UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Colorado Plateau District
P. O. Box 360
Grand Junction, Colorado

Mining Division
Date Rec'd.
NOV 30 1954
BUREAU OF MINES
Denver, Colorado

November 29, 1954

Mr. Darrell G. Hafen
1102 Walker Bank Bldg.,
Salt Lake City 1, Utah

Dear Mr. Hafen:

I have received from the Executive Officer, DMEA Field Team, Region IV, Denver, Colorado, a copy of a map of the nine Bloomington claims. The map was prepared by your Mr. Arthur F. Crosby.

I am sending you herewith my copy of the Bloomington claim map. Would you be so kind as to have Mr. Crosby or someone else in your organization indicate on the map the locations of the adits which exist on the claims, as well as the position of the rim, with thickness notations indicating the location of the channel in the Shinarump conglomerate.

As soon as you return the map to me with the additional information noted thereon, I shall complete my recommendations to the Executive Officer concerning an exploration program on your Bloomington claims.

Sincerely yours,

For Arnold L. Brokaw
District Supervisor

Enclosure

WPW/mlr

cc: S. R. Wilson
A. H. Koschmann
W. H. King

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

224 New Customhouse
Denver 2, Colorado

August 13, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 3063 (Tungsten), Darrell G. Hafen, Washington County, Utah.

Enclosed are four copies of the final report on the subject docket, a copy of the letter of denial to the applicant, and two copies of Form 3b.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

HMC:cwm

cc: SRWilson w/copy of Final Report
Ralph Roberts w/copy of Final Report
AHKoschmann w/copy of Final Report
DMEA w/copy of Final Report
Mining Division w/copy of Final Report
Subject
AHKoschmann (2)
Chron.

224 New Customhouse
Denver 2, Colorado

September 9, 1953

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 3063 (Tungsten), Darrell G. Hafen, Washington County, Utah

Reference is made to your letter dated September 1, 1953, regarding the analysis of samples in the final report on Docket No. DMEA 3063.

The statement that selected pieces of the float show the tungsten content to be low was based on a visual examination under the ultra-violet lamp.

W. H. King

W. H. King

JFS:jp
cc Contract
Chron
SRWilson w/copy incoming ltr
AHKoschmann

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

August 13, 1953.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 3063 (Tungsten), Darrell G. Hafen, Washington County, Utah.

Enclosed are nine copies of the final report on the subject docket. The Survey did not participate in the examination.

The engineer examiner concludes that no significant amount of tungsten would be found by the proposed exploration and he believes further exploration is not warranted.

We recommend that the application be denied.

W. H. King

W. H. King

Enclosures

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

Mining Division
Date Rec'd
SEP 3 - 1953
BUREAU OF MINES
Denver, Colorado

SEP 1 1953

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 3063 - Tungsten
Darrell G. Hafen
Washington County, Utah

Dear Mr. King:

Reference is made to the Field Team report on the subject property by W. E. Young, Bureau of Mines.

In reviewing this report it was noted that no sample returns were given. On page 3 of the report, however, it was stated: "Samples of selected pieces of the float show the content of tungsten to be low." If these samples were analyzed the results should be included in the report. Likewise, if the statement was based on visual examination under an ultra-violet lamp, the statement should be so qualified.

If the above referenced samples were analyzed, we would appreciate receiving the returns to complete our docket file.

Sincerely yours,

Ernest W. Ellis

ACTING Chairman, Operating Committee

APPROVED:

M H Cline
Member, Bureau of Mines

A P Kinkel
Member, Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

Mining Division
Land Branch
JUL 30 1953
Bureau of Mines
Denver, Colorado

July 28, 1953

Memorandum

To: W. H. King, Chief, Mining Division, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: DMEA-3063, Darrell G. Hafen, Washington County, Utah

Transmitted herewith are the original and eight copies of an engineering [redacted] report covering examination of the subject property. A separate Summary, Conclusions and Recommendations section is included. W. E. Young examined the property and prepared the report. The work was done without participation by the Geological Survey.

Examination of the applicant's property and reconnaissance of the surrounding area has disclosed that an extensive search has been made for concentrations of scheelite sufficiently high in grade to be commercially significant. Numerous trenches and pits have been excavated in areas adjacent to the applicant's claims, but no scheelite deposits of importance have been found. No scheelite-bearing outcrops are present on the applicant's property. A few scattered boulders of float, containing small quantities of scheelite, are in evidence.

The examining engineer believes exploratory work on the property is not warranted because of the low grade, and scattered mineralization. It is, therefore, recommended that the loan request be denied. I concur with this recommendation.

The original brochure is attached.

Stephen R. Wilson

Stephen R. Wilson

Enclosure

6-303
(March 1947)

cc: S. R. Wilson
Wm. H. Ying

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Salt Lake City, Utah

No. 3

Report to Mr. W. E. Young

Koschmann
DMEA files.

Chemical Laboratory Report

Date received June 24, 1953 Proj. 509 Date reported June 29, 1953

Serial No.	DESCRIPTION	Lot No.	WO_3	Mo
	Darrell Hafen, Castle Cliff, Washington County, Utah DMEA-3065			
14536		1	0.06	<0.01
37		2	8.6	<0.01

Mining Division
Date Received
JUL 1 - 1953
BUREAU OF MINES
Denver Colorado

U. S. GOVERNMENT PRINTING OFFICE 16—33553-3

Signed H. E. Gibson

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By W. E. Young

Tungsten property in Washington County, Utah, owned by Darrell G. Hafen and partners, was examined during June 1953. The applicant has requested a loan of $16,550 under docket DMEA-3063.

Scheelite and powellite are found over a wide area in the vicinity of the applicant's property. The host rocks are schists and gneisses that form the core of the Virgin Range. Mineralization is related to numerous small pegmatite bodies that cut the host rocks.

Examination of the applicant's property and reconnaissance of the surrounding area disclose that an extensive search has been made for concentrations of scheelite sufficiently high in grade to be commercially significant. Numerous trenches and pits have been excavated in areas surrounding the applicant's property, but no deposits of importance have been found.

Outcrops showing scheelite are absent on the applicant's property. A few small, scattered boulders of scheelite-bearing float are present, but the average grade of the boulders is low. Overburden may cover small occurrences of scheelite, but float evidence and the trenches and pits in the surrounding area indicate that any occurrences would be of minor importance.

It is believed the exploratory proposals submitted by the applicant will not uncover tungsten ores of significance because of the low grade and scattered mineralization. It is recommended that the loan request be denied.

Mining Division
Region IV

August 13, 1953.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 3363 (Tungsten), Darrell G. Hafen, Washington County, Utah.

Enclosed are nine copies of the final report on the subject docket. The Survey did not participate in the examination.

The engineer examiner concludes that no significant amount of tungsten would be found by the proposed exploration and he believes further exploration is not warranted.

We recommend that the application be denied.

