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Memorandum on the

LINKA TUNGSTEN PROPERTY, THE PEER-PEACOCK LEASE, AND THE PEER CLAIM

Northern Toquima Foothills, Lander County, Nevada

I. Linka Property and Peer-Peacock Lease

Abstract

The Linka tungsten property, part of which is leased to G.G. Peer and Sam Peacock, is in Lander County, Nevada, 21 miles southeast of Austin. Eight hundred tons of ore averaging 0.7%  $WO_3$  have been shipped from the property to the Metals Reserve Company stockpile at Battle Mountain. Scheelite occurs in limestone that has been altered to tascite. The known ore shoots are definitely controlled by structural features. Two ore zones have been developed and are believed to contain 6700 tons of 0.7%  $WO_3$  ore, of which eleven hundred tons are measured, 1600 tons are indicated, and 4000 tons are inferred. Two undeveloped zones may also contain shoots of commercial ore.

The Peer Claim adjoins the Linka property. Scheelite-bearing tascite occurs, but it has not yet been well exposed. No estimate of reserve can be made.

Location

On August 14 the writer examined the Linka tungsten property in Lander County, Nevada. The property is in low foothills at the north end of the Toquima Range, only 100 to 200 feet above the level of Smoky Valley. The property is reached by driving 11 miles east from Austin on U.S. Highway 50, then turning south for 6 miles on the graveled road leading to Potts Ranger Station. Here turn southeast and continue past Spencer Hot Spring to the property, a distance of 3 miles.

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Ownership

Mr. Steve Linka of Austin, Nevada, located the Garnetite group of 5 claims in February 1941. Rare Metals Corporation of Lovelock took an option on the property later in the year, but after a little shallow exploration gave it up. In February 1943 Linka began to work at the property, and in April he leased one-fifth of a claim to G.G. Peer and Sam Peacock of Austin. Since then both the owner and the lessees have been mining and shipping ore to the Metals Reserve Company stockpile at Battle Mountain.

### Production

Since April 1943, Linka has shipped 450 tons of ore averaging 0.7%  $\text{WO}_3$ . He now has about 50 tons of the same grade ready for shipment. Peer and Peacock have shipped 350 tons of 0.75%  $\text{WO}_3$  ore and have 50 ready to ship. Grade of 6-ton lots has varied from 0.4 to 0.9%  $\text{WO}_3$ , averaging between 0.7 and 0.75%. The owner and lessees each ship between 25 and 30 tons of ore weekly. The truck haul from the property to Battle Mountain is 113 miles over semi-improved county roads.

### Mining Equipment and Development

The four men now working at the property live in tent houses. Water for mine use is hauled from Spencer Hot Spring and for domestic use from Austin. The owner and the lessees each have a compressor, pipe, and necessary mining equipment. Trucking is contracted.

The property is developed by two open cuts from which a few hundred tons of ore have been mined, small cuts, and bulldozed areas. The lessees are sinking in ore at a depth of 25 feet. The owner has just collared a shaft in ore. (See attached map)

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### Geology

The claims are located on a low hill, covered by a mantle of small rock fragments. Exposures are almost entirely confined to excavations. A few areas have been bulldozed, but they have not yet been cleaned out so that geologic relationships can be observed.

Most of the property is underlain by a sequence of marble and hornfels. Marble predominates in the eastern part; hornfels in the western part. This metamorphic sequence is cut by dikes of granite, aplite, and at least two distinct types of porphyry. A larger mass of granitic intrusive skirts the eastern part of the property.

Exposures are too few to determine the structure of the sediments, but near the south end of the property two opposed dips were taken in the marble, suggesting an anticline.

Two faults of very small displacement are exposed in the workings. These faults have been important in localizing ore.

### Scheelite Deposits

Scheelite occurs in tactite that has been formed by alteration of limestone or marble. The tactite is composed mainly of brown garnet, with epidote, quartz, calcite, molybdenite, pyrite, scheelite and powellite. Most of the scheelite is fine-grained (1 mm. or smaller) and has a golden yellow fluorescent color. The distribution of tactite within the marble beds is clearly controlled by structural features. Two of the ore bodies that have been exposed lie along transverse faults of small displacement; a third lies along a contact between marble and hornfels. In the poorly exposed bulldozer cuts, the ore is believed to occur adjacent to intrusive dikes.

Zone No. I. - Almost all of the ore shipped from the property has been mined from Zone No. I. (See map) At present both the owner and the lessees operate here.

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The lessees are developing a zone of tactite along a contact between hornfels and marble. They have explored this contact by an open cut 60 feet long, and are now sinking at the south end of the zone. The ore is bounded by a definite hornfels hanging wall that dips between 45 and 60 degrees W. The footwall was determined by the ability of the solutions to alter the limestone, and is irregular. In the area explored it dips about 80 degrees W. The ore pinches out at the north end of the cut, but is 15 feet wide in the south face. The southern half of the ore zone probably averages 0.7%  $WO_3$ . It seems quite certain that the mineralizing solutions migrated along the marble-hornfels contact.

The lessees plan to sink 75 or 100 feet, unless the ore pinches out at a higher level, and then to drift to the limit of the ore in each direction and stope to the surface. It seems likely that the shoot will continue to a depth of 50 feet with an average length of 50 feet and width of 8 feet, and will contain 2000 tons of ore. If it continues to greater depth, 25 to 40 tons per vertical foot might be expected.

A 1 to 2 foot tactite bed containing 0.5 to 0.6%  $WO_3$  is explored in a few cuts west of the main ore shoot. It is probably non-commercial.

