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Item 13

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-2932, BLUE JACKET MINING CO.

BURNS MINE

ELKO COUNTY, NEV.

GLENN G. GENTRY, MINING ENGINEER
U. S. BUREAU OF MINES

ROSCOE M. SMITH, GEOLOGIST
U. S. GEOLOGICAL SURVEY

OCTOBER 1, 1953

EXHIBITS

Fig. 1 - Index map of northeast Nevada.

" 2 - Geologic map of scheelite prospect, Blue Jacket Mining Co., Elko County, Nev.

" 3 - Claim map, Blue Jacket Mining Co., Elko County, Nev.

in Flat Files

REPORT OF EXAMINATION

Docket No.: DMEA-2932 (Tungsten)

Name and address of applicant: Blue Jacket Mining Co.,
Leon K. Carson, President,
924 Main Street,
Boise, Idaho.

Name and location of property: Burns Mine, Elko County, Nev.

SUMMARY

Under date of March 13, 1953, the Blue Jacket Mining Co. submitted an application for Government assistance in the amount of $13,430.50 with which to conduct 825 feet of core drilling at the Burns Mine in Elko County, Nev.

Pursuant to receipt of this application, the Burns Mine was examined on the day and night of August 22, 1953 by a field team consisting of an engineer[1/] of the U. S. Bureau of Mines, Region III and a geologist[2/] of the U. S. Geological Survey. The delay in making the examination was due to snow and road conditions which prevented access to the property and to the applicant's failure (as per his letter dated June 17, 1953) to keep the Bureau of Mines advised when conditions at the mine would make the examination possible. Efforts by this office to contact the applicant at his official address in Boise, Idaho, prior to August 19, 1953, resulted in the letter being returned marked unclaimed.

1/ Glenn G. Gentry.
2/ Roscoe M. Smith.

During the examination, the field team were accompanied by:

Mr. Leon K. Carson, President
Mr. Jack Murdock, Secretary-Treasurer
Mr. Silas Cordes, Director
Mr. Ernest Oberbillig, Consulting Mining Engineer
Mr. W. C. Burns, owner of the Burns Mine

The above men represented the Blue Jacket Mining Co.

The field team consider that the diamond drilling program as outlined in the application will not yield sufficient reliable information relative to the grade of scheelite because of the lack of uniformity of mineralization.

The analysis of the samples taken by the examining engineer are considered to be representative of the exposures open for sampling. However, the samples also indicate the speculative nature of future development work.

The property has some merit and the field team suggest a moderate exploration project to be accomplished in two stages:

Stage I:- Drift on the vein for a distance of 200 feet in a southeasterly direction, beginning at an approximate elevation of 7,925 feet. (Fig. 2)

Stage II:- To be undertaken only if stage I exposes sufficient scheelite in commercial quantities and only upon prior written authorisation by the Government. -

Crosscut in an easterly direction for a distance of 50 feet at or near the south end of the adit extended under stage I. Then drift south, off the crosscut, for a distance of 50 feet.

CONCLUSIONS AND RECOMMENDATIONS

The field team conclude that there is a reasonable chance of discovering small ore bodies in a new district and that there may be inferred reserves of 1,000 tons containing about 0.50 percent WO_3 in the block to be explored.

If a tungsten deposit of this size and grade is in the National interest, it is recommended that Government enter into a contract with the applicant for the exploration as outlined in stage I and stage II.

NAME AND LOCATION OF PROPERTY

The Burns mine is located in northern Elko County, Nev., 39.2 miles south and west of Mountain City, Nev. It is situated on the western slope of the Bull Run Mountains and at an elevation of 8,200 feet. The specific location of the mine is NW 1/4 of the NW 1/4 of sec. 28, T. 44 N., R. 52 E. in the Centennial Mining District.

Road conditions:- The roads are the usual unimproved desert roads and for the most part will be difficult and at times impossible to travel during the winter months. From the mine camp to the mine, a distance of 7.4 miles, the road is narrow with a steep gradient. This latter section of the road will probably be blocked by snowfall from late November until June unless the operator maintains heavy equipment for snow removal.

APPLICANT'S PROPERTY RIGHTS

The application lists mining claims, considered as part of the Burns group, as the Silver, Wonder and Blue Grouse. These claims are held by W. C. Burns by right of location and are reported to be recorded in books 23 and 24, pages 551, 552 and 636 in the office of the County Recorder, Elko County Courthouse, Elko, Nev.

