

64

2660 0015

PRELIMINARY OBSERVATIONS
PHALAN PROPERTY
VESTALEE URANIUM & THORIUM CORP.

[illegible]

J. H. WREN & CO.
CONSULTING MINING ENGINEERS
4297 - D - STREET
SACRAMENTO, CALIF.
PHONE HILLCREST 6-0922

FOR ACCOUNT OF :

December 7, 1955

Vestalee Uranium And Thorium Corp.
ATT'N. : Mr. Lee W. Southam, President.

Three days field time, Dec. 1 through 3rd @ \$50 per day	\$150.00
Office mapping	25.00
Pro-rated milage (part of trip charged to another account enroute to field work). 500 miles @ 8¢ per mile.....	40.00
Map printing charge paid by JHW.....	12.65
Telephone calls.....	14.35
	<hr/>
	\$242.00

COMPANY CREDIT:

Overpayment of Nov. 14 bill.....	2.57
Cash received from L. W. Southam 12/5/55.	20.00
	<hr/>
	22.57
Balance now payable.....	\$219.43

MINE MANAGEMENT
OPERATIONAL CONSULTING

MINE EXAMINATIONS
MINING ENGINEERING

(64)

INVESTOR'S REPORTS
EFFICIENCY STUDIES

Item 15

2660 0015

J. H. WREN & CO.
CONSULTING ENGINEERS

CABLE ADDRESS
WRENCO

PHONE HILLCREST 6-0922
4297 D STREET
SACRAMENTO, CALIF.

VESTALEE URANIUM AND THORIUM CORPORATION
REPORT OF THE PHALAN LODGE MINING CLAIM
GROUP, KINSLEY MINING DISTRICT, ELKO
COUNTY, NEVADA.

(see also map)

J. H. WREN & CO.

CONSULTING ENGINEERS

CABLE ADDRESS
WRENCO

PHONE HILLCREST 6-0922
4297 D STREET
SACRAMENTO, CALIF.

November 12, 1955

Mr. Lee W. Southam, President
Vestalee Uranium And Thorium Corporation,
Geneva Finance Building
American Fork, Utah.

Re. : PRELIMINARY OBSERVATIONS REGARDING
THE VESTALEE URANIUM AND THORIUM
CORPORATION'S PHALAN LODGE MINING
CLAIM GROUP, KINSLEY MINING DISTRICT
ELKO COUNTY, NEVADA.

Dear Mr. Southam :

As per your request a preliminary examination was made of the Vestalee Uranium And Thorium Corporation's Phalan lode mining claim group operation in the Kinsley Mining District of Elko County, Nevada.

The following outline covers existing physical conditions, present position, recommendations and estimated economic potential based upon opened mineral areas and available technical information.

LOCATION :

The Phalan Lode Mining Claim Group is located in the Kinsley Mining District of Elko County, Nevada some nine miles South Easterly from Boone Springs, Nevada.

Road accessibility to the property from alternate highway #50 is excellent. Two roads, each about 12 miles in length approach the project from highway #50. In view of the very good access, crude ore or concentrate haulage costs should enjoy, if contracted out, a minimum per ton mile charge.

Weather conditions are such to allow an all year operational schedule.

PHALAN LODGE MINING CLAIM GROUP - 2 - :

PROPERTY EXTENT :

The property consists of six patented lode mining claims; Kerong, Daisy, Deseret Bank #2, World's Fair #2, Rose Towsley and the Marble Point. Herein included is a plan of the above mentioned claims' orientation.

It is suggested to locate several additional claims in the company's name adjoining side and end lines of existing holdings as a matter of protection against anyone locating from a standpoint of nuisance value. This can be done with very little cost.

CAMP SITE :

The Vestalee Corporation has rehabilitated the Phalan Camp and now has adequate housing to take care of immediately scheduled mine and mill operation.

Camp roads have been rehabilitated and are in good state of repair.

EQUIPMENT :

Present mining and surface equipment is adequate to fulfill the near future development and production schedule in the Phalan Shaft area.

Herewith included is an inventory of operating machinery.

GEOLOGY :

Under separate reporting detailed geological conclusions will be presented as a result of the present mapping campaign now in force.

In general limestone is the host rock with mineral occurrence along favorable beddings, influenced by fissure control and associated granitic intrusives. Mineral occurrence has been proven consistent by marketable ore production in several individually separate zones having a Northerly bearing on strike of the limestone beddings.

DEVELOPMENT :

Five areas were inspected during the writer's recent visit to the property. Following please find a recommended alignment for each area as well as present existing position.

#1 AREA (Phalan Shaft):

Major rehabilitation has been accomplished by the present management. A surface plant has been set up and is kept in orderly condition by supervision. The surface plant consists of compressor, installation and housing, shop building, hoisthouse, headframe and production hoisting facilities. The Phalan Shaft has been completely reconditioned and is in good state of repair. A production storage ore bin has been built and connected to shaft haulage.

DEVELOPMENT :

#1 AREA. (Phalan Shaft), Continuation :

- a). Several hundred feet of old exploration and development exists on the 100' level of this area. Scheelite and copper mineralization is in evidence in the old workings. During the period that the original development was driven scheelite was a non-marketable mineral. The exploration aims of the original operators, reportedly, were to develop copper and gold.

Long hole drilling of this level's favorable ground as designated by geological mapping conclusions, no doubt, will bring in additional ore to swell out the known ore zone's available production tonnage.

