., Calif.
Quit Claim deed from O. W . Atkin and R. C. Harmer deeding rights to G. E. Atkin on claims 1 to 16 inclusive are recorded in Book No. 1896, Page 424, Kern County, Calif.
Claims No. 17, 18, 19, 20 and 21 were originally recorded in the name of G. E. Atkin. Quit claim deed signed by G. E. Atkin deeding all right to Lime Dyke Tungsten Co. is now in processed and will be recorded within the next few days.

4. <u>Physical Description:</u>

(a) Up to the present time no actual mining operations have taken place on the property excepting that incidental to exploration and road building. Approximately 15 tons of 1% to 1½% ore has been recovered during this work and placed in a stock pile at the camp site. Production facilities now on the property include the following: One D-6 Dozer, one G.I. Army Truck (weapon carrier), one 1/2 ton Dodge pick-up truck, two house trailers, all owned by O. W. & G. E. Atkin; one 105 cu. ft. air compressor in excellent condition, owned by Wm. N. Frazee; Two 45# jack hammers, belonging to the Lime Dyke Tungsten Co. , and miscellaneous items such as picks, shovels, log chains, galvanized pipe, small electric light plant, 3 violet ray mineral lamps, etc., belonging to various members of the partnership.

4 (a) continued -

All units of proposed project are now readily accessible for examination purposes and most of them can be reached by truck; others by horseback or on foot.

(b) No past or present production except that incidental to exploration.

Ore reserves approximately 15 tons of 1% to 1½% tungsten.

(c) <u>Geologic features of the property</u>:

The following is quoted from a report made by Mr. Russell M. Gray, Jr., graduate geologist from the University of Redlands:

"The Scheelite ore is found in Epidote and Quartzite, associated with granitic material. The veins are hypo-thermal in character. The Epidote and Quartzite appear to grade into impure granular limestone. The limestone, which has been metamorphosed to a large extent, is bounded by garnetiferous schist and granite. The granite and schist are largely decomposed near the surface and there is some evidence of leaching and secondary replacement in the ore bodies near the surface.

"On claims No. 18 and 21 outcrops of Phyllite with a ~~90~~ 90 degree dip were observed directly above the limestone ( part of the Kernville Marbelized Limestone series). This mass of limestone is exposed for approximately one third of a mile, strikes in a general North-South direction. Due to the cristalline structure and the amount of contact m metamorphism, a dip was unattainable at this time.

"The strike of the ore veins appear to be roughly a few degrees East of North. A schistosity dip was taken on the veins, but due to the decomposed material near the surface, it may not be considered accurate. No faulting was observed in the veins under discussion. Veins average two to six feet in width. The geological aspects of the area indicate the presence of extremely favorable conditions for a large amount of tungsten ore.

"The construction of 2 miles of road and the exploration of two veins on claim No. 16; one vein on No. 17, and two veins on No. 18, have already been partially completed. On No. 18 a tunnel has been started, running in below the vein. Drifts will be run off the main tunnel to the ore bodies. The road in the area runs by all the land claimed and the

(continued on page 4)

4(c) (continued from page 3)

"ore bodies as shown on the attached map, with the exception of claims number one and three.

"This map is the Kernville quadrangle, enlarged 16 times. One inch equals 660 feet."

(d) Access Roads; Distance to Shipping, Supply and Residence Points:

The property is located approximately 1½ miles from an oiled road which extends approximately nine miles to a paved highway which connects with major State and National highways. The one and one half miles of dirt road which runs from the oiled road to the camp site is in fair condition and is passable for heavy trucks. About two or three days work with a dozer, plus a small amount of powder, would put it in very good condition.

The mine is located approximately 170 miles Northwest of San Bernardino, where the active partners reside and where most supplies are purchased. The property may be reached from San Bernardino by car or truck in about 3½ to four hours.

Ore mills are located at Weldon, 9 miles distance; Mojave, 60 miles distance; Bishop 150 miles distance, Randsburg, 65 miles distance; Barstow, 125 miles distance and Kernville 28 miles distance.

Tentative plans include trucking the ore to Weldon, Mojave, Barstow, or Bishop for milling until such time as the erection of a mill on the property is justified.

(e) Availability of Manpower, Materials, Supplies, Equipment, Water & Power

Experienced miners are available in and around the town of Weldon, nine miles distant. Materials, supplies and equipment are available at Bakersfield, 65 miles; Mojave, 60 miles; Inyokern, 45 miles; San Bernardino, 170 miles and Los Angeles, 140 miles. An ample supply of water is available from a stream which runs within 200 yards of Claim No. 16. Three excellent springs are available for domestic water. Electrical power lines are about 3½ miles from the property and can be extended to this property when needed.

5. The Exploration Project

(a) Mineral or metals we wish to explore: Tungsten

(b) Description of proposed work, including map of entire area and sketches of each unit of project showing plans and cross sections, and locations: Map and sketches are attached hereto. In order to execute the work of exploration of the entire project it is suggested that the project be seperated into eight distinct units. It is believed that by so doing the work can be done in a more efficient and expeditious manner and that it will also enable the applicant to proceed with mining operations upon the completion of each unit providing the results of the exploration justify it.

UNIT NO. 1, CLAIM No. 18 , to be referred to as Unit 1-18.

1. Drive a 150 foot tunnel on the ore vein in a Southwesterly direction, commencing at a point about 200 feet Northeast of the location monument and approximately 200 feet from the top of the ridge, which would place the end of the tunnel about 75 feet below the surface.

2. Make two 50 foot cross-cuts in this tunnel; one approximately 100 feet from the portal and one at the end of the tunnel. Each of these cross-cuts would extend 20 feet in a Southeasterly direction and 30 feet in a Northwesterly direction, cutting one vein on the East side of the tunnel and three veins on the west side of the tunnel. Approximate time required for completion of this unit would be 60 days.

UNIT NO. 2, CLAIM No. 18-A, (To be referred to as Unit 2-18-A

Sink a shaft on the vein to a depth of 60 feet; run a drift 80 feet in a Northerly direction and then cross-cut 20 feet on each side at end of drift. Approximate time for completion of this unit would be 50 days.

Unit No. 3, CLAIM NO. 20 (To be referred to as Unit 3-20.

Drive a tunnel into the hill extending about 100 feet into the bed. Then, at a point 50 feet from the portal, cross-cut 15 feet on each side to cross-cut the bed of ore, which is about 30 feet in width. Then at end of tunnel, run another cross-cut 15 feet in each direction. Estimated time required for completion of this project would be 40 days.

UNIT NO. 4, CLAIM NO. 3 ( to be referred to as Unit 4-3)

Drive a 100 foot tunnel into side of hill cross-cutting ore bed entire length of tunnel and drift 50 feet in each direction at a point 75 feet from the portal, following the ore bed. Estimated time for completion of this unit would be 50 days.

UNIT NO. 5, CLAIM No. 1 (to be refferred to as Unit 5-1)

Sink a 50 foot shaft near the North end of exposed ore body and drift fifty feet in a Northerly direction and 50 feet in a southerly direction. Then cross-cut 20 feet at each end. Estimated time to complete this unit would be 50 days.

UNIT NO. 6, CLAIM No. 17-North End (known as Unit 6-17NE)

Sink a 80 foot shaft near North end of exposed ore bed which extends up through lime and cross-cut 20 feet on each side at bottom of shaft. Estimated time for completion of this unit would be 30 days.

UNIT NO. 7, Claim No. 17, South End (known as Unit 7-17SE)

Sink an 80 foot shaft on ore bed and cross-cut 20 feet on each side at bottom of shaft. Estimated time for completion of this unit would be 30 days.

UNIT NO. 8, Trail

Build 2400 feet of trail from end of present road to Claim No. 1 and No. 3 sufficient to transport air compressor, men and tools for exploration work. See map for proposed route. Estimated time required for completion of this unit would be 15 days.

(c) The work will start within 10 days and be completed within 5 months from the date of an exploration project contract.

(d) EXPERIENCE AND BACKGROUND OF APPLICANT:

With the exception of O. W. Atkin, G. E. Atkin and Russell M. Gray, Jr., the members of the mining partnership have had practically no experience in the operation of mines. Mr. O. W. Atkin, who has supervised and helped build the access road and who will continue to act as superintendent, has had about 12 years experience in the mining of tungsten and other metals and the operation of equipment. Mr. Russell M. Gray, Jr., is a graduate geologist from the University of Redlands and has had some geological experience in connection with the oil business. The other members of the partnership consist mostly of successful business and professional men and are in a financial condition

(d) Experience and background of applicant. (continued)

to meet all requirements and manage the affairs of the business. A financial statement of each partner will be gladly furnished if requested.

6. ESTIMATE OF COSTS UNIT No. 1-18.

(a) Independent Contracts — None.

(b) Labor, Supervision, Consultants

| | | |
|---|---|---|
| 1 miner 60 days @ $16.00 | $960.00 | |
| 1 mucker, 60 days @14.00 | 840.00 | |
| 1 timber man, 15 days @ $20.00 | 300.00 | |
| 1 superintendent (1/3 of time) 60 days @ $6.67 | 400.20 | |
| 1 engineer, 6 days @ $30.00 | 180.00 | |
| 1 geologist, 3 days @ $30.00 | 90.00 | |
| 1 D-6 Dozer operator, 8 hrs. @ $2.50 | 20.00 | $2,790.20 |

(c) Operating materials and supplies

| | | |
|---|---|---|
| 2 miners picks @ $4.50 | $ 9.00 | |
| 2 shovels @ $2.50 | 5.00 | |
| 1 5' crowbar | 4.50 | |
| 10 pieces of 1"x10' galv. pipe @ $5.00 each | 50.00 | |
| 250 3/4" drill bits @ $ .65 | 162.50 | |
| 12 cases of powder @ $10.75 | 129.00 | |
| 600 caps @ $.16 | 96.00 | |
| 1 detonator | 35.00 | |
| 600 gallons gasoline for compressor @ $ .23½ | 141.00 | |
| 100 qts. oil for compressor @ $.30 | 30.00 | |
| 2 50' lengths of 3/4" air hose @ $35.00 | 70.00 | |
| 500' of mine track,(10# per ft.) @ 1.00 | 500.00 | |
| 100 pieces of 2"x4"x30" track ties @ $.10 | 10.00 | |
| 1 ore car (1 ton - used) | 75.00 | |
| 50 sets of mine timber @ $8.00 (600' of 6"x8") | 400.00 | |
| 2 carbide lights @ $3.50 | 7.00 | |
| 50# carbide @ $ .36 | 18.00 | $1,767.00 |

UNIT No. 1-18 (continued)

(d) Operating Equipment (to be rented)

| | | |
|---|---|---|
| * 1 105 cu. ft. air compressor, 60 days @ $6.00 | $360.00 | |
| 1 Jack hammer, 60 days @ $40.00 per mo. | 80.00 | |
| 1 Army truck (for transporting men and materials), 60 days @ $1.50 | 90.00 | |
| 1 D-6 Dozer (for preparing face of tunnel) 8 hrs. @ $5.50 | 44.00 | $ 574.00 |

*air compressor will be used on No.'s 1-18 and No. 2-18A simultaneously.

(e) Rehabilitation and Repairs

| | | |
|---|---|---|
| Overhaul motor on army truck | $90.00 | |
| 1 set of tires for army truck, | 168.00 | $258.00 |

(f) NEW Buildings, Installations, Improvements

| | | |
|---|---|---|
| Construct one powder magazine 6'x10' | $100.00 | |
| Construct one tool house 12'x16' | 300.00 | |
| Construct one bunk house 12'x20' | 400.00 | |
| Repair & improve present access road | 500.00 | $1,300.00 |

(g) Miscellaneous

| | | |
|---|---|---|
| Maintenance of operating equipment | $200.00 | |
| Analytical work | 30.00 | |
| Accounting | 50.00 | |
| Workmen's Comp. & Employers Liab. insurance | 250.00 | |
| General Liability Insurance | 30.00 | |
| Pay Roll Taxes (S.U.I., F.U.T.A., & F.I.C.A.) | 126.00 | $686.00 |

(h) Contingencies

| | | |
|---|---|---|
| Not included in costs stated above | $100.00 | $100.00 |

* Total cost of this unit . . . . . $7,475.20

* Note: This amount includes such items as picks, shovels, crowbar, detonator, ia air hose and pipe, buildings, etc., which will be used on two other units of the overall project as soon as this unit is completed.

- - - - - - - - - - - - - - - - -

UNIT No. 2-18A

(a) Independent Contracts - None

(b) Labor, Supervision, Consultants

| | | |
|---|---|---|
| 1 miner, 50 days @ $16.00 | $800.00 | |
| 1 mucker, 50 days @ $14.00 | 700.00 | |
| 1 timber man, 8 days @ $20.00 | 160.00 | |
| 1 superintendent (1/3 of time), 50 days @ $6.67 | 337.50 | |
| 1 engineer, 4 days @ $30.00 | 120.00 | |
| 1 geologist, 2 days @ $30.00 | 60.00 | $2,177.50 |

(c) Operating material and supplies

| | | |
|---|---|---|
| 2 picks @ $4.50 | $ 9.00 | |
| 1 5' crowbar | 4.50 | |
| 200 3/4" drill bits @ $ .65 | 130.00 | |
| 1 detonator | 35.00 | |
| 350 gallons gasoline for compressor @ $.23½ | 82.25 | |
| 50 quarts oil " " @ .30 | 15.00 | |
| 3 50' lengths of 3/4" air hose @ $35.00 | 105.00 | |
| 160' of mine track @ $1.00 | 160.00 | |
| 50 mine ties, 2"x4"x30" | 5.00 | |
| 8 [illegible] barrow 10.75 | 85.00 | |
| [illegible] | | |
| 240 caps .16 | 38.40 | |

(continued on page 9)

(c) Operating material and supplies (continued

| | | | |
|---|---|---|---|
| 1 set drill steel | | $25.00 | |
| 30 sets of mine timber @ | 8.00 | $240.00 | |
| 2 carbide lamps @ | 3.50 | 7.00 | |
| 40# Carbide @ | .35 | 14.00 | |
| 1 A-frame for hoist | | 7.00 | |
| 100 feet of 1/2" steel cable for hoist @ | .25 | 25.00 | |
| 1 ore bucket (500 lbs.) | | 30.00 | $1,058.15 |

(d) Operating Equipment (To be Rented)

| | | | |
|---|---|---|---|
| 1 105 cu.ft. air compressor , charged to unit #1-18 | | | |
| 1 jack hammer, 50 days @ $40.00 per mo. | | 66.67 | |
| 1 army truck (for transporting men and material to job) 50 days | | 75.00 | |
| 1 D-6 dozer, 8 hours @ | 5.50 | 44.00 | |
| 1 air tugger - 50 days @ $40 per mo. | | 66.67 | $ 252.34 |

(e) Rehabilitation & Repairs - None - all charged to Unit 1-18.

(f) New Buildings, Improvement,etc., -None - all charged to Unit 1-18

(g) Miscellaneous

| | | |
|---|---|---|
| Repairs and maintenance of operating equipment | $50.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workmen's Comp. & Liability Insurance | 170.00 | |
| General liability insurance | 10.00 | |
| Pay roll taxes | 100.00 | $390.00 |

(h) Contingencies - not included above $ 50.00 $ 50.00

Total cost of this unit . . . . . .$3,927.99

- - - - - - - - - - - - - - - -

UNIT NO. 3-20

(a) Independent Contracts - None

(b) Labor, Supervision, Consultants

| | | | |
|---|---|---|---|
| 1 miner - 40 days @ | $16.00 | $640.00 | |
| 1 mucker - 40 days @ | 14.00 | 560.00 | |
| 1 timber man - 8 days @ | 20.00 | 160.00 | |
| 1 superintendent (1/3 of time) 40 days @ | 6.67 | 266.80 | |
| 1 engineer - 3 days @ | 30.00 | 90.00 | |
| 1 geologist - 2 days @ | 30.00 | 60.00 | $1,776.80 |

(c) Operating Material & Supplies

| | | | |
|---|---|---|---|
| 2 Picks @ | 4.50 | 9.00 | |
| 2 Shovels @ | 2.25 | 4.50 | |
| 1 5' crowbar | | 4.50 | |
| 200 3/4" drill bits @ | .65 | 130.00 | |
| 8 cases of powder @ | 10.75 | 86.00 | |
| 1 set drill steel | | 25.00 | |
| 240 caps @ | .16 | 38.40 | |
| 1 detonator | | 35.00 | |
| 300 gallons gasoline for compressor | .23½ | [illegible] | 70.50 |
| 50 quarts oil for compressor | .30 | 15.00 | 15.00 |
| 3 50' lengths of 3/4" air hose | 35.00 ea | 105.00 | |
| 1 wheelbarrow | | 35.00 | |
| 30 sets mine timber | 8.00 | 240.00 | |
| 2 carbide lamps | 3.50 | 7.00 | $ 804.90 |

(d) Operating Equipment (to be rented)

| | | | |
|---|---|---|---|
| 1 105 cu. ft. air compressor, 40 days @ | 6.00 | 240.00 | |
| 1 Jack hammer, 40 days @ $40.00 per month | | 53.33 | |
| 1 army truck for hauling men and supplies, 40 days @ | 1.50 | 60.00 | |
| 1 D-6 Dozer, 8 hrs. @ | 5.50 | 44.00 | $ 397.33 |

(e) REHABILITATION & REPAIRS - None - (all charged to Unit 1-18)
(f) NEW BUILDINGS, IMPROVEMENTS, ETC. None - " " " "
(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs and maintenance of operating equipment | $ 50.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workmen's Comp. & Liability Ins. | 144.00 | |
| General Liability Insurance | 10.00 | |
| Pay Roll Taxes | 80.00 | $ 344.00 |
| (h) CONTINGENCIES | $ 50.00 | $ 50.00 |

Total cost of this unit . . . . . $3,373.03

- - - - - - - - - - - - -

UNIT NO. 4-3

( (a) INDEPENDENT CONTRACTS * None
(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 miner, 50 days @ | 16.00 | $800.00 | |
| 1 mucker, 50 days @ | 14.00 | 700.00 | |
| 1 timber man, 8 days @ | 20.00 | 160.00 | |
| * 2 laborers (for laying 1500' of 1" air pipe from claim #18 - 6 days each, 12 da. | 14.00 | 168.00 | |
| 1 superintendent (1/3 of time) 50 days @ | 6.67 | 337.50 | |
| 1 engineer - 3 days @ | 30.00 | 90.00 | |
| 1 geologist - 2 days @ | 30.00 | 60.00 | $2,315.50 |

* This item will not be required if we can secure loan for building trail; see Unit #8-Trail

- - - - - - - - - - - - - - -

(c) OPERATING MATERIAL AND SUPPLIES

| | | | |
|---|---|---|---|
| 200 3/4" drill bits @ | .65 | 130.00 | |
| 8 cases of powder @ | 10.75 | 86.00 | |
| 240 caps @ | .16 | 38.40 | |
| 350 gallons of gasoline @ | .23½ | 82.25 | |
| 50 quarts of oil @ | .30 | 15.00 | |
| 40 sets of mine timber @ | 8.00 | 320.00 | |
| 60 lengths of 1"x20' galv. pipe @ (to carry air from Claim No. 18) | 5.00 | 300.00 | |
| 2 14" pipe wrenches @ | 3.00 | 6.00 | $977.65 |

Note: Picks, shovels, crowbar, drill steel, detonator, air hose wheelbarrow, carbide lamps, etc., will be available from other completed units, so are, therefore, not charged on this unit.

