DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMEA ~~DMA~~ Docket No. 2373

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CONTROLLED DOCUMENT

2373 - Wood River Mining Co. - application held pending examination

FILE COPY
SURNAME:

Corbett
Keller
Pierson
Lemmon
Johnson

500

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

AUG 14 1952

Mr. George C. Castle
Wood River Lead & Zinc Mine
Box 47
Ketchum, Idaho

Re: Docket No. DMEA-2373
Wood River Lead & Zinc Mine
Warm Springs District
Blaine County, Idaho

Dear Mr. Castle:

Reference is made to your application, Docket No. DMEA-2373, for Government assistance in the exploration of your property.

A study of the information furnished in your application and other data available to this agency, indicates that the geological possibility of discovering significant bodies of ore is too poor to warrant the expenditure of public funds. We regret to advise you, therefore, that your application is denied.

Your interest in the defense program is appreciated, and we wish to thank you for bringing your property to the attention of the Government.

Sincerely yours,

C. O. Mittendorf

Acting Administrator

8-14-52

FXCorbett/bjl (written 8/11/52)

Copy to: Docket
Adrm. R. File
Op. Committee
H. F. Keller (2)
F. X. Corbett
Mr. Bishop
Mr. McKnight
Region II
Chron.

FILE COPY
SURNAME:

Corbett
Miller
Lemmon
Johnson

500

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

August 11, 1952

Memorandum

To: Acting Administrator

From: Acting Chief, Base Metals Division

Subject: Denial of Application Docket No. DMEA-2373

In compliance with Field Team and Commodity engineers regarding the merits of this proposal, this office has refused to grant exploration funds for this property.

The application was received in this office on February 11, 1952, and a report by the U.S.B.M. and the U.S.G.S. describing the property on July 24, 1952. In this report it is stated that several hundred feet of exploration work, both horizontally and vertically on the vein have failed to disclose workable ore bodies; further, the possibilities of discovering significant bodies of ore are too poor to warrant the program requested.

H. F. Keller

H. F. Keller
Acting Chief, Base Metals Division

FXCorbett/bjl

Copy to: Docket
Admr. R. File
Operating Committee
Mr. Keller (2)
Mr. Corbett
Mr. Bishop
Mr. McKnight
Chron.

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H. F. Keller

H. F. Keller
Acting Chief, Base Metals Division

IN REPLY REFER TO:

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

August 5, 1952

Memorandum

To: Mr. H. F. Keller

From: E. L. Newcomb, USGS
O. M. Bishop, USBM

Re: DMEA-2373
Wood River Lead & Zinc Mine
Warm Springs District
Blaine County, Idaho
$33,569.13
Lead, zinc

Subject: Recommendation for denial

The applicant requests Government assistance to explore the hanging wall portion of a split vein by sinking a 300-foot winze on the vein from the lower adit level. From the winze a total of 850 feet of drifting would be driven on the 100, 200 and 300 levels.

The field team does not recommend the applicant's proposal for approval. However, they have suggested a 3-stage project for possible consideration.

The present workings have explored the vein for over 300 feet along the strike and 230 feet down the dip without exposing any minable ore shoots. At the surface the vein outcrops as a persistent shear zone 2-4 feet wide. At depth it is divided into numerous splits, which are believed to be pre-mineral bedding faults. Most of the mineralization down to the lower adit level is oxidized, but at this level sulfides become more abundant. Eight samples were taken by the field team which average about 2% zinc over an average width of about 3 feet. The occurrence of the mineralization in narrow, low grade vein splits has been well established by the extensive exploration work already completed on the property. The available evidence indicates that further exploration work would be highly speculative and unlikely to find any significant tonnage of minable ore.

We recommend that the application be denied.

E. L. Newcomb (ETN)

E. L. Newcomb
Geologist

O. M. Bishop

O. M. Bishop
Mining Engineer

August 5, 1952

Memorandum

Re: DMEA-2373
Wood River Lead & Zinc Mine
Warm Springs District
Blaine County, Idaho
$33,569.13
Lead, zinc

To: Mr. H. F. Keller

From: L. L. Newcomb, USGS
O. M. Bishop, USBM

Subject: Recommendation for denial

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We recommend that the application be denied.

L. L. Newcomb
Geologist

O. M. Bishop
Mining Engineer

"U. S. Geological Survey"

COPY

So. 157 Howard Street
Spokane 4, Washington

July 21, 1952

Memorandum

To: Chairman, DMEA Operating Committee

From: DMEA Field Team, Region II

Subject: Report of field examination of the Wood River Lead-Zinc property, Blaine County, Idaho, DMEA Docket No. 2373

Attached are four copies of a report by Thor H. Kiilsguard, Geologist, U. S. Geological Survey, and T. E. Howard, Mining Engineer, U. S. Bureau of Mines, on the Wood River Lead-Zinc mine, Blaine County, Idaho.

The examiners do not present a conclusive opinion on the merits of the property. They call attention to the strong character of the vein, which appears to be increasing in strength and in zinc-lead sulphide content in the northwestern part of the mine on the lower level, and they suggest that the Hanging Wall vein in that area might warrant exploration to test the possible occurrence of minable ore bodies. They are, however, agreed that the exploration program proposed by the applicant is unwarranted and have therefore outlined a limited program, which, if acceptable to DMEA, could be presented to the applicant.

The Field Team recognized the low grade of the zinc-lead ore exposed in the mine workings; however, as proposed work by the examiners would be exploration in previously untested areas believed to be increasing in sulphide content, and since the vein is strong and could contain substantial ore bodies, and the applicant is experienced and considered competent to do the work, the Field Team recommends that a limited contract be negotiated. The exploration should be on a stage basis, as suggested in the attached report, and the applicant should be advised that the contract may be terminated at any point if exploration findings should so warrant.

By DMEA Field Team, Region II

/s/ A. E. Weissenborn, Exec. Officer
(U. S. Geological Survey)

/s/ M. E. Volin, Member, (USBM)

cc: USBM
Enclosures

U. S. Geological Survey
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 24 1952

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

1201 N. Division St.
Spokane 2, Wash.

July 17, 1952

MEMORANDUM

To: Field Team, DMEA, Region II

From: T. E. Howard, Mining Engineer, U. S. Bureau of Mines, and T. H. Kiilsgaard, Geologist, U. S. Geological Survey

Subject: Field examination of the Wood River Lead & Zinc prospect, Blaine County, Idaho, Docket DMEA 2373 (lead-zinc)

INTRODUCTION

The subject examination was begun June 1 and completed June 2, 1952. The applicants, Mr. George C. Castle, Mr. Orla R. Hicks, and Mr. Clayton L. Stewart, all of Ketchum, Idaho, accompanied the examining team during the first part of the examination.

RECOMMENDATIONS

In the opinion of the examining team the exploration program proposed by the applicant is not warranted at the present stage of development. Furthermore, it is considered that any future exploration would be in the nature of a long shot. Existing mine workings which explore the vein for over 300 feet on the strike and 230 feet along the dip have exposed no minable ore shoots. However, as the vein is strong and appears to be approaching the sulfide zone in the lower adit, a limited amount of exploration might be justified and may well indicate minable ore bodies. If the Field Team considers that the property merits any exploration work, it is recommended that a limited program, to be performed in stages with each successive stage contingent upon the success of the preceding one, be discussed with the applicant. Inasmuch as the quantity and quality of the ore appears to be increasing in the northeastern part of the mine, it is recommended that this area receive primary consideration in any contemplated exploration program.

LOCATION AND ACCESSIBILITY

The Wood River Lead and Zinc prospect is near the mouth of the North Fork of the Wood River in sec. 3, T. 5 N., R. 17 E., Boise meridian, in Blain County, Idaho, 10 miles northwest of Ketchum, Idaho,

Reviewed by
DEFENSE MINERALS COMMITTEE
7/28/52 TPT
(date)

the nearest railhead. One mile of good graveled road connects the property with paved U. S. Highway No. 93 at a point 9 miles northwest of Ketchum. The Lower adit portal is only about 150 yards from the graveled road and a few feet above the valley floor.

Heavy snowfall is normal in the area; however, U. S. Highway No. 93 is kept clear of snow to a point northwest of its junction with the mine access road. The applicant owns a D-4 caterpillar tractor equipped with a trexcavator so that snow removal on the remaining mile of road should present no problem and the mine could be made accessible for a year-around operation.

PROPERTY

The property consists of 4 unpatented claims, the Wood River Lead and Zinc, and the Wood River Lead and Zinc Nos. 1, 2, and 3. These claims, located by the applicants in April and May 1951, are recorded in Book 156, pages 422, 428, 429 and 430 of the lode mining claim locations in the office of the County Recorder, Hailey, Idaho. No accurate claim map exists but from the sketch submitted with the application and from conversation with the applicant it has been determined that the Wood River Lead and Zinc claim was staked with the center line on the vein outcrop and the discovery post near the old mine workings that have holed through to the surface. The No. 2 claim joins it on the northwest making a common end line and the No. 3 claim joins it similarly on the southeast. The No. 1 claim joins the Wood River Lead and Zinc claim on the southwest and has a common side line. The Lower adit portals near the southwest side of the Wood River Lead and Zinc claim, about equidistant from its ends. All of the proposed exploration work will be done on the Wood River Lead and Zinc claim. However, all the claims should be treated as a unit from which repayment should be made in the event an approved exploration program is successful and the mine becomes productive.

MINE WORKINGS

The mine is explored by over 700 feet of drift driven from two crosscut adits, 116 feet apart vertically. Two winzes and several raises have been driven from the drifts. Two raises from the Upper adit appear to have holed through to the surface on the vein outcrop but both are caved at their upper ends. Recent mine work has consisted of rehabilitating the Lower adit and driving a short drift northwest on the hanging wall structure about 16 feet above the sill level.

GEOLOGY

The Wood River Lead and Zinc vein outcrops as a strong, persistent structure consisting of 2 to 4 feet of shearing of which the 6 to 10 inches nearest the footwall are gossan containing quartz, calcite, and some smithsonite. This vein, hereafter referred to as the Hanging Wall vein, is the chief structure explored in the mine workings, although there are several footwall splits from this vein, some of which dip in

opposite directions. (See accompanying map.) These footwall splits from the Hanging Wall vein appear to be chiefly pre-mineral bedding faults in the enclosing siliceous and argillaceous limestone, members of the Pennsylvanian Wood River formation.

The Hanging Wall vein has been explored by mine workings from the outcrop to the Upper adit 101 feet below. The Lower adit, 217 feet below the outcrop, explores the vein with 235 feet of drift, and two short raises; there are no mine workings connecting the Upper and Lower adits. The best ore exposures are in the southeast raise where it holes through at the outcrop, the northwest drift on the Hanging Wall vein on the Upper adit level, and in the Hanging Wall vein sublevel off the Lower adit level. Of these exposures, the vein appears strongest at the face of the Lower adit sublevel. The best sample obtained was taken at this point. The ore occurs chiefly as bands and lenticular pods of quartz, sphalerite, and minor amounts of galena, which have a tendency to adhere to the walls.

The ores are coated with oxidation products and commonly are completely oxidized in the upper workings. The over-all oxidized condition of the vein possibly masks smaller disseminated mineral occurrences. In the Lower adit, however, sulfides are predominant, indicating the lower limits of the oxidized zone is being approached. A 4 to 5-ton pile of high grade sphalerite and galena, coated with oxidation products, is piled a few feet northwest of the winze from the Upper adit. This cobbed ore apparently came from the winze. Pieces of ore in this pile suggest that the ore came from the narrow, high grade band on the hanging wall. Scattered ore occurrences indicate a spotty enrichment of zinc-lead mineralization throughout the Hanging Wall vein; however, the vein appears to strengthen both in size and mineral content to the northwest, particularly on the lower level. Samples 66, 68, and 69, the best samples of ore taken in the mine, and the ore from the winze all point to an increase in zinc-lead mineralization in the northwestern extensions of the vein. Whether this indicates nearness to a possible ore shoot to the northwest or the possible northwest rake of a more mineralized zone from the Upper to the Lower adit levels is unknown. It does, however, suggest that the Hanging Wall structure might warrant exploration to the northwest to test the extent of these mineralized areas and to determine the possibility of their widening into minable ore bodies.

PRODUCTION

There are no records of production from the Wood River Lead and Zinc mine. Judging from the mine workings, no ore has been produced other than a small amount which may have been hand-cobbed during former exploration work.

PROPOSED EXPLORATION PROGRAM

The applicant proposes to sink a 300-foot winze from the Lower adit on the Hanging Wall vein, which he refers to as the second vein. The structure called the "first vein" by the applicant is in reality a footwall split off the Hanging Wall vein, which may merge with the Hanging Wall vein further to the northeast. (See accompanying map.) From this winze the applicant proposes 850 feet of drifting, 150 feet on the 100 level, 250 feet on the 200 level, and 450 feet on the 300 level. Accessory work proposed includes a sump, skip pockets and stations on each level and a 26-foot raise to connect the Lower adit level with a winze from the upper level to provide ventilation. The cost is estimated at $68,790.00.

The following exploration program is suggested for consideration:

Stage I

Drive 100 feet of slusher drift northeast on the hanging wall vein from the end of the present sublevel drift on the Lower adit level to further test the vein along its strike.

Stage II

If favorable showings are encountered in Stage I, drill three diamond drill holes aggregating 400 feet in length, from a station near the end of the Lower adit (see attached map) to test the structure at depth.

Stage III

Sink 100 feet of winze on the Hanging Wall vein from the lower adit level and drift 250 feet from its bottom.

Each successive stage should depend on the success of the previous one and should be started only with Government approval.

COMPETENCE OF THE APPLICANT

Mr. George C. Castle, one of the partners, has successfully operated small leasing operations for the past 15 years and is considered a competent miner. Of the remaining partners, one is a mechanic and the other is experienced in accounting. All three appear to be earnest, straightforward men. They were informed as to the amount of money they would be required to furnish and the amount they could expect to receive for depreciation of equipment in the event their original proposal was accepted, and they assured the examining team that they could furnish the required funds.