Under date of June 20, 1950, W. C. Burns and Inez Mae Burns, his wife, granted a lease and option on 30 mining claims to Silas Cordes of Boise, Idaho. The lease and option terminating on June 30, 1975.

Under date of February 25, 1952, Silas Cordes agreed to sell, assign, set over and transfer his lease and option obtained from W. C. Burns and Inez Mae Burns, dated June 28, 1950 to the Blue Jacket Mining Co. This assignment covers the Silver, Wonder and Blue Grouse claims on which the applicant applied for Government assistance. The exposures examined by the field team are reported as being on the Silver, Wonder and Blue Grouse mining claims. The quarts vein examined is principally on the Silver mining claim.

The applicant reports that all assessment work has been done and that no debts have accrued against the property. A Landlord's Subordination Agreement, dated May 15, 1951, signed by W. C. Burns, is attached to and made a part of the application.

COMPETENCY OF APPLICANT

The officers of the Blue Jacket Mining Company are a group of business men residing in Boise, Idaho. Mr. Silas Cordes, the engineer member of the group, states that he has many years of experience in developing and operating mines in various parts of the United States and in operating the Blue Jacket Mine near Mountain City, Nev. Mr. Cordes is now actively engaged in operating two restaurants in Boise, Idaho. Mr. Jack Murdock, Secretary-Treasurer of the company states that he conducts an automobile loan agency in Boise, Idaho.

Mining development and or exploration work would be under the supervision of Ernest Oberbillig, consulting mining engineer, and a graduate of the Idaho School of Mines, Moscow, Idaho. Mr. Oberbillig reports considerable experience in South America, of mostly metallurgical work. The field team consider that while the applicants are inexperienced in tungsten mining, that Mr. Oberbillig should be competent to supervise the proposed exploration program.

Mr. Cordes, one of the directors of the mining company, advises that his company has sufficient funds with which to pay for their portion of exploration expense and that they have sufficient mining equipment for the job.

DESCRIPTION OF PROPERTY

The mine, at present, can be considered as a prospect only. The quartz exposures have been opened in a limited manner in several

places by means of shallow trenches, bulldozing and relatively small cuts. Heavy rains during the summer had partially filled the cuts with soil and debris and this condition made a more complete examination and study impossible.

The prospecting done so far has been insufficient to determine the extent of the exposure.

GEOLOGY

The Scheelite prospect is in massive light and dark gray limestone that strikes N. 80° W. and dips 65° N. Two faults cut the limestone: One fault strikes N. 30° W. and dips 60-80° W. and contains a quartz vein as much as 5 feet wide; the second strikes N. 15° E. and dips 70° E. and displaces the quartz vein. There are reported to be granodiorite dikes about one half mile north and also about one mile west of the scheelite prospect.

ORE DEPOSITS

The scheelite-bearing quartz vein to be explored is poorly exposed in five pits and trenches (fig. 2), and appears to be cut into two segments by a fault. The lower segment ranges in width from 2 to 6 feet and contains the best exposures of scheelite. The upper segment is about the same width but showings are poor or absent.

Scheelite crystals as large as one fourth of an inch occur in seams and are irregularly disseminated in parts of the vein. Total production from the vein is one shipment of 6 tons made in 1953 to the Getchell mill

which is reported to have averaged 0.73 percent WO_3. Samples taken by the Bureau of Mines indicate the average grade to be 0.27 percent WO_3; selected highgrade assayed 1.64 percent WO_3.

SAMPLING

Samples were secured from all places where the quartz vein was exposed and are considered to be representative of the exposures:

Sample No.	%, WO_3	%, Pb	%, Zn	Oz/T Au	Oz/T Ag	Description
BM-736	0.10	0.2	1.3	0.06	0.20	Width 3.7 feet; end of lower trench; white quartz, some oxidation; highly silicified; shows light scheelite under lamp. The quartz ledge consists mostly of loose boulders and may be only float in the overburden. Trench is caved in face and along sides.
BM-737	0.18	0.2	0.3	Tr.	Tr.	Chip sample of about 1 ton of quartz on dump. This ore pile reported to have been mined from same trench as BM-736.
BM-738	0.52	0.2	0.4	Tr.	Tr.	Width 4.0 feet; quartz vein in face of small open cut on upper road.
BM-739	0.18	0.2	0.3	Tr.	Tr.	Chip sample from about 3 tons of quartz mined from open cut where BM-738 was taken.
BM-740	0.20	0.2	0.8	Tr.	Tr.	Width 3.0 feet; quartz vein in small open trench south of BM-739; some lead sulphides noted in the quartz.
BM-741	0.01*	0.2	0.4	Tr.	Tr.	Width 6.0 feet; quartz vein in face of open cut above road.
BM-742	0.17	1.4	0.9	0.01	3.40	Chip sample of 300 lbs. of quartz on dump. This quartz from ledge about 10 feet west of BM-741; considerable sulphides.