W. H. King
W. H. King

Enclosures

HMC:cwm

cc: Subject
AHKoschmann (2)
Chron.

DARRELL G. HAFEN
WASHINGTON COUNTY, UTAH
IMEA-3063
Tungsten

Engineering Report

By W. E. Young
Mining Engineer
Bureau of Mines

224 New Customhouse
Denver 2, Colorado

August 13, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 3063 (Tungsten), Darrell G. Nafen, Washington County, Utah.

Enclosed are four copies of the final report on the subject docket, a copy of the letter of denial to the applicant, and two copies of Form 3b.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Rec W.H.K.

Enclosures

HMC:cwm

cc: SRWilson w/copy of Final Report
Ralph Roberts w/copy of Final Report
AHKoschmann w/copy of Final Report
DMEA w/copy of Final Report
Mining Division w/copy of Final Report
Subject
AHKoschmann (2)
Chron.

DARRELL G. HAFEN
WASHINGTON COUNTY, UTAH

CONTENTS

	Page
Engineering and geologic report	
Introduction	2
Location, topography and physical features	2
History and production	2
Description of the deposits	2
Proposed exploration	3
Conclusions and recommendations	4

ILLUSTRATIONS

Fig. 1 Location map, Darrell G. Hafen property, Washington County, Utah

204 New Customhouse
Denver 2, Colorado

August 13, 1953.

Mr. Darrell G. Hafen
712 South 11th East
Salt Lake City, Utah

Re: Docket DMEA-3063

Dear Mr. Hafen:

Reference is made to your application for Government aid on the seven unpatented claims in Washington County.

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

A careful study of your property and data available to this agency reveals that the probability of disclosing minerable reserves of tungsten by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

W.H.K.

W. H. King
W. H. King
Field Team, Region IV

HMC:cwm

A.H. Koschmann
A. H. Koschmann
Field Team, Region IV

cc: Administrator, DMEA
SRWilson
Ralph Roberts
Subject
AHKoschmann (2)
Chron.

INTRODUCTION

Tungsten property in Washington County, Utah, owned by Darrel G. Hafen and partners, was examined by a Bureau of Mines engineer June 18, 1953. The examination was made at the request of the Field Team, Region IV, to appraise the feasibility of a requested loan under docket DMEA-3063.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The Hafen property, consisting of seven unpatented lode claims, lies at the northwest end of the Virgin Range. The claims are reached by traveling west from St. George, Washington County, on U. S. Highway 91 for a distance of 25 miles, and then by ungraded dirt road northerly 4 miles (fig. 1).

The claims lie along a northwest-trending ridge, topping the range. Four miles of road construction will be necessary to make the property accessible for exploration.

HISTORY AND PRODUCTION

The seven claims included in the application were located during April and May 1953. No exploration or development has been conducted on the property and no tungsten production is recorded from the area.

DESCRIPTION OF THE DEPOSITS

The rocks in the area consist chiefly of micaceous schists and gneisses that form the core of the Virgin Range. Numerous small, pegmatite masses have intruded the metamorphic rocks. A small granite intrusive was noted approximately 2 miles southeast of the property.

DMEA Form 3b
(Revised)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTROLLED DOCUMENT
Revised Abstract

DMEA Docket No. 3063

Name of Applicant Darrell G. Hafen

Change:	From		To	
	III 1	☐	III 1	☐
	III 2	☐	III 2	☒ 8-6-53
	III 3	☐	III 3	☐
	III 4	☒	III 4	☐
	III 5	☐	III 5	☐

Add: II 7 $ 16,550

II 8 $ None

II 8a %

Remarks:

Initials of person preparing sheet H.M.C.

Date sheet prepared 8-6-53

17367

Occurrences of powellite and scheelite are scattered over a wide area. Considerable prospecting and limited exploratory work have been conducted in the lower foothill area. Small zones adjacent to pegmatite dikes show fluorescence under the ultra-violet lamp. The predominant fluorescent mineral is powellite, with minor scheelite. The deposits appear too small and contain insufficient tungsten to further interest prospectors.

The property in question is situated near the top of the range. No scheelite was noted in place, but at scattered locations along the ridge, small boulders of float, containing minor scheelite, were observed. Samples of selected pieces of the float show the content of tungsten to be low.

PROPOSED EXPLORATION

The applicant has requested a loan of $16,550 to conduct exploratory work consisting of surface stripping with bulldozer, road construction, and shaft sinking. The proposed surface stripping is to cover an area approximately 3,000 feet long. If the stripping discloses sufficient tungsten mineralization in place to make further work warranted, the applicant proposes road construction to permit transportation of equipment and supplies for further exploration. Shaft sinking in areas showing most intense mineralization is proposed.

6-303
(March 1947)

CC: Wm. H. King

W.H.K.

Koschmann
DMEA file

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Salt Lake City, Utah

No. 7

Report to Mr. S. R. Wilson

Chemical Laboratory Report

Date received June 16, 1953

Proj. 509

Date reported June 17, 1953

Serial No.	DESCRIPTION	Lot No.	V_2O_5	Mo
	D. G. Hafen Property Washington County, Utah DMEA			
[illegible]37		D.G.H. 1	0.02	1.4

Mining Division
Date Rec'd
JUN 19 1953
BUREAU OF MINES
Denver, Colorado

U. S. GOVERNMENT PRINTING OFFICE 16—33553-3

Signed H. E. Peterson

CONCLUSIONS AND RECOMMENDATIONS

Scheelite and powellite occurrences are scattered over a wide area in the vicinity of the applicant's property. Reconnaissance of the surrounding area indicates from the numerous trenches and pits that an extensive search has been made for concentrations of scheelite sufficiently high in grade for commercial operation. No deposits of significance have been found.

No outcrops showing scheelite were noted on the applicant's property. A few small, scattered boulders of scheelite-bearing float are present, but the average grade of the boulders is low. Overburden may cover small occurrences of scheelite, but float evidence and the trenches and pits in the surrounding area indicate that these would be of minor importance.

In view of the above evidence, it is believed that the exploratory proposals submitted by the applicant have little merit. It is therefore recommended that the loan request be denied.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

W. H. K
S
F
C
B

Mining Division
Date Rec'd.
JUN 17 1953
BUREAU OF MINES
Denver, Colorado

June 15, 1953

Mr. Darrel G. Hafen
712 So. 11th East
Salt Lake City, Utah

Dear Mr. Hafen:

The rock sample recently submitted to this office for mineral identification has been studied in the microscopy laboratory.

No tungsten is present in the sample. Both molybdenum and vanadium were determined. It is probable that the molybdenum is present in the form of powellite ($Ca\ Mo\ O_4$), although this was not definitely established. Determination of both molybdenum and vanadium was done by qualitative methods. Additional tests will be conducted in an attempt to isolate the minerals containing the two above-mentioned elements.