- b). A shaft collar level has been run Northerly from the shop building where it is reported some 200 tons of 1% scheelite ore has been extracted from the entry and a winze sunk about 30' below the level. There is still excellent grade of scheelite ore in the winze bottom with a width of about 7'.

In-order-to build up a milling inventory ahead of mill construction, it may be advisable to sink this winze another 20 feet and then strip out economic W O₃ tonnage which can be trammed directly to the mine production bin.

There is a good possibility that this zone will tie into 87' level mineral occurrence and the lower portion of the ore shoot can be mined from the lower level. However, by immediately producing from the winze and then running on ore to the Northerly and Southerly shoot and immediate inventory value will be built up to offset mill construction costs. Without any copper calculation 20 tons per day of 1% W O₃ rock from this zone would produce a gross inventory addition of \$1,260.00 @ \$63 per unit. 80% recovery which should be the lowest possible with both gravity and flotation in the mill would amount to \$1,008.00 per day being built up in recoverable values. If The metallurgist, Mr. Rosenhan can do 90% in recovery the figure will be \$1,134.00 from this one zone alone, per day.

- c). The 87' level has been entirely run by Vestalee Uranium and Thorium Corporation as well as the shaft rehabilitation and operating equipment installation. This level is serviced by an ore pocket for ore storage to be loaded out for hoisting. Some 173' of exploration and development entry has been driven as well as sectionalized steel long holes have been drilled on exploration bearings.

A plan of this level is herewith included. This plan shows the location of some 30' of economic grade ore with a minimum 6' average width that has been opened up to the face in the Northerly drift, carrying Ag, Mo, Cu and W O₃ values. Ore was still continuing in the face during the mapping 11/3/55. Three sets of conservative samples a), face, 1/2 distance from chute, and the chute back carried in excess of 40 gross

PHALAN LODGE MINING CLAIM GROUP - 4 - :

DEVELOPMENT :

#1 AREA (Phalan Shaft). Section "c)" Continuation:

value, per ton produced.

- d). Another mineralized zone has been designated on the 87' level by sectionalized steel long hole exploration out of the Westerly fork of the level. Some 12' of mineralized zone showing Cu, Ag, and W O3 values was drilled across.

e). Recommendations :

It is suggested to drive the Northerly development on the ore strike. At the present time for each vertical foot on the basis of the horizontal x-section of area proven 18 tons of ore is represented. The gross value of that tonnage represents some \$720. Consequently ore reserve inventory will be raised to some considerable extent by further drifting on the mineral occurrence.

It is suggested to raise above the production chute in the opened ore occurrence. This will produce economic grade tonnage while the block is being developed above the 87' level. For example: By driving the drift 30 additional feet Northerly on the ore and raising 50' up the dip the horizontal cross section would be doubled. The raise would projectwise account for about 1800 tons of ore or \$72,000 gross value of the cubics on the basis of the zone's opened ore character.

It is suggested to drive to the proven mineral in the exploration hole out of the Westerly fork of the 87' level. by development of this zone additional milling reserves can be produced.

The 100' level of the Phalan Shaft holds excellent mineral occurrence potential. As soon as convenient, after the geological maps have been compiled and sections made, some very favorable new ore possibilities will be present.

It is suggested to stockpile all broken ore production ahead of the proposed mill's location. By placing in the mine bin and gravity loading out trucks a mill stockpile can be ramped up to furnish plant capacity when the unit commences operation. Added to this tonnage will be the ore that has already been stockpiled on the Phalan Shaft dump.

It is suggested to "grab" sample each car from every round in both the 87' level raise and the Northerly drift advance. By taking one handfull at random out of every car loaded out of the round and labeling it as a sample an accurate assay map can be compiled for future production reference and economic estimating of the block's value.

PHALAN LODGE MINING CLAIM GROUP - 5 - :

DEVELOPMENT . Continuation :

#2 AREA :

- a). Number two area's shallow shaft, near the camp site, and Northerly drifting has proven the occurrence of excellent grade scheelite ore. The occurrence is in one of the strongest North-South mineral breaks on the property. The zone has already produced a limited tonnage of plus 1% W O3 ore.

b). RECOMMENDATIONS :

Drive Northerly on the mineral occurrence. In view of potential widths this area could deliver a volume filler product for treatment plant capacity. As little as .50 % W O3 in volume from this location would be highly profitable production.

Collar a long exploration hole on the Easterly side of the North drift in such manner to drill across the very good scheelite showing on the West rib. Angle the hole to reach out some 25' ahead of the present face. It is suspected that economic grade ore will swell at certain points into pods of economic widths.

Some surface holes can be drilled along the mineralized zone's strike. By setting up to the side of the break in the lower contours, drilling Westerly at about a 45° downward angle with use of a water swivel to flush the hole out, much area can be charted in advance of the underground development.

#3 AREA :

- a). Number three area is only partly opened up. The work has been done entirely by the Vestalee Company. Some minor copper-scheelite tonnage has been produced out of an open pit which carried good mineral values.

b). RECOMMENDATIONS :

It is suggested to move overburden off of contacts of limestone-intrusives with the bulldozer in vicinity of #3 area. Favorable areas can be spotted at night with use of an ultra-violet lamp. Strip zones will be designated by scheelite bearing float. Contacts should be exposed and overburden stripped over a 50' width on the limestone side.