Sample No.	%, WO_3	%, Pb	%, Zn	Oz/T Au	Oz/T Ag	Description
BM-743	0.01	0.2	0.3	0.005	0.70	Chip sample of quartz boulders about 30 feet east of BM-741; quartz carries some sulphides.
BM-744	0.01*	0.2	0.4	0.005	0.80	Surface gossan from shallow cut on Burns claim. (Not shown on fig. 2).
BM-745	1.64	0.1	0.2	Tr.	Tr.	Selected specimen pieces of quartz from same pile as BM-739.

*= less than.

ORE RESERVES

There are no measured ore reserves at the Blue Jacket Mining Company scheelite prospect. A few tons of indicated ore may be present at the surface exposures and 1,000 tons of ore averaging 0.50 percent WO_3 is inferred to be in the block above the lower road and north of the fault that displaces the vein (fig. 2). In calculating this tonnage, the block was assumed to be 100 feet high, 175 feet long, 3 feet thick, and to contain 3,000 tons, one-third of which is inferred to be ore of the estimated grade in an ore shoot represented by sample BM-738.

PROPOSED EXPLORATION

The applicant has proposed a core drilling program consisting of three stages:

Stage 1. Four holes, 315 feet $4,863.00
Stage 2. Two holes, 260 feet $3,447.00
Stage 3. Two holes, 250 feet $3,370.50

He proposed to drill from both sides of the vein in the mistaken belief that the dip of the vein is vertical. In addition, the applicant has proposed to build two frame buildings 12 x 16 feet for living quarters for six men at a cost of $1,750.00. The applicant has built a road to the site of a proposed adit to explore the vein at altitude 7,925.

The field team considers that core drilling of this deposit is not a satisfactory method of exploration. Because only one-third of the total quartz may contain scheelite in commercial quantities and because even there the scheelite is erratically distributed within the quartz, diamond drill holes would be most likely to cut the vein in areas containing scheelite in less than average amount. Results of drilling would in that case be unfavorable to the property. Diamond drilling would be advantageous as an aid to exploration but not as exploration in itself unless a great many holes were drilled. As this drill hole exploration would be too costly, it is concluded that a drift along the vein would be a better exploratory method. The location of the vein underground can be projected from surface information with sufficient accuracy to direct the adit.

These factors were discussed with the applicant who is in agreement with the following revised exploration program: From the existing road at altitude 7,925 crosscut 50 feet south to cut the vein and drift 150 feet southeast along the vein; (2) depending upon finding ore in stage 1, and subject to the prior written approval of the government, crosscut 50 feet northeast to cut the faulted continuation of the vein, and drift

50 feet along the faulted segment.

The program is estimated to require about five months to complete and to cost $11,571.00. The government's share of the cost would be $8,678.25.

PAST OPERATION

During the period of prospecting, the operators report that six tons of selected ore, averaging 0.73 percent WO_3, was shipped to the Getchell mill near Redhouse, Nev.

The examining engineer secured a sample, BM-745, from the same location as the reported shipment. This sample was a chip sample of highest grade ore selected by using a mineralight, and it assayed 1.64 percent WO_3.

MANPOWER, SUPPLIES, ETC.

It is usually possible to secure a few experienced miners and other types of mine labor in the town of Mountain City, Nev. and a small amount of mining supplies may also be obtained there. Other sources of labor and major supplies would be from Elko, Nevada and Boise, Idaho.

Water for mining operations would have to be hauled by truck from a spring located approximately one half mile from the portal of the proposed adit. There is no transmitted electric power in the immediate area. Therefore, it will be necessary to use equipment operated by either Diesel or gasoline engines.

ALLOWABLE COSTS OF PROJECT

Independent contracts: None.

