DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4843

Application
- [ ] Denied
- [x] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

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

OFFICIAL FILE COPY
DMEA
RECEIVED 7 1957
DATE | | CODE
10/7 | WSM | 400

October 4, 1957

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

Re: New Application (Mercury)
Ralph Gillispie
The Fern Hill Cinnabar Mine
(O. J. Gillispie property)
Lewis County, Washington

Dear Mr. Selfridge:

Enclosed are an original and two reproduced copies of an application received from Mr. Ralph Gillispie for Government aid to explore for mercury on the O. J. Gillispie property in Lewis County, Washington. Also included are three copies (two thermofax) of a Mining Lease dated September 17, 1957, between O. J. Gillispie, lessor, and Ralph Gillispie, lessee of the Fern Hill Cinnabar Mine (O. J. Gillispie property), and one copy of portion of a map of Skamania County on which he has pencilled the location of his properties.

This applicant has submitted another application which has been given the Docket No. DMEA-4810.

Also enclosed are three copies of our reply to the last paragraph of Mr. Gillispie's letter of September 18, 1957.

Sincerely yours,

D. R. MacLaren

D. R. MacLaren
for: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosures

cc: USBM (2)
Geologist

So. 157 Howard Street
Spokane 4, Washington

October 4, 1957

Mr. Ralph Gillispie
Box 104
Morton, Washington

Re: Docket No. DMEA-4810 (Mercury)
West End Cinnabar Mine
(Sec. 36, T. 13 N.)
Lewis County, Washington
and
New Application (Mercury)
The Fern Hill Cinnabar Mine
(O. J. Gillispie property)
Lewis County, Washington

Dear Mr. Gillispie:

We have received your letter of September 18, 1957 enclosing one copy of an application for DMEA assistance to explore for mercury on the O. J. Gillispie property in Lewis County, Washington, and have forwarded it to our Washington, D. C. office.

Although you have already applied for DMEA assistance to explore in sec. 36, T. 13 N., R. 4 E. on August 1, 1957, we are enclosing the application forms you requested. Please note in the DMEA Order-1 Amended, which is also enclosed, that you should send in <u>four</u> copies of an application; the fifth copy is for your files.

Regarding your former application, Docket No. DMEA-4810, we are still waiting for the information requested in the Administrator's letter to you of August 30, 1957.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosures

cc: DMEA (3)
USBM (2)
Geologist

Form MF-103
Revised Feb. 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1035.3
Approval expires June 30, 1958

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

NAME OF APPLICANT (Full legal name and mailing address as it should appear on contract if one is executed)

Ralph Gillispie,
Box 104,
Morton, Washington

RECEIVED
SEP 20 1957
U. S. G. S.
SPOKANE, WASH.

APPLICANT NOT TO USE THIS BLOCK

Docket Number	DMEA-4843
Date Received	10/7/57
Government Participation %	
Region	I
Division Code	400

BUSINESS ORGANIZATION (Check one)

- Individual [X]
- Corporation [ ]
- Partnership [ ]
- Other [ ]

State in which organized

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
Ralph Gillispie	Morton	Lessee

Mineral(s) for which [illegible] to explore: Cinnabar

Estimated Cost of Project $ [illegible]0000

LOCATION OF PROPERTY

Name	County	State
O.G. Gillispie Property	Lewis	Wash.

GENERAL INSTRUCTIONS

Before filling out this application [illegible] DMEA Order-I, Amended, "Government Aid in Defe[illegible] Exploration Projects." To assure prompt action, your applic[illegible] provide all applicable material and information spec[illegible] back of this application form. Avoid unnecessary co[illegible] delays by submitting complete and accurat[illegible] *Please submit four copies of this application [illegible] companying papers* except as otherwise noted. Plac[illegible] name and address on each sheet. Each item of informat[illegible] maps, and reports required as a part of this application [illegible] described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of [illegible] application, except those in item 2(g) which you mark to [illegible] become the property of the Government and will [illegible] the applicant. Send true copies, *not* [illegible] contracts, and other documents which [illegible] your business records. *File this* [illegible] *with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

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 se[illegible] this form and accompanying papers is correct a[illegible] to the best of his knowledge and belief.

Sept. 18, 1957
Dated

RECEIVED
OCT 7 1957
D.M.E.A.

Ralph Gillispie
BY (Signature)

Lessee He Fern[illegible] Cinnabar Mine
Title

A wilfully false statement or certification to any Department or Agency of the United States Government is [illegible] offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. *Applicant's Property Rights:*

(a) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all land adjacent to the proposed project area which you own or control. Describe any part of the project land or workings which should not be subject to Government lien for royalty payments. If the land consists of unpatented claims, state the book and page number for each recorded location notice, including amended locations, and the place where recorded (courthouse, recorder's office, county, and state).

(b) State all the names by which you know the property.

(c) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise. If you are not the owner, submit with this application one exact copy of the lease, contract, or other document (with address of owner) under which you control the property.

(d) Describe all liens, mortgages, or other encumbrances on the property.

2. *Physical Description:*

(a) Describe in detail and illustrate with maps or sk[illegible] mining or exploration operations which you know have [illegible] being conducted upon the lands, including existing [illegible] Describe all production facilities.

(b) State your interest, if any, in operations [illegible] in 2*(a)*.

(c) State, as far as you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore [illegible] on the property giving quantities and grades and sampling methods used, supporting your statement with copies of [illegible] certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property including ore minerals, geologic formations if known, and type of [illegible] (vein, bedded, etc.).

(f) State [illegible] for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe the sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or [illegible] reports, assay maps, or technologic information which you may have, indicating on each whether you require its return [illegible]

3. *Accessibility of Project:*

(a) To aid DMEA representatives who may be required to examine the property, state the name and address of the person who will meet the DMEA representative; give directions for reaching the property; and describe accessibility of the property including the mine workings.

(b) Name the shipping and supply points and places where employees reside and state the distances between them and the property.

4. *The Exploration Project:*

(a) Describe fully the proposed exploration project giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and longitudinal and cross sections as necessary. Show the location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *property boundaries* or to the closest identifiable corner.

(b) If an access road to the project must be built, show the location on the property map and state the length, type, and construction methods proposed.

(c) In the event that an exploration contract with DMEA is executed, how soon will the work start and how many months will be required to complete it? State [illegible] average daily or monthly rate of progress for each [illegible]

5. *Experience:*

State your operating [illegible] background with relation to your ability to carry out [illegible] project, and also that of the person or persons who [illegible] the operations.

6. *Estimate of Co[illegible]*

Furnish [illegible] estimates of the costs *for each item of the work proposed* [illegible] headings listed below with a total for each heading and the estimated total cost of the project. Costs for any work to be performed by an independent contractor should be shown separately under category *(a)* below. Costs for any work that is not to be performed by an independent contractor should be given in [illegible] categories [illegible]

[illegible] contracts. State the cost of any proposed independent contract for performance of all or any part of the work, [illegible] work, such as per foot of drilling, per foot of [illegible] bulldozer operations, per cubic yard of material moved. [illegible] estimates should be supported by bids from three contractors if possible. *(Note* – If none of the work is to be contracted, write "none" after this item.) None

(b) Personal services. For necessary supervision, engineering and geological services, and labor, include an itemized schedule of numbers, classes, rates of wages, salaries or fees, and periods of employment. State whether these technicians and employees are available. None

(c) Operating materials and supplies. List items of material and supplies with their cost. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of operating equipment to be used giving specifications and indicating how each item is to be acquired – i.e., rented, purchased, or provided by the applicant. If it is rented or purchased, state the estimated rental or purchase price. If it is to be furnished by the applicant, give its present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of necessary *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant, which will be used on the exploration project.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration project stating specifications and cost including labor, materials and supervision.

(g) Miscellaneous. For the operating equipment listed in 6*(d)*, describe the type and estimate the cost of repairs and maintenance expected during project operations. Do not repeat initial repairs listed in 6*(e)*. Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories.

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)* State whether you are prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation stated in Sec. 7 of DMEA Order–I, Amended.

(b) Explain to what extent you propose to furnish your share of the costs by providing money, by use of equipment owned by you, or otherwise.

* * * * *

(1) (4)

RECEIVED
SEP 20 1957
U. S. G. S.
SPOKANE, WASH.

Morton Wash.,
Sept. 18, 1957

Dear Sir

I, Ralph Gillispie have lessed the A.J. Gillispie property, formerly known as the Morton Cinnabar Mine and the Roy Minning company. The legal discription is on the lease and on the map which I will enclose. As manager for the Last Morton Cinnabar company I have developed the property to the amount of about $20,000. I am asking for a loan of $30,000, more to put the mine in proper production. The first Morton Cinnabar company did produce a lot of mercury and worked just the far

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DMEA
RECEIVED OCT 7 1957

DATE	[illegible]	[illegible]

Eastern part of the property. I want to work the Western part and the Eastern part of the property

I have done tunnel work on the Western part and the middle part of the property, but have ~~not~~ gone far enough with the tunnel work. There are no liens or mortgages on the property. I have ore showings in my present workings. I have ~~spent~~ my life in the Cinnabar field.