PHALAN LODGE MINING CLAIM GROUP : 6 :

DEVELOPMENT, Continuation :

#4 AREA :

- a). The number four area is opened up by a drift some 160' in length with one raise and a short winze which has produced direct shipment grade crude oxide Cu-Ag ore. There is also a shallow shaft near the drift portal which has produced shipment grade ore.
- b). Sulfide ore commences at a point six feet from the end of the drift. A sample of this ore taken 11/2/55 showed a gross value of \$28.17 per ton in Ag, Cu and W O3 values.

c). RECOMMENDATIONS :

Sulfide ore near the drift face indicate that the primary mineral zone has been encountered. In view of the assay value it is suggested to drive on the strike of the sulfide ore.

This particular zone is quite adaptable for " Split Check Block Leasing". In view of the company's scheduled development and production in the #1 and #2 areas which will tie up the present machinery inventory, a team of leasors with their own equipment could expedite the exploration and development of the #4 zone. The usual procedure is for the "leasors", who are actually block leasees, to produce ore from a designated area at 100% their own expense. The ore is delivered to the mill bin. The company mills the ore at its own expense and the gross returns are divided equally.

#5 AREA :

- a). Number five area has produced direct shipment grade crude Cu-Ag ore. Very probably as the drifting progresses into the North sulfide ore will be encountered. Very definitely sulfide ore will be encountered at a greater downward course on the mineral occurrence. A character sample of direct shipment oxide crude showed a gross value of \$25.81 per ton in form of Au, Ag and Cu values.

b). RECOMMENDATIONS :

This zone is another likely "Block Leasor Area". Leasors could make direct crude ore shipments to either McGill or the Garfield, Utah copper smelter with a split check payment on the net-to-the-mine-bin returns. The company would benefit by the leasors activities by means of having the area opened up without cost and show a slight profit as well. The leasors incentive would be that if they kept their shipment ore clean and produced any reasonable volume, their income would be considerably better than wages.

DEVELOPMENT SUMMARY :

Several additional mineralized and prospected zones on the Vestalee Uranium And Thorium Corporation's Phalan holdings are in evidence. However, the writer did not scrutinize those areas.

Generally the series of Northerly-Southerly bearing mineralized breaks have all produced economic grade ore. The croppings are highly leached and practically all of the surface development has been in oxide minerals. Some justification is present relative to projecting the 87' level sulfide ore occurrence an additional 200' downward by the primary ore showing in the #4 area adit. That sulfide ore is over 200' vertically lower than the 87' level in elevation and the mineral trend is still quite strong downward. Consequently, it is safe to forecast that the Phalan Area's mineral trend will go at least 200' deeper and possibly much more depth is expectable.

As the various N-S mineralized zones are drifted out on a Northerly bearing the possibility exists whereby particularly enriched zones will be encountered at the intersections of E-W, N-S breaks.

The proposed treatment plant's capacity being some 25 tons should present no problem regarding available mill rock. Four zones are now opened from which production tonnage is available. The Phalan area's Northerly strike should furnish the initial milling tonnage until other blocks have been silled off for production.

Aspects of economic outlook, however, is dependent upon the construction of an efficient treatment plant in-order-to capitalize upon the full potential of the property. The sulfide ores are complex having Au, Ag, Pb, Cu, Mo and W O3 values. Mr. Rosenhan's metallurgy which he reports is favorably worked out, is the translation "key" regarding concentration, product separation and marketing to advantage.

MILLING :

Mr. Al A. Rosenhan, Metallurgist for the Vestalee Uranium And Thorium Corporation under separate heading herein has delivered a metallurgical report concerning the technical phases of the treatment, mill construction and operating economics.

Settlement sheets of crude ore marketed illustrate the vital requirement of a company owned treatment plant. It will be noted that scheelite was paid for at a reduced price from the \$63 market, custom milling charges were added, and aside from W O3 no other contained elements were paid for. The freight alone to a custom plant would pay for the company milling charges with plant amortization added.

EXPECTABLE ECONOMICS :

NOTE :

The following operational cost and income breakdown is presented as a possible example. Subsequently, a complete and detailed evaluation of available tonnage, grade, mill heads and mill recovery will be issued. This report can be compiled as soon as the presently in force mapping and assay charting campaign has been finished.

According to some of Mr. Rosenhan's mill test work findings, the following mill recovery is based upon a 90% recovery ratio. The subsequent economic report will qualify estimated recovery ratio on the basis of factual, itemized technical conclusions.

In-order-to arrive at a gross value per ton figure for the following example, the average grade of Vestalee Corporation assays, shipments, etc. would gross at \$50 per ton or better. For that reason the example of possible expectable economics has been set at a \$50 per ton level.

The milling capacity is calculated at 25 tons per day. At the present time more than 25 tons would not allow complete insurance in view of production development now available against capital risk hazard. However, at some subsequent date mill capacity may be enlarged at will if the first milling phase is so aligned. The crushing equipment for instance should be of more capacity than the presently proposed 25 ton plant will call for. Acquirement and installation costs for greater than a 25 ton crushing capacity would not be very much more, if any, than a straight 25 ton setup.