OPERATING EQUIPMENT

The applicant owns and has available nearly all of the equipment necessary to complete the proposed exploration program. In addition to the equipment he can furnish it will be necessary to purchase a blower and install a ventilation line. A brunton and tape survey made during the examination indicates that the ventilation raise proposed by the applicant would have to be about 55 feet long rather than 28 feet as he estimates, and its cost is not considered justified at this time. Therefore, the purchase of a fan is recommended.

Operating equipment to be purchased, rented, and furnished by the Operator is listed below:

To be purchased:	Estimated Cost
1 blower (gas engine driven)	$350.00

To be rented:

None

To be furnished:

Item	Value	Monthly Depreciation
1 315 cfm portable compressor	$4,000	$66.67
1 air hoist (2000 # rope pull)	600	10.00
1 air tugger	400	6.67
4 jackhammers	500	8.33
1 jackleg	150	2.50
1 air receiver	300	5.00
4 muck cars @ $150/ea.	600	10.00
1 sump pump	300	5.00
1 skip	200	3.33
1 portable slusher ramp	300	5.00
1 1—ton pickup	1,200	20.00
1 D-4 caterpillar tractor equipped with traxcavator	8,000	133.33

ESTIMATED COST OF PROJECT

Stage I — 2 months

(1) Independent contracts

None

(2) Labor, supervision and consultants

Labor

2 miners for a total of 60 man-shifts, driving drift, @ $14.50 per shift	$870.00	
2 miners installing fan and fan line, installing slusher and other preparatory work prior to commencement of drifting, 20 man-shifts @ $14.50 per shift	290.00	
Estimated overtime (9% of payroll)	104.00	$1,264.00

Supervision

1 working supervisor $450/mo. for 2 months	900.00

Consultants

None

(3) Operating materials and supplies

For drifting:

Item	Est. cost/ ft. of drift	
Explosives	$2.65	
Bits	.70	
Steel	.25	
Power (gas oil, etc.)	3.25	
Pipe	1.00	
Repair parts	.70	
Timber (assume 1/2 timbered)	3.00	
Miscellaneous	.45	
	12.00	
$12.00 x 100 feet of drift		$1,200.00

For fan installation and other preparatory work:

Item	Est. Cost	
430 feet of vent tube	$430.00	
Timber and miscellaneous supplies	100.00	
		$530.00

Total for supplies	$1,730.00

(4) Operating equipment

To be rented: None

To be purchased:

Item	Est. cost	
1 gas engine-driven blower	$350.00	
Total		$350.00

To be furnished:

Item	Monthly depreciation	Period of use	Total	
Compressor	$66.67	2 mo.	$133.34	
Tugger)used as slusher)	6.67	2 mo.	13.34	
2 jackhammers	8.33	2 mo.	16.66	
1 jacking	2.50	2 mo.	5.00	
1 air receiver	5.00	2 mo.	10.00	
4 muck cars	10.00	2 mo.	20.00	
1 pickup	20.00	2 mo.	40.00	
1 trenchcutter*	133.33		20.00	258.34

*To be used for muck disposal and charge prorated for time actually used.

(5) Rehabilitation and Repairs

Complete construction of tool shed 150.00*

*Includes labor and material.

(6) New Buildings, improvements, installations

None

(7) Miscellaneous

Payroll taxes, 11% of payroll	$139.00	
Guaging	50.00	
Accounting	50.00	239.00

(8) Contingencies

10% of total 500.00

Total cost of Stage I $5,391.64

Stage II -- 1 month

(1) Independent contracts

400 feet of AX diamond drill hole @ $6.00/ft. — $2,400.00

(2) Labor, supervision and consultants

Labor

To be furnished by independent contractor

Supervisors

1 working supervisor, 1 mo. @ $450.00 — 450.00

Consultants

Technical services on fee basis — 100.00

(3) Operating materials and supplies

Gas, oil and repairs on compressor	$250.00	
Miscellaneous supplies (core boxes, etc.)	100.00	350.00

(4) Operating equipment

To be rented: None

To be furnished:

Item	Monthly depreciation	Period of use	Total	
Compressor	$66.67	1 mo.	$66.67	
Pickup	20.00	1 mo.	20.00	
Air receiver	5.00	1 mo.	5.00	91.67

(5) Rehabilitation and repairs - none

(6) New buildings, improvements, installations - none

(7) Miscellaneous

Analytical work	$100.00	
Accounting	25.00	
Payroll taxes	50.00	175.00

(8) Contingencies - 10% — 356.00

Total - Stage II — $3,922.67

Stage III — 7 months

(1) Independent contracts - none

(2) Labor, supervision and consultants

Labor

Labor for sinking 100 feet of shaft, 10-foot sump, and cutting station on 100 level - 3 miners, 90 days or 270 man-shifts, @$14.50 per shift	$3,915.00	
Labor for driving 250 feet of drift from 100 level - 3 miners, 90 days or 270 shifts, @ $14.50 per shift	3,915.00	
Overtime @ 9%	704.00	$8,534.00

Supervision

1 working supervisor, 7 months @ $450	3,150.00

Consultants

Technical services on fee basis	400.00

(3) Operating materials and supplies

For winze and sump (6x8 timbered):

Item	Cost/ft.
Explosives	$ 3.50
Bits and Steel	1.25
Power (gas, oil, etc.)	9.00
Pipe	1.00
Timber	12.00
Repair parts	1.00
Vent Pipe	1.00
Small tools and miscellaneous	1.00
	$29.75

110 feet @ $29.75/ft.	3,272.50

(3) Operating materials and supplies (continued)

For 250 feet of drift:

Item	Est. cost/ ft. of drift
Timber (assume 1/2 timbered)	$3.00
Explosives	2.65
Bits	.70
Steel	.25
Power	3.25
Pipe	1.00
Repair parts	.70
Misc.	.45
Vent pipe	.80
	$12.80

250 feet of drift @ $12.80/ft. $3,200.00

(4) Operating equipment

To be rented: None

To be purchased: None

To be furnished:

Item	Monthly depreciation	Period of use	Total	
1 compressor	$66.67	7 mo.	$466.69	
1 air hoist (2000 # rope pull)	10.00	7 mo.	70.00	
1 air tugger	6.67	7 mo.	46.69	
2 jackhammers	8.33	7 mo.	58.31	
1 jackleg	2.50	7 mo.	17.50	
1 air receiver	5.00	7 mo.	35.00	
4 muck cars	10.00	7 mo.	70.00	
1 sump pump	5.00	7 mo.	35.00	
1 skip	3.33	7 mo.	23.31	
1 portable slusher ramp	5.00	3½ mo.	17.50	
1 1-ton pickup	20.00	7 mo.	140.00	
1 D-4 cat with trax-cavator for snow removal and muck disposal	133.33	4 mo.*	533.32	1,513.32

*To be prorated for time in actual use

(5) Rehabilitation and repairs - None

(6) New Buildings, improvements, installations - None

(7) Miscellaneous		
Analytical work	$ 300.00	
Accounting	400.00	
Payroll taxes, 11%	1,285.00	$1,985.00
(8) Contingencies - 10%		[illegible]
Total - Stage II		[illegible]
Estimated total cost of project		$33,569.13

cc: IECB, Spokane
4 cys - Wash.

SD

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 24 1952

July 24, 1952

Memorandum

To: Chairman, DMA Operating Committee

From: DMA Field Team, Region [illegible]

Subject: Report of field examination of the Cool River [illegible] property, Blaine County, Idaho, [illegible] Contract No. [illegible]

Attached are four copies of a report by Elmer [illegible] Hillsmeier, Geologist, U. S. Geological Survey, and [illegible] Howard, Mining Engineer, U. S. Bureau of Mines, on the Cool River Gold-Line mine, Blaine County, Idaho.

The examiners do not present a conclusive opinion as to the merits of the property. They call attention to the erratic character of the vein, which appears to be increasing in strength and in silver-lead sulphide content in the northwestern part of the mine on the lower level, and they suggest that the sampling all vein in that area might warrant exploration to test the possible occurrence of silver-lead ore bodies. They are, however, afraid that the exploration program proposed by the applicant is unwarranted and have therefore outlined a limited program, which, if acceptable to DMA, could be presented to the applicant.

The Field Team recognized the low grade of the silver-lead ore bodies in the mine workings; however, as proposed by the examiners, exploration in previously unexplored areas believed to be increasing in sulphide content, where the vein is strong, and could contain substantial ore bodies, and the applicant is experienced and considered competent to do the work, the Field Team recommends that a limited contract be negotiated. The exploration should be on a step basis, as presented in the attached report, and the applicant should be advised that the contract may be terminated at any point if exploration therein is deemed unwarranted.

[illegible], Chief, [illegible]

Approved by
DMA Operating Committee

7-30-52
(date)

[illegible], Asst. Chief
(U. S. Geological Survey)

[illegible], Chief, [illegible])

Copy to:
Attachments

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
1201 N. Division St.
Spokane 2, Wash.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUL 24 1952

July 17, 1952

MEMORANDUM

To: Field Team, DMEA, Region II

From: T. E. Howard, Mining Engineer, U. S. Bureau of Mines, and T. H. Kiilsgaard, Geologist, U. S. Geological Survey

Subject: Field examination of the Wood River Lead & Zinc prospect, Blaine County, Idaho, Docket DMEA 2373 (lead-zinc)

INTRODUCTION

The subject examination was begun June 1 and completed June 2, 1952. The applicants, Mr. George C. Castle, Mr. Orla E. Hicks, and Mr. Clayton L. Stewart, all of Ketchum, Idaho, accompanied the examining team during the first part of the examination.

RECOMMENDATIONS

In the opinion of the examining team the exploration program proposed by the applicant is not warranted at the present stage of development. Furthermore, it is considered that any future exploration would be in the nature of a long shot. Existing mine workings which explore the vein for over 300 feet on the strike and 230 feet along the dip have exposed no minable ore shoots. However, as the vein is strong and appears to be approaching the sulfide zone in the lower adit, a limited amount of exploration might be justified and may well indicate minable ore bodies. If the Field Team considers that the property merits any exploration work, it is recommended that a limited program, to be performed in stages with each successive stage contingent upon the success of the preceding one, be discussed with the applicant. Inasmuch as the quantity and quality of the ore appears to be increasing in the northwestern part of the mine, it is recommended that this area receive primary consideration in any contemplated exploration program.

LOCATION AND ACCESSIBILITY

The Wood River Lead and Zinc prospect is near the mouth of the North Fork of the Wood River in sec. 3, T. 5 N., R. 17 E., Boise meridian, in Blain County, Idaho, 10 miles northwest of Ketchum, Idaho,

Reviewed by
DMEA OPERATING COMMITTEE

7-30-52
(date)

the nearest railhead. One mile of good graveled road connects the property with paved U. S. Highway No. 93 at a point 9 miles northwest of Ketchum. The Lower adit portal is only about 150 yards from the graveled road and a few feet above the valley floor.

Heavy snowfall is normal in the area; however, U. S. Highway No. 93 is kept clear of snow to a point northwest of its junction with the mine access road. The applicant owns a D-4 caterpillar tractor equipped with a truxcavator so that snow removal on the remaining mile of road should present no problem and the mine could be made accessible for a year-around operation.

PROPERTY

The property consists of 4 unpatented claims, the Wood River Lead and Zinc, and the Wood River Lead and Zinc Nos. 1, 2, and 3. These claims, located by the applicants in April and May 1951, are recorded in Book 156, pages 422, 428, 429 and 430 of the lode mining claim locations in the office of the County Recorder, Hailey, Idaho. No accurate claim map exists but from the sketch submitted with the application and from conversation with the applicant it has been determined that the Wood River Lead and Zinc claim was staked with the center line on the vein outcrop and the discovery post near the old mine workings that have holed through to the surface. The No. 2 claim joins it on the northwest and has a common end line and the No. 3 claim joins it similarly on the southeast. The No. 1 claim joins the Wood River Lead and Zinc claim on the southwest and has a common side line. The Lower adit portals near the southwest side of the Wood River Lead and Zinc claim, about equidistant from its ends. All of the proposed exploration work will be done on the Wood River Lead and Zinc claim. However, all the claims should be treated as a unit from which repayment should be made in the event an approved exploration program is successful and the mine becomes productive.

MINE WORKINGS

The mine is explored by over 700 feet of drift driven from two crosscut adits, 116 feet apart vertically. Two winzes and several raises have been driven from the drifts. Two raises from the Upper adit appear to have holed through to the surface on the vein outcrop but both are caved at their upper ends. Recent mine work has consisted of rehabilitating the Lower adit and driving a short drift northwest on the hanging wall structure about 16 feet above the sill level.

GEOLOGY

The Wood River Lead and Zinc vein outcrops as a strong, persistent structure consisting of 2 to 4 feet of shearing of which the 6 to 10 inches nearest the footwall are gossan containing quartz, calcite, and some smithsonite. This vein, hereafter referred to as the Hanging Wall vein, is the chief structure explored in the mine workings, although there are several footwall splits from this vein, some of which dip in

opposite directions. (See accompanying map.) These footwall splits from the Hanging Wall vein appear to be chiefly pre-mineral bedding faults in the enclosing siliceous and argillaceous limestone, members of the Pennsylvanian Wood River formation.

The Hanging Wall vein has been explored by mine workings from the outcrop to the Upper adit 101 feet below. The Lower adit, 217 feet below the outcrop, explores the vein with 235 feet of drift, and two short raises; there are no mine workings connecting the Upper and Lower adits. The best ore exposures are in the southeast raise where it holes through at the outcrop, the northwest drift on the Hanging Wall vein on the Upper adit level, and in the Hanging Wall vein sublevel off the Lower adit level. Of these exposures, the vein appears strongest at the face of the Lower adit sublevel. The best sample obtained was taken at this point. The ore occurs chiefly as bands and lenticular pods of quartz, sphalerite, and minor amounts of galena, which have a tendency to adhere to the walls.

