DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 1508

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as

EXPLORATION LOAN

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip

To:	SUPPLY DIVISION	Date	SEP 13 1951
To:	Reports and Records	Date	SEP 17 1951
To:		Date	
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CONTROLLED DOCUMENT

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

SEP 17 1951

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Denial of exploration loan

Re: DMA-1508X
Carrietown Group
Camas County, Idaho
Exploration loan $100,000
Lead, zinc, copper

Garrett
Orin

The applicant has requested an exploration loan of $100,000 (Government participation 50%) for the purchase of mining equipment and for operating expenses at the Carrietown group of claims in Camas County, Idaho.

The Field Team, Region II, has examined the subject properties. Their report indicates that the veins seen on the property occur in roof pendant blocks of Paleozoic rocks lying adjacent to the granodiorite of the Idaho Batholith. The present underground workings have explored a vein from which minor production has been derived in the past but the ore has been proven to terminate against the post-ore instrusives below. The field team feels that other small bodies of ore probably do exist, but that they would not be large enough to warrant the capital expenditures required to find them.

The field team recommends that the application be denied and the Lead-Zinc Branch concurs with their recommendation.

Returned herewith are:

3 copies of field team report
3 " " Form MF-103 and attachments

T. P. Billings, Chief
Lead-Zinc Branch

Approved:
Sam Lyon
Director, Supply Division

FILE COPY
SURNAME: 350

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

SEP 17 19..

Campbell (ETK)
McKnight
Bishop
Billings

Memorandum

Re: DMA-1508X
Carrietown Group
Camas County, Idaho
Exploration loan $100,000
Lead,zinc,copper

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Denial of exploration loan

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Returned herewith are:

3 copies of field team report
3 " " Form MF-103 and attachments

9/17

T. P. Billings, Chief
Lead-Zinc Branch

Approved:

Tom Lyon

Director, Supply Division

ABCampbell:emp
G 9-12-51

Copies to: A. E. Weissenborn Region II (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
O. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. file — DMA docket files

FILE COPY
SURNAME:

350

Campbell (ETM)
McKnight
Bishop
Billinger

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

SEP 17 1951

Re: DMA-1508X

a b, c

Mr. Orin N. Garrett

Fairfield, Idaho

Dear Mr. Garrett:

Your application (DMA-1508X) for an exploration loan of $100,000 to be used at the Carrietown group in Camas County, Idaho, has been reviewed again by the Defense Minerals Administration after a report of an examination of your property was received from our field staff.

From this report, we must conclude that the exploration work which you propose does not show promise of finding a significant tonnage of strategic minerals. The Defense Minerals Administration does not consider that the chances of finding such minerals are good enough to warrant the expenditure of public funds which you request. I regret, therefore, that your application must be denied.

We wish to thank you for bringing this property to our attention.

Very truly yours,

Tom Lyon 9/17 c

Tom Lyon, Director
Supply Division

ABCampbell:emp
G 9-12-51
Copies to: A. E. Weissenborn Region II (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
O. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. file
DMA docket files

1508

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

July 24, 1951

Through: Landon F. Strobel

Memorandum

To: Mr. Tom Lyon, Chairman, Commodity Committee

From: Field Team, Region II

Subject: Docket DMA 1508 X- Commodity: Lead-Zinc
Orin N. Garrett
Carrietown Group
Little Smoky Mining District
Fairfield, Camas County, Idaho

Enclosed herewith is a report (four copies) by Elton A. Youngberg, U.S.G.S., on the subject property, and docket material.

The examining geologist has recommended that exploration aid be denied the applicant as the Carrietown Group of claims is not believed to contain a feasible exploration target.

The Field Team concurs with this recommendation.

Elton A. Youngberg
Elton A. Youngberg
For: A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

M E Volin
M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosures

cc: L. F. Strobel
U.S.B.M. Spokane
U.S.B.M. Albany

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 27 1951
LANDON F. STROBEL
Executive Secretary

AUG 1 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
[illegible] 157 Howard Street
Spokane 4, Washington

July 24, 1951

Through: [illegible] Strobel

Memorandum

To: Mr. Tom Lyon, Chairman, Commodity Committee

From: [illegible], Region II

Subject: Docket [illegible] - Commodity: Lead-Zinc
[illegible] Garrett
Carrietown Group
Little Smoky Mining District
Fairfield, Camas County, Idaho

Enclosed herewith is a report (four copies) by Milton A. Youngberg, [illegible], on the subject property, and docket material.

The examining geologist has recommended that exploration aid be denied the applicant as the Carrietown Group of claims is not believed to contain a feasible exploration target.

The Field [illegible] concurs with this recommendation.

Milton A. Youngberg
[illegible] E. Weissenborn
Executive Officer, [illegible]
Field [illegible], Region II

Concurrence

[illegible] Hollin, Member
[illegible] Bureau of Mines

cc: [illegible] Strobel
[illegible] Pohare
[illegible] Perry

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

[illegible] Ward Street
[illegible] 4, Washington

July 24, 1951

[illegible] Stroebel

[illegible]

[illegible] Mr. [illegible] Chairman, Commodity Committee

From: [illegible], Section II

Subject: [illegible] - Commodity: [illegible]
[illegible] Barrett
Barrisdown Group
Little Lost Mining District
Airfield, [illegible] County, Idaho

Enclosed herewith is a report (four copies) by Elton G. Dougherty, [illegible], on the subject property, and docket material.

The examiner-geologist has recommended that exploration aid be denied the applicant to the Barrisdown Group of claims in [illegible] allowed to submit a feasible exploration barrat.

[illegible] concurs with this recommendation.

Elton G. Dougherty
[illegible] Blumenborn
Executive Officer,
Field [illegible], Section II

[illegible]

[illegible] Allin, Director
[illegible] Bureau of Mines

[illegible]
[illegible] Pinsky
[illegible] Troy

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

[illegible] Ward Street
[illegible], Washington

July [illegible], 1951

[illegible] Personnel

[illegible]

[illegible]

[illegible]

[illegible]
[illegible]
[illegible]
[illegible] District
[illegible], [illegible] County, Idaho

[illegible] herewith is a report (four copies) by [illegible] Tonsberg, [illegible] on the subject property, and docket material.

[illegible] examiner [illegible] has recommended that [illegible] be denied the application [illegible] claim [illegible] be [illegible] a [illegible] mineral [illegible].

[illegible]

[illegible]
[illegible] Aluminum
[illegible] Officer,
[illegible]

[illegible]

[illegible] Director
[illegible] Office of [illegible]

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 27 1951
LINDON F. STRUBEL
Executive Secretary

July 18, 1951

Memorandum

To: A. E. Weissenborn, Executive Officer, DMA Field Team, Region II

From: Elton A. Youngberg, Geologist, U.S.G.S.

Subject: Docket DMA 1508 X-- Commodity: Lead-Zinc
Orin N. Garrett
Carrietown Group
Little Smoky Mining District
Camas County, Idaho

RECOMMENDATION

The Carrietown group of claims is not believed to contain an exploration target which would justify the exploration expenditures proposed by the applicant. It is recommended that this request for aid be denied.

RESUME OF FIELD INVESTIGATION

One day was spent with Orin Garrett and George White inspecting the outcrops and underground workings on the Carrietown group of claims.

The veins observed on the property occur in roof pendant blocks of Paleozoic, calcareous argillites adjacent to granodiorites of the Idaho batholith. Numerous large post mineral dikes of granitic composition were observed cutting the sediments.

The principal workings are three adits and a surface cut which explore a vein for several hundred feet from which a body of ore 20-30 feet long and 5-10 feet wide has been mined intermittently up the dip for about 125 feet. The lowest level was driven to explore downward extensions of this ore shoot without success. This adit was caved, however, the dump material and surface rock exposures indicate that downward extensions of the ore body are terminated by post ore intrusives a short distance below the level above. This geologic condition apparently has played important in limiting downward extensions of other ore bodies in the district.

There are no outcrops to indicate that other ore shoots occur along this structure which gives little hope of finding additional ore by further lateral underground exploration. Other small ore bodies probably do exist

but it appears that they would not be large enough to warrant the capital expenditures required to find them.

The property offers little possibilities for exploration as there is no target geologically indicated.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

[illegible] Street
[illegible]

[illegible] 1951

Memorandum

To: [illegible], Executive Officer, [illegible] Field Team, Region II

From: [illegible], Geologist, [illegible]

Subject: [illegible]
[illegible] Farrell
[illegible] Group
[illegible] District
[illegible]

[illegible]

The [illegible] group of claims is not believed to contain an exploration target which would justify the exploration expenditures proposed by the applicant. It is recommended that this request for aid be denied.

[illegible]

[illegible] Farrell and [illegible] site inspection [illegible] group of claims.

[illegible]

[illegible] surface [illegible] several hundred feet from which a body of ore [illegible] up the dip for about [illegible] feet. [illegible] downward extension [illegible] however, the [illegible] material [illegible] downward extensions of the ore [illegible] level [illegible] in the district.

[illegible] occur along [illegible] additional [illegible] further [illegible]

[illegible] it appears that they could not be [illegible] to correct the [illegible] conditions [illegible] to [illegible].

[illegible] [illegible] these responsibilities [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

FILE COPY
SURNAME:

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

June 18, 1951

Mr. Orin N. Garrett
Fairfield, Idaho

Subject: DMA-1508X
Re: Exploration Loan

My dear Mr. Garrett:

Receipt is acknowledged of your application and attachments of May 23, 1951 from yourself, Donald Vaught, and George R. White, for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1508X and was referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on June 7, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1508X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:js
cc: Strobel-2
> Files
Herres
Lyon

FILE COPY
SURNAME:

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

Mailed JUN 1951

Docket DMA-1508X
Orin N. Garrett
Carrietown Group
Little Smoky Mining District
Camas County, Idaho
Lead-zinc
Exploration loan

Mr. A. E. Weissenborn
Executive Officer, DMA Field Team
Region II
South 157 Howard Street
Spokane 8, Washington

Dear Mr. Weissenborn:

This district was formerly handicapped by its inaccessibility, but new roads have, in recent years, made the district accessible. The geology of the district is favorable, but the application is not specific enough as to the description of the ore occurrence, the proposed plan of exploration, and the proposed expenses.

The applicant wants the DMA Field Team to help work out a plan. It is not evident that the operators know very much about mining. Their costs appear high for the work proposed and the inclusion of the mill in their proposal is, of course, not allowable in the exploration program.

The property needs a field examination to see if geologic conditions are favorable in view of the relatively large exploration loan requested. If the geology is favorable, then the engineering phases of the application should be investigated, so that the proposal can be approved or denied, depending upon the overall appraisal.

Very truly yours,

Lowell B. Moon

Chairman
Coordinating Committee

for the Bureau of Mines
N. Rove

for the Geological Survey

ETMcKnight:emp
G 6/12/51

Copies to: Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA

Br. r. file 4214 GSA

FILE COPY
SURNAME:

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

McKnight
Mote
Hobsen
Lyon
Moore

JUN 13 1951

Re: Docket DMA-1508X

6-13-51

Mr. Orin N. Garrett

Fairfield, Idaho

Dear Mr. Garrett:

Your application (Docket DMA-1508X) for a Government loan under the provisions of the Defense Production Act of 1950 has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration. Before final decision can be taken on your request it will be necessary to obtain additional information on your property. Your application, therefore, has been referred to Mr. A. E. Weissenborn, Executive Officer of the Field Team, South 157 Howard Street, Spokane, Washington, with the request that the needed information be supplied to us.

Very truly yours,

Tom Lyon, Director
Supply Division

ETMcKNIGHT:emp
G 6/12/51
Copies to: A. E. Weissenborn Region II (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. dma/1508X

Date received 6-1-51

Participation

Name and address of applicant

[illegible] N. GARRETT
[illegible] VANCE
[illegible] N. [illegible] — all of
FAIRFIELD, IDAHO.

Date May 23rd, 1951.

FILL IN THIS BLOCK

Date of application May 23rd, 1951

Estimated cost $100,000

Mineral or metal Silver, lead, zinc, copper

Percentage of Government participation 50%

Location of mine Approx. 26 miles north of Fairfield, Camas County, Idaho in Little Smoky Mining District.

Date of filing MF-100 Not filed

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By Orin N Garrett (Signature of authorized official)
(Date)	Partner (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO
MINERAL SECTION 5, HOUSE BILL[illegible] PROTECTION ACT OF 1959.

DIRECTLY ANSWERED QUESTIONS CONTAINED IN FORM HP-100 AND ALSO
ANSWERED [illegible] TO FORM HP-102.

---

1. Applicant is a partnership.

2. Orin S. Garrett, Donald Vaught and George E. White all of Fairfield, Idaho.

3. No corporation.

4. Personal will be selected upon notice of application being accepted.

5. Owners.

6. No claims, liens or encumbrances against the property.

7. No lessee.

8. Property is not operating.

9. It is proposed to do 50% of financing upon approval of loan application.

10. Only one area involved, viz., 10 unpatented mining claims owned by the above mentioned locators, and known as the Carristown Group of Claims, located in the Little Smoky Mining District, Camas County, Idaho and legally described as being in Sec. 6, Tws. 3 S., R. 15 E., Camas County, Idaho.

11. Formerly known in part as the Spokane, Grant and Grant Fraction claims. Has been identified on the "Young America Group" back in the 1890's.

12. Property is located approximately 26 miles north of Fairfield, Idaho and approximately 30 miles west of Ketchum, Idaho, both R. R. shipping points. Roads leading into this District are good Forest Service maintained roads. A private bull-dozed road in good condition is into the property connecting with Forest Service road, approximately 1 mile.

13. Carrie Creek draining from Dollar Hide watershed and bordering the property on the south is a year round water supply. Also a stream intersecting the property from north to south is a good year round source of water supply.

14. One small frame compressor house.

15. Ore could be either trucked to Fairfield or Ketchum and shipped by rail to Salt Lake Smelters; or trucked to local mill for custom milling. A plan now under consideration for the latter method of handling ore mined.

16. Attached. See our engineers report; Also U. S. Geological report.

17. Mine not in production at present time.

18. During the summer of 1944-45 approximately 750 tons of ore was shipped from this property, (from the Carrietown Claim, formerly the Grant). Estimated tonnage computed by approximate cubic foot measurement of cavity left, figuring 12 cubic feet to the ton of broken ore. Gold cavity is filled by surface water to #3 tunnel level; estimated depth of workings below tunnel floor is 6 feet. Water should be pumped out to ascertain ore, if any, at this depth. Considerable ore left on hanging and foot walls or workings. A large quantity of ore left in the upper workings of the Carrietown. Hard to give a proper estimate, as workings are in bad shape. Would estimate approximately 500 tons of silver, lead, zinc, copper ore in sight, available in this upper workings. Assay returns on this ore run from $31.25 to $72.40.

19. Number 2 tunnel is connected with #3 tunnel by a stope, still standing, with some ore blocked out. This ore has not been sampled. The upper workings of the Carrietown are connected by stope to #3 tunnel. In bad shape. #1 tunnel should be opened, at present caved at portal, for examination and if found practical, a raise should be driven to #2 tunnel, so that ore from all upper workings could be brought out thru #1 tunnel. (See map)

20. Ore is silver, lead, zinc and copper in siderite and chalcopyrite.

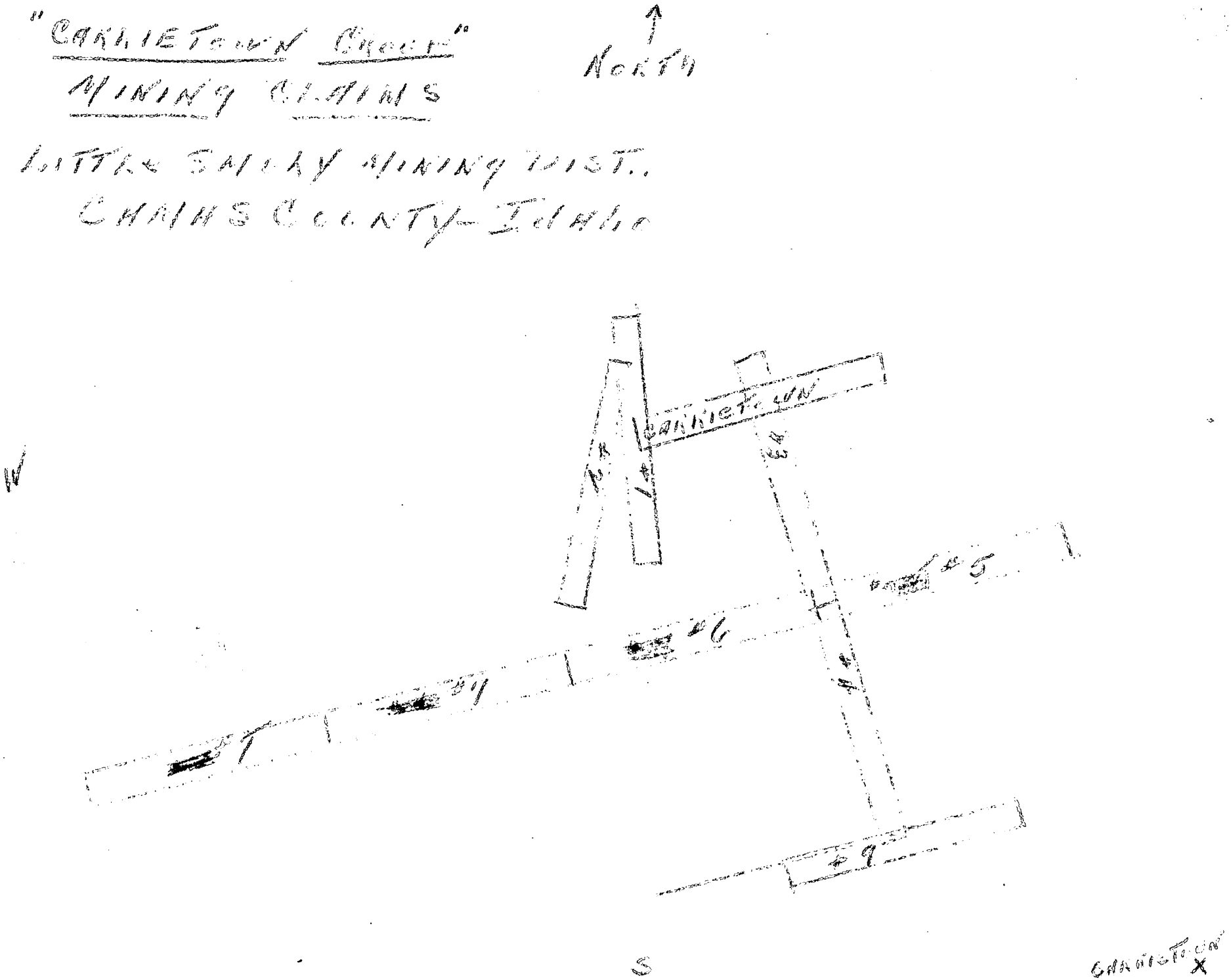
21. Proposed work consists in opening #1 tunnel on Carrie town Claim and driving proposed raise; putting workings in shape so that present ore in sight may be mined; exploration work on Carrietown #1 and #2 which have open drifts—approximately 100 feet on each claim in ore; opening and retimbering old tunnels on Carrietown #6, #7, and #8 of which there are 3, to explore for ore; development of surface ore bodies on Carrietown #3, 4, and 9 claims. To install necessary machinery for the proper mining and exploration work. To install proper size and type of mill to handle ore from these properties and to build and furnish necessary living quarters for crew necessary to conduct such work.

22. See Engineers report, U. S. Geological report, maps etc.

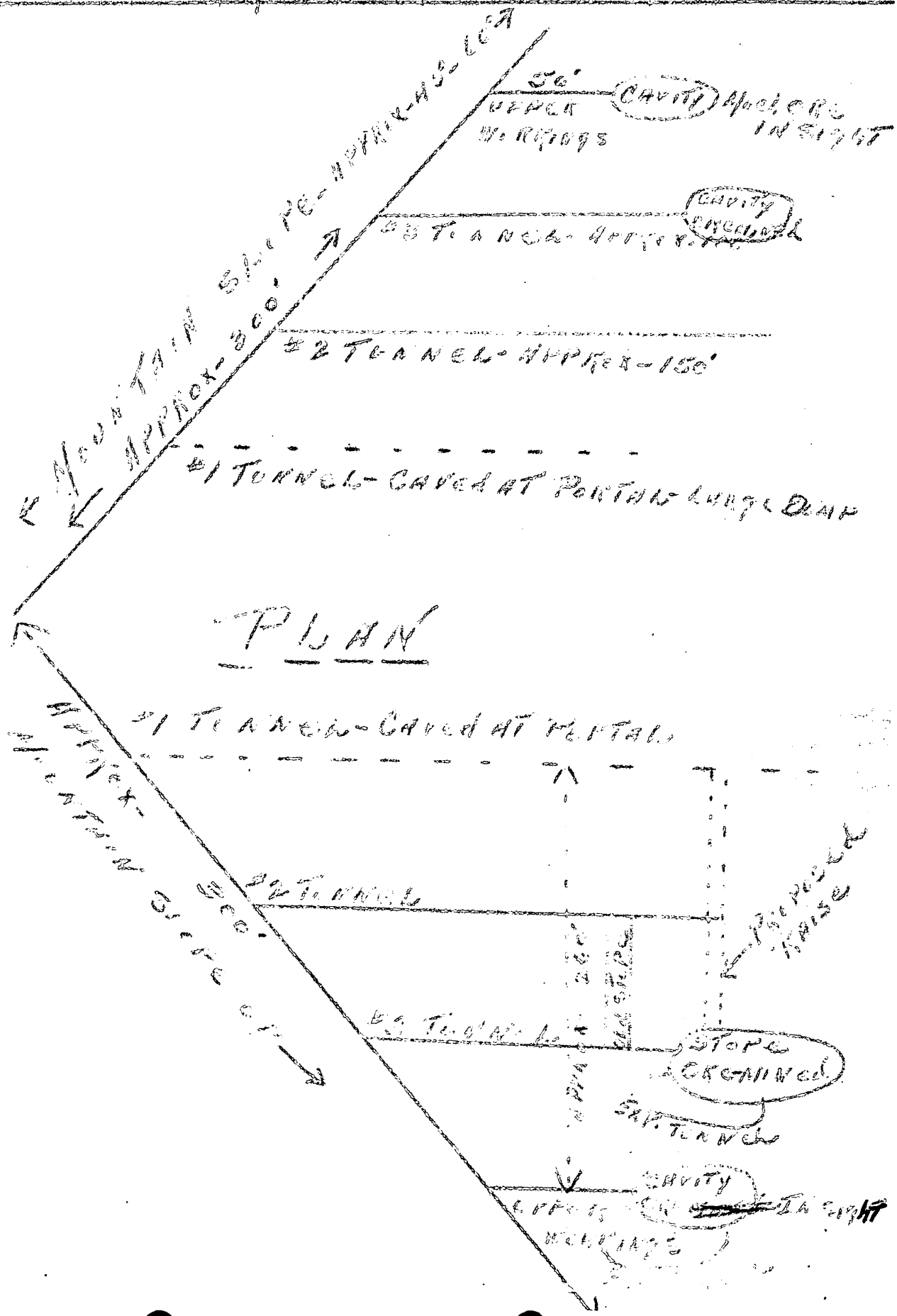
23. Equipment needed is everything necessary for the proper mining and exploration work to develop these properties. We estimate approximately $50,000 for equipment and $50,000 for working capital. It is impossible to arrive at concrete figures on this undertaking as costs are continually changing and much of the proposed work is based on one part co-ordinating with the other. Proper inspection of this property by Government engineers in conjunction with our engineer will crystallize a program of mining and exploration work which will be mutually beneficial to the Government and the owners. A full two-year program should be necessary.