Sincerely,

Stephen R. Wilson

Stephen R. Wilson, Chief
Minerals Development Branch
Mining Division, Region IV

cc: Mr. Darrel G. Hafen
Washington, Utah

cc: W. H. King

file
df

224 New Customhouse
Denver 2, Colorado

June 16, 1953

Memorandum

To: S. R. Wilson
Ralph Roberts

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA No. 3063 (Tungsten), D. G. Hafen, Washington County, Utah

The subject application forwarded you June 4, 1953 has been docketed DMEA 3063.

W. H. King
W. H. King

HMC:fwo

cc Subject
Chron
Koschmann (2)

224 New Customhouse
Denver 2, Colorado

June 5, 1953

Memorandum

To: C. R. Wilson (with brochure)

Ralph Roberts

From: Field Team, Region IV

Subject: (Tungsten), Application of D. C. Hafen, Washington County, Utah

Enclosed herewith is the subject application for Government assistance in exploration work estimated to cost $22,675.00.

A suitable report is required.

The brochure contains one geology sketch and one Standard Oil Road Map of Utah.

You will be advised of the docket number at a later date.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

W.H.K.
Enclosure

HMC:fwo

cc Subject
Chron
Koschmann (2)

224 New Customhouse
Denver 2, Colorado

June 5, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: Code 200

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docketing for Exploration Assistance

Enclosed herewith in duplicate is DMA Form 3a and NF-103 and supporting data pertaining to the following applications for Government assistance in exploration work:

B & H Mining Company, Inc.
236 Brotherhood Bldg.
Kansas City, Kansas

Darrel G. Hafen
712 South 11th East
Salt Lake City, Utah

Mountain States Metals Co.
Box 851
Kingman, Arizona

Nielson, Keele & Nielson
Blanding
Utah

Timco, Inc.
c/o Karl Maxwell
1895 Carter Drive, Reno, Nevada

Verne W. Young
Green River
Utah

W. H. King

Enclosures
cwm

cc: Code 200 file
AHKoschmann (2)
Chron.

Docket (B & H Mining Co.)
Docket (Darrel G. Hafen)
Docket (Mountain States Metals Co.)
Docket (Nielson, Keele & Nielson)
Docket (Timco, Inc.)
Docket (Verne W. Young)

DMEA Form 3a
(Revised)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTROLLED DOCUMENT
Abstract

I. 3

II. Fill in each item:

1. _____ 2. _____

3. Darrel G. Hafen 712 South 11th East

Salt Lake City, Utah

_____ (Code)

4. Seven Claims

5. State Utah County Washington

_____ (Code) _____ (Code)

6. Tungsten

7. $ 22,875.00

8. $ _____ 8a. % 75

III. Check one:

1 ☐ 2 ☐ 3 ☐ 4 ☒

Remarks:

Initials of person preparing sheet HMC

Date sheet prepared 6-4-53

17367

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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. .....
Metal or Mineral .....
Date Received .....
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: Darrell G. Hafen, 712 So. 11th East, Salt Lake City, Utah
PARTNERSHIP: Austin Gentry, Saint George, Utah
Harry Gentry, Saint George, Utah

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Seven standard size claims(600 ft by 1500 ft) in the West Mountain Mining District, Washington Co., Utah located 25 miles west of Saint George, Utah.

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Co-owner of unpatented claims

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

(*e*) If you own the land, describe any liens or encumbrances on it not applicable

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

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

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

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

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

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

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

(*c*) The work will start within 7 days and be completed within 6 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated June 3, 1953, 195

Darrell S. Hafen
(Applicant)

By

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

ACCOMPANYING PAPERS

APPLICATION FOR AID IN AN EXPLORATION PROJECT

DARRELL G. HAFEN 712 So. 11th E. Salt Lake City, Utah

Refer 3(b)..not applicable.

Refer 3(d) " "

Refer 3(e) " "

Refer 3(f) Claims are recorded at Washington County, Utah, recorder's office. Book number x 24. No page number listed.

Refer 4(a) This property was placed under claim during the months of April and May 1953. No previous mining or exploration operations have been effected, however 20 miles south of this location is a tungsten mine which is currently in production and operating under the name of Tri-State metals.

The mine is easy of access. The location of the mine is 3 miles from U.S. Highway 91 at Castle Cliffs, Utah.

Refer 4(b) Because of the fact that no past production has been effected in this area we are unable to say if there are numerous reserves or not, however from the indications of the area (geological formation) and the samples of scheelite that we have found through lamping with an ultra-violet short wave lamp, lead us to believe that the deposits may prove to be from 1 to 2 per cent WO_3.

The purpose of this application is to explore the indicated properties to determine if a commercial body of scheelite exists.

We have not had any of our ore assayed as yet, however from personal observation in comparison with other 2 per cent WO_3 scheelite deposits, these claims would appear to average out on a similar percentage basis.

DARRELL G. HAFEN 712 So. 11th East, Salt Lake City, Utah

Refer 4(c) The geologic features of the property, etc., are as follows------

This scheelite containing ore bed is protruding in a southerly direction extending from its granite contact to its lime contact. In this particular ore bed is a series of pegmitite and hornblend schists veins. There is also an outcropping of an epodote vein.

Our purpose of exploring this particular property is to determine whether or not there is a commercial deposit of scheelite in the area in order that we might develop the deposits in accordance with the Domestic Tungsten Program as outlined by the General Services Administration. We believe that our application falls within the intent, scope, and purposes of the Defense Minerals Exploration Program. In the event that the exploration program is successful we intend to produce our ores and sell them in accordance with the Domestic Tungsten Program. Since the deposits are of easy access, and a railroad is only 75 miles distant, we feel that we can produce scheelite in sizeable quantities if the exploration program proves successful. We feel that no accurate estimate of the grade, width, depth, etc. of the deposits can be made without a definite exploration program.

Attached maps of Utah will show the location of the deposits. A rough sketch showing a picture of the geologic formation and location of the deposits is also included with this application.

Refer 4(d) ACCESSABILITY..Very good. The location is approximately 25 miles from Saint George, Utah, and is located 3 miles west and north of a filling station which is named Castle Cliffs, Utah.

DARRELL G. HAFEN, 712 So. 11th E., Salt Lake City, Utah

Refer 4(d)..continued
Castle Cliffs is on U.S. Highway 91 which is a major oiled highway. At the present time no roads exist to the deposits and in the event that this application is approved we expect to construct an access road of 3 miles in length.

DISTANCE TO SHIPPING: 75 miles to the north of the location on U.S. Highway 91 is Cedar City, Utah, which is a railroad center. The ore could be shipped to Cedar by truck for further conveyance to Salt Lake City Utah where there will be a tungsten refinery which will be in operation by August 15, 1953.

SUPPLY AND RESIDENCE POINTS...Saint George, Utah, 25 miles east of the location will be the supply and residence points of the operator and employees.