The ores are coated with oxidation products and commonly are completely oxidized in the upper workings. The over-all oxidized condition of the vein possibly masks smaller disseminated mineral occurrences. In the Lower adit, however, sulfides are predominant, indicating the lower limits of the oxidized zone is being approached. A 4 to 5-ton pile of high grade sphalerite and galena, coated with oxidation products, is piled a few feet northwest of the winze from the Upper adit. This cobbed ore apparently came from the winze. Pieces of ore in this pile suggest that the ore came from the narrow, high grade band on the hanging wall. Scattered ore occurrences indicate a spotty enrichment of zinc-lead mineralization throughout the Hanging Wall vein; however, the vein appears to strengthen both in size and mineral content to the northwest, particularly on the lower level. Samples 66, 68, and 69, the best samples of ore taken in the mine, and the ore from the winze all point to an increase in zinc-lead mineralization in the northwestern extensions of the vein. Whether this indicates nearness to a possible ore shoot to the northwest or the possible northwest rake of a more mineralized zone from the Upper to the Lower adit levels is unknown. It does, however, suggest that the Hanging Wall structure might warrant exploration to the northwest to test the extent of these mineralized areas and to determine the possibility of their widening into minable ore bodies.

PRODUCTION

There are no records of production from the Wood River Lead and Zinc mine. Judging from the mine workings, no ore has been produced other than a small amount which may have been hand-cobbed during former exploration work.

PROPOSED EXPLORATION PROGRAM

The applicant proposes to sink a 300-foot winze from the Lower adit on the Hanging Wall vein, which he refers to as the second vein. The structure called the "first vein" by the applicant is in reality a footwall split off the Hanging Wall vein, which may merge with the Hanging Wall vein farther to the northwest. (See accompanying map.) From this winze the applicant proposes 850 feet of drifting, 150 feet on the 100 level, 250 feet on the 200 level, and 450 feet on the 300 level. Accessory work proposed includes a sump, skip pockets and stations on each level and a 23-foot raise to connect the Lower adit level with a winze from the upper level to provide ventilation. The cost is estimated at $63,750.00.

The following exploration program is suggested for consideration:

Stage I

Drive 100 feet of slusher drift northwest on the hanging wall vein from the end of the present subleval drift on the Lower adit level to further test the vein along its strike.

Stage II

If favorable showings are encountered in Stage I, drill three diamond drill holes aggregating 400 feet in length, from a station near the end of the Lower adit (see attached map) to test the structure at depth.

Stage III

Sink 100 feet of winze on the Hanging Wall vein from the lower adit level and drift 250 feet from its bottom.

Each successive stage should depend on the success of the previous one and should be started only with Government approval.

COMPETENCE OF THE APPLICANT

Mr. George C. Castle, one of the partners, has successfully operated small leasing operations for the past 15 years and is considered a competent miner. Of the remaining partners, one is a mechanic and the other is experienced in accounting. All three appear to be earnest, straightforward men. They were informed as to the amount of money they would be required to furnish and the amount they could expect to receive for depreciation of equipment in the event their original proposal was accepted, and they assured the examining team that they could furnish the required funds.

OPERATING EQUIPMENT

The applicant owns and has available nearly all of the equipment necessary to complete the proposed exploration program. In addition to the equipment he can furnish it will be necessary to purchase a blower and install a ventilation line. A brunton and tape survey made during the examination indicates that the ventilation raise proposed by the applicant would have to be about 55 feet long rather than 28 feet as he estimates, and its cost is not considered justified at this time. Therefore, the purchase of a fan is recommended.

Operating equipment to be purchased, rented, and furnished by the Operator is listed below:

To be purchased:	Estimated Cost
1 blower (gas engine driven)	$350.00

To be rented:

None

To be furnished:

Item	Value	Monthly Depreciation
1 315 cfm portable compressor	$4,000	$66.67
1 air hoist (2000 # rope pull)	600	10.00
1 air tugger	400	6.67
2 jackhammers	500	8.33
1 jacking	150	2.50
1 air receiver	300	5.00
4 muck cars @ $150/ea.	600	10.00
1 sump pump	300	5.00
1 skip	200	3.33
1 portable slusher pump	300	5.00
1 1-ton pickup	1,200	20.00
1 D-4 caterpillar tractor equipped with bulldozer	8,000	133.33

ESTIMATED COST OF PROJECT

Stage I — 2 months

(1) Independent contracts

None

(2) Labor, supervision and consultants

Labor

2 miners for a total of 60 man-shifts, driving drift, @ $14.50 per shift	$870.00	
2 miners installing fan and fan line, installing slusher and other preparatory work prior to commencement of drifting, 20 man-shifts @ $14.50 per shift	290.00	
Estimated overtime (9% of payroll)	104.00	$1,264.00

Supervision

1 working supervisor $450/mo. for 2 months	900.00

Consultants

None

(3) Operating materials and supplies

For drifting:

Item	Est. cost/ ft. of drift	
Explosives	$2.65	
Bits	.70	
Steel	.25	
Power (gas, oil, etc.)	3.25	
Pipe	1.00	
Repair parts	.70	
Timber (assume 1/2 timbered)	3.00	
Miscellaneous	.45	
	$12.00	
$12.00 x 100 feet of drift		$1,200.00

For fan installation and other preparatory work:

Item	Est. cost	
430 feet of vent tube	$430.00	
Timber and miscellaneous supplies	100.00	
		$530.00

Total for supplies	$1,730.00

(4) Operating equipment

To be rented: None

To be purchased:

Item	Est. cost	
1 gas engine-driven blower	$350.00	
Total		$350.00

To be furnished:

Item	Monthly depreciation	Period of use	Total	
Compressor	$66.67	2 mo.	$133.34	
Tugger)used as slusher)	6.67	2 mo.	13.34	
2 jackhammers	8.33	2 mo.	16.66	
1 jacklegs	2.50	2 mo.	5.00	
1 air receiver	5.00	2 mo.	10.00	
4 muck cars	10.00	2 mo.	20.00	
1 pump	20.00	2 mo.	40.00	
1 trenchwater*	133.33		20.00	258.34

*To be used for muck disposal and charge prorated for time actually used.

(5) Rehabilitation and Repairs

Complete construction of tool shed	190.00*

* Includes labor and material.

(6) New Buildings, improvements, installations

None

(7) Miscellaneous

Payroll taxes, 11% of payroll	$139.00	
Assaying	50.00	
Accounting	50.00	239.00

(8) Contingencies

10% of total	500.00
Total cost of Stage I	$5,391.64

Stage II -- 1 month

(1) Independent contracts

400 feet of AX diamond drill hole @ $6.00/ft. — $2,400.00

(2) Labor, supervision and consultants

Labor

To be furnished by independent contractor

Supervisors

1 working supervisor, 1 mo. @450.00 — 450.00

Consultants

Technical services on fee basis — 100.00

(3) Operating materials and supplies

Gas, oil and repairs on compressor	$250.00	
Miscellaneous supplies (core boxes, etc.)	100.00	350.00

(4) Operating equipment

To be rented: None

To be furnished:

Item	Monthly depreciation	Period of use	Total	
Compressor	$66.67	1 mo.	$66.67	
Pickup	20.00	1 mo.	20.00	
Air receiver	5.00	1 mo.	5.00	91.67

(5) Rehabilitation and repairs - none

(6) New buildings, improvements, installations - none

(7) Miscellaneous

Analytical work	$100.00	
Accounting	25.00	
Payroll taxes	50.00	175.00

(8) Contingencies - 10% — [illegible]

Total - Stage II — $3,9[illegible]2.67

Stage III — 7 months

(1) Independent contracts - none

(2) Labor, supervision and consultants

Labor

Labor for sinking 100 feet of shaft, 10-foot sump, and cutting station on 100 level - 3 miners, 90 days or 270 man-shifts, @$14.50 per shift	$3,915.00	
Labor for driving 250 feet of drift from 100 level - 3 miners, 90 days or 270 shifts, @ $14.50 per shift	3,915.00	
Overtime @ 9%	704.00	$8,534.00

Supervision

1 working supervisor, 7 months @450		3,150.00

Consultants

Technical services on fee basis	400.00

(3) Operating materials and supplies

For mines and sump (full timbered):

Item	Cost/Ft.
Explosives	$ 3.50
Bits and Steel	1.25
Power (gas, oil, etc.)	9.00
Pipe	1.00
Timber	12.00
Repair parts	1.00
Vent Pipe	1.00
Small tools and miscellaneous	1.00
	$29.75

110 feet @ $29.75/ft.	3,272.50

(3) Operating materials and supplies (continued)

For 250 feet of drift:

Item	Est. cost/ ft. of drift
Timber (assume 1/2 timbered)	$3.00
Explosives	2.65
Bits	.70
Steel	.25
Power	3.25
Pipe	1.00
Repair parts	.70
Misc.	.45
Vent pipe	.80
	$12.80

250 feet of drift @ $12.80/ft. $3,200.00

(4) Operating equipment

To be rented: None

To be purchased: None

To be furnished:

Item	Monthly depreciation	Period of use	Total	
1 compressor	$66.67	7 mo.	$466.69	
1 air hoist (2000 # rope pull)	10.00	7 mo.	70.00	
1 air tugger	6.67	7 mo.	46.69	
2 jackhammers	8.33	7 mo.	58.31	
1 jacklag	2.50	7 mo.	17.50	
1 air receiver	5.00	7 mo.	35.00	
4 muck cars	10.00	7 mo.	70.00	
1 sump pump	5.00	7 mo.	35.00	
1 skip	3.33	7 mo.	23.31	
1 portable slusher ramp	5.00	3½ mo.	17.50	
1 1-ton pickup	20.00	7 mo.	140.00	
1 D-4 cat with trencher for snow removal and muck disposal	133.33	4 mo.*	533.32	1,513.32

*To be prorated for time in actual use

(5) Rehabilitation and repairs - None

(6) New Buildings, improvements, installations - None

(7) Miscellaneous		
Analytical work	$ 300.00	
Accounting	400.00	
Payroll taxes, 11%	1,285.00	$1,985.00
(8) Contingencies - 10%		$2,200.00
Total - Stage II		$24,254.82
Estimated total cost of project		$33,569.13

cc: WEGS, Spokane
4 cys - Wash.
M/D
Albany
T.E.H.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 24 1952

So. 157 Howard Street
Spokane 4, Washington

July 21, 1952

Memorandum

To: Chairman, DMEA Operating Committee

From: DMEA Field Team, Region II

Subject: Report of field examination of the Wood River Lead-Zinc property, Blaine County, Idaho, DMEA Docket No. 2373.

Attached are four copies of a report by Thor H. Kiilsgaard, Geologist, U. S. Geological Survey, and T. E. Howard, Mining Engineer, U. S. Bureau of Mines, on the Wood River Lead-Zinc mine, Blaine County, Idaho.

The examiners do not present a conclusive opinion on the merits of the property. They call attention to the strong character of the vein, which appears to be increasing in strength and in zinc-lead sulphide content in the northwestern part of the mine on the lower level, and they suggest that the Hanging Wall vein in that area might warrant exploration to test the possible occurrence of minable ore bodies. They are, however, agreed that the exploration program proposed by the applicant is unwarranted and have therefore outlined a limited program, which, if acceptable to DMEA, could be presented to the applicant.

The Field Team recognized the low grade of the zinc-lead ore exposed in the mine workings; however, as proposed work by the examiners would be exploration in previously untested areas believed to be increasing in sulphide content, and since the vein is strong and could contain substantial ore bodies, and the applicant is experienced and considered competent to do the work, the Field Team recommends that a limited contract be negotiated. The exploration should be on a stage basis, as suggested in the attached report, and the applicant should be advised that the contract may be terminated at any point if exploration findings should so warrant.

By DMEA Field Team, Region II

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

M. E. Volin, Member, (USBM)

cc: USBM
Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUL 24 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
1201 N. Division St.
Spokane 2, Wash.

July 17, 1952

MEMORANDUM

To: Field Team, DMEA, Region II

From: T. E. Howard, Mining Engineer, U. S. Bureau of Mines, and T. H. Kiilsgaard, Geologist, U. S. Geological Survey

Subject: Field examination of the Wood River Lead & Zinc prospect, Blaine County, Idaho, Docket DMEA 2373 (lead-zinc)

INTRODUCTION

The subject examination was begun June 1 and completed June 2, 1952. The applicants, Mr. George C. Castle, Mr. Orla E. Hicks, and Mr. Clayton L. Stewart, all of Ketchum, Idaho, accompanied the examining team during the first part of the examination.

RECOMMENDATIONS

In the opinion of the examining team the exploration program proposed by the applicant is not warranted at the present stage of development. Furthermore, it is considered that any future exploration would be in the nature of a long shot. Existing mine workings which explore the vein for over 300 feet on the strike and 230 feet along the dip have exposed no minable ore shoots. However, as the vein is strong and appears to be approaching the sulfide zone in the lower adit, a limited amount of exploration might be justified and may well indicate minable ore bodies. If the Field Team considers that the property merits any exploration work, it is recommended that a limited program, to be performed in stages with each successive stage contingent upon the success of the preceding one, be discussed with the applicant. Inasmuch as the quantity and quality of the ore appears to be increasing in the northwestern part of the mine, it is recommended that this area receive primary consideration in any contemplated exploration program.

LOCATION AND ACCESSIBILITY

The Wood River Lead and Zinc prospect is near the mouth of the North Fork of the Wood River in sec. 3, T. 5 N., R. 17 E., Boise meridian, in Blain County, Idaho, 10 miles northwest of Ketchum, Idaho,

the nearest railhead. One mile of good graveled road connects the property with paved U. S. Highway No. 93 at a point 9 miles northwest of Ketchum. The Lower adit portal is only about 150 yards from the graveled road and a few feet above the valley floor.

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The following exploration program is suggested for consideration:

Stage I

Drive 100 feet of slusher drift northwest on the hanging wall vein from the end of the present sublevel drift on the Lower adit level to further test the vein along its strike.

Stage II

If favorable showings are encountered in Stage I, drill three diamond drill holes aggregating 400 feet in length, from a station near the end of the Lower adit (see attached map) to test the structure at depth.

Stage III

Sink 100 feet of winze on the Hanging Wall vein from the lower adit level and drift 250 feet from its bottom.

Each successive stage should depend on the success of the previous one and should be started only with Government approval.