As added insurance against capital risk, a milling plant constructed at the Phalan Property of the Vestalee Corporation would have additional available ore tonnage than that at the company's holdings. A number of nearby mines cannot operate as a result of no treatment facilities being available without prohibitive haulage costs to custom markets. Their position is exactly the same as Vestalee's at present. An economic grade of ore is represented in mine faces but by hauling, treatment charges, penalties, and receipt of only a portion of the quoted market prices a profit cannot be made, without concentration and separation before marketing.

The feeding of a 25 ton plant in regard to ore availability at the property seems quite simple in view of the number of ore sources. For example: One five foot wide by 7.5' high by 5' advance in sections like the present Northerly 87' level heading will produce 17.04 tons. Two such rounds per day would supply full mill capacity requirements. When the area is silled off for stoping two miners can produce the full milling complement out of a shrink section.

PHALAN LODGE MINING CLAIM GROUP - 9 - :

EXPECTABLE ECONOMICS : Continuation.

Underground estimated cost and recovery breakdown.

Example based upon \$50 gross value of recoverable ore minus mill loss and assumed marketable minerals treated on a 25 tons per day schedule. Direct costs do not include amortization of capital investment or concentrate marketing charges. The costs do include operating insurance and operating overhead.

Mining cost estimate and delivery to mill coarse bin.....	\$ 7.50	per ton.
Mr. Rosenhan's estimated milling cost.....	4.95	" "
Total mining and milling cost.....	\$12.45	" "
Total value in mill head.....	\$1,250.00	Per day.
Less 10% mill loss.....	1,125.00	" "
Mining and milling costs.....	311.25	" "
Operational net	813.75	" "
Operational net potential before taxes, amortization and marketing of concentrates.....	\$21,971.25	27 day month.

Expectable net income from open pit areas will be greater than the above in view of lower mining costs involved.

Upon the assumption of a 25% deduction factor for amortization, taxes and concentrate marketing costs the above \$21,971.25 would result in an overall operational net per 27 day month

of..... \$16,478.32

In the event that mill capacity is ever increased by justification brought about through additional ore reserve being developed mining charges will be reduced by less overhead reflection per individual production ton.

Phalan Lode Mining Claim Group : 10 - :

REQUIRED CAPITAL INVESTMENT :

In order-to carry out the steps necessary prior to the possible income listed in "EXPECTABLE ECONOMICS" the following movements are required:

UNDERGROUND

#1 Area's Collar Level Winze production.

#1 Area's 87' Level 30' additional drift footage, 50' raise in ore above ore loading chute. Hookup and drifting out ore cublics. Silling off and stoping preparation in the North Drift ore strike.

#2 Area's rehabilitation, drifting on ore and exploration drilling.

#3 Area's opening up and ore stockpiling.

#4 Area's Northerly drifting on the sulfide zone.

#5 Area's block leasing setup.

GENERAL :

One additional portable compressor will be required.

Misc. tools and equipment to back up the production aims.

Cost estimated for the two above items.... \$10,000.00

MILL CONSTRUCTION :

25 ton capacity treatment plant Const.,
machinery procurement, etc..... 30,000.00

75 K W diesel-electric plant..... 4,000.00

WATER :

Drilling well, pipe line to mill and camp
including pumping equipment..... 3,000.00

\$47,000.00

The above required capital figure seems reasonable in view of the fact that it may be possible to recover the invested capital requirement within 90 days after milling commences. Without the plant and above facilities selective mining of shipment grade ore from which only part of the minerals are paid for would result in a dangerously low margin for the operation to work on.

A respectable portion of the above capital would be on inventory in form of stockpile prior to starting the mill.

PHALAN LODGE MINING CLAIM GROUP - 11 - 1

SUMMARY :

Construction of a company owned treatment plant seems to be mandatory in-order-to realize an efficient economic margin.

The herein listed additional development work will produce inventory ore while the mill is being built to offset new capital investment.

Mr. Rosenhan's metallurgy will be the "key" to milling recovery of the various marketable minerals in separated form.

A completely detailed economic outlook will be possible to compile after the assay maps have been made. Then positive tons, probable tons and possible tonnage may be coordinated with Mr. Rosenhan's metallurgical potential. Thus an accurate and complete income picture will be possible to render.

Added to the assets at the Phalan Claim Group are the available tons of direct shipping grade ore at the company's Mispah properties.

Very truly yours,
J. H. WREN & COMPANY

BY


James H. Wren.

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METALLURGY

750 EAST 6400 SOUTH
MIDVALE, UTAH

ARMIN A. ROSENHAN

URANIUM
MINING and REFINING

PHONE AM 6-5439
Sept 11, 1955

MILL TEST REPORT

Test Sample For Morris & Sullivan (Yona Lee Mine) 40 lbs.

Assay Chemical ☒

Assay Radiometric ☐

URANIUM		LEAD		SILVER	
VANADIUM		TUNGSTEN	.60	NICKEL	
LIME		INSOLUBLE		ZINC	
IRON		CARBON		PLATINUM	
COPPER	2%	THORIUM		POLYDORAN	91
GOLD		RARE EARTHS			

REMARKS —

Heads

Tailings

Products

A general sample—40 lbs. of siliceous ore containing copper, silver, iron, gold, etc., Tungsten .60, and polydoran .91; was submitted to me for mill test and general amenability to processing. 3000 grams of the ore was selected from the crushed and quartered 40 lbs. and ground to 100 mesh and subjected to a chemical wash to remove soluble elements detrimental to further processing. 200 lbs. of soluble material was removed from a given ton of ore by this method. A micrograph of this waste material showed no appreciable loss of valuable elements. Assay figures as follows: Tungsten .60 to .65—silver .30 to .35—copper .1 to .15 — polydoran none. 50 lbs. of polydoran (P32) was recovered by simple flotation, chemical and oil reagents. 40 lbs. of copper concentrate was recovered by reagent flotation. 800 lbs. of clean siliceous ore containing 1.45 tungsten was recovered after chemical removal of waste and dewatering of pulp. Fine siliceous showed no readily recoverable values, and few actual values.