- - - - - - - - - - - - - - -

(d) OPERATING EQUIPMENT (To be rented)

| | | | |
|---|---|---|---|
| 1 105 cu.ft. air compressor - 50 days @ | 6.00 | 300.00 | |
| 1 Jack hammer, 50 days @ $40.00 per month | | 66.67 | |
| 1 army truck for trans. men & material 50 days @ | 1.50 | 75.00 | |
| 1 D-6 dozer - 8 hours @ | 5.50 | 44.00 | $485.67 |

(e) REHABILITATION AND REPAIRS - None - charged to Unit 1-18
(f) NEW BUILDINGS, IMPROVEMENTS, ETC., -None " " " "
(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs & Maintenance of operating eqpt. | 50.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workmen's Comp. Liability Insurance | 180.00 | |
| General Liability Insurance | 10.00 | |
| Pay roll taxes | 105.00 | $405.00 |
| (h) CONTINGENCIES | 50.00 | 50.00 |

Total cost of this unit . . . . . $4,233.82

## UNIT NO. 5-1

(a) INDEPENDENT CONTRACTS - None

(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 miner - 50 days @ | $ 16.00 | $ 800.00 | |
| 1 mucker - 50 days @ | 14.00 | 700.00 | |
| 1 timber man - 10 days @ | 20.00 | 200.00 | |
| 2 laborers (to lay 1200' of 1" air pipe from Claim #18) 12 man days @ | 14.00 | 168.00 | |
| 1 superintendent (1/3 of time) 50 days @ | 6.67 | 337.50 | |
| 1 engineer - 4 days @ | 30.00 | 120.00 | |
| 1 geologist - 2 days @ | 30.00 | 60.00 | $2,385.50 |

(c) OPERATING MATERIAL & SUPPLIES

| | | | |
|---|---|---|---|
| 250 3/4" drill bits @ | .65 | 162.50 | |
| 10 cases of powder @ | 10.75 | 107.50 | |
| 300 caps @ | .16 | 48.00 | |
| 350 gallons of gasoline for compressor @ | .23½ | 82.25 | |
| 60 quarts of oil @ | .30 | 18.00 | |
| 200 feet of mine track @ | 1.00 | 200.00 | |
| 40 sets of mine timber @ | 8.00 | 320.00 | |
| 80 2"x4"x30" track ties @ | .10 | 8.00 | |
| 50 lbs. of carbide for lamps @ | .36 | 18.00 | |
| * 60 lengths of 1" galv. pipe @ | 5.00 | 300.00 | 1,264.25 |

* This pipe will not be required if we can secure loan for Unit #6-Trail, which will enable us to transport air compressor to this Unit (5-1).
Other items of equipment and supplies not listed above will be available from other completed units.

(d) OPERATING EQUIPMENT (To be rented)

| | | | |
|---|---|---|---|
| 1 105 cu.ft. air compressor - 50 days @ | 6.00 | 300.00 | |
| 1 Jack hammer - 50 days @ $40.00 per mo. | | 66.67 | |
| 1 Army truck (to transport men & materials to job) 50 days @ | 1.50 | 75.00 | 441.67 |

(e) REHABILITATION & REPAIRS - None

(f) NEW BUILDINGS, INSTALLATIONS, IMPROVEMENTS - None

(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs and maintenance of operating eqpt. | 100.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workmen's Comp. & Liab. Insurance | 200.00 | |
| General Liab. insurance | 10.00 | |
| Pay Roll taxes | 106.00 | 476.00 |

(h) CONTINGENCIES 100.00 100.00

Total cost of this unit $4,669.42

UNIT NO. 6 - Claim No. 17 N.E.

(a) INDEPENDENT CONTRACTS - None.
(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 miner - 40 days @ | $16.00 | $640.00 | |
| 1 mucker - 40 days @ | 14.00 | 560.00 | |
| 1 timber man - 8 days @ | 20.00 | 160.00 | |
| 1 superintendent, (1/3 of time) 40 days @ | 6.67 | 266.80 | |
| 1 engineer - 3 days @ | 30.00 | 90.00 | |
| 1 geologist - 2 days @ | 30.00 | 60.00 | $1,776.80 |

(c) OPERATING MATERIAL & SUPPLIES

| | | | |
|---|---|---|---|
| 200 3/4" drill bits @ | .65 | 130.00 | |
| 8 cases of powder | 10.75 | 86.00 | |
| 240 caps | .16 | 38.40 | |
| 300 gallons of gasoline @ .23½ | | 70.50 | |
| 50 quarts oil for compressor @ | .30 | 15.00 | |
| 24 sets mine timber @ | 8.00 | 192.00 | |
| 1 set drill steel | | 25.00 | 556.90 |

Picks, shovels, crowbar, detonator, air hose, wheelbarrow, etc., will be available from other completed projects.

(d) OPERATING EQUIPMENT (To Be Rented)

| | | | |
|---|---|---|---|
| 1 105 cuft. air compressor - 40 days @ | 6.00 | 240.00 | |
| 1 jack hammer - 40 days @ $40.per mo. | | 53.33 | |
| 1 army truck -to transport men and supplies - 40 days @ | 1.50 | 60.00 | |
| 1 D-6 Dozer - 8 hrs @ 5.50 | | 44.00 | |
| 1 air tugger - 40 days @ | 6.00 | 240.00 | 637.33 |

(e) REHABILITATION & REPAIRS - None
(f) NEW BUILDINGS, IMPROVEMENTS, INSTALLATION - None
(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs and maintenance of operating equipment | 50.00 | |
| Analytical work | 30.00 | |
| Workmen's comp. & liability insurance | 144.00 | |
| General Liability insurance | 10.00 | |
| Pay roll taxes | 80.00 | 344.00 |

(h) CONTINGENCIES 50.00 50.00

Total cost of this unit . . . . . $3,365.03

- - - - - - - - - - - - -

7-17. S. End

UNIT NO. 7-S.End

(a) None
(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 MINer - 40 days @ | 16.00 | 640.00 | |
| 1 mucker - 40 days @ | 14.00 | 560.00 | |
| 1 timber man - 8 days @ | 20.00 | 160.00 | |
| 1 Supt.(1/3 of time) 40 days @ | 6.67 | 266.80 | |
| 1 Engineer - 3 days @ | 30.00 | 90.00 | |
| 1 Geologist - 2 days @ | 30.00 | 60.00 | $1,776.80 |

(c) OPERATING MATERIAL & SUPPLIES

| | | | |
|---|---|---|---|
| 200 3/4" drill bits @ | .65 | 130.00 | |
| 8 cases powder @ | 10.75 | 86.00 | |
| 240 caps @ | .16 | 38.40 | |
| 300 gallons gasoline for compressor | .23½ | 70.50 | |
| 50 quarts oil for compressor | .30 | 15.00 | |
| 24 sets mine timber | 8.00 | 192.00 | |
| 1 set drill steel | | 25.00 | 556.90 |

Picks, shovels, crowbars, detonator, air hose, wheelbarrow, etc., will be available from other completed units.

RICHARD M. ANDERSON
ATTORNEY AT LAW
307 ANDRESON BLDG.
SAN BERNARDINO,
CALIFORNIA
TELEPHONE 841269

(d) OPERATING EQUIPMENT ( To be Rented)

| | | | |
|---|---|---|---|
| 1 10$ cu. ft. air compressor - 40 days @ | 6.00 | 240.00 | |
| 1 Jack hammer - 40 days @ $40.00 per month | | 53.33 | |
| 1 Army truck, to trans. men & materials - 40 da. @ 1.50 | | 60.00 | |
| 1 D-6 Dozer - 8 hrs. @ | 5.50 | 44.00 | |
| 1 Air tugger - 40 days @ | 6.00 | 240.00 | |
| 1 1/2 ton pick-up truck for hauling gas, oil, supplies, repairs, timber, etc. for entire project - 4 months @ $50.00 per mo. | | 200.00 | $837.33 |

(e) None
(f) None
(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs and maintenance of operating equipment | 50.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workment's comp. & Liab. Ins. | 144.00 | |
| General Lia. Insurance | 10.00 | |
| Pay roll taxes (S.U.I., F.U.T.A., F.I.C.A.) | 80.00 | 344.00 |

(h) CONTINGENCIES 50.00

Total cost of entire project $3,565.00

- - - - - - - - - - - - -

UNIT NO. 8-Trail

(a) None
(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 powder man - 15 days @ | 14.00 | 210.00 | |
| 1 laborer - 15 days @ | 12.00 | 180.00 | |
| 1 D-6 Dozer Operator - 15 days @ | 20.00 | 300.00 | $690.00 |

(c) OPERATING MATERIAL & SUPPLIES

| | | | |
|---|---|---|---|
| 6 cases powder @ | 10.75 | 64.50 | |
| 200 caps | .16 | 32.00 | |
| 100 gallons gas for compressor @ | .23¢ | 23.50 | |
| 20 quarts oil for compressor | ..30 | 6.00 | |
| 300 gallons deisel fuel | .16 | 48.00 | |
| 20 gallons deisel oil | 1.00 | 30.00 | $194.00 |

(d) OPERATING EQUIPMENT TO BE RENTED

| | | | |
|---|---|---|---|
| 1 air compressor - 15 days @ | 6.00 | 90.00 | |
| 1 Jack hammer - 15 days @ $40.00 per month | | 20.00 | |
| 1 Army truck - to rans. men & material, 15 da. | 1.50 | 22.50 | |
| 1 D-6 Dozer - 15 days @ | 40.00 | 600.00 | $732.50 |

(e) None
(f) None
(g) MISCELLANEOUS

| | | | |
|---|---|---|---|
| Repairs & Maintenance of operating equipment | | 20.00 | |
| Accounting | | 15.00 | |
| Workment comp. & Liab. insurance | (70.00) | 20.00 | |
| General Liab. Ins. | | 5.00 | |
| Pay roll taxes | | 31.00 | $141.00 |

(h) CONTINGENCIES $25.00 25.00

Total cost of this unit . . . . . .$1,782.50

RICHARD M. ANDERSON
ATTORNEY AT LAW
307 ANDRESON BLDG.
SAN BERNARDINO,
CALIFORNIA
TELEPHONE 841269

SUMMARY OF ESTIMATED COSTS OF PROJECT

| | |
|---|---|
| Unit No. 1-18 | $7,475.20 |
| Unit No. 2-18A | 3,927.99 |
| Unit No. 3-20 | 3,373.03 |
| Unit No. 4-3 | 4,223.82 |
| Unit No. 5-1 | 4,669.42 |
| Unit No. 6-17 N.E. | 3365.03 |
| Unit No. 7-17 S.E. | 3,565.03 |
| Unit No. 8-Trail | 1,782.50 |
| T O T A L . . . . | $ 32,392.02 |

B R E A K D O W N

| Unit No. | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
|---|---|---|---|---|---|---|---|
| 1-18 | $2,790.20 | $1,767.00 | $ 574.00 | $258.00 | $1,300 | $ 686.00 | $ 100.00 |
| 2-18A | 2,177.50 | 1,058.15 | 252.34 | 00 | 00 | 390.00 | 50.00 |
| 3-20 | 1,776.80 | 804.90 | 397.33 | 00 | 00 | 344.00 | 50.00 |
| 4-3 | 2,315.50 | 977.65 | 485.67 | 00 | 00 | 405.00 | 50.00 |
| 5-1 | 2,385.50 | 1,264.25 | 441.67 | 00 | 00 | 476.00 | 100.00 |
| 6-17NE | 1,776.80 | 556.90 | 637.33 | 00 | 00 | 344.00 | 50.00 |
| 7-17SE | 1,776.80 | 556.90 | 837.33 | 00 | 00 | 344.00 | 50.00 |
| 8-Trail | 690.00 | 174.00 | 734.50 | 00 | 00 | 141.00 | 25.00 |
| TOTALS | $15,689.10 | $7,179.75 | $4,358.17 | $258.00 | $1,300 | $3,132.00 | $475.00 |

Included in the above estimates is the sum of $3,811.50 for rental of equipment owned either by the partnership or individual members of the partnership, and this sum may be considered as a portion of our 25% contribution.

7. (a) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation? Yes.

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

1. Money. The members of the partnership are financially able and prepared to supply their 25% share of the cost of the project. As stated above, $3,811.50 will be available from equipment rental, leaving a balance of approximately $4,422.50 to be supplied in cash.

2. Equipment - Rental value to the extent of approx. $3,811.50

RICHARD M. ANDERSON
ATTORNEY AT LAW
307 ANDRESON BLDG.
SAN BERNARDINO,
CALIFORNIA
TELEPHONE 841269

Copy

THESE ARTICLES OF PARTNERSHIP, MADE THIS 1st day of September, 1952, at San Bernardino, California, by and between O. W. Atkin, G. E. Atkin, R. C. Harmer, Wm. N. Frazee, Alan K. Guhin, W. R. Frazee, Carl Lang, Josephine Coulter, Josephine Snyder, William E. Brandes, Russell M. Gray, M.D., Russell M. Gray, Jr., Robert L. Gray, and Paul and Ann Hardy, hereinafter referred to as partners A,B,C,D,E,F,G,H,I,J,K,L,M,N and O, respectively; (Paul and Ann Hardy being referred to jointly as partner O)

WITNESSETH

WHEREAS, it is the desire of the parties hereto to form a mining partnership pursuant to the provisions of Division 2, Chapter 5, of the Public Resources Code of the State of California, and to revise articles of partnership, heretofore executed by some of these parties, to include additional partners;

AND WHEREAS it is the desire and intention of the parties hereto that these revised articles shall supplant and replace any and all articles of partnership heretofore drawn and executed by some of these parties for the LINE DYKE TUNGSTEN CO, a partnership; and that these articles of partnership shall be and are the articles of partnership of the hereinabove named partners henceforth,

AND WHEREAS, it is understood that the mining property of the partnership presently consists of twenty-one (21) certain mining claims in Kern County, California, described as follows: Claims numbered 1 to 16 inclusive, located by O. W. Atkin, G. E. Atkin, R. C. Harmer, V. P. DiGiorgio and J. A. DiGorgio, and five (5) claims, numbered 17, 18, 19, 20 and 21 respectively, located by G. E. Atkin, all of which said claims are located in virgin area laying generally in sections 13, 14, 23, 24, and 25 of Township 27 South, Range 34 East, M.D.B. & M., Kern County, California, being approximately seven miles South of Weldon Post Office and within the Sequoia National Forest Reserve; and whereas there is reason to suppose that upon some or all of these claims there are valuable mineral and metal deposits;

AND WHEREAS the mining claims numbered 1 to 16 inclusive, herein-

above described, have been, for various valuable considerations, transferred and conveyed by various quit claim deeds to G. E. Atkin, who now represents himself to be the legal owner and holder thereof of record; and that he holds said claims for this partnership

AND WHEREAS SAID mining claims numbered 17, 18, 19, 20 and 21 were discovered by and are presently of record in the name of said G. E. Atkin, who represents that he holds the same for this partnership

AND WHEREAS partners D, E, F, G, H, K, L, M, N, and O have contributed various sums for the exploration and development of said mining claims

AND WHEREAS partners A, B, and C have discovered said claims and have contributed time, effort and labor on said mining claims consisting mainly of locating and recording of said claims, erection of monuments, building roads and trails and other improvements upon said property,

NOW THEREFORE, it is hereby agreed and stipulated by the parties hereto as follows:

1. These articles shall be deemed to reflect and determine the interest of each and all of the parties hereto in and to the above described mining claims and properties and in and to any additional mining claims discovered by any of these partners within a one (1) mile radius of the boundaries of the present Lime Dyke Group of Claims, during the existence of this partnership and the interest of said partners in and to the proceeds of the sale of any ore from any of said claims or the products thereof, and the interests of the partners in and to the proceeds of the sale of any or all of said mining claims or fractional interests therein to third parties by said partnership;

2. This partnership shall continue until terminated by mutual consent or by operation of law.

3. Said partnership shall be conducted and carried on under the business name, ~~mf~~ style and firm of LIME DYKE TUNGSTEN COMPANY.

4. It is stipulated that each of the hereinafter designated

partners shall have and own the interest in and to the assets of the partnership and the profits, if any therefrom, set opposite their respective designating initials:

| Partner | Per cent | Partner | Per cent | Partner | Per cent |
|---|---|---|---|---|---|
| A | 17. | B | 9.6 | C | 18.75 |
| D | 20.25 | E | 7.20 | F | 3.6 |
| G | .45 | H | .45 | K | .45 |
| L | 2.25 | M | 10.[illegible] | N | 2. |
| P | 5.5 | [illegible] | 2.5 | | |

5. No partner shall sell, lease, or otherwise dispose of all or any part of his interest in this partnership and/or said mining claims without giving the other partners or any of them first right to purchase said interest.

6. The following described personal property, which is stipulated to be owned by O. W. Atkin, may be rented by the partnership at a rate to be agreed upon; or, if not so rented, said property may be removed by O. W. Atkin at any time; 1 D-6 Caterpillar Dozer, 1 Small Electric Light Plant, 1 Water pump.

7. That certain 125 cu. ft. Worthington Air Compressor which is presently located on the said partnership property and which is stipulated to be owned by William H. Frazee, may be rented by the partnership at a rate to be agreed upon; or, if not so rented, said compressor may be removed by William H. Frazee at any time.

8. Pursuant to the provisions of Section 2359 of the Public Resources Code of the State of California, partners A, D, and M are hereby expressly given all necessary authority to jointly negotiate and execute any and all agreements for the further exploration and/or development of the mining properties hereinabove described, and to do all acts necessary and incident to securing such agreements, and all acts necessary and incident to the performance of such agreements upon the execution of same.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written. P. _____ M. _____

| | | |
|---|---|---|
| Partner A | Partner B | Partner C |
| Partner D | Partner E | Partner F |
| Partner G | Partner H | Partner K |
| Partner L | Partner M | Partner N |

Orig. Signed

Keldon
research corporation
BOX 2555 TERMINAL ANNEX · LOS ANGELES 54, CALIF. · LU 5335

# LABORATORY CERTIFICATE

*Submitted By*
Lime Dyke Tungsten Co.
1360 E Street
San Bernardino, Calif.

*Date* Sept. 8, 1952

*Reference*

| | |
|---|---|
| Lab. No. | 32832 |
| Marking | Ore |
| Tungstic Oxide ($WO_3$) | 1.57% |

KELDON RESEARCH CORPORATION

William H. Talbott

WHT:hw

TRINITY 4791 FORM 1

LABORATORY REPORT

COPY

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

*LABORATORY No.* 359254-57 *Date* October 1, 1952.

*Sample* Ore

*Received* 9/23/52. *Marked*

*Submitted by* Mr. William N. Frazee
Post Office Box 230
San Bernardino, California.

REPORT OF DETERMINATIONS:

| Mark: | Tungsten Trioxide ($WO_3$) |
|---|---|
| "Claim #17-9-19-52" ---------- | 2.76% |
| "Vein #17-9/19/52" ---------- | 1.62% |
| "Claim #18 North End 9/19/52" ------ | 0.30% |
| "Vein #20-9/19/52" ---------- | 3.46% |

Respectfully submitted,

Smith-Emery Co.

CHEMISTS AND ENGINEERS.

E O S

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

TRINITY 4791 FORM 1

LABORATORY REPORT

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

*LABORATORY*
*No.* 358508-09 *Date* September 8, 1952

*Sample* Ore

*Received* 9/3/52 *Marked*

*Submitted by* Wm. N.Frazee,
1360 E Street,
SanBernardino, California.