COMPETENCE OF THE APPLICANT

Mr. George C. Castle, one of the partners, has successfully operated small leasing operations for the past 15 years and is considered a competent miner. Of the remaining partners, one is a mechanic and the other is experienced in accounting. All three appear to be earnest, straightforward men. They were informed as to the amount of money they would be required to furnish and the amount they could expect to receive for depreciation of equipment in the event their original proposal was accepted, and they assured the examining team that they could furnish the required funds.

OPERATING EQUIPMENT

The applicant owns and has available nearly all of the equipment necessary to complete the proposed exploration program. In addition to the equipment he can furnish it will be necessary to purchase a blower and install a ventilation line. A brunton and tape survey made during the examination indicates that the ventilation raise proposed by the applicant would have to be about 55 feet long rather than 28 feet as he estimates, and its cost is not considered justified at this time. Therefore, the purchase of a fan is recommended.

Operating equipment to be purchased, rented, and furnished by the Operator is listed below:

To be purchased:	Estimated Cost
1 blower (gas engine driven)	$350.00

To be rented:

None

To be furnished:

Item	Value	Monthly Depreciation
1 315 cfm portable compressor	$4,000	$66.67
1 air hoist (2000 # rope pull)	600	10.00
1 air tugger	400	6.67
2 jackhammers	500	8.33
1 jackleg	150	2.50
1 air receiver	300	5.00
4 mank cars @ $150/ea.	600	10.00
1 sump pump	300	5.00
1 skip	200	3.33
1 portable slusher ramp	300	5.00
1 1—ton pickup	1,200	20.00
1 D-4 caterpillar tractor equipped with trenchcavator	8,000	133.33

ESTIMATED COST OF PROJECT

Stage I — 2 months

(1) Independent contracts

None

(2) Labor, supervision and consultants

Labor

2 miners for a total of 60 man-shifts, driving drift, @ $14.50 per shift	$870.00	
2 miners installing fan and fan line, installing slusher and other preparatory work prior to commencement of drifting, 20 man-shifts @ $14.50 per shift	290.00	
Estimated overtime (9% of payroll)	104.00	$1,264.00

Supervision

1 working supervisor $450/mo. for 2 months	900.00

Consultants

None

(3) Operating materials and supplies

For drifting:

Item	Est. cost/ ft. of drift	
Explosives	$2.65	
Bits	.70	
Steel	.25	
Power (gas, oil, etc.)	3.25	
Pipe	1.00	
Repair parts	.70	
Timber (assume 1/2 timbered)	3.00	
Miscellaneous	.45	
	$12.00	
$12.00 x 100 feet of drift		$1,200.00

For fan installation and other preparatory work:

Item	Est. cost	
430 feet of vent tube	$430.00	
Timber and miscellaneous supplies	100.00	
		$530.00

Total for supplies $1,730.00

(4) Operating equipment

To be rented: None

To be purchased:

Item	Est. cost	
1 gas engine-driven blower	$350.00	
Total		$350.00

To be furnished:

Item	Monthly depreciation	Period of use	Total	
Compressor	$66.67	2 mo.	$133.34	
Tugger)used as slusher)	6.67	2 mo.	13.34	
2 jackhammers	8.33	2 mo.	16.66	
1 jackleg	2.50	2 mo.	5.00	
1 air receiver	5.00	2 mo.	10.00	
4 muck cars	10.00	2 mo.	20.00	
1 pickup	20.00	2 mo.	40.00	
1 traxcavator*	133.33		20.00	258.34

*To be used for muck disposal and charge prorated for time actually used.

(5) Rehabilitation and Repairs

Complete construction of tool shed	150.00*

*Includes labor and material.

(6) New Buildings, improvements, installations

None

(7) Miscellaneous

Payroll taxes, 11% of payroll	$139.00	
Assaying	50.00	
Accounting	50.00	239.00

(8) Contingencies

10% of total	500.00
Total cost of Stage I	$5,391.64

Stage II — 1 month

(1) Independent contracts

400 feet of AI diamond drill hole @ $6.00/ft. — $2,400.00

(2) Labor, supervision and consultants

Labor

To be furnished by independent contractor

Supervisors

1 working supervisor, 1 mo. @ $450.00 — 450.00

Consultants

Technical services on fee basis — 100.00

(3) Operating materials and supplies

Gas, oil and repairs on compressor	$250.00	
Miscellaneous supplies (core boxes, etc.)	100.00	350.00

(4) Operating equipment

To be rented: None

To be furnished:

Item	Monthly depreciation	Period of use	Total	
Compressor	$66.67	1 mo.	$66.67	
Pickup	20.00	1 mo.	20.00	
Air receiver	5.00	1 mo.	5.00	91.67

(5) Rehabilitation and repairs - none

(6) New buildings, improvements, installations - none

(7) Miscellaneous

Analytical work	$100.00	
Accounting	25.00	
Payroll taxes	50.00	175.00

(8) Contingencies - 10% — [illegible]

Total - Stage II — $3,[illegible].67

Stage III — 7 months

(1) Independent contracts - none

(2) Labor, supervision and consultants

Labor

Labor for sinking 100 feet of shaft, 10-foot sump, and cutting station on 100 level - 3 miners, 90 days or 270 man-shifts, @$14.50 per shift	$3,915.00	
Labor for driving 250 feet of drift from 100 level - 3 miners, 90 days or 270 shifts, @ $14.50 per shift	3,915.00	
Overtime @ 9%	704.00	$8,534.00

Supervision

1 working supervisor, 7 months @$450	3,150.00

Consultants

Technical services on fee basis	400.00

(3) Operating materials and supplies

For winze and sump (6x8 timbered):

Item	Cost/ft.
Explosives	$ 3.50
Bits and Steel	1.25
Power (gas, oil, etc.)	9.00
Pipe	1.00
Timber	12.00
Repair parts	1.00
Vent Pipe	1.00
Small tools and miscellaneous	1.00
	$29.75

110 feet @ $29.75/ft.	3,272.50

(3) Operating materials and supplies (continued)

For 250 feet of drift:

Item	Est. cost/ ft. of drift
Timber (assume 1/2 timbered)	$3.00
Explosives	2.65
Bits	.70
Steel	.25
Power	3.25
Pipe	1.00
Repair parts	.70
Misc.	.45
Vent pipe	.80
	$12.80

250 feet of drift @ $12.80/ft. 3,200.00

(4) Operating equipment

To be rented: None

To be purchased: None

To be furnished:

Item	Monthly depreciation	Period of use	Total	
1 compressor	$66.67	7 mo.	$466.69	
1 air hoist (2000 # rope pull)	10.00	7 mo.	70.00	
1 air tugger	6.67	7 mo.	46.69	
2 jackhammers	8.33	7 mo.	58.31	
1 jackleg	2.50	7 mo.	17.50	
1 air receiver	5.00	7 mo.	35.00	
4 muck cars	10.00	7 mo.	70.00	
1 sump pump	5.00	7 mo.	35.00	
1 skip	3.33	7 mo.	23.31	
1 portable slusher pump	5.00	3½ mo.	17.50	
1 1-ton pickup	20.00	7 mo.	140.00	
1 D-4 cat with trex-cavator for snow removal and muck disposal	133.33	4 mo.*	533.32	1,513.32

*To be prorated for time in actual use

(5) Rehabilitation and repairs - None

(6) New Buildings, improvements, installations - None

(7) Miscellaneous		
Analytical work	$ 300.00	
Accounting	400.00	
Payroll taxes, 11%	1,285.00	$1,985.00
(8) Contingencies - 10%		$2,200.00
Total - Stage II		$24,254.82
Estimated total cost of project		$33,569.13

cc: USGS, Spokane
4 cys - Wash.
M/D
Albany
T.E.H.

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMEA-2373
Metal or Mineral
Date Received 2-11-52
Amount $
Participation (Government %)

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

Name and address of applicant

Date February 1, 1952

If you have already filed MF-100, give date filed Feb 1, 1952, type of assistance requested 50%,

DMA Docket Number (if available)

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail. This information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

WOOD RIVER LEADS ZINC MINE (Partnership)
(Name of company)

By George C. Castle
George C. Castle
Orla R. Hicks
Orla R. Hicks
Clayton L. Stewart
Clayton L. Stewart
(Signature of authorized official)
Partners
(Title)

Feb 1, 1952
(Date)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho

FOR FORM MF-103 APPLICATION FOR AID

1. (a) Claims of the following:
Wood River Lead and Zinc Claim
Wood River Lead and Zinc # 1 Claim
Wood River Lead and Zinc # 2 Claim
Wood River Lead and Zinc # 3 Claim
Four claims in all, each claim 1,500 feet by 600 feet.
Claims located in Township 6N, Section 35, Range 17E,
in the Warm Springs Mining District, Blaine County, Idaho.

(b) We are the Owners

(c) Same as 1 (a)

2. Zinc, Lead and Silver (a)

(b) Answered in Form MF-103, question 7 (a),(b),(c) and 12 (a), (b) 1 & 2 and by map sketch attached.

Signed

George C. Castle
Orla R. Hicks
Clayton L. Stewart

George C. Castle

O. R. Hicks

Clayton L. Stewart

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho

FOR FORM MF-103 APPLICATION FOR AID

3. (a) We propose to sink a 60 degree winze on the second vein in the lower drift. This winze is to be approximately 5' x 5' inside timber dimensions, and we desire to sink to a 300 foot level. At the 100 foot level we propose a prospect drift extending 75 feet on either side of the winze. At the 200 foot level we propose a prospect drift of 100 feet on the Northwest side and a 150 foot prospect drift on the other side of the winze. At the 300 foot level we wish to drive a prospect drift 150 feet on the Northwest side, and 300 feet on the other side of the winze.

At the 100 foot level we want a skip pocket of approximately 12 cubic yards capacity. At the 200 foot level we want a skip pocket of approximately 15 cubic yards and a small dump of (depends on the water encountered) 6 ' x 8'. At the 300 foot level we also want a skip pocket of approximately 20 cubic yards capacity and a sump of (again depends on water encountered) pessibly 6' x 20'.

At the vein, where we propose to sink on the vein, we intend to drive a prospect drift for 200 feet on the vein; in addition to prospect drifts at all levels, we wish to crosscut to the first vein.

We believe a winze that was sunk on the vein in the upper drift lacks only about 28 feet from being connected with the lower drift. We propose to drive a raise to intercept this winze, so as to provide an adequate air ventilation for the sinking operation.

The above is the extent for which we wish to apply for an exploratory loan. The cost of the project we would estimate at $68,750.00. This cost was figured on the following basis.

Drifts	
200' drift @ $35 a foot	$ 7,000.00
150' drift at 100' level at $40 a foot	$ 6,000.00
250' drift at 200' level at $40 a foot	$10,000.00
450' drift at 300' level at $40 a foot	$18,000.00
Skip Pockets	
12 cubic yards	$ 200.00
15 cubic yards	$ 250.00
20 cubic yards	$ 300.00
Sumps	
6' x 8' @$35 at foot	$ 280.00
6' x 20' @$35 a foot	$ 700.00
Crosscuts	
120' at $ 40 a foot	$ 4,800.00
Winze	
342' at $60 a foot	$20,520.00
Air Duct	
28' raise @$35 a foot	$ 700.00
Total	$68,750.00

(b) We believe if this loan is approved we can start the project in May, 1952 and complete it in 18 months.

Signed George C. Castle *George Castle*
Orla R. Hicks *O. R. Hicks*
Clayton L. Stewart *Clayton L. Stewart*

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-103 APPLICATION FOR AID

4. This is answered by the map attached to MF-100.

5. Answered in MF-100, question # 17.

6. One tool shed to be completed, estimated cost $150.00.

7. (a) None

(b) Double Drum Air Tugger and a Slusher, & if large amount of water is encountered we may have to purchase a large pump.

(c)

Name	Cost	Year	Replacement	Condition	
Ov-Tiros Metal Chev. Truck, Dump	1,434.25	1942	3,100.00	Excellent	Snow Plow, with Cat.Trailer
Compressor, Ing.Rand 315 Cubic Feet	1,500.00	8 yrs	8,500.00	Excellent	
Compressor, Schramm 105 Cub Feet	2,200.00	1946	3,200.00	Excellent	
Stude. Pick-Up	x 1,750.00	1951	1,750.00	Excellent	
Willy's Jeep	x 1,250.00	1946	1,650.00	Excellent	with Sno-plow ect.
Catapillar D-4	x 7,780.55	1947	10,600.00	Excellent	
Traxcavator					
Jack Hammer	303.00	1949	380.00	Excellent	
Air Tugger, Single	450.00	1949	850.00	Excellent	
Water Pump	350.00	1949	400.00	Excellent	
Skip	250.00	1952	250.00	Excellent	
4 Mine Cars	500.00	1943	600.00	Excellent	
Two Stopers	816.00	1947	1,100.00	Excellent	
100 Feet Air Hose	50.00	1951	65.00	Excellent	
100 Feet Pressure Water H	45.00	1951	50.00	Excellent	
2 Air Receiver Tanks	400.00	1946	900.00	Excellent	
2 Pressure Water Tanks	60.00	1947	60.00	Excellent	
1400 Feet 2" Pipe	420.00	used	588.00	Excellent	
Drill Steel(500 Lbs)	500.00	used	750.00	Excellent	
Bits(500) I.C.Bits	175.00	used	175.00	Excellent	
Bits(300) Timken	126.00	used	126.00	Excellent	
Track 400' Double	170.00	used	800.00	Excellent	
Air Fittings	65.00	new	66.00	Excellent	
Winch	500.00	used	700.00	Excellent	
	21,095.80		36,660.00		

8. 1 Mine Supervisor - $500.00 per month
3 Miners @$14.00 per day
2 Muckers @$13.00 per day

Signed George C. Castle
Orla R. Hicks
Clayton L. Stewart

George C. Castle

O. R. Hicks

Clayton L. Stewart

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-103 APPLICATION FOR AID

9. Materials		
	Timber (wedges, Ties, Lagging, Caps, Girts ett.)	$ 12,210.00
	Pipe	630.00
	Rail (Spikes, Nails, Fish Plates, Bolts ect.)	3,000.00
	Cable	300.00
Supplies		
	Caps	150.00
	Powder	2,000.00
	Bits	375.00
	Hand Tools & Steel	150.00
	Gas	6,075.00
	Oil	150.00
	Carbide	30.00
	Fuse	500.00
	Lights	30.00
	Labor	41,375.00
	Purchases (Double Drum Air Tugger & a slusher	1,350.00
Engineering		
	Unknown Cost, but possibly $100.00	100.00
Assaying		
	Estimate	100.00
Power		
	None	-0-
Water		
	Ample	-0-
Accounting		
	Included in cost of Labor, $75.00 a month	-0-
Utilities		
	None	-0-
Repairs		225.00
	Total	$ 68,750.00

Signed George C. Castle
Orla M. Hicks
Clayton L. Stewart

George C. Castle

O. M. Hicks

Clayton L. Stewart

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-103 APPLICATION FOR AID

10. (a) We will put up our equipment, and labor, and we also expect to have ore to ship while sinking in the exploratory winze on the vein. We will also have some cash available.