In a letter dated Aug. 29, 1953, addressed to the Mining Division, Region III, Mr. Ernest Oberbillig, consulting mining engineer for the applicant, submitted a detailed estimate of costs for the proposed project. These costs have been checked by the field team, appear to be reasonable for the location of the mine, and it is recommended that they be accepted. The detailed costs are as follows:

Direct costs:	Cost per foot	
Labor (plus taxes, insurance)	$12.00	
Supervision and engineering	3.00	
Explosives	1.80	
Timber	4.22	
Gas, oil, grease for compressor	2.48	
Rail and pipe	1.50	
Cable for slusher	0.32	
Bits, steel and drill parts	1.68	
Compressor repairs	1.00	
Jack leg drill rental	0.62	
		$28.62
Indirect costs:		
Rental on cabin	0.75*	
Bulldozer (roads and dump)	2.00	
4 WD-pickup truck rental	0.75	
Gas, oil for trucks, tires and repairs	3.60	
10% reseve for contingencies	3.60	
		10.70
Total cost per foot		$39.32
Less rental of cabin		0.75
Revised cost per foot		$38.57

*Rental of the cabin should be deleted as it is a part of the facilities owned by the applicant.

Initial rehabilitation and repairs: None.

New buildings, improvements and installations: None.

Total cost of project:

Stage 1.	200 feet of adit @ $38.57 per foot	$7,714.00
Stage 2.	100 feet of crosscut @ $38.57 per foot	3,857.00
		$ 11,571.00

Government participation @ 75% = $8,678.25

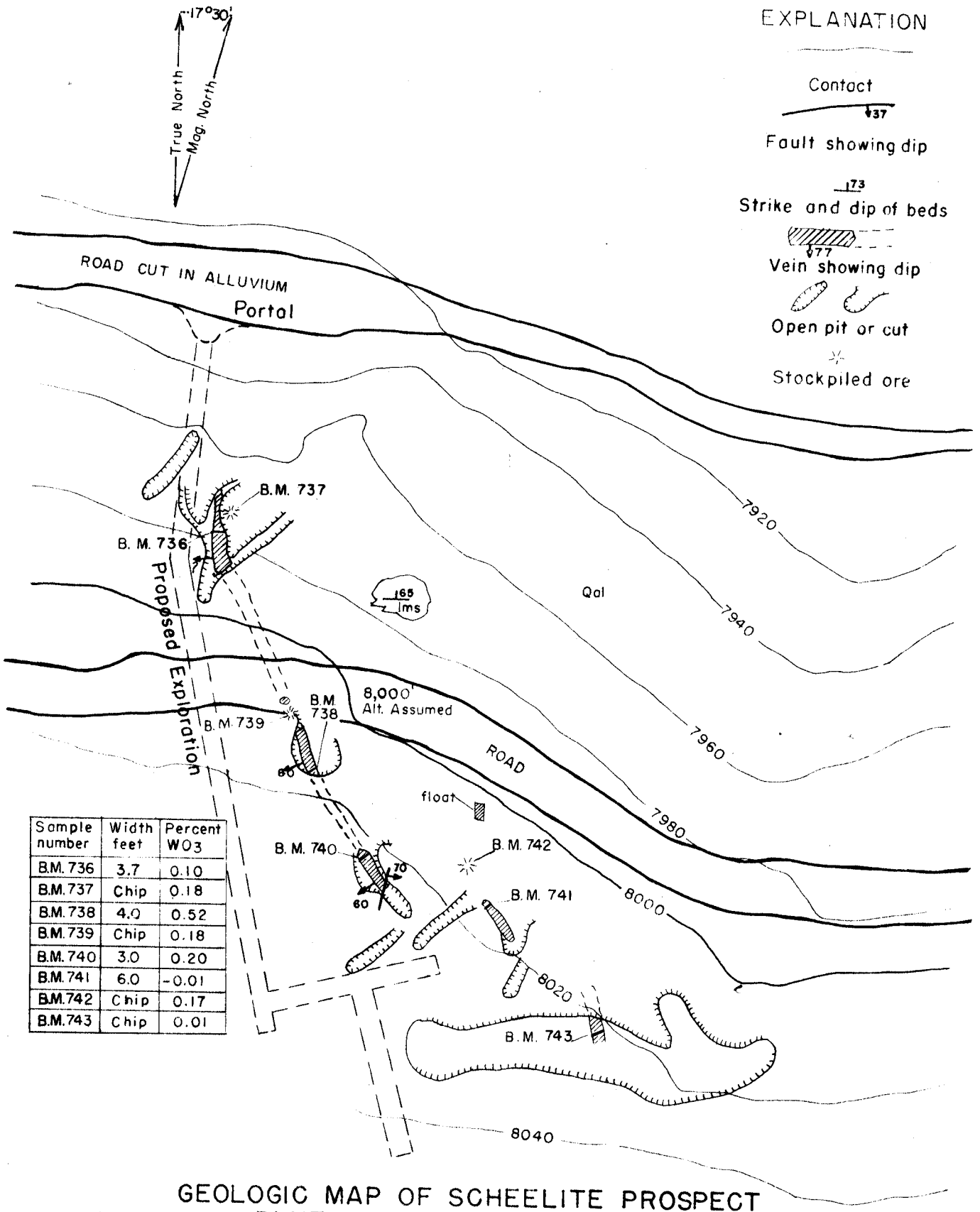
The applicant believes that he can complete the project in about 3-1/2 months. However, allowing for time to bring in equipment, road repairs, etc., the field team consider that five months time should be allowed. The applicant also reports that he will be prepared to start work immediately if the project is approved.

