3400 0015

July 8, 1955

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J-Tom

TO: Mr. L. E. Damon, Vice President
Nev-Tah Oil and Mining Company

FROM: J. H. Wren

(See Toulon Mill map in 275, Item 15)

SUBJECT: WOLFRAM CORPORATION TUNGSTEN PLANT INSPECTION, NIGHTENGALE MINE AND PEMBERTON-COUNTISS PROPERTIES PRELIMINARY EXAMINATIO

WOLFRAM CORP. MILL:

The Wolfram Corporation tungsten plant was inspected on July 6th and 7th. Following observations may be of importance regarding the alignment of business arrangement relative to the mill's purchase.

1. MACHINERY:

A). While much of the plant machinery is somewhat old, it is serviceable and in good condition.

B). Equipment unit power transmission is out-of-date. Example:- Flat belt drives off of jack shafts instead of efficient close coupled Vee belt drives. Subsequently, this condition may be corrected.

C). Reportedly, the equipment is kept up in shape, preventative maintenance done and a stock of operating parts kept on hand.

D). All of the mill's rolling stock must be included in the purchase negotiations, as it is required for operation. The rolling stock consists of: 1 H. D. 14 A. C. Bulldozer, one front end loader, one light power shovel, service truck.

E). Besides an inventory of repair parts, the mill's management has an inventory of electric motors, conveyors and other items which can be utilized to advantage. Some spare motors should be included in the purchase inventory.

2. MILL:

A). The mill building and floor plan is not the result of a comprehensive planned construction program. It is the result of a series of metallurgical changes, plant revamping, and additions over a long period of years.

B). Fines bin capacity is limited but probably will serve if proper coordination is used.

C). If the company acquires the plant, the gravity circuit can continue operating for income purposes while the flotation unit is being set up. The gravity circuit will handle approximately 140 tons of ore per day depending upon character.

D). For the most part, the flotation equipment is at the mill site and some of it is set. It is suggested that the consulting metallurgist inventory the equipment items which will have to be purchased and deliver that required inventory to the purchasing department, with a cost estimate.

E). The Nevada-Massachusetts Company metallurgist states that the ball mill can be used, but a smaller rod mill would be more efficient. The ball mill now set will only use a partial charge of grind balls when the tailings are run through.

F). Time element to put the flotation circuit into production will require not less than six weeks after commencement of the project. This will also include arrangement to deliver the tails from the pond to the mill. During that interim, all income will result from gravity treatment of scheelite ores.

G). An itemized cost estimate regarding equipment purchase and installation costs should be obtained at this time from the consulting metallurgist. That data will be necessary prior to compiling an overall immediately on-call capital subscription.

H). The laboratory at the plant is not complete. About 2/3rds of the necessary items are present.

I). It is suggested to purchase and install an automatic sampler on the mill tails and one on the mill heads.

J). An advantage with regard to the acquirement of this plant is that the experienced operating staff comes with the deal. The consulting metallurgist is a very valuable man, in view of the fact that he not only has extensive tungsten milling experience, but is particularly acquainted with this plant and the ores of the district. He also has done research on the tailing pond problems and has worked out a logical method to process the tonnage. He has agreed to personally align the treatment procedure and follow through when and if he is subsequently needed.

3. MILL TAILS:

A). Some 125,000 tons of mill tailings are estimated to be available for treatment. Mr. George Crerar, consulting metallurgist for Nevada-Mass. has been familiar with the Toulon plant efficiency throughout the term of the tailing pond building. He stated that his estimate of tailing grade was .17

to .18 WO_3. This figure is also the estimate of the mill superintendent, Mr. Ray L. Clausen. Mr. Clausen is a very good millman and has an excellent mechanical background. Over and above company directions, he has carried operating data which is of value to us now.

B). Added to the above tailing grade estimates are areas which were built up during hi-grade runs, circuit and ball mill serges that have been impounded, etc. One of these impounded areas will, no doubt, run in excess of 1% WO_3. These areas are not calculated in the .17 - .18 estimate. There is also a magentic separator pile of rejects that can be fed in for regrind to release the scheelite.

C). Aside from about a $5,000 investment to definitely tie down actual tailings grade by drilling, and bailing out semi-solid slimes to gain representative samples, the cost of equipment, labor, laboratory work on the basis of pattern drilling plus the time element seems inadvisable at this time. The mill has a stockpile of samples taken from the tails for the past several years. They were unguarded samples and unless management desires to go into an extensive tailing pond evaluation program, the above samples would be as representative as we can now obtain.