Chgs.

7/11/53

Harris & Southam (Vents Lee Mine)

The raw ore showed a content of 12 lbs. of tungsten scheelite per ton, of 2000 lbs. The assay upgrade weighed 800 lbs., containing 1.45% tungsten or 29 lbs. of scheelite before tailing for further concentration. Without treatment this ore was worth only \$23.70 per ton; the value was increased to \$46.00 per ton, by mill treatment. Actual recovery value showed an increase in value per ton of \$22.30.

This was a general mill test--no attempt was made to incorporate any treatment not commercially planned for application to a large or small mill flow sheet.

ARTHUR J. ROBERTSON

ARM; JX

cc

P.S. Milling costs, including chemicals and reagents will be about \$5.00 per ton.

VESTALEE URANIUM AND THORIUM CORPORATION

ASSAY CHEMICAL

150 LBS.

Mr. Southam:

By way of a report on composite samples of ore from your Vestalee property submitted to me, and mill tested for amenability to flotation and tabling; with a view to separating for market, the minerals known as copper sulphide--copper carbonate, tungsten (as sheelite), and molybdenum. Also such gold and silver, as may appear in the ores.

Spectrographic analysis showed a considerable portion of the ores (21%) was composed of soluble elements. These elements have no market value, as there is insufficient quantity of any one kind to warrant treatment for saving them. These solubles were also detrimental to flotation and tabling. As a result of research work on these ores, acid treatment was resorted to to clean and condition the ores for flotation and tabling. It was proved undesirable to crush ores and table to recover coarse sheelite. By so doing, valuable, and recoverable values in copper carbonate were lost; as were considerable values in molybdenum, which floats easily. Also with a view to simplifying the circuit, and using a minimum of equipment, the following

II

type of circuit was resorted to and excellent results obtained therefrom.

THUS: as follows: The ores are crushed and screened, preferably to 1/8 mesh, by conventional mill methods, and stored in bin as ball mill feed. As the values in this ore are generally not massive, but fine grained, fine grinding 150-mesh preferred, is necessary to release the granules of mineral--acid treatment also helps release minerals entrained or partly entrained by solubles. The resulting slurry is piped or laundered to the first agitator tank as a preferred density of 50-50 and acid added, not to exceed 5% by weight of the ore. Sulphide reaction with acid creates gas bubbles which act as a flotation reagent and as a result much of the molybdenum and copper sulphides come to the surface as a thick scum. This scum can be immediately retrieved as by hand or mechanical means and the balance of the slurry thinned to 30-70 density and circulated through a series of flotation cells using conventional reagents, and recovered by conventional means. Molybdenum and copper may be retrieved together and then cleaned or retrieved separately by selective reagents.

Tungsten (as Sheelite) is recovered at the end of the circuit. The clean ore will now table very nicely as fine as 300 mesh settling readily on the tables. The particular type of ore presented does not seem very favorable for flotation of sheelite. Bureau of Mines tests on similar ores did not give good results.

Acid waste liquor from this operation can be now precipitated for recovery of copper carbonate solubles and also silver and possible gold solubles, These are air dried to a smelter product.

III

Assays on heads, tails, and concentrates are shown on front page in spaces provided. Tabling at the end of the circuit gives a high recovery total including fine slimes. I had in mind a high grade ore, 40% to 55% sheelite for conditioning to 60% plus, in a separate conditioning operation.

750 EAST 6400 SOUTH
MIDVALE, UTAH

ARMIN A. ROSENHAN

URANIUM
MINING and REFINING

PHONE AM 6-5439

MILL TEST REPORT

Test Sample For Vesta Lee Uranium and Thorium Corporation

150lbs.

Assay Chemical ☐

Assay Radiometric ☐

URANIUM		LEAD		SILVER	
VANADIUM		TUNGSTEN		NICKEL	
LIME		INSOLUBLE		ZINC	
IRON		CARBON		PLATINUM	
COPPER		THORIUM			
GOLD		RARE EARTHS			

REMARKS —

Heads

Tailings

Products

ECONOMICS

6 samples tungsten	average	.38 @ \$1.70	\$10.20
6 samples copper	average	1.285 @ .35	9.50
6 samples molybdenum	average	.12 @ .32 base	.64
6 samples silver	average	2.68 g. @ .90	2.00
5 samples lead	average	.18 @ .13	.39

PROBABLE VALUE OF ORE

\$22.73

ALL THE ABOVE FIGURES ARE BASE PRICE, SALT LAKE SMELTER
SETTLEMENT.

Chgs. _____

750 EAST 6400 SOUTH
MIDVALE, UTAH

ARMIN A. ROSENHAN

URANIUM
MINING and REFINING

PHONE AM 6-5439

MILL TEST REPORT

Test Sample For Vest Lee Uranium and Thorium Corporation 150lbs.

