

Tungsten

004

March 12, 1943

HGP/ec

Mr. James A. Marsh,
P.O. Box 1499,
1401 Walker Bank Bldg.,
Salt Lake City, Utah

Re: Romar Scheelite Ore

Dear Mr. Marsh:

The Accompanying data sheets cover coarse gravity treatment of a sample of Romar scheelite ore submitted by Eugene Frey, project engineer. After consultation with Mr. Roberson, operator of the property, it was decided that "Sink and Float" treatment would give more satisfactory quantitative data than hand sorting in the coarse sizes. Therefore, a straight gravity process was proposed for treatment of minus 2-inch ore. (1"-2")

A screen analysis of the minus 2-inch ore showed that the minus 20-mesh fraction assayed 3.36 percent WO_3 and met shipping grade without treatment. For beneficiation to shipping grade only, the minus 20-mesh fines can be included with concentrate made from "Sink and Float" and jigging. By the above treatment, 91.0 percent of the contained tungsten would be recovered in a shipping product assaying 4.1 percent WO_3 and an additional 2.0 percent in a possible mill feed assaying 0.9 percent WO_3 . The combined product representing a recovery of 99 percent would assay 3.0 percent WO_3 .

However, the minus 20-mesh ore fraction is readily amenable to table concentration and approximately 84 percent of the tungsten contained was recovered at a grade of 66.1 percent WO_3 . If the complete gravity flow sheet is used on the minus 2-inch ore, the over-all results show a recovery of 24.3 percent at 66.1 percent WO_3 grade, a recovery of 65.7 percent at 4.36 percent WO_3 grade, and an additional 10.4 percent recovery at 0.87 percent WO_3 , while rejecting 50.2 percent of the original weight in a product assaying only 0.06 percent WO_3 .

The over-all results are exceptionally good considering that the original ore was crushed only to minus 2-inch and no middling treatment was involved. However, the results only confirm previously reported data on the

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SL Files
MP Files *ny-5.2

ready amenability of Romur ore to concentration. The "Sink and Float" data on plus 1-inch ore can be considered as the optimum results possible by sorting.

No further work is planned and if additional information is required, please advise. Mr. Frey and Mr. Roberson should be informed of the results of the above tests.

Very truly yours,

H. G. Poole.

Enclosure

U. S. Bureau of Mines
Western Region
Ore Dressing Report

Date March 2, 1943

Ore Wy-3.2 Homar Cochet Class Tungsten Source Eugene Frey, U.S.B.M.,
Bonnevillle, Wyoming
Project 744

Owner or Lessee J. M. Roberson, Box 75, Shoshone, Wyoming.

State Engineer's Remarks Coarse ore is being hand sorted. A cheap method for concentrating fines is desired.

Physical Character Sample as received contained plus 2-inch material. Scheelite associated with quartz, garnet, and metamorphic schist.

From vein matter only

Chemical Character

Assay No.	Mn.	Insol	Assay percent					Oz./Ton		Assay percent		
			SiO ₂	Fe.	CaO	MgO	Al ₂ O ₃	Au	Ag	Mo	WO ₃	CO ₂
H-845	0.2	57.4	57.7	1.6	10.9	1.8	20.75	N11	Tr.	.015	1.65	0.3

Treatment Procedures

1. Screen analysis minus 2-inch ore.
2. "Sink and Float", jigging and tabling of minus 2-inch ore.

U. S. Bureau of Mines
Western Region
Ore Dressing Report

Date March 2, 1943

Test Number Z-15047 -A

Ore Wy-3.2 Romur Connet Class Tungsten

Treatment Ore crushed to about 2-inches and screened on 1-inch, 1/2-inch, 3-, 6-, and 20-mesh.

Metallurgical Data

Calculated Size Distribution

<u>Size Product</u>	<u>Percent Weight</u>	<u>Assay, Percent WO₃</u>	<u>Distribution, Percent WO₃</u>
X -2inch+1-inch	24.01	1.82	23.61
X -1-inch+1/2-inch	22.27	1.69	20.39
-1/2-inch+3-Mesh	14.39	1.32	10.26
-3+6-Mesh	10.88	1.27	7.42
-6+20-Mesh	12.56	1.38	9.38
-20-Mesh	15.92	3.36	22.94
<u>Calculated Heads</u>	<u>100.00</u>	<u>1.65</u>	<u>100.00</u>

Remarks The minus 20-mesh fraction could be shipped for treatment without further beneficiation.