I expect to be in production in 6 months after I start to work. I will start to work as soon as possible.

As near as I can estimate the project, the expence will be something like this, the building of the necessary sheds, to cover the smelters and of dring rooms ~~etc~~ etc. will be:

1, 500 ft of tunnel. $14,000.
2, Bulldozer work 1,800.
Ming tools, machinery and miscellaneous. 7,000.
3 Building smelter. 5,000.
total $27.800.

Will you please send me another application to apply on Sec. 36.

Yours truly
Ralph Gillispie

MINING LEASE

This agreement made and entered into this 17th day of September,1957 by and between O.J.Gillispie,a widower,the owner of real property hereinafter referred to as the Lessor,and Ralph gillispie,hereinafter referred to as the Lessee,Herewith called Fern Hill Cinabar Mine.

WITNESSETH: That for and in consideration of the mutual promises and agreements between the parties as hereinafter specified,and the rental payments as provided for herein, the Lessor does by these presents lease and demise unto the Lessee the right to go in and upon the following descibed real property in Lewis County, Washington,to wit;

> Government Lots Eight (8) and nine (9),and the Southeast Quarter of the Southewest quarter(SE¼ OF SW¼)of Seation Six (6),Township Twelve (12),North of Range Five (5),East of Willamette Meridan (EWM),in Lewis County,Washington, formerly known as the Roy Mining Company property.

and to mime and remove therefrom any and all mineral products(excepting coal)

The terms of this lease shall continue as long as the Lessee continues to pay monthly rental as hereinafter specified.

The monthly rent for said use of said premises for said mining purposes shall be in the nature of a royalty of ten percent (10%) of the gross sale price of the minerals and mineral products removed from said premises by the Lessee,Plus the said monthly re nt. The monthly rent shall not be less than One Hundred Dollars (100.00) dollars per month, regardless of whether any minerals are in the process of removal from said premises.

The Lessee may go in and upon the premises and any and all parts thereof,and prospect for and open up tunnels,pits or other mines for the removal of minerals and mineral products and construct such roads and other facilities in and across said premises as may be necessary or proper for the economical removal of the minerals and mineral products mined from said products.

The monthly payments of rent shall be due and payable on the first day of each and every calendar month,bommencing with the first day of November,1957.

The Lessee shall,on or before the first day of each calendar month, furnish the Lessor with a full,correct and complete accounting for all minerals removed from the said premises during the preceding calendar month,and shall furnish duplicate slips showing the receipts for minerals so soldor disposed of from said premises during that period, the Lessee shall be required to pay royalties on the minerals and on the mineral produc ucts sold and paid for during the preceding calendar month,but the amount of royalties shall in no event be less than O ne Hundred Dollars ($100.00) per month.

It is especialy understood and agreed that in conducting his operations, the Lessee will see to it that the spring from which the Lessor gets water is not disturbed or contaminated by him but the Lessee may use water for domestic purposes from said spring in common with the Lessor. The Lessee may use any water from any flowing stream, other than said spring, upon the premises in so far as it may be necessary or convenient in connection with his mining operations.

The Lessee may construct and maintain such buildings and other structures upon the premises as are necessary and proper in connection with his mining operations,but shall avoid doing injury to any agricultural land or buildings upon the premises and if it is necessary to use any agriculturaral land in connection with his mining operations, he will pay reasonable damages arising out of such use.

The Lessee shall pay the real property taxes assessed upon said premises commencing with the year 1957,so long as he continues to lease said property and any taxes assessed against his mining operations commencing as of this date. The Lessee shall keep the said premises

free and clear of all liens for labor and materials.

In the event that any suit is commenced,either at law or in equity,involving the title to said mineral lease or lease condtiond, then during the pendency of said action and until the final decision thereof,Lessee may deposit sums accruing hereunder to Lessor in any National Bank and no asignment by the Lessor of all or any part of said interest shall be binding on Lessee until Lessee shall have been furnished with a duplicate original executed copy signed by the Lessor of such assignment, together with the address of the assigne thereof.

The Lessee further agrees that under no conditions shall he sub-lease or syb-let the above descibed property without the written consent of the Lessor.

In the event that the Lessee shall fail or neglect to carry out and perform any of these terms and conditions of this lease on his part to be performed,and in the event that such failure shalll continue for a period of more than twenty days after payment is due,then and in that event the Lessor may at his option cancel this lease and upon such cancellation all the rights of the Lessor shall immediately cease and determine and he shall have no further interest in the premises. The Lessee may remove any machinery or equipment which he may have placed upon the premises during the term of this lease,upon the termination of this lease,provide he is not in default under the terms of this lease.

The amount of Five hundred dollars to be paid on execution of this lease and One hundred dollars on the first of each and every month there after;

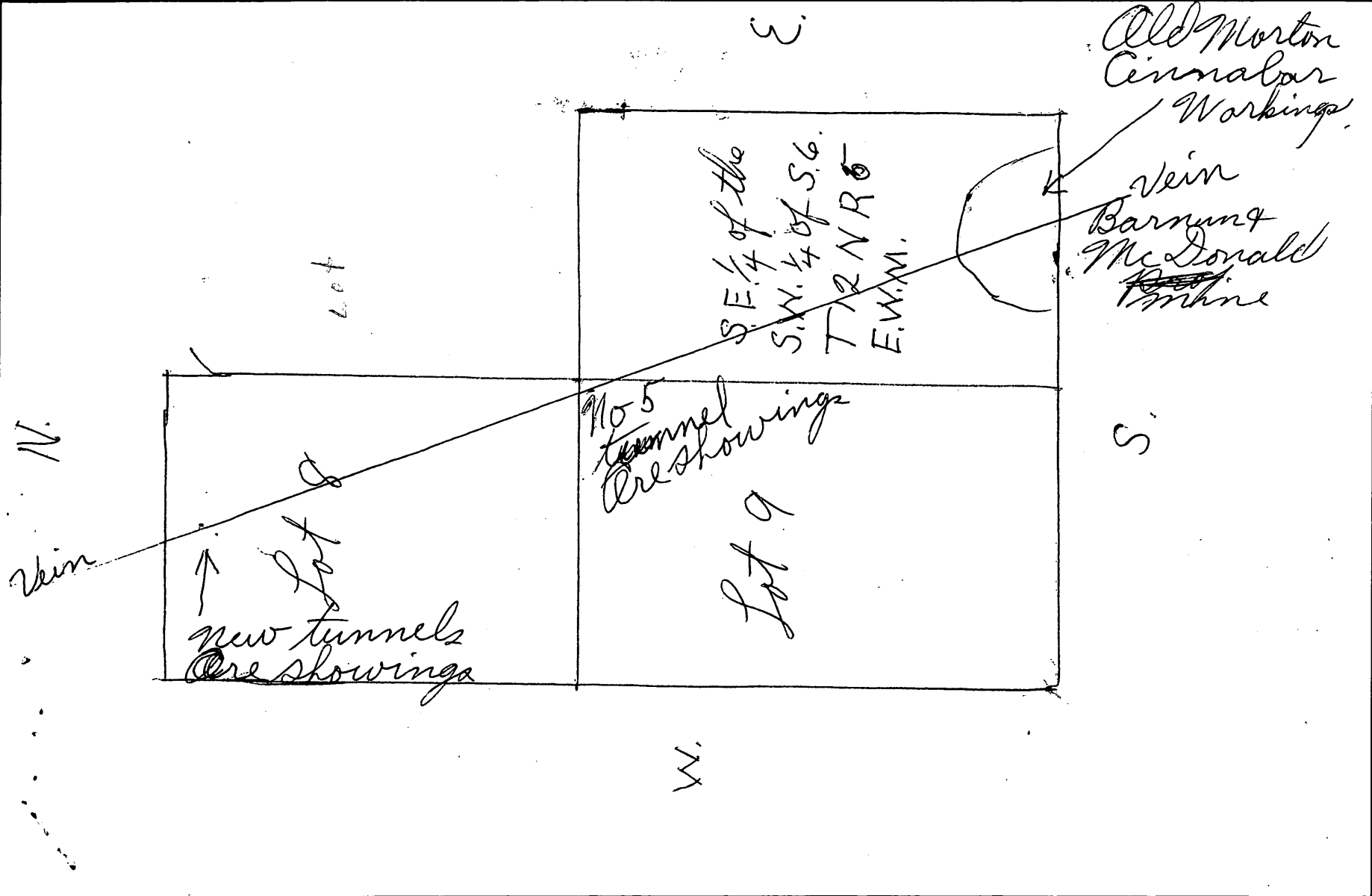
IN WITNESS WHEREOF, THE Said parties have hereunto set their hands in triplicate this Seventeenth(17th) day of September,1957.