"CARLIETOWN GROUP"
MINING CLAIMS

LITTLE SALLY MINING DIST.
CHAINS COUNTY - IDAHO



Rough SKETCH OF Underground Workings
CARLINETON CLAIM



(COPY)

MINERALS ENGINEERING CO.,
LOS ANGELES, CALIF.

Jan. 30, 1950

To George White: $7.00 Pd

QUANTITIVE SPECTROGRAPHIC ANALYSIS

ELEMENT	ESTIMATED QUANTITY
Iron main constituent	
Silicon	10%
Lead	1 to 10
Copper	1 to 10
Zinc	1 to 10
Manganese	1
Magnesium	0.1 to 1
Aluminum	0.1 to 1
Calcium	0.1 to 1
Bismuth	0.01 to 0.1
Arsenic	0.01 to 0.1
Nickel	Trace
Cobalt	Trace
Silver	Present

(This sample from Carritown Claim)

ASSAY REPORTS ON CARRIETOWN CLAIMS - 1950.

COPY

Assay report
UNION ASSAY OFFICE, INC.,
Salt Lake City, Utah, 11.
Hand sample serial #19975

Mine — U. S. #447 - Geo. R. White, (Carrietown #9)
Box 50, Fairfield, Idaho.

Gold Ozs per ton	Silver Ozs per ton	Lead Per cent wet	Copper Per cent	Zinc Per cent
0.200	1.6	1.0		2.0

Certificate of Assay
BEASON & NICHOLS
160 So. West Temple St.,
Salt Lake City, 1, Utah.

Mr. Bill Chess
W. R. Davies & Son
Fairfield, Idaho (#1 sample from Carrietown - #2 sample from Carrietown)

	Gold Ozs	Silver Ozs	Wet Lead %	Copper %	No zinc
Sample #1	0.02	14.20	22.20	0.9	Value $4.00
Sample #2	0.01	4.40	10.80	1.20	" 31.25

Assay Report
UNION ASSAY OFFICE, INC.,
Salt Lake City, 11, Utah.

Hand Sample Serial #19782-84
Mine - U. S. #644 - Geo. R. White
Fairfield, Idaho. (All bulk samples from Carrietown Claim)

Sample	Gold Ozs	Silver Ozs	Lead %	Copper %	Zinc %
#1 dump	0.20	2.3	2.3	0.72	0.7
#2 Upper Lark s Hang.wall	0.120	0.9	None?	1.52	None?
#3 Glory Hole	0.400	0.5	6.2	1.21	3.0

FOREWORD

The following data of the Little Smoky and Miller Creek mining districts, Camas County, Idaho is a correct and true copy of that portion of pamphlet 632, by Clyde P. Ross of the U. S. Geological Survey. Certain changes have been made in the arrangement of the data on the production record of the mines listed. They have been grouped by mines rather than by years of production as in the original.

It can be definitely stated that some quantities of ore have been shipped from these properties since the date of this pamphlet. For instance the Isabella Mine was leased and shipped ore during the years 1936, 1937 and 1938 and a property not here listed, known as the Grant and Grant Fraction, and now known as the Carrietown Group, shipped ore during the early 1940's, and many of the old dumps have been hand picked for shipping ore.

It will also be noted that little zinc is shown on the production records. The zinc content was in most cases jigged out. For instance the writer is familiar with the instance of the tailings from the Carrie Leonard Mine being sorted for the zinc in the summer of ~~xxx~~ 1914. Shipments were hauled from the mine to Fairfield in wagons and considerable zinc concentrates were recovered.

During the early days the writer has knowledge of mills being on the following properties:- Carrie Leonard, Silver Star, King of the West, Tyrannus, Dollar Mile, Smoky Bullion, Hidden Treasure and Five Points. It will be noted that some of these properties are not even mentioned in the production report.

It will be noted that most of these properties are grouped within a small radius. Considering the past production from this district under conditions of crude machinery and methods of operation, plus inaccessibility, compared to the improved methods and machinery available today, plus the accessibility to this district made possible by good Forest Service roads, and the abundance of milling ore to be obtained, it would be fair to presume that a modern custom mill erected in this district, where the flow of ore could be milled to a shippable concentrate, would pay big dividends at the present metal prices.

It is with this idea in mind that this data has been gathered and presented.

Respectfully submitted,

by George A. White,
Fairfield, Idaho.

Excerpt from Pamphlet #39 - Geology and Ore Deposits of the Seafoam, Alder Creek, Little Smoky and Willow Creek Mining Districts, in Custer and Camas Counties, Idaho. By Clyde P. Ross, U. S. Geological Survey.

The Little Smoky and Willow Creek Mining Districts, Camas County, Idaho.

The Little Smoky Mining District, which includes what is sometimes referred to as the Rosette District, is an area of about 150 square miles lying mainly in the drainage basin of Little Smoky Creek in the southern part of the Sawtooth quadrangle, Camas County, Idaho. A few of the deposits are in Blaine County a short distance northeast of the crest of the Smoky Mountains, which here forms the divide between the two counties. The Willow Creek mining District, which includes the deposits in the drainage basin of Willow Creek, adjoins the Little Smoky district on the southeast and is also in Camas County on the border of Blaine County.

Both districts were discovered during the boom in lode mining in the early eighties and flourished for a time but have been almost entirely abandoned since about 1900. Most of the production ceased prior to 1890. In recent years interest in several of the properties has been renewed and some development work done, but no shipments, except a few sample lots, have yet been made. The lead and zinc ore characteristic of both districts can be more easily handled under present conditions than it could be in the early days. The relative accessibility of both districts encouraged the hope that development of some of the properties may prove profitable. Nearly all the properties can now be reached or closely approached by automobile over roads which are in part in poor shape but are without excessive grades. Carrictown, the former metropolis of the Little Smoky District, is 26 miles from the Hill City branch of the Oregon Short Line at Fairfield, and the mines of the Willow Creek district are about the same distance away. A somewhat shorter road formerly connected Carrictown with the railroad at Ketchum but is not indlerepair.

The first two tables below show the shipments to the Ketchum Smelter from a number of mines identified as being in the Little Smoky District in 1924, 1925 and 1926, and from the Silver Star in 1927, 1928 and 1929 and also give data on shipments which passed through the hands of W. Daft, of Hailey, in 1922 to 1926. It is probable that additions could be made to these tables if all shipments could be identified. Some of those listed in Mr. Daft's records, or those of the Ketchum Smelter, only under the names of individuals or of mines whose locations are not relevant, may have come from this district. Approximate calculations show that the gross value of the shipments listed is about $1,200,000, which agrees well with Umpleby's estimate of a total production of $1,000,000, half of which came from the Carrie Leonard.

The only production known from the Willow Creek District is that recorded as from the Curtis Middle by the Ketchum Smelter in 1926 and from the Buttercup by W. Daft in 1920 to 1922. Apparently these two names refer to the same mine or to closely adjoining mines. The data are shown in the tabletable below. Small lots have been shipped at various times from other properties in the District, but data on these shipments are lacking.

General Geology.

The two districts lie on the southeastern border of the Idaho batholith and are largely underlain by the granitic rock of this area, ranging in composition from granite to quartz diorite. Most of the ore deposits are in the impure quartzite and limestone of Paleozoic age which are intruded by the batholith. Because of their lithologic character and relation to rocks of known age in the adjoining Bailey quadrangle these strata are regarded as belonging to the Wood River formation, of Pennsylvanian age. No fossils have been found in them, and the stratigraphy has not been studied in detail, so that it is possible that pre-Pennsylvanian beds are included in the Paleozoic rocks mapped on Figure 1. Both the granitic and the sedimentary rocks are cut by dikes of granodiorite and kindred porphyries, so small that they were not mapped. Some of these dikes cut the lodes. From studies elsewhere it is believed that these dikes are of Miocene or possibly later age. Extensive remnants of the Challis Volcanics (Miocene), which formerly covered the area, still remain. In the southern part of the area the Mount Bennett rhyolite has been distinguished from the rest of the volcanic rocks by Piper. This distinction has not been carried north of the area mapped by him and is not shown in Figure 1. This mapping has been used with revision, in preparing the southern part of Plate 1. In the southeast corner of the area mapped there are masses of the Snake River basalt. The Tertiary strata are probably much later than the ore deposition in this area. Near the head of Sheep Creek there is a small, partly caved tunnel in tuff, perhaps driven in search of lignite, as a little shaly rubber is present in the tuff. The tributaries of Little Smoky Creek contain considerable recent alluvium, some of which has been worked for its content of placer gold.

Ore Deposits.

The ore deposits of the Little Smoky and Miller Creek districts belong to the most common type of deposit in south-central Idaho. They have been formed along shear zones, largely by replacement, and are genetically related to the Idaho batholith. Most of them are in sedimentary rock close to the granitic contact, but two of those visited are in the granitic rock. The characteristic ore minerals are galena, sphalerite, pyrite, and tetrahedrite in a gangue of quartz, siderite, and altered country rock. Little can be added to the descriptions of Umpleby except for a few deposits on which development work has been done since his visit. The reader is referred to his report for data on the Carrie Leonard, Dollarhide, Isabella, Margaret, Silver Crown, King of the West, Sandy, Stormy Galore, Tyrrhus, and Hidden Treasure, most of which were caved when the district was visited in 1930. In some of the above mentioned mines tunnels at a distance from the old stopes are still open, and several of these were entered, but few pertinent data were obtained. Little development, other than annual assessment work, has been attempted at most of them since 1930.

Although most of the Carrie Leonard Mine, formerly the most productive in either district, is now largely inaccessible and is therefore not described in the present paper, a map of the workings adapted from one kindly furnished by Mr. Stewart Campbell, State Mine Inspector, is reproduced as Figure 2 for the convenience of anyone interested in the future development of this or neighboring properties.

[illegible] REPORT.

SILVER STAR MINE.

The Silver Star Mine is about 3,300 feet in an air line southwest of Carrietown, which in the boom days was the principal settlement of the district. The distance by the winding road is nearly two miles. This mine was one of the smaller producers in the early days but at present has a larger amount of underground workings accessible than any of the other old mines. This fact, coupled with data furnished by Mr. Stewart Campbell, State Mine Inspector, who kindly accompanied the writer to this and many of the other mines, makes it possible to give more information regarding this than any of the other properties. The characteristics of the Silver Star deposit are probably typical of the other deposits in sedimentary rocks in the two districts. The historical data summarized below are taken mainly from an unpublished report made by Mr. Campbell for the Idaho Lead Company, December 1, 1926. The geologic data consists entirely of observations by the writer on the surface and in the tunnel, the only safely accessible part of the workings.

The Silver Star vein was discovered in the summer of 1881, and a little high grade ore was shipped at that time. It was sold in 1882 to the Philadelphia Mining and Smelting Co., of Ketchum, for $50,000 in cash. This company drove the greater part of the more than 6,200 feet of underground workings shown in Figure 2 and erected a 20-ton stamp mill, which was put into operation November 15, 1887, and closed permanently December 20, 1887. The total expenditure by this company, including the purchase price, is reported to have been over $500,000. The table above records treatment of 520 tons of Silver Star ore and concentrates in 1885 to 1889. Campbell's report states that 1,350 tons of ore were treated in the mill. After 250 tons of high grade material were picked out by hand the ore milled averaged 9 per cent lead and 12.5 ounces of silver to the ton. The concentrates averaged 14.98 per cent lead and 36.02 ounces of silver and 0.216 ounces of gold to the ton, and the tailings contained 6.1 ounces of silver to the ton, a loss of over 45%. Concentration was in the ratio of 5.075 tons of feed to one ton of concentrates. Although nearly all the lead was recovered in the concentrate, the high silver loss made the operation of the mill under the conditions then existing unprofitable. No record appears to have been made of the zinc content of the ore milled. Much of the ore now exposed contains about as much sphalerite as galena. The only production since the mill shut down consisted of the small lots shipped by lessees recorded in the table above. Most or all of this was obtained by sorting material on the dump. Recently parts of the old workings have been scoured, but there has been no production.

The lode has an average strike of about N. 65° E. and dips 40°-45° S. in the upper workings, steepening to about 60° on the lowest level. This coincides approximately with that attitude of the sedimentary rocks in this vicinity, but on the third level, at least, the shearing dips somewhat more steeply than the bedding. There is local variation in both. Interruptions

in the continuity of the lode, indicated by the sharp bends in the drifts in Figure 1, have been locally interpreted as the result of postmineral faulting. There has probably been renewal of movement at different times, but most of this has been approximately parallel to the original shearing. Little evidence of lateral displacement exists in the parts of the workings studied. Here, as in many other deposits in this region, the apparent displacement results from arrangement of the original shearing in echelon rather than from post-mineral faulting.

The lode matter consists of galena and sphalerite, with locally considerable pyrite and small amounts of tetrahedrite in gangue of quartz and siderite in crushed and altered quartzite. Parallel banding is common, resulting from penetration along numerous planes of weakness in a zone of shearing. Vein quartz is more abundant than in any lode of this type in the region, and some of it contains angular inclusions of quartzite, suggesting that there was considerable filling of pre-existing openings. Here as elsewhere, however, much of the mineralization resulted from replacement of the country rock. In places the ore zones are as much as 14 feet wide, and on the third level the combined length of the several zones is reported to be over 300 feet. Very little stoping has been done. Sampling recorded in Campbell's report indicates that the ore contains from 1 to nearly 4 per cent of lead, about as much zinc, over 2 ounces of silver to 1 per cent of lead, and small amounts of gold.

The following is an excerpt (condensed) from Pamphlet 633—Geology and ore Deposits of the Seafoam, Alder Creek, Little Smoky, and Willow Creek Mining Districts, In Custer and Camas County, Idaho. By Clyde P. Ross, U. S. Geological Survey.

MINERAL PRODUCTION OF THE MINES, SMELTERS AND MILLS DURING 1902. Compiled from the records of L. Ezell, Acuyer, Hailey, Idaho, and shipments to the Philadelphia Mining and Smelting Co., Ketchum, Idaho, for the years 1902 to 1903.

No.	Name of Property.	Dry tons.	Date shipped.	Gold Ounces	Silver Ounces	Lead Pounds	Zinc Pounds
1.	King of the West	823	'82 - '88	32.93	22,780	316,204	59,325
2.	Tyranus	443.6	'85 - '09	1.96	32,455	472,456	7,920
3.	Carrie Leonard	829.9	'89 - '01	5.22	872,952	1,969,509	145,754
4.	Silver Star	609.62	'85 - '96	69.91	533,500	101,536	6,187
5.	Dollar Mine	69.24	'86 - '96	.28	3,420	10,923	———
6.	Isabella	106.70	'82 - '96	6.43	19,302	12,564	26,517
7.	Stormy Galore	310.57	'94 - '96	11.04	52,[illegible]0	33,691	1,951
8.	Silver Crown	11.61	'90 - '06	.62	764	[illegible],459	———
9.	Various Mines	145.16	'82 - '95	79.07	6,928	63,091	———
10.	Willow Creek (Sutterung)	461.01	'86 - '93	2.11	40,439	[illegible]	19,913
	Total	3,787.21		206.971	645,013	3,020,277	267,677

Average:

The above tabulation shows average contents to have been:

Gold-Ozs	Silver-Ozs	Lead-Percent	Zinc-Percent
.055	439.	41.5%	3.55%

Approx. percent value per ton - May 1st, 1909.
Gold @ $32.00, Silver @ .70¢, and Lead @ .14¢.

Au: ———	/ Gold——— @	1.925
	Silver —	307.30
	Lead ——	116.20
	Approx. total value per ton ——— @	425.425

(Above report compiled by Marshall D. Draper, E. E.
715 Park Central Bldg.,
Los Angeles, Calif.)

NOTES COVERING PROPERTIES IN
THE LITTLE SMOKY MINING DISTRICT IN
CAMAS COUNTY, IDAHO

LOCATION:

The properties are located 26 miles North of Fairfield, Camas County, Idaho, close to the old Camp of Carrietown. Fairfield, the county seat of Camas County, has a present population of 492 and is a wheat and cattle community. Also has a sawmill, cutting from 30,000 to 40,000 feet of lumber per day. The Mill has a six-foot band saw. They secure their logs on Pine Creek, 40 miles from Fairfield.

TITLES:

The titles have been examined by the writer and they are all on record at the County Seat and are O.K. to date.

ELEVATION:

The elevation of Fairfield is 5065, and the community enjoys a wonderful climate in the summer months. Snow falls generally about mid-November, and is gone by the 1st of April.

ROADS:

Excellent roads to the Sawtooth National Forest and to Twin Falls extend across the valley and to Hailey. The valley has artesian water, mineral free, and is so pure it is used for battery water in automobiles, tractors, etc.

ACCOMMODATIONS:

There is one hotel, a rooming house, and a number of private rooms in the community for the accommodation of travelers in the area. A weekly newspaper serves the community, The Camas County Courier.

SUPPLIES:

The land along the Snake River near Twin Falls, a town of some 23,000 inhabitants, is prolific in growing potatoes, onions, beans, wheat, alfalfa, sugar beets, poultry, eggs, melons, watermelons, tomatoes. Peaches grow in abundance. The fruit has a wonderful flavor not found in many areas of the West, and is cheap and reasonable.

RAILROADS:

The Union Pacific Branch Line, known as the Hill City Branch of the Oregon Short Line, connects with Shoshone, 60 miles from Fairfield to the main line. Fairfield is approximately 300 miles from Salt Lake City, Utah, and the smelters at Garfield, Utah.

Little Smoky Mining District:

Twenty-six miles North of Fairfield is the old mining camp of Carrietown, reached by a hard-surfaced Forest Service Road. The District lies within the confines of the Sawtooth National Forest, Carrietown being at an elevation of 7400 feet, and within a few feet of Carrie Creek. Second growth fir surrounds the camp, and several of the lod log houses still stand, built in the '80s, when Carrietown was the center of intense mining activity. It is on a good location for the campsite and the proposed operations in the vicinity. Water and mining timbers are available. The water is ample for milling purposes, the operation having the advantage of year-round water. A good millsite can be obtained here

for milling purposes and one that can fully protect the streams in regard to tailings and debris. The various mines and prospects in the District can be reached by roads, the majority being old mine roads that can be easily bulldozed to be entirely serviceable.

HISTORY OF THE LITTLE SMOKY DISTRICT:

The history of the Little Smoky Mining District goes back into the '80s, when the country was in the pioneer stage. The writer was informed by an old-timer who was born and raised in this area, namely, Bailey, and farmed with his parents in Camas Prairie before ever the town of Fairfield or a railroad came into being in the valley, that at least eleven mills were in operation in the Little Smoky Mining District at one time or another. Judging by the size of the numerous dumps in the District, a large amount of activity took place in the period above mentioned. Most of the mines, of course, are now patented properties and quite a few of the workings are inaccessible, being caved. However, some are open enough to get some idea of the underground conditions. In those days there was a smelter at Ketchum, down over the Divide from the Little Smoky, and ore from the mines in the District were smeltered there. (See attached sheet showing production records). The operators in those days had to have high-grade ore to make it pay. Of course, the body blow to a silver-producing District was the drop in the price of silver, which rapidly made ghost camps in the West. Carrietown was no exception to the rule and the mines simply closed down. Some had faulted ore bodies to contend with, and with the drop in the price of silver, no further exploration work took place. The District became abandoned, only assessment work on unpatented properties being done, and the taxes on patented properties being paid by the owners.

General Geology of the District

GRANITE:

The District is on the southeastern edge of the Idaho Batholith, consisting of various phases of the granites and quartz diorite. They underlie the District.

QUARTZITE:

Residual phases of the ~~granite~~ quartzites were noted in the area, some of them noted as inclusions, crushed and much distorted.

LIMESTONE:

An old limestone, also crushed and disturbed by igneous intrusions, occurs in the District. This limestone is highly metamorphosed, especially in proximity to the igneous flows and dikes.

PORPHYRIES:

Rhyolite porphyry dykes intrude the limestone and in a few places the granites; these dykes of Tertiary Age, probably early Tertiary. The flows are of Tertiary Age, some of them older than others.

BASALT:

The basaltic flows seem to be the latest igneous activity in the area. They have almost eroded away in some places in the District. Some tuffaceous material was noted in the area, but not a great deal.

MESOTHERMAL DEPOSITS (Little Smoky Mining District)

The Little Smoky Ore veins lie within the Good Hope formation. They are Tetrahedrite-Galena-Siderite veins, formed within Carboniferous rocks, namely, the limestones and quartzites which were penetrated by ascending solution. They are associated with intrusions of quartz monzonite, granodiorite, lamprophyric dykes and diorite. The lamprophyric dikes are the latest intrusion and the ores seem to be made contemporaneously with their intrusion. The veins themselves seem to be crushed and the ores appear as filling and replacements. The quartzite appears as angular inclusions within the veins, and it is possible to see the drag of the faulting, with considerable slickensiding. Tetrahedrite seems to be the silver bearer, associated with galena. I have noticed considerable banding in the ores and also in the country rocks showing the ascending solutions came through parallel joints and fractures were, no doubt, deposited by hot solutions from depth. Pyrite is also somewhat prevalent, carrying from 1.65% to 5% copper, associated with siderite and zinc blend. The ore shoots, being of the replacement series, are, by their very nature, irregular in size, shape and extent. The Minnie Moore Mine, in the Hailey District, shows 16' of solid galen and produced around $10,000,000 in a short period of time. Mesothermal deposits are among the deepest seated ore bodies in the world, the Coeur d' Alene having produced $564,000,000 to date. I believe the Little Smoky Mining District has every chance of going to depth, and should produce ore bodies consistently for years to come.

ORE BODIES:

Replacements in limestone and quartzite in contact with granite and porphyry dykes. They lie at various angles from 45% to 60% and in some places 75%. It depends upon the local condition of the enclosing rocks as to the angle at which the ore bodies lie. Where the pre-existing formations received the greatest pressure, both end and side, the ore bodies are flatter or blanket in character. The ore is formed along bedding planes in the limestone.

MINERALS: (GANGUE MATERIAL)

The gangue material associated with the ore is largely siderite, an iron carbonate calcite and inclusions of dark greenish quartzite with the quartz.

MINERALS: (METALLIC)

Galena, Pyrite, Bornite, Ruby Silver (Proustite,) Tetrahedrite, and ore of Copper-silver. Some Malachite was noted, but not a great deal.

VEINS IN THE DISTRICT:

There are a series of E. W. parallel fault fissures in the District, with N.N.E.S.S. cross fractures. These fissures are on both sides of Dollarhide Peak, a prominence of 9,272 feet, practically in the center of the Little Smoky Mining District. The fissures dip N. 45% - N. 60%, but 45% seems to be the average dip. Dollarhide Peak seems to be the center of the mineralizing activity that took place in the area. The veins seem to be veins that were made through step-faulting, the ore being made in the bedding planes on the limestones and quartzites. The vein matter is brecciated and crushed with quartzite inclusions, calcite, siderite and quartz. The metallic content of the vein is complex in character, containing pyrite, lead, silver, copper and zinc. In some of the mines, large metallic contents of iron are present. I have noted two of the carbonate ores of copper, namely, malachite and bornite present in some mining properties examined in the District. The vein system as a whole is estock work within a shear zone with considerable banding of the country rock, and the ore itself. The ore is a replacement; namely,

replacement ore bodies, formed in pre-existing formations along bedding planes in the structure, faulted, brecciated and crushed. The zones — a shallow oxide zone, and the sulphide zone — are mixed in character. I believe the lead-silver ores are secondary, and the ore bodies at greater depth will be copper-silver-zinc ores, with the copper content becoming greater with depth.

