2800 0004

(330)

Item 4

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Ely, Nevada
May, 25, 1942

Memorandum to T. B. Nolan

Lexington Mines Company, Baker, Nevada
WHITE PINE COUNTY.

Location: The scheelite property of Lexington Mines Co., consisting of 6 patented claims and a mill site, is located on the east flank of the Snake Range, White Pine County, Nevada. It is reached by a 13 mile dirt road branching west from the Baker- Milford highway, 12 miles southeast of Baker, Nevada. The property is 88 miles southeast of Ely, Nevada and 73 miles northwest of Milford, Utah. The deposit lies on a rounded hill top between 8700 and 8750 feet elevation.

Ownership: Lexington Mines Co. is a partnership of W. H. Garrett, Ely, Nevada, Frank Gallo and Donald Taylor, Baker, Nevada. The claims were taken under option in June, 1941 and purchased in September, 1941. At present the owners are remodeling the mill and expect to start mining and milling in a month.

Geology: The claims are underlain by dark blue limestone cut by calcite stringers. Granite, cropping out north and west of the claims, probably intrudes the limestone. Except for several small limestone outcrops north and east of the mineralized zone the claims are covered by overburden. Three shafts (Map 2) penetrate 12 to 25 feet of overburden before reaching bedrock.

Bedrock Scheelite: Scheelite, associated with calcite stringers and lenses in the blue limestone, has been found in the three shafts. #3 shaft enters bedrock at 15 feet. Two small lenses of good grade scheelite (about 5%) that appear to parallel the bedding (N60W, 20SW) are exposed on the drift level 25 feet beneath the surface. A winze sunk on one of these lenses is now watered. In the accessible workings only 10 to 20 tons of good ore is indicated. In addition to these good lenses smaller scheelite-bearing stringers cut the limestone, but it is not likely that much of this rock is of mineable grade.

At present #1 and #2 shafts are watered. Some scheelite associated with calcite is on the dumps. A resident of Baker, who worked on the property during World War 1 states that a good grade of calcite-scheelite was mined from both of these shafts and drifts, and that production exceeded $ 100,000.

Placer Scheelite: The zone containing bedrock scheelite is overlain by 12 to 25 feet (where thickness can be measured) of overburden containing scheelite. The overburden appears to be largely a product of weathering in place and consists of an ungraded mixture of all sizes from boulders to clay. In the fine sizes the scheelite is almost wholly free. In coarser sizes it is associated with calcite, although occasional scheelite nuggets, several inches in diameter, occur.

Lexington (2)

Grade and Size of Placer Deposit: Last year the owners milled 525 tons of ore through a makeshift mill, all placer material, and recovered 2461 pounds of concentrates averaging about 64% WO_3 (see Appendix) or about 4 pounds per ton. The tailings appear to contain an equal amount. This would indicate a mill feed of about 0.48% WO_3.

This mill feed represents all the material removed from Cut A, 200'x 25'x 1½' (Map 2), with a small contribution from Cuts B and C. These cuts were examined with the ultra-violet lamp. Dissemination of scheelite in the fine material is estimated to average 0.10% or a little higher throughout the sides and bottom of the cuts. In addition there are coarser fragments of scheelite-bearing calcite.

Two 1 ton lots of the placer material were screened and sorted by Marc C. Latham in 1919 (?) and showed:

Barren limestone----------	1225 pounds
Scheelite-bearing calcite-	175 "
Minus 1" material -------	600 "

This ratio appears to be reasonable.

If the minus 1" averages 0.10% WO_3 and the scheelite-bearing calcite 2.0%, the unsorted gravel contains 4.1 pounds of scheelite per ton. If all the plus 1" barren limestone could be sorted before milling, a mill feed with about 9 or 10 pounds scheelite per ton might be obtained. The company plans to trommel the gravel as mined, sending the minus 1½" to the mill and sorting the the ore from the plus 1½" before trucking to the mill. In this way they may be able to attain 0.40 or 0.50% heads.