Test Engineer George M. Potter

U. S. Bureau of Mines
Western Region
Ore Dressing Report

Date March 2, 1943

Test Number W-13047-A

Ore Wy-3.2 Romer Co mat Class Tungsten

Treatment Ore crushed to about 2-inches and screened one-inch, 1/2-inch, 3-, 6-, and 20-mesh. Plus 6-mesh fractions treated by "Sink and Float", plus 20-mesh by jigging, and minus 20-mesh by tabling.

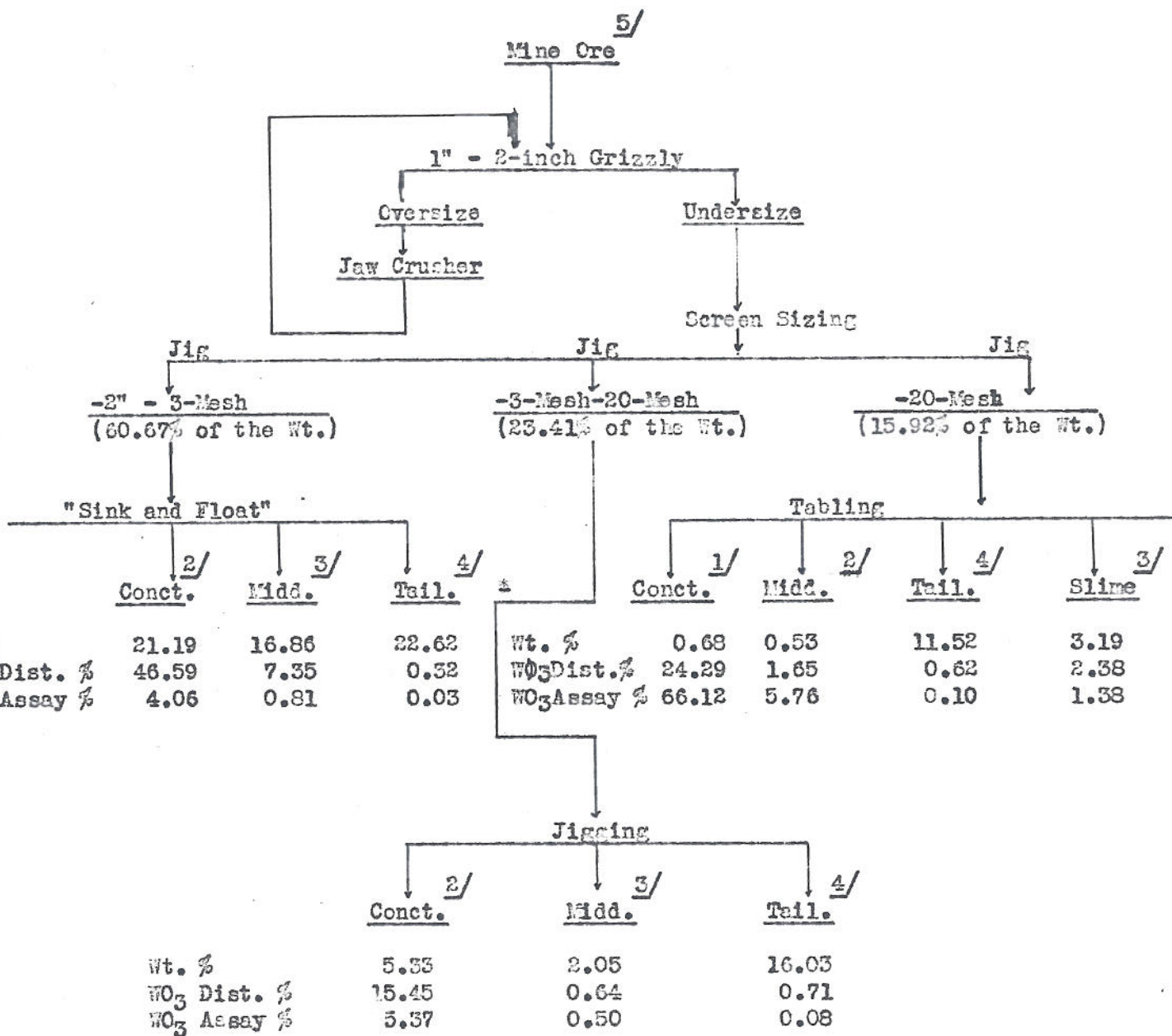
Metallurgical Data

Product	Assay No.	Weight	% Weight	Assay, % WO ₃	Distribution, Percent WO ₃
-1-inch Sink 3.0	6173	2600	9.72	4.04	21.35
-1-inch Sink 2.6	6176	1034	7.84	0.50	2.12
+1-inch Float 2.8	6177	1699	6.39	0.04	0.14
-1-inch+1/2-inch Sink 3.0	6185	2414	9.08	3.70	18.15
-1-inch+1/2-inch Sink 2.6	6182	1033	3.85	1.03	3.14
-1-inch+1/2-inch Float 2.8	6183	2424	9.34	0.02	0.10
-1/2-inch+3-Mesh Sink 3.0	6184	691	2.33	5.63	7.09
-1/2-inch+3-Mesh Sink 2.6	6181	705	2.65	1.70	2.52
-1/2-inch+3-Mesh Sink 2.6	6179	659	2.52	0.42	0.57
-1/2-inch+3-Mesh Float 2.8	6180	1533	6.23	0.02	0.08
-3+6-Mesh Jig Concentrate	6186	621	2.33	5.16	6.50
-3+6-Mesh Jig Middling	6187	546	2.05	0.50	0.64
-3+6-Mesh Jig Tailing	6188	1733	6.47	0.03	0.28
-6+20-Mesh Jig Concentrate	6189	799	3.00	5.32	5.93
-6+20-Mesh Jig Middling	6190	442	1.66	0.15	0.13
-6+20-Mesh Jig Tailing	6191	2151	7.90	0.07	0.33
-20-Mesh Table Concentrate	6173	100	0.69	63.12	24.29
-20-Mesh Table Middling	6174	140	0.55	5.76	1.85
-20-Mesh Table Sand					
Tailing	6344	3682	11.22	0.10	0.62
-20-Mesh Table Slime					
Tailing	6175	630	2.19	1.33	2.32
Calculated Heads		28596	100.00	1.23	100.00
Coarse Gravity Conct.			26.52	4.35	62.04
Coarse Gravity Conct. + -20-Mesh Fraction			42.44	4.06	96.99
Coarse Gravity Middlings			16.91	0.73	7.99
Coarse Gravity Conct. + Middlings + -20-Mesh Fraction			61.35	2.56	98.97

