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Item 8

## Orasby County

Capitol - DELAWARE DIST.

Scheelite was found in 1942 by Julius Vargiolu on the Capitol group of claims, north of Carson Hot Springs, on the south side of of the Washoe Range, in T. 16 N., R. 20 E., Carson quadrangle. It is reported that scheelite occurs at a contact between limestone and granite. The property was not visited by members of the Geological Survey.

## Dixon Brothers —

Tungsten-bearing manganese oxides are found on the Dixon Brothers claims, midway between Brunswick and Eldorado Canyons near the crest of the Pine Nut Mountains, about  $8\frac{1}{2}$  miles due east from Carson City, Carson quadrangle. Numerous veinlets of manganese oxides are found cementing brecciated and altered rhyolite tuff. The most highly mineralized zone is exposed for a length of 60 feet and a width of 15 feet, and is estimated to contain 10 percent of

manganese oxides. Two samples taken assayed 0.21 and 0.39 percent of  $WO_3$ , and 11.57 and 24.78 percent of  $MnO$ .

#### McTarnahan Hill

Thin layers of tautite containing less than 1.0 percent of  $WO_3$  are found interbedded with hornfels near a granitic intrusive on McTarnahan Hill, southeast from Carson City, Carson quadrangle. Claims on the north and east sides of the hill, held in 1943 by Alex Eske, were originally prospected for copper. They can be reached from Empire on U. S. Highway 50, 3 miles east of Carson City, by following the Brunswick Canyon road south for 8 miles, then turning west for 1.7 miles on a dirt road. The deposits consist of several short, thin layers of tautite estimated to contain 0.25 to 0.5 percent of  $WO_3$ .

On the west slope of McTarnahan Hill, the Valley View tungsten prospect is reached by 6.2 miles of road from the Nevada State Penitentiary east of Carson City. In 1943, Joe Vesco shipped 34 tons of sorted ore assaying 0.6 percent of  $WO_3$  to Metals Reserve Co. Scheelite is found in 2 tautite beds 2 to 4 feet thick.

June 27, 1944

VALLEY VIEW TUNGSTEN PROSPECT  
Ormsby County, Nevada

by  
Paul C. Bateman

The Valley View tungsten prospect is 6 miles southeast of Carson City, Nevada, on the west slope of Mount McTarnation. It is accessible by 6.2 miles of dirt road that join the Prison road 1.3 miles east of Carson City.

Two claims, the Valley View No. 1 and No. 2, were located in November 1942 by Vern Cunningham of Carson City and A. C. Fulstone of Wellington, Nevada. Joe Vesco of Carson City leased the claims during most of 1943 and shipped one 34-ton car of ore to the Metals Reserve Company at Salt Lake City. Vesco states this ore contained 0.6%  $WO_3$ . The property is now idle. I visited it June 27, 1944.

Scheelite occurs in 2 or more beds of tactite that are interstratified in hornfels. The beds strike N. 20-60° E. and dip 65° northwest. The tactites are explored by 5 open cuts. A 240-foot adit does not cross any tactite, although a few crystals of scheelite occur in hornfels along bedding planes.

The tactite beds explored in the open cuts range from 2 to 4 feet thick, but exposures in the areas between the open cuts are too poor to show any continuity along the strike of the beds. Three of the open cuts, however, appear to explore tactite occupying approximately the same stratigraphic position. Scheelite occurs in the tactite in narrow streaks parallel to the bedding.

The scheelite content of the unsorted tactite is too low to be commercial. The distribution of the scheelite in small streaks makes it possible to sort a fair grade of ore, but it is doubtful that enough scheelite can be recovered to pay the cost of sorting. The 34 tons shipped by Vesco were partially sorted ore from the open pit containing the most scheelite.

Memorandum on  
Alex Eske Scheelite Property

Ormsby County, Nevada  
by  
M. R. Klepper

Location.- The Alex Eske scheelite property is located on the north and east flanks of McTarnahan Hill in the northern part of the Pine Nut Mountains. Most (and probably all) of the property is in Ormsby County. (See Carson, Nevada topographic sheet). To reach the property from Carson City drive from the State prison to Empire and then along the Brunswick Canyon road for 8 miles. Here turn west on a good dirt road and drive 1.7 miles to the property. Peter Joralemon and I briefly examined the property on October 28.