Assay Chemical ☐

Assay Radiometric ☐

URANIUM		LEAD		SILVER	
VANADIUM		TUNGSTEN		NICKEL	
LIME		INSOLUBLE		ZINC	
IRON		CARBON		PLATINUM	
COPPER		THORIUM			
GOLD		RARE EARTHS			

REMARKS —

Heads

Tailings

Products

C O S T S P E R T O N

Crushing to and screening to 1/8 mesh	.90¢
Ball Mill Maximum	.75¢
Acid	\$1.00
Reagents	.80¢
Precipitating chemicals	\$1.50

T O T A L \$4.95

COSTS VARY AS TO READINESS OF ORE

750 EAST 6400 SOUTH
MIDVALE, UTAH

ARMIN A. ROSENHAN
URANIUM
MINING and REFINING

PHONE AM 6-5439

MILL TEST REPORT

Test Sample For Vesta Lee Uranium and Thorium Corporation

150 lbs.

Assay Chemical ☐

Assay Radiometric ☐

URANIUM		LEAD		SILVER	
VANADIUM		TUNGSTEN		NICKEL	
LIME		INSOLUBLE		ZINC	
IRON		CARBON		PLATINUM	
COPPER		THORIUM			
GOLD		RARE EARTHS			

REMARKS —

Heads

Tailings

Products

MILL COSTS

It is generally conceded that an average mill costs about \$1,000.00 per through ton. However, by purchasing good used materials, a 20 ton mill could be built for \$750.00 per through ton.

Each engineering company has a somewhat different way of figuring. I would say, between \$15,000.00 and \$25,000.00.

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SAMPLE & SHIPMENT DATA

PURCHASE STATEMENT, Tungsten Ore Concentrate

June 30, 1955

Vestaleo Uranium & Thorium Corp., Carson, Nevada 89101, American Fork,

Utah Seller

Material 273 lbs. 1 Producer's Lot or Delivery Number.

Assay: Tungstic Oxide 33.78 % WO₃ \$ 1.205 Penalty for under 60% WO₃

Phosphorous 0.05 % P 1.25 P. Penalty for Excess

Sulphur % S S " " "

Copper 0.1 % Cu Cu " " "

Lead 23 % Pb 3.25 Pb " " "

Zinc % Zn Zn " " "

% " " "

\$ 1.605 Total Deductions per Unit

Pay per Unit \$ 10.00, less \$ 1.605 Net pay per Unit

Total Units, WO₃ 1.311 @ \$ 30.105 \$ 129.12

Charges: Freight \$ 1.00 Screening \$ 1.00

Upgrading \$ 10.00 Sampling \$ 3.30 Assaying \$ 7.00 \$ 30.30

Net to Seller \$ 397.01

Advance Payment: 10% GROSS ROYALTY TO SELLER VARIATION \$12.70

To Seller: Bal. Provisional Final Chk. No. 6919 \$ 12.70

Acceptance of Final Settlement Payment closes this Sales-Purchase Transaction. Seller Warrants unencumbered ownership and right to assign, sell and transfer to the undersigned Consignee and/or Buyer.

Vestaleo Uranium & Thorium Corp.

Owner or Authorized Agent, Seller

C. W. JONES

Consignee and/or Buyer

NOTICE: On acceptance of final Settlement, please sign and return one copy to Consignee and/or Buyer.

Assay Report

Union Assay Office, Inc.
Salt Lake City 10, Utah

To: Minerals Engineering Lot 63

Con Serial 2013

August 29, 1955

Vestalee Lot 1 8-25-55

Lead Wet on Ore 2.60
Copper per Cent 1.02
Tungstic Oxide Per Cent 38.80
Per Cent Mo 0.159

$250 \# @ 38.80 = 4.8500 \text{ Units} @ \$45.00 \text{ per Unit} = \$ 218.25$

Remarks " Invoice "

Charges \$ 12.50

Agent for American Zinc Company of Tennessee
Salt Lake City, Utah _____

Salt Lake City, Utah

Ors Tungsten Crude C.M.R. Co. Lot No. 41 Shippers Lot No. _____ Class _____

	Ozs. Au.	Ozs. Ag.	% Pb.	% Zn.	% Fe.	% Insol.	% WO ₃	%	%	%	%
Assays											
C.M.R. Co.											
Shipper											
Unpire											
Gross											
Settlement							38				

Values Per Ton				Treatment	
Gold	●			Base	6 000
Silver	●				
Lead	●				
Zinc	●				
WO ₃	●	83.9%	35.00	11 159	
Gross Metal Payment				11 159	
Less Treatment				6 000	
Net Value Per Ton				5 159	Net Treatment
					6 000

Initial	Car Number	Weight		Per Ton		
			43.578 Dry Tons @ 5.159			224 82
			Freight @ 2.19		109 50	
			Fed. Freight Tax @ 3%		3 29	
WP	9571	90,140	Sampling		10 00	
Total Wet Weight		90,140				
3.31 % Moisture						
Dry Weight		87,156				
					Total Deductions	122 79
					Net Proceeds	102 03

KE/rb

GETCHELL MINE INC.

Red House, Nevada

Custom Ore Settlement Sheet

Received of: Vestalee Uranium & Thorium Corp.
Geneva Finance Bldg.
American Fork, Utah

Date Rec'd 9-1-55

Shipper's Mark

Lot No.