Thelma Taylor
Witness

Ralph Gillispie
Ralph Gillispie

Noah L. Taylor
witness

O J Gillispie
O,J.Gillispie


W.
Old Morton Cinnabar Workings
Vein
Barnum & McDonald Mine
S.E. 1/4 of the S.W. 1/4 of S.6. T.12 N R.6 E.W.M.
Lot 7
No 5 Tunnel Ore Showings
Lot 9
N.
S.
Lot 8
Vein
New tunnels Ore Showings
W.

ORIGINAL FILE COPY
DMEA
RECEIVED OCT. 7 1957

DATE		COPY

GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
February 21, 1967

ORIGINAL COPY
O. M. E.
RECEIVED
FEB 23 1967
INITIALS | CODE
120 m
TEJ 110
EP 120 P

Mr. Ralph Gillispie
P. O. Box 104
Morton, Washington 98356

Re: OME-6432 (Mercury)
Ralph Gillispie
Fern Hill Cinnabar Mine
Lewis County, Washington

Dear Mr. Gillispie:

As I attempted to explain to Mrs. Beck during her telephone call of February 15, 1967, it will be necessary for the ground to be free of snow before a satisfactory examination relative to your OME application can be made.

If you will notify me when the snow is gone, I will schedule an examination as soon as possible thereafter.

Sincerely yours,

D. R. MacLaren
Field Officer, OME
Region I

DRMacLaren/mls

cc: OME

Director's Reading File

IN REPLY REFER TO:

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

DMEA
RECEIVED FEB 20 1958

DATE		CODE
2/20	a	220
	WSM	400

February 14, 1958
Re: DMEA 4810 & 4843
Ralph Gillispie
West End Cinnabar Mine (4810)
Fern Hill " " (4843)
Lewis County, Washington
$20,400 (4810)
$30,000 (4843) Mercury

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Review of Field Team Report

The applicant requested assistance in exploring a mercury-bearing fault in two properties, the West End and Fern Mines, by bulldozing and drifting. The estimates of cost include 2 "smelters". Ore, some of it high grade, yielding upwards of 5,000 flasks of mercury has been mined in the Barnum fault breccia on the Fern Hill and McDonnell properties. By careful bending the applicant projects the fault over a mile into the West End property.

To the examiner, such an extension does not look probable and he recommends that the application (4810) be denied.

The examiner thinks bulldozing planned to trace the Opalite fault to its assumed intersection with the possible extension of the Blackwall thrust fault is warranted. If ore is found in the outcrop of the Opalite vein or at the intersection, drifting would follow. If generally successful, other similar work, as on the Roy No. 5 fault, might be justified. No detailed work program is outlined.

I concur with the recommendations of the examiner, that application 4810 be denied and a staged work program be approved as for application 4843.

W. P. Williams
for N. E. Nelson

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
2-11	Chapman	400
2-11	Martin	400
2/13	Selfridge	120
2/13	Gilman	110
"	Mittendorf	100
		220

FEB 13 1958

Mr. Ralph Gillispie
Box 104
Morton, Washington

Re: Docket No. DMEA 4843 - Mercury
The Fern Hill Cinnabar Mine
Lewis County, Washington

Dear Mr. Gillispie:

In accordance with your letters of January 4 and 24, 1958, to Mr. A. E. Weissenborn, the subject application for exploration assistance has been removed from our active files.

We wish to thank you for your interest in the Defense Minerals Exploration Administration program and for bringing this property to our attention.

Sincerely yours,

C. O. Mittendorf (fcw)

Administrator

TLCHAPMAN/foc
2-11-58
cc to: Docket
Code 400
Admr. R. File
Code 120
FT. REG. I
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
2-7	Chapman	400
2-7	Martin	400
		200

February 7, 1958

MEMORANDUM

To: Allan S. Dakan, Director
Division of Operation, Control and Statistics, DMEA

From: Division of Iron and Ferro-Alloys, DMEA

Subject: Withdrawal of Application
Docket No. DMEA 4843 - Mercury
Ralph Gillispie
The Fern Hill Cinnabar Mine
Lewis County, Washington

The above application has been withdrawn. Please see the applicant's letter of January 24, 1958, to Mr. A. E. Weissenborn, who sent a copy to us by letter of January 29, 1958.

W S Martin
W. S. Martin, Director
Division of Iron and Ferro-Alloys

TLCHAPMAN/foc
2-7-58
cc to: Docket
Admr. R. File
Oper. Comm.
Code 400

8623

DATE		
2/14	SHB	130 220

[illegible] Street
[illegible], [illegible]

February [illegible], 1958

[illegible]
[illegible]
[illegible]
[illegible]

[illegible]
[illegible]
[illegible]
and
[illegible]

Dear Mr. [illegible]

[illegible] report [illegible] property [illegible], [illegible] survey.

[illegible] property [illegible] structural [illegible] property cannot be [illegible] property [illegible] property be denied.

[illegible] property [illegible] from [illegible] along faults, from [illegible] fault [illegible] fault. [illegible] that there may be [illegible] between [illegible] fault and the [illegible] fault. [illegible] two-stage program. [illegible] stage would consist of [illegible] fault, [illegible] fault. [illegible] fault, [illegible] second stage of drilling.

After [illegible] report [illegible] prepared, Mr. [illegible] a letter dated January [illegible], 1958 [illegible] the [illegible] letter [illegible] Chief Engineer, U. S. Bureau

Reviewed by
DMEA OPERATING [illegible]
2-14-58
(date)

[illegible] were in the area and called on Mr. [illegible] who said that he did not want to request withdrawal of the application, that he thought he could raise the money to pay the taxes on the land and that he would request the bid [illegible] be extended within a few days. He promised Gibbs and Randall that he would write to [illegible] Team requesting reinstatement of the application as soon as the financial problem is solved and consent to [illegible] forms were signed. In a letter dated January [illegible], 195[illegible], Mr. [illegible] advised the Field Team that he could not get the property owner to sign the consent to [illegible].

We concur with [illegible]'s recommendation that the application [illegible] Contract [illegible] for [illegible] to explore on the [illegible] land property be denied.

With respect to the application for Contract [illegible] for [illegible] to explore on the Fern [illegible] property as the applicant cannot get consent to [illegible] on the property, we recommend that the application be considered as withdrawn.

By Field Team, Region [illegible]

[illegible], Exec. Officer
U. S. Geological Survey

[illegible], Member
U. S. Bureau of Mines

Enclosures

cc: [illegible] (2)
[illegible] ([illegible]) (2)
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
So. 157 Howard Street
Spokane 4, Washington

EXTRA COPY DMEA RECEIVED FEB 10 1958		
DATE	INITIALS	CODE
2/14	JHB	130
		220

February 4, 1958

MEMORANDUM

To: DMEA Field Team, Region I

From: Howard F. Albee, Geologist, U. S. Geological Survey

Subject: Field Examination Report, Docket No. DMEA-4810 (Mercury), West End Cinnabar Mine, and Docket No. DMEA-4843 (Mercury), The Fern Hill Cinnabar Mine, Ralph Gillispie, Lewis County, Washington

INTRODUCTION AND SUMMARY

Ralph Gillispie, Box 104, Morton, Washington, applied September 18 and October 14, 1957, respectively, to Defense Minerals Exploration Administration for assistance to explore for mercury on the West End and Fern Hill Cinnabar properties (fig. 2). Mr. Gillispie proposes to drift 300 feet on the West End property at a total cost of $20,400 and 500 feet on the Fern Hill property at a total cost of $27,800. He proposed no definite program. The only maps accompanying the applications did not show the locations of the proposed drifts or indicate any definite exploration targets.

The properties were examined November 20 and 21, 1957, by Howard F. Albee, U. S. Geological Survey, accompanied by Mr. Ralph Gillispie. Accessible parts of the property were examined, but all the drifts that reportedly reached the mercury-bearing structures and strata were caved or full of water and no mercury-bearing rocks or structures were seen.

Production records of the U. S. Bureau of Mines show that about 5,000 flasks of mercury were produced from the district from 1926 through 1940, mostly from the Fern Hill property and the adjoining Barnum-McDonnell property to the south. The greater part of the production reportedly came from brecciated zones along faults that served as the main, or primary, avenues of upward movement of mineralizing solutions.

Reviewed by
DMEA OPERATING COMMITTEE
2-14-58
(date)

CM-SITE EXAM.

CONCLUSIONS AND RECOMMENDATIONS

The Fern Hill property has had a substantial production and there is a good geologic probability that exploration could discover significant reserves. A two-stage program, consisting of bulldozing and drifting, is recommended to explore this property.