D). If the stockpiled mill tailing samples taken over a period of several years are deemed satisfactory with regard to tailings pond grade evaluation, the following procedure is suggested:

Split an assay sample out of each tailing sample.

Set up a log book on this particular sampling procedure with each sample date, tonnage represented, and number of the sample.

These samples should be sent to Deason and Nichols of Salt Lake City, Utah, after first splitting one sample in each 25 out. These one-in-twenty-five splits will be check samples and can be sent any laboratory of repute desired.

After the sample returns come in, a calculated coposite should be compiled on the basis of weights. That sample calculation will deliver the probable estimated tailings grade. It should be pointed out that in view of the fact that slimes were not settled when the samples were taken, the slime fraction will not be properly represented. For that

reason, the actual tailing pond grade will no doubt be higher than the calculated tailings average.

E). According to Mr. George Crerar, he expects to obtain 75% of the tailings value which will market at $63 per unit. There will be another 10% which can be beneficiated to a $63 market, but before setting up for it, that product will probably bring around $48 per unit. The following estimates are based upon 75% at $63 and 10% at $48.

Economics--125,000 Tons Tails:

.17% WO_3 at $63 per unit equals a gross value of.....$10.71 per ton.

75% recovery at $63 per unit..... 8.03 " "

10% of recovery at $48 per unit..... .56 " "

Possible gross recovery of the 75% at $63 per unit.....$1,003,750.00

Possible gross recovery of the 10% at $48 per unit..... 70,000.00

$1,073,750.00

Estimated milling,marketing of flotation, treatment of 400 tons per day tailing direct, cost per ton $2.00

Estimated $6.69 per ton net profit prior to mill purchase amortization deduction, management overhead and taxes..... $736,250.00

NOTE: The above estimates will be dependent upon assay results. However, factors involved as gained from Mr. Crerar seem reasonably accurate.

4. NIGHTENGALE PROPERTY:

A). This property is some 55 miles from the Wolfram mill. 21 miles is over well-graded graveled road and the balance over oiled highway.

B). The property holds strong scheelite mineralization well over 2,000' in length. Ore occurs on granite-limestone contacts as well as making out into the steeply dipping limestone beddings.

C). The main workings were first operated during World War #1. At that time, a mill was running on the property and some 23,000 tons of tails are stockpiled which reportedly run between .23 and .27 WO_3.

D). This mineral occurrence probably will attain some considerable depth. The existing workings only go down something over 200'. A completed diamond drilling program has proven greater depth than 200'.

E). Present and recently past operational procedure has been to produce ore out of 8'to 25' widths from the surface out of open pits, chiefly. The pits were taken down to a point where either waste benches would have to be stripped or underground mining would have to be scheduled. At least one location remains at the Southerly end of the mineralized zone which could be open pitted. Some 10,000 tons of ore is probable at this location. Grade would be around .50% WO_3, if the ore was kept. free of dilution.

Besides the open pits are two underground workings. One was mined with a tractor front end loader underground. This particular workings has some 500 tons of broken ore which will run about .30% WO_3, ready to load out. An incline shaft was sunk with a slusher hoist handling the broken cubics to get under a block of ore in the old workings.

Dilution has been present in the production cubics as no attempt was made to segregate waste rounds. Ore grade average with the dilution has been reportedly .35% WO_3. No doubt, better control and disposal of waste cubics would considerably beneficiate the mill heads.

Generally, the mining procedure has been to "gut" as much tonnage as possible on the basis of the cheapest means. This probably was temporarily economical, but was not in the best long range interests of the property. A minimum of $125,000 is now needed to develop an underground volume production alignment. No doubt the Wolfram management has taken this in consideration with regard to their decision to sell the treatment plant.

If purchase negotiations are successfully carried out, I would advise having part of the Nightengale equipment remain with the lease (the property is only available for a lease agreement). There are four portable compressors; two of which are late model gyro-flows; one H. D. 5 A. C. front end loader, slusher hoist as well as rock drilling equipment. Actually, this whole machinery compliment is needed by the company, if the Stormy Day and Pemberton properties are to be mined. The Stormy Day needs more air now and there is no equipment at the Pemberton property.