Refer 4(e) Manpower is available in sufficient quantities in Saint George, Utah. In fact this particular area needs industries which could give men of the local community an opportunity to work in the area in order that they won't have to seek employment in the larger cities.
MATERIALS, SUPPLIES, EQUIPMENT--These are all available in the area.
WATER and POWER---Water is available at Castle Cliffs, Utah, 3 miles distant. Power will have to be generated at the mine by diesel or gasoline generators.

DARRELL G. HAFEN , 712 So. 11th E., Salt Lake City, Utah

Refer 5.(b) Refer to the accompanying map and sketch.

Refer 5 (c) 7 days------6 months.

Refer 5(d) The applicant has no operating experience, however Laura Gentry and Austin Gentry will be performing supervision work. These two have experience in mining and prospecting. Laura has 2.0 (20) years experience and Austin has one year.

Refer 6 ----NOTATION: Please note that in arriving at the estimate of costs that it will be necessary to depart from the itemized classification under heading 6. This departure was advised by Mr. Steve Wilson, Bureau of Mines, Salt Lake City, Utah, in order that the estimate of costs could be shown on a well-classified and logical basis, which would result in greater simplicity. Therefore, on the accompanying page 5 you will please find the estimate of costs.

The estimate of costs is being broken down into three stages. Stripping operations, Road work, and Shaft sinking. It is contemplated that if the bulldozer stripping work does not result in a fairly accurate idea of the worth of the deposits that the exploration program will be terminated. In the event that deposits are discovered which will be of commercial value, then we would prefer to continue the exploration program, which would include the building of roads and shaft sinking, etc.

DARRELL G. HAFEN, 712 So. 11th East, Salt Lake City, Utah

ESTIMATE OF COSTS

A. Stage One--Stripping operations

1. Bulldozer work (stripping overburden) 15 days at 100 dollars per day	1500
2. Drayage	400
3. Supervision (one month)	500
4. Sampling and assaying	150
5. One laborer, 25 days at 15 dollars per day	375
6. Book-keeping	50
7. Supplies	50
8. Geological Consultants (Two for two days)	300
TOTAL	$3325

B. Stage Two---Road work

1. Three miles of road work.	3000
TOTAL	$ 3000

C. Stage three----- Shaft sinking.

1. 2oo feet at 70 dollars per foot on subcontract	14,000
2. Supervision--4 months at 500 dollars per month	2,000
3. Sampling and assaying--includes supplies	350
4. Book-keeping	200
TOTAL	$ 16,550

TOTALS

Stage 1 = 3325

Stage 2 = 3000

Stage 3 = 16,550

TOTAL $ 22,875

DARRELL G. HAFEN , 712 So. 11th E., Salt Lake City, Utah

Refer 7(a) Yes..

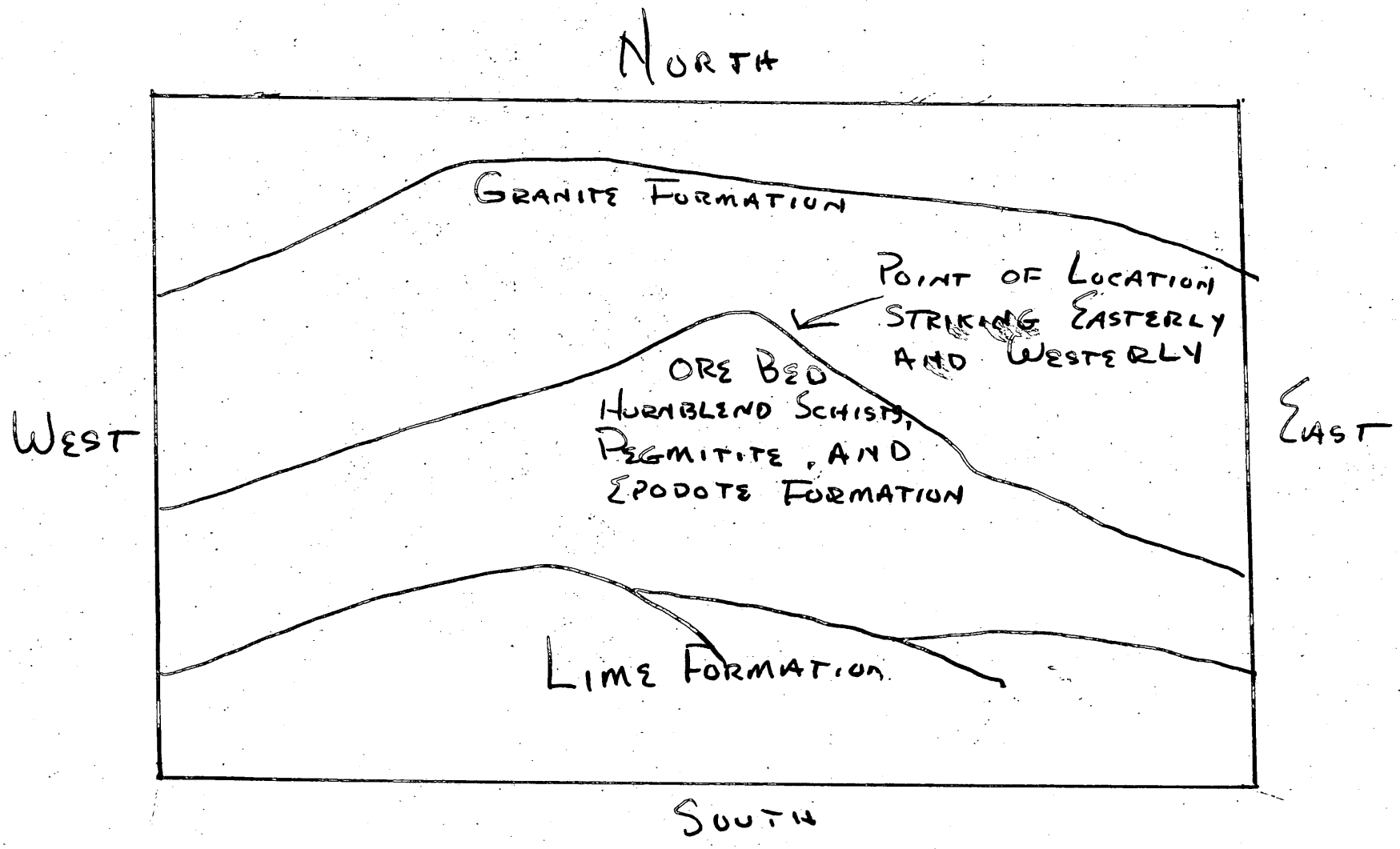
Refer 7(b) Personal Bank Funds

----------FINIS-------- ---

DaRRELL G. HAFEN, 712 So. 11th E. Salt Lake City, Utah

POST-SCRIP-----The nature of the terrain on which the deposits are located is not exceedingly rough and it loosk as if there will be little or no trouble involved in stripping the vein that is showing for a length of 3000 feet. There is not a great deal of over-burden on the vein.