On the West End property, the applicant could show no evidence to justify exploration and it is recommended that the application in Docket No. DMEA-4810 be denied.

ACCESSIBILITY

The Morton cinnabar district is about 2 miles east of the town of Morton, Washington, and is accessible by paved highway (fig. 1). The West End property is near the north end of the district and is reached by about a mile of unimproved road. The Fern Hill property lies a few hundred yards north of the highway and is reached by a steep unimproved road.

The Fern Hill property lies on the steep western slope of a north-trending ridge and ranges in altitude from about 1,000 to 2,000 feet. The old adits, now inaccessible, were driven at about 100-foot vertical intervals, between altitudes of about 1,100 and 1,400 feet.

The West End property is on a spur of the same ridge in somewhat less steep terrain. Small perennial streams cross each property. The area receives from 40 to 45 inches of precipitation annually, mostly as rain. Snowfall is light and does not long remain on the ground.

The district has a heavy cover of timber, mostly conifers and alders. The conifers consist largely of white fir, which may be adequate for mine timber.

DESCRIPTION OF THE PROPERTY

The West End Cinnabar property comprises a total of 240 acres in Lewis County, Washington, which the applicant controls by prospecting leases from the State of Washington. The prospecting leases run for two years and are renewable. The lessees, dates, and descriptions of the land are:

Lessee	Date	Description
William Gillispie	May 28, 1957	S½NW¼, sec. 36, T. 13 N., R. 4 E., W.M.
John R. Forrest	May 28, 1957	N½SW¼, sec. 36, T. 13 N., R. 4 E., W.M.
Ralph Gillispie	May 28, 1957	S½SW¼, sec. 36, T. 13 N., R. 4 E., W.M.

The Fern Hill Cinnabar property consists of 120 acres of land held under lease and is described as:

Government lots 8 and 9, and SE¼SW¼, all in section 6, T. 12 N., R. 5 E., W.M., Lewis County, Washington. The land is leased by Ralph Gillispie from O. J. Gillispie and the lease continues as long as rental amounting to $100 per month and 10 percent of the gross sale price of any minerals removed (except coal) is paid to the lessor.

THE APPLICANT

The applicant under Docket No. DMEA-4843 (Fern Hill Cinnabar property) is Ralph Gillispie, an individual. The applicant under Docket No. DMEA-4810 (West End Cinnabar property) is a partnership comprising Ralph Gillispie, John R. Forrest, and William B. Gillispie, all of Morton, Washington.

Ralph Gillispie is a practical hard-rock miner with considerable mining experience but obviously is not capable of directing an exploration program without technical advice. Conversation with Mr. Gillispie indicates that he has an exaggerated faith in his ability to direct a program without using engineering or geological tools. His two partners are not experienced mining men.

HISTORY AND PRODUCTION

The original discovery of mercury in the Morton district is said to have been made in 1913 when the presence of cinnabar was noted in a seam of coal. Mercury was reportedly first produced in 1916, when 75 flasks were recovered from 47 tons of ore. Active development of the district began with the opening of the Barnum-McDonnel mine in 1926. The total output of the district from 1926 through 1940, as recorded by the U. S. Bureau of Mines, was 4,999 flasks. This figure does not include five years for which the production figures are grouped with those of other states.

From studying the available data, J. H. Mackin (Report of Investigations No. 6, Relation of Geology to Mineralization in the Morton Cinnabar District, State of Washington, Division of Mines and Mining, 1944) ascertained the yearly production of individual mines and determined roughly the tenor of the ores.

In the first year of operation (1926) the Barnum-McDonnell mine produced 489 flasks from 900 tons of ore, indicating a recovery of about 47 pounds per ton. The total production of the mine from 1926 to 1929, inclusive, was 1,265 flasks. In 1931 this property produced 441 flasks from 11,115 tons of ore, or about 3 pounds per ton.

The Roy-Fisher property, now the Fern Hill property and adjacent to the Barnum-McDonnell mine, was developed in 1926 and 1927. According to Mackin, this property produced about 2,500 flasks of mercury in 1928 and 1929, 1,079 flasks in 1930, and 1,581 tons in 1931. The 1931 production averaged about 5 pounds per ton; apparently the ore produced from 1928 through 1930 averaged somewhat higher. Most of the other mines in the district were opened between 1931 and 1936. Their production was evidently insufficient to counteract the steady decline in output of the district resulting from decreased activity on the Barnum-McDonnell and Roy-Fisher properties between 1930 and 1940. The Roy-Fisher property produced 60 flasks of mercury from 1,000 tons of ore in 1940, or slightly under 5 pounds per ton, and was operated intermittently on a small scale until at least 1943.

Drifting from the surface has been done at two places on the old Roy-Fisher property in recent years, but the work in each case did not reach mercury-bearing structure. Ralph Gillispie leased the property on September 17, 1957, and no work has been done since.

GEOLOGY AND ORE DEPOSITS

A report on the Morton Cinnabar District by J. H. Mackin, previously cited, was published in 1944. Descriptions of the geology and ore deposits are taken from that report.

The rocks penetrated by the old Roy-Fisher and Barnum-McDonnell workings are a sequence of sediments that include shale with coal seams, siltstone, and tuffaceous sandstone, all of which have been intruded by basic sills, dikes and other igneous bodies (pl. 2). The prevailing strike of the beds is northerly and the dips average about 20° easterly. Surface observations in the area indicate that the mines are on the east limb of a major north-south anticline.

Mineralization was effected by solutions rising along fault planes and accompanied by intense hydrothermal alteration. The mineral deposition was controlled by varying degrees of perviousness in the east-dipping sedimentary beds and by brecciated zones and/or gouge along three faults: the Barnum normal fault, trending north and dipping 35°-60° W.; the Black Wall thrust, trending N. 10°-15° W. and dipping 20°-25° NE.; and the Opalite strike-slip fault, trending N. 52° E. and dipping 80°-90° NW. (pl. 1). The Barnum and Opalite faults are examples of main avenues of upward movement of mineral-bearing solutions, and the relatively low-angle Black Wall fault is an example of a gouge-carrying cross fault that interrupted the continuity of the brecciated feeder-fault planes.

Three main types of ore occurrence have been mined from the district: the breccia type, the sandstone type, and the intersection type. The brecciated zones along faults served as main avenues for the movement of mineral-bearing solutions and thus formed the most productive ore bodies. There does not appear to be any relation between the tenor of the ore and wall-rock types or the amount of ore and irregularities in the fault surface. The greater part of the production of the district has come from the Barnum fault breccia zone.

The sandstone type of ore deposit was formed when some fraction of the mineral-bearing solutions passed from the breccia zones into the sandstone beds. Circumstances favoring this type of deposition include: perviousness of the sandstone, attitude of the bedding in the hanging wall, the absence of a tight seal of gouge on the hanging wall, and some kind of dam on the fault which prevented or inhibited free movement upward along it. The sandstone-type occurrence was thus formed by a diversion or dispersal of flow of some portion of the mercury-carrying solutions, and it may be expected to be lower in tenor than the associated breccia-type ore.

The intersection-type deposit is found at places where the continuity of the breccia zones was interrupted by cross faults. The concentration of flow of mineral-bearing solutions results in relatively rich ore in deposits of this type.

The Barnum fault has been explored for about 1,300 feet on strike and through a vertical range of about 350 feet. The thickness of the brecciated zone ranges from a few inches to 3 feet or more and averages about 1 foot. The breccia has been largely mined out in the Barnum-McDonnell workings and in the southern part of the Roy-Fisher workings. Decrease in the size of stopes in a northerly direction in the Roy-Fisher workings and relatively poor showings of cinnabar in the breccia near the north headings of the drifts suggest that the values decrease toward the north.

If a large east-west fault were truncated by the Black Wall thrust, then solutions rising along the breccia of the east-trending fault would be forced to flow upward (westward) in the fault breccia just under the impervious Black Wall gouge, either to a breach in the gouge or possibly high enough to be intersected by the present surface. The Opalite fault (pl. 1) is such a fault and it did carry mineral-bearing solutions. Whether or not it continues far enough to the east, and whether the Black Wall thrust continues far enough to the north so that they intersect is not known.

A recommended course of action would be to investigate the possibility of an intersection. A drift easterly on the Opalite fault would encounter this intersection within 1,600-1,700 feet,

provided that the faults do intersect and maintain observed attitudes. If values along the Opalite vein do not justify extension of a drift along it, there is doubt as to how much dependence should be placed on the theoretical possibility of finding ore at the intersection. This doubt could be largely resolved by tracing the outcrop of the Opalite vein on the surface to where it should be cut by the Black Wall thrust, in order to determine if there is actually a concentration of values at the intersection. Sampling and assaying of the Opalite vein in test pits for several hundred feet along its outcrop and at the possible intersection should provide a basis for determining the practicability of deeper exploration.