Due to the lateness of this season, the isolation of the mine and the usual severe winters in the area, it is doubtful that much would be accomplished prior to heavy snowfall.

The field team recommend that the project, if approved, be considered only on a unit or footage basis, with the applicant furnishing all labor, materials, and supplies at a specified cost per foot.

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 2932



Sample number	Width feet	Percent WO3
B.M. 736	3.7	0.10
B.M. 737	Chip	0.18
B.M. 738	4.0	0.52
B.M. 739	Chip	0.18
B.M. 740	3.0	0.20
B.M. 741	6.0	-0.01
B.M. 742	Chip	0.17
B.M. 743	Chip	0.01

GEOLOGIC MAP OF SCHEELITE PROSPECT
BLUEJACKET MINING COMPANY
ELKO COUNTY, NEVADA

FIG. 2

0 40 80 120ft.
Scale

After L. C. Clark 1952

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 2932

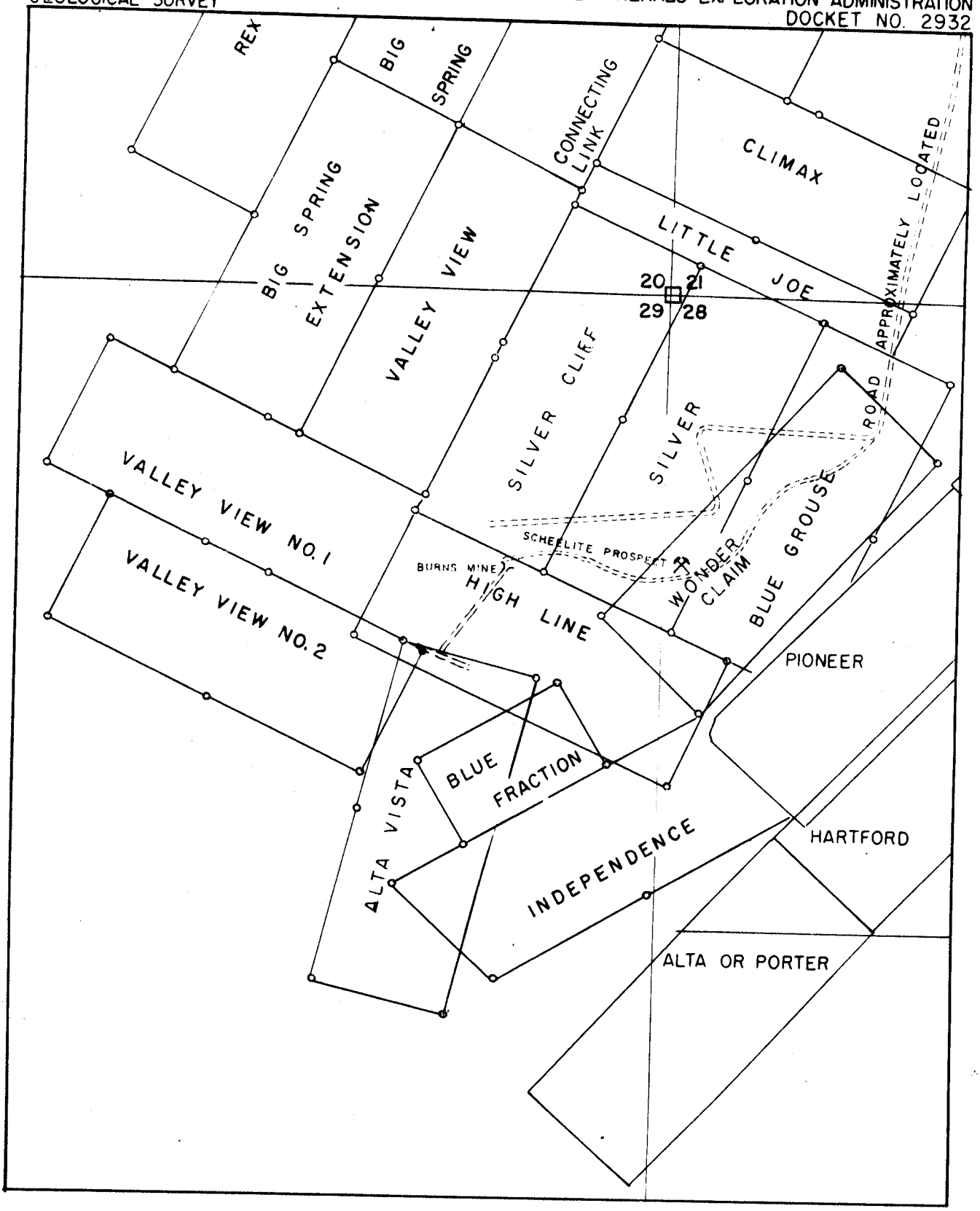