## REPORT OF DETERMINATIONS

| | Tungsten trioxide ($WO_3$) |
|---|---|
| "Lime Dyke #1 - North End" ---- | 0.55% |
| "Lime Dyke #18-A" ---------- | 1.14% |

Respectfully submitted,

Smith-Emery Co.

CHEMISTS AND ENGINEERS

G.L.C.

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

FILE COPY
SURNAME:

Rutledge
Martin for
Selfridge
Sullivan
Hedges
Mitchell
Hjelmeen

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

DEC 19 1952

BL

Mr. William N. Frazee
Lime Dyke Tungsten
1239 Esperanza Street
San Bernardino, California

Re: Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
Lime Dyke Claims 1 to 21, inclusive
Kern County, California

Dear Mr. Frazee:

Your application for exploration assistance and other reports concerning the Lime Dyke tungsten claims on the east slope of the Piute Mountains available to us in Washington have been carefully reviewed. These reports include the data from both the original and the second field examinations of your property.

This information, although substantiating the occurrence of a small amount of low grade tungsten mineralization on your property, indicates to us that the probability of disclosing mineable ore reserves is not sufficiently promising to justify Government participation. We regret, therefore, to inform you that your amended application for exploration assistance is also denied.

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

Sincerely yours,

C. O. Mittendorf (for) J.H. 12-19-52

Administrator

Enclosures - 10 Photographs

FARutledge/ls 12/18/52

cc: Docket
Admn. Read. File
Field Team, Reg. 3
F. A. Rutledge
G. C. Selfridge
D. M. Lemmon, USGS
R. W. Geehan, USBM
Operating Committee

STANDARD FORM NO. 64

# Office Memorandum • UNITED STATES GOVERNMENT

TO : Administrator, DMEA

DATE: Dec. 18, 1952

FROM : Iron and Ferro-Alloy Division, DMEA

SUBJECT: Denial of application for exploration assistance in the amount of $32,392.02. Previously denied under Docket No. DMEA 2450.
Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
Lime Dyke Claims 1 to 21, inclusive
Kern County, California

The denial of the subject application by this Division is based on the following information:

(1) The deposits are typical of the Weldon district. Scheelite is found disseminated in scattered tactite bodies and lenses in a series of interbedded schist, tactite, and marble that has been intruded by granitic rock.

No significant production or discovery of tungsten has been made in the Weldon district to date. Scheelite was sparse in all of the tactite bodies investigated during the referenced field team examinations.

(2) The subject application for exploration assistance was divided into seven separate units or projects. Only one of the deposits contained scheelite in quantities approaching 0.5 percent $WO_3$.

This deposit, on Claim No. 20, consisted of small lenses of tactite in a triangular wedge-shaped body of marble in contact with quartz diorite. One lense is 5½ feet thick at the center and the other 1½ feet thick. The tactite beds pinch out 6 to 10 feet away from the quartz diorite-marble contact. The average grade of the tactite appears to be considerably less than 0.5 percent $WO_3$.

(3) Work to date by the applicant has consisted of a small amount of trenching and road work which has exposed no tungsten mineralization of importance.

(4) The results of the Field Team examination indicated that exploration of the property with Government funds is not warranted.

(5) The Field Team recommends denial of the application.

(6) The Commodity Division of the U. S. Geological Survey concurred in the denial.

W S Martin
for G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

FILE COPY
SURNAME:

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

Rutledge
Martin for
Selfridge
Gickson

Administrator, DMEA

Dec. 18, 1952

Iron and Ferro-Alloy Division, DMEA

Denial of application for exploration assistance in the amount of $32,392.02. Previously denied under Docket No. DMEA 2450.
Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
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(5) The Field Team recommends denial of the application.

(6) The Commodity Division of the U. S. Geological Survey concurred in the denial.

FARutledge/ls

/s/ Martin
for G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

cc: Docket
Admn. Read. File
F. A. Rutledge
G. C. Selfridge

STANDARD FORM NO. 64

Dorfest

COPY COPY

# Office Memorandum • UNITED STATES GOVERNMENT

TO : Geo. C. Selfridge

DATE: 12-12-52

FROM : M. D. Crittenden, Jr.

SUBJECT: DMEA 2673 - Tungsten
2730 - Tungsten

Rejection sustained.

/s/ Max D. Crittenden, Jr.

COPY COPY

Geo. C. Selfridge 12-12-52

M. D. Crittenden, Jr.

DMEA 2673 - Tungsten
2730 - Tungsten

Rejection sustained.

/s/ Max D. Crittenden, Jr.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

December 4, 1952

Memorandum

To: Frank E. Johnson, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2730 (Tungsten), Lime Dyke Tungsten Company, Lime Dyke Claims 1 to 21 Incl., Kern County, California

Reference is made to your request, dated October 16, requesting a reexamination of the subject group of tungsten claims for which a prior application, Docket DMEA-2450, was denied on August 14, 1952 because of inadequate evidence of a worthwhile target.

Since the examination of the property by John D. Warne of the Bureau of Mines on June 4 and 5, 1952, the applicants completed some additional work which they believed warranted reconsideration of their application for a DMEA loan. Accordingly, the claims were reexamined on October 21, 1952 by W. P. Irwin and J. F. Robertson of the Geological Survey, who report that the property consists of several small bodies of rock that contain scattered showings of scheelite, which, however, are small and too low grade to constitute ore. Exploration of the deposits, they report, would prove a negligible tonnage of ore, and it is their recommendation that the applicant's request for Government aid be denied.

Four copies of the report, entitled DMEA-2730, Lime Dyke Tungsten Company, Kern County, California by J. F. Robertson and W. P. Irwin, Geologists, U. S. Geological Survey, dated November 25, 1952, are attached.

Reviewed by
DMEA OPERATING COMMITTEE

12-12-52
(date)

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

Attachment

Copy to: E. H. Bailey, USGS
A. C. Johnson, Reno, Nev. (with copy of report)

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

# DMEA 2730, Lime Dyke Tungsten Company

## Kern County, California

J. F. Robertson, Geologist
W. P. Irwin, Geologist
U. S. Geological Survey

November 25, 1952

Reviewed by
DMEA OPERATING COMMITTEE

12-12-52
(date)

## Introduction

The tungsten claims of the Lime Dyke Tungsten Company were examined by W. P. Irwin and J. F. Robertson of the Geological Survey on October 21, 1952 in response to a request from the Defense Minerals Exploration Administration. Members of the Company present during the examination were O. W. Atkins, W. N. Frazee, R. M. Gray, Jr., and R. L. Gray. Discovery pits and outcrops pertinent to the Company's exploration proposals, with exception of those on Claim No. 3, were inspected during the day and re-examined with ultra-violet lamp at night. One sample was taken from each of Claims Nos. 1 and 18-A, the two best showings of scheelite.

The Company's exploration proposal is mainly for underground work at a cost of $32,392.02. With the exception of the deposit on Claim No. 1, none of the deposits is exposed sufficiently to be at a stage of development requiring underground work. A systematic program of relatively inexpensive surface trenching would be more in order than the applicant's proposal, but even this does not appear to be warranted owing to the indicated low grade of the deposits.

It is recommended that the applicant be denied Government aid.

## Location and Description

The Lime Dyke Tungsten Company claims are on the east slope of the Piute Mountains between 4000 and 6000 feet in altitude, approximately 6 miles south of Weldon in Kern County, California. They are in the Sequoia National Forest Reserve, in parts of sections 13,14,15,23 and 24, T. 27 S., R. 34 E., Kernville quadrangle. All of the claims relevent to the DMEA application are on a northwest-trending spur-ridge of the Piute Mountains.

The property is readily accessible from Weldon by automobile over 7½ miles of paved road and about 2 miles of fair dirt road. Most of the claims and prospect pits are reached by 2 miles of steep dirt road built by the company. Claim Nos. 1 and 3, however, are 2/3 miles beyond, and 500 to 1000 feet higher than the end of the mine road. No trail to these claims exists.

Topography is steep and bed rock exposures are good. Vegetation on the property is sparse owing to an arid climate. A creek that issues from the range and passes through the property is reported to provide a year-around supply of water.

## General Geology

The claims are along the southeast limb of a syncline in metamorphic rocks. The metamorphic rocks consist of interbedded schist, calc-silicate rock, and marble, and have been intruded by granitic rock of

probable granodiorite and quartz dioritic composition. In some places, the metamorphic rocks occur as discontinuous masses in the granitic rocks. Aplitic and pegmatitic dikes are numerous and widespread, crosscutting the other rocks; their intrusion appears to have followed the period of granitic intrusion. Migmatite and calc-silicate rock have been developed locally near the contacts between granitic or pegmatitic and metamorphic rocks.

The calc-silicate rock occurs as irregular patches and lenses in the marble and schist, and consists of garnet, epidote, amphibole, and quartz and calcite. In some favorable places the tactite contains the tungsten-bearing mineral scheelite. Scheelite, however, was sparse in the tactite bodies examined.

The exploration proposals in the DMEA application are listed as units, with separate consideration of each claim or prospect. A similiar system has been used in the following discussion of the property.

## Unit No. 1, Claim No. 18

Prospect No. 18 is at the upper end of the mine road, at an altitude of 5000 feet, and on the north side about 50 feet below the crest of the northwest-trending ridge. The prospect is a cut 45 feet long and 12 feet deep that crosses two beds of calc-silicate rock. Each bed is about 2 feet thick, and the beds are separated from each other by 18 feet of schist. Two beds strike N.40°W. and are nearly vertical. The southeasterly bed is 8 feet from a conformable contact between granodiorite and schist.

The calc-silicate beds can be traced by following discontinuous outcrops to the ridge crest approximately 100 feet southwest of the open cut. The northwesterly bed has been explored by open cutting along the strike for 35 feet. Lamping over 50 feet of fresh exposure revealed no scheelite, although the applicants claimed that considerable $WO_3$ ore had been mined from the northwesterly bed.

The applicants want assistance to explore this prospect by driving a 150 foot adit southwesterly from a point on the ridge slope below the open cut bank exposure. Two 50 foot crosscuts from the adit are proposed to explore laterally for scheelite-bearing beds. The total cost is to be $7,475.20.

Bodies or shoots of scheelite-bearing rock may be present in the calc-silicate beds, but the barren exposures suggest that such bodies if present, are separated by considerable quantities of barren rock. It is doubtful that a sufficient quantity of scheelite-bearing rock is present to warrant the cost of the proposed exploration. Trenching on the surface at intervals along the strike of the calc-silicate beds would be a much cheaper method of prospecting, but even this is not warranted.

## Unit No. 2, Claim No. 18-A

Prospect No. 18-A, at the southeast corner of claim No. 18, is a 50-foot cut along the north side of the mine road and is on the south side of the spur ridge at an elevation of about 4900 feet. It exposes a calc-silicate bed for a length of 18 feet. The bed is in schist, and is at the crest of a small anticlinal fold that pitches steeply northeast. At the crest of the fold the calc-silicate bed is 1 to 2 feet thick, but within a few feet thickens to 3½ feet on the west limb and 3 feet on the east limb. Two feet east of the calc-silicate bed in the east limb of the anticline granodiorite is in contact with the schist. The east limb strikes N.5°E., and is vertical; the west limb strikes west and dips 60°N.

Scheelite is disseminated throughout some of the calc-silicate rock in both limbs of the fold, but none was seen at the crest of the fold. In the east limb, one area of 2 square feet lamps 1 percent $WO_3$, but in other places it is barren. The distribution of scheelite is more uniform in the west limb. A sample taken across the west limb for a width of 2.5 feet was assyed by the Bureau of Mines at Reno, Nevada and contained 0.09% $WO_3$.

The applicants propose to sink a shaft in the calc-silicate bed to a depth of 60 feet, from which an 80 foot drift northward with a 40 foot crosscut at the end would be driven. They estimate the total cost to be $3,927.99. The proposal does not seem reasonable to explore the steeply-plunging anticlinal structure indicated by the surface exposures. Considering the small amount of surface prospecting, a more reasonable proposal would consist of trenching across the inferred extensions of both limbs of the folded calc-silicate bed to determine its extent down the hillside on the south side of the road. Trenching would determine whether more costly underground exploration is justified, and would provide a point for drifting in the bed rather than sinking and crosscutting.

## Unit No. 3, Claim No. 20

A triangular wedge-shaped body of marble with interbedded calc-silicate and minor schist is exposed about 1200 feet south of the road on the south slope of the ridge. The bedding strikes N.50°W., and dips 80° S., and is truncated on the southeast by a 6-foot-thick pegmatite dike that strikes N.75°W. The dike dips 55°NW and bounds the wedge for 50 feet. Quartz diorite bounds the west and north sides of the wedge.

An 8-by-6-foot pit exposes a part of the contact between the pegmatite and wedge of bedded rock. Calc-silicate rock occurs at intervals along this contact as semi-lenticular bodies that are interbedded with marble and schist, and lie nearly at right angles to the contact. The calc-silicated beds pinch out 6 to 10 feet away from the contact. Two such beds are exposed in the pit. One is 5½ feet thick with a 1¼-foot-thick shear zone at the center, and the other is 1½ feet thick. Other such beds may be present along the concealed parts of the contact between the pegmatite and wedge.

Lamping of the beds exposed in the pit showed scheelite distributed in small patches and discontinuous streaks in the calc-silicate beds. These patches and streaks may contain as much as 1 percent $WO_3$, but the average grade of the calc-silicate rock appears to be considerable less than 0.5 percent $WO_3$.

The applicants proposed to drive a 100 foot adit into the wedge of the bedded rock. They then plan to drive two crosscuts, one midway along the adit and the other at the face to explore laterally. The proposed cost of $3,373.03 for this program is not warranted by the meager showings of scheelite in the pit or by the indicated small size of the body of bedded rock. Surface exploration by trenching to expose the contact zone of the marble along the pegmatite dike is more to be recommended. It is doubtful however that sufficient scheelite-bearing rock of commercial grade would be discovered by either method to make exploration worthwhile.

## Unit No. 4, Claim No. 3

This prospect is at an elevation of about 5500 feet on a spur ridge where the hill slope exceeds 30 degrees. It is 500 feet higher and nearly 1/2 mile distant from the end of the road. There was insufficient time to visit this outcrop during the examination.

According to the applicants, it consists of calc-silicate rock at the contact between steeply dipping marble and granitic rocks. No exploratory work has been done, but questioning of the applicants indicates that the calc-silicate rock contains no higher values of $WO_3$ than at the other prospects and contains lower values than Claim No. 1 described under Unit No. 5 below.

The applicants propose to explore Claim No. 3 by driving a 100 foot adit into the ridge slope to crosscut the calc-silicate rock and marble, then drift 50 feet in opposite directions from a point 75 feet in from the portal. The cost is to be $4,233.82. The plan is not warranted considering the probable low grade of the calc-silicate rock and lack of surface prospecting. Efficient surface prospecting, however, would require the building of trails, considered under Unit No. 8 below.

## Unit No. 5, Claim No. 1

Claim No. 1, at over 6000 feet altitude is the highest prospect on the property to be considered. It is 1000 feet above and 3000 feet airline distant from the end of the mine road. No trail exists from the road to this prospect.

The deposit consists of a zone of calc-silicate rock along a contact that strikes N.20°W and dips 80°SW between marble and pegmatite. At the north end of the claim the zone of calc-silicate rock is 10.5 feet wide, and is truncated on the north by pegmatite. The zone is progressively narrower to the southeast; at 85 feet it is 4 feet wide; at 100 feet it is 3 feet wide; and at 120 feet it is 1 foot wide. From the 120-foot point

it extends southward as a thin, more or less continuous sliver, pinching and swelling from 6 inches to 2 feet in thickness, until it pinches out at about 265 feet.

Scheelite is fairly well distributed in the calc-silicate rock for a length of about 20 feet at the north end of the zone. A sample was cut across 10.5 feet of the zone at a point about 12 feet from the north end. The sample was assayed by the Bureau of Mines at Reno, Nevada and contained 0.15 percent $WO_3$. South of the 20-foot length, scheelite is considerable less abundant and less uniformly distributed. The southern half of the zone of calc-silicate rock is nearly barren of scheelite.

The applicants proposed to sink a 50 foot shaft in the zone of calc-silicate rock near the north end, then drift along the zone 50 feet both to the north and south. At the face of the drifts they propose to crosscut 20 feet. The applicants estimate the program to cost $4,669.42. In addition to this cost, a road approximately a mile long from the present road would have to be built to the prospect over which to carry mining equipment to perform the underground work. The road building is considered under Unit No. 8, below, but it is an important factor to include in balancing cost against possible reserves blocked out by exploration of units No. 4 and 5.

Exploration of this deposit would involve either tunneling or diamond drilling, as the deposit is ~~not~~ well exposed at the surface. Diamond drilling would be difficult from the standpoint of supplying water and establishing suitable foundations for the drill rig on the steep hillside. An adit driven westward from a point on the steep slope below the outcrop near the north end is preferrable to sinking a shaft. Drifts could then be driven north and south along the calc-silicate rock from the face of the adit to effectively explore the zone of calc-silicate rock. The small amount of marginal ore indicated by the outcrops, however, does not seem to warrant expensive underground exploration.

## Unit No. 6, Claim No. 17, North end

This prospect is on the crest of the ridge about 100 feet north of the road at an altitude of 4500 feet. A shallow 3-by-6-foot pit in a 30-foot-wide area of no outcrop between a pegmatite dike and marble constitutes the prospect. A few pieces of scheelite-bearing calc-silicate float were uncovered by the pit, but no bedrock was exposed.

Marble crops out north of the pit. The bedding of the marble strikes north and dips 80° E. South of the pit the pegmatite dike crops out and ranges in thickness from 10 to 15 feet. It strikes N.50°W and dips 50°NE. A zone of calc-silicate rock is inferred to be at the contact between the marble and pegmatite.

An 80-foot shaft with two 20-foot crosscuts is proposed by the applicants to explore the inferred bed of calc-silicate rock. The cost is to be $3,365.03. The proposal is not practical, considering how little

is known of the size and grade of the inferred bed. Much data could be otained by a far less expensive program of surface trenching.

## Unit No. 7, Claim No. 17, South end

This prospect consists of three small pits along the northeast side of the road at an altitude of about 4450 feet. The two end pits are 90 feet apart, and the middle pit is 40 feet southeast of the northernmost pit.

The two northern pits expose a calc-silicate bed that strikes N.30°W. and dips 70°SW. The bed is in biotite schist and migmatite, and is a maximum of 2 feet thick. In places it appears to pinch out.

The southern pit is approximately in line with the northern pits. There, three calc-silicate beds are exposed. Two are a foot thick and the third is 8 inches thick. The three beds are cut by a foot-thick pegmatite dike that strikes N.50°W and dips 45° NE. A pegmatite body 6 feet northeast of the beds is about 5 feet thick and appears to be a sill. Scheelite occurs as small grains disseminated throughout a few small areas in the calc-silicate beds, but at no place does the calc-silicate rock contain sufficient scheelite to constitute ore. The average grade of the rock is probably less than 0.1 percent $WO_3$.

The applicants propose to sink a shaft 80 feet in the calc-silicate beds, and crosscut 20 feet in two directions from the bottom of the shaft. The proposed cost is $3,565.03. This proposal is not warranted, as the small surface showings of low grade scheelite-bearing rock give no indication of there being a concealed body of ore of sufficient value to pay for the exploration.

## Unit No. 8, Trail

The applicants propose to build a crude road or trail from the end of the mine road to connect with claims No. 1 and 3. The purpose of the trail is to facilitate transportation of men and equipment for exploration of work. The trail is to be 2400 feet long, and is to be built at a cost of $1782.50.