There will be no great difficulty involved in the constructing of roads into the deposits. The deposits are reasonably accessible and the road building program will not be extensive in nature.


NORTH
GRANITE FORMATION
POINT OF LOCATION
STRIKING EASTERLY
AND WESTERLY
ORE BED
HORNBLEND SCHISTS,
PEGMITITE, AND
EPIDOTE FORMATION
WEST
EAST
LIME FORMATION
SOUTH

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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. 3063
Metal or Mineral
Date Received 6/8/53
Estimated Cost
Participation (Government %)

F.

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: Darrell G. Hafen, 712 So. 11th East, Salt Lake City, Utah
PARTNERSHIP: Austin Gentry, Saint George, Utah
Harry Gentry, Saint George, Utah

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Seven standard size claims (600 ft by 1500 ft) in the West Mountain Mining District, Washington Co., Utah located 25 miles west of Saint George, Utah.

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Co-owner of unpatented claims

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

(*e*) If you own the land, describe any liens or encumbrances on it not applicable

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

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

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

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

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

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

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

(*c*) The work will start within 7 days and be completed within 6 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated June 3, 1953, 195__

Darrell G. Hafen
(Applicant)

By

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

ACCOMPANYING PAPERS

APPLICATION FOR AID IN AN EXPLORATION PROJECT

DARRELL G. HAFEN 712 So. 11th E. Salt Lake City, Utah

Refer 3(b)..not applicable.

Refer 3(d) " "

Refer 3(e) " "

Refer 3(f) Claims are recorded at Washington County, Utah, recorder's office. Book number x 24. No page number listed.

Refer 4(a) This property was placed under claim during the months of April and May 1953. No previous mining or exploration operations have been effected, however 20 miles south of this location is a tungsten mine which is currently in production and operating under the name of Tri-State metals.

The mine is easy of access. The location of the mine is 3 miles from U.S. Highway 91 at Castle Cliffs, Utah.

Refer 4(b) Because of the fact that no past production has been effected in this area we are unable to say if there are numerous reserves or not, however from the indications of the area (geological formation) and the samples of scheelite that we have found through lamping with an ultra-violet short wave lamp, lead us to believe that the deposits may prove to be from 1 to 2 per cent WO_3.

The purpose of this application is to explore the indicated properties to determine if a commercial body of scheelite exists.

We have not had any of our ore assayed as yet, however from personal observation in comparison with other 2 per cent WO_3 scheelite deposits, these claims would appear to average out on a similar percentage basis.

DARRELL G. HAFEN 712 So. 11th East, Salt Lake City, Utah

Refer 4(c) The geologic features of the property, etc., are as follows-------

This scheelite containing ore bed is protruding in a southerly direction extending from its granite contact to its lime contact. In this particular ore bed is a series of pegmitite and hornblend schists veins. There is also an outcropping of an epodote vein.

Our purpose of exploring this particular property is to determine whether or not there is a commercial deposit of scheelite in the area in order that we might develop the deposits in accordance with the Domestic Tungsten Program as outlined by the General Services Administration. We believe that our application falls within the intent, scope, and purposes of the Defense Minerals Exploration Program. In the event that the exploration program is successful we intend to produce our ores and sell them in accordance with the Domestic Tungsten Program. Since the deposits are of easy access, and a railroad is only 75 miles distant, we feel that we can produce scheelite in sizeable quantities if the exploration program proves successful. We feel that no accurate estimate of the grade, width, depth, etc. of the deposits can be made without a definite exploration program.

Attached maps of Utah will show the location of the deposits. A rough sketch showing a picture of the geologic formation and location of the deposits is also included with this application.

Refer 4(d) ACCESSABILITY..Very good. The location is approximately 25 miles from Saint George, Utah, and is located 3 miles west and north of a filling station which is named Castle Cliffs, Utah.

DARRELL G. HAFEN, 712 So. 11th E., Salt Lake City, Utah

Refer 4(d)..continued
Castle Cliffs is on U.S. Highway 91 which is a major oiled highway. At the present time no roads exist to the deposits and in the event that this application is approved we expect to construct an access road of 3 miles in length.

DISTANCE TO SHIPPING: 75 miles to the north of the location on U.S. Highway 91 is Cedar City, Utah, which is a railroad center. The ore could be shipped to Cedar by truck for further conveyance to Salt Lake City Utah where there will be a tungsten refinery which will be in operation by August 15, 1953.

SUPPLY AND RESIDENCE POINTS...Saint George, Utah, 25 miles east of the location will be the supply and residence points of the operator and employees.

Refer 4(e) Manpower is available in sufficient quantities in Saint George, Utah. In fact this particular area needs industries which could give men of the local community an opportunity to work in the area in order that they won't have to seek employment in the larger cities.
MATERIALS, SUPPLIES, EQUIPMENT--These are all available in the area.
WATER and POWER---Water is available at Castle Cliffs, Utah, 3 miles distant. Power will have to be generated at the mine by diesel or gasoline generators.

DARRELL G. HAFEN , 712 So. 11th E., Salt Lake City, Utah

Refer 5.(b) Refer to the accompanying map and sketch.

Refer 5 (c) 7 days------6 months.

Refer 5(d) The applicant has no operating experience, however Laura Gentry and Austin Gentry will be performing supervision work. These two have experience in mining and prospecting. Laura has 2 0 (20) years experience and Austin has one year.

Refer 6 ----NOTATION: Please note that in arriving at the estimate of costs that it will be necessary to depart from the itemized classification under heading 6. This departure was advised by Mr. Steve Wilson, Bureau of Mines, Salt Lake City, Utah, in order that the estimate of costs could be shown on a well-classified and logical basis, which would result in greater simplicity. Therefore, on the accompanying page 5 you will please find the estimate of costs.

The estimate of costs is being broken down into three stages: Stripping operations, Road work, and Shaft sinking. It is contemplated that if the bulldozer stripping work does not result in a fairly accurate idea of the worth of the deposits that the exploration program will be terminated. In the event that deposits are discovered which will be of commercial value, then we would prefer to continue the exploration program, which would include the building of roads and shaft sinking, etc.

DARRELL G. HAFEN, 712 So. 11th East, Salt Lake City, Utah

ESTIMATE OF COSTS

A. Stage One--Stripping operations

1. Bulldozer work (stripping overburden) 15 days at 100 dollars per day	1500
2. Drayage	400
3. Supervision (one month)	500
4. Sampling and assaying	150
5. One laborer, 25 days at 15 dollars per day	375
6. Book-keeping	50
7. Supplies	50
8. Geological Consultants (Two for two days)	300
TOTAL	$3325

B. Stage Two---Road work

1. Three miles of road work.	3000
TOTAL	$ 3000

C. Stage three----- Shaft sinking.

1. 2oo feet at 70 dollars per foot on subcontract	14,000
2. Supervision--4 months at 500 dollars per month	2,000
3. Sampling and assaying--includes supplies	350
4. Book-keeping	200
TOTAL	$ 16,550

TOTALS

Stage 1 = 3325

Stage 2 = 3000

Stage 3 = 16,550

TOTAL $ 22,875

DARRELL G. HAFEN , 712 So. 11th E., Salt Lake City, Utah

Refer 7(a) Yes..