THE CARRIETOWN GROUP (NORTH CLAIM):

The Carrietown Group consists of ten claims and was visited first. The Carrietown and Carrietown Nos. 5, 6, 7, 8 and 9 trend 20° N.E. - S. 20° S.E. Carrietown Claims Nos.1, 2, 3, and 4 trend N. by W. - S. by E., and follow the strike of cross-fracture veins. There are several tunnels on the property and ore was shipped from the property as late as 1944. The best ore showing is on the Carrietown claim. The Minerals Year Book shows the District shipped 227 tons from old dumps and tailings from the Carrie Leonard and the Stormy Galore. The Carrietown also produced some ore in 1944. There is an old compressor house on the Carrietown claim in good condition. I picked up specimens of bornite, and lead ore associated with pyrite on the dump. No.1 tunnel is caved at the present time but has a large dump showing siderite, calcite and porphyry schist. No. 2 tunnel is in schistose material dipping N. 45° and trending E. and W. The upper tunnel is in ore, with good values in gold, copper, silver, lead and zinc. The vein at the surface carried $11.20 in gold. The vein assayed over $70.00 per ton. The ore makes on the hanging wall in the bedding planes, and is a typical replacement orebody characteristic of the District.

DEVELOPMENT WORK ON THE CARRIETOWN GROUP:

Tunnel No. 1 on the Carrietown is caved, and so is inaccessible at this time. Tunnel No. 2 has about 100 feet of workings. Some ore was stoped and shipped. I have examined the stope the ore came out of, and it measured about 60 feet up to Tunnel No. 3. Tunnel No. 3 has a stope measuring about 40' x 20' x 10' Taking 12 cu. feet to the ton of broken ore as a measure, around 600 tons should be about the tonnage taken out of this stope, which connects with Tunnel No. 2, as previously mentioned. Tunnel No. 4 on the Carrietown Claim has ore in place on the hanging wall, about four to six inches of solid ore. I was able to secure samples of this ore, although the hanging wall at the moment is in a dangerous condition, and should be caught up at the earliest opportunity. This ore has a metallic content of gold, silver, lead, zinc, and copper. Previously sampling of this vein went as follows:

Gold	$10.50
Silver	19.50
Lead	27.20
Zinc	7.20
Copper	5.20; or a total of $72.10

In all, about 500 feet of work has been done on the Carrietown Claim. Other previous workings are shown by the various dumps on the Carrietown Claims No.1, 2, 6, 7, 8 and 9. The veins trend through the property and are typical parallel fault fissures of the District.

DEVELOPMENT WORK RECOMMENDED:

The surface veins and ores can easily be uncovered by using a bulldozer across the strike of the veins. This method of procedure is being successfully used on the South Side vein system, namely, the Summit Property, uncovering quantities of lead ore at the surface. On the Red Star Group churn drilling is now taking place. I am very confident that a large amount of good ore can also be uncovered on the Carrietown Group by following the procedure outlined above.

This should be done at an early date. A bulldozer is available in the District and can be hired, machine and man, for $[illegible].00 per hour. It is amazing the work done on the Red Star Group in one afternoon, sufficient to pave the way for the churn drill. Five days' time, or $[illegible],00 in monetary outlay, should uncover and expose the veins on the Sawtooth Group for a considerable distance. This work should expose a good tonnage of ore, high and low grade, for milling purposes. You soldom find a district where conditions lend themselves to this class of development and prospecting. By getting down to solid material with the bulldozer, a portable compressor can be brought up and the work continued from there.

OTHER MINES VISITED:

I visited several old producers of the District, viz.: Carrie Leonard, Silver Star, Isabella, Holy Bullion, Forest Group and Taft. All of these properties are patented properties, with the exception of the Red Star which is now churn drilling the property. The Carrie Leonard was the largest producer in the District and a large amount of work has been done there. The Ores from the dump material are the usual silver-lead-copper-zinc ores, and the early operators jigged out the zinc content. I have see the old slag dump at Ketchum from former operations. Ore was packed over trails by mules and ox teams to the smelter at Ketchum. These early operators had to have high-grade ore. In fact, $100.00 ore was their objective in their mining operations; anything under that value had to be discarded and put on the dumps. No depth to speak of has been developed in any of the early operations, the development having been done mainly by tunneling into the steep mountain sides. Many of the old dumps have been high-graded for ore by recent small lessees and the tailings jigged over for the zinc content and shipped out due to the high price of zinc. However, the large dumps all over the District contain ores of a milling grade that should be worked over by modern methods. In Phillips Gulch, six miles West of Bailey in Blaine County, the Apache Mines, Inc.,s, has a 100-ton selective flotation plant operating entirely on old dumps and tailings in the Wood River Mining District. They are making an 80% to 94% recovery on these dumps and tailings. A like operation, within the Little Smoky Mining District, with the added incentive, I believe, of more milling ore than the Wood River Mining District, can be and should conceived at an early date. It is with this objective in mind and the method of procedure involved, that this report and recommendations has been undertaken. Three hundred and fifty thousand tons from various mines and prospects from their dumps, to say nothing of the surface ores that can be uncovered by the bulldozer method of prospecting, should be incentive to install a mill to serve the District. Also by opening up and exploring old patented properties, I believe that considerable tonnage can be secured for the mill operations. However, the mill can run on dumps and surface ore for a good period.

METHOD OF PROCEDURE:

The methods and procedure for any mining and exploration company entering this District should be as follows:

1. The acquisition of mining claims and properties having a favorable amount of ore as a nucleus to start with;

2. The acquisition of the following machinery:

(a) A portable diamond drilling outfit. (Longyear)

(b) A portable compressor, drill, steel pipe, etc.

(c) A 5-ton truck to transport ore to the mill and concentrates to the smelter, and to haul the compressor to whatever point is desirable.

(d) A pilot mill (25-ton) to make a rough concentrate from ores from various mines and prospects. To be erected in a convenient place so as to enable the operators to haul their ore down grade.

(e) A bulldozer.

PILOT MILL.

The pilot plant mill consist of a 25-ton mill, consisting of a crusher, mill, jigs and concentrating tables to make a rough concentrate for shipping to the smelter. This, of course, will be followed by a larger plant, either selective flotation or direct smelting.

MACHINERY MILL FOR THE DISTRICT.

After the ore supply is assured, the assay value of the ores mined out by the pilot mill, a selective flotation plant should be installed, of a capacity to suit the District, say, 100-tons capacity. This should be erected at a place where it is easily accessible to all the operators in the District, and where the tailings and debris can be easily controlled.

DEPTH OF THE ORE VEIN AND FUTURE OF THE DISTRICT.

The vein system in the area has only been exploited to a shallow depth and rich ore taken out, shipped and smeltered. For instead, the Carrie Leonard property produced $500,000 above the 150' level. This production, according to the development, is only in the shallow zone. There is no reason to presume deep mining will not produce more ore, and of good values. Every mine in the District is really in the first development stage. The pioneer mining operators had to develop ore in the shallow zones because they were not equipt to go to greater depth. The drop in the price of silver forced a shutdown of the mines in the area, as well as faulted orebodies. The same condition exists here as in other productive districts as to the geological conditions — the same gangue material, the East and West productive veins, N.E.S.W. cross fractures, the "swelling" and pinching of the veins and the same mineralizing agent, the Idaho Batholith, is present in the area. There is no reason to presume if the Batholith, is penetrated at depth, the mine will pinch out, because other mines in the area are wholly within the Batholithic rocks and are productive. I am led to the conclusion that tabular ore bodies consisting of silver-zinc-copper will be encountered at depth with minor amounts of lead. Some arsenical pyrite can be looked for. All in all, I am of the opinion the District has a future as a productive area of the metals — silver, zinc, and copper. Exploration at depth by shaft or by drilling should determine this condition. In the meantime, a goodly number of mines and prospects should produce a real amount of ore from the surface and dumps and tailings to make a mill well worthwhile as a paying project. The conclusion is reached, after a month's intensive study of the area, that thefuture is bright in the District and it only needs the practical approach, as I have outlined in this report, to bring about intense activity that should develop real orebodies.

Respectfully submitted,

(signed) L. C. Blakeslee
Mining Geologist-engineer.

Heres

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

So. 157 Howard Street
Spokane 8, Washington

June 8, 1951

Amer - 1508X
Heres

Mr. Landon F. Strobel
Executive Secretary
Defense Minerals Administration
Department of Interior
Washington 25, D. C.

Re: Exploration application on
Carrietown Group, Camas County, Idaho
submitted by Oren N. Garrett & partners

Dear Mr. Strobel:

A letter from Mr. Oren N. Garrett dated June 2, 1951 informs this office that the applicants for an exploration loan on the Carrietown Group, Camas County, Idaho, wish their present application loan figure to remain as is ($100,000). The applicants wish the figures which they have allocated for construction of a mill to be striken from the application. They state that they intend to expend the $100,000 wholly for exploration purposes.

The applicants have advised that they will match their share of the loan with $50,000, or 50 percent, raised from private funds.

Yours very truly,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

cc: O. N. Garrett

JUN 14 1951

5

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. dma 1508 X

Date received 6-1-51

Participation

ORIN N. GARRETT
DONALD VAUGHT
GEORGE R. WHITE -- all of

FAIRFIELD, IDAHO.

Name and address of applicant

Date May 23rd, 1951.

FILL IN THIS BLOCK

Date of application May 23rd, 1951

Estimated cost $100,000

Mineral or metal Silver, lead, zinc, copper

Percentage of Government participation 50%

Location of mine Approx. 26 miles north of Fairfield, Camas County, Idaho in Little Smoky Mining District.

Date of filing MF-100 Not filed

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By Orin M. Garrett (Signature of authorized official)
(Date)	Partner (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

dma 1508 X

Fairfield, Idaho,
May 23rd, 1951.

DEFENSE MINERALS ADMINSTRATION,
S-157 Howard Street,
Spokane, Washington.

Attention A. E. Weissenborn.

Dear Sir:-

Attached herewith find Form MF-103, Application for aid for an Exploration Project, covering 10 unpatented mining claims in the Little Smoky Mining District, Camas County, Idaho and known as the Carrietown Group, locators and applicants for loan being

Orin N. Garrett
Donald Vaught
George R. White, all of Fairfield, Idaho.

Attached to application you will find questions answered as concretely as possible. Attached also you will find assay reports, spectrographic analysis, excrept from pamphlet #33 of the U. S. Geological Survey covering this district with condensed production report on properties covered by pamphlet #33, and also a copy of our engineers report made in the fall of 1949 by L. G. Blakemore, M. E., together with a rough sketch of the claims involved and a rough sketch of the workings on the Carrietown Claim from which ore was shipped in 1944-45 and a quantity of ore is in sight there at the present time.

We would appreciate a survey of this property by your office with the idea of putting into operation the plan as outlined. When loan is approved, we feel we will be in a position to raise dollar for dollar.

Sincerely,

Orin N Garrett

dma 1508X

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

May 29, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUN 1 - 1951
LANDON F. STROBEL
Executive Secretary

Postmarked - May 29 - 1951 7 p.m.

Mr. Landon F. Strobel
Executive Secretary
Defense Minerals Administration
Department of Interior
Washington 25, D. C.

Dear Mr. Strobel:

Enclosed herewith is an application submitted by three partners all of Fairfield, Idaho, on the Carrietown group of claims, Camas County, Idaho.

The applicants propose an estimated $100,000 exploration contract of which the Government is to contribute 50 percent. They infer in their application that part of these funds is for the construction of a mill. The applicants have been advised that funds for mill construction cannot be obtained from an exploration contract. It was suggested to the applicants that if they wished to delete the cost of the mill from the estimated cost of $100,000 that they resubmit an estimated cost of the total program. However, they were advised that if the $100,000 is for exploration purposes alone the application would stand as is.

We wish to call attention to the applicants' reference to pamphlet #33, U. S. G. S. This should be corrected to read pamphlet #33, Idaho Bureau of Mines and Geology.

Yours very truly,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

Enclosure

cc: U.S.B.M.

JUN 7 1951

9

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950.

DIRECTLY ANSWERING QUESTIONS CONTAINED IN FORM MF-103 AND ALSO QUESTIONS PERTAINING TO FORM MF-100.

1. Applicant is a partnership.

2. Orin N. Garrett, Donald Vaught and George R. White all of Fairfield, Idaho.

3. No corporation.

4. Personel will be selected upon notice of application being accepted.

5. Owners.

6. No claims, leins or encumbrances against the property.

7. No lessee.

8. Property is not operating.

9. It is proposed to do 50% of financing upon approval of loan application.

10. Only one area involved, viz., 10 unpatented mining claims owned by the above mentioned locators, and known as the Carrietown Group of Claims, located in the Little Smoky Mining District, Camas County, Idaho and legally described as being in Sec. 8, Tws. 3 N., R. 15 E., Camas County, Idaho.

11. Formerly known in part as the Spokane, Grant and Grant Fraction claims. Has been identified as the "Young America Group" back in the 1890's.

12. Property is located approximately 26 miles north of Fairfield, Idaho and approximately 30 miles west of Ketchum, Idaho, both R. R. shipping points. Roads leading into this District are good Forest Service maintained roads. A private bull-dozed road in good condition is into the property connecting with Forest Service road, approximately 1 mile.

13. Carrie Creek draining from Dollar Hide watershed and bordering the property on the south is a year round water supply. Also a stream intersecting the property from north to south is a good year round source of water supply.

14. One small frame compressor house.

15. Ore could be either trucked to Fairfield or Ketchum and shipped by rail to Salt Lake Smelters; or trucked to local mill for custom milling. A plan now under consideration for the latter method of handling ore mined.

16. Attached. See our engineers report; Also U. S. Geological report.

17. Mine not in production at present time.

18. During the summer of 1944-45 approximately 750 tons of ore was shipped from this property, (from the Carrietown Claim, formerly the Grant). Estimated tonnage computed by approximate cubic foot measurement of cavity left, figuring 12 cubic feet to the ton of broken ore. Said cavity is filled by surface water to #3 tunnel level; estimated depth of workings below tunnel floor is 6 feet. Water should be pumped out to ascertain ore, if any, at this depth. Considerable ore left on hanging and foot walls or workings. A large quantity of ore left in the upper workings of the Carrietown. Hard to give a proper estimate, as workings are in bad shape. Would estimate approximately 500 tons of silver, lead, sinc, copper ore in sight, available in this upper workings. Assay returns on this ore run from $31.25 to $72.40.

19. Number 2 tunnel is connected with #3 tunnel by a stope, still standing, with some ore blocked out. This ore has not been sampled. The upper workings of the Carrietown are connected by stope to #3 tunnel. In bad shape. #1 tunnel should be opened, at present caved at portal, for examination and if found practical, a raise should be driven to #2 tunnel, so that ore from all upper workings could be brought out thru #1 tunnel. (See map)

20. Ore is silver, lead, sinc and copper in siderite and chalcopyrite.

21. Proposed work consists in opening #1 tunnel on Carrie town Claim and driving proposed raise; putting workings in shape so that present ore in sight may be minied; exploration work on Carrietown #1 and #2 which have open drifts--approximately 100 feet on each claim in ore; opening and retimbering old tunnels on Carrietown #6, #7, and #8 of which there are 3, to explore for ore; development of surface ore bodies on Carrietown #3, 4, and 9 claims. To install necessary machinery for the proper mining and exploration work. To install proper size and type of mill to handle ore from these properties and to build and furnish necessary living quarters for crew necessary to conduct such work.

22. See Engineers report, U. S. Geological report, maps etc.

23. Equiptment needed is everything necessary for the proper mining and exploration work to develop these properties. We estimate approximately $50,000 for equiptment and $50,000 for working capital. It is impossible to arrive at concrete figures on this undertaking as costs are continually changing and much of the proposed work is based on one part co-ordinating with the other. Proper inspection of this property by Government engineers in conjunction with our engineer will crystallize a program of mining and exploration work which will be mutually beneficial to the Government and the owners. A full two-year program should be necessary.

(COPY)

MINERALS ENGINEERING CO.,
LOS ANGELES, CALIF.

Jan. 30, 1950

To George White:

$7.00 Pd

QUALTITIVE SPECTROGRAPHIC ANALYSIS

ELEMENT	ESTIMATED QUANTITY
Iron main constituent	
Silicon	10%
Lead	1 to 10
Copper	1 to 10
Zinc	1 to 10
Manganese	1
Magnesium	0.1 to 1
Aluminum	0.1 to 1
Calcium	0.1 to 1
Bismuth	0.01 to 0.1
Arsenic	0.01 to 0.1
Nickel	Trace
Cobalt	Trace
Silver	Present

(This sample from Carritown Claim)

ASSAY REPORTS ON CARRIETOWN CLAIMS - 1950.

COPY

Assay report
UNION ASSAY OFFICE, INC.,
Salt Lake City, Utah, 11.
Hand sample serial #10075

Mine -- U. S. #607 - Geo. R. White, (Carrietown #9)
Box 58, Fairfield, Idaho.

Gold Ozs per ton	Silver Ozs per ton	Lead Per cent wet	Copper Per cent	Zinc Per cent
0.200	1.6	1.0		2.0

Certificate of Assay
DEASON & NICHOLS
160 So. West Temple St.,
Salt Lake City, 1, Utah.

Mr. Bill Chess
%J. R. Davies & Son
Fairfield, Idaho (#1 sample from Carrietown9- #2 sample from Carrietown)

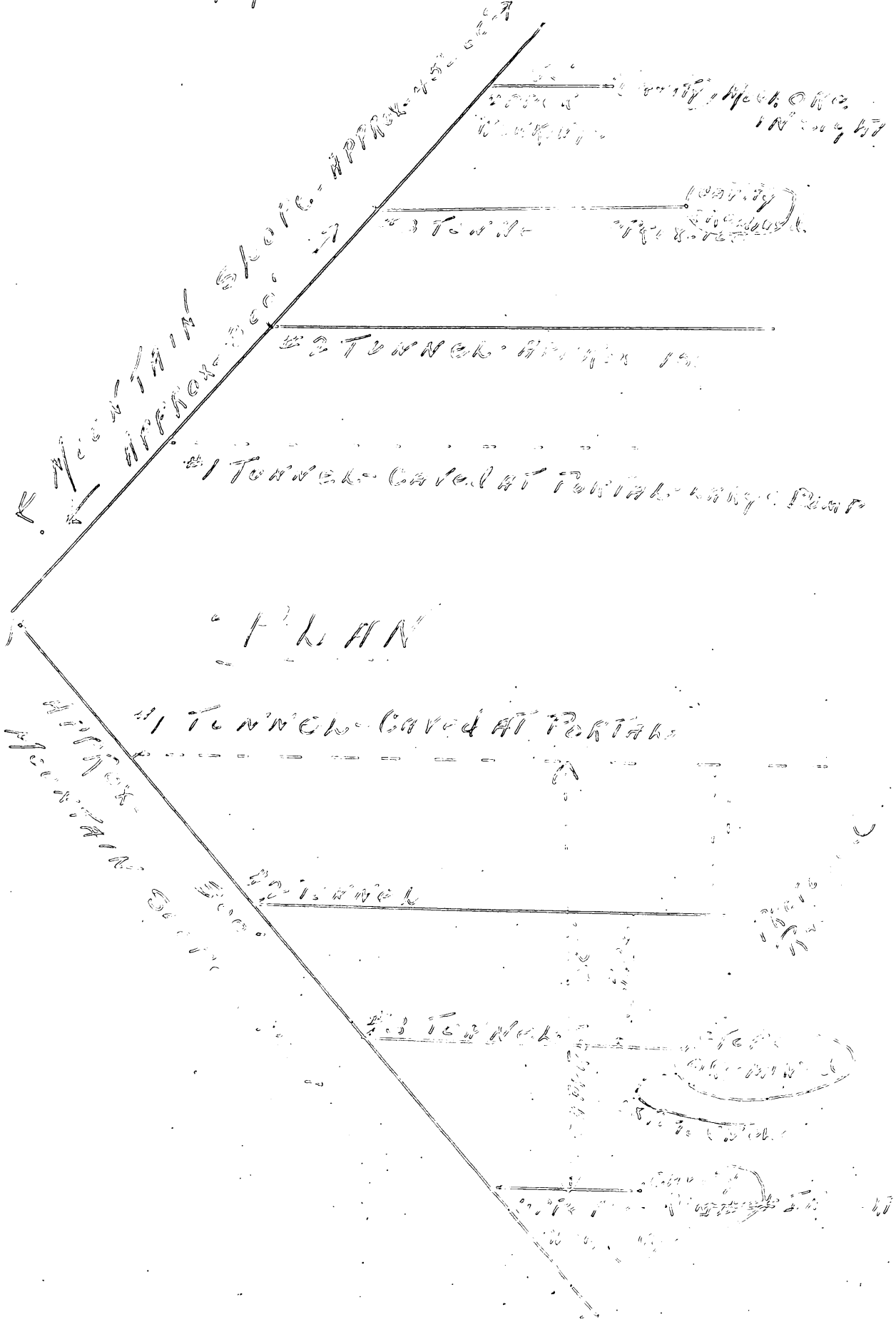
	Gold Ozs	Silver Ozs	Wet Lead %	Copper %	No zinc
Sample #1	0.02	14.20	22.20	0.8	Value $64.00
Sample #2	0.01	4.40	10.80	1.20	" 31.25

Assay Report
UNION ASSAY OFFICE, INC.,
Salt Lake City, 11, Utah.

Hand Sample Serial #10982-84
Mine - U. S. #644 - Geo. R. White
Fairfield, Idaho. (All bulk samples from Carrietown Claim)

Sample	Gold Ozs	Silver Ozs	Lead %	Copper %	Zinc %
#1 dump	0.30	2.3	2.3	0.72	0.7
#2 Upper Work's Hang.wall	0.120	8.9	None?	1.52	None?
#3 Glory Hole	0.400	8.5	6.2	1.21	3.0

Rough Sketch of Underground Workings
CARRIETOWN CLAIM

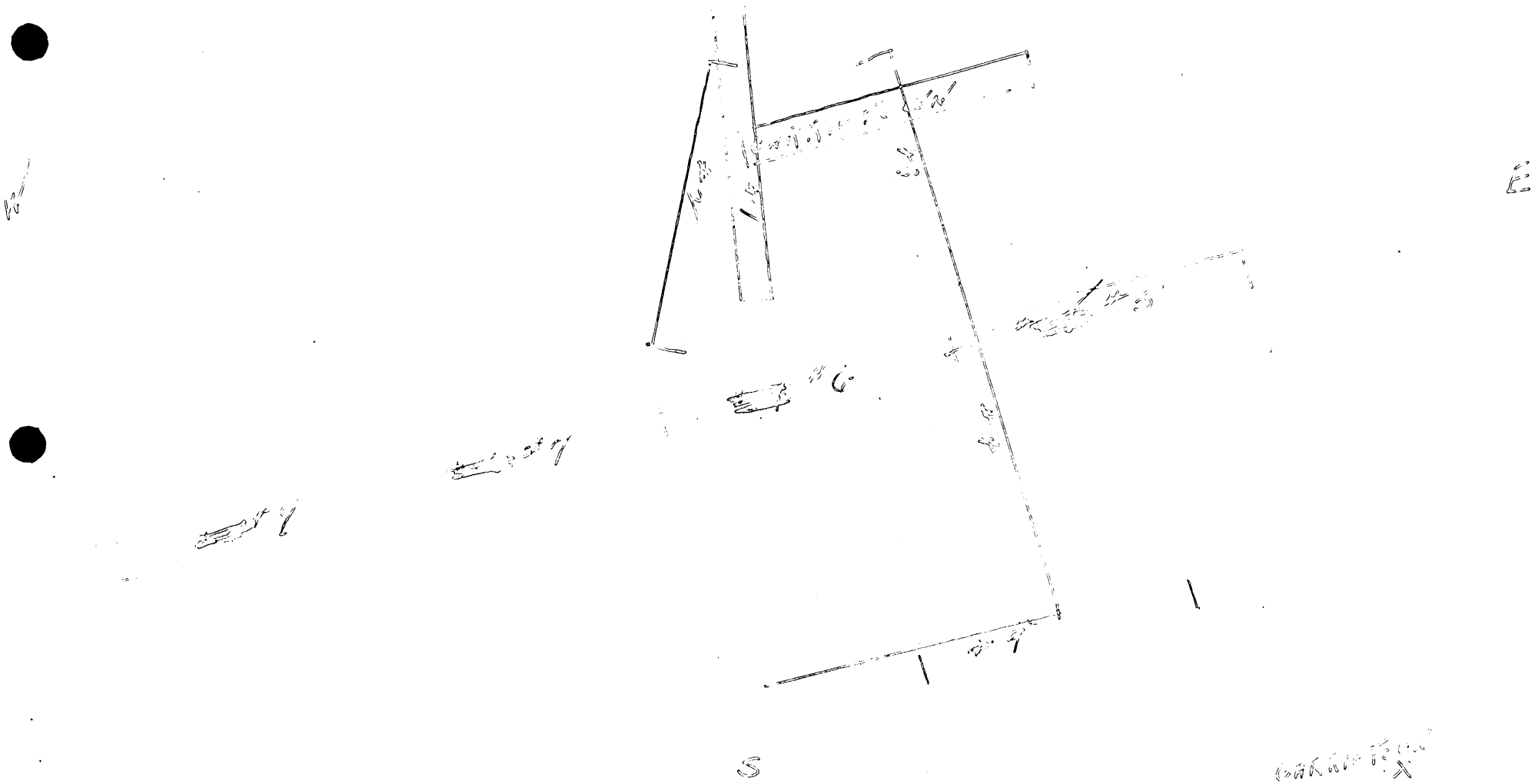


"CARNATION PROJECT"

MINING CLAIM.