In the event that the mill is acquired, it is suggested that consideration be first given to the Southerly block of around 10,000 tons, which can be open-pitted. Some $300,000 gross is represented in this block.

GEORGE CRERAR
MINERAL DRESSING ENGINEER
BRICELAND CALIFORNIA

July 18, 1955

Nev-Tah Oil & Mining Company,
430 Gazette Building,
Reno, Nevada.

Attention Mr. A. L. Daman, General Manager

Dear Mr. Daman:

The following estimates are more or less pertinent to the proposed project of operating the present gravity mill at Toulon on ore and re-equipping the gravity and flotation section to treat the tailing from the present dump.

If a 3' x 6' Marcy Rod Mill, or 3' x 8' ball mill of another make should be installed in the gravity plant in place of the rigid rolls, the plant could have a capacity up to 8 or more tons per hour -35 mesh. The primary rolls would be kept in operation. The thru product of the rolls would be treated on a 35-mesh duplex Callow screen and the rod mill would operate in closed circuit with the Callow screen.

The -35 mesh product- which would actually be about a 48 mesh product- would be pumped thru two 4" Krebs Cyclones, the underflow of which would be the feed of the launder type Deister Machine Company Hydraulic Sizers- one for each table- and the cyclone overflows would go to a large thickener to be prepared for flotation feed.

If the hydraulic sizers and tables are equipped with proper flowmeters and the table decks are rebuilt and riffled scientifically the gravity tailing can be discarded to a waste dump. Middling would be returned to the rod mill and the thickened slime pumped to the re-equipped flotation #1 conditioner in the tailing section.

Inasmuch as the flotation product from the gravity mill could amount to 35-40 tons, it should be stored in a stirred tank and fed into the flotation circuit gradually thruout the 3 flotation shifts if the gravity mill is operated but one or two shifts.

I figure the tailing dump will be treated at the rate of 300-350 tons daily.

Practically the only costs the flotation step will have over the gravity will be that of reagents and acid for the upgrading of the concentrate and elimination of phosphorus.

The estimated cost of flotation reagents is as follows:

Soda Ash	2.00 #	per ton @	$44.00	per ton	-	4.40 cts. per ton
Sodium Silicate	1.75 #	" " @	40.10	" "	-	3.50 " " "
Sodium Cyanide	0.15 #	" " @	22.50	" lb.	-	2.40 " " "
Quebracho	0.30 #	" " @	22.00	" "	-	6.60 " " "
Xanthate Z 5	0.15 #	" " @	35.00	" "	-	5.25 " " "
Cresylic Acid						
¼ Barrett #4	0.15 #	" " @	10.60	" "	-	1.60 " " "
Oleic Acid-Mixed	0.25 #	" " @	15.33	" "	-	3.80
BTO "	0.30 #	" " @	13.33	" "	-	4.00
						31.55 " " "

Other reagents may be used and/or substitnted for some of the above bringing reagent costs up to approximately 35 cts. per ton of solids in the flotation feed which might amount to 100 tons daily.

Estimated milling costs are

Reagents - Flotation alone	$ 0.12
Muriatic acid flot. conc. treat.	0.50
Labor 16 shifts @ 1.75 per hr. ?	0.60
Power 20 KW per ton @ 1.3	0.26
Maintenance	0.15
Amortization - 1 year	0.25
Overhead - Taxes, Insurance, &c	0.22
	$ 2.10

Labor cost will be less if the gravity ore section is operated but two shifts.

The mill could be arranged, however, so that if the present gravity section lacked tonnage for full time it could be put on tailing within an hour. As a matter of fact, I would rathe[illegible]ee the fixed charges divided by 500 tons than by 400. 500 tons daily might crowd our water supply. However, the use of flowmeters on all equipment using water will not only conserve water but definitely add materially to the recovery of scheelite. On completion of improvements outlined for the gravity section, I expect recovery of WO3 to be increased by one pound or more per ton.

List of equipment required to bring the present gravity mill up to date.