From the work done to date it seems likely that 300'x 50'x 15' (approximately 12000 tons) of gravel amenable to treatment exists. If 80% recovery can be attained in the remodeled mill (see Appendix) about 20 tons of 60 to 70% concentrates might be extracted. If the ore can be mined and milled for $2.00 per ton, as the owners anticipate, a much larger volume of scheelite bearing gravel adjacent to the zone discussed above may be workable. As yet this zone, 600'x 100'x 15' or about 40,000 tons has not been explored and no estimate of grade is warranted. In addition some bed-rock scheelite may be developed in the underground workings.

One sample of tailings and four samples of the placer material were collected for assay (see Appendix).

APPENDIX
2 MAPS
CC:
DML
File

M. R. Klepper

MRKlepper

Junior Geologist

Lexington (3)

APPENDIX

PRODUCTION : All concentrates sold to Mineral Research Co., Glendale, Cal. Smith- Emery Co. settlement sheets.

8-30-41	333#	49.99 %
9-5-41	239#	59.17 %
9-18-41	768#	64.83 %
10-10-41	861#	70.87 %
10-31-41	263#	72.30 %
Total	2461# from 525 tons milled, or 4.65# per ton	

FINANCIAL : Property and $15,000 equipments and improvements paid for. Only minor current accounts outstanding. (Statement of owners)

OPERATING PLANS :

[redacted]: Gravel by dragline to conveyor belt to trommel. Minus 1½" to mill. Plus 1½" sorted; ore through crusher and rolls. Also glory holing ore in #2 and #3 shafts.

Three quarter mile truck haul from mine to mill.

MILL: Bin to automatic feeder to rod mill to jig to vibrating screen, oversize to rolls to tables (2), undersize to tables.

Anticipate 80 to 82 % recovery.

Capacity: 2 to 2½ tons per hour (3 shifts planned).

Water: Abundant year round flow (5" or greater) in Lexington Creek only 200' from mill.

REQUIREMENTS TO OPERATE ACCORDING TO PLANS:

DENVER Mineral Jig	$ 1100
Rod Mill	$ 1600
Balance on Tractor	$ 500
Mill Building	$ 2800
Labor and current expenses	

SAMPLES COLLECTED BY WRITER:

#1, Grab from tailings of last mill run
#2, Grab from ore bin, minus 1½" from cut A
#3, 30' groove across Cut A (see Map 2)
#4, 25' " " " "
#5, Grab of plus 1½" scheelite- bearing calcite from Cut A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Cherry Creek, Nevada
July, 14, 1942

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

Dear Mr. Nolan:

Analyses of the samples from the Lexington property that were submitted to the Bureau of Mines at Reno for analysis are listed below:

Sample No.	Description	Au
L1	Grab from tailings of last mill run	0.44*
L2	Grab from ore bin, minus ½" from cut A	0.29*
L3	30' groove across cut A	0.12
L4	25' groove across cut A	0.27*
L5	Grab of plus ½" calcite from cut A	0.[illegible]