The estimated length and cost appears to be considerably in error. According to the applicant's map, as well as the field examination, the road would need to be about a mile long. The cost appears to be too low; a cost of $10,000 would be more nearly correct. About one-third of the road would require drilling and blasting of solid bedrock, as the hillside is steep and the overburden shallow.

FILE COPY 400
SURNAME:

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

Rutledge
Selfridge
Geehan
Kinkel
H Johnson

OCT 1 6 1952

Mr. William N. Frazee
Lime Dyke Tungsten Company
1239 Esperanza Street
San Bernardino, California

Re: Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
Lime Dyke Claims 1 to 21 Incl.
Kern County, California

Dear Mr. Frazee:

Your amended application for assistance in exploring the Lime Dyke group of claims in Kern County, California, has been reviewed by the Iron and Ferro-Alloy Division of the Defense Minerals Exploration Administration and has been referred to Mr. H. C. Miller, Executive Officer, DMEA Field Team, Region III, 1012 Flood Building, 870 Market Street, San Francisco 2, California, for a field examination.

The Regional Office will contact you at an early date in regard to the examination of your property. Any assistance that you can render the field team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

F.H. 10-16-52

FARutledge'lm
10/10/52

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. III
G. C. Selfridge
F. A. Rutledge

Nov. 1 - Field examination has been scheduled.

FARutledge'lm
10/9/52

FILE COPY 400
SURNAME:

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

cc: Admn. Reading File
L. Decker
R. M. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. III
Operating Committee
G. C. Selfridge
F. A. Rutledge

Rutledge
Selfridge
Geehan

Mr. H. C. Miller
Executive Officer, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

OCT 1 6 1952

Re: Docket No. DMEA 2730 - Tungsten
Lime Dyke Tungsten Company
Lime Dyke Claims 1 to 21 Incl.
Kern County, California

Dear Mr. Miller:

The subject docket is an amended application for exploration assistance on the Lime Dyke group of claims, Kern County, California. A prior application on part of the same property, Docket No. DMEA 2450, was denied August 14, 1952, because of inadequate evidence of a worthwhile target.

A field team examination of the property was made June 4 and 5, 1952, by John B. Warne, Bureau of Mines. The applicants now state that since this examination, they have completed a large amount of work and believe their exploratory project should be reconsidered. The application, therefore, is referred to your office for a field team examination to evaluate the new proposed projects.

Copies of the applicants' letter of transmittal and a memorandum by T. P. Thayer, U. S. Geological Survey, are enclosed for your information.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee (EWB)

F.H. 10-16-52

Enclosures

Approved:

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

A. R. Zeitel Jr. (EWB)
Member, Geological Survey

IN REPLY REFER TO:

G-MD-CF

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

October 8, 1952

Memorandum

To: George C. Selfridge

From: T. P. Thayer

Subject: DMEA 2730, amending DMEA 2450
Lime Dyke Tungsten Co., Kern County, Calif.

After a field examination by J. D. Warne of the Bureau of Mines, the previous application was denied on the grounds of inadequate evidence of a worthwhile target and imcompetence of the operators.

The only new information indicates that an inexperienced oil geologist (his drawings indicate his inexperience in tungsten) has been hired, some roads have been built, and some tunnels started. The applicants have not submitted a geologic map to document the merits of their exploration proposals for a $32,392.02 project.

Recommendation:

Refer the new application to the field for checkup on recent activities, and further evidence regarding competence of the applicants.

T. P. Thayer

T. P. Thayer

Copy retained 400

October 7, 1952

Mr. William N. Frazee
Lime Dyke Tungsten Company
1239 Esperanza Street
San Bernardino, California

Subject: DMEA-2730
Re: Exploration Assistance

My dear Mr. Frazee:

The receipt of your application dated September 27, 1952 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2730 and referred to the Iron and Ferro-Alloy Division.

Kindly refer to DMEA-2730 in any future correspondence relating to your application.

Sincerely yours,

R. E. ADAMS

Robert E. Adams
Chief, Operation Control
and Statistics Division

25451

1239 Esperanza St.,
San Bernardino, Calif.,
September 30th, 1952.

Mr. C. O. Mittendorf,
Acting Administrator, D. M. E. A.,
U. S. Dept. of the Interior,
Washington, 25, D. C.

Re: Docket No. D M E A ~~2450~~ 2730 Tungsten
Lime Dyke Claims 1 to 21 inclusive
Kern Co., Calif.

Dear Sir:

This will acknowledge your letter of August 14th informing us that our application for exploration assistance was denied.

We fully appreciate the fact that this denial was justified on the basis of the small amount of information submitted; however, subsequent to the date of the application and also the time when your engineer, Mr. John D. Warne, of the U. S. Bureau of Mines, Reno, Nevada, made a very brief inspection of a minor portion of the property on June 5th, 1952, a large amount of work has been done, and the results, we feel certain, should justify your re-consideration of this project.

At the time of Mr. Warne's inspection on June 5th, only a very limited amount of work had been done and a thorough examination and sampling of the deposits was not possible. At that time he recommended that we open up these deposits in a certain manner and he indicated that he would recommend a further examination after the work was completed providing the results of our work were satisfactory. Since Mr. Warne's visit we have built approximately two miles of road extending from the camp site and crossing or contacting each of the seven deposits which are now opened and ready for your examination. We have expended approximately $5,000.00 for this work to date, practically all of which was spent on road building, and have about 15 tons of 1% to 1½% tungsten ore ready for the mill.

With reference to the geological aspects of our property, we should like to refer you to Mr. Otto F. Heiser, recognized as one of the foremost authorities on tungsten in this country, who made a three day examination of the property last April, and while this examination was not made on our behalf, we believe he would gladly furnish you with his report if requested.

The following is quoted from a report made by Mr. Russell M. Gray, Jr., graduate geologist of the University of Redlands:

> "The Scheelite ore is found in epidote and quartzite, associated with granitic material. The veins are hypo-thermal in character. The epidote and tungsten appear to grade into impure granular limestone. The limestone, which has been metamorphosed to a large extent, is bounded by garnetiferous schist and granite. The granite and schist are largely decomposed near the surface and there is some evidence of leaching and secondary replacement in the ore bodies near the surface.
>
> "On claims No. 18 and 21, outcrops of Phyllite with a 90 degree dip were observed directly above the limestone. Claim No. 1 is located directly beneath a large mass of limestone (part of the Kernville Marbelized Limestone series). This mass of limestone is exposed for approximately one third of a mile, strikes in a general North-South direction. Due to the crystalline structure and the amount of contact metamorphism, a dip was unattainable at this time.

"The strike of the ore veins appear to be roughly, a few degrees East of North. A schistosity dip was taken on the veins, but due to the decomposed material near the surface, it may not be considered accurate. No faulting was observed in the veins under discussion. Veins average two to six feet in width.

"The geological aspects of the area indicate the presence of extremely favorable conditions for a large amount of tungsten ore.

"The construction of two miles of road and the exploration of two veins on claim No. 16; one vein on No. 17, and two veins on No. 18 have already been partially completed. On No. 18 a tunnel has been started, running in below the vein. Drifts will be run off the main tunnel to the ore bodies.

"The road in the area runs by all the land and ore bodies claimed as shown on the attached map, with the exception of Claim No. 1 and No. 13.

"The map used is the Kernville Quadrangle, enlarged 16 times. One inch equals 660 feet."

We are enclosing herewith four copies of the above described map showing the location of claims No. 1, 13, 14, 16, 17, 18, 19, 20 and 21; the location of the exposed deposits; the location of the present road and the location of the proposed trail.

Also enclosed are labratory reports from Smith-Emery Co. and Keldon Research Corp. showing the tungsten assays on the various samples of ore submitted.

Return

The enclosed photographs are intended to ~~you~~ give you a general idea of the appearance and topography of the property, and we will appreciate their return after they have served their purpose.

In view of the facts and conditions as outlined above, we respectfully request that you give favorable consideration to an exploration loan for this project, and we are submitting an amended application herewith.

Your prompt and favorable action will be appreciated.

Yours very truly,

LIME DYKE TUNGSTEN CO.
by- Wm N. Frazee

Wm. N. Frazee, Secretary-Treasurer

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Docket No. D.M.E.A. ~~2450,~~ 2730 Tungsten, AMENDED APPLICATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 6 1952

*Not to be filled in by applicant*

Docket No. DMEA 2730
Metal or Mineral
Date Received 10-6-52
Estimated Cost
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: Lime Dyke Tungsten Co. ( 1239 Esperanza Street, San Bernardino, Calif.
See attached supplement for names of partners
(A Mining Partnership)

(*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. see supplement

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 Virgin area partially located in Sections 13, 14, 15, 23 and 24 of Township 27 South, Range 34 East, M.D.B. & M., Kern County, California, approximately seven miles south of Weldon Post Office, and within the Sequoia National Forest Reserve.

(*b*) State any mine name by which the property is known. Lime Dyke Tungsten Co.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
Owner of mineral rights by virtue of contract in articles of partnership

(*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. See attached "Articles of Partnership"

(*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. See Supplement

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. See supplement

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

(*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. see supplement

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

16—66551-1

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

(*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. See attached sketches of proposed work and supplement

(*c*) The work will start within 10 days and be completed within 5 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. see attached supplement

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: see supplement

(*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.). none

(*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. See supplement

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

(*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. see supplement

(*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. see supplement

(*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. see supp.

(*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. see supplement

(*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. see supplement

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)? yes

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

[x] Money [x] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper. see supplement

## 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 September 27th, 1952

LIME DYKE TUNGSTEN CO.
(Applicant)

By Wm N. Frazer
Russell M Gray
O W Arthur

**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

SUPPLEMENT TO FORM MF-103

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

D.M.E.A. Docket No. 2450
Amended application

(a)

1. Name of Applicant: Lime Dyke Tungsten Co., (Mining partnership),
Mailing Address: 1239 Esperanza St., San Bernardino, Calif.

(b) - not applicable
(c) - not applicable
(d) - Names and addresses of all partners:

Partner "A" - O. W. Atkin, 3343 Otono Court, San Bernardino, Calif.

Partner "B" - Garrold E. Atkin, 3343 Otono Court, San Bernardino, Calif.

Partner "C" - Ray C. Harmer, Weldon, Calif.

Partner "D" - Wm. N. Frazee, 1239 Esperanza, San Bernardino, Calif.

Partner "E" - Alan E. Guhin, 2780 Ladera Road, San Bernardino, Calif.

Partner "F" - W. R. Frazee, 6724 Lake Circle, Dallas, Texas.

Partner "G" - Carl Lang, 3608 52nd St., Maywood, Calif.

Partner "H" - Josephine Coulter, 1542 "E" Street, San Bernardino, Calif.

Partner "K" - Josephine Snyder, 2856 Patterson Way, San Bernardino, Calif.

Partner "L" - William E. Brandes, 6724 Lake Circle, Dallas, Texas.

Partner "M" - Russell M. Gray, M.D., 1600 "E" Street, San Bernardino, Calif.

Partner "N" - Russell M. Gray, Jr., 1600 "E" Street, San Bernardino, Calif.

Partner "P" - Robert L. Gray, 1600 "E" Street, San Bernardino, Calif.

Partner "Q" - Major Paul Hardy and Ann Hardy, 1600 E Street, San Bernardino.

2. General - DMEA Order 1, "Government Aid in Defense Projects," has been carefully read.

3. Applicants Property Rights.

(a) Legal description of land upon which we wish to explore: Virgin area partially located in Sections 13, 14, 15, 23 and 24 of Township 27 South, Range 34 East, M.D.B. & M., Kern County, California, approximately seven miles South of the town of Weldon, and within the Sequoia National Forest Reserve.

(b) Name by which property is known: Lime Dyke Tungsten Co.

(c) Interest in land: Owner of mineral rights.

(d) See attached "Articles of Partnership"

(e) Liens or encumbrances: None

(f) Unpatented claims, book and page numbers for each recorded location notice: (Continued on page 2)

Lime Dyke Claims notices of location for claims Numbers 1, 2, 3, 4, 5 and 6 are recorded in Book No. 1875, Pages 217 to 224 inclusive, Kern County, Calif.

Claims number 7, 8, 9, 10, 11, and 12 are recorded in Book No. 1881, pages 347 to 352 inclusive, Kern County, Calif.

Claims number 13, 14, 15, 16, are recorded in Book No. 1920, pages 334 to 340 inclusive, Kern County, Calif.

Claims No. 17 and 18 are recorded in Book No. 1947, pages 350 to 352 inclusive, Kern County, Calif.

Claims No. 19, 20, and 21 are recorded in Book No. 1983, pages 209 to 213 inclusive, Kern County, California.

Claims number 1 to 16 inclusive were originally recorded in the names of O. W. Atkin, G. E. Atkin, R. C. Harmer, J. A. Di Giorgio and V. P. Di Giorgio. Quit Claim Deeds signed by J. A. Di Giorgio and V. V. Di Giorgio deeding rights to O. W. Atkin are recorded in Book No. 1923, Page 459, Kern Co., Calif.

Quit Claim deed from O. W . Atkin and R. C. Harmer deeding rights to G. E. Atkin on claims 1 to 16 inclusive are recorded in Book No. 1896, Page 424, Kern County, Calif.

Claims No. 17, 18, 19, 20 and 21 were originally recorded in the name of G. E. Atkin. Quit claim deed signed by G. E. Atkin deeding all right to Lime Dyke Tungsten Co. is now in processes and will be recorded within the next few days.

4. <u>Physical Description</u>:

(a) Up to the present time no actual mining operations have taken place on the property excepting that incidental to exploration and road building. Approximately 15 tons of 1% to 1½% ore has been recovered during this work and placed in a stock pile at the camp site. Production facilities now on the property include the following: One D-6 Dozer, one G.I. Army Truck (weapon carrier), one 1/2 ton Dodge pick-up truck, two house trailers, all owned by O. W. & G. E. Atkin; one 105 cu. ft. air compressor in excellent condition, owned by Wm. N. Frazee; Two 45# jack hammers, belonging to the Lime Dyke Tungsten Co. , and miscellaneous items such as picks, shovels, log chains, galvanized pipe, small electric light plant, 3 violet ray mineral lamps, etc., belonging to various members of the partnership.

4 (a) continued -

All units of proposed project are now readily accessible for examination purposes and most of them can be reached by truck; others by horseback or on foot.

(b) No past or present production except that incidental to exploration.

Ore reserves approximately 15 tons of 1% to 1½% tungsten.

(c) Geologic features of the property:

The following is quoted from a report made by Mr. Russell M. Gray, Jr., graduate geologist from the University of Redlands:

"The Scheelite ore is found in Epidote and Quartzite, associated with granitic material. The veins are hypo-thermal in character. The Epidote and Quartzite appear to grade into impure granular limestone. The limestone, which has been metamorphosed to a large extent, is bounded by garnetiferous schist and granite. The granite and schist are largely decomposed near the surface and there is some evidence of leaching and secondary replacement in the ore bodies near the surface.

"On claims No. 18 and 21 outcrops of Phyllite with a ~~90%~~ 90 degree dip were observed directly above the limestone ( part of the Kernville Marbelized Limestone series). This mass of limestone is exposed for approximately one third of a mile, strikes in a general North-South direction. Due to the cristalline structure and the amount of contact m metamorphism, a dip was unattainable at this time.

"The strike of the ore veins appear to be roughly a few degrees East of North. A schistosity dip was taken on the veins, but due to the decomposed material near the surface, it may not be considered accurate. No faulting was observed in the veins under discussion. Veins average two to six feet in width. The geological aspects of the area indicate the presence of extremely favorable conditions for a large amount of tungsten ore.

"The construction of 2 miles of road and the exploration of two veins on claim No. 16; one vein on No. 17, and two veins on No. 18, have already been partially completed. On No. 18 a tunnel has been started, running in below the vein. Drifts will be run off the main tunnel to the ore bodies. The road in the area runs by all the land claimed and the

(continued on page 4)

4(c) (continued from page 3)

"ore bodies as shown on the attached map, with the exception of claims number one and three.

"This map is the Kernville Quadrangle, enlarged 16 times. One inch equals 660 feet."

(d) Access Roads; Distance to Shipping, Supply and Residence Points:

The property is located approximately 1½ miles from an oiled road which extends approximately nine miles to a paved highway which connects with major State and National highways. The one and one half miles of dirt road which runs from the oiled road to the camp site is in fair condition and is passable for heavy trucks. About two or three days work with a dozer,plus a small amount of powder, would put it in very good condition.

The mine is located approximately 170 miles Northwest of San Bernardino, where the active partners reside and where most supplies are purchased. The property may be reached from San Bernardino by car or truck in about 3½ to four hours.

Ore mills are located at Weldon, 9 miles distance; Mojave, 60 miles distance; Bishop 150 miles distance, Randsburg, 65 miles distance; Barstow, 125 miles distance and Kernville 28 miles distance.

Tentative plans include trucking the ore to Weldon, Mojave, Barstow, or Bishop for milling until such time as the erection of a mill on the property is justified.

(e) Availability of Manpower, Materials, Supplies, Equipment, Water & Power

Experienced miners are available in and around the town of Weldon, nine miles distant. Materials, supplies and equipment are available at Bakersfield, 65 miles; Mojave, 60 miles; Inyokern, 45 miles; San Bernardino, 170 miles and Los Angeles, 140 miles. An ample supply of water is available from a stream which runs within 200 yards of Claim No. 16. Three excellent springs are available for domestic water. Electrical power lines are about 3½ miles from the property and can be extended to this property when needed.

5. The Exploration Project

(a) Mineral or metals we wish to explore: Tungsten

(b) Description of proposed work, including map of entire area and sketches of each unit of project showing plans and cross sections, and locations: Map and sketches are attached hereto. In order to execute the work of exploration of the entire project it is suggested that the project be seperated into eight distinct units. It is believed that by so doing the work can be done in a more efficient and expeditious manner and that it will also enable the applicant to proceed with mining operations upon the completion of each unit providing the results of the exploration justify it.

UNIT NO. 1, CLAIM No. 18 , to be referred to as Unit 1-18.

1. Drive a 150 foot tunnel on the ore vein in a Southwesterly direction, commencing at a point about 200 feet Northeast of the location monument and approximately 200 feet from the top of the ridge, which would place the end of the tunnel about 75 feet below the surface.

2. Make two 50 foot cross-cuts in this tunnel; one approximately 100 feet from the portal and one at the end of the tunnel. Each of these cross-cuts would extend 20 feet in a Southeasterly direction and 30 feet in a Northwesterly direction, cutting one vein on the East side of the tunnel and three veins on the west side of the tunnel. Approximate time required for completion of this unit would be 60 days.

UNIT NO. 2, CLAIM No. 18-A, (To be referred to as Unit 2-18-A

Sink a shaft on the vein to a depth of 60 feet; run a drift 80 feet in a Northerly direction and then cross-cut 20 feet on each side at end of drift. Approximate time for completion of this unit would be 50 days.

Unit No. 3, CLAIM NO. 20 (To be referred to as Unit 3-20.

Drive a tunnel into the hill extending about 100 feet into the bed. Then, at a point 50 feet from the portal, cross-cut 15 feet on each side to cross-cut the bed of ore, which is about 30 feet in width. Then at end of tunnel, run another cross-cut 15 feet in each direction. Estimated time required for completion of this project would be 40 days.

UNIT NO. 4, CLAIM NO. 3 ( to be referred to as Unit 4-3)

Drive a 100 foot tunnel into side of hill cross-cutting ore bed entire length of tunnel and drift 50 feet in each diredtion at a point 75 feet from the portal, following the ore bed. Estimated time for completion of this unit would be 50 days.