1 3x6 Marcy or 3x8 Denver Equipment Rod Mill and 5 tons or rods.- The Rod Mill to replace the present rigid rolls

6 Deister Machine Co. Hydraulic Sizers for launder attachment to take a probable 10 tons per hour -35 mesh deslimed feed from Krebs Cyclone

2 Krebs 4" Cyclones - Equipment Engrs. 41 Sutter St. San Francisco 4, California

1 Duplex Callow Screen equipped with 35 mesh stainless steel or phosphor bronze screen. One extra screen.

3 Brooks Flowmeters 2½-15 GpM) For Hydr Sizers
3 " " 1½-10 ") " " "
7 " " 5-10 " " Table Wash Water
2 " " 10-20 " " Callow Duplex Wash Water
2 " " 1½-5 " " " " Oversize W ash

Order thru Specialty Sales Co. 208 South West Temple, Salt Lake City, Utah. Flowmeters with 1½" flange unions.

On the tables, feed boxes will have to be repaired, or renewed. Wash water boxes, decks and riffling will have to be worked over.

The Callow screens are to replace the Hummer. The Hummer can be used as a trash screen in the tailing plant set-up.

List of main items required to re-equip the tailings mill- gravity and flotation.

2 Duplex Callow Screens - The Galigher Co. Salt Lake City, Utah.

7 Deister Machine Co. Hydraulic Sizers - launder type to size 12-13 tons per hour -35 mesh feed deslimed by 3 Krebs 4" cyclones.

1 Deister Concentrator Co. slime deck table standard size

1 New Deister Machine Co. triplex Plato deck except iron parts which we have on hand.

2 1/2 size Deister Machine Co. single Plato tables,- complete with motor drive 440 V. 60 C. 3 P.

3 Krebs 4" Cyclones to take approximately 17 tons per hr. -35 mesh pulp. Density about 3:1

5 New rubber deck covers for Deister Machine Co. triplex Plato tables.

1 Automatic pH controller and panel. Soda Ash to be fed by Syntron Vibrator into dissolving drum and the Na2CO3 solution to flow from there into pulp conditioner. Order from Specialty Sales Co. 208 South West Temple St. Salt Lake City, Utah.

1 [illegible]sity Controller - Mine & Smelter Supply Co. (Massco-Adams) Denver, Colo.

4 Clarkson Reagent feeders - Equipment Engineers, Inc. 41 Sutter St. San Francisco, California.

2	Flowmeters	10-20	GpM - Callow Screen	Wash Water
2	"	1½-5	" "	Oversize Wash
7	"	5-10	" Table	Wash
4	"	2½-15	" Hydr.	Sizers
6	"	1½-10	" "	"

Laboratory equipment for WO3, P, S&Mo. determinations.

Laboratory 500 Gram Flotation machine and 2x4 laboratory table for research.

Details supplied later if interested in re-equipping laboratory.

The main item in recovering the tailing will be a #6 Cat. Bulldozer or equivalent on the sands. Where the slime is undried in pools, a 1" pump on a float will do. Pumped slime would have to go over the trash screen for the reason that there will be brush and trash off the bottom. The Hummer top deck could be equipped with a 4-mesh screen and mounted on top of the tank bin to eliminate trash. Or it could be installed in the mill to take the mill feed ahead of the Callow screens. Flowmetered water would be added to this.

By replacing the former conveyor feeder a Feedoweight, or similar, can be installed on the conveyor that will show the daily weight of the tailing milled and also the rate of feed carried by the conveyor. This will permit the operator to carry all the screens and ball mill will take. In other words, keep the mill up to maximum capacity.

Good used equipment can be substituted for any of the foregoing items where available.

The acid treatment plant in its simplest form will require

1 5'x5' - 3" redwood stave tank
1 9' I.D. x 3' deep tank, 4" redwood stave. This tank will have to be supplied with 1½" or 2" medium grained silica filtering tile. The outside tile will be shaped to fit the arc of the circle of the inside diameter of the tank.

These tanks will have to be acid-proofed with a soft alphaltum supplied by Standard Oil.

A 3" cheap cast iron centrifugal pump will serve as an agitator. Fittings can be supplied at the mill. A Wilfley will not do as it must have a good gland and suction.

For vacuum on the filter tank, a 4" triplex or rotary will do.

I will probably have to be present when installation of the foregoing acid treatment is made. I will get the address of the company making the filter tile from Nevada-Massachusetts Company.

A Beckman "M" type pH meter, laboratory type, will be required as the use of acid should be controlled to avoid waste.