LITTLE SMOKY MINING DIST.

CANYON COUNTY, IDAHO.



FOREWORD

The following data of the Little Smoky and Willow Creek mining districts, Camas County, Idaho is a correct and true copy of that portion of pamphlet #33, by Clyde P. Ross of the U. S. Geological Survey. Certain changes have been made in the arrangement of the data on the production record of the mines listed. They have been grouped by mines rather than by years of production as in the original.

It can be definitely stated that some quantities of ore have been shipped from these properties since the date of this pamphlet. For instance the Isabella Mine was leased and shipped ore during the years 1936, 1937 and 1938 and a property not here listed, known as the Grant and Grant Fraction, and now known as the Carrietown Group, shipped ore during the early 1940's, and many of the old dumps have been hand picked for shipping ore.

It will also be noted that little zinc is shown on the production records. The zinc content was in most cases jigged out. For instance the writer is familiar with the instance of the tailings from the Carrie Leonard Mine being worked for the zinc in the summer of 1914. Shipments were hauled from the mine to Fairfield in wagons and considerable zinc concentrates were recovered.

During the early days the writer has knowledge of mills being on the following properties:- Carrie Leonard, Silver Star, King of the West, Tyrannus, Dollar Hide, Smoky Bullion, Hidden Treasure and Five Points. It will be noted that some of these properties are not even mentioned in the production report.

It will be noted that most of these properties are grouped within a small radius. Considering the past production from this district under conditions of crude machinery and methods of operation, plus inaccessibility, compared to the improved methods and machinery available today, plus the accessibility to this district made possible by good Forest Service roads, and the abundance of milling ore to be obtained, it would be fair to presume that a modern custom mill erected in this district, where the flow of ore could be milled to a shippable concentrate, would pay big dividends at the present metal prices.

It is with this idea in mind that this data has been gathered and presented.

Respectfully submitted,

by George R. White,
Fairfield, Idaho.

Excerpt from Pamphlet #33 - Geology and Ore Deposits of the Seafoam, Alder Creek, Little Smoky and Willow Creek Mining Districts, in Custer and Camas Counties, Idaho. By Clyde P. Ross, U. S. Geological Survey.

The Little Smoky and Willow Creek Mining Districts,
CCamas County, Idaho.

The Little Smoky Mining District, which includes what is sometimes referred to as the Rosetta District, is an area of about 150 square miles lying mainly in the drainage basin of Little Smoky Creek in the southern part of the Sawtooth quadrangle, Camas County, Idaho. A few of the deposits are in Blaine County a short distance northeast of the crest of the Smoky Mountains, which here forms the divide between the two counties. The Willow Creek mining District, which includes the deposits in the drainage basin of Willow Creek, adjoins the Little Smoky district on the southeast and is also in Camas County on the border of Blaine County.

Both districts were discovered during the boom in Lode mining in the early eighties and flourished for a time but have been almost entirely abandoned since about 1900. Most of the production ceased prior to 1890. In recent years interest in several of the properties has been renewed and some development work done, but no shipments, except a few sample lots, have yet been made, The lead and zinc ore characteristic of both districts can be more easily handled under present conditions than it could be in the early days. The relative accessibility of both districts encouraged the hope that development of some of the properties may prove profitable. Nearly all the properties can now be reached or closely approached by automobile over roads which are in part in poor shape but are without excessive grades. Carrietown, the former metropolis of the Little Smoky District, is 26 miles from the Hill City branch of the Oregon Short Line at Fairfield, and the mines of the Willow Creek district are about the same distance away. A somewhat shorter road formerly connected Carrietown with the railroad at Ketchum but is now indisrepair.

The first two tables below show the ship ments to the Ketchum Smelter from a number of mines identifies as being in the Little Smoky District in 1884, 1885 and 1886, and from the Silver Star in 1887, 1888 and 1889 and also give data on shipments which passed through the hands of E. Daft, of Hailey, in 1882 to 1906. It is probable that additions could be made to bothtables if all shipments could be identified. Some of those listed in Mr. Daft's records, or those of the Ketchum Smelter, only under the names of individuals or of mines whose locations are now unknown, may have come from this district. Approximate calculations show that the gross value of the shipments listed is about $1,200,000, which agrees well with Umpleby's estimate of a total production of $1,000,000, half of which came from the Carrie Leonard.

The only production known from the Willow Creek district is that recorded as from the Gertie Riddle by the Ketchum Smelter in 1886 and from the Buttercup by E. Daft in 1888 to 1893. Apparently these two names refer to the same mine or to closely adjoining mines. The data are shown in the thirdtable below. Small lots have been shipped at various times from other properties in the District, but data on these shipments are lacking.

General Geology.

The two districts lie on the southeastern border of the Idaho batholith and are largely underlain by the granitic rock of this mass, ranging to composition from granite to quartz diorite. Most of the oredeposits are in the impure quartizite and limestone of Paleozoic age which are intruded by the batholith. Because of their lithologic character and relation to rocks of known age in the adjoining Hailey quadrangle these strata are regarded as belonging to the Wood River formation, of Pennsylvanian age. No fossils have been found in them, and the stratigraphy has not been studied in detail, so that it is possible that pre-pennsylvannian beds are included in the Paleosoic rocks mapped on Figure 1. Both the granitic and the sedimentary rocks are cut by dikes of granophyre and kindred porphyries, so small that they were not mapped. Some of these dikes cut the lodes. From studies elsewhere it is believed that these dikes are of Miocene or possibly later age. Extensive remanents of the Challis Volanics (Miocene), which formerly covered the area, still remain. In the southern part of the area the Mount Bennett rhyolite has been distinguished from the rest of the volcanic rocks by Piper. This distinction has not been carried north of the area mapped by him and is not shown in Figure 1. This mapping has been used with revision, in preparing the southern part of Plate 1. In the southeast corner of the area mapped there are masses of the Snake River basalt. The Tertiary strata are probably much later than the ore deposition in this area. Near the head of Sheep Creek there is a small, partly caved tunnel in tuff, perhaps driven in search of lignite, as a little woody matter is present in the tuff. The tributaries of Little Smoky Creek contain considerable recent alluvian, some of which has been worked for its content of placer gold.

Ore Deposits.

The ore deposits of the Little Smoky and Willow Creek districts belong to the most common type of deposit in south-central Idaho. They have been formed along shear zones, largely by replacement, and are genetically related to the Idaho batholith. Mostoof them are in sedimentary rock close to the granitic contact, but two of those visited are in the granitic rock. The characteristic ore minerals are galena, sphalerite, pyrite, and tetrahedrite in a gangue of quartz, siderite, and altered country rock. Little can be added to the descriptions of Umpleby except for a few deposits on which development work has been done since his visit. The reader is referred to his report for data on the Carrie Leonard, Dollarhide, Isabella, Margaret, Silver Crown, King of the West, Sunday, Stormy Galore, Tyrannus, and Hidden Treasure, most of which were caved when the district was visited in 1929. In some of the above mentioned mines tunnels at a distance from the old stopes are still open, and several of these were entered, but few pertinent data were obtained, Little development, other than annual assessment work, has been attempted at most of them since 1900.

Although most of the Carrie Leonard Mine, formerly the most productive in either district, is now largely inacessible and is therefore not described in the present paper, a map of the workings adapted from one kindly furnished by Mr. Stewart Campbell, State Mine Inspector, is reproduced as Figure 2 for the convenience of anyone interested in the future development of this or neighboring properties.

LITTLE SMOKY DISTRICT.

SILVER STAR MINE.

The Silver Star Mine is about 3,300 feet in an air line southwest of Carrietown, which in the boom days was the principal settlement of the district. The distance by the winding road is nearly two miles. This mine was one of the smaller producers in the early days but at present has a larger amount of underground workings accessible than any of the other old mines. This fact, coupled with data furnished by Mr. Stewart Campbell, State Mine Inspector, who kindly accompanied the writer to this and many of the other mines, makes it possible to give more information regarding this than any of the other properties. The characteristics of the Silver Star deposit are probably typical of the other deposits in sedimentary rocks in the two districts. The historical data summarized below are taken mainly from an unpublished report made by Mr. Campbell for the Idaho Lead Company, December 1, 1926. The geologic data consists mainly of observations by the writer on the surface and in #3 tunnel, the only safely accessible part of the workings.

The Silver Star vein was discovered in the summer of 1881, and a little high grade ore was shipped at that time. It was sold in 1883 to the Philadelphia Mining and Smelting Co., of Ketchum, for $50,000 in cash. This company drove the greater part of the more than 6,200 feet of underground workings shown in Figure 3 and erected a 20-ton stamp mill, which was put into operation November 15, 1887, and closed permanently December 20, 1887. The total expenditure by this company, including the purchase price, is reported to have been over $500,000. The table above records treatment of 523 tons of Silver Star ore and concentrates in 1885 to 1889. Campbells report states that 1,350 tons of ore were treated in the mill. After 258 tons of high grade material were picked out by hand the ore milled averaged 3 per cent lead and 13.5 ounces of silver to the ton. The concentrates averaged 14.58 per cent lead and 36.82 ounces of silver and o.216 ounces of gold to the ton, and the tailings contained 6.1 ounces of silver to the ton, a loss of over 45%. Concentration was in the ratio of 5.075 tons of feed to one ton of concentrates. Although nearly all the lead was recovered in the concentrate, the high silver loss made the operation of the mill under the conditions then existing unprofitable. No record appears to have been made of the zinc content of the ore milled. Much of the ore now exposed contains about as much sphalerite as galena. The only production since the mill shut down consisted of the small lots shipped by lessees recorded in the table above. Most or all of this was obtained by sorting material on the dump. Recently parts of the old workings have been reopened, but there has been no production.

The lode has an average strike of about N. 65° E. and dips 40°-45° S. in the upper workings, steepening to about 80° on the lowest level. This coincides approximately with that attitude of the sedimentary rocks in this vicinity, but on the third lever, at least, the shearing dips somewhat more steeply than the bedding. There is local variation in both. Interruptions

in the continuity of the lode, indicated by the sharp bends in the drifts in Figure 1, have been locally interperted as the result of postmineral faulting, There has probably been renewal of movement at different times, but most of this has been approximately parallel to the original shearing. Little evidence of lateral displacement exists in the parts of the workings studied, Here, as in many other deposits in this region, the apparent displacement results from arrangement of the original shearing in echelon rather than from post-mineral faulting.

The lode matter consists of Galena and Sphalerite, with locally considerable pyrite and small aounts of tetrahedrite in gangue of quartz and siderite in crushed and altered quartzite. Parallel banding is common, resulting from penetration along numerous planes of weakness in a zone of shearing. Vein quartz is more abundant than in many lodes of this type in the region, and some of it contains angular inclusions of quartzite, suggesting that there was considerable filling of pre-existing openings. Here as elsewhere, however, much of the mineralization resulted from replacement of the country rock. In places the ore zones are as much as 14 feet wide, and on the third level the combined length of the several zones is reported to be over 300 feet. Very little stopping has been done. Sampling recorded in Campbell's report indicates that the ore contains from 1 to nearly 4 per cent of lead, about as much zinc, over 2 ounces of silver to 1 per cent of lead, and small amounts of gold.

The following is an excrept (condensed) from Pamphlet #33--Geology and ore depositsof the Seafoam, Alder Creek, Little Smoky, and Willow Creek Mining Districts, In Custer and Camas County, Idaho. By Clyde P. Ross, U. S. Geological Survey.

PRODUCTION OF THE LITTLE SMOKY MINING DISTRICT. Compiled from the records of E. Daft, Assayer, Hailey, Idaho, and shipments to the Philadelphia Mining and Smelting Co., Ketchum, Idaho, for the years 1882 to 1903.

No.	Name of Property.	Dry tons.	Date shipped.	Gold Ounces	Silver Ounces	Lead Pounds	Zinc Pounds
1.	King of the West	848	'82 - '86	32.93	82,782	316,204	59,335
2.	Tyrannus	443.4	'85 - '03	1.96	32,486	472,456	7,920
3.	Carrie Leonard	823.9	'85 - '01	5.22	872,052	1,063,509	145,754
4.	Silver Star	603.62	'85 - '96	60.91	533,900	191,536	6,187
5.	Dollar Hide	60.24	'86 -'96	.28	3,420	18,928	-----
6.	Isabella	106.70	'82 - '96	6.43	19,302	42,564	26,517
7.	Stormy Galore	340.57	'84 - '96	11.84	52,840	38,691	1,851
8.	Silver Crown	11.61	'90 - '06	.62	764	8,430	----
9.	Various Mines	148.16	'82 - '95	79.07	6,928	63,091	-----
10.	Willow Creek(Buttercup)	661.01	'86 - '93	7.11	40,439	804,864	19,913
	Total	3,747.21		206.37	1,645,013	3,020,273	267,477

Average:

The above tabulation shows average contento to have been:

Gold-Ozs	Silver-Ozs	Lead-percent	Zinc-Percent
.055	439.	41.5%	3.55%

Approx. present value per ton - May 1st, 1949.
Gold @ #35.00, Silver @ .70¢, and Lead @ .14¢.

is: ---------- / Gold---- $ 1.925
Silver -- 307.30
lead --- 116.20

Approx. total value per ton ----- $ 425.425

(Above report compiled by Marshall D. Draper, M. E.
715 Park Central Bldg.,
Los Angeles, Calif.)

REPORT COVERING PROPERTIES IN
THE LITTLE SMOKY MINING DISTRICT IN
CAMAS COUNTY, IDAHO

LOCATION:

The properties are located 26 miles North of Fairfield, Camas County, Idaho, close to the old Camp of Carrietown. Fairfield, the county seat of Camas County, has a present population of 492 and is a wheat and cattle community. Also has a sawmill, cutting from 30,000 to 40,000 feet of lumber per day. The Mill has a six-foot band saw. They secure their logs on Pine Creek, 40 miles from Fairfield.

TITLES:

The titles have been examined by the writer and they are all on record at the County Seat and are O.K. to date.

ELEVATION:

The elevation of Fairfield is 5065, and the community enjoys a wonderful climate in the summer months. Snow falls generally about mid-November, and is gone by the 1st of April.

ROADS:

Excellent roads to the Sawtooth National Forest and to Twin Falls extend across the valley and to Hailey. The valley has artesian water, mineral free, and is so pure it is used for battery water in automobiles, tractors, etc.

ACCOMODATIONS:

There is one hotel, a rooming house, and a number of private rooms in the community for the accommodation of traverlers in the area. A weekly newspaper serves the community, The Camas County Courier.

SUPPLIES:

The land along the Snake River near Twin Falls, a town of some 20,000 inhabitants, is prolific in growing potatoes, onions, beans, wheat, alfalfa, sugar beets, poultry, eggs, melons, watermelons, tomatoes. Peaches grow in abundance. The fruit has a wonderful flavor not found in many areas of the West, and is cheap and reasonable.

RAILROADS:

The Union Pacific Branch Line, known as the Hill City Branch of the Oregon Short Line, connects with Shoshone, 60 miles from Fairfield to the main line. Fairfield is approximately 300 miles from Salt Lake City, Utah, and the smelters at Garfield, Utah.

Little Smoky Mining District:

Twenty-six miles North of Fairfield is the old mining camp of Carrietown, reached by a hard-surfaced Forest Service Road. The District lies within the confines of the Sawtooth National Forest, Carritown being at an elevation of 7400 feet, and within a few feet of Carrie Creek. Second growth fir surrounds the camp, and several of the lod log houses still stand, built in the '80s, when Carrietown was the center of intense mining activity. It is on a good location for the campsite and the proposed operations in the vicinity. Water and mining timbers are available. The water is ample for milling purposes, the operation having the advantage of year-round water. A good millside can be obtained here

for milling purposes and one that can fully protect the steams in regard to tailings and debris. The various mines and prospects in the District can be reached by roads, the majority being old mine roads that can be easily bulldozed to be entirely serviceable.

HISTORY OF THE LITTLE SMOKY DISTRICT:

The history of the Little Smoky Mining District goes back into the '80s, when the country was in the pioneer stage. The writer was informed by an old-timer who was born and raised in this area, namely, Hailey, and farmed with his parents in Camas Prairie before ever the town of Fairfield or a railroad came into being in the valley, that at least eleven mills were in operation in the Little Smoky Mining District at one time or another. Judging by the size of the numerous dumps in the District, a large amount of activity took place in the period above mentioned. Most of the mines, of course, are now patented properties and quite a few of the workings are inaccessible, being caved. However, some are open enough to get some idea of the underground conditions. In those days there was a smelter at Ketchum, down over the divide from the Little Smoky, and ore from the mines in the District were smeltered there. (See attached sheet showing production records). The operators in those days had to have high-grade ore to make it pay. Of course, the body blow to a silver-producing district was the drop in the price of silver, which rapidly made ghost camps in the West. Carrietown was no exception to the rule and the mines simply closed down. Some had faulted ore bodies to contend with, and with the drop in the price of silver, no further exploration work took place. The District became abandoned, only assessment work on unpatented properties being done, and the taxes on patented properties being paid by the owners.

General Geology of the District

GRANITES:

The District is on the southeastern edge of the Idaho Batholith, consisting of various phases of the granites and quartz diorite. They underlie the District.

QUARTZITE:

Residual phases of the ~~granites and~~ quartzites were noted in the area, some of them noted as inclusions, crushed and much distorted.

LIMESTONE:

An old limestone, also crushed and disturbed by igneous intrusions, occurs in the District. This limestone is highly metamorphosed, especially in proximity to the igneous flows and dikes.

PORPHYRIES:

Rhyolite porphyry dykes intrude the limestone and in a few places the granites; these dykes of Tertiary Age, probably early Tertiary. The flows are of Tertiary Age, some of them older than others.

BASALT:

The basaltic flows seem to be the latest igneous activity in the area. They have almost eroded away in some places in the District. Some tufaceous material was noted in the area, but not a great deal.

MESOTHERMAL DEPOSITS (Little Smoky Mining District)

The Little Smoky Ore veins lie within the Wood River formation. They are Tetrahedrite-Galen-Siderite veins, formed within Carboniferous rocks, namely, the limestones and quartzites which were penetrated by ascending solution. They are associated with intrusions of quartz monzonite, granodiorite, lamphrophyric dykes and diorite. The lamprophyric dikes are the latest intrustion and the ores seem to be made contemporaneously with their intrustion. The veins themselves seem to be crushed and the ores appear as filling and replacements. The quartzite appears as angular inclusions witin the veins, and it is possible to see the drag of the faulting, with considerableslickensiding. Tetrahedrite seems to be the silver bearer, associated with galena. I have noticed considerable banding in theores and also in the country rocks showing the ascending solutions came through parallel joints and fractures were, no doubt, deposited by hot solutions from depth. Pyrite is also somewhat prevalent, carrying from 1.65% to 5% copper, associated with siderite and zinc blend. The ore shoots, being of the replacement series, are, by their very nature, irregular in size, shape and extent. The Minnie Moore Mine, in the Hailey District, shows 16' of solid galen and produced around $10,000,000 in a short period of time. Mesothermal deposits are among the deepest seated ore bodies in the world, the Coeur d' Alene having produced $564,000,000 to date. I believe the Little Smoky Mining District has every chance of going to depth, and should produce ore bodies consistently for years to come.

ORE BODIES:

Replacements in limestone and quartzite in contact with granite and porphyry dykes. They lie at various angles from 45% to 65% and in some places 75%. It depends upon the local condition of the enclosing rocks as to the andle at which the ore bodies lie. Where the pre-existing formations received the greatest pressure, both end and side, the ore bodies are flatter or blanket in character. The ore is formed along bedding planes in the limestone.

MINERALS: (GANGUE MATERIAL)

The gangue material associated with the ore is largely siderite, an iron carbonate calcite and inclusions of dark greeish quartzite with the quartz.

MINERALS: (METALLIC)

Galena, Pyrite, Bornite, Ruby Silver (Proustite,) Tetrahedrite, and ore of Copper-silver. Some Malachite was noted, but not a great deal.

VEINS IN THE DISTRICT:

There are a series of E. W. parallel fault fissures in the District, with N.W.S.E. cross fractures. These fissures are on both sides of Dollarhide Peak, a prominence of 9,272 feet, practically in the center of the Little Smoky Mining District. The fissures dip N. 45% - N. 60%, but 45% seems to be the average dip. Dollarhide Peak seems to ve the center of the mineralizing activity that took place in the area. The veins seem to ve veins that were made through step-faulting, the ore being made in the bedding planes on the limestones and quartzites. The vein matter is brecciated and crushed with quartzite inclusions, calcite, siderite and quartz. The metallic content of the vein is comples in character, containing pyrite, lead, silver, copper and zinc. In some of the mines, large metallic contents of iron are present. I have noted two of the carbonate ores of copper, namely, malachite and bornite present in some mining properties examined in the District. The vein system as a whole is astock work within a shear zone with considerable banding of the country rock, and the ore itself. The ore is a replacement; namely,

replacement ore bodies, formed in pre-existing formations along bedding planes in the structure, faulted, brecciated and crushed. The zones -- a shallow oxide zone, and the sulphide zone -- are mixed in character. I believe the lead-silver ores are secondary, and the ore bodies at greater depth will be copper-silver-zinc ores, with the copper content becoming greater with depth.