Test Engineer George H. Potter

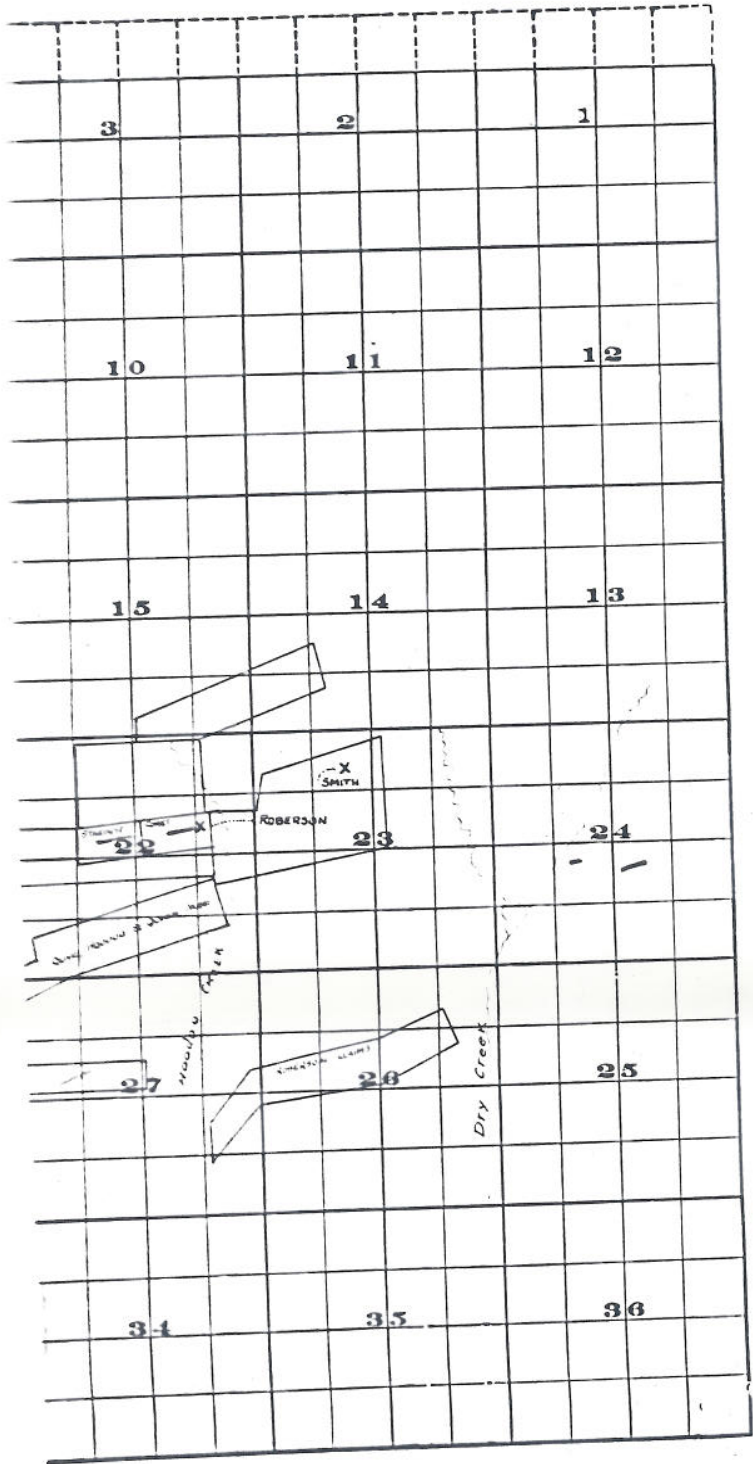
Romur Scheelite Ore Gravity Test

No. Z-13047-A



	Wt. %	Assay % WO ₃	Recovery %
<u>1/</u> Premium Grade Concentrate	0.68	66.12	24.29
<u>2/</u> Combined Shipping Grade Conct.	27.05	4.36	63.69
<u>3/</u> Combined Milling Grade Conct.	22.10	0.87	10.37