FIG. 3 CLAIM MAP OF PART OF THE BLUE JACKET PROPERTY
ELKO COUNTY, NEVADA

0 600 1200 1800 ft.
Scale

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 2932

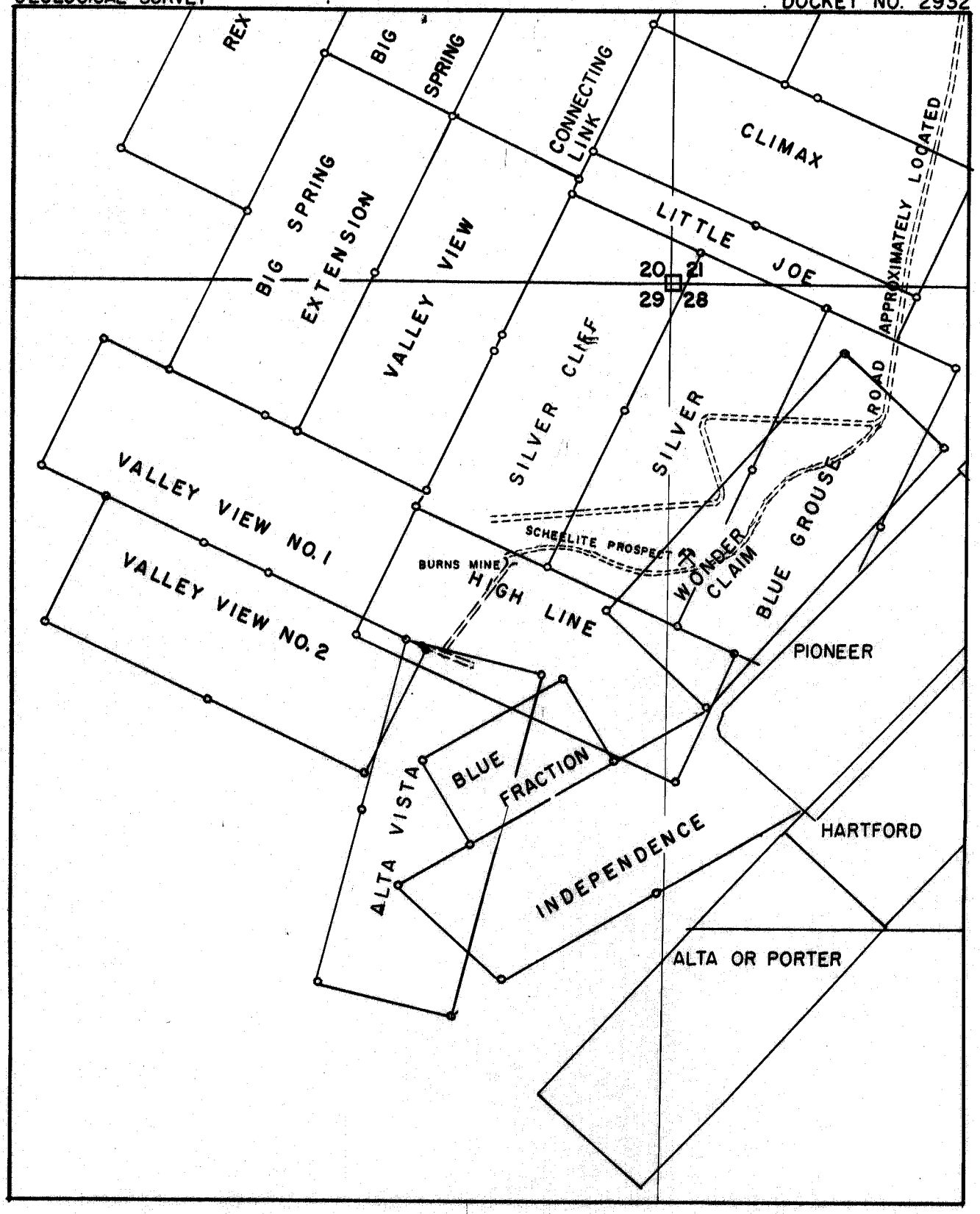


FIG. 3

CLAIM MAP OF PART OF THE BLUE JACKET PROPERTY
ELKO COUNTY, NEVADA

0 600 1200 1800 ft.
Scale

17½

Aug 22 1953 DMEA 2932 Blue Jacket Mng. Co. Centennial Dist.
NW¼NW¼ Sec 28, T 44N R52E Elko Co. Nev.

Leon K Carson — Burns
Jack Murdock — Silas Cordes
Ellis Oberbilling

Mt. City Nev (T32557) hiway north (B of m.) 35684.3
Turn L. (West) toward Petan ranch 676.5
(½ mi. So. of Owyhee, Nev)
Turn L. (SW) sign "Petan 22" follow power line 679.4
Cross Creek - dry. 691.5
" " " " 692.0
" " " " 693.3
" " " " 694.0
Ranches keep straight (S) 696.7
Cross silver Creek ≈150 gpm. 697.2
turn L. (E) 699.0
Camp 699.8
keep straight (R. to mine - Nevada Zinc) 700.3