(b) We believe our particapation will be equal to the Governments as stated above.

11. We would like to restate again, that the location of this property is such that it will always be available to year round operation.

Signed

George C. Castle
Orla R. Hicks
Clayton L. Stewart

George C. Castle

O. R. Hicks

Clayton L. Stewart

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

So. 157 Howard Street
Spokane 4, Washington

April 3, 1952

Department of the Interior
Defense Minerals Administration
APR 7 1952

Memorandum

To: Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket DMEA 2373 Wood River Lead and Zinc mine, George C. Cassell, O. R. Heck, C. R. Stewart, Partners, Ketchum, Idaho.

This will acknowledge receipt of the subject docket. The operator will be contacted and a field examination scheduled as soon as possible.

A. E. Weissenborn

A. E. Weissenborn

cc: USBM

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 1 - 1952

Ketchum, Idaho.
March 29, 1952

U. S. Dept. of the Interior
Defense Minerals Exploration Adm.,
Washington, 25, D. C.

Dear Sirs:

I am writing you in regard to our application for a loan under the Defense Production Act of 1950, and assigned Docket Number DMEA-2373 by you on February 12, 1952.

We are sending a Rotary Sno-Plow up to open our mine today. We did not keep our mine roads open this winter, as we were not in production, but are now opening the mine up so we could begin at the earliest possible moment.

Any information you could give us in regard to our application, or as to when we might hear from you, would certainly be appreciated, so we could plan accordingly. As spring is rapidly approaching, we would like to begin work as soon as possible.

Respectfully yours,

George C Castle

George C. Castle
Wood River Lead & Zinc Mine
Box 47
Ketchum, Idaho.

500
FILE COPY
SURNAME:

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

MAR 31 1952

Mr. George C. Castle
Wood River Lead & Zinc Mine
Box 47
Ketchum, Idaho

Re: Docket No. DMEA 2373

Dear Mr. Castle:

Your application for Government assistance in exploring the Wood River Lead and Zinc Mine, Docket No. DMEA-2373, has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration, and has been referred to Mr. A. E. Weissenborn, Executive Officer, Region II, DMEA Field Team, South 157 Howard Street, Spokane 4, Washington, for a field examination.

The Region office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

D. E. Moulds (mch)

D. E. Moulds, Chief
Base Metals Division
Defense Minerals Exploration
Administration

JWAlt/hmj
3-27-52
cc to: Adm. R. File
Docket
Region II
Mr. Moulds
Mr. Alt

FILE COPY
Surname:

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

Malde
Bishop
Eng

MAR 31 1952

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

Re: Docket No. DMEA 2373
West River Lead & Zinc Mine
George E. Castel, C. A. Hicks,
C. L. Stewart, Partners
Ketchum, Idaho

Dear Mr. Weissenborn:

A review of the above referenced docket, of which you have retained a copy, indicates that additional information is needed in order to process this application for Government assistance for this exploration project.

The following points have been raised in the review of the application which appear necessary to examine in the field to evaluate the project and, if the project indicates the possibility of worthwhile Government participation, will be necessary to process a contract.

1. The geological feasibility of the project.

2. Maps showing proposed work with necessary copies.

3. A legal description of the property on which the work is to be done.

4. Applicants state in answer to question 10, Form [illegible]-103, "we will set up our equipment, and labor, and we also expect to have ore to ship while sinking in the exploratory winze on the vein, we will also have some cash available." It should be explained to the applicants, the amount of money they will be required to furnish and the amount they will receive for the use of this equipment that is to be used on the project.

5. Amount of drifting and crosscutting that applicants propose to do seems very excessive for an exploration project, also the number of sumps and skip pockets.

6. Check applicants equipment and present value of the same. Also, state how much of this equipment will be needed on the project.

7. If exploration assistance is justified, include cost figures which cover recommended program.

Any other information that you may think is necessary for processing of this application will be appreciated. We have only attempted to point out some of the items, that we considered essential and realize that the usual field examination is necessary.

Enclosed is map submitted with application.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Enclosure

APPROVED:

J. H. Hodges

Member, Bureau of Mines

T. P. Thayer

Member, Geological Survey

JWalt/hmj
3-27-52

J.N.
3-31-52

CC to: Adm. A. File
✓Docket File Copy
Operating Committee
Region II
Mr. Bishop
Mr. McKnight
Mr. Moulds
Mr. Alt

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2373

Date received 2-11-52

George S. Castle
Box 47
Butte, Mont.

RECEIVED
FEB 1 1952
Defense Minerals Administration

Name and address of applicant

Date February 1, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☒ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production Answered on Page two of attached papers
   If not in production or operation, estimated date when production will begin same as above
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*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.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
George C. Castle	Partner	Not in Oper.	30,000			3,000	No Loans
Box 47 Ketchum, Idaho.							
Clayton L. Stewart	Partner	Not in Oper.	10,000			5,500	No Loans
Box 62, Sun Valley, Idaho	Partner						
Orla R. Hicks			10,000			3,000	No Loans
Box 112, Sun Valley, Idaho.							
	Total	-0-	x x x x x	-0-	-0-	x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

Not applicable

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

NOT IN OPERATION

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons 2,000 lbs	Metal or Mineral Content Per Ton (Grade) ton (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)	30,000	18%	68.40	32.00	8.00

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

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.

WOOD RIVER LEAD AND ZINC MINE
(Name of company)

By George C. Castle
Orla R. Hicks
Clayton L. Stewart
(Signature of authorized official)

February 1, 1952
(Date)

Partners
(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.

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho

FOR FORM MF-100 GENERAL TECHNICAL DATA

1. Material produced:

   (a) The chief products of the mine are zinc, lead and silver.

   (b) None

2. The name of the mine is "Wood River Lead and Zinc". The type of the mine is lode or fissure. The property was formally known as the old Anderson Property and as the Mary Claims.

   (a) 86 feet of shafts or winzes

   (b) 618½ feet of drifts and crosscuts

   (c) 639 feet of tunnels or adits

   (d) 125 feet of other mine openings. These openings are prospect raises on the veins.

   The mine is not flooded. We do expect to encounter water in the vein in sinking, but do not believe it will cause a problem. As the mine is not now in operation we do not know how much it will produce, but it has the possibility of producing 50 tons a day.

3.

   (a) 10 (ten) miles Northwest from Ketchum, Idaho, which is also the shipping point.

   (b) Warm Springs Mining District

   (c) Township 6N, Section 35, Range 17E

   (d) Blaine County, Idaho.

4.

   (a) The mine is not in operation at the present time. However, we have built the necessary roads and bridge to the mine for year round operation, installed track in to the vein, Installed our compressor and built a compressor house, built both ore and waste trestles, laid air pipe and air and water receiving tanks, built a tool shed, blacksmith shop and cabin, and partially completed another shed, have re-timbered and built an ore bin shoot in the mine and are cutting a station for air tugger preparatory to sinking.

   (b) Owners

Signed George C. Castle — George C Castle
Orla R. Hicks — O.R. Hicks
Clayton L. Stewart — Clayton L. Stewart

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-100 GENERAL TECHNICAL DATA

5. Number of years in production, Not in production, unknown of prior years
The estimated date when production will begin, April, 1953.

6. (a) George C. Castle.

My first mining experience started in 1934 with a partner. I located an old abandoned mine and we started working it in the middle of the winter. Neither of us had even been in a mine or knew anything about mining. With a few old hand tools we started out. We cleaned out an old tunnel and timbered it up. We were lucky enough to find a small stope of ore to start on. We worked about two months all told. We quit with 16 sacks of high grade ore which we shipped to the U. S. Smelting & Refining Co, which assayed 57% lead and 111 oz of Silver per ton.

The greater part of the next two years was spent working at a gold dredge in Stanley Basin, Idaho. One of my jobs at this dredge was testing the ground for the dredging.

In 1937 I started working undergound for the Triumph Mine until the spring of 1938 when I met a student of the Colorado School of Mines who had a small assaying kit and we spent four months in Bear Valley, Idaho prospecting for tungsten, molybdenite and antimony ores. At this time I spent considerable time studying rock structure ore deposits.

In 1941 I leased some dumps located in Boulder Basin, Idaho. I worked the dumps and old tailings piles, shipping seven railroad cars of ore to the American Smelter at Salt Lake City, Utah.

In the spring of 1942 with a partner I took a lease on the old Vienna Mine which is a gold and silver mine. We shipped three railroad cars of ore during the summer. Late that fall I went to work at the Hecle Mine in Wallace, Idaho. Worked for a short time as a miner and was promoted to timberman with five men working under my supervision. This gave me the oppotunity to study the different phases of mining during the two years I worked there I worked in different places from the 300 foot level to the 3,400 foot level. By this time I had definitely decided to go into the mining business for myself. Making every effort I could to learn all the different types of mining I encountered there, I started buying mining equipment what I could squeeze out above living expenses out of my wages.

In the summer of 1944 I went back to the Vienna Mine, and during that summer I shiped two cars of ore from there. As the winters were quite severe I moved over to Mackey, Idaho in the fall. Working with partners I shipped ten railroad cars of Copper Ore in a years time.

In 1945 I took a sub lease at the Homestake Mine near Ketchum, from which I shipped 35 railroad cars of zinc ore to the International Smelter in Utah during a year and one half time at that mine. (Continued on next page)

Signed George C. Castle *George C. Castle*
Orla R. Hicks *O. R. Hicks*
Clayton L. Stewart *Clayton L. Stewart*

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho

FOR FORM MF-100 GENERAL TECHNICAL DATA

6. (a) Continued.
At this time the bonus was taken off the zinc and the price of metal was too low forcing me to stop mining zinc as the principle metal in the ore, and the royalty I had to pay was too high.

In the fall of 1947 I entered into a partnership and we took a lease in the old 25 foot level of the Triumph mine and also on the dumps. I managed both operations, and we shipped over 25 railroad cars of ore (lead and zinc) low grade from the dumps and 48 railroad cars of ore from the mine during that time between 1947 and 1949. In that time I also managed the shiping of two cars of copper ore from Birch Creek and Farney.

In the summer of 1949 I leased in Boulder Basin. I spent my time building roads and making tests. I sank one new winze and pumped out several old ones, and made a thorough study of the vein structure and ore shoots, and shipped a little over three tons of ore which neted more than a 60 ton car from the Triumph that I shipped at the same time.

I have been self employed since 1944. In the fall of 1950, I and my brother took a lease at the Triumph Mine, in the Old North Star Section. This lease was given to me because the Triumph was unable to mine it at a profit. Although I have been unable to spend all my time there I have shipped 19 railroad cars of a good grade of ore. The average value of each of these cars being about $1,500 per car.

6. (a) Orla R. Hicks
My knowledge of mining is limited. However, having been raised in a mining country I am quite familiar with mining in general. In the year 1917 I began working in the Automotive repair field and have continued in that business to this date. I was with the State of Idaho for eight years as Master Mechanic and from there I came to Sun Valley going to work for the Union Pacific as Mechical Shop Foreman in maintenance of their equipment. Five years ago they made me Supervisor of Transportation which includes supervision of equipment maintenance. I am throughly qualified in the repair and maintenance of all types of machinery and am also experienced in acetylene and Electric Welding.

I feel with my knowledge together with Mr. Castle's ability as a miner and Mr. Stewart's knowledge in business and accounting we will make an efficient and successful partnership.

6. (a) Clayton L. Stewart
At the age of 19 years I was an Assistant Manager of a J. C. Penney Company Store and became familiar with purchasing, selling, and accounting of that firm. At the age of 20 I came to the UPRR Co., Sun Valley resort and with some additional training, worked as a Cashier and managed this resorts Liquor and Wine Store. In the Service in 1942 I joined as an apprentice seaman and after examination was assigned to the finance Section, and rose in grade from Apprentice Seaman to Warrant Officer Pay Clerk. I learned Gov't accounting procedure for Pay, Purchasing, Clothing ect., completely as I was responsible for the preparation and accuracy of all accounting for two shore stations of 6,000 service and civilian personnel, also two large training ships with a complement of 2,000 men, (Con't next page) Signed George C. Castle *George C. Castle*
Orla R. Hicks *O. R. Hicks*
Clayton L. Stewart *Clayton L. Stewart*

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-100 GENERAL TECHNICAL DATA

8. Answered on Form MF-100

9. INAPPLICABLE

10. NOT IN OPERATION

11. We are not yet in operation, but we expect when in full operation to produce about 1,000 tons a month.

12.
(a) We have about a 4 foot vein with the sulphide seam along the foot wall which runs from 2 inches to 14 inches at the present. The remaining portion of the vein is composed of oxidized zinc scattered through the vein material. The rest of this question is answered by the answer of question 7 (a) and 7 (c).

(b)
1. Assay plan enclosed, and proved mineral (measured) is indicated on the map.

2. It is impossible to estimate the measured tonnage of ore due to the irregularity of the ore in the vein, and as for indicated (probable) it is characteristic of the ore bodies in this area to become larger as depth is gained. Inasmuch as we have two definate veins 30 feet apart and the material between the veins has vein material mixed with it; it is possible that when sufficient depth is gained this 30 feet will become an ore bearing body, thus indicating tremendous amounts of ore deposits may be produced from this mine.