Mr. Linka has mined about 400 tons of 0.7%  $WO_3$  ore from an open cut, forty feet long and averaging 18 feet wide. He is now sinking a shaft along the same zone south of the cut. Both the open cut and the shaft straddle a distinct, but relatively weak, transverse fracture. Tactite ore has irregularly replaced the marble beds on both sides of this fracture. It seems clear that the mineralizing solutions migrated along the fracture.

Mr. Linka will continue to sink along the fracture, and will work laterally at a convenient elevation. It seems probable that this ore shoot may average 60 feet long and 15 feet wide to a depth of 50 feet. If so, it contains 4000 tons of ore. If it continues to greater depth, fifty to 75 tons per vertical foot might be anticipated.

Underground prospecting of the marble-hornfels contact, and along this fault, may disclose continuations of the known ore bodies or other ore bodies. It seems particularly worthwhile to prospect the marble-hornfels contact between Linka's and the lessees' workings, for it is possible that the two ore bodies may merge into one at some depth below the surface.

Zone No. 2. - An irregular cut, about 80 feet square, has been bulldozed in marble, tactite, and hornfels. A porphyry dike of intermediate composition angles across the cut. Pieces of good grade tactite ore can be picked from the floor of the cut. Until the debris has been

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cleared from the cut, no estimate of number, width or length of ore zones can be made. There is a suggestion that the zone or zones may be parallel to the dike, or may possibly parallel another cross-fracture.

Zone No. 3. - Zone No. 3 is similar to Zone No. 2. Here, also, there is a suggestion that mineralization may have followed cross breaks or a dike margin.

Zone No. 4 - Zone No. 4 is explored by an open cut with two 10 foot shafts, and by two smaller cuts. The larger open cut is bounded on each side by a narrow granitic dike, and is cut by a cross-fracture parallel to the dikes. Two bands of scheelite ore, each about 3 feet wide, are separated by a 3 foot band of tactite containing oxidized copper minerals, but no scheelite. The cross-fracture longitudinally bisects the southern ore band. Mineralization in the two ore bands is spotty, but believed to average about 0.75%  $WO_3$ . A ton of 4%  $WO_3$  ore has been sorted from the shaft in the south band. Mr. Linka plans to sink on this zone. About 15 tons of ore per foot of vertical depth are indicated by the present workings.

The narrow ore lenses explored in the two small cuts <sup>are</sup> probably non-commercial.

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Suggestions for Prospecting and Development

In view of the strong suggestion of control of mineralization by structural features, it seems worthwhile to more intensively prospect certain areas:

- (1) North and south along the strike of the marble-hornfels contact shown on the map; and
- (2) along the strike of the two known faults, and of faults or dikes that further work may show control the mineralization in Zones No. 2 and 3.

Ore Reserves\*

<u>Ore Zones</u>	<u>Measured</u>		<u>Indicated</u>		<u>Inferred</u>		<u>Total</u>	
	Tons	Units WO <sub>3</sub>	Tons	Units WO <sub>3</sub>	Tons	Units WO <sub>3</sub>	Tons	Units WO <sub>3</sub>
Zone 1								
Linka	500	350	1000	700	2500	1750	4000	2800
Peer-Peacock	500	350	500	350	1000	700	2000	1400
Total	1000	700	1500	1050	3500	2450	6000	4200
Zone 2	No basis for estimate.							
Zone 3	No basis for estimate.							
Zone 4	100	70	100	70	500	350	700	490
Grand Total	1100	770	1600	1120	4000	2800	6700	4690

\* An average grade of 0.7% WO<sub>3</sub> is used to calculate units of WO<sub>3</sub> from tons of ore.

II. Peer Claim

Mr. G.G. Peer recently located one claim adjoining the Linka property to the north. The claim is prospected by only one bulldozer cut. Pieces of good scheelite ore can be picked from a number of places in the floor of the cut. The zone appears to be quite similar to Zone No. 2 and 3 on the Linka property. No estimate of size or grade of the mineralized body or bodies can be made until the cut is cleaned out and bedrock is exposed.

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S.G. Lasky

D.M. Lemmon

File

M.R. Klepper

Assistant Geologist

August 14, 1943

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Location

On August 14 the writer examined the Linka tungsten property in Lander County, Nevada. The property is in low foothills at the north end of the Toquima Range, only 100 to 200 feet above the level of Snake Valley. The property is reached by driving 11 miles east from Austin on U.S. Highway 50, then turning south for 6 miles on the graveled road leading to Potts Ranger Station. Here turn southeast and continue past Spencer Hot Spring to the property, a distance of 3 miles.

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### Geology

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Zone No. 3. - Zone No. 3 is similar to Zone No. 2. Here, also, there is a suggestion that mineralization may have followed cross breaks or a dike margin.

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Zone 3	No basis for estimate.											
Zone 4	100	70		100	70		500	350		700	490	
Grand Total	1100	770		1600	1120		4000	2800		6700	4690	

\* An average grade of 0.7% WO<sub>3</sub> is used to calculate units of WO<sub>3</sub> from tons of ore.

## II. Peer Claim

Mr. G.G. Peer recently located one claim adjoining the Linka property to the north. The claim is prospected by only one bulldozer cut. Pieces of good scheelite ore can be picked from a number of places in the floor of the cut. The zone appears to be quite similar to Zone No. 2 and 3 on the Linka property. No estimate of size or grade of the mineralized body or bodies can be made until the cut is cleaned out and bedrock is exposed.

T.B. Nolan (5)

S.G. Lasky

D.M. Lemmon

File

M.R. Klepper

Assistant Geologist

August 14, 1943