Also, two drums of commercial Pyridine #2 should be obtained. In the 2nd acid treatment step some scheelite will go into solution. The tungsten will react with the iron surface of the agitation equipment producing the blue ditungsten pentoxide W205 which indicates the apatite has been dissolved. The blue soluble tungsten can be precipitated by adding a gallon or two of #2 commercial Pyridine, thus eliminating a loss of W03. The Pyridine might be ordered direct from The Barrett Company New York or thru American Cynamid Co. If commercial Pyridine #2 is not available, there are a dozen other reagents that will accomplish the same purpose but will cost more. One pound of above Pyridine will percipitate 3-1/3# W03.

Considering the foregoing mill re-equipment as a whole, if it were my problem I would concentrate on the gravity section now and after that end was completed and in satisfactory operation I would then turn to the tailing and flotation section. The tailing would keep. The time involved in rehabilitating and operating the gravity section would permit building up a satisfactory personnel so that the following more extensive job should in the end cost less and eliminate possible mistakes and faulty construction.

Flotation and acid treatment would be next in line,- the first items to start on in the tailing mill. The thickened Krebs Cyclone overflow together with the overflow from the hydraulic sizer launder would constitute a light load for the flotation end and acid treatment steps and, therefore, favorable for breaking in operators and ironing out any defective equipment or flow sheet.

Of course there is much that can be done in the tailing section, which will not require close supervision, that can be done in parallel with work in the gravity section as suitable men become available. However, I favor concentrating on the gravity section.

Re an additional water supply; an excavation down below the sub-surface of the ground water level appears to be the most favorable solution.

The excavation could be carried out by a Cat.-Bulldozer and pump of 400 or more GPM capacity equipped with foot valve and priming water from present supply. Water level is but 10'-12' below ground surface.

The following is a screen test that was made on a 404 gram sample cut from Nightingale tailing composite of February 1955. Sample was first screened wet to wash slime off scheelite particles. The screen products were then air-dried, returned to their proper screens and put on the Tyler screening machine for 10 minutes:

Head Sample		0.14% WO3	% sizes	% WO3 in products
+35 mesh	140.0 gms.	0.08% "	35.3	11.20
-35 " plus 48	44.5 "	0.15% "	11.2	6.75
-48 " " 65	43.0 "	0.17% "	10.8	7.31
-65 " " 100	31.0 "	0.15% "	7.8	4.65
-100 " " 200	54.0 "	0.14%	13.6	7.56
-200 "	85.0 "	0.29% "	21.2	24.65
	397.5		99.9	

Head sample, average by products - 0.156% WO3

From the above it is fairly certain the tailing dump will average over 0.15% WO3.

The foregoing screen products were examined under the ultraviolet light and were, so far as we could see, entirely free,- with the exception of some in the plus 35 mesh fraction which would go to regrind in ball or rod mill to -35 mesh.

It is well to keep in mind that every 0.01% WO3 (0.0001x100) captured by refined milling adds $0.60 to the net value of the ore.

As a rough estimate the foregoing changes will approximate $30,000.00. There are such a multitude of small items involved and lack of experienced and efficient labor that it is practically impossible to make a close estimate of costs

at this time. An experienced mill construction engineer could probably come closer. Time required may run into 3 months, depending on deliveries of new equipment.