(c) Not applicable

13. Nine miles of State Highway # 93 North, Paved. One mile of U. S. Forest Service Gravel Surfaced Road, and 150 yards of newly built road directly to the portal of the mine. Also 100 yards of new road built from the lower tunnel to the upper tunnel.

14. There is at least 50 inches of spring water near the portal, and ample water in the mine for mining operations. This water will be sufficient for all seasons of the year.

15. We do not have electric power brought into the mine. However, the power lines of Idaho Power Company are only 1½ miles from the mine portal. The present Kilowatt rate per hour in the domestic use is .01541.

Signed

George C. Castle
Orla R. Hicks
Clayton L. Stewart

George C Castle
O. R. Hicks
Clayton L. Stewart

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-100 GENERAL TECHNICAL DATA

6. (a) Continued.
Four smaller ships and nine enrollment offices in the western area.
After the war I returned to Sun Valley and re-opened their Post Office, advancing it from 4th class to 2nd class in 90 days. I received a 100% rating from a Postal Inspector, who told me that in 22 years he had never given that rating before. As I did not like the Postmaster position I resigned to enter the Transportation Department of Sun Valley, where I am now employed as Ass't Supr. of Transportation. I have always been interested in mines and mining and every spare moment for the past years I have spent prospecting and studying mining operations. I feel that my knowledge of accounting and business will be of value to the mine partnership along with Mr. Hicks and Mr. Castle's knowledge in their fields. I also intend to work at the mine whenever it is possible for me to do so.

6 (b) Same as 6 (a)

7.
(a) The majority of the explorations, development, operation and production of this mine was done in the very early days. Small lots of ore were shipped but we do not know the amounts involved. The map which is included in these papers will show the work that was done.
We believe the reasons for suspension of operations was the low price of metal, and particularly the low price of zinc which is the principle metal in this ore. The work that was done, was done by hand, and they did not have the facilities to sink and pump water to explore the vein at depth, where we believe the major ore bodies will lie.

(b) The Triumph Mine lies about 10 air miles east from this property. It's production is lead, zinc, silver, and gold, and they mill about 250 tons a day.
The Homestake Mine at Lake Creek is about 4 air miles east from this property. It's production has been principally zinc. We do not know its present production, but it produced several thousands of tons during World War # 2.
The Boulder Basin Area Mines lie about 6 air miles west from this property and though not now in production, known records show well over $1,000,000. of ore shipped in early days.

(c) We have never had a mine examination by a geologist where we received a report. However in September a mining Engineer for Kennametal Inc visited the property briefly and was very interested in the development work. He asked for us to keep in contact with him and let him know how the work was progressing and if we needed any help on it to let him know.

Signed George C. Castle
Orla R. Hicks
Clayton L. Stewart
George C. Castle
O. R. Hicks
Clayton L. Stewart

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-100 GENERAL TECHNICAL DATA

16. There was no recent payroll period as we are not in operation, but when in operation we anticipate employing the following classes.

3 - - miners
2 - - muckers

17. all of the equipment and buildings listed below are owned by us.
Compressor House (Built this summer 1951 and is insulated)14'x20'
Blacksmith Shop (Built this summer 1951) 12'x 12'.
Tool Shed and Outhouse (Good Condition-4 years old) 8' x 4'.
Cabin (Living Cabin-Good Condition-4 years old) 12' x 16'.
Tool Shed (Partially completed-new) 12' x 20'.
Large Compressor (Excellent Condition)
Jack Hammer (Excellent Condition)
Air Tugger (Excellent Condition) Single Drum
Air Tugger (Excellent Condition) Double Drum
Water Pump (Excellent Condition)
Skip (Excellent Condition)
Four Mine Cars (Excellent Condition)
Two Stopers (Excellent Condition)
100 Feet Pressure Air Hose (Excellent Condition)
100 Feet Pressure Water Hose (Excellent Condition)
D-4 Catapillar Traxcavator (Excellent Condition)
Dump Truck, Metal Dump Bed (Good Condition)
Two large Air Receiver Tanks (Good Condition)
Two large water tanks (Good Condition)
1,400 feet of 3 inch pipe (Good Condition)
400 feet of Double Track laid (Good Condition)
Two Dump Trestles, ore & waste (Newly built)
Large Bridge across river (Newly built)
Necessary drill steel and bits (Good Condition)
Large ore or waste bin newly built in the mine.
One Jeep (Excellent Condition)
Necessary hand tools for repair and maintainence

18. The ore shoot runs between 80 and 100 feet in length of showings in the upper workings, and only part of it is exposed in the lower tunnel. We would estimate the ore shoot is striking at about 60 degrees north-west with the vein dipping at about 80 degrees to the west. In this area it seems to be very characteristic for the ore to change from oxide to sulphide as the depth is gained at the water table. In this mine they have never went deep enough to reach the water table level. The area where we propose to sink and crosscut at 100 foot levels lies in the major ore bearing area.

Signed George C. Castle
Orlie R. Hicks
Clayton L. Stewart

George C. Castle
O. R. Hicks
Clayton L. Stewart

EXPLORATION

Subject: DMEA-2373
Re: Exploration Loan
Wood River Lead & Zinc Mine
February 12, 1952

Mr. George C. Castle, Partner
Wood River Lead & Zinc Mine
Box 47
Ketchum, Idaho

My dear Mr. Castle:

This will acknowledge receipt of your application dated February 1, 1952 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2373 and referred to the Base Metals Division.

Kindly refer to DMEA-2373 in any future correspondence relating to your application.

Sincerely yours,

R. E. ADAMS

Robert E. Adams
Acting Administrative Officer

7862

DMEA-2373

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 11 1952

February 7, 1952

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region II

Subject: Application for Exploration Loan,
Wood River Lead & Zinc Mine
George C. Castle
Box 47, Ketchum, Idaho

Enclosed are three copies of MF-100 and three copies of MF-103 of the subject application. Copies MF-100 and MF-103 have been retained in order to expedite a field examination.

Verne C. Fryklund, Jr.
Verne C. Fryklund, Jr.
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosures

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMEA-2373
Metal or Mineral
Date Received 2-11-52
Amount $
Participation (Government %)

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FEB 1 1 1952

Name and address of applicant

Date February 1, 1952

If you have already filed MF-100, give date filed Feb 1, 1952, type of assistance requested 50%,

DMA Docket Number (if available)

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

WOOD RIVER LEAD & ZINC MINE (Partnership)
(Name of company)

By George C. Castle
George C. Castle
O. R. Hicks
Orla R. Hicks
(Signature of authorized official)

Clayton L. Stewart
Clayton L. Stewart
Partners
(Title)

Feb 1, 1952
(Date)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho

FOR FORM MF-103 APPLICATION FOR AID

1. (a) Claims of the following:
Wood River Lead and Zinc Claim
Wood River Lead and Zinc # 1 Claim
Wood River Lead and Zinc # 2 Claim
Wood River Lead and Zinc # 3 Claim
Four claims in all, each claim 1,500 feet by 600 feet.
Claims located in Township 6N, Section 35, Range 17E,
in the Warm Springs Mining District, Blaine County, Idaho.

(b) We are the Owners

(c) Same as 1 (a)

2. Zinc, Lead and Silver (a)

(b) Answered in Form MF-100, question 7 (a),(b),(c) and 12 (a), (b) 1 & 2 and by map sketch attached.

Signed

George C. Castle
Orla R. Hicks
Clayton L. Stewart

George Castle

O. R. Hicks

Clayton L. Stewart

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho

FOR FORM MF-103 APPLICATION FOR AID

3. (a) We propose to sink a 60 degree winze on the second vein in the lower drift. This winze is to be approximately 5' x 5' inside timber dimensions, and we desire to sink to a 300 foot level. At the 100 foot level we propose a prospect drift extending 75 feet on either side of the winze. At the 200 foot level we propose a prospect drift of 100 feet on the Northwest side and a 150 foot prospect drift on the other side of the winze. At the 300 foot level we wish to drive a prospect drift 150 feet on the Northwest side, and 300 feet on the other side of the winze.

At the 100 foot level we want a skip pocket of approximately 12 cubic yards capacity. At the 200 foot level we want a skip pocket of approximately 15 cubic yards and a small dump of (depends on the water encountered) 6 ' x 8'. At the 300 foot level we also want a skip pocket of approximately 20 cubic yards capacity and a sump of (again depends on water encountered) possibly 6' x 20'.

At the vein, where we propose to sink on the vein, we intend to drive a prospect drift for 200 feet on the vein; in addition to prospect drifts at all levels, we wish to crosscut to the first vein.

We believe a winze that was sunk on the vein in the upper drift lacks only about 28 feet from being connected with the lower drift. We propose to drive a raise to intercept this winze, so as to provide an adequate air ventilation for the sinking operation.

The above is the extent for which we wish to apply for an exploratory loan. The cost of the project we would estimate at $68,750.00. This cost was figured on the following basis.

Drifts	
200' drift @ $35 a foot	$ 7,000.00
150' drift at 100' level at $40 a foot	$ 6,000.00
250' drift at 200' level at $40 a foot	$10,000.00
450' drift at 300' level at $40 a foot	$18,000.00
Skip Pockets	
12 cubic yards	$ 200.00
15 cubic yards	$ 250.00
20 cubic yards	$ 300.00
Sumps	
6' x 8' @$35 at foot	$ 280.00
6' x 20' @$35 a foot	$ 700.00
Crosscuts	
120' at $ 40 a foot	$ 4,800.00
Winze	
342' at $60 a foot	$20,520.00
Air Duct	
28' raise @$35 a foot	$ 700.00
Total	$68,750.00

(b) We believe if this loan is approved we can start the project in May, 1952 and complete it in 18 months.

Signed George C. Castle — George C Castle
Orla R. Hicks — O. R. Hicks
Clayton L. Stewart — Clayton L. Stewart

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-103 APPLICATION FOR AID

4. This is answered by the map attached to MF-100.

5. Answered in MF-100, question # 17.

6. One tool shed to be completed, estimated cost $150.00.

7. (a) None

(b) Double Drum Air Tugger and a Slusher, & if large amount of water is encountered we may have to purchase a large pump.

(c)

Name	Cost	Year	Replacement	Condition
Ov-Tires Metal Chev. Truck, Dump	1,434.25	1942	3,100.00	Excellent, Snow Plow with Cat. Trailer
Compressor, Ing. Rand 315 Cubic Feet	1,500.00	8 yrs	8,500.00	Excellent
Compressor, Schramm 105 Cub Feet	2,200.00	1948	3,200.00	Excellent
Stude. Pick-Up	1,750.00	1951	1,750.00	Excellent
Willy's Jeep	1,250.00	1946	1,650.00	Excellent with Sno-plow ect.
Catapillar D-4 Traxcavator	7,780.55	1947	10,600.00	Excellent
Jack Hammer	303.00	1949	380.00	Excellent
Air Tugger, Single	450.00	1949	850.00	Excellent
Water Pump	350.00	1949	400.00	Excellent
Skip	250.00	1952	250.00	Excellent
4 Mine Cars	500.00	1943	600.00	Excellent
Two Stopers	816.00	1947	1,100.00	Excellent
100 Feet Air Hose	50.00	1951	65.00	Excellent
100 Feet Pressure Water H	45.00	1951	50.00	Excellent
2 Air Receiver Tanks	400.00	1946	900.00	Excellent
2 Pressure Water Tanks	60.00	1947	60.00	Excellent
1400 Feet 2" Pipe	420.00	used	588.00	Excellent
Drill Steel(500 Lbs)	500.00	used	750.00	Excellent
Bits(500) I.Q.Bits	175.00	used	175.00	Excellent
Bits(300) Timken	126.00	used	126.00	Excellent
Track 400' Double	170.00	used	800.00	Excellent
Air Fittings	66.00	new	66.00	Excellent
Winch	500.00	used	700.00	Excellent
	21,095.80		36,660.00	

8. 1 Mine Supervisor - $500.00 per month
3 Miners @$14.00 per day
2 Muckers @$13.00 per day

Signed George C. Castle
Orla R. Hicks
Clayton L. Stewart

George Castle
O. R. Hicks
Clayton L. Stewart

WOOD RIVER LEAD & ZI[illegible] MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-103 APPLICATION FOR AID

9. Materials		
Timber (wedges, Ties, Lagging, Caps, Girts etc.)	$	12,210.00
Pipe	$	630.00
Rail (Spikes, Nails, Fish Plates, Bolts ect.)	$	3,000.00
Cable	$	300.00
Supplies		
Caps	$	150.00
Powder	$	2,000.00
Bits	$	375.00
Hand Tools & Steel	$	150.00
Gas	$	6,075.00
Oil	$	150.00
Carbide	$	30.00
Fuse	$	600.00
Lights	$	30.00
Labor	$	41,375.00
Purchases (Double Drum Air Tugger & a slusher	$	1,350.00
Engineering		
Unknown Cost, but possibly $100.00	$	100.00
Assaying		
Estimate	$	100.00
Power		
None	$	-0-
Water		
Ample	$	-0-
Accounting		
Included in cost of Labor, $75.00 a month	$	-0-
Utilities		
None	$	-0-
Repairs	$	225.00
Total	$	68,750.00

Signed George C. Castle
Orla R. Hicks
Clayton L. Stewart

George C Castle

O. R. Hicks

Clayton L. Stewart

WOOD RIVER LEAD & ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-103 APPLICATION FOR AID

10. (a) We will put up our equipment, and labor, and we also expect to have ore to ship while sinking in the exploratory winze on the vein. We will also have some cash available.

(b) We believe our particapation will be equal to the Governments as stated above.

11. We would like to restate again, that the location of this property is such that it will always be available to year round operation.

Signed

George C. Castle
Orla R. Hicks
Clayton L. Stewart

George C Castle

O. R. Hicks

Clayton L. Stewart

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2373

Date received 2-11-52

FEB 1 1952

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

Name and address of applicant

Date February 1, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - [x] Owner.
   - [ ] Lessee.
   - [ ] Contractor.
5. Number of years in production Answered on Page two of attached papers

   If not in production or operation, estimated date when production will begin same as above
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*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.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
George C. Castle	Partner	Not in Operation	$30,000			3,000	No?Loans
Box 47 Ketchum, Idaho.							
Clayton L. Stewart	Partner		$10,000			5,500	No?Loans
Box 62, Sun Valley, Idaho.							
Orla R. Hicks	Partner		$10,000			3,000	No Loans
Box 112, Sun Valley, Idaho.							
	Total	-0-	x x x x x	-0-	-0-	x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:
Not applicable

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:
NOT IN OPERATION

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons 2,000 lbs ton (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)	30,000	18%	68.40	32.00	8.00

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

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.