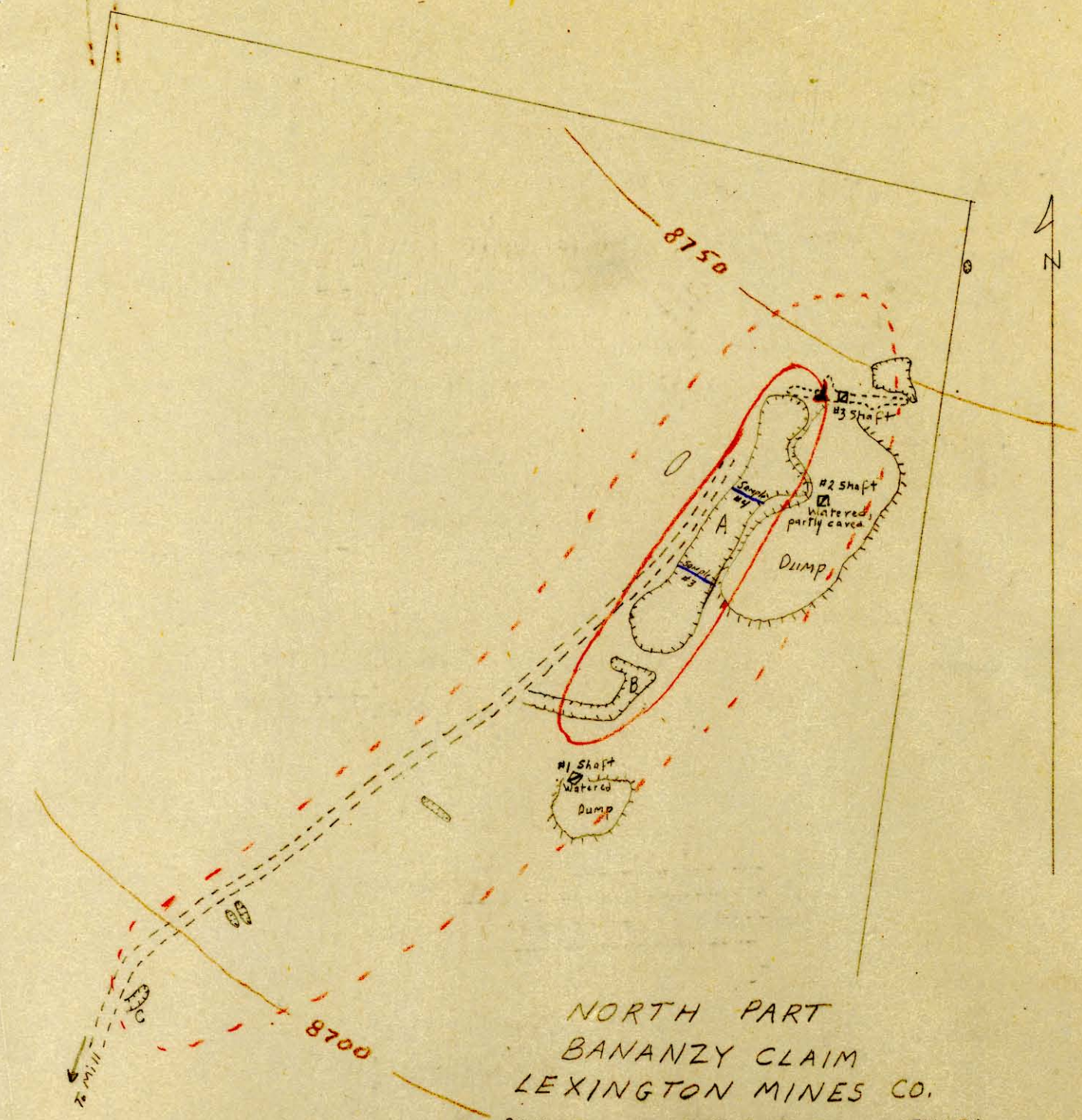
* Analyses rechecked

Sincerely yours,

M. R. Klepper

cc
SGL
DML
File

MAP 2



NORTH PART
BANANZY CLAIM
LEXINGTON MINES CO.
BAKER WHITE PINE CO. NEVADA

Scale 1" = 100'