The Roy No. 5 fault also carried mineralizing solutions. Provided that investigations along the Opalite fault proved encouraging, then a similar course of action could be undertaken on the Roy No. 5 fault.

Rock types and general structural relationships on the West End Cinnabar property in section 36 are probably similar to those in section 6 on the Fern Hill Cinnabar property. However, lack of surface exposures makes it appear most unlikely that any specific fault can be traced from section 6 into section 36. As it is virtually impossible to work out a definite and detailed stratigraphic sequence on the basis of surface exposures, surface stratigraphic and structural study in section 36 is of little use in finding faults. Even if faults could be found, geologic relations contribute little to the understanding of the distribution of values along them. For these reasons, the structural and ore pattern observed in section 6 cannot be projected to serve as guides to possible exploration targets in section 36.

EQUIPMENT AND SUPPLIES

There are no buildings or equipment on the property. Materials, equipment and supplies are available locally or in Seattle, 90 miles to the north. Water for domestic and mining uses is available on the property and labor is available locally. Power lines cross the southwest corner of the property.

APPLICANT'S PROPOSAL

The applicant indicated he would drift 300 feet on the West End property and 500 feet on the Fern Hill property but he gave no locations of the work. The applicant did not clarify this during the examination as he seemed uncertain as to where he would start except "somsplace in the old, caved haulage tunnel (Roy No. 1, pl. 2) on the Fern Hill property and crosscut to the northeast."

Such a procedure may well have merit but it would entail a large amount of rehabilitation in the old haulage tunnel and several hundred feet of dead crosscutting. Mackin states that the old drifts (drifts that would lead to the applicant's target area) show decreasing values to the north.

RECOMMENDED EXPLORATION PROPOSAL

On the Fern Hill property, a program that consists of bulldozing along the outcrop of the Opalite vein to where it is cut by the Black Wall fault is recommended. If the Opalite vein shows mercury along its outcrop and a concentration of mercury at the intersection of the Black Wall Fault, then drifting along the vein is recommended.

Mr. Gillispie states that he could open the old workings into the Opalite vein with a few days work and that he would be willing to go along with the proposed program.

Attachments

Distribution:
DMEA (6)
USBM (6)
USGS(SRO) (2)
Dockets (2)
Albee (1)

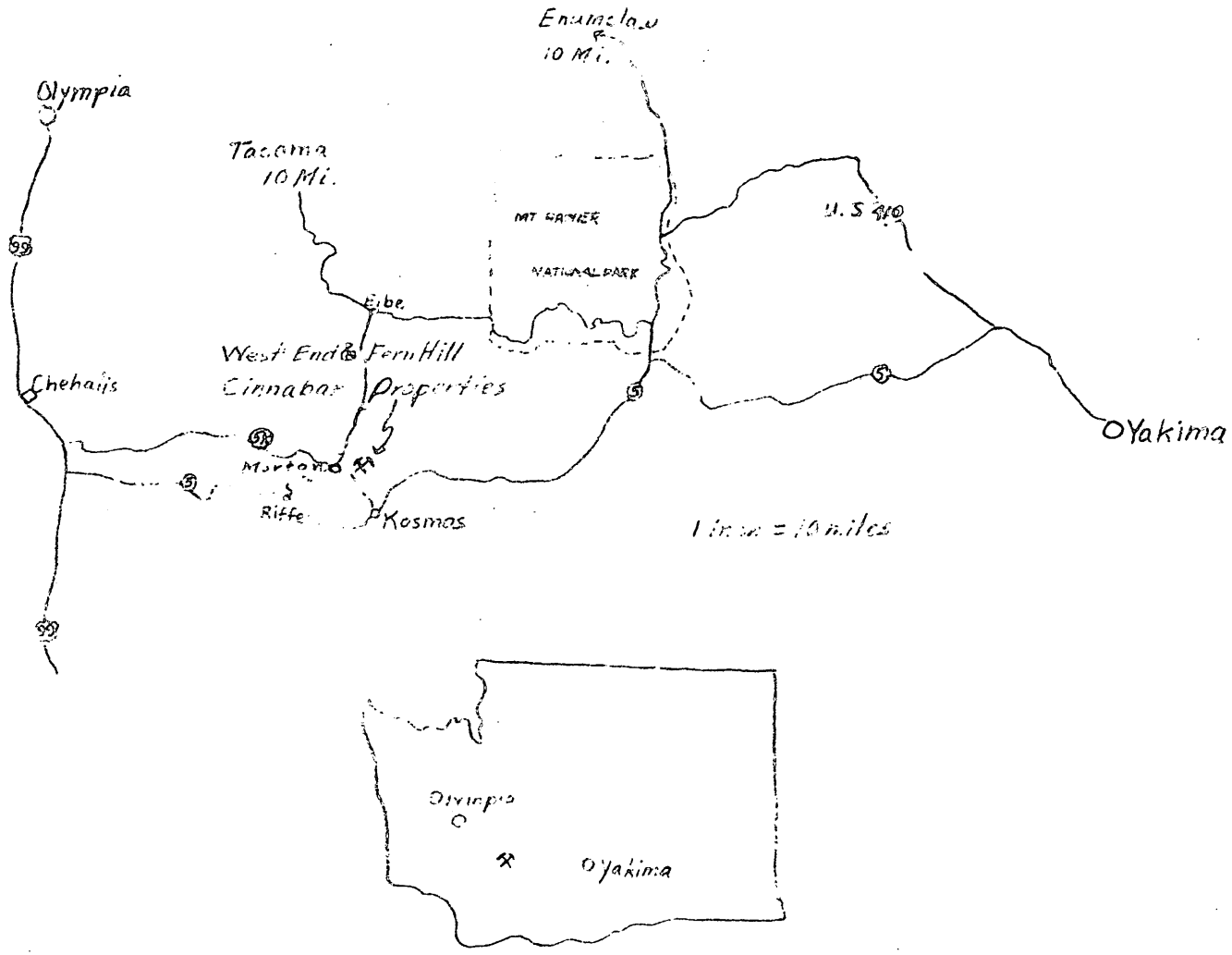


Figure 1. Location map, West End and Fern Hill Cinnabar properties, Lewis County, Washington

H.F. Riley [illegible], 1957

Note: Property boundaries from applicants map. Location of faults from a structural and topographic map of the Morton Cinnabar District by L.T. Christian and L.V. Mu[illegible], 1942

