

2020 0007

(128)
Item 7

TUNGSTEN PROPERTIES, LTD.

MINING

SONORA OFFICE

P. O. Box 667
Sonora, California 95370
Phone: (209) 532-7417

Sonora, California
March 9, 1972

MINE

P. O. Box A
Imlay, Nevada 89418
Phone: Imlay 2324

Mr. Larry Garside, Geologist,
Nevada Bureau of Mines and Geology,
University of Nevada,
Reno, Nevada 89507

Dear Larry:

As indicated to you at the meeting in El Centro some weeks ago now (!) I am enclosing for your geothermal information the data concerning the drilled well on the site of the Golconda Hot Springs. The exact site of the well is 330 feet South of the main hot springs and about 350 West of the site of the old Golconda Hot Springs Hotel. The subdivision location of the well is: Center of NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 32, T36N, R40E, MDBM, Golconda townsite, Humboldt County, Nevada.

You will note that there are two data sheets and that the well pumped 450 GPM and the water temperature was 160 degrees F. On October 6, 1966, I tested the well at the well-head with a tank-car thermometer and recorded 165 degrees F. Lowering the thermometer to a well depth of 110 feet, I recorded a temperature of 177 degrees F. Surface temperature of the nearest flowing hot spring to the well on 10-6-66 was 162 degrees F. Three or four hot springs on the location presently flow a combined (estimated) 250 GPM. This spring flow is presently used for irrigation and domestic purposes. For many years the water was used for "health baths" at the Golconda Hot Springs Hotel and was reputed to have great curative effect on so-called "social diseases". From 1940 through 1945 the water from the well was used for mill water in the chemical plant treating the tungsten-iron-manganese ores from the Golconda mine, 4 miles to the East. The mill treated 150 TPD of material and product was artificial scheelite. During the operation of the mill more than 110,000 short ton units of WO₃ were produced. The water in the well and in the springs is very pure but runs a few parts per million of W and apparently a few parts per million of Thorium. Some of the areas around the hot spring vents are quite radioactive from accumulations of a scum-like material which may be Thorium.

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Mr. Garside - Page 2 - 3/9/72

The other "hole" about which I spoke to you is in the mine at Golconda, which, I guess, could be classified as a "Fossil hot spring". The well log on this 12 inch hole is at the mine at Imlay and I will forward a copy to you as soon as possible. In the meanwhile, perhaps, I can get to Golconda and the Golconda mine and check the temperature of the water in the bottom of this hole, plus the temperature of the water in the feeble hot springs at the mine. There are two springs there but the water is only tepid but I would want to check that for you so as to be sure.

I will keep a copy of this letter in my hard hat so that I will be sure to remember to record the Golconda mine temperatures and get the data to you promptly. Incidentally, the Golconda mine hole is about 250 feet or more in depth and cased down a distance.

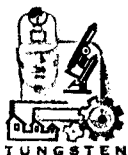
I will get back to you as soon as I can.

Kindest personal regards.

Sincerely yours,

Donald I. Segerstrom,
Vice President

cc: R.J. Segerstrom



TUNGSTEN PROPERTIES, LTD.

MINING

SONORA OFFICE

P. O. Box 667
Sonora, California 95370
Phone: (209) 532-7417

Imlay, Nevada
July 10, 1972

MINE

P. O. Box A
Imlay, Nevada 89418
Phone: Imlay 2324

Mr. Larry Garside, Economic Geologist,
Nevada Bureau of Mines and Geology,
University of Nevada,
Reno, Nevada 89507

Dear Larry:

As per my letter to you of a couple of months ago, I enclose herewith a portion of the start and end of the drill log for Drill Hole No. 302 at the Golconda Tungsten Mine. The hole was started on February 25, 1945 - using a well drilling rig. The hole is cased to 188 feet. The hole is located in almost the exact center of the SW $\frac{1}{4}$ of Section 36, T36N, R40E, MDB&M, Humboldt County, Nevada. About 600 ft. to the Northeast of the collar of this hole is a warm spring which produces about 1 $\frac{1}{2}$ gallons per minute of 69 degree F. water. As you recall, the entire area is supposed to be a fossil hot spring location. The ancient hot spring deposited or precipitated iron, tungsten and manganese layers in various thicknesses in an area that encompasses about 600 acres. In 1916 and 1917 the mine area produced several hundred tons of manganese ore of high enough grade to be shipped to steel mills in the east. In 1940, Nevada-Massachusetts Co. built a chemical milling plant at the townsite of Colconda and treated about 110,000 tons of ore from the mine area, producing about 100,000 units of artificial scheelite. The operation was closed in late 1945.

A recent visit to the above mentioned drill hole (No. 302) at Golconda mine showed a water temperature at a depth of 220 feet of 143 degree F. This temperature may be caused by the oxidization of the sulphide zones at depth which are noted on the drill log. The sulphide has recently been identified as marcasite. Recent study has shown also that the hole is apparently in marcasite for almost the entire depth. Could this have been one of the hot spring vents now filled with marcasite? We will have to do some more drilling sometime to find out.

Hope this will help line out this particular hot springs hole for your geothermal report. How is it coming along?

Kindest personal regards.