Ownership and History.- This property has been prospected for copper, iron, and tungsten. In the late 1920's it was located by the Nevada Massachusetts Company. During the last few years Alex Eske has held the property by location. It is now idle.

Production.- There has probably been no production of scheelite from the property.

Workings.- Workings consist of three adits (50', 100', and 250' long) driven in search of copper ore, two 20' shafts sunk in very low-grade scheelite ore, and at least a dozen surface cuts.

Equipment.- There is no mining or milling equipment at the property.

Topography.- The property lies near the crest of the northern part of the Pine Nut Mountains. Rounded hills and wide gullies of moderate gradient are the major topographic features. Elevations are between 6100' and 6600'.

Geology.- Metamorphosed sedimentary rocks underlie most of the northern part of the property; a granitic intrusive underlies most of the southern part. Small pendants of metasediments occur within the intrusive, and dikes of "granite" and aplite cut the metasediments. Near intrusive contacts, limestone beds have been locally altered to tactite or to iron oxides. Most of the scheelite occurs in small irregular tactite bodies that are partly controlled by bedding. Limonitic bedding replacements contain a little low-grade copper ore and scheelite. Small replacement bodies of massive hematite contain no scheelite.

Scheelite Deposits.- Several lenses of tactite have been prospected. Most of them contain only a very small amount of scheelite (0.25%  $WO_3$  or less). The only lens containing ore that might be of commercial grade is developed by an open cut from which about 50 tons of tactite have been removed. Grade of this tactite is estimated to average between 0.25% and 0.5%  $WO_3$ . Narrow zones within the cut are believed to contain 0.5% to 1.0%  $WO_3$ . Small bunches (few hundred pounds to few tons) of 0.25% to 0.75%  $WO_3$  ore also occur in the limonite-copper bedding replacement that is explored by the three adits.

Reserve and Possibility of Production.- Only a few hundred tons of ore containing between 0.25% and 0.5%  $WO_3$  are inferred. There is little likelihood of production under present conditions.

Reno, Nevada  
November 2, 1943

Memorandum on

DIXON BROTHERS MANGANESE-TUNGSTEN PROSPECT

Ormsby County, Nevada

by

M. R. Klepper

Location

The Dixon Brothers manganese-tungsten prospect is located midway between Brunswick and Eldorado Canyons on the maturely dissected crest of the northern part of the Pine Nut Mountains. It is 8½ miles east of Carson City by airline. (See Carson, Nevada topographic sheet). To reach the property from Carson City drive from the State Prison to Empire and then southeast along the Brunswick Canyon road for 7½ miles. Turn northeast on a rarely travelled dirt road and drive to the end, a distance of 4½ miles. Walk north from the end of the road for about ¼ of a mile to the property.

Ownership and History

The property is owned by the Dixon Brothers, well-known western Nevada prospectors. In the 1930's they located and explored the prospect for manganese. John H. Heizer, Superintendent of Rare Metals Corp., sampled the property in 1941 and found that the manganese oxide(s) contained worthwhile amounts of tungsten. At present the property is idle, but the Nevada Massachusetts Co. might decide to develop it more thoroughly when the reserve of manganese-tungsten ore at Golconda has been more nearly exhausted.

Workings

The workings consist of two adits. The lower is a 120' angling crosscut; the upper, 35' above the lower, is a 40' angling crosscut.

Equipment

There is no mining or milling equipment at the property.

Geology

The area in which the prospect is located is underlain by Tertiary rhyolitic volcanic rocks that strike northerly and dip to the west at moderate angles. On the property dull red flow-banded rhyolite (or compacted vitric rhyolite tuff) overlies a homogeneous lithic rhyolite tuff. The tuff is locally brecciated and intensely silicified. A narrow sill of granite porphyry separates the rhyolite (?) from the tuff in the northern part of the area mapped.