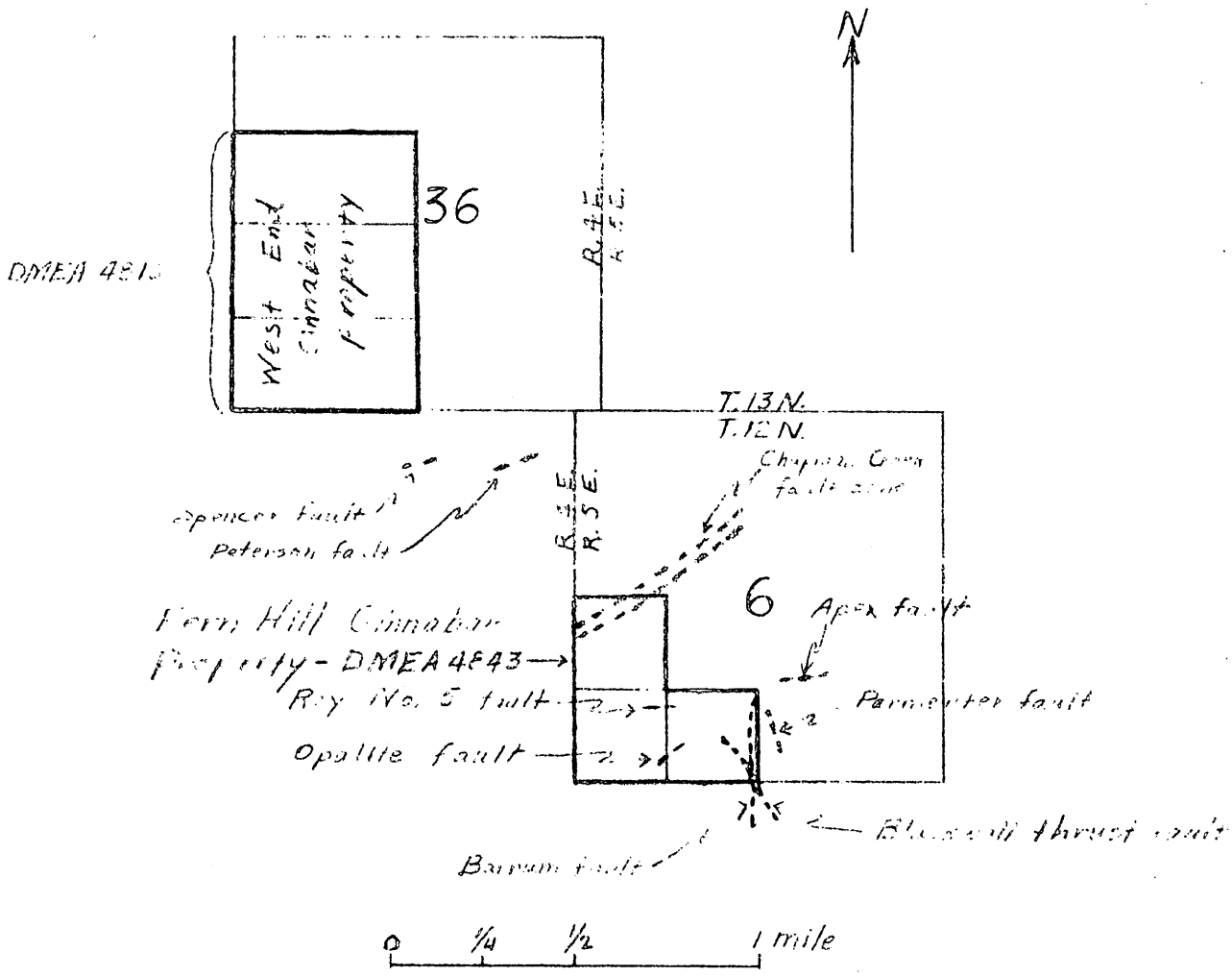


Figure 2. Map of the West End and Fern Hill Cinnabar properties showing the location of most of the known faults, Ralph Gillispie, Lewis County, Washington

H. F. Albee
November, 1957

LIBRARY COPY
DREA
RECEIVED 10 1958

DATE	NAMES	CARD

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

January 29, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 3 1958

DATE	INITIALS	CODE
2/3	aG	220
	WSM	400

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

Re: Docket No. DMEA-4843 (Mercury)
Ralph Gillispie
The Fern Hill Cinnabar Mine
Lewis County, Washington

Dear Mr. Selfridge:

Enclosed are two copies of a letter from the referenced applicant in which he states that he cannot secure signed Consent to Lien and Subordination Agreement for the Fern Hill property.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I

Enclosures

cc: USBM (2)
Albee

To be treated as withdrawn 2/3/58

Tigton, Washington
Jan. 24, 1958

Dear Sir

My dad has refused to sign the agreement that you asked me to have him sign. So I guess that ends my dream of getting the Gillespie property in operation.

I am slowly digging a tunnel starting on Sec. 36. I expect to get it in operation some day.

Yours truly
Ralph Gillespie

RECEIVED
MAY - 1958

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DMEA
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DATE | | CODE
1/13 | gb wsm | 220 400

So. 157 Howard Street
Spokane 4, Washington

January 10, 1958

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

Re: Docket No. DMEA-4810 (Cinnabar)
Ralph Gillispie
West End Cinnabar Mine
and
Docket No. DMEA-4843 (Mercury)
The Fern Hill Cinnabar Mine
Lewis County, Washington

Dear Mr. Selfridge:

Enclosed are two copies of a self-explanatory letter dated January 4, 1958 from the subject applicant requesting that his application be withdrawn as he cannot meet the payments due on leases and taxes.

As we have made an examination we will submit a report on the property for the files as soon as it is completed.

By Field Team, Region I

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

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

Enclosures

cc: USBM (2)
Albee

EXTRA COPY
DMEA
RECEIVED [illegible] 1958
DATE | INITIALS | CODE

[illegible]

Dear Sir (1) [illegible]

[illegible] sorry but I guess I will have to have my agent [illegible] my negotiating with the Government. The Gilmer property has already cost two in round figures $1000 on payments and taxes. I have no money and cannot buy it. I thought I could raise some money on these properties. But even my friends want so much interest for even $1000 that it don't operate. I have different proof since the rains that these properties are good properties. I thought maybe the Government might

[illegible]

[illegible] capital for operations [illegible] not [illegible] very good to me at this time.

Yours truly,

[illegible] Gillespie

EXTRA COPY DMEA		
RECEIVED		1957
DATE		CODE
11/15	WSM	400

So. 157 Howard Street
Spokane 4, Washington

November 12, 1957

Mr. Ralph Gillispie
P. O. Box 104
Morton, Washington

Re: Docket No. DMEA-4810 (Mercury)
West End Cinnabar Mine
and
Docket No. DMEA-4843 (Mercury)
The Fern Hill Cinnabar Mine
Lewis County, Washington

Dear Mr. Gillispie:

Your DMEA applications have been assigned to Mr. E. W. Parsons of the U. S. Bureau of Mines and me for examination. We plan to be in Morton the evening of November 19, 1957, and will meet you in front of the Post Office at 8:00 a. m. on the following day.

If this arrangement is not satisfactory, please notify this office by Monday, November 18, 1957. We may not be able to arrange for a jeep from this office and if not may wish to arrange for one in Morton if possible. Please drop us a postcard at this address giving your telephone number in case we find it necessary to change our plans.

Sincerely yours,

Howard F. Albee
Geologist

cc: DMEA (2)
USBM (2)

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
10-15	Chapman	400
10-15	Martin	400
		140
10-16	Lamb	130
10/16	Kilgaard	130
10/16	Gillespie	130
	Johnson	100
10/15	B	220
	Mittendorf	100
		400

OCT 16 1957

Mr. Ralph Gillispie
Box 104
Morton, Washington

Re: Docket No. DMEA 4843 - Mercury
The Fern Hill Cinnabar Mine
Lewis County, Washington

Dear Mr. Gillispie:

The above-referenced application for exploration assistance for mercury ores has been reviewed by the Washington office of the Defense Minerals Exploration Administration and referred to A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, South 157 Howard Street, Spokane 4, Washington, for a field examination of the property.

Any assistance you can give the members of the Field Team will be appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

TLChapman/dlm 10-15-57
cc to: Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
10-15	Chapman	400
10-15	Martin	400
10/16	GCS	130
/	Jones	110
"	Matthewson	100
10/17	B	220
		400

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

Re: Docket No. DMEA 4843 - Mercury
Ralph Gillispie
The Fern Hill Cinnabar Mine
Lewis County, Washington

Dear Mr. Weissenborn:

The above-docketed application for exploration assistance is being referred to your office for a field examination of the property.

Copies of memoranda dated October 8 and 9, 1957, by W. P. Williams, Geological Survey, and J. W. Pennington, Bureau of Mines, respectively, relating to the project are enclosed. Also enclosed is an extra copy of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

Frank D. Lamb

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

TLChapman/dlm 10-15-57
cc to: Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. J. W. Pennington, USBM
T. H. Kiilsgaard, USGS

Enclosures

8623

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

October 9, 1957

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: Assistant Chief, Branch of Base Metals

Subject: Review of Application, Docket No. DMEA 4843 (mercury), Ralph Gillispie, O. J. Gillispie Property, Lewis County, Washington $30,000.

The applicant proposes to explore for mercury mineralization by underground and surface methods at an estimated total cost of $30,000.

Information supplied with the application is inadequate to evaluate the work and additional data are required.

It is recommended that the application be referred to the Field Team for appropriate action.

The application is returned herewith.

J. W. Pennington

Attachment

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U. S. G. S.
F. D. Lamb
F i l e s

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 9 1957

DATE	INITIALS	CODE
10/9	B	220
	WSM	400

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

IN REPLY REFER TO:

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 10 1957

DATE	INITIALS	CODE
10/10	C	220
	WSM	400

October 8, 1957

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Review of application, DMEA 4843 (mercury), Ralph Gillispie, Fern Hill Cinnabar mine, Lewis County, Washington

The applicant proposes to explore for mercury ore deposits on lands that appear to form a part of application DMEA 4810 by the same applicant.

The application is incomplete and not well prepared. The proposed work is only vaguely described as 'bulldozing, tunneling, and miscellaneous' at a total estimated cost of $27,800.

It does not seem likely that much would be gained by asking the applicant for more information. For that reason I recommend that the application be referred to the Field Team for further action.