4th gear (20%) 702
keep Rt. 702.8
stop @ sch. prospect DMEA 2932 703.1
Burns tunnel W of " ± 703.5

Burns vein N45W 45S 0-5' qtz
Small shoots 1' thick Ag-Pb + loc. sch,
where fissure is N70W no qtz. along it.
Blue Jacket Sch Prospect:
Mass lite & dark gray ls. N80 65° N
Grd reported ½ mi. N & ± 1 mi. West @ Nev. Zinc mine
Sch Vein poorly exposed 4 places N25W 80° W 1'-4'-0
Cut by fault N15E 70° E Normal
Sch. in Xals to ¼" little powellite
6 tons to Getchell - calc. heads 0.73
Prospect is S1°W across canyon from
dump on Silver Plume qtz vein @ same alt.
Prospect located on W side of Bull Run Mts
on S side of White Rock Cr. Canyon @
alt. 8250 on Wonder and Blue Grouse claims

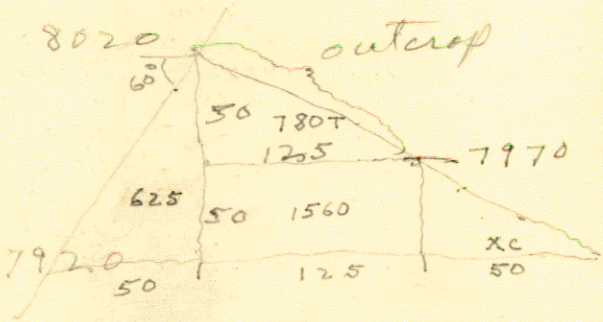
See Report by Emmons

.75
9
6750

150
10.4
600
1500.
780

125 × 3 × 50 =
2 × 12

12 | 15000
1250
2 = 625



780
625
1560
2965

1/3 of Tons = ore