Respectfully submitted

GC/c

Consulting Engineer

INVENTORY TOULON WORKS

July 1955

GRAVITY MILL

1 Wemco Table No. 4 Ser. No. 42-3043F
1 Wemco Table No. 4 " " 42-3043B
1 Table Motor GE 1-1/2 HP 220-440 Ser. No. 5578902
1 Table Motor GE 1-1/2 HP 220-440 " " 5618023
5 Plat-O Tables Belt driven
5 Plat-O Self Oiling Heads
1 Magnetic Separator
2 Wheelbarrows for separator rejects
1 12 x 16 Roaster Tube with oil burner
2 12 inch elevators 40 feet
1 8 inch Elevator 30 feet
2 6 inch Elevators 30 feet
1 Gallagher 2 cell Flotation Machine
Motor Float Drive GE 5 HP 220-440 RPM 1735 Ser. No. BR11561
1 16 x 36 Rod Mill (concentrate regrind)
1 20 inch x 8 feet Screw Classifier
Allis-Chalmers Motor Gear Reduction 3 "
1 Small Belt Conveyor conc. dewatering classifier to waste
3 Pairs Allis-ChalmerskRolls 14 x 24
1 Pair Stearns-Rogers Rolls 14 x 24
Roll Drive GE Motor 75 HP, RPM 900, Ser. No. 684351 Extra paper pulley, 1 used - 1 new
1 Krogh 1-1/4" pump Allis Chalmers motor 1-1/2 HP 220-440 RPM 1740 Ser. No. 67794K
1 Table Drive Westinghouse Motor 10 HP, RPM 1140 Ser. No. 2319872
1 Wet Trommell Screen
1 Single Callow Screen
1 10-foot Cone
1 6-cell Sizer
1 Curtis Compressor, Wagner Motor 1/2HP, RPM 1725, Ser. No. IU
1 Ingersoll Rand Motor Pump Ser. No. 2PVH10. Motor 10 HP, 220-440 V. RPM 3470, Ser. No. 5L1677
2 2-ton Chain Blocks
1 3-ton Chain Blocks
1 Braun Pulverizer Type UA, GE Motor 1-1/2 HP, 220-440 V. RPM 1740, Ser. No. 5404140
1 Denver Fire Clay Co. Crusher No. 2, GE Motor 1-1/2 HP, 220-440, RPM 1740, Ser. No. 5431106
1 Watson Generator KW5 Amps. 40 Volt 125 RPM 1140, Type AW8P, No. 32442 Westinghouse Motor 7½ HP, RPM 1725, Ser. No. 2330558
10 GE Magnetic Switches 7½ HP, 440 V., No. GR7006D40H
3 Square D Motor Switches 440 7½ HP Type KXR1
1 GE Starting Compensator Type 1, Form K, 100 HP
1 De-ion Linestarter Size 2 Style 999207A Westinghouse
1 GE Motor 2 HP RPM 1150 Ser. No. 3999489
1 Power Hacksaw

1 Sterling Grinding Stand No. 1
1 8 x 16 Steel Thickener Tank
1 8 x 30 Wood Thickener Tank
1 Toledo Platform Scale Style 501 No. 717583, Cap. 2850
3 Primary Transformers 6600 V. to 440 Volt
2 Lighting Transformers on pole adjacent to substation
1 Tyler Hummer Electric Screen 4' x 5' 2-surface Ser. No. 11542
1 Outside Ore Bin for odd lot ores, together with conveyor belt from crushing plant
3 Clarkson Reagent Feeders mounted near concentrate flotation section
1 Lennox Furnace (for mill equipment with oil burner, electrically driven)
1 P&H Electric Welder, Type H263, 440 V. with leads for same
1 Thor Electric 2-wheel grinder complete with stand for same
1 Acetylene Welding & Cutting Unit complete with Igniter
1 Small Syntron Feeder located near pump sump
1 Bendarari Jiggs 24" Ser. No. 380
1 440 to 110 Volt Transformer located near Tyler screen
1 Oil Storage Tank, tank car type, located near spur track and marked "Rare Metals Corporation".
1 10" x 20" Farrell Jaw Crusher driven by 40 HP GE Motor with multiplex Vbelt drive to crusher
1 Conveyor located above Telsmith secondary crusher approximately 18" x 3'
1 Acme Root Blower with electric motor - Vbelt drive
1 Main Elevator Drive Falk Reducer, motor unit
1 3" Wilfley pump driven by U. S. Electric Motor, 10 HP in main pump sump

Crushing Plant

1 Telsmith Crusher, Westinghouse Motor 25 HP, RPM 865, Ser. No. 2318673
Fairbanks-Morse Induction Motor Starter No. 56284 30 to 40 HP
1 3 foot x 6 foot Pan Conveyor
Rite-Lo Speed Gear Reduction Motor 1-1/2 HP, RPM 60, Ser. No. 4927
1 16 inch 60 feet Conveyor Belt
1 12 inch Elevator Belt 40 ft. centers
1 5/16 Punched Trommel Screen, GE Motor, 10 HP, RPM 870, Ser. No. 4830669
Westinghouse Auto-Start 5 to 10 HP, No. 521035A
1 12 x 20 Fine Ore Bin, wood
1 Pan Conveyor (spare for main ore grizzly) no power