<u>4/</u> Combined Reject	50.17	0.06	1.65
<u>5/</u> Original Head	100.00	1.85	100.00

Range 93 West.

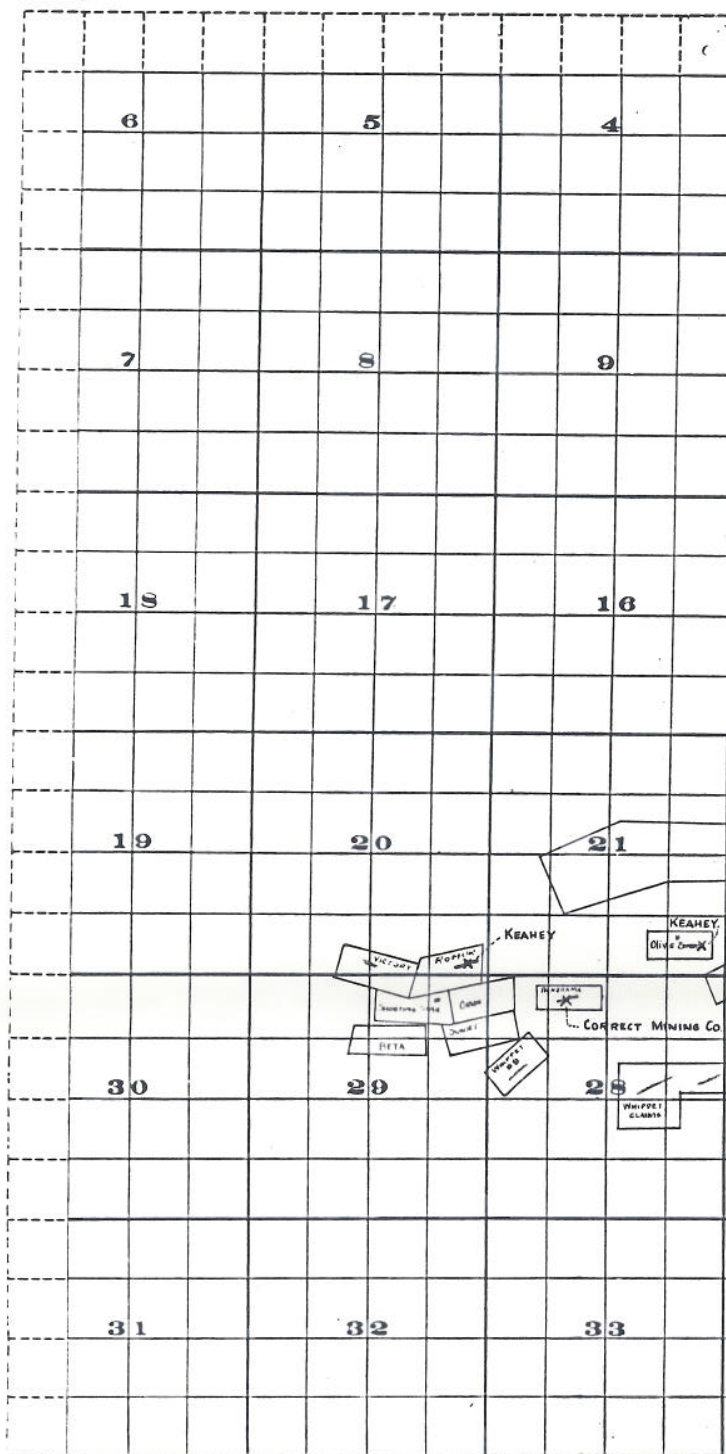


COPPER MOUNTAIN
JUNE, 1943

- X TUNNEL
- SCHEELITE LEADS
- BERYL & OTHER PEGMATITE MINERALS

W.D.T. - June 23, 1943

Township 40 North.