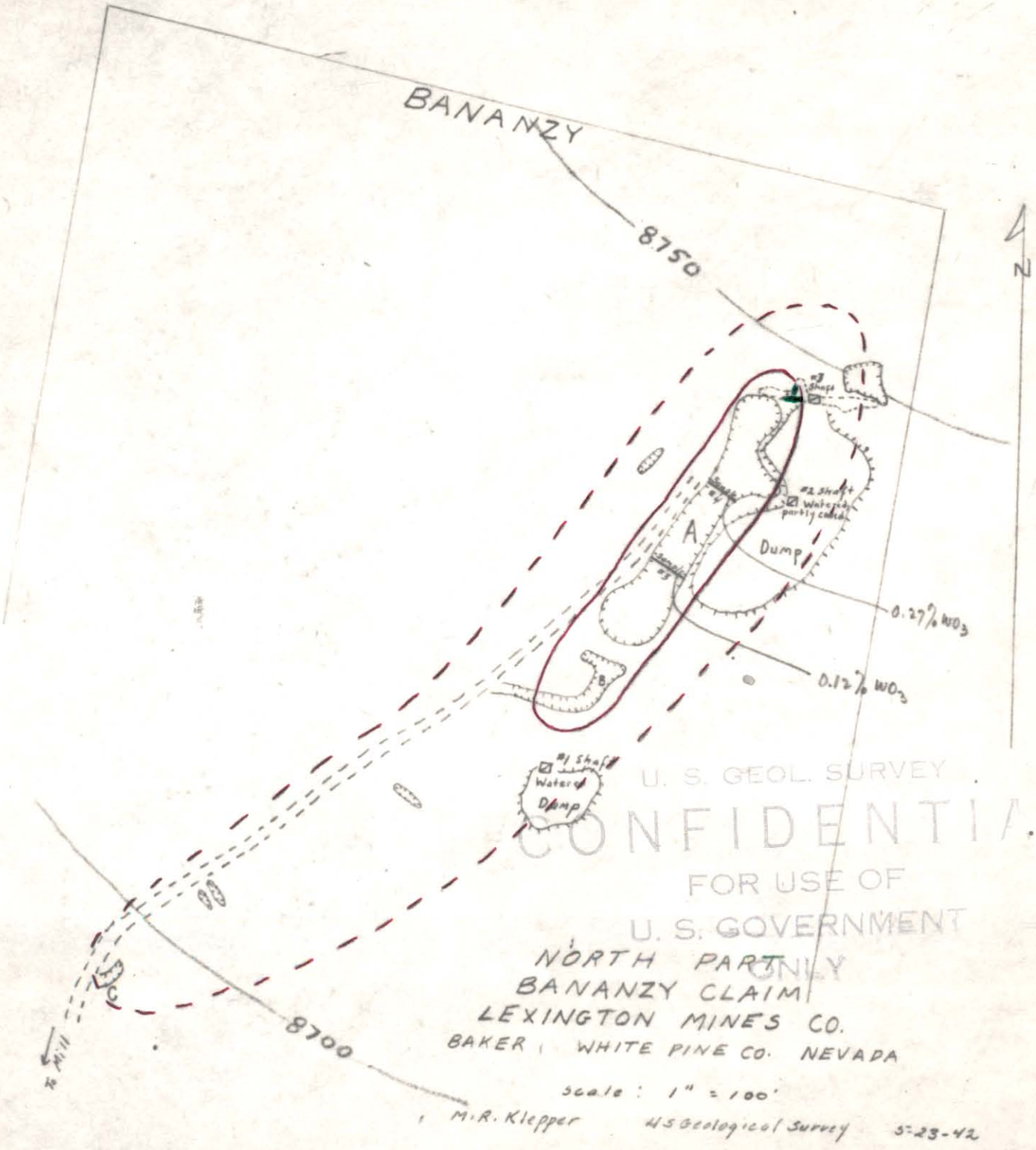
M.R. Klepper U.S. Geological Survey 5-2-42

Zone of 4# gravel

Zone of mineralized gravel, probably less than 4#.

Scheelite ore in bedrock

MAP 2



NORTH PART
BANANZY CLAIM
LEXINGTON MINES CO.
BAKER, WHITE PINE CO. NEVADA

scale: 1" = 100'

M.R. Klepper U.S. Geological Survey 5-23-42

zone of 4" gravel

Undeveloped mineralized gravel, probably less than 4"

Scheelite ore in bedrock

Mineral Survey #4432 A and B

Elko Land District

PLAT

Lexington Mining District

White Pine Co. Nevada

Scale: 1 inch = 300 feet

Nov. 7-15, 1919 W. B. Colwell

U.S. Mineral Surveyor

Reno, Nevada

May 14, 1920

Property of Lexington Mines Co.

Copied by M.R. Klepper

U.S. Geological Survey

5-23-42