George C. Castle
Orla R. Hicks
By Clayton L. Stewart
(Signature of authorized official)

WOOD RIVER LEAD AND ZINC MINE
(Name of company)

February 1, 1952
(Date)

Partners
(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.

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho

FOR FORM MF-100 GENERAL TECHNICAL DATA

1. Material produced:

(a) The chief products of the mine are zinc, lead and silver.

(b) None

2. The name of the mine is "Wood River Lead and Zinc". The type of the mine is lode or fissure. The property was formally known as the old Anderson Property and as the Mary Claims.

(a) 86 feet of shafts or winzes

(b) 618½ feet of drifts and crosscuts

(c) 639 feet of tunnels or adits

(d) 125 feet of other mine openings. These openings are prospect raises on the veins.

The mine is not flooded. We do expect to encounter water in the vein in sinking, but do not believe it will cause a problem. As the mine is not now in operation we do not know how much it will produce, but it has the possibility of producing 50 tons a day.

3.

(a) 10 (ten) miles Northwest from Ketchum, Idaho, which is also the shipping point.

(b) Warm Springs Mining District

(c) Township 6N, Section 35, Range 17E

(d) Blaine County, Idaho.

4.

(a) The mine is not in operation at the present time. However, we have built the necessary roads and bridge to the mine for year round operation, installed track in to the vein, Installed our compressor and built a compressor house, built both ore and waste trestles, laid air pipe and air and water receiving tanks, built a tool shed, blacksmith shop and cabin, and partially completed another shed, have re-timbered and built an ore bin shoot in the mine and are cutting a station for air tugger preparatory to sinking.

(b) Owners

George C. Castle
Signed Orla R. Hicks
Clayton L. Stewart

George C. Castle
O. R. Hicks
Clayton L. Stewart

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-100 GENERAL TECHNICAL DATA

5. Number of years in production, Not in production, unknown of prior years
The estimated date when production will begin, April, 1953.

6. (a) George C. Castle.

My first mining experience started in 1934 with a partner. I located an old abandoned mine and we started working it in the middle of the winter. Neither of us had even been in a mine or knew anything about mining. With a few old hand tools we started out. We cleaned out an old tunnel and timbered it up. We were lucky enough to find a small stope of ore to start on. We worked about two months all told. We quit with 16 sacks of high grade ore which we shipped to the U. S. Smelting & Refining Co, which assayed 57% lead and 111 oz of Silver per ton.

The greater part of the next two years was spent working at a gold dredge in Stanley Basin, Idaho. One of my jobs at this dredge was testing the ground for the dredging.

In 1937 I started working undergound for the Triumph Mine until the spring of 1938 when I met a student of the Colorado School of Mines who had a small assaying kit and we spent four months in Bear Valley, Idaho prospecting for tungsten, molybdenite and antimony ores. At this time I spent considerable time studying rock structure ore deposits.

In 1941 I leased some dumps located in Boulder Basin, Idaho. I worked the dumps and old tailings piles, shipping seven railroad cars of ore to the American Smelter at Salt Lake City, Utah.

In the spring of 1942 with a partner I took a lease on the old Vienna Mine which is a gold and silver mine. We shipped three railroad cars of ore during the summer. Late that fall I went to work at the Hecle Mine in Wallace, Idaho. Worked for a short time as a miner and was promoted to timberman with five men working under my supervision. This gave me the opportunity to study the different phases of mining during the two years I worked there I worked in different places from the 300 foot level to the 3,400 foot level. By this time I had definitely decided to go into the mining business for myself. Making every effort I could to learn all the different types of mining I encountered there, I started buying mining equipment what I could squeeze out above living expenses out of my wages.

In the summer of 1944 I went back to the Vienna Mine, and during that summer I shiped two cars of ore from there. As the winters were quite severe I moved over to Mackey, Idaho in the fall. Working with partners I shipped ten railroad cars of Copper Ore in a years time.

In 1945 I took a sub lease at the Homestake Mine near Ketchum, from which I shipped 35 railroad cars of zinc ore to the International Smelter in Utah during a year and one half time at that mine. (Continued on next page)

Signed George C. Castle — George C. Castle
Orla R. Hicks — O. R. Hicks
Clayton L. Stewart — Clayton L. Stewart

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho

FOR FORM MF-100 GENERAL TECHNICAL DATA

6. (a) Continued.

At this time the bonus was taken off the zinc and the price of metal was too low forcing me to stop mining zinc as the principle metal in the ore, and the royalty I had to pay was too high.

In the fall of 1947 I entered into a partnership and we took a lease in the old 25 foot level of the Triumph mine and also on the dumps. I managed both operations, and we shipped over 25 railroad cars of ore (lead and zinc) low grade from the dumps and 48 railroad cars of ore from the mine during that time between 1947 and 1949. In that time I also managed the shiping of two cars of copper ore from Birch Creek and Farney.

In the summer of 1949 I leased in Boulder Basin. I spent my time building roads and making tests. I sank one new winze and pumped out several old ones, and made a thorough study of the vein structure and ore shoots, and shipped a little over three tons of ore which neted more than a 60 ton car from the Triumph that I shipped at the same time.

I have been self employed since 1944. In the fall of 1950, I and my brother took a lease at the Triumph Mine, in the Old North Star Section. This lease was given to me because the Triumph was unable to mine it at a profit. Although I have been unable to spend all my time there I have shipped 19 railroad cars of a good grade of ore. The average value of each of these cars being about $1,500 per car.

6. (a) Orla R. Hicks

My knowledge of mining is limited. However, having been raised in a mining country I am quite familiar with mining in general. In the year 1917 I began working in the Automotive repair field and have continued in that business to this date. I was with the State of Idaho for eight years as Master Mechanic and from there I came to Sun Valley going to work for the Union Pacific as Mechical Shop Foreman in maintenance of their equipment. Five years ago they made me Supervisor of Transportation which includes supervision of equipment maintenance. I am throughly qualified in the repair and maintenance of all types of machinery and am also experienced in acetylene and Electric Welding.

I feel with my knowledge together with Mr. Castle's ability as a miner and Mr. Stewart's knowledge in business and accounting we will make an efficient and successful partnership.

6. (a) Clayton L. Stewart

At the age of 19 years I was an Assistant Manager of a J. C. Penney Company Store and became familiar with purchasing, selling, and accounting of that firm. At the age of 20 I came to the UPRR Co., Sun Valley resort and with some additional training, worked as a Cashier and managed this resorts Liquor and Wine Store. In the Service in 1942 I joined as an apprentice seaman and after examinations was assigned to the finance Section, and rose in grade from Apprentice Seaman to Warrant Officer Pay Clerk. I learned Gov't accounting procedure for Pay, Purchasing, Clothing ect., completely as I was responsible for the preparation and accuracy of all accounting for two shore stations of 6,000 service and civilian personnel, also two large training ships with a complement of 2,000 men, (Con't next page) Signed George C. Castle *George C. Castle*
Orla R. Hicks *O. R. Hicks*
Clayton L. Stewart *Clayton L. Stewart*

TELEPHONE 3-3302

Hand Sample Serial 17467-69

Mine U.S. 969 Ben B. Castle

12 (B) (1) Ketchum, Idaho

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
A. C. SELBY, Vice-Pres. & Treas.
A. C. SELBY, JR., Secretary

Salt Lake City 11, Utah

RESULTS PER TON OF 2000 POUNDS

May 23, 1951

NO.	GOLD Ozs. per Ton	SILVER Ozs. per ton	LEAD Per Cent Wet	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent	VALUE GOLD
1	Trace	3.1	4.8	None	50.4	13.2	12.6	4.4				
2	Trace	7.9	14.4	None	10.8	36.9	4.3	6.8				
3	Trace	5.4	5.8	None	70.6	5.1	0.2	4.4				

These Are Crosscuts Samples On the Vein or Sulphide Seam, Where we propose to do Work

This is from Small Ore Dump Outside. That has lain there for Many Years

Remarks

Charges $

A. C. Selby Jr.

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-100 GENERAL TECHNICAL DATA

8. Answered on Form MF-100

9. INAPPLICABLE

10. NOT IN OPERATION

11. We are not yet in operation, but we expect when in full operation to produce about 1,000 tons a month.

12.
(a) We have about a 4 foot vein with the sulphide seam along the foot wall which runs from 2 inches to 14 inches at the present. The remaining portion of the vein is composed of oxidized zinc scattered through the vein material. The rest of this question is answered by the answer of question 7 (a) and 7 (c).

(b)
1. Assay plan enclosed, and proved mineral (measured) is indicated on the map.

2. It is impossible to estimate the measured tonnage of ore due to the irregularity of the ore in the vein, and as for indicated (probable) it is characteristic of the ore bodies in this area to become larger as depth is gained. Inasmuch as we have two definate veins 30 feet apart and the material between the veins has vein material mixed with it; it is possible that when sufficient depth is gained this 30 foot will become an ore bearing body, thus indicating tremendous amounts of ore deposits may be produced from this mine.

(c) Not applicable

13. Nine miles of State Highway # 93 North, Paved. One mile of U. S. Forest Service Gravel Surfaced Road, and 150 yards of newly built road directly to the portal of the mine. Also 100 yards of new road built from the lower tunnel to the upper tunnel.

14. There is at least 50 inches of spring water near the portal, and ample water in the mine for mining operations. This water will be sufficient for all seasons of the year.

15. We do not have Electric power brought into the mine. However, the power lines of Idaho Power Company are only 1½ miles from the mine portal. The present Kilowatt rate per hour in the domestic use is .01541.

Signed

George C. Castle
Orla R. Hicks
Clayton L. Stewart

George C Castle
O. R. Hicks
Clayton L. Stewart

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-100 GENERAL TECHNICAL DATA

6. (a) Continued.
Four smaller ships and nine enrollment offices in the western area.
After the war I returned to Sun Valley and re-opened their Post Office, advancing it from 4th class to 2nd class in 90 days. I received a 100% rating from a Postal Inspector, who told me that in 22 years he had never given that rating before. As I did not like the Postmaster position I resigned to enter the Transportation Department of Sun Valley, where I am now employed as Ass't Supr. of Transportation. I have always been interested in mines and mining and every spare moment for the past years I have spent prospecting and studying mining operations. I feel that my knowledge of accounting and business will be of value to the mine partnership along with Mr. Hicks and Mr. Castle's knowledge in their fields. I also intend to work at the mine whenever it is possible for me to do so.

6 (b) Same as 6 (a)

7.
(a) The majority of the explorations, development, operation and production of this mine was done in the very early days. Small lots of ore were shipped but we do not know the amounts involved. The map which is included in these papers will show the work that was done.
We believe the reasons for suspension of operations was the low price of metal, and particularly the low price of zinc which is the principle metal in this ore. The work that was done, was done by hand, and they did not have the facilities to sink and pump water to explore the vein at depth, where we believe the major ore bodies will lie.

(b) The Triumph Mine lies about 10 air miles east from this property. It's production is lead, zinc, silver, and gold, and they mill about 250 tons a day.
The Homestake Mine at Lake Creek is about 4 air miles east from this property. It's production has been principally zinc. We do not know its present production, but it produced several thousands of tons during World War # 2.
The Boulder Basin Area Mines lie about 6 air miles west from this property and though not now in production, known records show well over $1,000,000. of ore shipped in early days.

(c) We have never had a mine examination by a geologist where we received a report. However in September a mining Engineer for Kennametal Inc visited the property briefly and was very interested in the development work. He asked for us to keep in contact with him and let him know how the work was progressing and if we needed any help on it to let him know.

Signed George C. Castle
Orla R. Hicks
Clayton L. Stewart
George C. Castle
O. R. Hicks
Clayton L. Stewart

WOOD RIVER LEAD AND ZINC MINE
George C. Castle
Box 47
Ketchum, Idaho.

FOR FORM MF-100 GENERAL TECHNICAL DATA

16. There was no recent payroll period as we are not in operation, but when in operation we anticipate employing the following classes.

3 - - miners
2 - - muckers

17. all of the equipment and buildings listed below are owned by us.

Compressor House (Built this summer 1951 and is insulated) 14'x20'
Blacksmith Shop (Built this summer 1951) 12'x 12'.
Tool Shed and Outhouse (Good Condition-4 years old) 8' x 4'.
Cabin (Living Cabin-Good Condition-4 years old) 12' x 16'.
Tool Shed (Partially completed-new) 12' x 20'.
Large Compressor (Excellent Condition)
Jack Hammer (Excellent Condition)
Air Tugger (Excellent Condition) Single Drum
Air Tugger (Excellent Condition) Double Drum
Water Pump (Excellent Condition)
Skip (Excellent Condition)
Four Mine Cars (Excellent Condition)
Two Stopers (Excellent Condition)
100 Feet Pressure Air Hose (Excellent Condition)
100 Feet Pressure Water Hose (Excellent Condition)
D-4 Catapillar Traxcavator (Excellent Condition)
Dump Truck, Metal Dump Bed (Good Condition)
Two large Air Receiver Tanks (Good Condition)
Two large water tanks (Good Condition)
1,400 feet of 2 inch pipe (Good Condition)
400 feet of Double Track laid (Good Condition)
Two Dump Trestles, ore & waste (Newly built)
Large Bridge across river (Newly built)
Necessary drill steel and bits (Good Condition)
Large ore or waste bin newly built in the mine.
One Jeep (Excellent Condition)
Necessary hand tools for repair and maintainence

18. The ore shoot runs between 80 and 100 feet in length of showings in the upper workings, and only part of it is exposed in the lower tunnel. We would estimate the ore shoot is striking at about 60 degrees north-west with the vein dipping at about 80 degrees to the west. In this area it seems to be very characteristic for the ore to change from oxide to sulphide as the depth is gained at the water table. In this mine they have never went deep enough to reach the water table level. The area where we propose to sink and crosscut at 100 foot levels lies in the major ore bearing area.