W. P. Williams

W. P. Williams

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

October 7, 1957

Mr. Ralph Gilliopic
Box 104
Morton, Washington

Dear Mr. Gilliopic:

Subject: DMEA-4843

Your application for exploration assistance, dated September 18, 1957 submitted to our office at Spokane, Washington has been assigned Docket Number DMEA-4843 and referred to the Iron and Ferro-Alloys Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:

Region I

U. S. Government Messenger Envelope

Standard Form No. 65 (Rev. 1/46)

1. Use blocks consecutively, one a
2. Void previous block.
3. Write clearly.

NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND RO	
~~Van Lefte~~	RUN STOP	~~Bureau of Land Management~~	RUN STOP
~~Mrs. Denton, Accounts~~	RUN STOP	~~Mr. Jounge Rm. 5116~~	RUN STOP
~~Va Courtes~~	RUN STOP	~~14458~~ ~~DNA~~	RUN STOP
~~Mrs Denton~~ Accounts	RUN STOP	Miss Curlin	RUN STOP
~~Mrs Lavin~~	RUN STOP		RUN STOP
~~Mrs Jean Dorothy~~ ~~Office of Solicitor~~	RUN STOP		RUN STOP
~~Room 7380~~	RUN STOP		RUN STOP
~~Mrs Hubbard~~ ~~Sec'y Payroll Section~~ ~~Rm 5318~~	RUN STOP		RUN STOP
~~Mr. C Park Service~~ ~~Rm — 3328~~	RUN STOP		RUN STOP
~~Office of Territories~~ ~~Alaska Division~~	RUN STOP		RUN STOP

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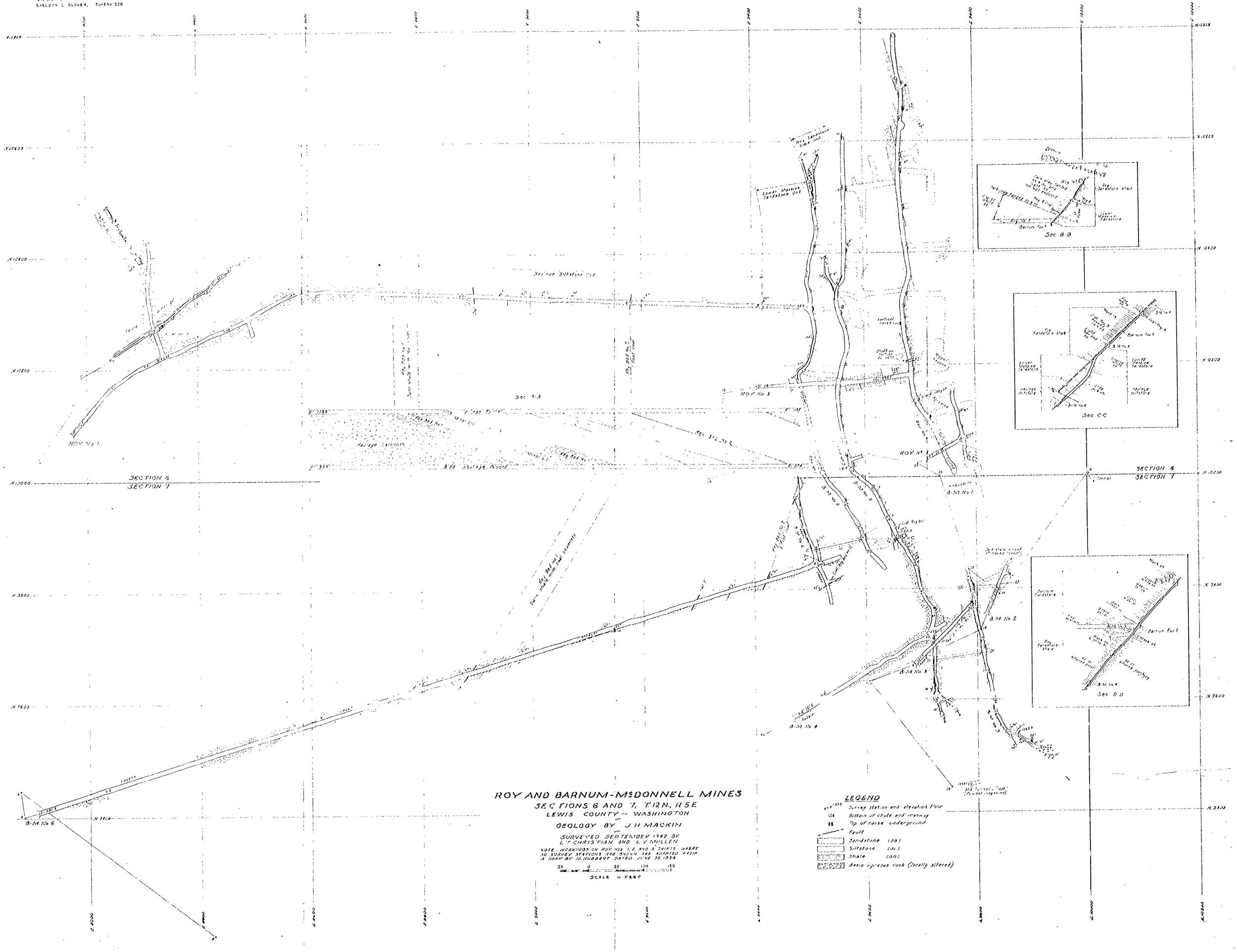
STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
DIVISION OF MINES AND MINING
SHELDON L GLOVER, SUPERVISOR

DOCKET NOS. DMEA 4810 AND 4843

REPORT OF INVESTIGATIONS
NUMBER 6 PLATE 2



ROY AND BARNUM-McDONNELL MINES

SECTIONS 6 AND 7, T.12N., R.5E
LEWIS COUNTY -- WASHINGTON

GEOLOGY BY J.H. MACKIN

SURVEYED SEPTEMBER 1942 BY
L.T. CHRISTIAN AND L.V. MULLEN

NOTE: WORKINGS ON ROY Nos 1, 2, AND 3 DRIFTS WHERE NO SURVEY STATIONS ARE SHOWN ARE ADAPTED FROM A MAP BY H. HUBBERT DATED JUNE 30, 1939

50 0 50 100 150
SCALE IN FEET

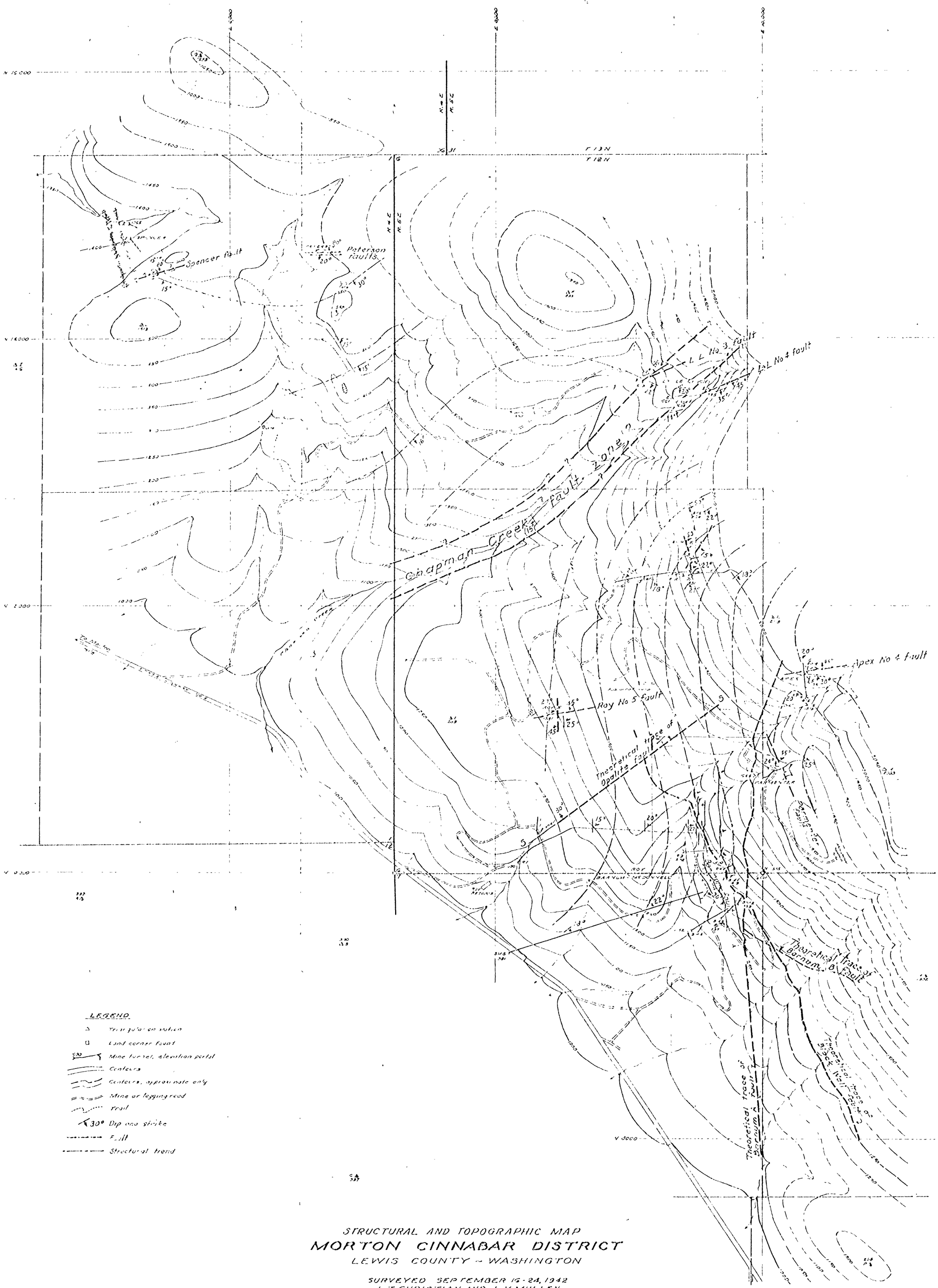
LEGEND

- Survey station and elevation floor
- Bottom of chute and tramway
- Top of raise underground
- Fault
- Sandstone (ss)
- Siltstone (si)
- Shale (sh)
- Basic igneous rock (locally altered)