UNIT NO. 5, CLAIM No. 1 (to be refferred to as Unit 5-1)

Sink a 50 foot shaft near the North end of exposed ore body and drift fifty feet in a Northerly direction and 50 feet in a southerly direction. Then cross-cut 20 feet at each end. Estimated time to complete this unit would be 50 days.

UNIT NO. 6, CLAIM No. 17-North End (known as Unit 6-17NE)

Sink a 80 foot shaft near North end of exposed ore bed which extends up through lime and cross-cut 20 feet on each side at bottom of shaft. Estimated time for completion of this unit would be 30 days.

UNIT NO. 7, Claim No. 17, South End (known as Unit 7-17SE)

Sink an 80 foot shaft on ore bed and cross-cut 20 feet on each side at bottom of shaft. Estimated time for completion of this unit would be 30 days.

UNIT NO. 8, Trail

Build 2400 feet of trail from end of present road to Claim No. 1 and No. 3 sufficient to transport air compressor, men and tools for exploration work. See map for proposed route. Estimated time required for completion of this unit would be 15 days.

(c) The work will start within 10 days and be completed within 5 months from the date of an exploration project contract.

(d) EXPERIENCE AND BACKGROUND OF APPLICANT:

With the exception of O. W. Atkin, G. E. Atkin and Russell M. Gray, Jr., the members of the mining partnership have had practically no experience in the operation of mines. Mr. O. W. Atkin, who has supervised and helped build the access road and who will continue to act as superintendent, has had about 12 years experience in the mining of tungsten and other metals and the operation of equipment. Mr. Russell M. Gray, Jr., is a graduate geologist from the University of Redlands and has had some geological experience in connection with the oil business. The other members of the partnership consist mostly of successful business and professional men and are in a financial condition

(d) Experience and background of applicant. (continued)

to meet all requirements and manage the affairs of the business. A financial statement of each partner will be gladly furnished if requested.

6. ESTIMATE OF COSTS UNIT No. 1-18.

(a) Independent Contracts — None.

(b) Labor, Supervision, Consultants

| | | |
|---|---|---|
| 1 miner 60 days @ $16.00 | $960.00 | |
| 1 mucker, 60 days @14.00 | 840.00 | |
| 1 timber man, 15 days @ $20.00 | 300.00 | |
| 1 superintendent (1/3 of time) 60 days @ $6.67 | 400.20 | |
| 1 engineer, 6 days @ $30.00 | 180.00 | |
| 1 geologist, 3 days @ $30.00 | 90.00 | |
| 1 D-6 Dozer operator, 8 hrs. @ $2.50 | 20.00 | $2,790.20 |

(c) Operating materials and supplies

| | | |
|---|---|---|
| 2 miners picks @ $4.50 | $ 9.00 | |
| 2 shovels @ $2.50 | 5.00 | |
| 1 5' crowbar | 4.50 | |
| 10 pieces of 1"x10' galv. pipe @ $5.00 each | 50.00 | |
| 250 3/4" drill bits @ $ .65 | 162.50 | |
| 12 cases of powder @ $10.75 | 129.00 | |
| 600 caps @ $.16 | 96.00 | |
| 1 detonator | 35.00 | |
| 600 gallons gasoline for compressor @ $ .23½ | 141.00 | |
| 100 qts. oil for compressor @ $.30 | 30.00 | |
| 2 50' lengths of 3/4" air hose @ $35.00 | 70.00 | |
| 500' of mine track,(10# per ft.) @ 1.00 | 500.00 | |
| 100 pieces of 2"x4"x30" track ties @ $.10 | 10.00 | |
| 1 ore car (1 ton - used) | 75.00 | |
| 50 sets of mine timber @ $8.00 (600' of 6"x8") | 400.00 | |
| 2 carbide lights @ $3.50 | 7.00 | |
| 50# carbide @ $ .36 | 18.00 | $1,767.00 |

UNIT No. 1-18 (continued)

(d) Operating Equipment (to be rented)

| | | |
|---|---|---|
| * 1 105 cu. ft. air compressor, 60 days @ $6.00 | $360.00 | |
| 1 Jack hammer, 60 days @ $40.00 per mo. | 80.00 | |
| 1 Army truck (for transporting men and materials), 60 days @ $1.50 | 90.00 | |
| 1 D-6 Dozer (for preparing face of tunnel) 8 hrs. @ $5.50 | 44.00 | $ 574.00 |

*air compressor will be used on No.'s 1-18 and No. 2-18A simultaneously.

(e) Rehabilitation and Repairs

| | | |
|---|---|---|
| Overhaul motor on army truck | $90.00 | |
| 1 set of tires for army truck, | 168.00 | $258.00 |

(f) NEW Buildings, Installations, Improvements

| | | |
|---|---|---|
| Construct one powder magazine 6'x10' | $100.00 | |
| Construct one tool house 12'x16' | 300.00 | |
| Construct one bunk house 12'x20' | 400.00 | |
| Repair & improve present access road | 500.00 | $1,300.00 |

(g) Miscellaneous

| | | |
|---|---|---|
| Maintenace of operating equipment | $200.00 | |
| Analytical work | 30.00 | |
| Accounting | 50.00 | |
| Workmen's Comp. & Employers Liab. insurance | 250.00 | |
| General Liability Insurance | 30.00 | |
| Pay Roll Taxes (S.U.I., F.U.TA., & F.I.C.A.) | 126.00 | $686.00 |

(h) Contingencies

| | | |
|---|---|---|
| Not included in costs stated above | $100.00 | $100.00 |

* Total cost of this unit . . . . . $7,475.20

* Note: This amount includes such items as picks, shovels, crowbar, detonator, ia air hose and pipe, buildings, etc., which will be used on two other units of the overall project as soon as this unit is completed.

- - - - - - - - - - - - - - - - -

UNIT No. 2-18A

(a) Independent Contracts - None

(b) Labor, Supervision, Consultants

| | | |
|---|---|---|
| 1 miner, 50 days @ $16.00 | $800.00 | |
| 1 mucker, 50 days @ $14.00 | 700.00 | |
| 1 timber man, 8 days @ $20.00 | 160.00 | |
| 1 superintendent (1/3 of time), 50 days @ ~~$20.00~~ $6.67 | 337.50 | |
| 1 engineer, 4 days @ $30.00 | 120.00 | |
| 1 geologist, 2 days @ $30.00 | 60.00 | $2,177.50 |

(c) Operating material and supplies

| | | |
|---|---|---|
| 2 picks @ $4.50 | | $ 9.00 |
| 2 shovels @ 2.50 | | 5.00 |
| 1 5' crowbar | | 4.50 |
| 200 3/4" drill bits @ $ .65 | | 130.00 |
| 1 detonator | | 35.00 |
| 350 gallons gasoline for compressor @ $.23½ | | 82.25 |
| 50 quarts oil " " @ .30 | | 15.00 |
| 3 50' lengths of 3/4" air hose @ $35.00 | | 105.00 |
| 160' of mine track @ $1.00 | | 160.00 |
| 50 mine ties, 2"x4"x30" | | 5.00 |
| 1 wheel barrow | | 35.00 |
| 8 cases powder | 10.75 | 86.00 |
| ( ~~[illegible]~~ ) | | |
| 240 caps | .16 | 38.40 |

(c) Operating material and supplies (continued

| | | | |
|---|---|---|---|
| 1 set drill steel | | $25.00 | |
| 30 sets of mine timber @ | 8.00 | $24.00 | |
| 2 carbide lamps @ | 3.50 | 7.00 | |
| 40# Carbide @ | .35 | 14.00 | |
| 1 A-frame for hoist | | 7.00 | |
| 100 feet of 1/2" steel cable for hoist @ | .25 | 25.00 | |
| 1 ore bucket (500 lbs.) | | 30.00 | $1,058.15 |

(d) Operating Equipment (To be Rented)

| | | | |
|---|---|---|---|
| 1 105 cu.ft. air compressor , charged to unit #1-18 | | | |
| 1 jack hammer, 50 days @ $40.00 per mo. | | 66.67 | |
| 1 army truck (for transporting men and material to job) 50 days | | 75.00 | |
| 1 D-6 dozer, 8 hours @ | 5.50 | 44.00 | |
| 1 air tugger - 50 days @ $40 per mo. | | 66.67 | $ 252.34 |

(e) Rehabilitation & Repairs - None - all charged to Unit 1-18.

(f) New Buildings, Improvement,etc., -None - all charged to Unit 1-18

(g) Miscellaneous

| | | |
|---|---|---|
| Repairs and maintenance of operating equipment | $50.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workmen's Comp. & Liability Insurance | 170.00 | |
| General liability insurance | 10.00 | |
| Pay roll taxes | 100.00 | $390.00 |

(h) Contingencies - not included above $ 50.00 $ 50.00

Total cost of this unit . . . . . .$3,927.99

- - - - - - - - - - - - - - - -

UNIT NO. 3-20

(a) Independent Contracts - None

(b) Labor, Supervision, Consultants

| | | | |
|---|---|---|---|
| 1 miner - 40 days @ | $16.00 | $640.00 | |
| 1 mucker - 40 days @ | 14.00 | 560.00 | |
| 1 timber man - 8 days @ | 20.00 | 160.00 | |
| 1 superintendent (1/3 of time) 40 days @ | 6.67 | 266.80 | |
| 1 engineer - 3 days @ | 30.00 | 90.00 | |
| 1 geologist - 2 days @ | 30.00 | 60.00 | $1,776.80 |

(c) Operating Material & Supplies

| | | | |
|---|---|---|---|
| 2 Picks @ | 4.50 | 9.00 | |
| 2 Shovels @ | 2.25 | 4.50 | |
| 1 5' crowbar | | 4.50 | |
| 200 3/4" drill bits @ $ | .65 | 130.00 | |
| 8 cases of powder @ | 10.75 | 86.00 | |
| 1 set drill steel | | 25.00 | |
| 240 caps @ | .16 | 38.40 | |
| 1 detonator | | 35.00 | |
| 300 gallons gasoline for compressor | .23½ | 70.50 | 70.50 |
| 50 quarts oil for compressor | .30 | 15.00 | 15.00 |
| 3 50' lengths of 3/4" air hose | 35.00 ea | 105.00 | |
| 1 wheelbarrow | | 35.00 | |
| 30 sets mine timber | 8.00 | 240.00 | |
| 2 carbide lamps | 3.50 | 7.00 | $ 804.90 |

(d) Operating Equipment (to be rented)

| | | | |
|---|---|---|---|
| 1 105 cu. ft. air compressor, 40 days @ | 6.00 | 240.00 | |
| 1 Jack hammer, 40 days @ $40.00 per month | | 53.33 | |
| 1 army truck for hauling men and supplies, 40 days @ | 1.50 | 60.00 | |
| 1 D-6 Dozer, 8 hrs. @ | 5.50 | 44.00 | $ 397.33 |

(e) REHABILITATION & REPAIRS - None - (all charged to Unit 1-18)
(f) NEW BUILDINGS, IMPROVEMENTS, ETC., None - " " " "
(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs and maintenance of operating equipment | $ 50.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workmen's Comp. & Liability Ins. | 144.00 | |
| General Liability Insurance | 10.00 | |
| Pay Roll Taxes | 80.00 | $ 344.00 |
| (h) CONTINGENCIES | $ 50.00 | $ 50.00 |

Total cost of this unit . . . . . $3,373.03

- - - - - - - - - - - - -

UNIT NO. 4-3

(a) INDEPENDENT CONTRACTS - None
(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 miner, 50 days @ | 16.00 | $800.00 | |
| 1 mucker, 50 days @ | 14.00 | 700.00 | |
| 1 timber man, 8 days @ | 20.00 | 160.00 | |
| * 2 laborers (for laying 1500' of 1" air pipe from claim #18 - 6 days each, 12 da. | 14.00 | 168.00 | |
| 1 superintendent (1/3 of time) 50 days @ | 6.67 | 337.50 | |
| 1 engineer - 3 days @ | 30.00 | 90.00 | |
| 1 geologist - 2 days @ | 30.00 | 60.00 | $2,315.50 |

* This item will not be required if we can secure loan for building trail; see Unit #8-Trail

- - - - - - - - - - - - - - - -

(c) OPERATING MATERIAL AND SUPPLIES

| | | | |
|---|---|---|---|
| 200 3/4" drill bits @ | .65 | 130.00 | |
| 8 cases of powder @ | 10.75 | 86.00 | |
| 240 caps @ | .16 | 38.40 | |
| 350 gallons of gasoline @ | .23½ | 82.25 | |
| 50 quarts of oil @ | .30 | 15.00 | |
| 40 sets of mine timber @ | 8.00 | 320.00 | |
| 60 lengths of 1"x20' galv. pipe @ (to carry air from Claim No. 18) | 5.00 | 300.00 | |
| 2 14" pipe wrenches @ | 3.00 | 6.00 | $977.65 |

Note: Picks, shovels, crowbar, drill steel, detonator, air hose wheelbarrow, carbide lamps, etc., will be available from other completed units, so are, therefore, not charged on this unit.

- - - - - - - - - - - - - - -

(d) OPERATING EQUIPMENT (To be rented)

| | | | |
|---|---|---|---|
| 1 105 cu.ft. air compressor - 50 days @ | 6.00 | 300.00 | |
| 1 Jack hammer, 50 days @ $40.00 per month | | 66.67 | |
| 1 army truck for trans. men & material 50 days @ | 1.50 | 75.00 | |
| 1 D-6 dozer - 8 hours @ | 5.50 | 44.00 | $485.67 |

(e) REHABILITATION AND REPAIRS - None - charged to Unit 1-18
(f) NEW BUILDINGS, IMPROVEMENTS, ETC., -None " " " "
(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs & Maintenance of operating eqpt. | 50.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workmen's Comp. Liability Insurance | 180.00 | |
| General Liability Insurance | 10.00 | |
| Pay roll taxes | 105.00 | $405.00 |
| (h) CONTINGENCIES | 50.00 | 50.00 |

Total cost of this unit . . . . . $4,233.82

## UNIT NO. 5-1

| | | | |
|---|---|---|---|
| (a) INDEPENDENT CONTRACTS - None | | | |
| (b) LABOR, SUPERVISION, CONSULTANTS | | | |
| 1 miner - 50 days @ | $ 16.00 | $ 800.00 | |
| 1 mucker - 50 days @ | 14.00 | 700.00 | |
| 1 timber man - 10 days @ | 20.00 | 200.00 | |
| 2 laborers (to lay 1200' of 1" air pipe from Claim #18) 12 man days @ | 14.00 | 168.00 | |
| 1 superintendent (1/3 of time) 50 days @ | 6.67 | 337.50 | |
| 1 engineer - 4 days @ | 30.00 | 120.00 | |
| 1 geologist - 2 days @ | 30.00 | 60.00 | $2,385.50 |
| (c) OPERATING ~~EQUIPMENT~~ MATERIAL & SUPPLIES | | | |
| 250 3/4" drill bits @ | .65 | 162.50 | |
| 10 cases of powder @ | 10.75 | 107.50 | |
| 300 caps @ | .16 | 48.00 | |
| 350 gallons of gasoline for compressor @ | .23½ | 82.25 | |
| 60 quarts of oil @ | .30 | 18.00 | |
| 200 feet of mine track @ | 1.00 | 200.00 | |
| 40 sets of mine timber @ | 8.00 | 320.00 | |
| 80 2"x4"x30" track tires @ | .10 | 8.00 | |
| 50 lbs. of carbide for lamps @ | .36 | 18.00 | |
| * 60 lengths of 1" galv. pipe @ | 5.00 | 300.00 | 1,264.25 |

* This pipe will not be required if we can secure loan for Unit #8-Trail, which will enable us to transport air compressor to this Unit (5-1).
Other items of equipment and supplies not listed above will be available from other completed units.

| | | | |
|---|---|---|---|
| (d) OPERATING EQUIPMENT (To be rented) | | | |
| 1 105 cu.ft. air compressor - 50 days @ | 6.00 | 300.00 | |
| 1 Jack hammer - 50 days @ $40.00 per mo. | | 66.67 | |
| 1 Army truck (to transport men & materials to job) 50 days @ | 1.50 | 75.00 | 441.67 |
| (e) REHABILITATION & REPAIRS - None | | | |
| (f) NEW BUILDINGS, INSTALLATIONS, IMPROVEMENTS - None | | | |
| (g) MISCELLANEOUS | | | |
| Repairs and maintenance of operating eqpt. | | 100.00 | |
| Analytical work | | 30.00 | |
| Accounting | | 30.00 | |
| Workmen's Comp. & Liab. Insurance | | 200.00 | |
| General Liab. insurance | | 10.00 | |
| Pay Roll taxes | | 108.00 | 478.00 |
| (h) CONTINGENCIES | | 100.00 | 100.00 |
| Total cost of this unit | | | $4,669.42 |

UNIT NO. 6 - CLaim No. 17 N.E.

(a) INDEPENDENT CONTRACTS - None.

(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 miner - 40 days @ | $16.00 | $640.00 | |
| 1 mucker - 4 0 d ays @ | 14.00 | 560.00 | |
| 1 timber man - 8 days @ | 20.00 | 160.00 | |
| 1 superintendent, (1/3 of time) 40 days @ | 6.67 | 266.80 | |
| 1 engineer - 3 days @ | 30.00 | 90.00 | |
| 1 geologist - 2 days @ | 30.00 | 60.00 | $1,776.80 |

(c) OPERATING MATERIAL & SUPPLIES

| | | | |
|---|---|---|---|
| 200 3/4" drill bits @ | .65 | 130.00 | |
| 8 cases of powder | 10.75 | 86.00 | |
| 240 caps | .16 | 38.40 | |
| 300 gallons of gasoline @ .23½ | | 70.50 | |
| 50 quarts oil for compressor @ | .30 | 15.00 | |
| 24 sets mine timber @ | 8.00 | 192.00 | |
| 1 set drill steel | | 25.00 | 556.90 |

Picks, shovels, crowbar, detonator, air hose, wheelbarrow, etc., will be available from other completed projects.

(d) OPERATING EQUIPMENT (To Be Rented)

| | | | |
|---|---|---|---|
| 1 105 cuft. air compressor - 40 days @ | 6.00 | 240.00 | |
| 1 jack hammer - 40 days @ $40.per mo. | | 53.33 | |
| 1 army truck -to transport men and supplies - 40 days @ | 1.50 | 60.00 | |
| 1 D-6 Dozer - 8 hrs @ 5.50 | | 44.00 | |
| 1 air tugger - 40 days @ | 6.00 | 240.00 | 637.33 |

(e) REHABILITATION & REPAIRS - None

(f) NEW BUILDINGS, IMPROVEMENTS, INSTALLATION - None

(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs and maintenance of operating equipment | 50.00 | |
| Analytical work | 30.00 | |
| Workmen's comp. & liability insurance | 144.00 | |
| General Liability insurance | 10.00 | |
| Pay roll taxes | 80.00 | 344.00 |

| | | |
|---|---|---|
| (h) CONTINGENCIES | 50.00 | 50.00 |
| Total cost of this unit . . . . . | | $3,365.03 |

- - - - - - - - - - - -

7-17 S. END

UNIT NO. 7-S.End

(a) None

(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 MINer - 40 days @ | 16.00 | 640.00 | |
| 1 mucker - 40 days @ | 14.00 | 560.00 | |
| 1 timber man - 8 days @ | 20.00 | 160.00 | |
| 1 Supt.(1/3 of time) 40 days @ | 6.67 | 266.80 | |
| 1 Engineer - 3 days @ | 30.00 | 90.00 | |
| 1 Geologist - 2 days @ | 30.00 | 60.00 | $1,776.80 |

(c) OPERATING MATERIAL & SUPPLIES

| | | | |
|---|---|---|---|
| 200 3/4" drill bits @ | .65 | 130.00 | |
| 8 cases powder @ | 10.75 | 86.00 | |
| 240 caps @ | .16 | 38.40 | |
| 300 gallons gasoline for compressor | .23½ | 70.50 | |
| 50 quarts oil for compressor | .30 | 15.00 | |
| 24 sets mine timber | 8.00 | 192.00 | |
| 1 set drill steel | | 25.00 | 556.90 |

Picks, shovels, crowbars, detonator, air hose, wheelbarrow, etc., will be available from other completed units.