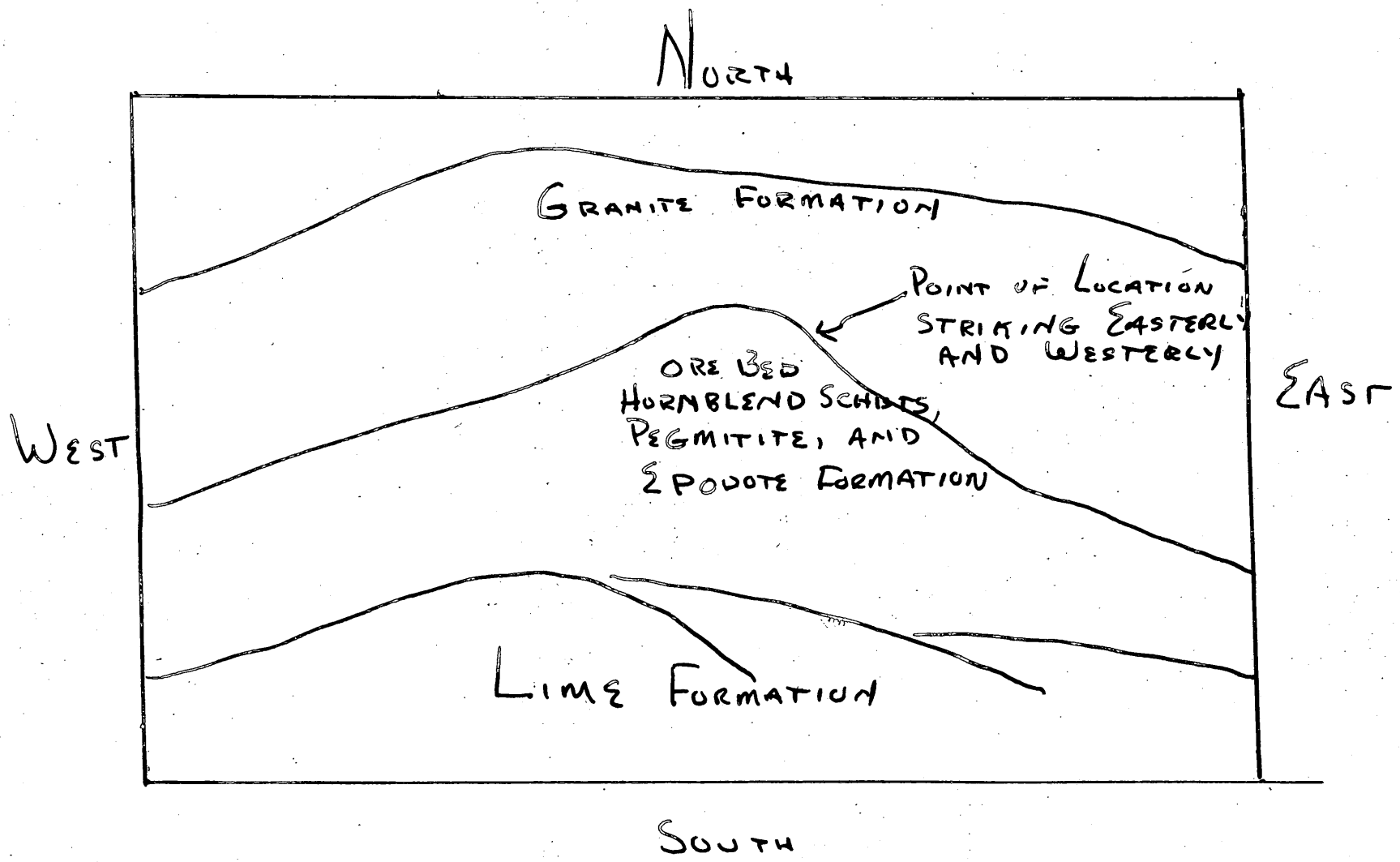
Refer 7(b) Personal Bank Funds

----------FINIS---------

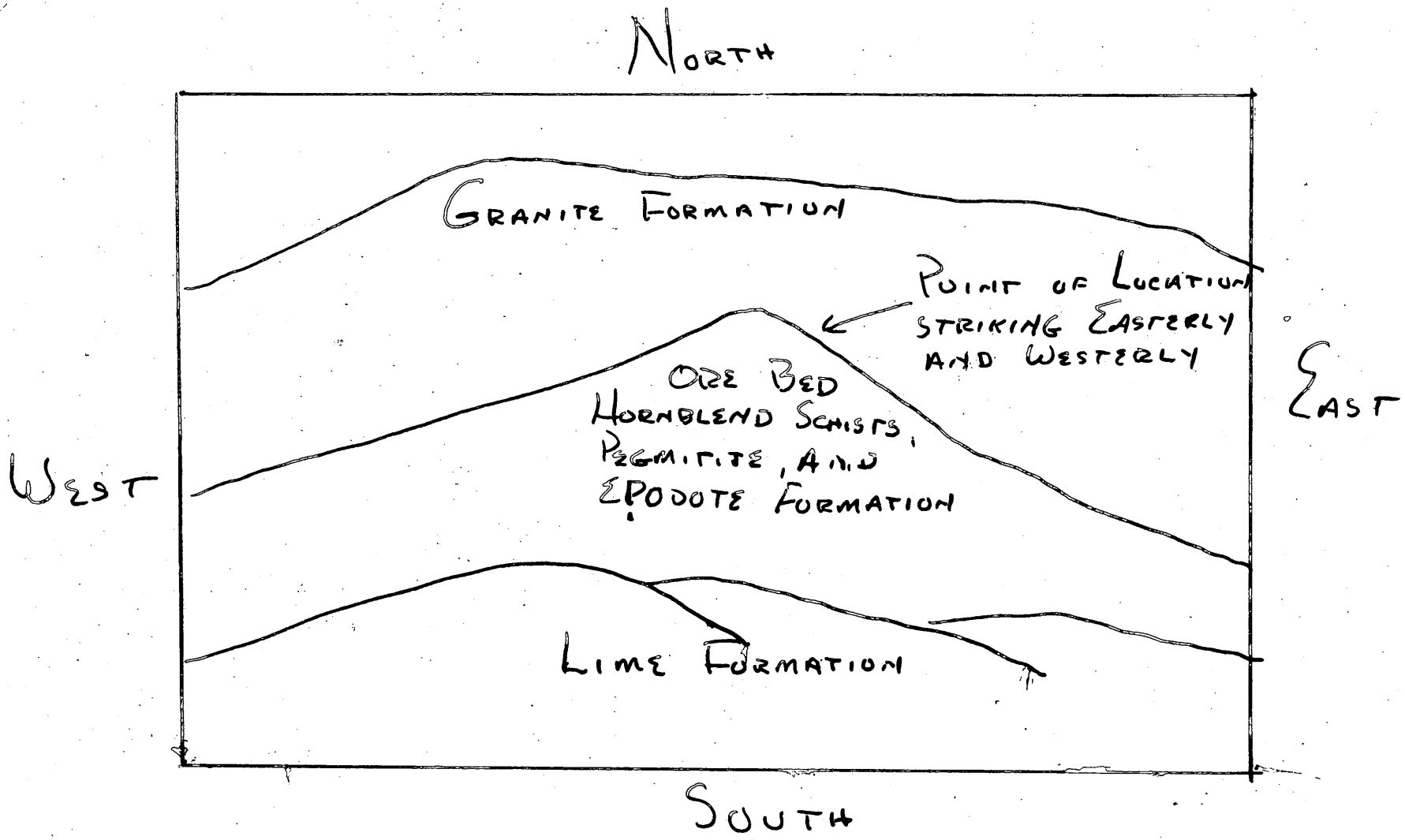
DaRRELL G. HAFEN, 712 So. 11th E. Salt Lake City, Utah