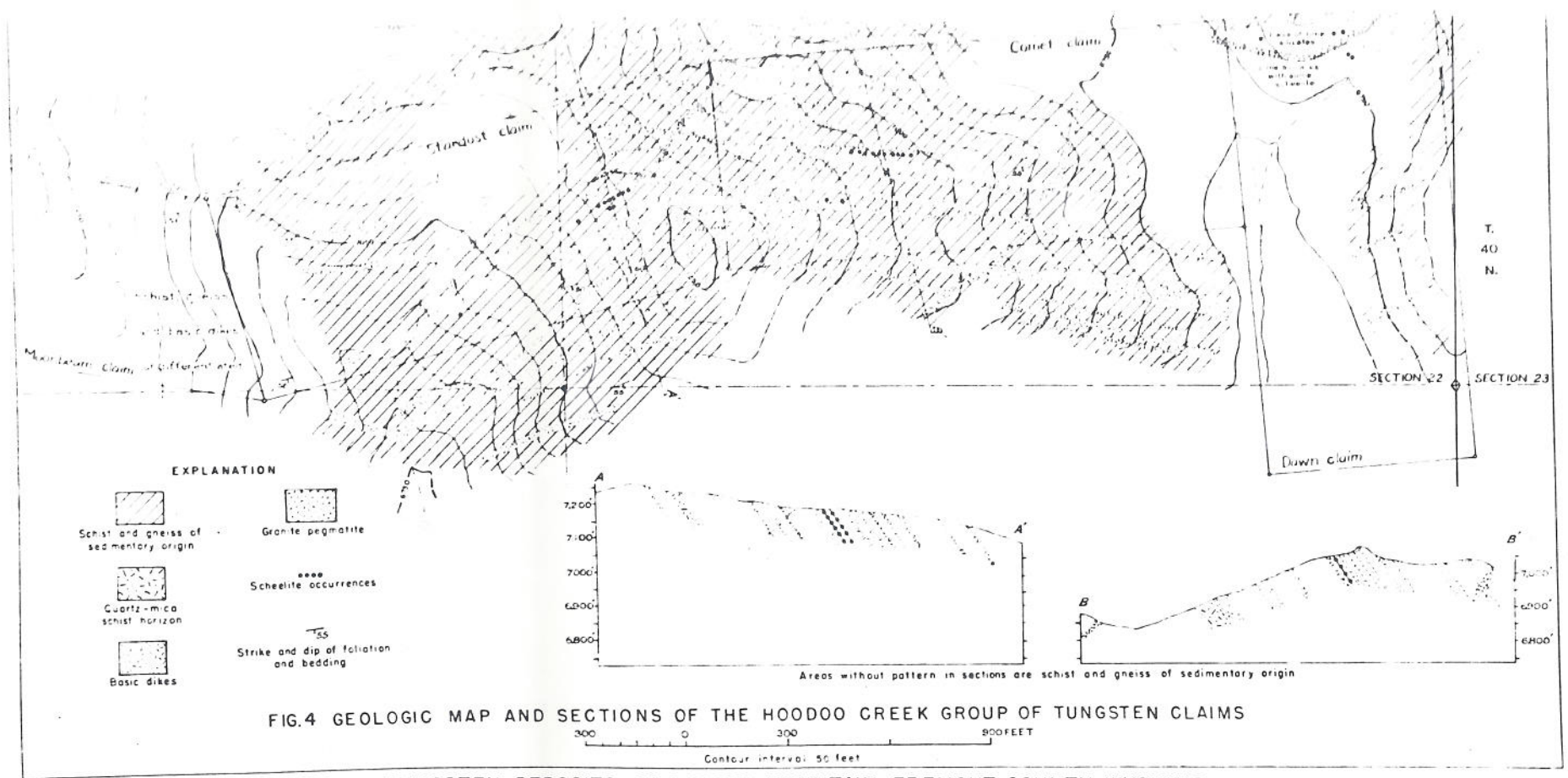


FIG. 4 GEOLOGIC MAP AND SECTIONS OF THE HOODOO CREEK GROUP OF TUNGSTEN CLAIMS

TUNGSTEN DEPOSITS OF COPPER MOUNTAIN, FREMONT COUNTY, WYOMING