RICHARD M. ANDERSON
ATTORNEY AT LAW
307 ANDRESON BLDG.
SAN BERNARDINO,
CALIFORNIA
TELEPHONE 841269

(d) OPERATING EQUIPMENT ( To be Rented)

| | | | |
|---|---|---|---|
| 1 105 cu. ft. air compressor - 40 days @ | 6.00 | 240.00 | |
| 1 Jack hammer - 40 days @ $40.00 per month | | 53.33 | |
| 1 Army truck, to trans. men & materials - 40 da. @ 1.50 | | 60.00 | |
| 1 D-6 Dozer - 8 hrs. @ | 5.50 | 44.00 | |
| 1 Air tugger - 40 days @ | 6.00 | 240.00 | |
| 1 1/2 ton pick-up truck for hauling gas, oil, supplies, repairs, timber, etc. for entire project - 4 months @ $50.00 per mo. | | 200.00 | $837.33 |

(e) None
(f) None
(g) MISCELLANEOUS

| | | |
|---|---|---|
| Repairs and maintenance of operating equipment | 50.00 | |
| Analytical work | 30.00 | |
| Accounting | 30.00 | |
| Workment's comp. & Liab. Ins. | 144.00 | |
| General Lia. Insurance | 10.00 | |
| Pay roll taxes (S.U.I., F.U.T.A., F.I.C.A.) | 80.00 | 344.00 |

(h) CONTINGENCIES 50.00

Total cost of entire project $3,565.00

- - - - - - - - - - - - -

UNIT NO. 8-Trail

(a) None
(b) LABOR, SUPERVISION, CONSULTANTS

| | | | |
|---|---|---|---|
| 1 powder man - 15 days @ | 14.00 | 210.00 | |
| 1 laborer - 15 days @ | 12.00 | 180.00 | |
| 1 D-6 Dozer Operator - 15 days @ | 20.00 | 300.00 | $690.00 |

(c) OPERATING MATERIAL & SUPPLIES

| | | | |
|---|---|---|---|
| 6 cases powder @ | 10.75 | 64.50 | |
| 200 caps | .16 | 32.00 | |
| 100 gallons gas for compressor @ | .23½ | 23.50 | |
| 20 quarts oil for compressor | .30 | 6.00 | |
| 300 gallons deisel fuel | .16 | 48.00 | |
| 20 gallons deisel oil | 1.00 | 20.00 | $194.00 |

(d) OPERATING EQUIPMENT TO BE RENTED

| | | | |
|---|---|---|---|
| 1 air compressor - 15 days @ | 6.00 | 90.00 | |
| 1 Jack hammer - 15 days @ $40.00 per month | | 20.00 | |
| 1 Army truck - to rans. men & material, 15 da. | 1.50 | 22.50 | |
| 1 D-6 Dozer - 15 days @ | 40.00 | 600.00 | $732.50 |

(e) None
(f) None
(g) MISCELLANEOUS

| | | | |
|---|---|---|---|
| Repairs & Maintenance of operating equipment | | 20.00 | |
| Accounting | | 15.00 | |
| Workmens comp. & Liab. insurance | (70.00) | 70.00 | |
| General Liab. Ins. | | 5.00 | |
| Pay roll taxes | | 31.00 | $141.00 |

(h) CONTINGENCIES

| | | |
|---|---|---|
| | $25.00 | 25.00 |

Total cost of this unit . . . . . .$1,782.50

RICHARD M. ANDERSON
ATTORNEY AT LAW
307 ANDRESON BLDG.
SAN BERNARDINO,
CALIFORNIA
TELEPHONE 841269

SUMMARY OF ESTIMATED COSTS OF PROJECT

| | |
|---|---|
| Unit No. 1-18 | $7,475.20 |
| Unit No. 2-18A | 3,927.99 |
| Unit No. 3-20 | 3,373.03 |
| Unit No. 4-3 | 4,223.82 |
| Unit No.5-1 | 4,669.42 |
| Unit No. 6-17 N.E. | 3365.03 |
| Unit No. 7-17 S.E. | 3,565.03 |
| Unit No. 8-Trail | 1,782.50 |
| T O T A L . . . . | $ 32,392.02 |

R E C A P I T U L A T I O N

| Unit No. | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
|---|---|---|---|---|---|---|---|
| 1-18 | $2,790.20 | $1,767.00 | $ 574.00 | $258.00 | $1,300 | $ 686.00 | $ 100.00 |
| 2-18A | 2,177.50 | 1,058.15 | 252.34 | 00 | 00 | 390.00 | 50.00 |
| 3-20 | 1,776.80 | 804.90 | 397.33 | 00 | 00 | 344.00 | 50.00 |
| 4-3 | 2,315.50 | 977.65 | 485.67 | 00 | 00 | 405.00 | 50.00 |
| 5-1 | 2,385.50 | 1,264.25 | 441.67 | 00 | 00 | 478.00 | 100.00 |
| 6-17NE | 1,776.80 | 556.90 | 637.33 | 00 | 00 | 344.00 | 50.00 |
| 7-17SE | 1,776.80 | 556.90 | 837.33 | 00 | 00 | 344.00 | 50.00 |
| 8-Trail | 690.00 | 194.00 | 732.50 | 00 | 00 | 141.00 | 25.00 |
| TOTALs | $15,689.10 | $7,179.75 | $4,358.17 | $258.00 | $1,300 | $3,132.00 | $475.00 |

Included in the above estimates is the sum of $3,811.50 for rental of equipment owned either by the partnership or individual members of the partnership, and this sum may be considered as a portion of our 25% contribution.

7. (a) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation? Yes.

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

1. Money. The members of the partnership are financially able and prepared to supply their 25% share of the cost of the project. As stated above, $3,811.50 will be available from equipment rental, leaving a balance of approximately $4,422.50 to be supplied in cash.
2. Equipment - Rental value to the extent of approx. $3,811.50

RICHARD M. ANDERSON
ATTORNEY AT LAW
307 ANDRESON BLDG.
SAN BERNARDINO,
CALIFORNIA
TELEPHONE 841269

Copy

THESE ARTICLES OF PARTNERSHIP, MADE THIS 1st day of September, 1952, at San Bernardino, California, by and between O. W. Atkin, G. E. Atkin, R. C. Harmer, Wm. N. Frazee, Alan E. Guhin, W. R. Frazee, Carl Lang, Josephine Coulter, Josephine Snyder, William E. Brandes, Russell M. Gray, M.D., Russell M. Gray, Jr., Robert L. Gray, and Paul and Ann Hardy, hereinafter referred to as partners A,B,C,D,E,F,G,H,K,L,M,N, P and Q, respectively; (Paul and Ann Hardy being referred to jointly as partner Q)

WITNESSETH

WHEREAS, it is the desire of the parties hereto to form a mining p artnership pursuant to the provisions of Division 2, Chapter 5, of the Public Resources Code of the State of California, and to revise articles of partnership, heretofore executed by some of these parties, to include additional partners;

AND WHEREAS it is the desire and intention of the parties hereto that these revised articles shall supplant and replace any and all articles of partnership heretofore drawn and executed by some of these parties for the LIME DYKE TUNGSTEN CO, a partnership; and that these articles of partnership shall be and are the articles of partnership of the hereinabove named partners henceforth,

AND WHEREAS, it is understood that the mining property of the partnership presently consists of twenty-one (21) certain mining claims in Kern County, California, described as follows: Claims numbered 1 to 16 inclusive, located by O. W. Atkin, G. E. Atkin, R. C. Harmer, V. F. DiGiorgio and J. A. DiGorgio, and five (5) claims, numbered 17, 18, 19, 20 and 21 respectively, located by G. E. Atkin, all of which said claims are located in virgin area laying generally in sections 13, 14, 23, 24, and 25 of Township 27 South, Range 34 East, M.D.B. & M., Kern County, California, being approximately seven miles South of Weldon Post Office and within the Sequoia National Forest Reserve; and whereas there is reason to suppose that upon some or all of these claims there are valuable mineral and metal deposits;

AND WHEREAS the mining claims numbered 1 to 16 inclusive, herein-

above described, have been, for various valuable considerations, transferred and conveyed by various quit claim deeds to G. E. Atkin, who now represents himself to be the legal owner and holder thereof of record; and that he holds said claims for this partnership

AND WHEREAS SAID mining claims numbered 17, 18, 19, 20 and 21 were discovered by and are presently of record in the name of said G. E. Atkin, who represents that he holds the same for this partnership

AND WHEREAS partners D, E, F, G, H, K, L, M, N, P, and Q have contributed various sums for the exploration and development of said mining claims

AND WHEREAS partners A, B, and C have discovered said claims and have contributed time, effort and labor on said mining claims consisting mainly of locating and recording of said claims, erection of monuments, building roads and trails and other improvements upon said property,

NOW THEREFORE, it is hereby agreed and stipulated by the parties hereto as follows:

1. These articles shall be deemed to reflect and determine the interest of each and all of the parties hereto in and to the above described mining claims and properties and in and to any additional mining claims discovered by any of these partners within a one (1) mile radius of the boundaries of the present Lime Dyke Group of Claims, during the existence of this partnership and the interest of said partners in and to the proceeds of the sale of any ore from any of said claims or the products thereof, and the interests of the partners in and to the proceeds of the sale of any or all of said mining claims or fractional interests therein to third parties by said partnership;

2. This partnership shall continue until terminated by mutual consent or by operation of law.

3. Said partnership shall be conducted and carried on under the business name, style and firm of LIME DYKE TUNGSTEN COMPANY.

4. It is stipulated that each of the hereinafter designated

partners shall have and own the interest in and to the assets of the partnership and the profits, if any therefrom, set opposite their respective designating initials:

| Partner | Per cent | Partner | Per cent | Partner | Per cent |
|---|---|---|---|---|---|
| A | 17. | B | 9.6 | C | 18.75 |
| D | 20.25 | E | 7.20 | F | 3.6 |
| G | .45 | H | .45 | K | .45 |
| L | 2.25 | M | 10. | N | 2. |
| P | 5.5 | Q | 2.5 | | |

5. No partner shall sell, lease, or otherwise dispose of all or any part of his interest in this partnership and/or said mining claims without giving the other partners or any of them first right to purchase said interest.

6. The following described personal property, which is stipulated to be owned by O. W. Atkin, may be rented by the partnership at a rate to be agreed upon; or, if not so rented, said property may be removed by O. W. Atkin at any time; 1 D-6 Caterpillar Dozer, 1 Small Electric Light Plant, 1 Water pump.

7. That certain 125 cu. ft. Worthington Air Compressor which is presently located on the said partnership property and which is stipulated to be owned by William N. Frazee, may be rented by the partnership at a rate to be agreed upon; or, if not so rented, said compressor may be removed by William N. Frazee at any time.

8. Pursuant to the provisions of Section 2359 of the Public Resources Code of the State of California, partners A, D, and M are hereby expressly given all necessary authority to jointly negotiate and execute any and all agreements for the further exploration and/or development of the mining properties hereinabove described, and to do all acts necessary and incident to securing such agreements, and all acts necessary and incident to the performance of such agreements upon the execution of same.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written. P. _____ Q. _____

| | | |
|---|---|---|
| Partner A | Partner B | Partner C |
| Partner D | Partner E | Partner F |
| Partner G | Partner H | Partner K |
| Partner L | Partner M | Partner N |

C O P Y

Invoice

M SMITH-EMERY Company, Chemists - Engineers
920 Santee St., Los Angeles 15, Calif. Phone Trinity 4791

Date - Sept. 8th, 1952

Laboratory
No. 358508
Sample - Ore
Received 0-3-52

Submitted by Wm. N. Frazee,
1360 E Street,
San Bernardino, Calif.

REPORT OF DETERMINATIONS

| | Tungsten trioxide ($WO_3$) |
|---|---|
| "Lime Dyke #1 - North End" - - - | 0.5% |
| "Lime Dyke #18-A" - - - - - - - - - | 1.14% |

Respectfully Submitted,

(signed) Smith-Emery
Chemists and Engineers G.L.C.

* * * * * * * * * * * * * * * * * * * * * * * * * * * * *

Copy KELDON RESEARCH CORPORATION, Box 2555, Terminal Annex, Los Angeles, Calif.

LABORATORY CERTIFICATE

Submitted by: Lime Dyke Tungsten Co.,
1360 E Street,
San Bernardino, Calif.

| Lab.No. Marking | Reference Ore |
|---|---|
| (sample from Vein #18-A | |
| Tungstic Oxide ($WO_3$) | 1.57% |

KELDON RESEARCH CORPORATION
(signed) Wm. H. Talbott

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

(COPY) SMITH EMERY CO., Los Angeles, Calif.

October 1st, 1952

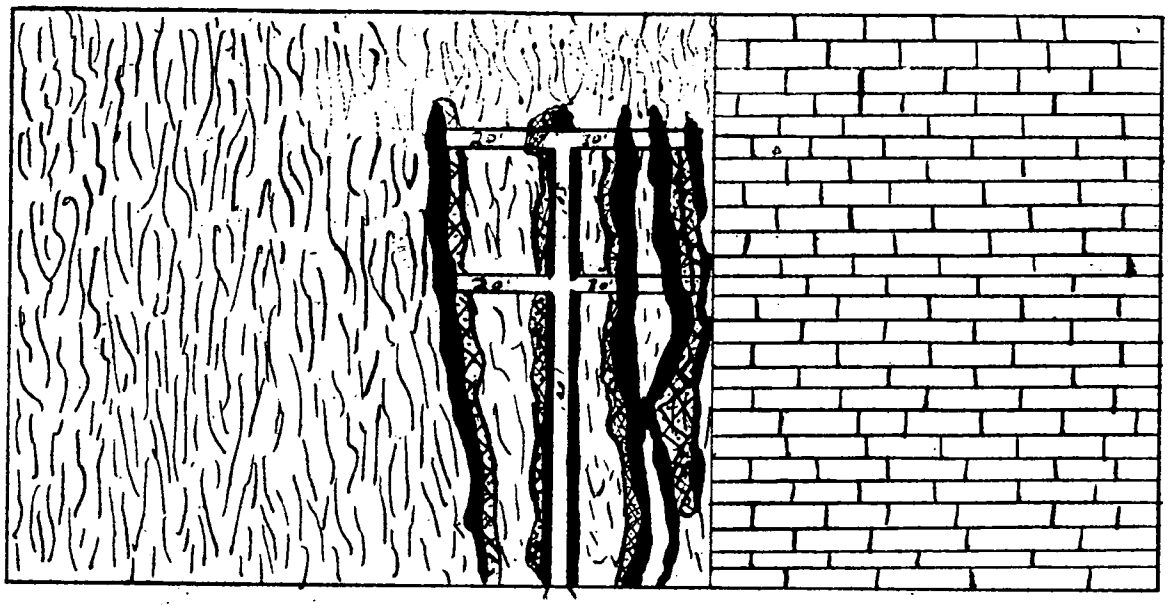
Laboratory No: 359254-57
Sample - Ore
Received 9/23/52
Submitted by Wm. N. Frazee,
P.O. Box 230, San Bernardino, Calif.

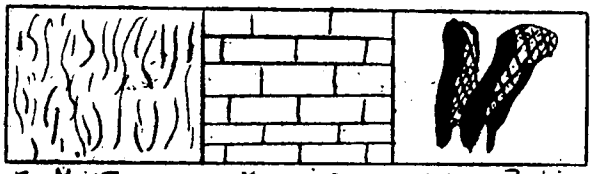
REPORT OF DETERMINATIONS

| Mark: | Tungsten Trioxide ($WO_3$) |
|---|---|
| "Claim #17-9-19-52" - - - - - - - - - - - - | 2.76% |
| "Vein #17-9-19-52" - - - - - - - - - - - - - | 1.62% |
| "Claim #18 North End 9-19-52" - - - - - - - | 0.30% |
| "Vein #20-9/19//52" - - - - - - - - - - - - | 3.46% |

(signed) Smith-Emery Co

UNIT # 1-18

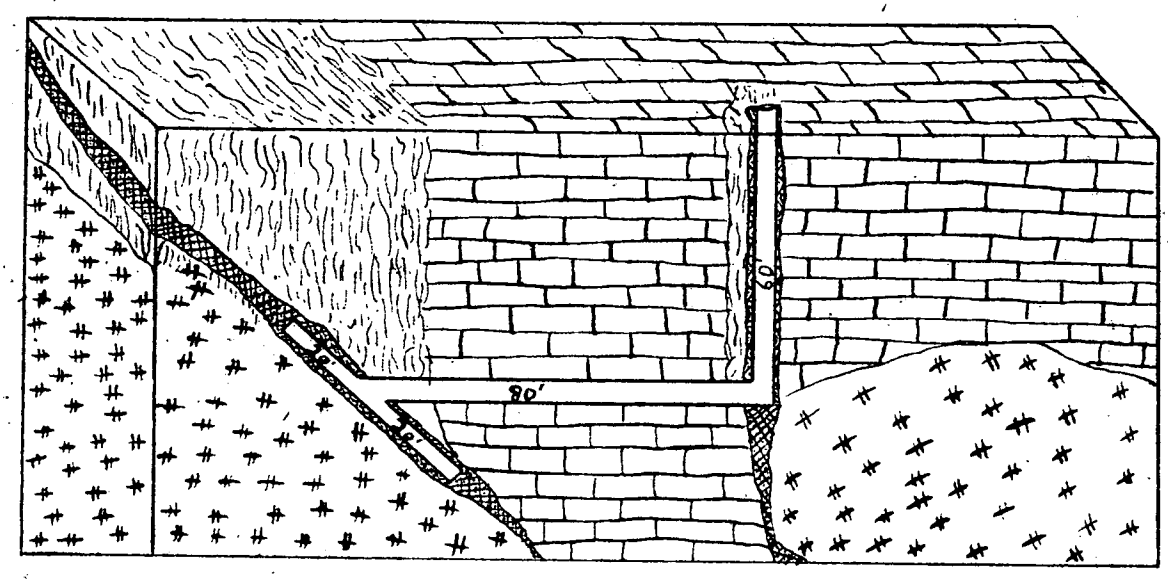


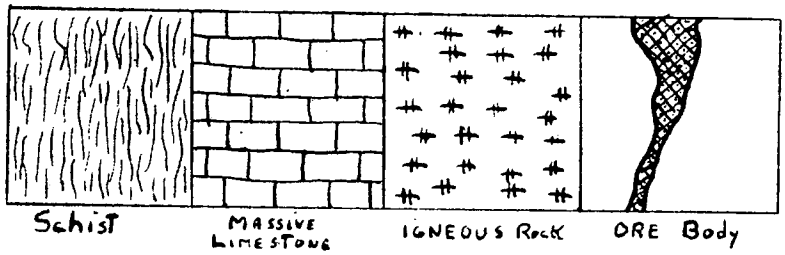




LIME DYKE TUNGSTEN CO.

Unit #2-18 A.