THE CARRIETOWN GROUP MINING CLAIMS:

The Carrietown Group consists of ten claims and was visited first. The Carrietown and Carrietown Nos. 5, 6, 7, 8 and 9 trend 20% N.E. - S. 20% S.W. Carrietown Claims Nos.1, 2, 3, and 4 trend N. by W. - S. by E., and follow the strike of cross-fracture veins. There are several tunnels on the property and ore was shipped from the property as late as 1944. The best ore showing is on the Carrietown claim. The Minerals Year Book shows the District shipped 227 tons from old dumps and tailings from the Carrie Leonard and the Stormy Galore. The Carrietown also produced some ore in 1944. There is an old compressor house on the Carrietown claim in good condition. I picked up specimens of bornite, and lead ore associated with pyrite on the dumps. No.1 tunnel is caved at the present time but has a large dump showing siderite, calcite and porphyry schist. No. 2 tunnel is in schistose material dipping N. 45% and trending E. and W. The upper tunnel is in ore, with good values in gold, copper, silver, lead and zinc. The vein at the surface carried $11.20 in gold. The vein assayed over $70.00 per ton. The ore makes on the hanging wall in the bedding planes, and is a typical replacement orebody characteristic of the District.

DEVELOPMENT WORK ON THE CARRIETOWN GROUP:

Tunnel No. 1 on the Carrietown is caved, and so is inaccessible at this time. Tunnel No. 2 has about 100 feet of workings. Some ore was stoped and shipped. I have examined the stope the ore came out of, and it measured about 60 feet up to Tunnel No. 3. Tunnel No. 3 has a stope measuring about 40' x 20' x 10'. Taking 12 cu. feet to the ton of broken ore as a measure, around 600 tons should be about the tonnage taken out of this stope, which connects with Tunnel No. 2, as previously mentioned. Tunnel No. 4 on the Carrietown Claim has ore in place on the hanging wall, about four to six inches of solid ore. I was able to secure samples of this ore, although the hanging wall at the moment is in a dangerous condition, and should be caught up at the earliest opportunity. This ore has a metallic content of gold, silver, lead, zinc, and copper. Previously sampling of this vein went as follows:

Gold	$10.50
Silver	19.80
Lead	29.28
Zinc	7.28
Copper	5.28; or a total of $72.14

In all, about 500 feet of work has been done on the Carrietown Claim. Other previous workings are shown by the various dumps on the Carrietown Claims No.1, 2, 6, 7, 8 and 9. The veins trend through the property and are typical parallel fault fissures of the District.

DEVELOPMENT WORK SUGGESSTED:

The surface veins and ores can easily be uncovered by using a bulldozer across the strike of the veins. This method of precedure is being successfully used on the South Side vein system, namely, the Summit Property, uncovering quantities of lead ore at the surface. On the Red Star Group churn drilling is now taking place. I am very confident that a large amount of good ore can also be uncovered on the Carrietown Group by following the procedure outlined above.

This should be done at an early date. A bulldozer is available in the District and can be hired, machine and man, for $8.00 per hour. It is amazing the work done on the Red Star Group in one afternoon, sufficient to pave the way for the churn drill. Five days' time, or $320.00 in monetary outlay, should uncover and expose the veins on the Carrietown Group for a considerable distance. This work should expose a good tonnage of ore, high and low grade, for milling purposes. You seldom find a district where conditions lend themselves to this class of development and prospecting. By getting down to solid material with the bulldozer, a portable compressor can be brought up and the work continued from there.

OTHER MINES VISITED:

I visited several old producers of the District, viz.: Carrie Leonard, Silver Star, Isabella, Smoky Bullion, Forest Group and Taft. All of these properties are patented properties, with the exception of the Red Star which is now churn drilling the property. The Carrie Leonard was the largest producer in the District and a large amount of work has been done there. The Ores from the dump material are the usual silver-lead-copper-zinc ores, and the early operators jigged out the zinc content. I have see the old slag dump at Ketchum from former operations. Ore was packed over trails by mules and ox teams to the smelter at Ketchum. These early operators had to have high-grade ore. In fact, $100.00 ore was their objective in their mining operations; anything under that value had to be discarded and put on the dumps. No depth to speak of has been developed in any of the early operations, the development having been done mainly by tunneling into the steep mountain sides. Many of the old dumps have been high-graded for ore by recent small lessees and the tailings jigged over for the zinc content and shipped out due to the high price of zinc. However, the large dumps all over the District contain ores of a milling grade that should be worked over by modern methods. In Bullion Gulch, six miles West of Hailey in Blaine County, the Apache Mines, Inc,m, has a 100-ton selective flotation plant operating entirely on old dumps and tailings in the Wood River Mining District. They are making an 80% to 94% recovery on these dumps and tailings. A like operation, within the Little Smoky Mining District, with the added incentive, I believe, of more milling ore than the Wood River Mining District, can be and should conceived at an early date. It is with this objective in mind and the method of procedure involved, that this report and recommendations has been undertaken. Three Hundred and fifty thousand tons from various mines and prospects from their dumps, to say nothing of the surface ores that can be uncovered by the bulldozer method of prospecting, should be incentive to install a mill to serve the District, Also by opening up and exploring old patented properties, I believe that considerable tonnage can be secured for the mill operations. However, the mill can run on dumps and surface ore for a good period.

METHODS OF PROCEDURE:

The methods and procedure for any mining and exploration company entering this District should be as follows:

1. The acquisition of mining claims and properties having a favorable amount of ore as a nucleus to start with;

2. The acquisition of the following machinery:

(a) A portable diamond drilling outfit. (Longyear)

(b) A portable compressor, drill, stell pipe, etc.

(c) A 5-ton truck to transport ore to the mill and concentrates to the smelter, and to haul the compressor to whatever point is desirable.

(d) A pilot mill (25-ton) to make a rough concentrate from ores from various mines and prospects. To be erected in a convenient place so as to enable the operators to haul their ore down grade.

(e) A bulldozer.

PILOT MILL:

The pilot plant will consist of a 25-ton mill, consisting of a crusher, mill, jigs and concentrating tables to make a rough concentrate for shipping to the smelter. This, of course, will be followed by a larger plant, either selective flotation or direct smelting.

PERMANENT MILL FOR THE DISTRICT:

After the ore supply is assured, the assay value of the ores worked out by the pilot mill, a selective flotation plant should be installed, of a capacity to suit the District, say, 100-tons capacity. This should be erected at a place where it is easily accessible to all the operators in the District, and where the tailings and debris can be easily controlled.

DEPTH OF THE ORE VEIN AND FUTURE OF THE DISTRICT:

The vein system in the area has only been exploited to a shallow depth and rich ore taken out, shipped and smeltered. For instand, the Carrie Leonard property produced $500,000 above the 150' level. This production, according to the development, is only in the shallow zone. There is no reason to presume deep mining will not produce more ore, and of good values. Every mine in the District is really in the first development stage. The pioneer mining operators had to develop ore in the shallow zones because they were not equipt to go to greater depth. The drop in the price of silver forced a shutdown of the mines in the area, as well as faulted orebodies. The same condition exists here as in other productive districts as to the geological conditions -- the same gangue material, the East and West productive veins, N.E.S.W. cross fractures, the "swelling" and pinching of the veins and the same mineralizing agent, the Idaho Batholith, is present in the area. There is no reason to presume if the Batholith, is penetrated at depth, the mine will pinch out, because other mines in the area are wholly within the Batholithic rocks and are productive. I am led to the conclusion that tabular ore bodies consisting of silver-zinc-copper will be encountered at depth with minor amounts of lead. Some arsenical pyrite can be looked for. All in all, I am of the opinion the District has a future as a productive area of the metals -- silver, zinc, and copper. Exploration at depth by shaft or by drilling should determine this condition. In the meantime, a goodly number of mines and prospects should produce a real amount of ore from the surface and dumps and tailings to make a mill well worthwhile as a paying project. The conclusion is reached, after a month's intensive study of the area, that thefuture is bright in the District and it only needs the prectical approach, as I have outlined in this report, to bring about intense activity that should develop real orebodies.

Respectfully submitted,

(signed) L. G. Blakemore
Mining Geologist-engineer.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. dma 1508X

Date received 6-1-51

Participation

ORIN N. GARRETT
DONALD VAUGHT
GEORGE R. WHITE — all of

FAIRFIELD, IDAHO.

Name and address of applicant

Date May 23rd, 1951.

FILL IN THIS BLOCK

Date of application May 23rd, 1951

Estimated cost $100,000

Mineral or metal Silver, lead, zinc, copper

Percentage of Government participation 50%

Location of mine Approx. 26 miles north of Fairfield, Camas County, Idaho in Little Smoky Mining District.

Date of filing MF-100 Not filed

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By Orin N. Garrett (Signature of authorized official)
(Date)	Partner (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950.

DIRECTLY ANSWERING QUESTIONS CONTAINED IN FORM MF-103 AND ALSO QUESTIONS PERTAINING TO FORM MF-100.

1. Applicant is a partnership.

2. Orin N. Garrett, Donald Vaught and George R. White all of Fairfield, Idaho.

3. No corporation.

4. Personel will be selected upon notice of application being accepted.

5. Owners.

6. No claims, leins or encumbrances against the property.

7. No lessee.

8. Property is not operating.

9. It is proposed to do 50% of financing upon approval of loan application.

10. Only one area involved, viz., 10 unpatented mining claims owned by the above mentioned locators, and known as the Carrietown Group of Claims, located in the Little Smoky Mining District, Camas County, Idaho and legally described as being in Sec. 8, Tws. 3 N., R. 15 E., Camas County, Idaho.

11. Formerly known in part as the Spokane, Grant and Grant Fraction claims. Has been identified as the "Young America Group" back in the 1890's.

12. Property is located approximately 26 miles north of Fairfield, Idaho and approximately 30 miles west of Ketchum, Idaho, both R. R. shipping points. Roads leading into this District are good Forest Service maintained roads. A private bull-dozed road in good condition is into the property connecting with Forest Service road, approximately 1 mile.

13. Carrie Creek draining from Dollar Hide watershed and bordering the property on the south is a year round water supply. Also a stream intersecting the property from north to south is a good year round source of water supply.

14. One small frame compressor house.

15. Ore could be either trucked to Fairfield or Ketchum and shipped by rail to Salt Lake Smelters; or trucked to local mill for custom milling. A plan now under consideration for the latter method of handling ore mined.

16. Attached. See our engineers report; Also U. S. Geological report.

17. Mine not in production at present time.

18. During the summer of 1944-45 approximately 750 tons of ore was shipped from this property, (from the Carrietown Claim, formerly the Grant). Estimated tonnage computed by approximate cubic foot measurement of cavity left, figuring 12 cubic feet to the ton of broken ore. Said cavity is filled by surface water to #3 tunnel level; estimated depth of workings below tunnel floor is 6 feet. Water should be pumped out to ascertain ore, if any, at this depth. Considerable ore left on hanging and foot walls or workings. A large quantity of ore left in the upper workings of the Carrietown. Hard to give a proper estimate, as workings are in bad shape. Would estimate approximately 500 tons of silver, lead, sinc, copper ore in sight, available in this upper workings. Assay returns on this ore run from $31.25 to $72.40.

19. Number 2 tunnel is connected with #3 tunnel by a stope, still standing, with some ore blocked out. This ore has not been sampled. The upper workings of the Carrietown are connected by stope to #3 tunnel. In bad shape. #1 tunnel should be opened, at present caved at portal, for examination and if found practical, a raise should be driven to #2 tunnel, so that ore from all upper workings could be brought out thru #1 tunnel. (See map)

20. Ore is silver, lead, sinc and copper in siderite and chalcopyrite.

21. Proposed work consists in opening #1 tunnel on Carrie town Claim and driving proposed raise; putting workings in shape so that present ore in sight may be minied; exploration work on Carrietown #1 and #2 which have open drifts—approximately 100 feet on each claim in ore; opening and retimbering old tunnels on Carrietown #6, #7, and #8 of which there are 3, to explore for ore; development of surface ore bodies on Carrietown #3, 4, and 9 claims. To install necessary machinery for the proper mining and exploration work. To install proper size and type of mill to handle ore from these properties and to build and furnish necessary living quarters for crew necessary to conduct such work.

22. See Engineers report, U. S. Geological report, maps etc.

23. Equiptment needed is everything necessary for the proper mining and exploration work to develop these properties. We estimate approximately $50,000 for equipptment and $50,000 for working capital. It is impossible to arrive at concrete figures on this undertaking as costs are continually changing and much of the proposed work is based on one part co-ordinating with the other. Proper inspection of this property by Government engineers in conjunction with our engineer will crystallize a program of mining and exploration work which will be mutually beneficial to the Government and the owners. A full two-year program should be necessary.

(CONF)

MINERAL [illegible] CO.,
LOS ANGELES, CALIF.

Jan. 30, 1959

To George White: 07.00 PM

AMERICAN SPECTROGRAPHIC CHARGES

ELEMENT	ESTIMATED AMOUNT
Iron main constituent	
Silicon	10%
Lead	1 to 10
Copper	1 to 10
Zinc	1 to 10
Manganese	1
Magnesium	0.1 to 1
Aluminum	0.1 to 1
Calcium	0.1 to 1
Bismuth	0.01 to 0.1
Arsenic	0.01 to 0.1
Nickel	Trace
Cobalt	Trace
Silver	Present

(Sample origin from Carnitas Claim)

ASSAY REPORTS ON CARRIETOWN CLAIMS - 1950.

COPY

Assay report
UNION ASSAY OFFICE, INC.,
Salt Lake City, Utah, 11.
Hand sample serial #10075

Mine -- U. S. #607 - Geo. R. White, (Carrietown #9)
Box 58, Fairfield, Idaho.

Gold Ozs per ton	Silver Ozs per ton	Lead Per cent wet	Copper Per cent	Zinc Per cent
0.200	1.6	1.0		2.0

Certificate of Assay
DEASON & NICHOLS
160 So. West Temple St.,
Salt Lake City, 1, Utah.

Mr. Bill Chess
%J. R. Davies & Son
Fairfield, Idaho (#1 sample from Carrietown9- #2 sample from Carrietown)

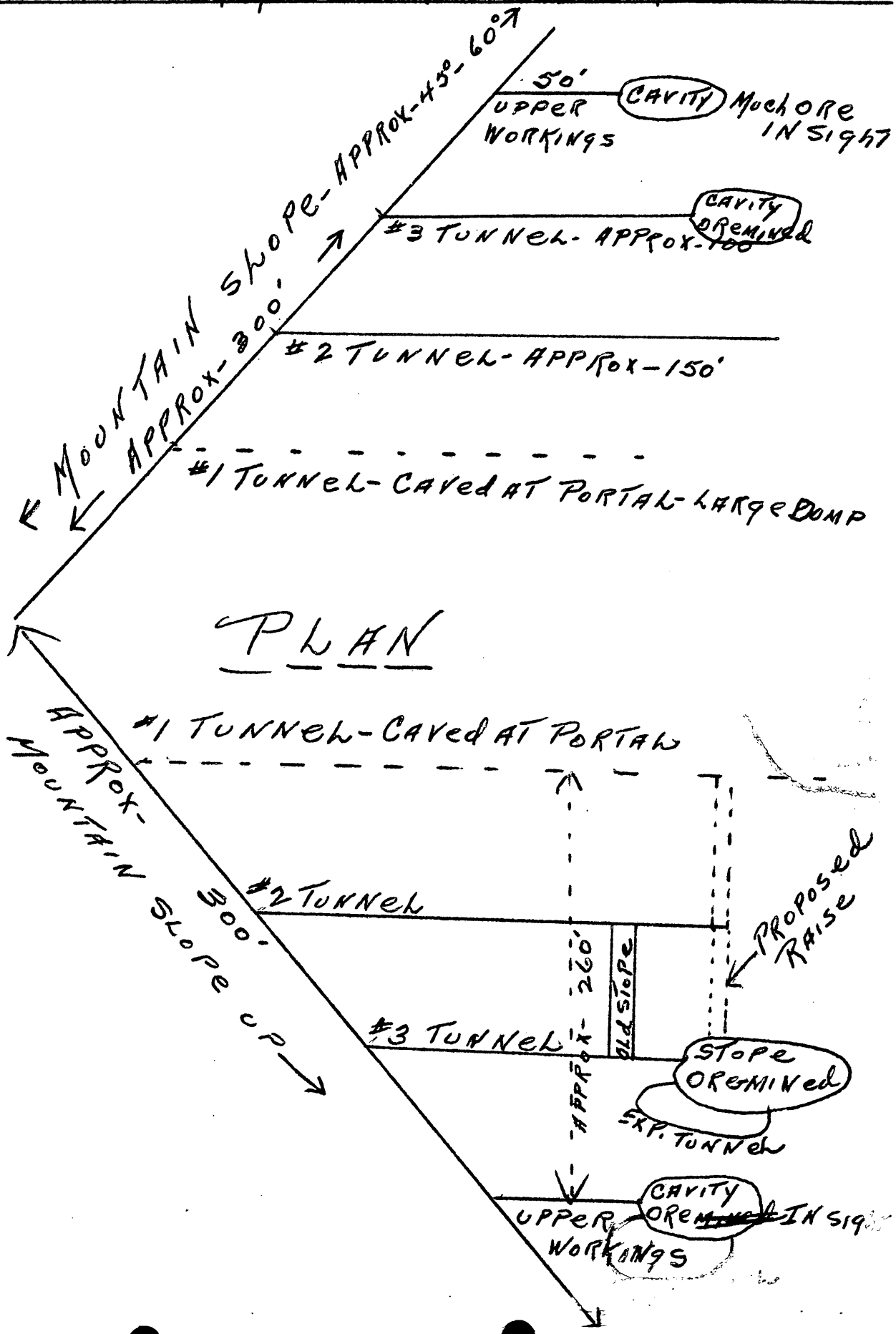
	Gold Ozs	Silver Ozs	Wet Lead %	Copper %	No zinc
Sample #1	0.02	14.20	22.20	0.8	Value $64.00
Sample #2	0.01	4.40	10.80	1.20	" 31.25

Assay Report
UNION ASSAY OFFICE, INC.,
Salt Lake City, 11, Utah.

Hand Sample Serial #10982-84
Mine - U. S. #644 - Geo. R. White
Fairfield, Idaho. (All bulk samples from Carrietown Claim)

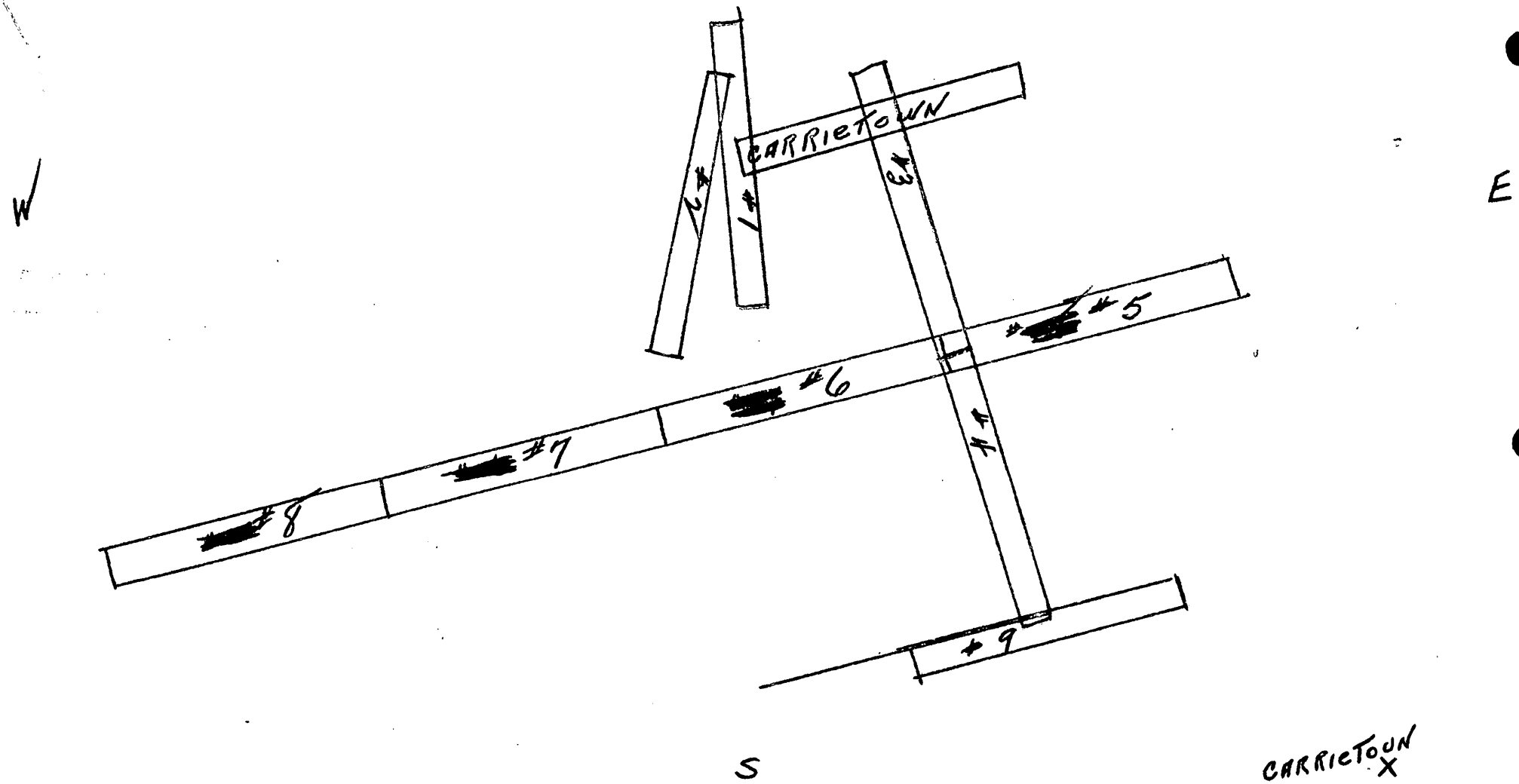
Sample	Gold Ozs	Silver Ozs	Lead %	Copper %	Zinc %
#1 dump	0.30	2.3	2.3	0.72	0.7
#2 Upper Work's Hang.wall	0.120	8.9	None?	1.52	None?
#3 Glory Hole	0.400	8.5	6.2	1.21	3.0

Rough Sketch of Underground Working
Carrietown Claim



"CARRIETOWN GROUP"
MINING CLAIMS

LITTLE SMOKY MINING DIST.,
CAMAS COUNTY - IDAHO



FOREWORD

The following data of the Little Smoky and Willow Creek mining districts, Camas County, Idaho is a correct and true copy of that portion of pamphlet #33, by Clyde P. Ross of the U. S. Geological Survey. Certain changes have been made in the arrangement of the data on the production record of the mines listed. They have been grouped by mines rather than by years of production as in the original.

It can be definitely stated that some quantities of ore have been shipped from these properties since the date of this pamphlet. For instance the Isabella Mine was leased and shipped ore during the years 1936, 1937 and 1938 and a property not here listed, known as the Grant and Grant Fraction, and now known as the Carrietown Group, shipped ore during the early 1940's, and many of the old dumps have been hand picked for shipping ore.

It will also be noted that little zinc is shown on the production records. The zinc content was in most cases jigged out. For instance the writer is familiar with the instance of the tailings from the Carrie Leonard Mine being worked for the zinc in the summer of 1914. Shipments were hauled from the mine to Fairfield in wagons and considerable zinc concentrates were recovered.

During the early days the writer has knowledge of mills being on the following properties:- Carrie Leonard, Silver Star, King of the West, Tyrannus, Dollar Hide, Smoky Bullion, Hidden Treasure and Five Points. It will be noted that some of these properties are not even mentioned in the production report.

It will be noted that most of these properties are grouped within a small radius. Considering the past production from this district under conditions of crude machinery and methods of operation, plus inaccessibility, compared to the improved methods and machinery available today, plus the accessibility to this district made possible by good Forest Service roads, and the abundance of milling ore to be obtained, it would be fair to presume that a modern custom mill erected in this district, where the flow of ore could be milled to a shippable concentrate, would pay big dividends at the present metal prices.

It is with this idea in mind that this data has been gathered and presented.