INVENTORY TOULON WORKS

July 1955

TAILINGS PLANT SECTION

5 Plat-O Tables
5 Self-Oiling Heads, Westinghouse Motor 1-1/2 HP, 220-440 RPM 1134 Ser. No. 117EM877 Reeves Drive No Pulley
GE Motor 1-1/2 HP, 220-440 RPM 1125, Ser. No. 5346803 Reeves Drive No pulley
Westinghouse Motor 2 HP, 440 RPM 1140 Ser. No. 1332409 Reeves Drive Pulley
Westinghouse Motor 2 HP, 220-440 RPM 1150 Ser. No. 43237 Reeves Drive Pulley
1 EIMCO Ball Mill Complete with liners and balls and U drive GE Motor 100 HP. RPM 720, Ser. No. 252006 GE AC Drum Switch
2 Pairs Double Callow Screens Incomplete - some parts in gravity plant
1 Roper Gear Pump No. N2172 Westinghouse Motor - 1-1/2 HP, 220-440, RPM 1730 Ser. No. 8106106
1 Wilfley 2" Pump (no motor)
1 U.S. Motor 3 HP, 220-440 RPM 600 Ser. No. 182448
1 Gardner Vertical Air Compressor with motor and motor circulating pump, 4" 150 Lb. Pressure No. 73174
1 5-ton Block on 40 ft. overhead trolley and beam
1 40 ft. x 10 ft. Thickener Tank. U. S. Syncrogear Gear Reduction Motor 2 HP, 220-440 RPM 79 Ser. No. 179989
1 30 foot x 20 foot Fine Bin
1 Oliver Filter Ser. No. 4279R 5' 4" x 4' GE Motor 220-440 1 HP, RPM 1720 Ser. No. 5376959 Reeves Drive
Sterling Motor 1 HP, 220-440 RPM 1800 Ser. No. 51048
6 Gallagher Flotation Cells No. 40
GE Motor 7-1/2 HP, 220-440 RPM 1450 Ser. No. 5774635
GE Motor " " " " " " " GY14441
GE Motor " " " " " " " GY16974
1 Gallagher 4 cell Reagent Feeder
Westinghouse Motor 1/4 HP, 220 RPM 1725 Ser. No. HH
Transformer HP5EVA RPM 440 Volts 110-220 No. 3557
1 Dorr Diaphragm Pump
1 Conditioner Tank 8 x 8 Wood
GE Motor 5 HP 220-440 RPM 1735 Ser. No. BR9947
1 Conditioner Tank 5 x 5 Wood
Allis Chalmers Motor 3 HP, 220-440 RPM 1740 Ser. No. N5063-355
Westinghouse Gear Reduction Motor 1-1/2 HP, 220-440 RPM 258, Ser. No. 17235
2 Dorr Diaphragm Pumps
1 Thickener Tank 4 x 4 Wood
1 Thickener Tank 8 x 12 Wood
Diaphragm Pump
Pacific Gear Reduction Motor 2 HP, RPM 115, Ser. No. 5MR817
2 Reagent Conditioner Tanks 6 x 8 Wood
1 Electric Eye
1 16 inch Roaster S.T. Johnson Oil Burner Type BH-O Ser. No. 117736
Oil Burner Motor 1/6 HP Ser. No. ED
Sterling Gear Reduction Motor 220-440 RPM 30 3 HP Ser. No. 21289
1 Ingersoll Rand Vacuum Pump 10 x 4 Class ER-2, No. 63942 GE Motor 5 HP 440 RPM 1155 Ser. No. 4071453

1 Small Root Blower (no plate)
1 Motor Pump Ingersoll Rand Size 1-1/2 inch. RV5, RPM 3470 Ser. No. 103617
GE Motor Pump 5 HP, 220-440 RPM 3470 Ser. No. HM2439
1 Ingersoll Rand Motor Pump Size 1RVF-2 RPM 3470 No. A38656
GE Motor 2 HP, 220-440 RPM 3470, Ser. No. HS837
2 5 KVA Transformers at tailings plant substation
3 75 KVA GE Transformers - same location
1 Small Roots Blower
Partial barrels of following flotation reagents:
Aero X301,- Cresylic Acid,-Soldim Silicate,-Emulsol X20,-Short Wooden barrel of black reagent, probably BTO,- one oil-fired space heater mounted on two wheels and with electric-driven oil burner.

