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Item 74

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Mineral Deposits Branch

May 8, 1958

Memorandum

To: Record (not for public distribution)

From: D. M. Lemmon

Subject: Notes on visit to Nevada-Masschusetts Company tungsten mines at Tungsten, Pershing County, Nevada, April 16-17, 1958

Accompanied by Robert E. Wallace and Donald B. Tatlock, I spent two days (April 16-17) taking a quick look at current operation of the Nevada-Massachusetts Company and at the work done since my last visit in 1951. We examined the Company maps of surface and underground workings, visited the various surface pits, and went underground in the Sutton No. 2 mine on the 125- and 625-foot levels. We also visited the mill briefly.

The Company is still operating although on a greatly reduced basis. With a payroll of 80 men (contrasted to more than 300 a few years ago), work is restricted to two open pits (Sutton No. 1 Pit and Footwall Pit east of Sutton No. 2 mine), and two mines (Sutton No. 2 and Humboldt). The mill is concentrating about 400 tons of ore a day, with a 4-day shutdown every two weeks. No concentrate has been sold since January.

Mine development has been favorable, and the property appears to be in shape to continue production for a long time at a rate of perhaps 50,000 units WO_3 a year provided economic conditions warrant. The grade of ore milled has ranged from 0.3 to 0.5 percent in recent years and may improve as the ratio of mine ore to open pit ore increases.

Sutton No. 2 mine (North Sutton). Opened to the 850-foot level by an underground inclined shaft with one hoisting compartment and manway, levels at 125-foot intervals on 67° incline. The 125-foot level is extended south of the shaft to a point about 600 feet from the Sutton No. 1 workings and north of the shaft to the Uncle Sam area, a total distance of about 3,600 feet. The 250-foot level is extended nearly as far in both directions. The south face of the 625-foot level is now in the granodiorite dike beneath the adit portal; there is no indication on this level or the lower ones of any decrease in the length or grade of ore. Average grade may be about 0.4 percent.

Stank mine. Opened by a shaft to 700 feet, a winze from 700 to 1,200, and a second winze from 1,200 to 1,300 feet. The 1,300-foot level has been drifted out in good ore and the outlook for the ore body is more favorable now than in years past. The mine is inactive. The winze from 700- to 1,200-foot levels will be extended to the 1,300-foot level before mining of the lower ore block. Grade of ore perhaps 1.0 percent or better.

Humboldt mine. Shaft deepened to 1,850-foot level and crosscut started toward ore bed. Some ore remains to be stoped on 1,725-foot level, north. Mine ventilation has been disturbed by the open pit operation, resulting in filling of formerly open stopes. Consequently, the main shaft is now upcast rather than downcast and timber decay has increased.

South Sutton (No. 1) mine. Developed by open pits and by workings on 100- and 200-foot levels. Ore on 300-foot level only partly developed.

Ore reserves. My impression is that ore reserves have been well-maintained, development in the Sutton No. 2 is well ahead, and sufficient ore is broken in shrinkage stopes to permit continuation of milling for a while without mining. I do not have the Company's ore reserve estimates. Geologically, conditions continue favorable and justify inference that a half million to a million more units of WO_3 can be produced if economic conditions permit. I will try to get some better dope on reserves later on this year.

Original to T. P. Thayer

cc: Ogden Tweto
R. E. Wallace

Lemmon

DML:sws

Feb. 26, 1971

Visit with Richard J. Segerstrom

567 Cresta Vista Lane, Portola Valley 854-6200

1) Segerstrom Bros (without Boston Banks) is building 100 ton Pilot mill at Mill City to treat tails (8 hrs/day). Plan 3,000 ton mill when metallurgy is proved. Reserves for 3 years. Plan extensive exploration and new mine methods in ore deposits. Reports 800 000 Tons of broken ore in N. Sutton mine (shrinkage stopes). Hopes to re-hire Daniel A. O'Keefe (metallurgist, USBM, Boulder City, Nev), formerly engineer with Nev. Mass.

Exploration plan is to include mild at holes in search of blind orebodies (assuming probability of lenticular limestone beds).

2) Golconda Tailings contain 0.6% WO_3 - possibly 300,000 tons - Union Carbide autoclave process requires 20% WO_3. Nev. Mass could increase grade, only, by 100% with high loss. Segerstrom does not believe that Carbide has any metallurgical Process to treat deposit.

3) Interest in other W-bearing mm dep and in exploration at depth (considering Hewett theories). Also depth at Golconda for other metals. (over)

GE agreement to contract for all production indefinitely at a floor price +. Will finance exploration.
GE optioned Strawberry. Apparently GE is anxious to pin down future limits. JWD.

12-4-71

Eugene Mtns - Pershing Co. Report

Names of unpatented claims, and number of claims, are ephemeral and should be dropped. Also ownership unless it can be checked against current tax records in Lovelock.

The land grid on overlapping grids differs - apparently very few corners were found in 34N - 34E.