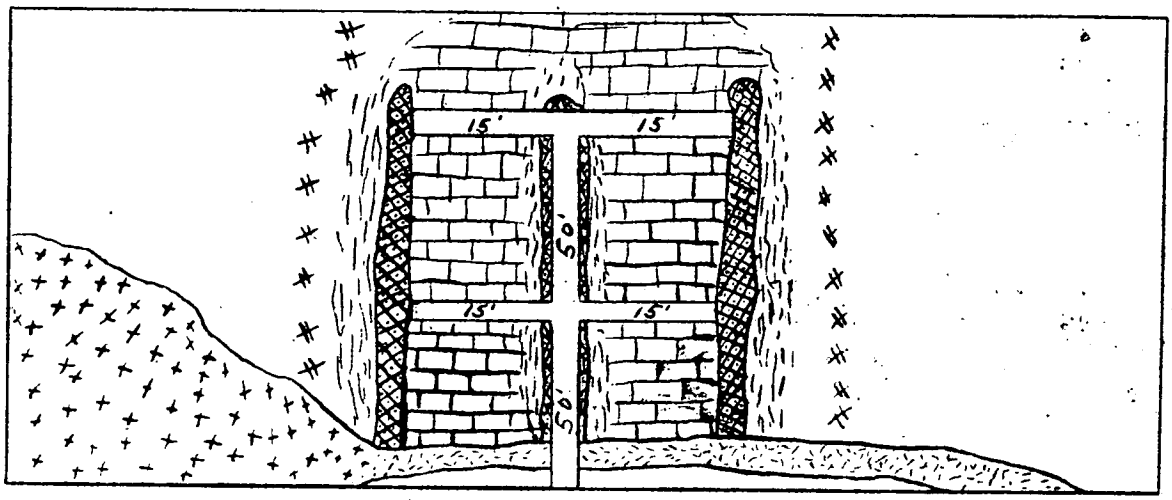
# UNIT 2-18A

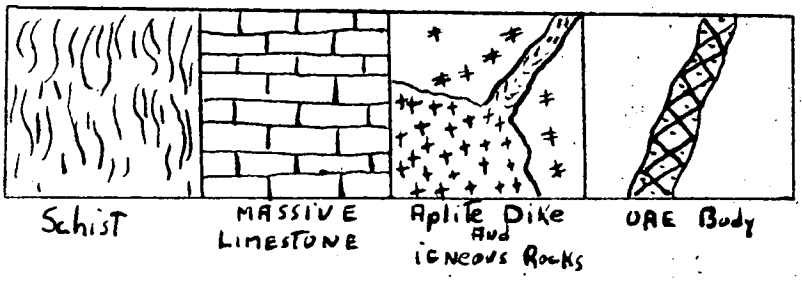



LIME DYKE TUNGSTEN CO.

UNIT 3 - 20

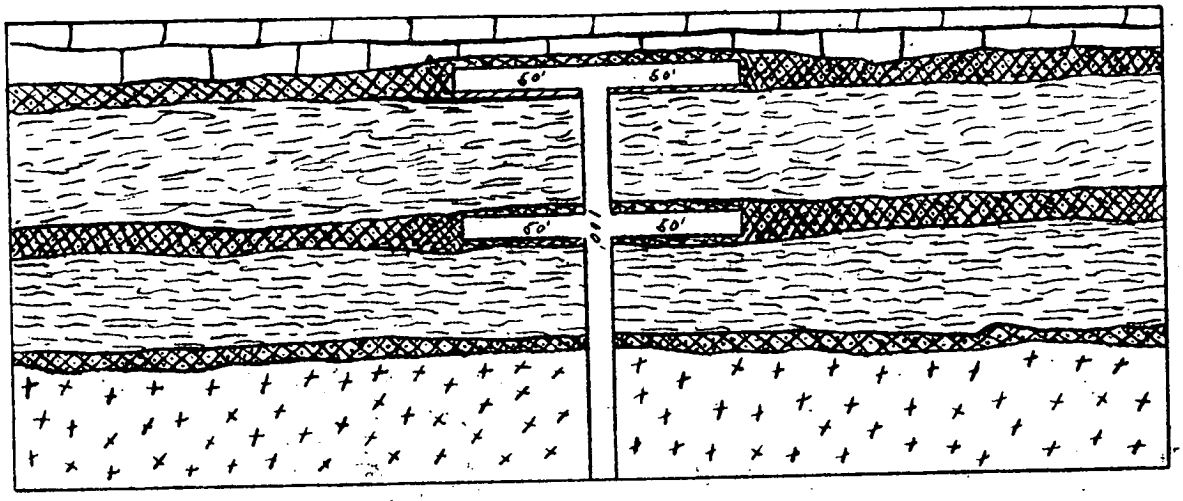


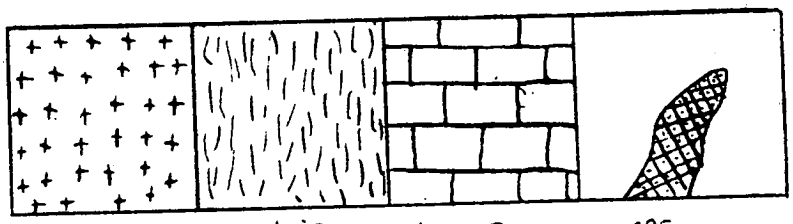




LIME DYKE TUNGSTEN CO.

UNIT #4 claim 3

# 4-3

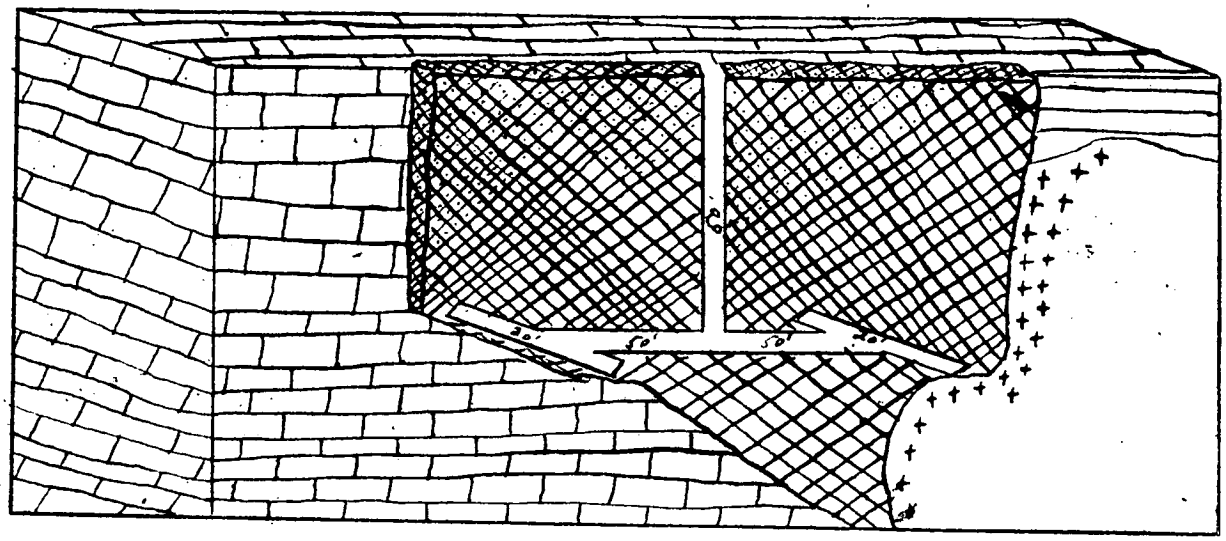


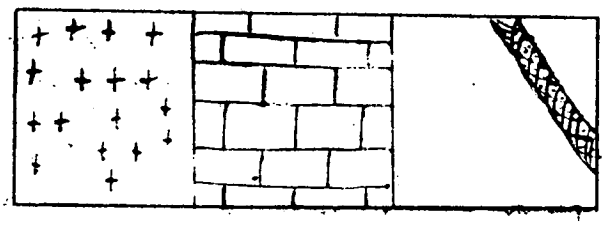



IGNEOUS SCHIST LIMESTONE ORE.

LIME DYKE TUNGSTEN CO.

UNIT #5 chin 1

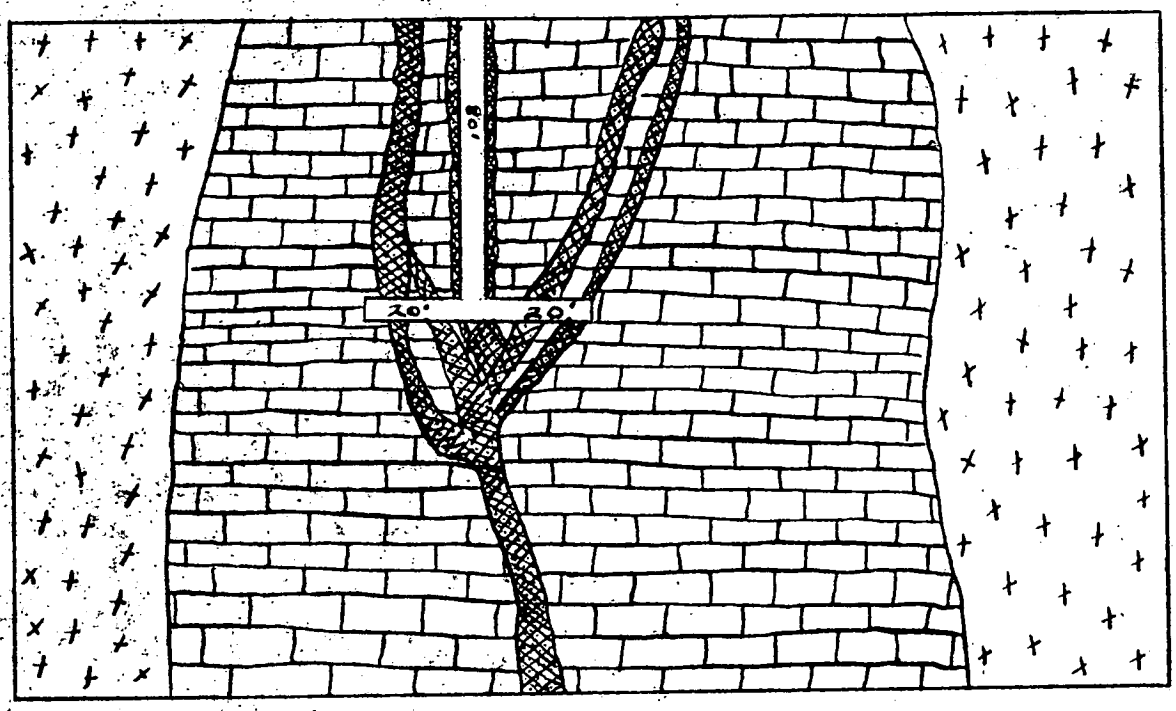


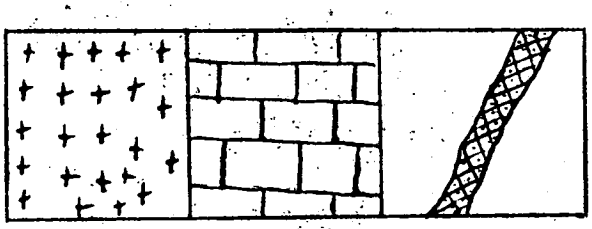



IGNEOUS LIMESTONE ORE BODY

LIME DYKE TUNGSTEN CO.

UNIT #6 claim 17 - S. END

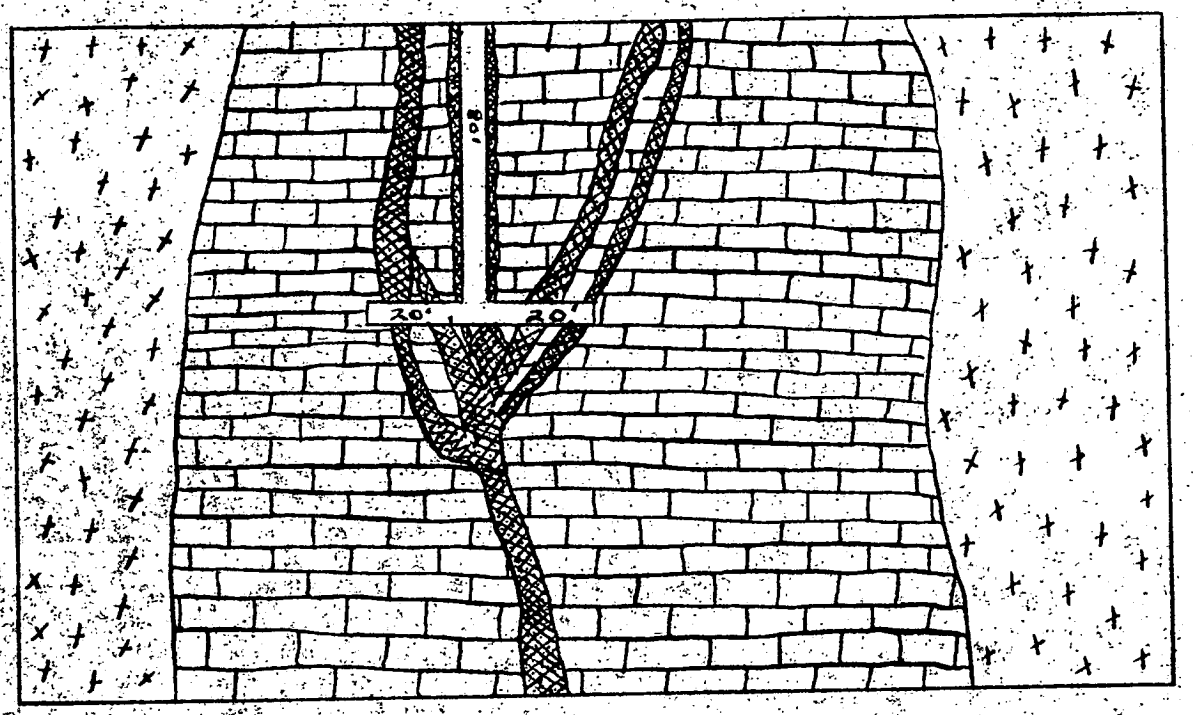


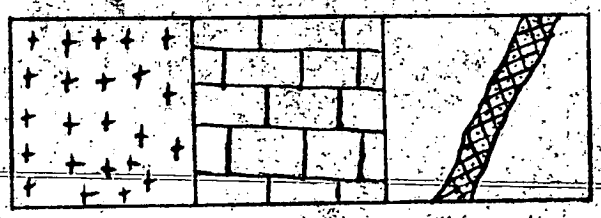



IGNEOUS LIMESTONE ORE Body

LIME DYKE TUNGSTEN CO.

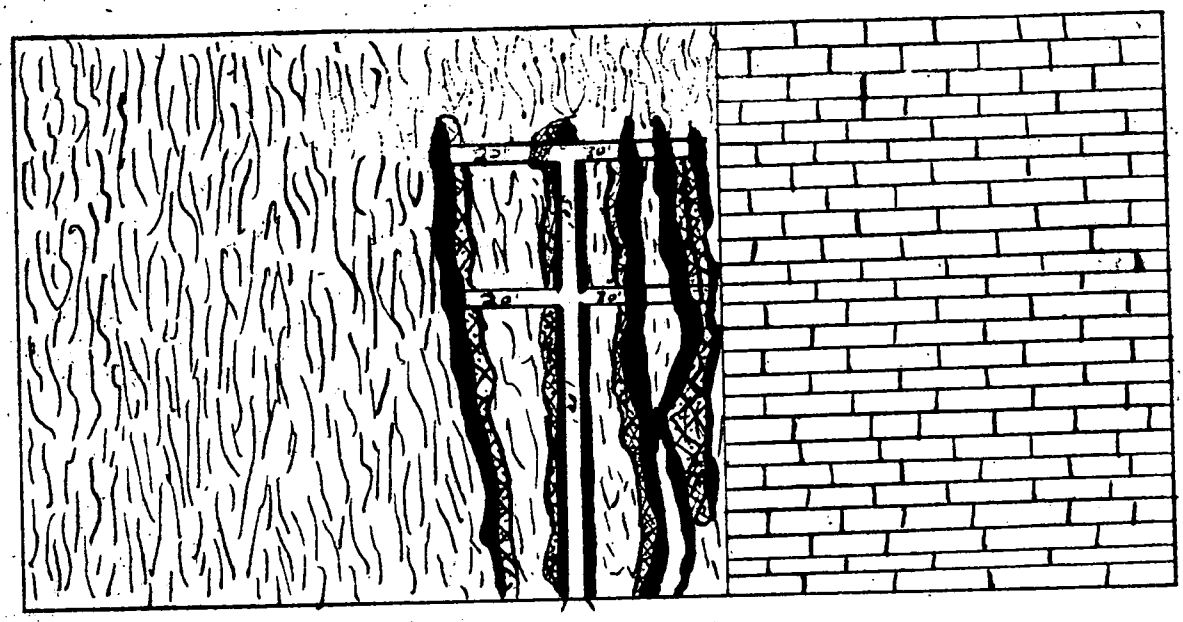
Unit #7 claim 17 No. End

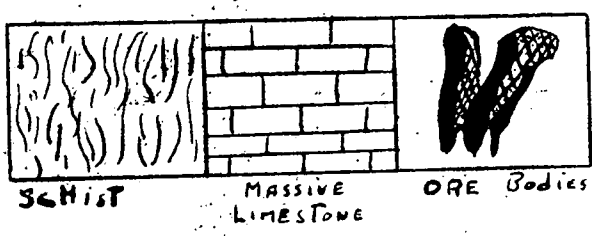



LIME DYKE TUNGSTEN CO.

UNIT # 1-18

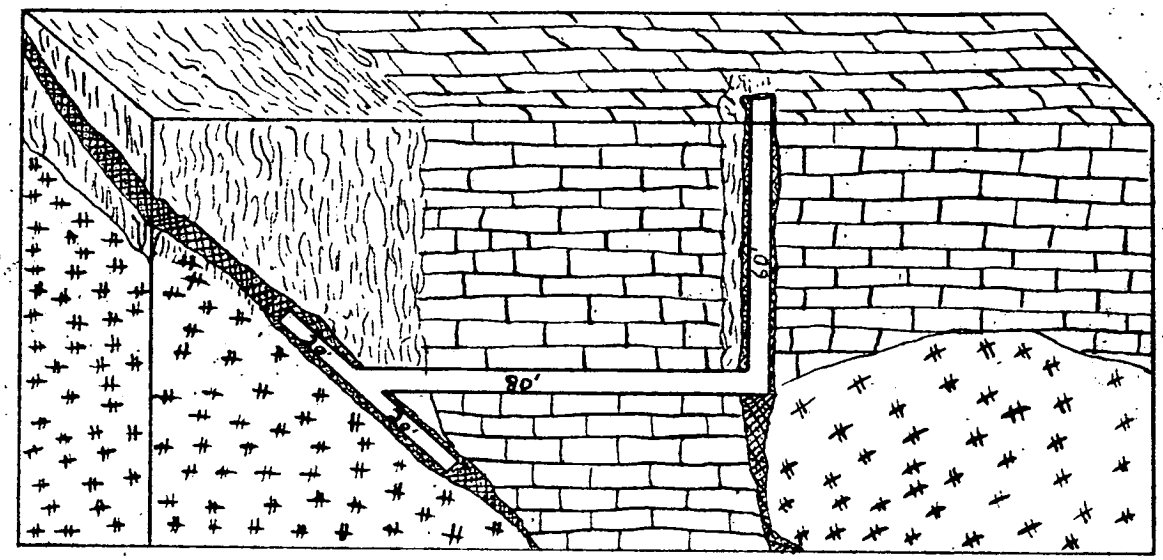


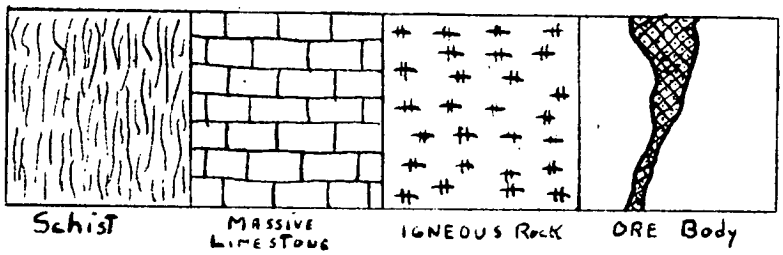



LIME DYKE TUNGSTEN CO.