Gravity Mill Shop

1 1/8" Electric Drill
1 Van Dorn Electric Grinder
1 1/2" Thor Electric Drill
1 3/4" Thor Electric Drill
1 8" T or Electric Saw

General Classification

1 75 HP Electric Motor (spare motor for main drive in gravity plant)
1 HD 14 Allis Chalmers Tractor powered with General Motors Diesel engine equipped with bulldozer.
1 Hough Payloader with cable for same
1 Dodge 4x4 Service Truck equipped with front winch and front boom
New Elevator Buckets, Size AA
1 New movable head for 10 x 20 Farrell Jaw Crusher
1 Stationery Jaw for same
1 New pair Roll Sheels for Stearns-Rogers rolls
1 Ingersoll Rand motor pump on mill circulating water (located near Tyler screen
1 Bank of 4 Kraut Flotation Cells
1 Half-size Wilfley Table less head motion
1 Hevi-Duty Electric Muffle complete with thermocouple and temperature recording scale
Assorted Glass Funnels with metallurgical reagents

Telephone 9-9962

Rpd

Nevtah Oil & Mining Co.
430 Gazette Bldg.
Reno, Nevada

CERTIFICATE OF ASSAY

DEASON & NICHOLS

ASSAYERS & CHEMISTS

C. Ivan Nichols Wm. J. Deason

160 So. West Temple Street
Salt Lake City 1, Utah

July 14, 1955

ASSAY PER TON OF 2000 POUNDS

DESCRIPTION	NO.	GOLD OUNCES	SILVER OUNCES	WET LEAD %	COPPER %	ZINC %	INSOL %	Tungsten WO_3 %	%	%
Nightingale										
# 351								0.16		
352								0.16		
353								0.17		
354								0.48		
355								0.13		
356								0.11		
357								0.10		
358								0.10		
359								0.105		
360								0.14		
361								0.12		
362								0.12		
363								0.08		
364								0.07		
365								0.07		
366								0.07		
367								0.21		
368								0.08		
369								0.07		
370								0.07		
371								0.075		
372										

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C. Ivan Nichols Wm. J. Deason

160 So. West Temple Street

Salt Lake City 1, Utah

Nev-Tah Oil & Mining Co. - 2 -

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Reno, Nevada

July 14, 1955

ASSAY PER TON OF 2000 POUNDS

DESCRIPTION	NO.	GOLD OUNCES	SILVER OUNCES	WET LEAD %	COPPER %	ZINC %	INSOL %	Tungsten %	%	%	%
Nightingale								WO3			
	373							0.07			
	374							0.48			
	375							0.22			
	376							0.08			
Joe Uisco-Star											
	377							0.15			
	378							0.54			
	379							0.79			
	380							0.76			
	381							0.18			
	382							0.11			
	383							0.11			
Delamare-Lot 3											
	384							0.17			
	385							0.33			
	386							0.12			
Lot 7	387							0.30			
Lot 5	388							0.21			
	389							0.34			
Ragged Top-Lot R2											
	390							0.13			

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Salt Lake City 1, Utah

July 14, 1955

Nev-Tah Oil & Mining Company - 3 -

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ASSAY PER TON OF 2000 POUNDS

DESCRIPTION	NO.	GOLD OUNCES	SILVER OUNCES	WET LEAD %	COPPER %	ZINC %	INSOL %	Tungsten WO3	%	%	%
Ragged Top - Lot 3	391							0.13			
Lot 4	392							0.08			
Blair - Lot 1	393							0.08			
	394							0.07			
Blacksmith Tunnell	395							0.20			
	396							0.39			
Prospect Pit	397							0.12			
	398							0.12			
Alpine Lot 2	399							0.18			
	400							0.36			
	401							0.31			
Stormy Day Lot 1	402							0.30			
Lot 2	403							0.33			
Stormy Day	404							0.10			
	405							0.34			
-Tommy Kent Clyde Morrison	406							0.48			

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Salt Lake City 1, Utah

July 14, 1955

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ASSAY PER TON OF 2000 POUNDS

DESCRIPTION	NO.	GOLD OUNCES	SILVER OUNCES	WET LEAD %	COPPER %	ZINC %	INSOL %	Tungsten WO_3 %	%	%	%
Temple	407							0.30			
Chester	408							0.30			
Gail Pier	409							0.42			
Reid & Mayfield	410							0.37			
Graig	411							0.40			
Modoc	412							0.30			
Dennison	413							0.33			
Paradise	414							0.29			
D D EOT	415							0.30			
Composite Ending	416							0.30			
D D Tails	417							0.31			

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