AMS sheet has errors and is out of date. North of Imlay, Humboldt Diversion Canal is called "Division Canal". Tungsten mines of Nev. Mess Co. are not at site plotted, and mill may or not be at locality shown. "Power Station", "Windmill", "Water Pump" are also ephemeral and may not be there today. Annotations of principal commodity (gold, silver, e.g.) meaningless - substitute property identification.

DMEA may be used as background info, but should not be quoted directly nor should conclusions - Enough to give the facts without adding "no commercial ore" "Prop. no good", etc.

Do not cite DMEA reports or other unpublished reports - gives the impression that they are available.

Are "mining districts" officially delineated in Nevada? Boundaries seem flexible enough so that detailed history and geography may not be needed

Compile Surface map - Perhaps 1000 ft/inch - show all New Mex mines and orebodies - Topo after Kerr? ~~pb~~ fig 9

Look for DMR 1948 surface map (made after mine).

TUNGSTEN

NEVADA-MASSACHUSETTS COMP

Producers of Tungsten Products

Location of Mine and Plants
TUNGSTEN, NEVADA

Teletype No. :TUNGSTEN MINE NEV. 190
Telephone No.: IMLAY, NEV. 2571

Mine
TUNGSTE

P.O. Box 667,
Sonora, Ca. 95370
October 6, 1972

Mr. Dwight Lemmon,
U.S. Geological Survey,
345 Middlefield Road,
Menlo Park, California

Dear Mr. Lemmon:

This letter is our authorization to you to release those production figures for Nevada-Massachusetts Company, whose mining properties are in the Eugene Mountains, Pershing County, Nevada, and which previously and for certain years were reserved from release by Nevada-Massachusetts Company.

This release to you covers those production figures given to the Bureau of Mines annually, some of which were reserved from release by us. This also refers to my verbal release to you in our telephone conversation of this date.

If you do not have figures covering the period 1917 to 1924, we have these production records on file and would be able to give them to you.

Thank you for your courtesy in this matter. It was good to talk with you.

Kindest personal regards.

Sincerely yours,

Charles H. Segerstrom, Jr.,
President

cc: Mine file

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SUMMARY OF RESERVES

Nevada Massachusetts Co., Mill City, Nevada

Commercial Ore

Operating Mines:	Measured		Indicated		Inferred		Broken	
	Tons	% WO3*	Tons	% WO3*	Tons	% WO3*	Tons	% WO3*
Stank	3,550	0.75	9,100	0.75	21,500	0.5-1.0	3,500	0.75-1.0
Sutton #2	3,000	0.4-0.5	16,000	0.4-0.5	400**	?	2,000	0.4-0.5
Humboldt								
Humboldt Bed	0		0		(1)		2,000	0.75
Springer Bed	3,000	0.5-0.75	7,500	0.5-0.75	5,000	0.5-0.75	2,000	0.75
George Bed	500	0.5	2,500	0.5	8,000	?	0	
Total***	10,050		35,100		34,500 plus 400**		9,500	0.7
Inactive Mines								
Summit	500	0.8	1,000	0.8	(2)			
O'Byrne	1,250	0.75-1.0	1,250	0.75-1.0	2,750 plus 75**			
Uncle Sam	300	0.5	2,150	0.5	2,000	?		
Sutton #1	500	0.5	1,000	0.5	75**	?	500	0.5
	2,550		5,400		4,750 plus 75**		500	0.5

Prospects

George Bed, Springer Ridge to Stank Hill area. May contain 7,500 tons of 0.5-1.0 % WO3 ore in small, faulted shoots near the surface. Larger tonnage at depth possible.

West Beds, Small lenses near the surface may contain 5,000 tons of 0.5-1.0% WO3 ore. Drill holes beneath outcrops intersected only barren limestone.

Explanation

*. Grade has been estimated on the basis of assays of car samples from drifts and stopes and examination of mine workings with an ultra-violet lamp.

**. Denotes predicted tons of ore per foot of depth beneath lowest workings.

***. Fourteen month supply for mill at 180 tons per day. Allowance has been made for pillars.

(1). Possible faulted segment of bed may contain substantial tonnage of ore.

(2). Possible faulted segment of bed may contain 100 tons of ore per foot of depth.

RESERVES OF NON-COMMERCIAL ORE

Nevada Massachusetts Co., Mill City, Neva a

Operating Mines	Measured and Indicated Tons	% WO3*	Inferred Tons	% WO3*
Humboldt Mine				
Humboldt Bed				
Surface to 300L. North end	10,000	0.25	40,000	0.25
Shaft Area	5,000	0.25	15,000	0.25
700L.-1400L. North end	5,000	0.25	5,000	0.25
1500 L.	1,500	0.25	1,500	0.25
Sub-total	21,500		61,500	
Springer Bed				
975 L.	2,000	0.25	1,500	0.25
George Bed	?		?	
Total	23,500	0.25	63,000	0.25
Stank Mine	10,000	0.25	28,500	0.25
Grand Total	33,500	0.25	91,500	0.25

Prospects

Florence Beds.- May be small tonnage of 0.25-0.5% WO3 ore near the surface in the East Florence area. Exposures in West Florence area are very low grade. In the west area the beds are wide and fairly continuous. They may contain ore at depth.