POST-SCRIP----The nature of the terrain on which the deposits are located is not exceedingly rough and it loosk as if there will be little or no trouble involved in stripping the vein that is showing for a length of 3000 feet. There is not a great deal of over-burden on the vein.

There will be no great difficulty involved in the constructing of roads into the deposits. The deposits are reasonably accessible and the road building program will not be extensive in nature.


NORTH
GRANITE FORMATION
POINT OF LOCATION
STRIKING EASTERLY
AND WESTERLY
ORE BED
HORNBLEND SCHIST,
PEGMITITE, AND
EPIDOTE FORMATION
WEST
EAST
LIME FORMATION
SOUTH

3063


North
Granite Formation
Point of Location
striking Easterly
and Westerly
Ore Bed
Hornblend Schists,
Pegmitite, and
Epodote Formation
West
East
Lime Formation
South

ACCOMPANYING PAPERS

APPLICATION FOR AID IN AN EXPLORATION PROJECT

DARRELL G. HAFEN 712 So. 11th E. Salt Lake City, Utah

Refer 3(b)..not applicable.

Refer 3(d) " "

Refer 3(e) " "

Refer 3(f) Claims are recorded at Washington County, Utah, recorder's office. Book number x 24. No page number listed.

Refer 4(a) This property was placed under claim during the months of April and May 1953. No previous mining or exploration operations have been effected, however 20 miles south of this location is a tungsten mine which is currently in production and operating under the name of Tri-State metals.

The mine is easy of access. The location of the mine is 3 miles from U.S. Highway 91 at Castle Cliffs, Utah.

Refer 4(b) Because of the fact that no past production has been effected in this area we are unable to say if there are numerous reserves or not, however from the indications of the area (geological formation) and the samples of scheelite that we have found through lamping with an ultra-violet short wave lamp, lead us to believe that the deposits may prove to be from 1 to 2 per cent WO_3.

The purpose of this application is to explore the indicated properties to determine if a commercial body of scheelite exists.

We have not had any of our ore assayed as yet, however from personal observation in comparison with other 2 per cent WO_3 scheelite deposits, these claims would appear to average out on a similar percentage basis.

DARRELL G. HAFEN 712 So. 11th East, Salt Lake City, Utah

Refer 4(c) The geologic features of the property, etc., are as follows------

This scheelite containing ore bed is protruding in a southerly direction extending from its granite contact to its lime contact. In this particular ore bed is a series of pegmitite and hornblend schists veins. There is also an outcropping of an epodote vein.

Our purpose of exploring this particular property is to determine whether or not there is a commercial deposit of scheelite in the area in order that we might develop the deposits in accordance with the Domestic Tungsten Program as outlined by the General Services Administration. We believe that our application falls within the intent, scope, and purposes of the Defense Minerals Exploration Program. In the event that the exploration program is successful we intend to produce our ores and sell them in accordance with the Domestic Tungsten Program. Since the deposits are of easy access, and a railroad is only 75 miles distant, we feel that we can produce scheelite in sizeable quantities if the exploration program proves successful. We feel that no accurate estimate of the grade, width, depth, etc. of the deposits can be made without a definite exploration program.

Attached maps of Utah will show the location of the deposits. A rough sketch showing a picture of the geologic formation and location of the deposits is also included with this application.

Refer 4(d) ACCESSABILITY..Very good. The location is approximately 25 miles from Saint George, Utah, and is located 3 miles west and north of a filling station which is named Castle Cliffs, Utah.

DARRELL G. HAFEN, 712 So. 11th E., Salt Lake City, Utah

Refer 4(d)..continued
Castle Cliffs is on U.S. Highway 91 which is a major oiled highway. At the present time no roads exist to the deposits and in the event that this application is approved we expect to construct an access road of 3 miles in length.

DISTANCE TO SHIPPING: 75 miles to the north of the location on U.S. Highway 91 is Cedar City, Utah, which is a railroad center. The ore could be shipped to Cedar by truck for further conveyance to Salt Lake City Utah where there will be a tungsten refinery which will be in operation by August 15, 1953.

SUPPLY AND RESIDENCE POINTS...Saint George, Utah, 25 miles east of the location will be the supply and residence points of the operator and employees.

Refer 4(e) Manpower is available in sufficient quantities in Saint George, Utah. In fact this particular area needs industries which could give men of the local community an opportunity to work in the area in order that they won't have to seek employment in the larger cities.
MATERIALS, SUPPLIES, EQUIPMENT--These are all available in the area.
WATER and POWER---Water is available at Castle Cliffs, Utah, 3 miles distant. Power will have to be generated at the mine by diesel or gasoline generators.

DARRELL G. HAFEN , 712 So. 11th E., Salt Lake City, Utah

Refer 5.(b) Refer to the accompanying map and sketch.

Refer 5 (c) 7 days------6 months.

Refer 5(d) The applicant has no operating experience, however Laura Gentry and Austin Gentry will be performing supervision work. These two have experience in mining and prospecting. Laura has 20 years experience and Austin has one year.

Refer 6 ----NOTATION: Please note that in arriving at the estimate of costs that it will be necessary to depart from the itemized classification under heading 6. This departure was advised by Mr. Steve Wilson, Bureau of Mines, Salt Lake City, Utah, in order that the estimate of costs could be shown on a well-classified and logical basis, which would result in greater simplicity. Therefore, on the accompanying page 5 you will please find the estimate of costs.