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
DIVISION OF MINES AND MINING
SHELDON L. GLOVER, SUPERVISOR

DOCKET NOS. DMEA 4810 AND 4843

REPORT OF INVESTIGATIONS
NUMBER 6 PLATE I

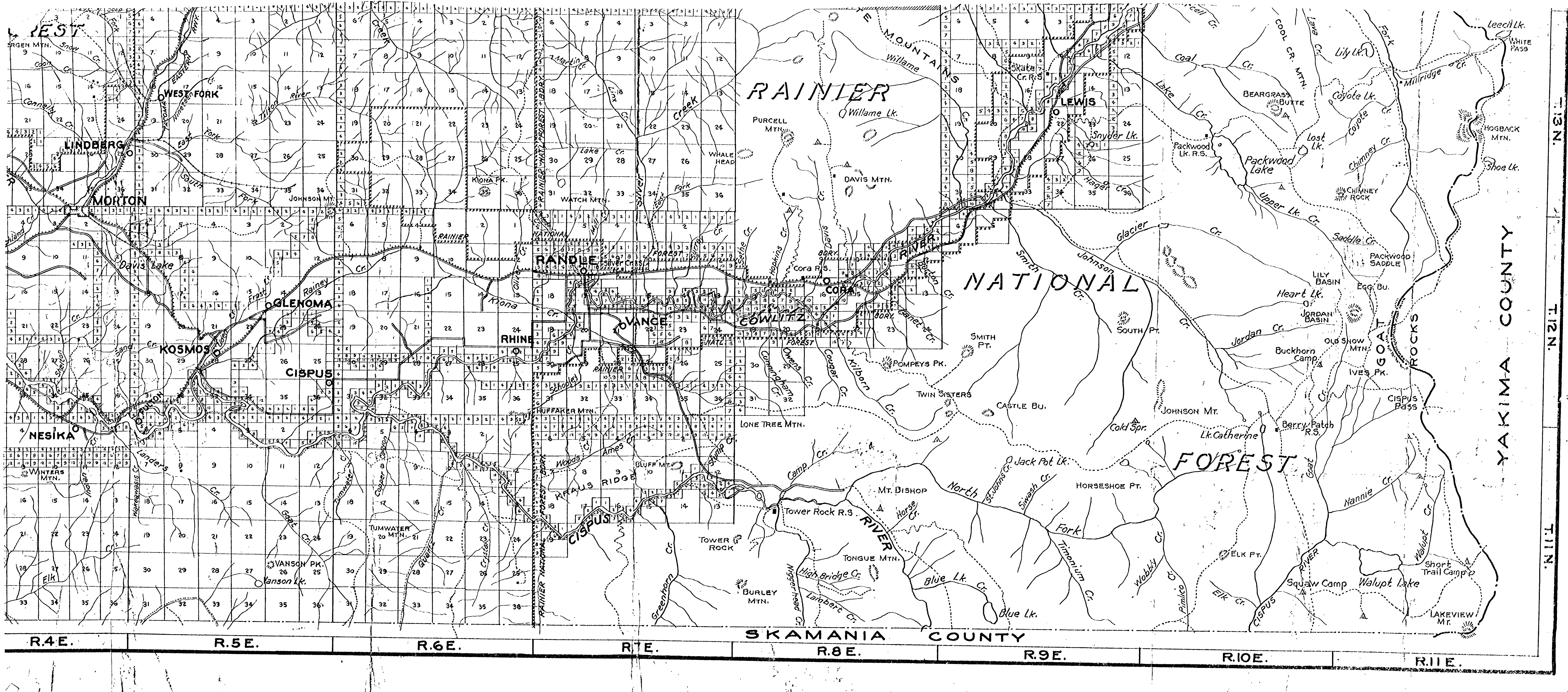


STRUCTURAL AND TOPOGRAPHIC MAP
MORTON CINNABAR DISTRICT
LEWIS COUNTY - WASHINGTON

SURVEYED SEPTEMBER 16-24, 1942
L. T. CHRISTIAN AND L. V. MULLEN

CONTOUR INTERVAL 50 FEET

SCALE IN FEET
0 500 1000 2000



REST
ERGEN MTN.
Snow Cr.
Coon Cr.
Connelly Cr.
WEST FORK
TACOMA EASTERN RWY.
Nineteen Cr.
LINDBERG
MORTON
East Fork
South Fork
Tilton River
Creek
Martin Cr.
Linx Cr.
Lake Cr.
Creek
WHALE HEAD
KIONA PK.
JOHNSON MT.
WATCH MTN.
Silver
East Fork
RAINIER NAT'L FOREST BDRY.
RAINIER
Willame
MOUNTAINS
PURCELL MTN.
Willame Lk.
DAVIS MTN.
Skate Cr. R.S.
LEWIS
Snyder Lk.
Hager Cr.
Coal Cr.
Lake Cr.
COOL CR. MTN.
Lava Cr.
Lily Lk.
Fork
Leech Lk.
WHITE PASS
Millridge Cr.
BEARGRASS BUTTE
Coyote Lk.
Coyote Cr.
Lost Lk.
Packwood Lk. R.S.
Packwood Lake
Chimney Cr.
HOGBACK MTN.
Shoe Lk.
CHIMNEY ROCK
Upper Lk. Cr.
Glacier Cr.
Saddle Cr.
PACKWOOD SADDLE
T.13 N.
T.12 N.
T.11 N.
YAKIMA COUNTY
NATIONAL
FOREST
Johnson Cr.
Smith Cr.
LILY BASIN
EGG BU.
Heart Lk.
JORDAN BASIN
Jordan Cr.
SOUTH PT.
Buckhorn Camp
OLD SNOW MTN.
GOAT ROCKS
IVES PK.
CISPUS PASS
Davis Lake
Rainey Cr.
Frost Cr.
GLENOMA
Kiona Cr.
Olive Cr.
RANDLE
Silver Cr. R.S.
Mill Cr.
Surrey Cr.
Sethe Cr.
Hopkins Cr.
Davis Cr.
Cora R.S.
CORA
BDRY.
RIVER
Burton Cr.
Ganet Cr.
COWLITZ
VANCE
RHINE
NAT'L FOREST
KOSMOS
Sand Cr.
Shelton Cr.
CISPUS
NESIKA
FULTON
Landers Cr.
Indian Cr.
Wakeawasis Cr.
WINTERS MTN.
Goat Cr.
Tumwater Cr.
Copper Canyon
TUMWATER MTN.
Quartz Cr.
Crystal Cr.
VANSON PK.
Vanson Lk.
Elk Cr.
Schooley Cr.
HUFFAKER MTN.
Woods Cr.
Ames Cr.
KRAUS RIDGE
BLUFF MT.
Stump Cr.
Cunningham Cr.
Owens Cr.
Cougar Cr.
Kilborn Cr.
POMPEYS PK.
SMITH PT.
TWIN SISTERS
CASTLE BU.
LONE TREE MTN.
Camp Cr.
Jack Pot Lk.
St. Johns Cr.
Siwash Cr.
North Fork
MT. BISHOP
Tower Rock R.S.
Horse Cr.
CISPUS RIVER
TOWER ROCK
TONGUE MTN.
Greenhorn Cr.
BURLEY MTN.
High Bridge Cr.
Niggerhead Cr.
Lambert Cr.
Blue Lk. Cr.
Blue Lk.
Timonium Cr.
Wobbly Cr.
Pimlico Cr.
Elk Cr.
HORSESHOE PT.
ELK PT.
JOHNSON MT.
Cold Spr.
Lk. Catherine
Berry Patch R.S.
Goat Cr.
Nannie Cr.
Walupt Cr.
Short Trail Camp
Walupt Lake
Squaw Camp
LAKEVIEW MT.
SKAMANIA COUNTY
R.4E.
R.5E.
R.6E.
R.7E.
R.8E.
R.9E.
R.10E.
R.11E.