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W. Pine Co. 3321

331	Calico	Sec. 33? T. 12N., R. 68E.	E. B. Hansel S. A. Fulmer
343	Cherry Creek	Sec. 24, 25, T. 14N., R. 62E.	Joseph Wilmot Kenneth C. Leghorn
174	Deer Trail	Sec. 28, T. 10N., R. 65E.	A. A. Mortensen
331	Mount Wheeler	Sec. 14, T. 12N., R. 68E.	Anaconda Company
337	Sacrament Pass	Sec. 8, T. 15N., R. 68E.	Russel B. Moyle George Starkweather
332	Tungsten Metals	Sec. 16, 21, 28, T. 11N., R. 68E.	Tungsten Metals Corp.
342	Tungstonia	Sec. 27, T. 21N., R. 69E.	Strategic Metal Inc.

Item 3

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S8,9, 19N, 55E

Bay State

The Bay State property consists of 3 patented lode claims, known as the Chihuahua, Buckeye State, and the Lincoln. The property is situated in an area of steep topography a mile above the mouth of Mining Canyon on the east slope of the Diamond Range, about 65 miles west of Ely, the supply and shipping point on the Nevada Northern Railroad.

The district was discovered in 1866 by prospectors from Austin. The principal mines were purchased by the Centennary Silver Co. in 1867. About $100,000 in bullion was produced from shallow surface workings in the course of the next few years and the district then became inactive. The ownership of the claims was conveyed to the Bay State Silver Mining Co. in the 1870's. In the early 1900's, the Neward Silver Mining Co. acquired control of the property and built a mill at the mouth of Mining Canyon which was destroyed by fire in the middle 1930's. The total value of silver, lead, and copper produced during the

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operation of the mine is reported to be about $250,000. In 1932, the claims were purchased at a tax sale by W. T. [illegible] and W. D. Robinson, Eureka, Nevada.

A. R. Laird of Eureka, Nevada, and Frank Hoagland of Kimberly, Nevada acquired the property on a lease and option arrangement in 1941. During the following year Mr. Laird discovered scheelite on the dumps and in the old mine workings, and from 1942 to 1946, tungsten production from the property amounted to 1,500 tons of ore that averaged 2.0 percent WO_3, and 100 tons shipped in the fall of 1946 that contained 3.0 percent WO_3.

The Bay State mine is underlain by a thick sequence of Devonian limestone that strikes east and dips 15° to 22° W. The sequence is made up of interlayered gray, blue, and black beds varying from a few inches to 5 or more feet thick.

In the mine area, the limestone is broken by a few steeply dipping northwesterly trending fractures of small displacement with dips between 70° NE and 70° SW. These fractures have been filled by silver-bearing quartz veins varying in thickness from a few inches to 15 feet.

The steeply dipping veins have been formed by the filling of a fracture or several closely-spaced fractures with quartz and some calcite. Tetrahedrite and galena carrying varying amounts of silver are distributed irregularly through the quartz. Scheelite occurs locally in the vein quartz, but not in commercial quantities. Limestone adjacent to the filled fractures is silicified.

At several places in the mine stock works of quartz were formed where mineralizing solution spread from 1 or more of the steeply dipping fractures into fractured or brecciated zones. These stock works appear to cap the vein irregularly and discontinuously along a favorable limestone strat that plunges northwesterly.

Mineralization in the stockworks differs from that in the main veins. Silver-bearing galena is the most abundant metallic mineral. Tetrahedrite, sphalerite, and scheelite occur in smaller amounts. The galena occurs in replacement veins along certain beds and as small irregular-shaped bodies. Scheelite in quartz and silicified limestone occurs adjacent to, but not within the veins or bodies of lead-silver ore.

The scheelite mineralization, as far as is known, is confined almost entirely to the stock works. Within the stock works, the better values appear along certain beds, and in a few places along steeply dipping fracture zones. Scheelite along the zone occurs coarsely crystalline, irregularly distributed in a gangue of white quartz or silicified limestone and calcite. All of the scheelite ore bodies are associated with the bedded replacement bodies of lead-silver-zinc ore, but little or no scheelite occurs within the sulfide ore bodies.

The principal stockwork zone exposed in the upper workings is about 150 feet long, 40 to 50 feet wide, and possible 30 feet thick. The favorable bed or beds continue northwesterly at a low angle, and in places along its course additional scheelite-bearing stockwork sections are exposed. From exposed areas, it appears the scheelite-bearing stockwork zone extends along the strike and dips for a distance of about 500 feet. The width will probably average 40 feet with a thickness of possibly 30 feet that may average 0.25 percent WO_3. Within this area there will undoubtedly be small sections that may average from 0.5 to 2.0 or 3.0 percent WO_3.

Development openings on the Chihuahua claim consist of the principal adit 875 feet long and by interconnecting drifts crosscuts at elevations between 30

and 120 feet above the adit, and by numerous stopes, raises, winzes. The Bechoyo State claim is developed by 3 caved shafts, a caved adit and by open cuts. No scheelite has been formed in these workings. Exploratory openings on the Lincoln claim consist of 3 short adits with stopes, and several open cuts.

Production from the stock work area in the workings above the adit level in the south part of the mine amounted to 1,500 tons that were selectively mined and sorted averaging 2.0percent WO_3.

It is estimated that there are possibly 1,000 tons on the dumps that may average 0.5 percent WO_3. From this tonnage it is possible 200 tons of 2.0 percent ore could be sorted.

Chance

The Chance property consists of the patented Chance lode claim situated in an area of steep topography on the east slope of the Egan Mountains about 45 miles north of the small settlement of Cherry Creek and 57 miles north of Ely, the supply center on the Nevada Northern Railroad.

Limestone of unmeasured thickness is overlain by shale. The Tioup quartz vein formed at the limestone-shale contact attains widths up to 5 feet and is exposed in a continuous outcrop along the center of the Chance lode claim. The sediments and the vein strike N.10° E. and dip 30° to 40° W. A rhyolite dike striking east-west cuts the formations near the south end of the claim.

Faults with small displacements form a series of short narrow fissures parallel to the limestone bedding. These fissures are seldom more than an inch wide and 10 to 12 feet in length. A tight east-west fault offsets the Tioup vein about 7 feet, and in the south shaft there is a steep fault that strikes N.65° E.