Respectfully submitted,

by George R. White,
Fairfield, Idaho.

Excerpt from Pamphlet #33 - Geology and Ore Deposits of the Seafoam, Alder Creek, Little Smoky and Willow Creek Mining Districts, in Custer and Camas Counties, Idaho. By Clyde P. Ross, U. S. Geological Survey.

The Little Smoky and Willow Creek Mining Districts, CCamas County, Idaho.

The Little Smoky Mining District, which includes what is sometimes referre to as the Rosetta District, is an area of about 150 square miles lying mainly in the drainage basin of Little Smoky Creek in the southern part of the Sawtooth quadrangle, Camas County, Idaho. A few of the deposits are in Blaine County a short distance northeast of the crest of the Smoky Mountains, which here forms the divide between the two counties. The Willow Creek mining District, which includes the deposits in the drainage basin of Willow Creek, adjoins the Little Smoky district on the southeast and is also in Camas County on the border of Blaine County.

Both districts were discovered during the boom in Lode mining in the early eighties and flourished for a time but have been almost entirely abandoned since about 1900. Most of the production ceased prior to 1890. In recent years interest in several of the properties has been renewed and some development work done, but no shipments, except a few sample lots, have yet been made, The lead and zinc ore characteristic of both districts can be more easily handled under present conditions than it could be in the early days. The relative accessibility of both districts encouraged the hope that development of some of the properties may prove profitable. Nearly all the properties can now be reached or closely approached by automobile over roads which are in part in poor shape but are without excessive grades. Carrietown, the former metropolis of the Little Smoky District, is 26 miles from the Hill City branch of the Oregon Short Line at Fairfield, and the mines of the Willow Creek district are about the same distance away. A somewhat shorter road formerly connected Carrietown with the railroad at Ketchum but is not indisrepair.

The first two tables below show the ship ments to the Ketchum Smelter from a number of mines identifies as being in the Little Smoky District in 1884, 1885 and 1886, and from the Silver Star in 1887, 1888 and 1889 and also give data on shipments which passed through the hands of E. Daft, of Hailey, in 1882 to 1906. It is probable that additions could be made to bothtables if all shipments could be identified. Some of those listed in Mr. Daft's records, or those of the Ketchum Smelter, only under the names of individuals or of mines whose locations are now unknown, may have come from this district. Approximate calculations show that the gross value of the shipments listed is about $1,200,000, which agrees well with Umpleby's estimate of a total production of $1,000,000, half of which came from the Carrie Leonard.

The only production known from the Willow Creek district is that recorded as from the Gertie Riddle by the Kethhum Smelter in 1886 and from the Buttercup by E. Daft in 1888 to 1893. Apparently these two names refer to the same mine or to closely adjoining mines. The data are shown in the thirdtable below. Small lots have been shipped at various times from other properties in the District, but data on these shipments are lacking.

General Geology.

The two districts lie on the southeastern border of the Idaho batholith and are largely underlain by the granitic rock of this mass, ranging to composition from granite to quartz diorite. Most of the oredeposits are in the impure quartzite and limestone of Paleozoic age which are intruded by the batholith. Because of their lithologic character and relation to rocks of known age in the adjoining Hailey quadrangle these strata are regarded as belonging to the Wood River formation, of Pennsylvanian age. No fossils have been found in them, and the stratigraphy has not been studied in detail, so that it is possible that pre-pennsylvannian beds are included in the Paleosoic rocks mapped on Figure 1. Both the granitic and the sedimentary rocks are cut by dikes of granophyre and kindred porphyries, so small that they were not mapped. Some of these dikes cut the lodes. From studies elsewhere it is believed that these dikes are of Miocene or possibly later age. Extensive remanents of the Challis Volanics (Miocene), which formerly covered the area, still remain. In the southern part of the area the Mount Bennett rhyolite has been distinguished from the rest of the volcanic rocks by Piper. This distinction has not been carried north of the area mapped by him and is not shown in Figure 1. This mapping has been used with revision, in preparing the southern part of Plate 1. In the southeast corner of the area mapped there are masses of the Snake River basalt. The Tertiary strata are probably much later than the ore deposition in this area. Near the head of Sheep Creek there is a small, partly caved tunnel in tuff, perhaps driven in search of lignite, as a little woody matter is present in the tuff. The tributaries of Little Smoky Creek contain considerable recent alluvian, some of which has been worked for its content of placer gold.

Ore Deposits.

The ore deposits of the Little Smoky and Willow Creek districts belong to the most common type of deposit in south-central Idaho. They have been formed along shear zones, largely by replacement, and are genetically related to the Idaho batholith. Mostoof them are in sedimentary rock close to the granitic contact, but two of those visited are in the granitic rock. The characteristic ore minerals are galena, sphalerite, pyrite, and tetrahedrite in a gangue of quartz, siderite, and altered country rock. Little can be added to the descriptions of Umpleby except for a few deposits on which development work has been done since his visit. The reader is referred to his report for data on the Carrie Leonard, Dollarhide, Isabella, Margaret, Silver Crown, King of the West, Sunday, Stormy Galore, Tyrannus, and Hidden Treasure, most of which were caved when the district was visited in 1929. In some of the above mentioned mines tunnels at a distance from the old stopes are still open, and several of these were entered, but few pertinent data were obtained, Little development, other than annual assessment work, has been attempted at most of them since 1900.

Although most of the Carrie Leonard Mine, formerly the most productive in either district, is now largely inacessible and is therefore not described in the present paper, a map of the workings adapted from one kindly furnished by Mr. Stewart Campbell, State Mine Inspector, is reproduced as Figure 2 for the convenience of anyone interested in the future development of this or neighboring properties.

LITTLE SMOKY DISTRICT.

SILVER STAR MINE.

The Silver Star Mine is about 3,300 feet in an air line southwest of Carrietown, which in the boom days was the principal settlement of the district. The distance by the winding road is nearly two miles. This mine was one of the smaller producers in the early days but at present has a larger amount of underground workings accessible than any of the other old mines. This fact, coupled with data furnished by Mr. Stewart Campbell, State Mine Inspector, who kindly accompanied the writer to this and many of the other mines, makes it possible to give more information regarding this than any of the other properties. The characteristics of the Silver Star deposit are probably typical of the other deposits in sedimentary rocks in the two districts. The historical data summarized below are taken mainly from an unpublished report made by Mr. Campbell for the Idaho Lead Company, December 1, 1926. The geologic data consists mainly of observations by the writer on the surface and in #3 tunnel, the only safely accessible part of the workings.

The Silver Star vein was discovered in the summer of 1881, and a little high grade ore was shipped at that time. It was sold in 1883 to the Philadelphia Mining and Smelting Co., of Ketchum, for $50,000 in cash. This company drove the greater part of the more than 6,200 feet of underground workings shown in Figure 3 and erected a 20-ton stamp mill, which was put into operation November 15, 1887, and closed permanently December 20, 1887. The total expenditure by this company, including the purchase price, is reported to have been over $500,000. The table above records treatment of 523 tons of Silver Star ore and concentrates in 1885 to 1889. Campbells report states that 1,350 tons of ore ware treated in the mill. After 258 tons of high grade material were picked out by hand the ore milled averaged 3 per cent lead and 13.5 ounces of silver to the ton. The concentrates averaged 14.58 per cent lead and 36.82 ounces of silver and o.216 ounces of gold to the ton, and the tailings contained 6.1 ounces of silver to the ton, a loss of over 45%. Concentration was in the ratio of 5.075 tons of feed to one ton of concentrates. Although nearly all the lead was recovered in the concentrate, the high silver loss made the operation of the mill under the conditions then existing unprofitable. No record appears to have been made of the zinc content of the ore milled. Much of the ore now exposed contains about as much sphalerite as galena. The only production since the mill shut down consisted of the small lots shipped by lessees recorded in the table above. Most or all of this was obtained by sorting material on the dump. Recently parts of the old workings have been reopened, but there has been no production.

The lode has an average strike of about N. 65° E. and dips 40°-45° S. in the upper workings, steepening to about 80° on the lowest level. This coincides approximately with that attitude of the sedimentary rocks in this vicinity, but on the third lever, at least, the shearing dips somewhat more steeply than the bedding. There is local variation in both. Interruptions

in the continuity of the lode, indicated by the sharp bends in the drifts in Figure 1, have been locally interperted as the result of postmineral faulting, There has probably been renewal of movement at different times, but most of this has been approximately parallel to the original shearing. Little evidence of lateral displacement exists in the parts of the workings studied, Here, as in many other deposits in this region, the apparent displacement results from arrangement of the original shearing in echelon rather than from post-mineral faulting.

The lode matter consists of Galena and Sphalerite, with locally considerable pyrite and small acunts of tetrahedrite in gangue of quartz and siderite in crushed and altered quartzite. Parallel banding is common, resulting from penetration along numerous planes of weakness in a zone of shearing. Vein quartz is more abundant than in many lodes of this type in the region, and some of it contains angular inclusions of quartzite, suggesting that there was considerable filling of pre-existing openings. Here as elsewhere, however, much of the mineralization resulted from replacement of the country rock. In places the ore zones are as much as 14 feet wide, and on the third level the combined length of the several zones is reported to be over 300 feet. Very little stopping has been done. Sampling recorded in Campbell's report indicates that the ore contains from 1 to nearly 4 per cent of lead, about as much zinc, over 2 ounces of silver to 1 per cent of lead, and small amounts of gold.

The following is an excrept (condensed) from Pamphlet #33--Geology and ore depositsof the Seafoam, Alder Creek, Little Smoky, and Willow Creek Mining Districts, In Custer and Camas County, Idaho. By Clyde P. Ross, U. S. Geological Survey.

PRODUCTION OF THE LITTLE SMOKY MINING DISTRICT. Compiled from the records of E. Daft, Assayer, Hailey, Idaho, and shipments to the Philadelphia Mining and Smelting Co., Ketchum, Idaho, for the years 1882 to 1903.

No.	Name of Property.	Dry tons.	Date shipped.	Gold Ounces	Silver Ounces	Lead Pounds	Zinc Pounds
1.	King of the West	848	'82 - '86	32.93	82,782	316,204	59,335
2.	Tyrannus	443.4	'85 - '03	1.96	32,486	472,456	7,920
3.	Carrie Leonard	823.9	'85 - '01	5.22	872,052	1,063,509	145,754
4.	Silver Star	603.62	'85 - '96	60.91	533,900	191,536	6,187
5.	Dollar Hide	60.24	'86 -'96	.28	3,420	18,928	------
6.	Isabella	106.70	'82 - '96	6.43	19,302	42,564	26,517
7.	Stormy Galore	340.57	'84 - '96	11.84	52,840	38,691	1,851
8.	Silver Crown	11.61	'90 - '06	.62	764	8,430	------
9.	Various Mines	148.16	'82 - '95	79.07	6,928	63,091	------
10.	Willow Creek(Buttercup)	661.01	'86 - '93	7.11	40,439	804,864	19,913
	Total	3,747.21		206.37	1,645,013	3,020,273	267,477

Average:

The above tabulation shows average contento to have been:

Gold-Ozs	Silver-Ozs	Lead-percent	Zinc-Percent
.055	439.	41.5%	3.55%

Approx. present value per ton - May 1st, 1949.
Gold @ $35.00, Silver @ .70¢, and Lead @ .14¢.

is: ———————————————— / Gold—— $ 1.925
Silver — 307.30
lead —— 116.20

Approx. total value per ton ——— $ 425.425

(Above report compiled by Marshall D. Draper, M. E.
715 Park Central Bldg.,
Los Angeles, Calif.)

REPORT COVERING PROPERTIES IN
THE LITTLE SMOKY MINING DISTRICT IN
CAMAS COUNTY, IDAHO

LOCATION:

The properties are located 26 miles North of Fairfield, Camas County, Idaho, close to the old Camp of Carrietown. Fairfield, the county seat of Camas County, has a present population of 492 and is a wheat and cattle community. Also has a sawmill, cutting from 30,000 to 40,000 feet of lumber per day. The Mill has a six-foot band saw. They secure their logs on Pine Creek, 40 miles from Fairfield.

TITLES:

The titles have been examined by the writer and they are all on record at the County Seat and are O.K. to date.

ELEVATION:

The elevation of Fairfield is 5065, and the community enjoys a wonderful climate in the summer months. Snow falls generally about mid-November, and is gone by the 1st of April.

ROADS:

Excellent roads to the Sawtooth National Forest and to Twin Falls extend across the valley and to Hailey. The valley has artesian water, mineral free, and is so pure it is used for battery water in automobiles, tractors, etc.

ACCOMODATIONS:

There is one hotel, a rooming house, and a number of private rooms in the community for the accommodation of traverlers in the area. A weekly newspaper serves the community, The Camas County Courier.

SUPPLIES:

The land along the Snake River near Twin Falls, a town of some 20,000 inhabitants, is prolific in growing potatoes, onions, beans, wheat, alfalfa, sugar beets, poultry, eggs, melons, watermelons, tomatoes. Peaches grow in abundance. The fruit has a wonderful flavor not found in many areas of the West, and is cheap and reasonable.

RAILROADS:

The Union Pacific Branch Line, known as the Hill City Branch of the Oregon Short Line, connects with Shoshone, 60 miles from Fairfield to the main line. Fairfield is approximately 300 miles from Salt Lake City, Utah, and the smelters at Garfield, Utah.

Little Smoky Mining District:

Twenty-six miles North of Fairfield is the old mining camp of Carrietown, reached by a hard-surfaced Forest Service Road. The District lies within the confines of the Sawtooth National Forest, Carritown being at an elevation of 7400 feet, and within a few feet of Carrie Creek. Second growth fir surrounds the camp, and several of the lod log houses still stand, built in the '80s, when Carrietown was the center of intense mining activity. It is on a good location for the campsite and the proposed operations in the vicinity. Water and mining timbers are available. The water is ample for milling purposes, the operation having the advantage of year-round water. A good millside can be obtained here

for milling purposes and one that can fully protect the steams in regard to tailings and debris. The various mines and prospects in the District can be reached by roads, the majority being old mine roads that can be easily bulldozed to be entirely serviceable.

HISTORY OF THE LITTLE SMOKY DISTRICT:

The history of the Little Smoky Mining District goes back into the '80s, when the country was in the pioneer stage. The writer was informed by an old-timer who was born and raised in this area, namely, Hailey, and farmed with his parents in Camas Prairie before ever the town of Fairfield or a railroad came into being in the valley, that at least eleven mills were in operation in the Little Smoky Mining District at one time or another. Judging by the size of the numerous dumps in the District, a large amount of activity took place in the period above mentioned. Most of the mines, of course, are now patented properties and quite a few of the workings are inaccessible, being caved. However, some are open enough to get some idea of the underground conditions. In those days there was a smelter at Ketchum, down over the divide from the Little Smoky, and ore from the mines in the District were smeltered there. (See attached sheet showing production records). The operators in those days had to have high-grade ore to make it pay. Of course, the body blow to a silver-producing district was the drop in the price of silver, which rapidly made ghost camps in the West. Carrietown was no exception to the rule and the mines simply closed down. Some had faulted ore bodies to contend with, and with the drop in the price of silver, no further exploration work took place. The District became abandoned, only assessment work on unpatented properties being done, and the taxes on patented properties being paid by the owners.

General Geology of the District

GRANITES:

The District is on the southeastern edge of the Idaho Batholith, consisting of various phases of the granites and quartz diorite. They underlie the District.

QUARTZITE:

Residual phases of the ~~granites and~~ quartzites were noted in the area, some of them noted as inclusions, crushed and much distorted.

LIMESTONE:

An old limestone, also crushed and disturbed by igneous intrusions, occurs in the District. This limestone is highly metamorphosed, especially in proximity to the igneous flows and dikes.

PORPHYRIES:

Rhyolite porphyry dykes intrude the limestone and in a few places the granites; these dykes of Tertiary Age, probably early Tertiary. The flows are of Tertiary Age, some of them older than others.

BASALT:

The basaltic flows seem to be the latest igneous activity in the area. They have almost eroded away in some places in the District. Some tufaceous material was noted in the area, but not a great deal.

MESOTHERMAL DEPOSITS (Little Smoky Mining District)

The Little Smoky Ore veins lie within the Wood River formation. They are Tetrahedrite-Galen-Siderite veins, formed within Carboniferous rocks, namely, the limestones and quartzites which were penetrated by ascending solution. They are associated with intrusions of quartz monzonite, granodiorite, lamphrophyric dykes and diorite. The lamprophyric dikes are the latest intrustion and the ores seem to be made contemporaneously with their intrustion. The veins themselves seem to be crushed and the ores appear as filling and replacements. The quartzite appears as angular inclusions witin the veins, and it is possible to see the drag of the faulting, with considerableslickensiding. Tetrahedrite seems to be the silver bearer, associated with galena. I have noticed considerable banding in theores and also in the country rocks showing the ascending solutions came through parallel joints and fractures were, no doubt, deposited by hot solutions from depth. Pyrite is also somewhat prevalent, carrying from 1.65% to 5% copper, associated with siderite and zinc blend. The ore shoots, being of the replacement series, are, by their very nature, irregular in size, shape and extent. The Minnie Moore Mine, in the Hailey District, shows 16' of solid galen and produced around $10,000,000 in a short period of time. Mesothermal deposits are among the deepest seated ore bodies in the world, the Coeur d' Alene having produced $564,000,000 to date. I believe the Little Smoky Mining District has every chance of going to depth, and should produce ore bodies consistently for years to come.

ORE BODIES:

Replacements in limestone and quartzite in contact with granite and porphyry dykes. They lie at various angles from 45% to 65% and in some places 75%. It depends upon the local condition of the enclosing rocks as to the andle at which the ore bodies lie. Where the pre-existing formations received the greatest pressure, both end and side, the ore bodies are flatter or blanket in character. The ore is formed along bedding planes in the limestone.

MINERALS: (GANGUE MATERIAL)

The gangue material associated with the ore is largely siderite, an iron carbonate calcite and inclusions of dark greyish quartzite with the quartz.

MINERALS: (METALLIC)

Galena, Pyrite, Bornite, Ruby Silver (Proustite,) Tetrahedrite, and ore of Copper-silver. Some Malachite was noted, but not a great deal.

VEINS IN THE DISTRICT:

There are a series of E. W. parallel fault fissures in the District, with N.W.S.E. cross fractures. These fissures are on both sides of Dollarhide Peak, a prominence of 9,272 feet, practically in the center of the Little Smoky Mining District. The fissures dip N. 45% - N. 60%, but 45% seems to be the average dip. Dollarhide Peak seems to ve the center of the mineralizing activity that took place in the area. The veins seem to ve veins that were made through step-faulting, the ore being made in the bedding planes on the limestones and quartzites. The vein matter is brecciated and crushed with quartzite inclusions, calcite, siderite and quartz. The metallic content of the vein is comples in character, containing pyrite, lead, silver, copper and zinc. In some of the mines, large metallic contents of iron are present. I have noted two of the carbonate ores of copper, namely, malachite and bornite present in some mining properties examined in the District. The vein system as a whole is astock work within a shear zone with considerable banding of the country rock, and the ore itself. The ore is a replacement; namely,

replacement ore bodies, formed in pre-existing formations along bedding planes in the structure, faulted, brecciated and crushed. The zones — a shallow oxide zone, and the sulphide zone — are mixed in character. I believe the lead-silver ores are secondary, and the ore bodies at greater depth will be copper-silver-zinc ores, with the copper content becoming greater with depth.

THE CARRIETOWN GROUP MINING CLAIMS:

The Carrietown Group consists of ten claims and was visited first. The Carrietown and Carrietown Nos. 5, 6, 7, 8 and 9 trend 20% N.E. - S. 20% S.W. Carrietown Claims Nos.1, 2, 3, and 4 trend N. by W. - S. by E., and follow the strike of cross-fracture veins. There are several tunnels on the property and ore was shipped from the property as late as 1944. The best ore showing is on the Carrietown claim. The Minerals Year Book shows the District shipped 227 tons from old dumps and tailings from the Carrie Leonard and the Stormy Galore. The Carrietown also produced some ore in 1944. There is an old compressor house on the Carrietown claim in good condition. I picked up specimens of bornite, and lead ore associated with pyrite on the dumps. No.1 tunnel is caved at the present time but has a large dump showing siderite, calcite and porphyry schist. No. 2 tunnel is in schistose material dipping N. 45% and trending E. and W. The upper tunnel is in ore, with good values in gold, copper, silver, lead and zinc. The vein at the surface carried $11.20 in gold. The vein assayed over $70.00 per ton. The ore makes on the hanging wall in the bedding planes, and is a typical replacement orebody characteristic of the District.

DEVELOPMENT WORK ON THE CARRIETOWN GROUP:

Tunnel No. 1 on the Carrietown is caved, and so is inaccessible at this time. Tunnel No. 2 has about 100 feet of workings. Some ore was stoped and shipped. I have examined the stope the ore came out of, and it measured about 60 feet up to Tunnel No. 3. Tunnel No. 3 has a stope measuring about 40' x 20' x 10'. Taking 12 cu. feet to the ton of broken ore as a measure, around 600 tons should be about the tonnage taken out of this stope, which connects with Tunnel No. 2, as previously mentioned. Tunnel No. 4 on the Carrietown Claim has ore in place on the hanging wall, about four to six inches of solid ore. I was able to secure samples of this ore, although the hanging wall at the moment is in a dangerous condition, and should be caught up at the earliest opportunity. This ore has a metallic content of gold, silver, lead, zinc, and copper. Previously sampling of this vein went as follows:

Gold	$10.50
Silver	19.80
Lead	29.28
Zinc	7.28
Copper	5.28; or a total of $72.14

In all, about 500 feet of work has been done on the Carrietown Claim. Other previous workings are shown by the various dumps on the Carrietown Claims No.1, 2, 6, 7, 8 and 9. The veins trend through the property and are typical parallel fault fissures of the District.

DEVELOPMENT WORK SUGGESSTED:

The surface veins and ores can easily be uncovered by using a bulldozer across the strike of the veins. This method of precedure is being successfully used on the South Side vein system, namely, the Summit Property, uncovering quantities of lead ore at the surface. On the Red Star Group churn drilling is now taking place. I am very confident that a large amount of good ore can also be uncovered on the Carrietown Group by following the procedure outlined above.

This should be done at an early date. A bulldozer is available in the District and can be hired, machine and man, for $8.00 per hour. It is amazing the work done on the Red Star Group in one afternoon, sufficient to pave the way for the churn drill. Five days' time, or $320.00 in monetary outlay, should uncover and expose the veins on the Carrietown Group for a considerable distance. This work should expose a good tonnage of ore, high and low grade, for milling purposes. You seldom find a district where conditions lend themselves to this class of development and prospecting. By getting down to solid material with the bulldozer, a portable compressor can be brought up and the work continued from there.

OTHER MINES VISITED:

I visited several old producers of the District, viz.: Carrie Leonard, Silver Star, Isabella, Smoky Bullion, Forest Group and Taft. All of these properties are patented properties, with the exception of the Red Star which is now churn drilling the property. The Carrie Leonard was the largest producer in the District and a large amount of work has been done there. The Ores from the dump material are the usual silver-lead-copper-zinc ores, and the early operators jigged out the zinc content. I have see the old slag dump at Ketchum from former operations. Ore was packed over trails by mules and ox teams to the smelter at Ketchum. These early operators had to have high-grade ore. In fact, $100.00 ore was their objective in their mining operations; anything under that value had to be discarded and put on the dumps. No depth to speak of has been developed in any of the early operations, the development having been done mainly by tunneling into the steep mountain sides. Many of the old dumps have been high-graded for ore by recent small lessees and the tailings jigged over for the zinc content and shipped out due to the high price of zinc. However, the large dumps all over the District contain ores of a milling grade that should be worked over by modern methods. In Bullion Gulch, six miles West of Hailey in Blaine County, the Apache Mines, Inc.m, has a 100-ton selective flotation plant operating entirely on old dumps and tailings in the Wood River Mining District. They are making an 80% to 94% recovery on these dumps and tailings. A like operation, within the Little Smoky Mining District, with the added incentive, I believe, of more milling ore than the Wood River Mining District, can be and should conceived at an early date. It is with this objective in mind and the method of procedure involved, that this report and recommendations has been undertaken. Three Hundred and fifty thousand tons from various mines and prospects from their dumps, to say nothing of the surface ores that can be uncovered by the bulldozer method of prospecting, should be incentive to install a mill to serve the District. Also by opening up and exploring old patented properties, I believe that considerable tonnage can be secured for the mill operations. However, the mill can run on dumps and surface ore for a good period.