Unit 2-18 A.

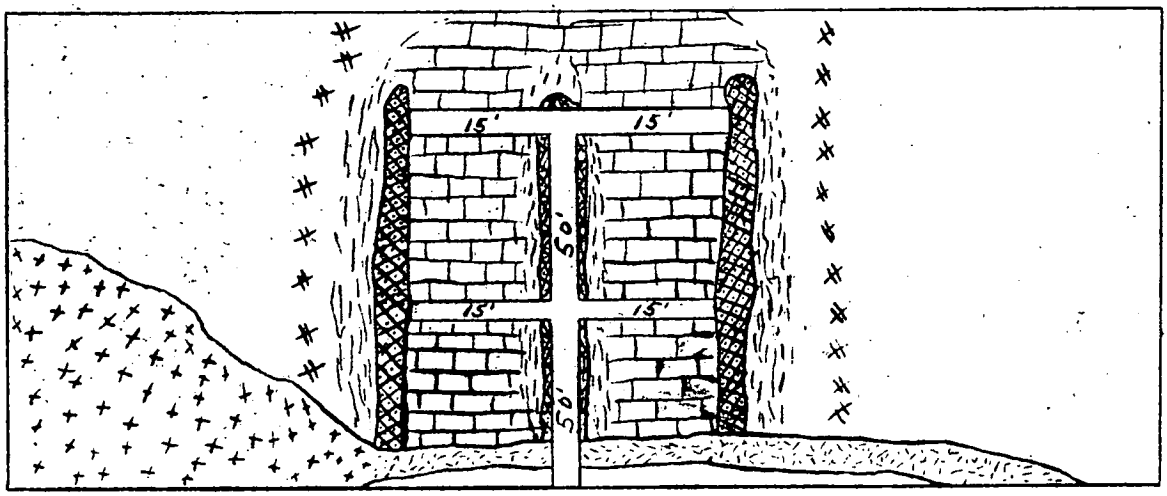
# UNIT 2-18A

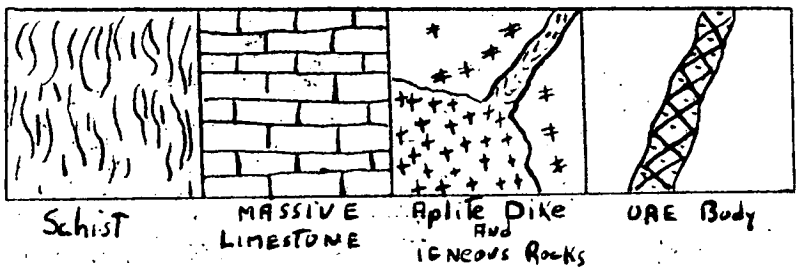



LIME DYKE TUNGSTEN CO.

UNIT 3 - 20

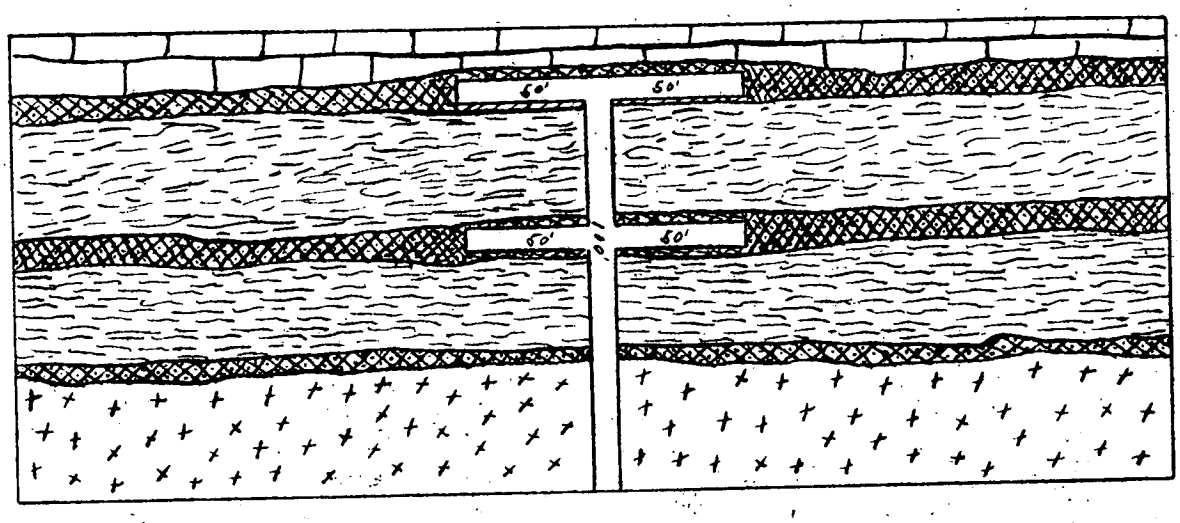


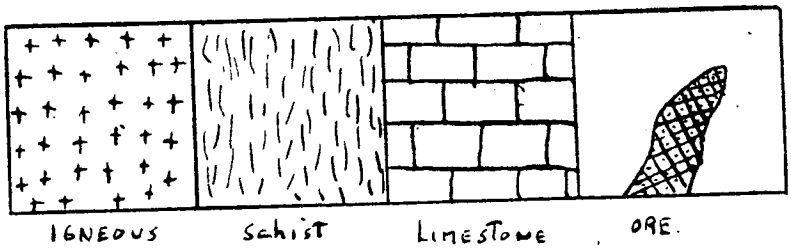




LIME DYKE TUNGSTEN CO.

UNIT #4 claim 3

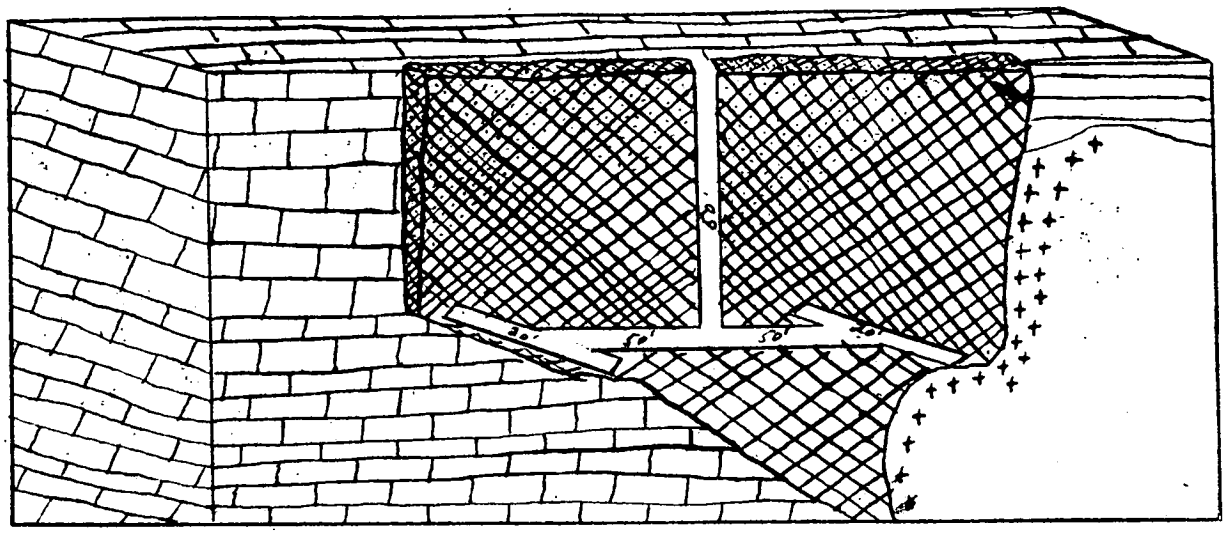
# 4 - 3

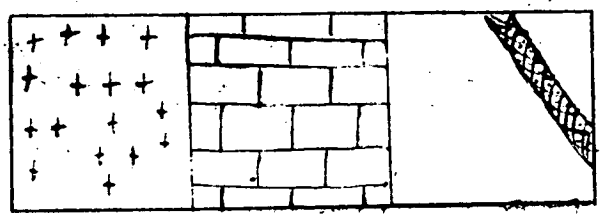



LIME DYKE TUNGSTEN CO.

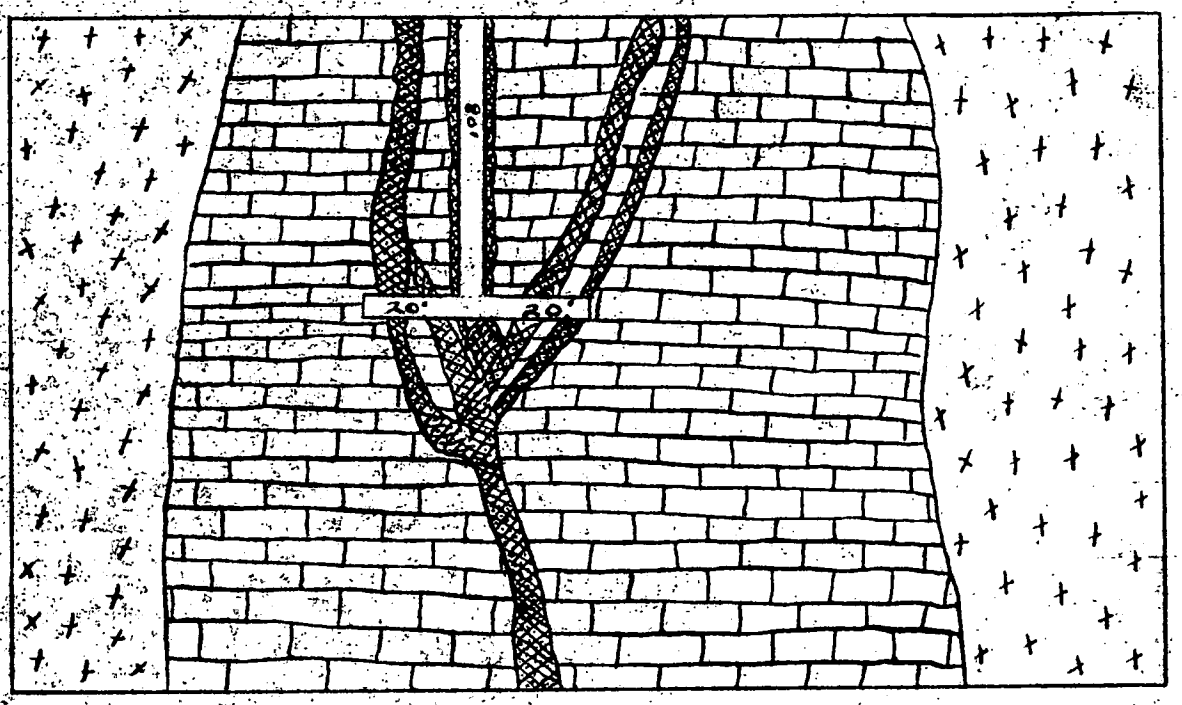
Unit #5 chin 1

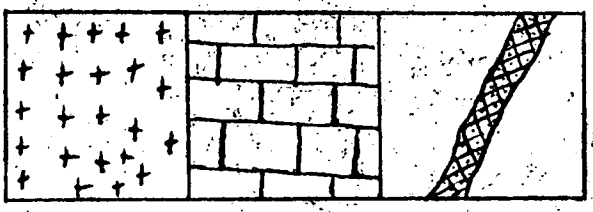




IGNEOUS LIMESTONE ORE Body

UNIT #6 Coin 17 - S. END

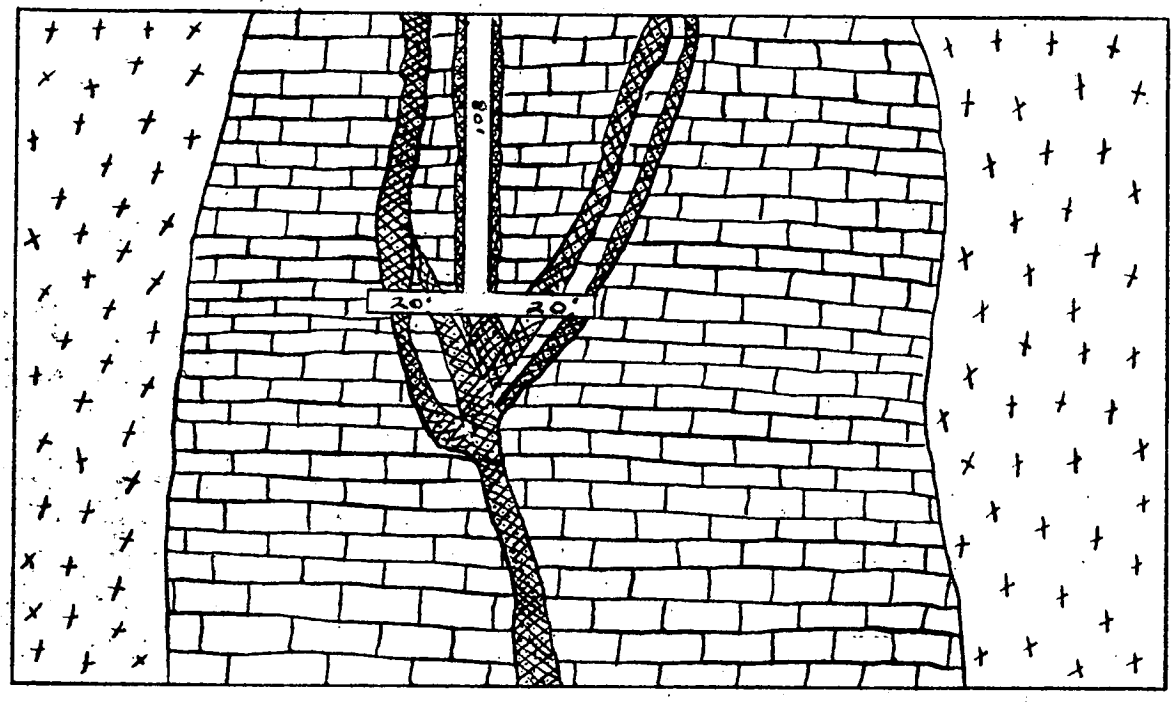


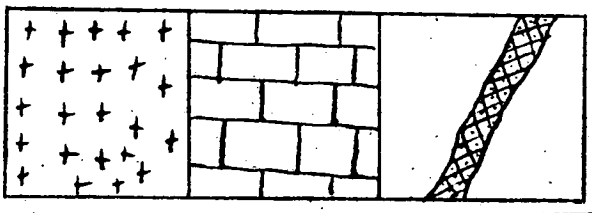



IGNEOUS LIMESTONE ORE BODY

LIME DYKE TUNGSTEN CO.

Unit ~~4~~ 7 claim 17 No. End



IGNEOUS LIMESTONE ORE Body

LIME DYKE TUNGSTEN CO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
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Spokane 8, Wash.

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2

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

Smea 2730

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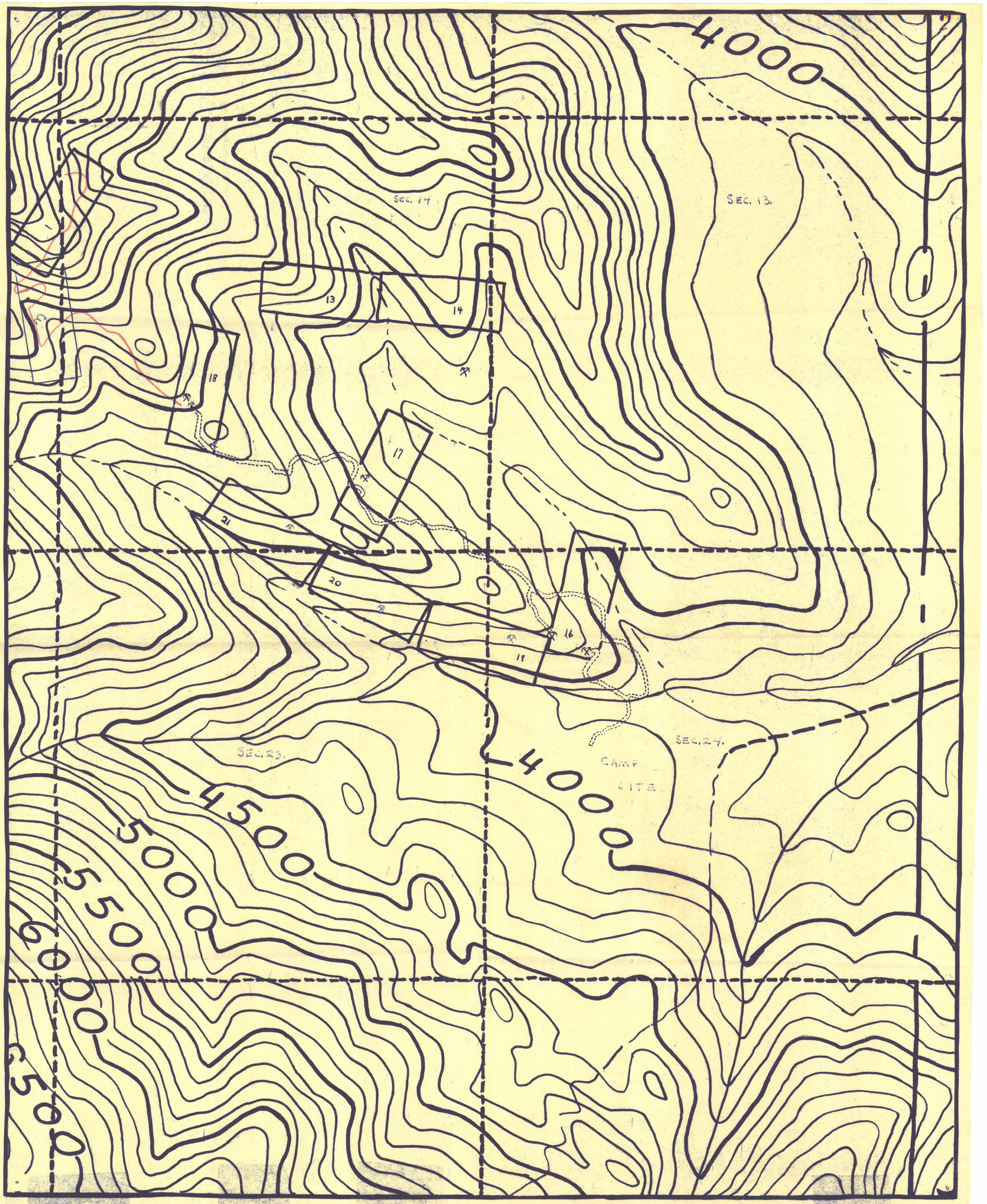


# LIME DYKE TUNGSTEN CO.

N
W E
S

R. 34 E.
T 27 S.

1" = 660'

X = Exposed veins

NEW ROAD
PROPOSED TRAIL

R.M. GRAY