Sincerely yours,

Donald I. Segerstrom

DRILL HOLE #302

Started: 2/24/45

<u>Interval</u>	<u>Assay</u>	<u>Description</u>
0-5	0.37	Blue, red and black clays.
4-6	0.20	Blue, black, tan clays and gravel.
6-8	0.51	Ditto
8-10	0.69	Ditto
10-12	0.30	Red clay and phyllite.
12-14	0.18	Ditto with gray shale.
14-16	0.22	Ditto
16-18	0.20	Ditto
18-20	0.22	Ditto
20-22	0.21	Red clay and shale.
22-24	0.17	Ditto
24-26	0.21	Ditto
26-30	0.16	Ditto
30-35	0.07	Blue clays, sulfides and quartz fragments.
35-40	Nil	Ditto
40-42	"	Ditto
42-44	"	Ditto
44-46	"	Ditto
46-48	0.17	Tan clays, quartzite and limestone fragments, decreasing sulfides.
48-50	0.13	Ditto, very little sulfides.
50-52	0.16	Ditto - no sulfides.
52-54	0.08	Quartz and quartzite fragments, very little clay.

DRILL HOLE #302 (continued)

<u>Interval</u>	<u>Assay</u>	<u>Description</u>
240-242	Nil	Limestone, clean quartz and little sulfides.
242-244	"	Limestone, iron stained quartz, little clay, increasing hard sulfides - very hard.
244-246	"	Ditto but no clay.
246-248	"	Ditto
248-250	"	Ditto
250-252	"	Ditto
252-254	"	Ditto, water smelling strong of sulfur, hole travelling bad.
254-256	"	Ditto - no mud in sample, probably water coarse at bottom.

Bottom

DRILL HOLE #302

No water until 50' and then not very heavy flow.

Drilled 12" hole to 16'. Cased with 16" pipe. Progress too slow so cut down to 8 1/2".

Drilled 8 1/2" hole to 186'. Caving so badly from above could not make any footage so cased to here with sleeve joint standard 6" pipe. Open hole below this level.

At 252' ravelling started and got so bad drilling was greatly slowed down. Finally got to 256' but further progress was impossible so discontinued drilling.

Ravelling apparently due to existence of water course as all samples baled here contained no mud only good size rock fragments. Water here smelling very strongly of sulfur.

6" standard pipe joints in hole. Measurements from bottom of pipe to top of sleeve coupling:

From bottom to top of hole:

1.	21'	6"
2.	22'	3 1/2"
3.	21'	8"
4.	10'	11"
5.	11'	3 1/2"
6.	10'	4-3/4"
7.	10'	8"
8.	10'	3-3/4"
9.	10'	8"
10.	10'	8 1/2"
11.	10'	8 1/2"
12.	10'	7"
13.	11'	1"
14.	11'	1"
15.	4'	8-3/4"

Total 188' 6"

"Sinter" Deposit
~~HOT SPRING~~

County Humboldt

Geothermal Area _____

Golconda Tungsten Mine

TYPE: _____

S 36, T 36 N, R 40 E

FLOW RATE: _____
date _____

WATER TEMP: _____
date _____

Sinter

---WATER ANALYSES: W 7% Fe high

Ba 7%

Co 3000 ppm black Mn-rich bands - high in Th

Nb 300 ppm red iron-rich bands - high in As, Be, Fe.

Ni 300 ppm

As 1.5%

Be 85 ppm

date: 1971? laboratory: pers. comm. Ralph Erickson (GSN talk)

REMARKS: 105,000 units of WO_3 produced from Tungsten-bearing iron and manganese oxides deposited by Pleistocene hot springs as fissure veins and blankets cementing gravel beds (Kerr, 1940). The higher grade portions of the ore bodies contained up to 7 percent WO_3 ; material containing less than 0.8 percent WO_3 could not be treated profitably because of the high cost of the chemical treatment used to recover the Tungsten. Analyses up to 0.016 percent BeO reported. (Warner and others, 1959)

$$\frac{105,000 \times 10^4}{1000} = 1,050,000 \text{ tons } WO_3$$

→ Kerr, 1940

Warner and others, 1959

Ferguson, Roberts, and Muller, 1952.

November 1st, 1940

NEW WELL DRILLED AT GOLCONDA BY JUD UNDERWOOD

Total Depth 175 feet (?)

12" casing to 84' - 10" casing perforated 84' to 175'

Test Pump Bowls were set at 60'

Water flowed 5" deep from a weir with 18" crest on October 28th,
equivalent to about 450 GPM - temperature 160° F.

10 yards of washed gravel 1/4" to 5/8" poured into hole
outside of casing.

NOVEMBER 1, 1940

***** WELL *****

Sunk by Judd Underwood, well drilling contractor, Reno, Nev.
under Agreement of Sept. 24, 1940.

Drilling started Sept. 28, 1940.

Mud seen encountered 145' to 157'.

Well bottomed at 175 ft.

12 " solid casing for 80 ft.: 10 " Perforated casing for 80 ft.

Pump installed Oct. 22, and pumping started Oct. 23rd.

Pump set at 80 ft. plus 4 ft. impellers.

Oct. 24th. Pumping on sanding well. 4 yds screened gravel.

Oct. 25th. " and " " 4 " " "

Oct. 26th. Laid off.

Oct. 27th. " "

Oct. 28th. " "

Oct. 29th. " "

Oct. 30th. Moved equipment 4 hrs. : Bailed 4 hrs.: 3 yds. gravel
used sanding.

Oct. 31st. Bailing 4 hrs.: Moving 4 hrs.

November 1st. Moving.

Charges against Agreement-

Oct. 21 & 22 - 16 hrs. labor @ .56 ---- \$8.96 plus tax.