Manganese-tungsten mineralization

Veinlets of tungsten-bearing manganese oxide(s) cement brecciated zones in the altered tuff. Thin films of secondarily deposited oxide also coat weathered surfaces and joints in tuff near the more intensely mineralized zones. Only one zone contains a great enough concentration of veinlets to be of possible commercial interest. This zone lies near and appears to be more or less parallel to the contact between rhyolite and tuff. It crops out for a length of 60' with an average width of 15'. Adjacent

tuff is only weakly mineralized. The Upper adit crosscuts the mineralized zone at shallow depth, and the Lower adit crosscuts a similar zone, which is probably a faulted segment. The rock in this zone is estimated to average at least 10% of tungsten-bearing manganese oxide(s). No other zone exposed in the area contains more than a few per cent of oxide(s), and most of this is thin films deposited on weathered surfaces and along joints by meteoric waters.

#### Grade

Samples collected from the property by Mr. Heizer averaged about 0.7%  $WO_3$ . He believes that it is possible to concentrate rock containing between 10% and 20% of oxide(s) (0.4-0.75%  $WO_3$ ) to nearly pure oxide (about 2.5%  $WO_3$  estimated) at the property by crushing and tabling. A spring within a mile of the property probably supplies enough water for such an operation. If the oxide(s) can cheaply be separated from barren tuff, the concentrate could profitably be shipped to Golconda for chemical treatment.

In order to check the grade of ore exposed I collected two samples: D-1 is a 13' chip sample across the best ore zone in the Lower adit (corrected width about 10'); D-2 is a 24' chip sample across the best zone in the Upper adit (corrected width about 17'). D-3 is a selected sample of relatively pure oxide(s).

#### Reserve

About 1000 tons of mineralized tuff between the Upper adit and the surface are believed to contain an average of at least 10% of oxide(s). The ore zone cut by the Lower adit does not crop out and is believed to be a faulted segment. It may contain above the adit 250 tons averaging 20% of oxides. Exploration of this zone at greater depth might develop a larger reserve of about the same grade.

T. B. Nolan (3)  
D. M. Lemmon  
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several smaller mineralized areas. In the mineralized areas lenses of nearly pure hematite and partly replaced dolomite and conglomerate are intermixed with small zones of unreplaced country rock. Much of the surrounding area is covered by Tertiary volcanic rocks. Under present conditions these deposits could not be mined profitably. Four samples from the Boak prospect were analyzed by the Nevada Mining Analytical Laboratory of the University of Nevada. (See figure 23 for location of samples of analyses and table 6 for results.)

TABLE 6. Analyses of iron ore from the Boak prospect.  
C. W. Hammond, analyst.

Sample No.	Description	PERCENT				
		Iron	Manganese	Sulfur	Phosphorus	Insolubles
1	Chip sample 20 ft. along east side of adit	42.6	Trace	0.35	Trace	11.3
2	Chip sample 30 ft. across west end of east mineralized body	52.6	-----	-----	-----	-----
3	Chip sample of outcrops across 150 ft. center of east mineralized body	43.5	Trace	0.29	Trace	6.7
4	Chip sample of outcrops across 100 ft. east end of east mineralized body	50.4	6.3	0.51	Trace	4.5

#### Capitol prospect (8)

The Capitol group of claims, held by location by T. J. Eason, A. Mendiguren, and W. F. Gallagher, is in sec. 1, T. 14 N., R. 20 E., and sec. 36, T. 15 N., R. 20 E., MDBM, in Ormsby County 7 miles southeast of Carson City (pl. 9). It is on the western front of the Pine Nut Range east of the Mexican Dam, at an altitude of about 4,500 feet.

Magnetite and hematite occur in echelon veinlike bodies along fault zones in hornblende diorite, near a contact with limestone. The veinlike bodies are 2 or 3 feet wide and generally less than 50 feet long, and trend east. The largest body of ore is at the intersection of one of the east-trending zones and a northeast-trending cross fault. Here the ore body is 15 feet wide, and has been exposed for about 15 feet along the strike and for a height of 15 feet. The ore narrows on each end of this body to widths less than 3 feet. It is badly sheared by the cross faulting, and breaks to 2- to 3-inch pieces. A sample cut across the 15-foot wide, 15-foot high face contained 64.3 percent Fe and less than 0.01 percent S and 0.01 percent P.