The estimate of costs is being broken down into three stages. Stripping operations, Road work, and Shaft sinking. It is contemplated that if the bulldozer stripping work does not result in a fairly accurate idea of the worth of the deposits that the exploration program will be terminated. In the event that deposits are discovered which will be of commercial value, then we would prefer to continue the exploration program, which would include the building of roads and shaft sinking, etc.

DARRELL G. HAFEN, 712 So. 11th East, Salt Lake City, Utah

ESTIMATE OF COSTS

A. Stage One--Stripping operations

1. Bulldozer work (stripping overburden) 15 days at 100 dollars per day	1500
2. Drayage	400
3. Supervision (one month)	500
4. Sampling and assaying	150
5. One laborer, 25 days at 15 dollars per day	375
6. Book-keeping	50
7. Supplies	50
8. Geological Consultants (Two for two days)	300
TOTAL	$3325

B. Stage Two---Road work

1. Three miles of road work.	3000
TOTAL	$ 3000

C. Stage three----- Shaft sinking.

1. 2oo feet at 70 dollars per foot on subcontract	14,000
2. Supervision--4 months at 500 dollars per month	2,000
3. Sampling and assaying--includes supplies	350
4. Book-keeping	200
TOTAL	$ 16,550

TOTALS

Stage 1 = 3325

Stage 2 = 3000

Stage 3 = 16,550

TOTAL $ 22,875

DARRELL G. HAFEN , 712 So. 11th E., Salt Lake City, Utah

Refer 7(a) Yes..

Refer 7(b) Personal Bank Funds

---------FINIS------- ---

DaRRELL G. HAFEN, 712 So. 11th E. Salt Lake City, Utah

POST-SCRIP----The nature of the terrain on which the deposits are located is not exceedingly rough and it loosk as if there will be little or no trouble involved in stripping the vein that is showing for a length of 3000 feet. There is not a great deal of over-burden on the vein.

There will be no great difficulty involved in the constructing of roads into the deposits. The deposits are reasonably accessible and the road building program will not be extensive in nature.

Mining Division
Rec'd.
Date JUN 4 - 1953
BUREAU OF MINES
Denver, Colorado

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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. .....
Metal or Mineral .....
Date Received .....
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: Darrell G. Hafen, 712 So. 11th East, Salt Lake City, Utah
PARTNERSHIP: Austin Gentry, Saint George, Utah
Harry Gentry, Saint George, Utah

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Seven standard size claims(600 ft by 1500 ft) in the West Mountain Mining District, Washington Co., Utah located 25 miles west of Saint George, Utah.

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Co-owner of unpatented claims

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

(*e*) If you own the land, describe any liens or encumbrances on it not applicable

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

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

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

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

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

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

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

(*c*) The work will start within 7 days and be completed within 6 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

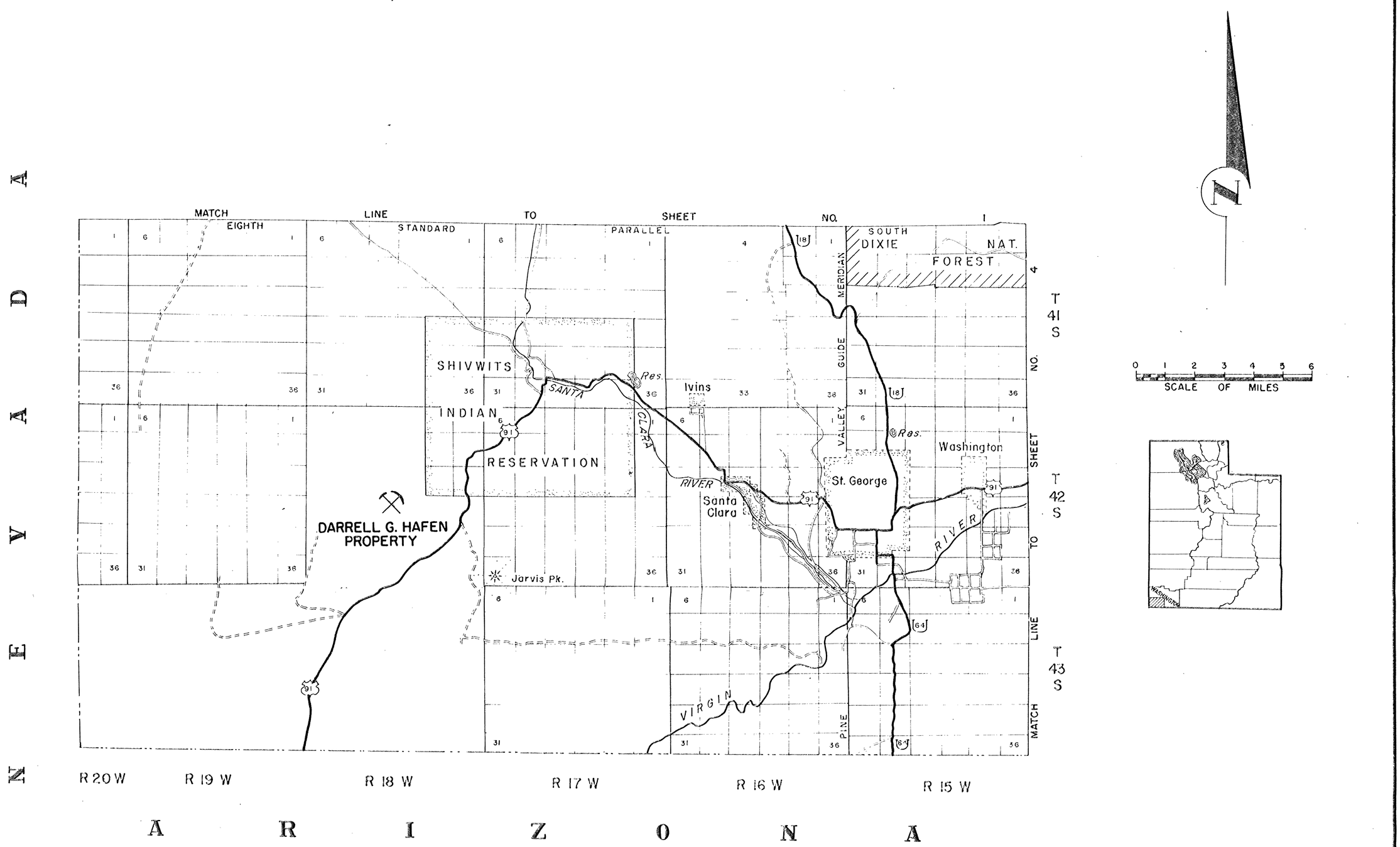
Dated June 3, 1953, 195

Darrell D. Hafen
(Applicant)

By

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



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 DMEA Docket No. 3063

STATE : UTAH

COUNTY : WASHINGTON

Sheet 3 of 4

Location Map

ENGINEER : W. E. Young	DATE : JULY 28, 1953
TRACED: JULY, 1953; BY: A.P.T.S.	700 - 180 - C
CHECKED :	