Signed George C. Castle
Orla R. Hicks
Clayton L. Stewart

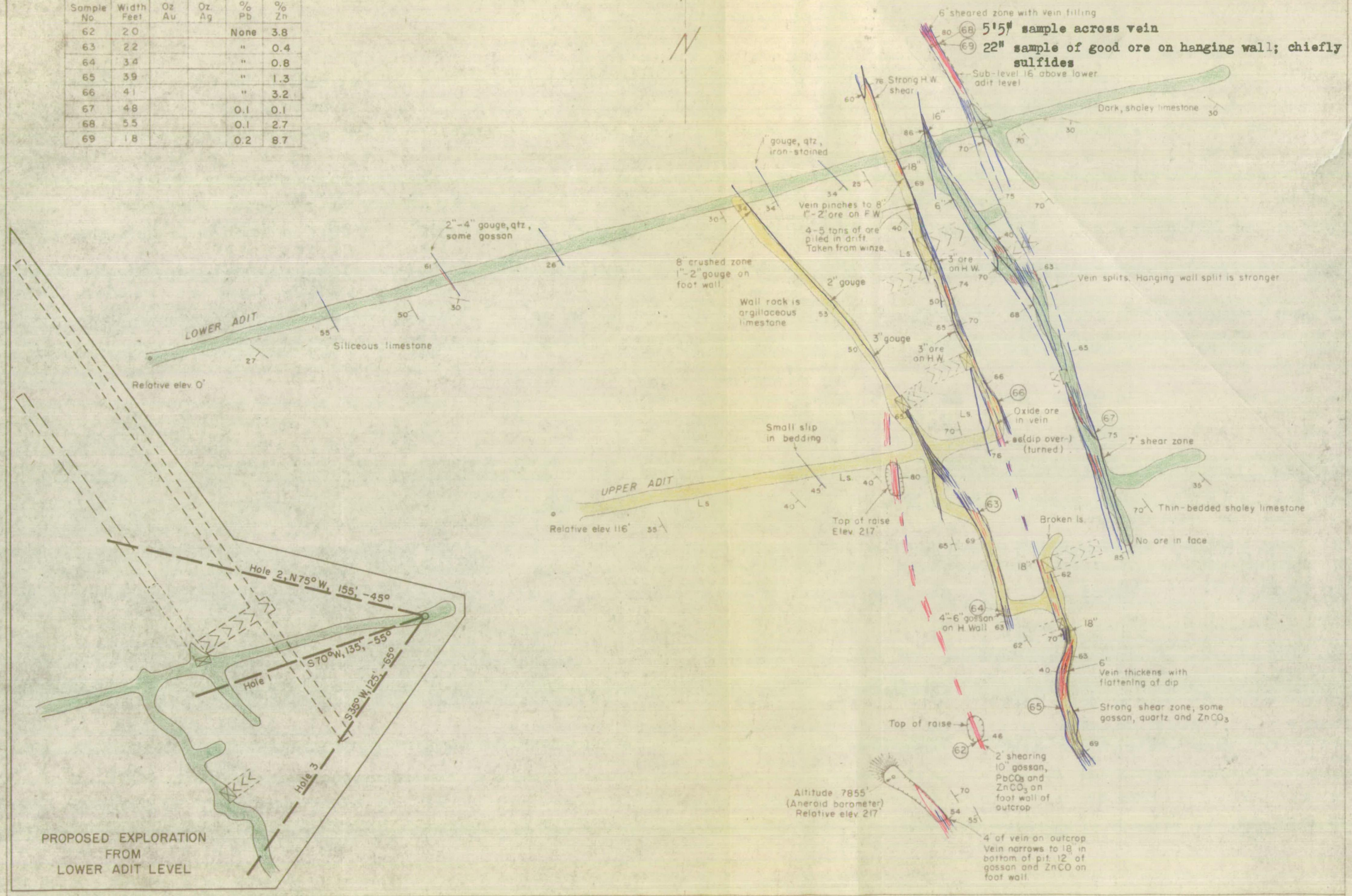
George C Castle
O. R. Hicks
Clayton L. Stewart

DMEA-2373

Contains Maps of
Wood River Lead + Zinc
Mine

SAMPLE DATA

Sample No.	Width Feet	Oz Au	Oz Ag	% Pb	% Zn
62	2.0			None	3.8
63	2.2			"	0.4
64	3.4			"	0.8
65	3.9			"	1.3
66	4.1			"	3.2
67	4.8			0.1	0.1
68	5.5			0.1	2.7
69	1.8			0.2	8.7



Brunton and tape survey by T.H.K. and T.E.H., June 1, 1952

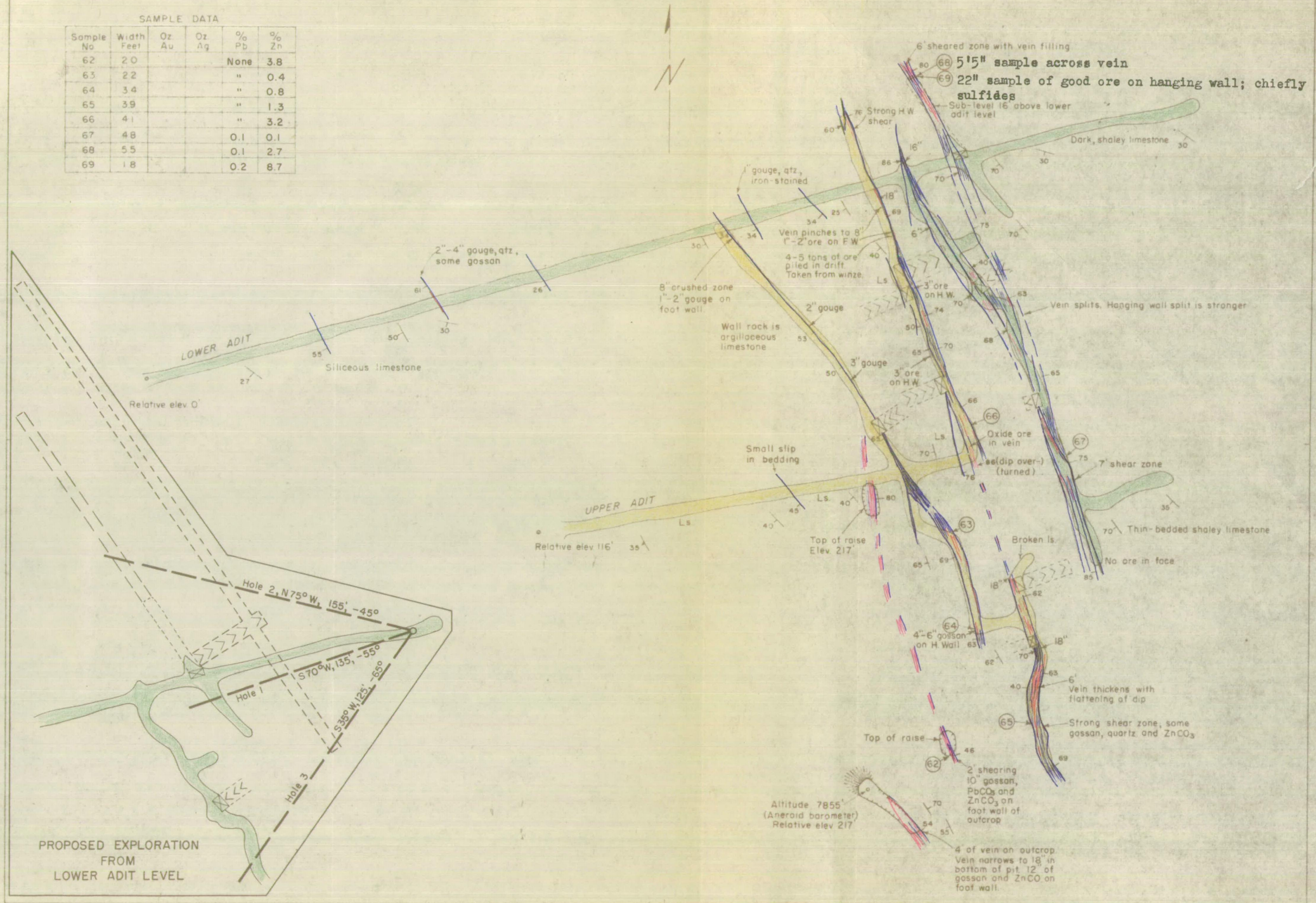
Geology by T. H. Kiilsgaard, U.S.G.S. and T.E. Howard, U.S.B.M., June 1, 1952

GEOLOGIC MAP OF WOOD RIVER LEAD-ZINC MINE, BLAINE COUNTY, IDAHO

40 0 40 80 120 Feet

SAMPLE DATA

Sample No	Width Feet	Oz Au	Oz Ag	% Pb	% Zn
62	2.0			None	3.8
63	2.2			"	0.4
64	3.4			"	0.8
65	3.9			"	1.3
66	4.1			"	3.2
67	4.8			0.1	0.1
68	5.5			0.1	2.7
69	1.8			0.2	8.7



Brunton and tape survey by T.H.K. and T.E.H., June 1, 1952

Geology by I.H. Kulsgaard, U.S.G.S. and T.E. Howard, U.S.B.M., June 1, 1952

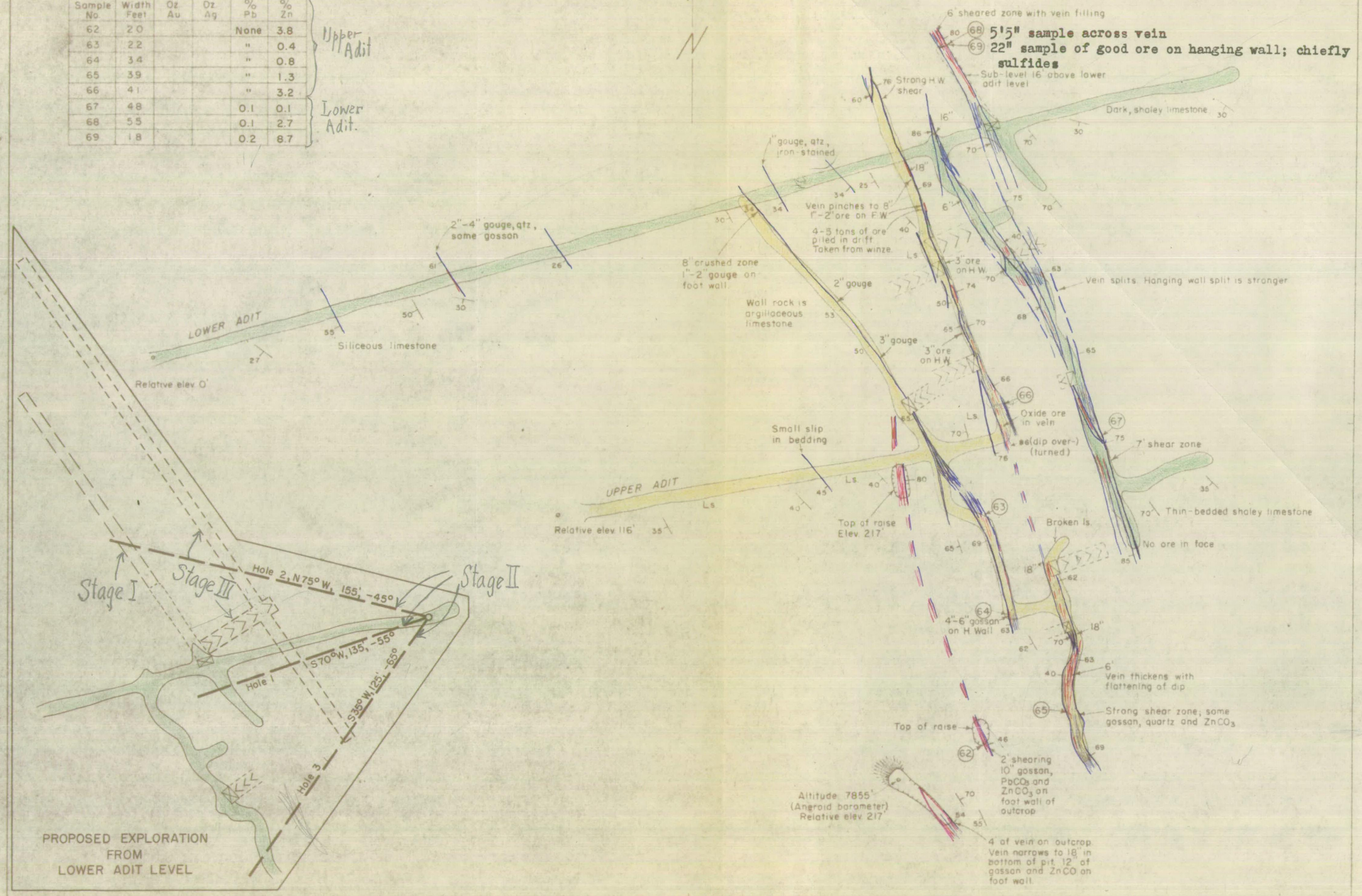
GEOLOGIC MAP OF WOOD RIVER LEAD-ZINC MINE, BLAINE COUNTY, IDAHO

40 0 40 80 120 Feet

"U. S. Geological Survey"

SAMPLE DATA

Sample No.	Width Feet	Oz Au	Oz Ag	% Pb	% Zn	
62	2.0			None	3.8	Upper Adit
63	2.2			"	0.4	
64	3.4			"	0.8	
65	3.9			"	1.3	
66	4.1			"	3.2	
67	4.8			0.1	0.1	Lower Adit.
68	5.5			0.1	2.7	
69	1.8			0.2	8.7	



Brunton and tape survey by T.H.K. and T.E.H., June 1, 1952

Geology by T. H. Kiilsgaard, U.S.G.S. and T.E. Howard, U.S.B.M., June 1, 1952

GEOLOGIC MAP OF WOOD RIVER LEAD-ZINC MINE, BLAINE COUNTY, IDAHO

40 0 40 80 120 Feet