Mill Beds.- Very low grade tactite is exposed in trenches in fanglomerate east of camp. If mineralized at greater depth, these two wide beds may contain a worthwhile tonnage of low grade ore.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Lovelock, Nevada
October 12, 1943

Mr. T. B. Nolan
U. S. Geological Survey
Washington, D. C.

Dear Mr. Nolan:

Subject: Resume of Operations at Nevada Massachusetts Co., Mill City, Nevada, June 1, 1943 to October 12, 1943.

On October 11 I visited the Nevada Massachusetts Co. operation at Mill City. The labor situation appears to be more or less stabilized at a position somewhat better than in June. The amount of development work completed since June 1 has been greater than I expected, and the results have been gratifying. If a crew of the present size can be held during the next year (October 1943- October 1944), production of tungsten concentrate should somewhat exceed that during the past year. The production of concentrate from treatment of tailings will probably drop sharply in about another year, but the likelihood of continued substantial production of concentrate from ore beyond this time is good.

Humboldt-Springer mine: The reserve of developed ore has been increased since June and now totals, exclusive of broken ore, about 11,000 tons averaging between 0.75 and 1.0% WO_3. Broken ore may total 3500 or 4000 tons.

Humboldt bed: A block of ore estimated to contain 4000 tons averaging 1.0% WO_3 lies below the 1575' level and above a gently dipping pre-mineral displacement. This block has now been developed and will be mined with a slusher. A crosscut driven from the shaft station on the 1700' level intersected the bed at the expected position. Drifts have been started north and south in 5' of ore averaging between 0.75 and 1.0% WO_3. An ore shoot 100' long on this level would probably yield between 2500 and 5000 tons from stopes above the level. A long hole is being drilled south from the 1700 station to prospect for a possible south segment of the bed.

Springer bed: A stope expected to contain 4500 tons of ore has been outlined between the 1100' and 975' levels. Grade will probably average between 0.75 and 1.0% WO_3. On the 725' level, a prospect drift is being driven northward along the Springer bed. This is the most northerly work that has been done on the bed below the train tunnel and is 500' north of the northernmost Springer stopes. Here the bed averages between 1' and 2' wide and contains about 0.5% WO_3. A surface drill hole intersected 3' of ore at a depth of 150' below a cropping of Springer (?) bed in Pickhandle Gulch. Eventually this area will be prospected from the 400' level Springer workings.

George bed: The sub-level above the train tunnel has been driven southward to a point almost beneath Humboldt Canyon. The last 50' of this drift has been in spotty ore that may average 0.75% WO_3. Yesterday's face probably averaged 3.0%.. Unfortunately the backs are only from 30' to 45'. If this shoot continues southward beneath exposures of ore on the south side of the canyon, several thousand tons may be developed above the sub-level. The north drift of the sub-level has been driven more than 300' without finding the bed.

It is now passing below a fine surface showing of ore at a depth of about 160'.

A crosscut was driven along a diamond drill hole to the George bed from the north end of the south Springer drift on the 725' level. Drifts are being extended north and south along the bed. In the south drift 45' of 0.6% WO_3 ore averaging 4'-5' wide has been developed and the face is in ore. The north drift, now 45' long, is too low-grade to stope (0.2% WO_3). Two other holes drilled farther south in the mine intersected ore in the George bed. Sooner or later these intersections will be tested by crosscutting.

Stank mine: Development work in the Stank mine has not been as fruitful as in the Humboldt-Springer, and the reserve of blocked-out ore has declined slightly. Drifts have been continued southward on the 400', 500', 600' and 700' levels. On the 400' level, 45' of ore is developed south of the Codd dike. The remaining 150' of drift is in low-grade or barren bed, mostly limestone. The 500' and 600' levels are stopped in the dike for want of gob space. The 700' level penetrated 30' of ore south of the dike and then about 80' of low-grade or barren limy bed. It seems likely that a shoot averaging 35' or 40' long can be stoped from the 700' level to some point above the 400' level. This block would contain about 4000 tons of 0.75 to 1.0% WO_3 ore.

A wedge of ore is being underhanded along the granite contact at the north end of the 1200' level. When sufficient gob space has been provided by this work, a station will be cut near the dike 300' south of the crosscut on this level, and a winze will be sunk in ore. From this winze the triangular block of ore bounded by the 1200' level, the main granite body and the dike will be mined. This block of ore is expected to contain between 10,000 and 15,000 tons of ore.

North Sutton mine: The North Sutton shaft has been deepened 125' and a station is now being cut for the 250' level. Sinking will be continued for at least another 125'. Drifting has been continued to the north and south on the 125' level, and another stope has been opened from each drift. Ore continues to average about 0.5% WO_3. The reserve of blocked-out ore is about the same as in June but should be increased materially as the 250' level is drifted.

Sincerely yours,

T. B. Nolan
M. E. Dorr (2)
D. M. Lemmon
File

M. R. Klepper