METHODS OF PROCEDURE:

The methods and procedure for any mining and exploration company entering this District should be as follows:

1. The acquisition of mining claims and properties having a favorable amount of ore as a nucleus to start with;

2. The acquisition of the following machinery:

(a) A portable diamond drilling outfit. (Longyear)

(b) A portable compressor, drill, stell pipe, etc.

(c) A 5-ton truck to transport ore to the mill and concentrates to the smelter, and to haul the compressor to whatever point is desirable.

(d) A pilot mill (25-ton) to make a rough concentrate from ores from various mines and prospects. To be erected in a convenient place so as to enable the operators to haul their ore down grade.

(e) A bulldozer.

PILOT MILL:

The pilot plant will consist of a 25-ton mill, consisting of a crusher, mill, jigs and concentrating tables to make a rough concentrate for shipping to the smelter. This, of course, will be followed by a larger plant, either selective flotation or direct smelting.

PERMANENT MILL FOR THE DISTRICT:

After the ore supply is assured, the assay value of the ores worked out by the pilot mill, a selective flotation plant should be installed, of a capacity to suit the District, say, 100-tons capacity. This should be erected at a place where it is easily accessible to all the operators in the District, and where the tailings and debris can be easily controlled.

DEPTH OF THE ORE VEIN AND FUTURE OF THE DISTRICT:

The vein system in the area has only been exploited to a shallow depth and rich ore taken out, shipped and smeltered. For instend, the Carrie Leonard property produced $500,000 above the 150' level. This production, according to the development, is only in the shallow zone. There is no reason to presume deep mining will not produce more ore, and of good values. Every mine in the District is really in the first development stage. The pioneer mining operators had to develop ore in the shallow zones because they were not equipt to go to greater depth. The drop in the price of silver forced a shutdown of the mines in the area, as well as faulted orebodies. The same condition exists here as in other productive districts as to the geological conditions — the same gangue material, the East and West productive veins, N.E.S.W. cross fractures, the "swelling" and pinching of the veins and the same mineralizing agent, the Idaho Batholith, is present in the area. There is no reason to presume if the Batholith, is penetrated at depth, the mine will pinch out, because other mines in the area are wholly within the Batholithic rocks and are productive. I am led to the conclusion that tabular ore bodies consisting of silver-zinc-copper will be encountered at depth with minor amounts of lead. Some arsenical pyrite can be looked for. All in all, I am of the opinion the District has a future as a productive area of the metals — silver, zinc, and copper. Exploration at depth by shaft or by drilling should determine this condition. In the meantime, a goodly number of mines and prospects should produce a real amount of ore from the surface and dumps and tailings to make a mill well worthwhile as a paying project. The conclusion is reached, after a month's intensive study of the area, that thefuture is bright in the District and it only needs the prectical approach, as I have outlined in this report, to bring about intense activity that should develop real orebodies.

Respectfully submitted,

(signed) L. G. Blakemore
Mining Geologist-engineer.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. dma 1508 X

Date received 6-1-51

Participation

Name and address of applicant

ORIN H. GARNETT
DONALD VAUGHT
GEORGE R. WHITE — all of

FAIRFIELD, IDAHO.

Date May 23rd, 1951.

FILL IN THIS BLOCK

Date of application May 23rd, 1951

Estimated cost $100,000

Mineral or metal Silver, lead, zinc, copper

Percentage of Government participation 90%

Location of mine Approx. 26 miles north of Fairfield, Camas County, Idaho in Little Smoky Mining District.

Date of filing MF-100 Not filed

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

_____ (Name of company)

By _____ (Signature of authorized official)

_____ (Date)

Partner (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950.

DIRECTLY ANSWERING QUESTIONS CONTAINED IN FORM MFMO3 AND ALSO QUESTIONS PERTAINING TO FORM LE-100.

1. Applicant is a partnership.

2. Orin N. Garrett, Donald Vaught and George H. White all of Fairfield, Idaho.

3. No corporation.

4. Personel will be selected upon notice of application being accepted.

5. Owners.

6. No claims, leins or encumbrances against the property.

7. No lessee.

8. Property is not operating.

9. It is proposed to do 50% of financing upon approval of loan application.

10. Only one area involved, viz., 10 unpatented mining claims owned by the above mentioned locators, and known as the Carrietown Group of Claims, located in the Little Smoky Mining District, Camas County, Idaho and legally described as being in Sec. 6, Tws. 3 N., R. 15 E., Camas County, Idaho.

11. Formerly known in part as the Spokane, Grant and Grant Fraction claims. Has been identified as the "Young America Group" back in the 1890's.

12. Property is located approximately 26 miles north of Fairfield, Idaho and approximately 30 miles west of Ketchum, Idaho, both R. R. shipping points. Roads leading into this District are good Forest Service maintained roads. A private bull-dozed road in good condition is into the property connecting with Forest Service road, approximately 1 mile.

13. Carrie Creek draining from Dollar Hide watershed and bordering the property on the south is a year round water supply. Also a stream intersecting the property from north to south is a good year round source of water supply.

14. One small frame compressor house.

15. Ore could be either trucked to Fairfield or Ketchum and shipped by rail to Salt Lake Smelters; or trucked to local mill for custom milling. A plan now under consideration for the latter method of handling ore mined.

16. Attached. See our engineers report; Also U. S. Geological report.

17. Mine not in production at present time.

18. During the summer of 1944-45 approximately 750 tons of ore was shipped from this property, (from the Carrietown Claim, formerly the Grant). Estimated tonnage computed by approximate cubic foot measurement of cavity left, figuring 12 cubic feet to the ton of broken ore. Said cavity is filled by surface water to #3 tunnel level; estimated depth of workings below tunnel floor is 6 feet. Water should be pumped out to ascertain ore, if any, at this depth. Considerable ore left on hanging and foot walls or workings. A large quantity of ore left in the upper workings of the Carrietown. Hard to give a proper estimate, as workings are in bad shape. Would estimate approximately 500 tons of silver, lead, zinc, copper ore in sight, available in this upper workings. Assay returns on this ore run from $31.25 to $72.40.

19. Number 2 tunnel is connected with #3 tunnel by a stope, still standing, with some ore blocked out. This ore has not been sampled. The upper workings of the Carrietown are connected by stope to #3 tunnel. In bad shape. #1 tunnel should be opened, at present caved at portal, for examination and if found practical, a raise should be driven to #2 tunnel, so that ore from all upper workings could be brought out thru #1 tunnel. (See map)

20. Ore is silver, lead, zinc and copper in siderite and chalcopyrite.

21. Proposed work consists in opening #1 tunnel on Carrie town Claim and driving proposed raise; putting workings in shape so that present ore in sight may be minied; exploration work on Carrietown #1 and #2 which have open drifts--approximately 100 feet on each claim in ore; opening and retimbering old tunnels on Carrietown #6, #7, and #8 of which there are 3, to explore for ore; development of surface ore bodies on Carrietown #3, 4, and 9 claims. To install necessary machinery for the proper mining and exploration work. To install proper size and type of mill to handle ore from these properties and to build and furnish necessary living quarters for crew necessary to conduct such work.

22. See Engineers report, U. S. Geological report, maps etc.

23. Equiptment needed is everything necessary for the proper mining and exploration work to develop these properties. We estimate approximately $50,000 for equiptment and $50,000 for working capital. It is impossible to arrive at concrete figures on this undertaking as costs are continually changing and much of the proposed work is based on one part co-ordinating with the other. Proper inspection of this property by Government engineers in conjunction with our engineer will crystallize a program of mining and exploration work which will be mutually beneficial to the Government and the owners. A full two-year program should be necessary.

(COPY)

MINERALS ENGINEERING CO.,
LOS ANGELES, CALIF.

Jan. 30, 1950

To George White: $7.00 Pd

QUALITITIVE SPECTROGRAPHIC ANALYSIS

ELEMENT	ESTIMATED QUANTITY
Iron main constituent	
Silicon	10%
Lead	1 to 10
Copper	1 to 10
Zinc	1 to 10
Manganese	1
Magnesium	0.1 to 1
Aluminum	0.1 to 1
Calcium	0.1 to 1
Bismuth	0.01 to 0.1
Arsenic	0.01 to 0.1
Nickel	Trace
Cobalt	Trace
Silver	Present

(This sample from Carritown Claim)

ASSAY REPORTS ON CARRIETOWN CLAIMS - 1950.

COPY

Assay report
UNION ASSAY OFFICE, INC.,
Salt Lake City, Utah, 11.
Hand sample serial #10075

Mine -- U. S. #607 - Geo. R. White, (Carrietown #9)
Box 58, Fairfield, Idaho.

Gold Ozs per ton	Silver Ozs per ton	Lead Per cent wet	Copper Per cent	Zinc Per cent
0.200	1.6	1.0		2.0

Certificate of Assay
DEASON & NICHOLS
160 So. West Temple St.,
Salt Lake City, 1, Utah.

Mr. Bill Chess
J. R. Davies & Son
Fairfield, Idaho (#1 sample from Carrietown9- #2 sample from Carrietown)

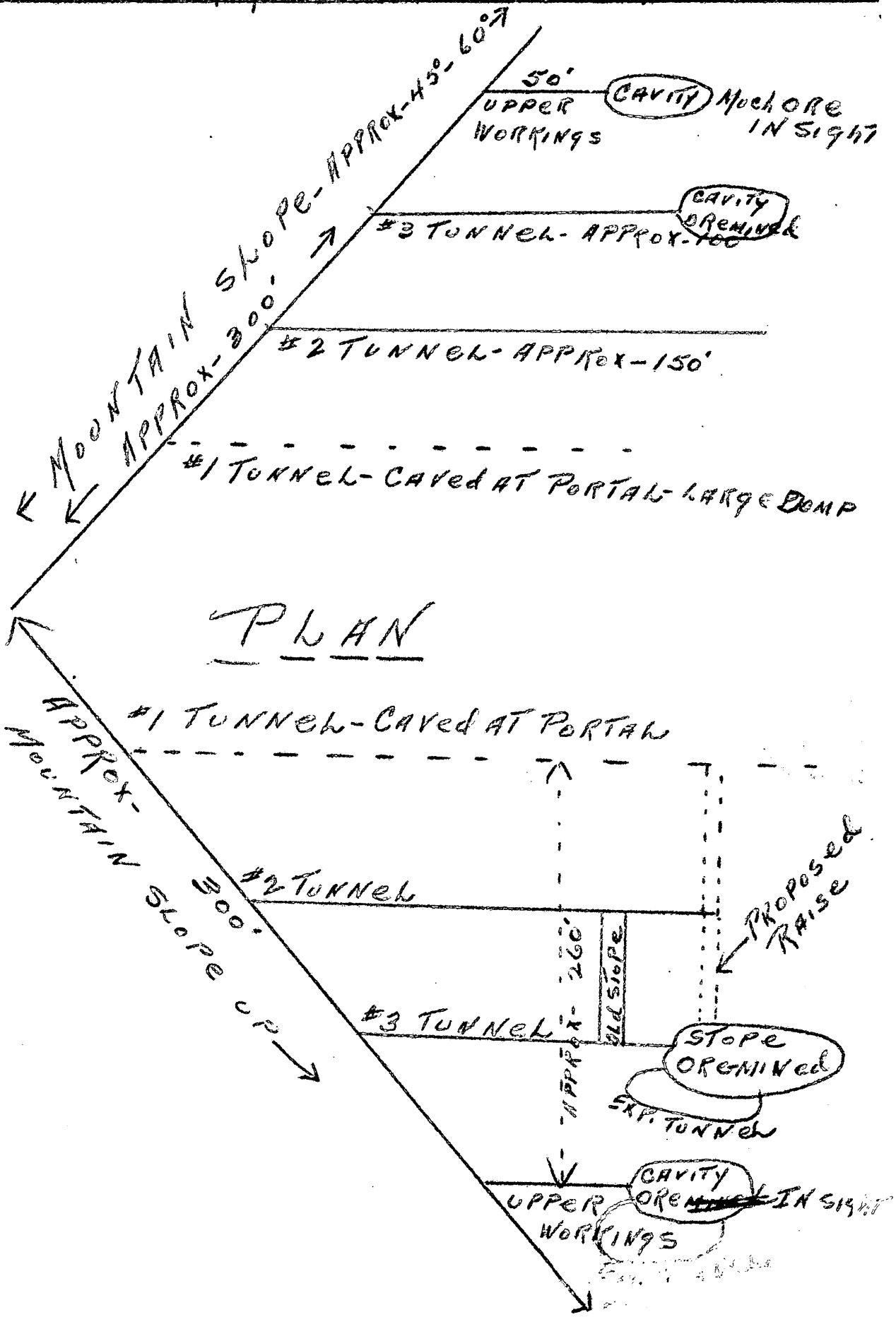
	Gold Ozs	Silver Ozs	Wet Lead %	Copper %	No zinc
Sample #1	0.02	14.20	22.20	0.8	Value $64.00
Sample #2	0.01	4.40	10.80	1.20	" 31.25

Assay Report
UNION ASSAY OFFICE, INC.,
Salt Lake City, 11, Utah.

Hand Sample Serial #10982-84
Mine - U. S. #644 - Geo. R. White
Fairfield, Idaho. (All bulk samples from Carrietown Claim)

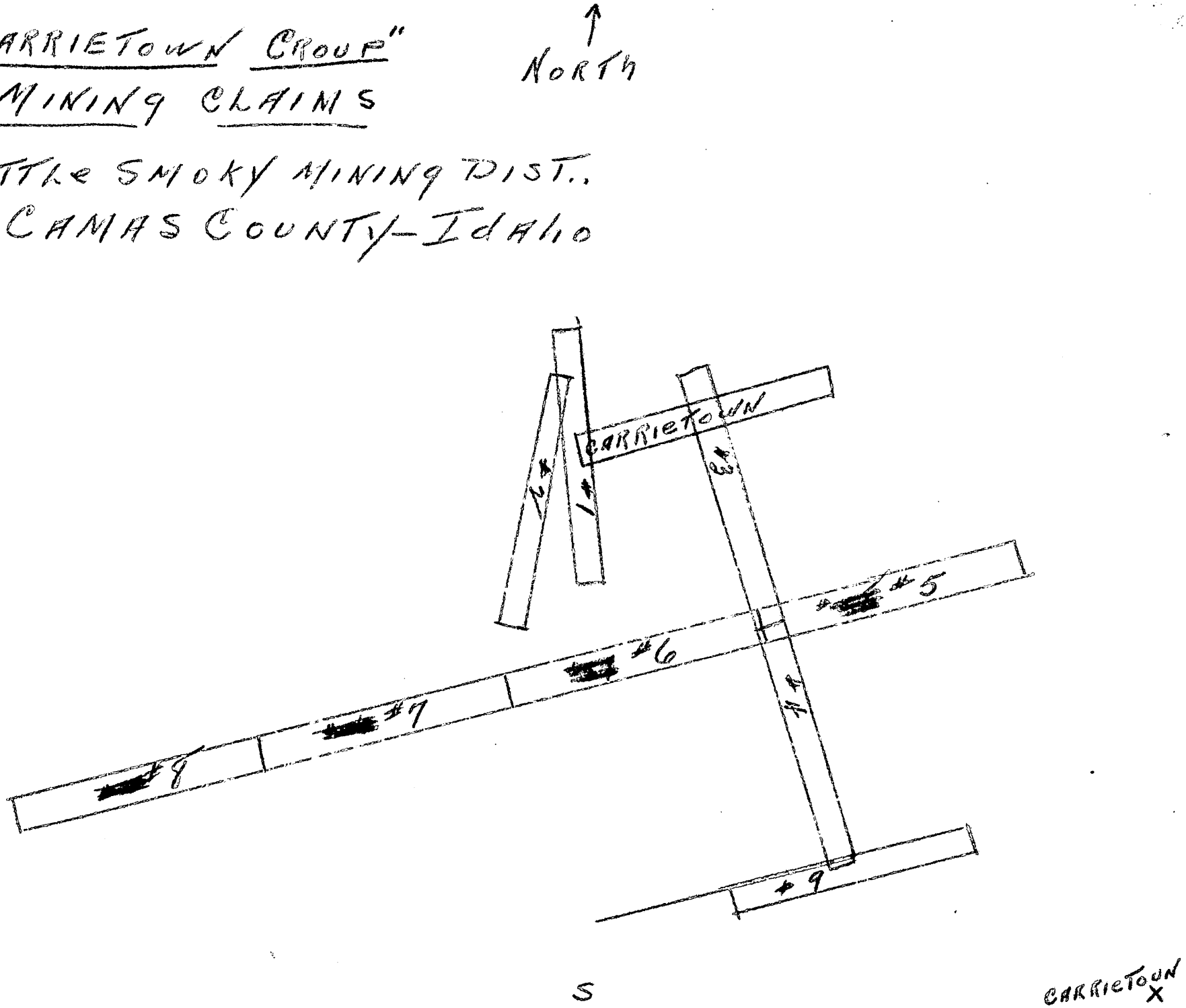
Sample	Gold Ozs	Silver Ozs	Lead %	Copper %	Zinc %
#1 dump	0.20	2.3	2.3	0.72	0.7
#2 Upper Work's Hang.wall	0.120	8.9	None?	1.52	None?
#3 Glory Hole	0.400	8.5	6.2	1.21	3.0

Rough Sketch of Underground Working
Carrietown Claim



"CARRIETOWN GROUP"
MINING CLAIMS

LITTLE SMOKY MINING DIST.,
CAMAS COUNTY—IDAHO



FOREWORD

The following data of the Little Smoky and Willow Creek mining districts, Camas County, Idaho is a correct and true copy of that portion of pamphlet #33, by Clyde P. Ross of the U. S. Geological Survey. Certain changes have been made in the arrangement of the data on the production record of the mines listed. They have been grouped by mines rather than by years of production as in the original.

It can be definitely stated that some quantities of ore have been shipped from these properties since the date of this pamphlet. For instance the Isabella Mine was leased and shipped ore during the years 1936, 1937 and 1938 and a property not here listed, known as the Grant and Grant Fraction, and now known as the Carrietown Group, shipped ore during the early 1940's, and many of the old dumps have been hand picked for shipping ore.

It will also be noted that little zinc is shown on the production records. The zinc content was in most cases jigged out. For instance the writer is familiar with the instance of the tailings from the Carrie Leonard Mine being worked for the zinc in the summer of ~~1914~~ 1914. Shipments were hauled from the mine to Fairfield in wagons and considerable zinc concentrates were recovered.

During the early days the writer has knowledge of mills being on the following properties:- Carrie Leonard, Silver Star, King of the West, Tyrannus, Dollar Ride, Smoky Bullion, Hidden Treasure and Five Points. It will be noted that some of these properties are not even mentioned in the production report.

It will be noted that most of these properties are grouped within a small radius. Considering the past production from this district under conditions of crude machinery and methods of operation, plus inaccessibility, compared to the improved methods and machinery available today, plus the accessibility to this district made possible by good Forest Service roads, and the abundance of milling ore to be obtained, it would be fair to presume that a modern custom mill erected in this district, where the flow of ore could be milled to a shippable concentrate, would pay big dividends at the present metal prices.

It is with this idea in mind that this data has been gathered and presented.

Respectfully submitted,

by George R. White,
Fairfield, Idaho.

Excerpt from Pamphlet #33 - Geology and Ore Deposits of the Seafoam, Alder Creek, Little Smoky and Willow Creek Mining Districts, in Custer and Camas Counties, Idaho. By Clyde P. Ross, U. S. Geological Survey.

The Little Smoky and Willow Creek Mining Districts, Camas County, Idaho.

The Little Smoky Mining District, which includes what is sometimes referred to as the Rosetta District, is an area of about 150 square miles lying mainly in the drainage basin of Little Smoky Creek in the southern part of the Sawtooth quadrangle, Camas County, Idaho. A few of the deposits are in Blaine County a short distance northeast of the crest of the Smoky Mountains, which here forms the divide between the two counties. The Willow Creek mining District, which includes the deposits in the drainage basin of Willow Creek, adjoins the Little Smoky district on the southeast and is also in Camas County on the border of Blaine County.

Both districts were discovered during the boom in lode mining in the early eighties and flourished for a time but have been almost entirely abandoned since about 1900. Most of the production ceased prior to 1890. In recent years interest in several of the properties has been renewed and some development work done, but no shipments, except a few sample lots, have yet been made. The lead and zinc ore characteristic of both districts can be more easily handled under present conditions than it could be in the early days. The relative accessibility of both districts encouraged the hope that development of some of the properties may prove profitable. Nearly all the properties can now be reached or closely approached by automobile over roads which are in part in poor shape but are without excessive grades. Carrietown, the former metropolis of the Little Smoky District, is 26 miles from the Hill City branch of the Oregon Short Line at Fairfield, and the mines of the Willow Creek district are about the same distance away. A somewhat shorter road formerly connected Carrietown with the railroad at Ketchum but is not indisrepair.

The first two tables below show the ship ments to the Ketchum Smelter from a number of mines identifies as being in the Little Smoky District in 1924, 1925 and 1926, and from the Silver Star in 1927, 1928 and 1929 and also give data on shipments which passed through the hands of L. Daft, of Hailey, in 1922 to 1926. It is probable that additions could be made to Ketchtables if all shipments could be identified. Some of those listed in Mr. Daft's records, or those of the Ketchum Smelter, only under the names of individuals or of mines whose locations are now unknown, may have come from this district. Approximate calculations show that the gross value of the shipments listed is about $1,200,000, which agrees well with Shgleby's estimate of a total production of $1,000,000, half of which came from the Carrie Leonard.

The only production known from the Willow Creek district is that recorded as from the Gertie Riddle by the Ketchum Smelter in 1926 and from the Buttercup by L. Daft in 1922 to 1923. Apparently these two names refer to the same mine or to closely adjoining mines. The data are shown in the thirdtable below. Small lots have been shipped at various times from other properties in the District, but data on these shipments are lacking.

General Geology.

The two districts lie on the southeastern border of the Idaho batholith and are largely underlain by the granitic rock of this mass, ranging in composition from granite to quartz diorite. Most of the ore deposits are in the impure quartzite and limestone of Paleozoic age which are intruded by the batholith. Because of their lithologic character and relation to rocks of known age in the adjoining Hailey quadrangle these strata are regarded as belonging to the Wood River formation, of Pennsylvanian age. No fossils have been found in them, and the stratigraphy has not been studied in detail, so that it is possible that pre-pennsylvannian beds are included in the Paleozoic rocks mapped on Figure 1. Both the granitic and the sedimentary rocks are cut by dikes of granophyre and kindred porphyries, so small that they were not mapped. Some of those dikes cut the lodes. From studies elsewhere it is believed that these dikes are of Miocene or possibly later age. Extensive remanents of the Challis Volanics (Miocene), which formerly covered the area, still remain. In the southern part of the area the Mount Bennett rhyolite has been distinguished from the rest of the volcanic rocks by Piper. This distinction has not been carried north of the area mapped by him and is not shown in Figure 1. This mapping has been used with revision, in preparing the southern part of Plate 1. In the southeast corner of the area mapped there are masses of the Snake River basalt. The Tertiary strata are probably much later than the ore deposition in this area. Near the head of Sheep Creek there is a small, partly caved tunnel in tuff, perhaps driven in search of lignite, as a little woody matter is present in the tuff. The tributaries of Little Smoky Creek contain considerable recent alluvian, some of which has been worked for its content of placer gold.

Ore Deposits.

The ore deposits of the Little Smoky and Willow Creek districts belong to the most common type of deposit in south-central Idaho. They have been formed along shear zones, largely by replacement, and are genetically related to the Idaho batholith. Most of them are in sedimentary rock close to the granitic contact, but two of those visited are in the granitic rock. The characteristic ore minerals are galena, sphalerite, pyrite, and tetrahedrite in a gangue of quartz, siderite, and altered country rock. Little can be added to the descriptions of Umpleby except for a few deposits on which development work has been done since his visit. The reader is referred to his report for data on the Carrie Leonard, Dollarhide, Isabella, Margaret, Silver Crown, King of the West, Sunday, Stormy Galore, Tyrannus, and Hidden Treasure, most of which were caved when the district was visited in 1929. In some of the above mentioned mines tunnels at a distance from the old stopes are still open, and several of these were entered, but few pertinent data were obtained. Little development, other than annual assessment work, has been attempted at most of them since 1900.

Although most of the Carrie Leonard Mine, formerly the most productive in either district, is now largely inaccessible and is therefore not described in the present paper, a map of the workings adapted from one kindly furnished by Mr. Stewart Campbell, State Mine Inspector, is reproduced as Figure 2 for the convenience of anyone interested in the future development of this or neighboring properties.

LITTLE SMOKY DISTRICT.

SILVER STAR MINE.

The Silver Star Mine is about 3,300 feet in an air line southwest of Carrietown, which in the boom days was the principal settlement of the district. The distance by the winding road is nearly two miles. This mine was one of the smaller producers in the early days but at present has a larger amount of underground workings accessible than any of the other old mines. This fact, coupled with data furnished by Mr. Stewart Campbell, State Mine Inspector, who kindly accompanied the writer to this and many of the other mines, makes it possible to give more information regarding this than any of the other properties. The characteristics of the Silver Star deposit are probably typical of the other deposits in sedimentary rocks in the two districts. The historical data summarized below are taken mainly from an unpublished report made by Mr. Campbell for the Idaho Lead Company, December 1, 1926. The geologic data consists mainly of observations by the writer on the surface and in #3 tunnel, the only safely accessible part of the workings.

The Silver Star vein was discovered in the summer of 1881, and a little high grade ore was shipped at that time. It was sold in 1883 to the Philadelphia Mining and Smelting Co., of Ketchum, for $50,000 in cash. This company drove the greater part of the more than 6,200 feet of underground workings shown in Figure 3 and erected a 20-ton stamp mill, which was put into operation November 15, 1887, and closed permanently December 20, 1887. The total expenditure by this company, including the purchase price, is reported to have been over $500,000. The table above records treatment of 523 tons of Silver Star ore and concentrates in 1885 to 1889. Campbells report states that 1,350 tons of ore were treated in the mill. After 258 tons of high grade material were picked out by hand the ore milled averaged 3 per cent lead and 13.5 ounces of silver to the ton. The concentrates averaged 14.58 per cent lead and 36.82 ounces of silver and 0.216 ounces of gold to the ton, and the tailings contained 6.1 ounces of silver to the ton, a loss of over 45%. Concentration was in the ratio of 5.075 tons of feed to one ton of concentrates. Although nearly all the lead was recovered in the concentrate, the high silver loss made the operation of the mill under the conditions then existing unprofitable. No record appears to have been made of the zinc content of the ore milled. Much of the ore now exposed contains about as much sphalerite as galena. The only production since the mill shut down consisted of the small lots shipped by lessees recorded in the table above. Most or all of this was obtained by sorting material on the dump. Recently parts of the old workings have been reopened, but there has been no production.

The lode has an average strike of about N. 65° E. and dips 40°-45° S. in the upper workings, steepening to about 80° on the lowest level. This coincides approximately with that attitude of the sedimentary rocks in this vicinity, but on the third lever, at least, the shearing dips somewhat more steeply than the bedding. There is local variation in both. Interruptions

in the continuity of the lode, indicated by the sharp bends in the drifts in Figure 1, have been locally interpreted as the result of postmineral faulting. There has probably been renewal of movement at different times, but most of this has been approximately parallel to the original shearing. Little evidence of lateral displacement exists in the parts of the workings studied. Here, as in many other deposits in this region, the apparent displacement results from arrangement of the original shearing in echelon rather than from post-mineral faulting.

The lode matter consists of Galena and Sphalerite, with locally considerable pyrite and small amounts of tetrahedrite in gangue of quartz and siderite in crushed and altered quartzite. Parallel banding is common, resulting from penetration along numerous planes of weakness in a zone of shearing. Vein quartz is more abundant than in many lodes of this type in the region, and some of it contains angular inclusions of quartzite, suggesting that there was considerable filling of pre-existing openings. Here as elsewhere, however, much of the mineralization resulted from replacement of the country rock. In places the ore zones are as much as 14 feet wide, and on the third level the combined length of the several zones is reported to be over 300 feet. Very little stopping has been done. Sampling recorded in Campbell's report indicates that the ore contains from 1 to nearly 4 per cent of lead, about as much zinc, over 2 ounces of silver to 1 per cent of lead, and small amounts of gold.

The following is an excerpt (condenced) from Pamphlet #33—Geology and ore depositsof the Seafoam, Alder Creek, Little Smoky, and Willow Creek Mining Districts, In Custer and Camas County, Idaho. By Clyde P. Ross, U. S. Geological Survey.

PRODUCTION OF THE LITTLE SMOKY MINING DISTRICT. Compiled from the records of E. Daft, Assayer, Hailey, Idaho, and shipments to the Philadelphia Mining and Smelting Co., Ketchum, Idaho, for the years 1882 to 1903.

No.	Name of Property.	Dry tons.	Date shipped.	Gold Ounces	Silver Ounces	Lead Pounds	Zinc Pounds
1.	King of the West	848	'82 - '96	32.93	82,782	316,204	59,335
2.	Tyrannus	443.4	'85 - '03	1.96	32,486	472,456	7,920
3.	Carrie Leonard	823.0	'85 - '01	5.22	872,052	1,063,509	145,754
4.	Silver Star	603.62	'85 - '96	60.91	533,900	191,536	6,187
5.	Dollar Hide	60.24	'86 - '96	.28	3,420	18,928	———
6.	Isabella	106.70	'82 - '96	6.43	19,302	42,564	26,517
7.	Stormy Galore	340.57	'84 - '96	11.84	52,240	38,691	1,851
8.	Silver Crown	11.61	'90 - '06	.62	764	8,420	———
9.	Verbous Mines	148.16	'82 - '95	79.07	6,928	63,091	———
10.	Willow Creek(Buttercup)	661.01	'86 - '93	7.11	40,439	804,864	19,913
	Total	3,747.21		206.37	1,645,013	3,020,273	267,477

Average:

The above tabulation shows average contents to have been:

Gold-Ozs	Silver-Ozs	Lead-percent	Zinc-Percent
.055	439.	41.5%	3.55%

Approx. present value per ton - May 1st, 1949.
Gold @ $35.00, Silver @ .70¢, and Lead @ .14¢.

1s: ——— /	Gold——— @	1.925
	Silver —	307.30
	lead —	116.20
Approx. total value per ton ———	@	425.425

(Above report compiled by Marshall D. Drover, M. E.
715 Park Central Bldg.,
Los Angeles, Calif.)

REPORT COVERING PROPERTIES IN
THE LITTLE SMOKY MINING DISTRICT IN
CAMAS COUNTY, IDAHO

LOCATION:

The properties are located 26 miles North of Fairfield, Camas County, Idaho, close to the old Camp of Carrictown. Fairfield, the county seat of Camas County, has a present population of 492 and is a wheat and cattle community. Also has a sawmill, cutting from 30,000 to 40,000 feet of lumber per day. The Mill has a six-foot band saw. They secure their logs on Pine Creek, 40 miles from Fairfield.

TITLES:

The titles have been examined by the writer and they are all on record at the County Seat and are O.K. to date.

ELEVATION:

The elevation of Fairfield is 5065, and the community enjoys a wonderful climate in the summer months. Snow falls generally about mid-November, and is gone by the 1st of April.

ROADS:

Excellent roads to the Sawtooth National Forest and to Twin Falls extend across the valley and to Hailey. The valley has artesian water, mineral free, and is so pure it is used for battery water in automobiles, tractors, etc.

ACCOMODATIONS:

There is one hotel, a rooming house, and a number of private rooms in the community for the accomodation of travelers in the area. A weekly newspaper serves the community, The Camas County Courier.

SUPPLIES:

The land along the Snake River near Twin Falls, a town of some 20,000 inhabitants, is prolific in growing potatoes, onions, beans, wheat, alfalfa, sugar beets, poultry, eggs, melons, watermelons, tomatoes. Peaches grow in abundance. The fruit has a wonderful flavor not found in many areas of the West, and is cheap and reasonable.

RAILROADS:

The Union Pacific Branch Line, known as the Hill City Branch of the Oregon Short Line, connects with Shoshone, 60 miles from Fairfield to the main line. Fairfield is approximately 300 miles from Salt Lake City, Utah, and the smelters at Garfield, Utah.

Little Smoky Mining District:

Twenty-six miles North of Fairfield is the old mining camp of Carrictown, reached by a hard-surfaced Forest Service Road. The District lies within the confines of the Sawtooth National Forest, Carritown being at an elevation of 7400 feet, and within a few feet of Carrie Creek. Second growth fir surrounds the camp, and several of the lod log houses still stand, built in the '80s, when Carrictown was the center of intense mining activity. It is on a good location for the campsite and the proposed operations in the vicinity. Water and mining timbers are available. The water is ample for milling purposes, the operation having the advantage of year-round water. A good millsite can be obtained here

for milling purposes and one that can fully protect the streams in regard to tailings and debris. The various mines and prospects in the District can be reached by roads, the majority being old mine roads that can be easily bulldozed to be entirely serviceable.

HISTORY OF THE LITTLE SMOKY DISTRICT:

The history of the Little Smoky Mining District goes back into the '80s, when the country was in the pioneer stage. The writer was informed by an old-timer who was born and raised in this area, namely, Hailey, and farmed with his parents in Camas Prairie before ever the town of Fairfield or a railroad came into being in the valley, that at least eleven mills were in operation in the Little Smoky Mining District at one time or another. Judging by the size of the numerous dumps in the District, a large amount of activity took place in the period above mentioned. Most of the mines, of course, are now patented properties and quite a few of the workings are inaccessible, being caved. However, some are open enough to get some idea of the underground conditions. In those days there was a smelter at Ketchum, down over the divide from the Little Smoky, and ore from the mines in the District were smeltered there. (See attached sheet showing production records). The operators in those days had to have high-grade ore to make it pay. Of course, the body blow to a silver-producing district was the drop in the price of silver, which rapidly made ghost camps in the West. Carrietown was no exception to the rule and the mines simply closed down. Some had faulted ore bodies to contend with, and with the drop in the price of silver, no further exploration work took place. The District became abandoned, only assessment work on unpatented properties being done, and the taxes on patented properties being paid by the owners.

General Geology of the District

GRANITES:

The District is on the southeastern edge of the Idaho Batholith, consisting of various phases of the granites and quartz diorite. They underlie the District.

QUARTZITE:

Residual phases of the ~~granites and~~ quartzites were noted in the area, some of them noted as inclusions, crushed and much distorted.

LIMESTONE:

An old limestone, also crushed and disturbed by igneous intrusions, occurs in the District. This limestone is highly metamorphosed, especially in proximity to the igneous flows and dikes.

PORPHYRIES:

Rhyolite porphyry dykes intrude the limestone and in a few places the granites; these dykes of Tertiary Age, probably early Tertiary. The flows are of Tertiary Age, some of them older than others.

BASALT:

The basaltic flows seem to be the latest igneous activity in the area. They have almost eroded away in some places in the District. Some tufaceous material was noted in the area, but not a great deal.

MESOTHERMAL DEPOSITS (Little Smoky Mining District)

The Little Smoky Ore veins lie within the Wood River formation. They are Tetrahedrite-Galen-Siderite veins, formed within Carboniferous rocks, namely, the limestones and quartzites which were penetrated by ascending solution. They are associated with intrusions of quartz monzonite, granodiorite, lamprophyric dykes and diorite. The lamprophyric dikes are the latest intrustion and the ores seem to be made contemporaneously with their intrustion. The veins themselves seem to be crushed and the ores appear as filling and replacements. The quartzite appears as angular inclusions witin the veins, and it is possible to see the drag of the faulting, with considerable slickensiding. Tetrahedrite seems to be the silver bearer, associated with galena. I have noticed considerable banding in theores and also in the country rocks showing the ascending solutions came through parallel joints and fractures were, no doubt, deposited by hot solutions from depth. Pyrite is also somewhat prevalent, carrying from 1.65% to 5% copper, associated with siderite and zinc blend. The ore shoots, being of the replacement series, are, by their very nature, irregular in size, shape and extent. The Minnie Moore Mine, in the Hailey District, shows 16' of solid galen and produced around $10,000,000 in a short period of time. Mesothermal deposits are among the deepest seated ore bodies in the world, the Coeur d' Alene having produced $564,000,000 to date. I believe the Little Smoky Mining District has every chance of going to depth, and should produce ore bodies consistently for years to come.

ORE BODIES:

Replacements in limestone and quartzite in contact with granite and porphyry dykes. They lie at various angles from 45% to 65% and in some places 75%. It depends upon the local condition of the enclosing rocks as to the angle at which the ore bodies lie. Where the pre-existing formations received the greatest pressure, both end and side, the ore bodies are flatter or blanket in character. The ore is formed along bedding planes in the limestone.

MINERALS: (GANGUE MATERIAL)

The gangue material associated with the ore is largely siderite, an iron carbonate calcite and inclusions of dark greyish quartzite with the quartz.

MINERALS: (METALLIC)

Galena, Pyrite, Bornite, Ruby Silver (Proustite,) Tetrahedrite, and ore of Copper-silver. Some Malachite was noted, but not a great deal.

VEINS IN THE DISTRICT:

There are a series of E. W. parallel fault fissures in the District, with N.W.S.E. cross fractures. These fissures are on both sides of Dollarhide Peak, a prominence of 9,272 feet, practically in the center of the Little Smoky Mining District. The fissures dip N. 45% - N. 60%, but 45% seems to be the average dip. Dollarhide Peak seems to ve the center of the mineralizing activity that took place in the area. The veins seem to ve veins that were made through step-faulting, the ore being made in the bedding planes on the limestones and quartzites. The vein matter is brecciated and crushed with quartzite inclusions, calcite, siderite and quartz. The metallic content of the vein is complex in character, containing pyrite, lead, silver, copper and zinc. In some of the mines, large metallic contents of iron are present. I have noted two of the carbonate ores of copper, namely, malachite and bornite present in some mining properties examined in the District. The vein system as a whole is stock work within a shear zone with considerable banding of the country rock, and the ore itself. The ore is a replacement; namely,

replacement ore bodies, formed in pre-existing formations along bedding planes in the structure, faulted, brecciated and crushed. The zones — a shallow oxide zone, and the sulphide zone — are mixed in character. I believe the lead-silver ores are secondary, and the ore bodies at greater depth will be copper-silver-zinc ores, with the copper content becoming greater with depth.

THE CARRIETOWN GROUP MINING CLAIMS:

The Carrietown Group consists of ten claims and was visited first. The Carrietown and Carrietown Nos. 5, 6, 7, 8 and 9 trend 20% N.E. - S. 20% S.W. Carrietown Claims Nos.1, 2, 3, and 4 trend N. by W. - S. by E., and follow the strike of cross-fracture veins. There are several tunnels on the property and ore was shipped from the property as late as 1944. The best ore showing is on the Carrietown claim. The Minerals Year Book shows the District shipped 227 tons from old dumps and tailings from the Carrie Leonard and the Stormy Galore. The Carrietown also produced some ore in 1944. There is an old compressor house on the Carrietown claim in good condition. I picked up specimens of bornite, and lead ore associated with pyrite on the dumps. No.1 tunnel is caved at the present time but has a large dump showing siderite, calcite and porphyry schist. No. 2 tunnel is in schistose material dipping N. 45% and trending E. and W. The upper tunnel is in ore, with good values in gold, copper, silver, lead and zinc. The vein at the surface carried $11.20 in gold. The vein assayed over $70.00 per ton. The ore makes on the hanging wall in the bedding planes, and is a typical replacement orebody characteristic of the District.

DEVELOPMENT WORK ON THE CARRIETOWN GROUP:

Tunnel No. 1 on the Carrietown is caved, and so is inaccessible at this time. Tunnel No. 2 has about 100 feet of workings. Some ore was stoped and shipped. I have examined the stope the ore came out of, and it measured about 60 feet up to Tunnel No. 3. Tunnel No. 3 has a stope measuring about 40' x 20' x 10' Taking 12 cu. feet to the ton of broken ore as a measure, around 600 tons should be about the tonnage taken out of this stope, which connects with Tunnel No. 2, as previously mentioned. Tunnel No. 4 on the Carrietown Claim has ore in place on the hanging wall, about four to six inches of solid ore. I was able to secure samples of this ore, although the hanging wall at the moment is in a dangerous condition, and should be caught up at the earliest opportunity. This ore has a metallic content of gold, silver, lead, zinc, and copper. Previously sampling of this vein went as follows:

Gold	$10.50
Silver	19.60
Lead	29.28
Zinc	7.28
Copper	5.28; or a total of $72.14

In all, about 500 feet of work has been done on the Carrietown Claim. Other previous workings are shown by the various dumps on the Carrietown Claims No.1, 2, 6, 7, 8 and 9. The veins trend through the property and are typical parallel fault fissures of the District.

DEVELOPMENT WORK SUGGESTED:

The surface veins and ores can easily be uncovered by using a bulldozer across the strike of the veins. This method of procedure is being successfully used on the South Side vein system, namely, the Summit Property, uncovering quantities of lead ore at the surface. On the Red Star Group churn drilling is now taking place. I am very confident that a large amount of good ore can also be uncovered on the Carrietown Group by following the procedure outlined above.

This should be done at an early date. A bulldozer is available in the District and can be hired, machine and man, for $8.00 per hour. It is amazing the work done on the Red Star Group in one afternoon, sufficient to pave the way for the churn drill. Five days' time, or $320.00 in monetary outlay, should uncover and expose the veins on the Carrietown Group for a considerable distance. This work should expose a good tonnage of ore, high and low grade, for milling purposes. You seldom find a district where conditions lend themselves to this class of development and prospecting. By getting down to solid material with the bulldozer, a portable compressor can be brought up and the work continued from there.

OTHER MINES VISITED:

I visited several old producers of the District, viz.: Carrie Leonard, Silver Star, Isabella, Smoky Bullion, Forest Group and Taft. All of these properties are patented properties, with the exception of the Red Star which is now churn drilling the property. The Carrie Leonard was the largest producer in the District and a large amount of work has been done there. The Ores from the dump material are the usual silver-lead-copper-zinc ores, and the early operators jigged out the zinc content. I have see the old slag dump at Ketchum from former operations. Ore was packed over trails by mules and ox teams to the smelter at Ketchum. These early operators had to have high-grade ore. In fact, $100.00 ore was their objective in their mining operations; anything under that value had to be discarded and put on the dumps. No depth to speak of has been developed in any of the early operations, the development having been done mainly by tunneling into the steep mountain sides. Many of the old dumps have been high-graded for ore by recent small lessees and the tailings jigged over for the zinc content and shipped out due to the high price of zinc. However, the large dumps all over the District contain ores of a milling grade that should be worked over by modern methods. In Bullion Gulch, six miles West of Hailey in Blaine County, the Apache Mines, Inc.,s, has a 100-ton selective flotation plant operating entirely on old dumps and tailings in the Wood River Mining District. They are making an 80% to 94% recovery on these dumps and tailings. A like operation, within the Little Smoky Mining District, with the added incentive, I believe, of more milling ore than the Wood River Mining District, can be and should conceived at an early date. It is with this objective in mind and the method of procedure involved, that this report and recommendations has been undertaken. Three Hundred and fifty thousand tons from various mines and prospects from their dumps, to say nothing of the surface ores that can be uncovered by the bulldozer method of prospecting, should be incentive to install a mill to serve the District. Also by opening up and exploring old patented properties, I believe that considerable tonnage can be secured for the mill operations. However, the mill can run on dumps and surface ore for a good period.

METHODS OF PROCEDURE:

The methods and procedure for any mining and exploration company entering this District should be as follows:

1. The acquisition of mining claims and properties having a favorable amount of ore as a nucleus to start with;
2. The acquisition of the following machinery:
   - (a) A portable diamond drilling outfit. (Longyear)
   - (b) A portable compressor, drill, steel pipe, etc.
   - (c) A 5-ton truck to transport ore to the mill and concentrates to the smelter, and to haul the compressor to whatever point is desirable.
   - (d) A pilot mill (25-ton) to make a rough concentrate from ores from various mines and prospects. To be erected in a convenient place so as to enable the operators to haul their ore down grade.
   - (e) A bulldozer.

PILOT MILL:

The pilot plant will consist of a 25-ton mill, consisting of a crusher, mill, jigs and concentrating tables to make a rough concentrate for shipping to the smelter. This, of course, will be followed by a larger plant, either selective flotation or direct smelting.

PERMANENT MILL FOR THE DISTRICT:

After the ore supply is assured, the assay value of the ores worked out by the pilot mill, a selective flotation plant should be installed, of a capacity to suit the District, say, 100-tons capacity. This should be erected at a place where it is easily accessible to all the operators in the District, and where the tailings and debris can be easily controlled.

DEPTH OF THE ORE VEIN AND FUTURE OF THE DISTRICT:

The vein system in the area has only been exploited to a shallow depth and rich ore taken out, shipped and smeltered. For instead, the Carrie Leonard property produced $500,000 above the 150' level. This production, according to the development, is only in the shallow zone. There is no reason to presume deep mining will not produce more ore, and of good values. Every mine in the District is really in the first development stage. The pioneer mining operators had to develop ore in the shallow zones because they were not equipt to go to greater depth. The drop in the price of silver forced a shutdown of the mines in the area, as well as faulted orebodies. The same condition exists here as in other productive districts as to the geological conditions — the same gangue material, the East and West productive veins, N.E.S.W. cross fractures, the "swelling" and pinching of the veins and the same mineralizing agent, the Idaho Batholith, is present in the area. There is no reason to presume if the Batholith, is penetrated at depth, the mine will pinch out, because other mines in the area are wholly within the Batholithic rocks and are productive. I am led to the conclusion that tabular ore bodies consisting of silver-zinc-copper will be encountered at depth with minor amounts of lead. Some arsenical pyrite can be looked for. All in all, I am of the opinion the District has a future as a productive area of the metals — silver, zinc, and copper. Exploration at depth by shaft or by drilling should determine this condition. In the meantime, a goodly number of mines and prospects should produce a real amount of ore from the surface and dumps and tailings to make a mill well worthwhile as a paying project. The conclusion is reached, after a month's intensive study of the area, that thefuture is bright in the District and it only needs the practical approach, as I have outlined in this report, to bring about intense activity that should develop real orebodies.

Respectfully submitted,

(signed) L. G. Blakemore
Mining Geologist-engineer.