By GETCHELL MINE INC.

1	Trucks weighing	30,540	Gross Lbs.
1.0	% Moisture	14,860	Tare Lbs.
0.64	% WO ₃	15,680	Net Wet Lbs.
7.7615	Net Dry Tons	157	Moisture Lbs.
4.967	Contained STU WO ₃	15,523	Net Dry Lbs.

PAYMENT:

Pay for 80% contained STU WO₃, 3.974 at \$ 46.00 @ * \$ 182.80

LESS CHARGES:

Treatment of 7.7615 Net Dry Tons at \$ 6.00 @ * \$ 46.57
Sampling & Assaying \$ 10.00
\$

TOTAL

\$ 56.57

NET PROCEEDS \$ 126.23

* (equals)

Daily Assay Report.

DATE September 6, 1955

ASSAYER

LABORATORY CERTIFICATE

Keldon

research corporation

BOX 2555 TERMINAL ANNEX — LOS ANGELES 54, CALIFORNIA

LABORATORY: 2565 BELGRAVE AVE., HUNTINGTON PARK, CAL.

Date **Aug. 30, 1955**

Lab. No. **8942-1**
Reference

Submitted By **Mr. Armin A. Rosenhan**
750 E. 6100 South
Midvale, Utah

Markings Sulphuric Acid Product

ELEMENT	NOT LESS THAN	NOT MORE THAN	ELEMENT	NOT LESS THAN	NOT MORE THAN
Silicon	Major Constituent		Barium	%	%
Aluminum	1.0	10.0	Columbium		
Magnesium	0.5	5.0	Nickel	0.01	0.1
Iron	0.5	5.0	Beryllium		
Calcium	0.5	5.0	Molybdenum		
Sodium	0.5	5.0	Vanadium		
Potassium	0.1	1.0	Yttrium	0.003	0.03
Tellurium			Cadmium		
Gold			Copper	0.01	0.1
Boron			Silver	0.0003	0.003
Mercury			Tantalum		
Phosphorus			Zinc	0.005	0.05
Lithium			Titanium	0.05	0.5
Thallium			Zirconium		
Lead		0.05	Palladium		
Tin			Rhodium		
Chromium			Ruthenium		
Arsenic			Cobalt		
Antimony			Lanthanum		
Manganese	0.01	0.1	Strontium		
Gallium			Rubidium		
Germanium			Tungsten	0.005	0.05
Platinum			Indium		
Bismuth	0.001	0.01	Uranium		

1. Percentage ranges represent the probable concentrations of the elements found to be present.
2. Fire assay is the method of choice for Gold and Platinum group elements; general spectrographic techniques are limited to ore concentrations greater than one or two ounces per ton.
3. Spectrochemical analysis is only one of several factors required for the complete evaluation of an ore sample; it should be regarded as a "Coarse Screen" used to estimate the advisability of additional study. Economic and mineralogical considerations are also necessary for a true appraisal of the specimen.
4. Special attention:

Respectfully submitted,

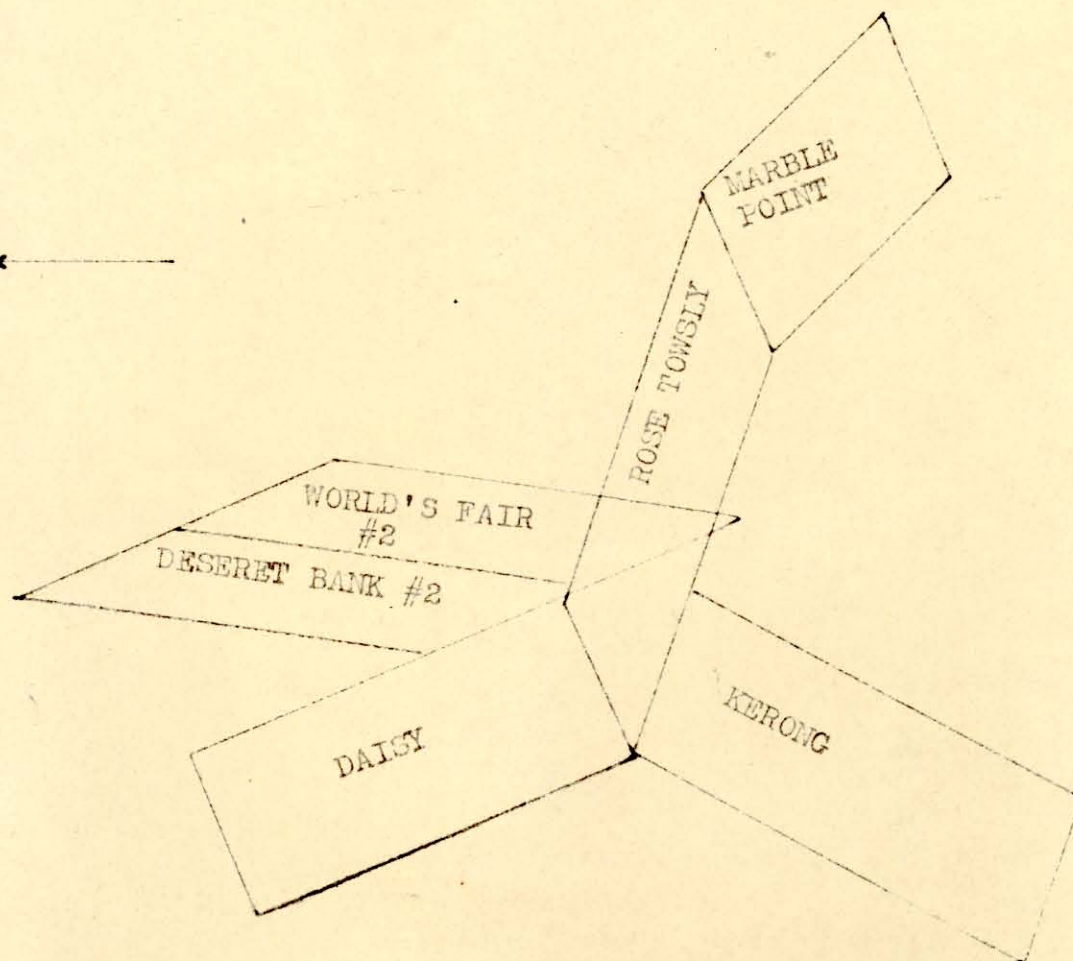
J. H. WREN & CO.
CONSULTING ENGINEERS

CABLE ADDRESS
WRENCO

PHONE HILLCREST 6-0922
4297 D STREET
SACRAMENTO, CALIF.

MAPS

Z ←



VESTALEE URANIUM & THORIUM CORP.

MINING CLAIM PLAN

KINSLEY MINING DISTRICT
ELKO COUNTY, NEVADA

Exploration hole.
12' of Cu, Mo,
W O₃ mineralization.

Drift face 11/3/55
Full face economic
grade ore.

Commencement of economic
grade ore.



87' Level Phalan Shaft



VESTALEE URANIUM & THORIUM CORP
PHALAN SHAFT

87' LEVEL PLAN
SCALE : 1" = 20'
11/4/55
J. H. W.

Cu, Mo, W O₃ values starting
6' from end of drift. (SULFIDES)

28.5' deep winze
Ag, Cu crude ore oxides
produced and sold

20' raise Ag, Cu
oxides produced.

NOTE:

Total length of this entry is minerali
and has produced direct smelting ore.
Sulfide zone has been encountered
6' back of drift end with copper, Mo,
and W O₃ values. The drift should be
continued on the sulfide ore.



27' deep shaft - Ag, Cu oxide ore
produced here and sold direct to
smelter.

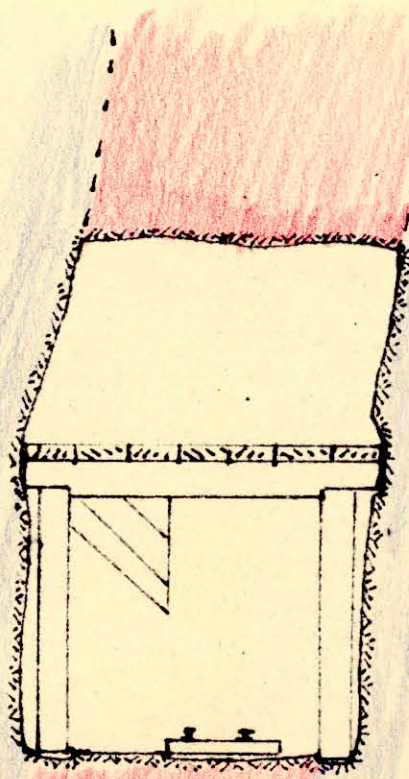
VESTALEE URANIUM & THORIUM CORP.
#4 AREA

PLAN

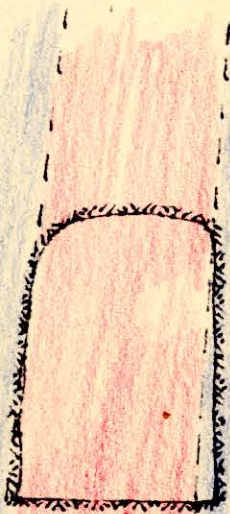
SCALE : 1" = 20'.

11/4/55.

J. H. B.



E. - W. X-SECTION AT
ORE LOADING CHUTE.



N. DRIFT FACE 11/3/55.

VESTALEE URANIUM & THORIUM CORP.
THALON SHAFT
NORTH DRIFT X-SECTIONS

DIAGRAMATIC

SCALE : 1" = 5' .

11/4/55

J. H. W.

R. R. CASTO

P. M. CRISMON

ORRIN FISHER

HAROLD E. GULL

PHONE 3-7417

CRISMON & NICHOLS

ASSAYERS AND CHEMISTS

229-231 SOUTH WEST TEMPLE STREET

REPORT OF ASSAY

Vestalee Uranium & Thorium Corp.

SALT LAKE CITY, UTAH

Oct. 5, 1955

WE HAVE ASSAYED YOUR three SAMPLES AND FIND them

TO CONTAIN AS FOLLOWS:

DESCRIPTION	NO.	OZS. GOLD PER TON	OZS. SILVER PER TON	PER CENT LEAD	PER CENT COPPER	PER CENT ZINC	INSOL. PER CENT	PER CENT IRON	PER CENT Cobalt	VALUE OF GOLD PER TON
	1	Trace	2.00		4.40				0.04	
	2	Trace	8.10		12.05					
	3	Trace	Trace							
									Molybdenum oxide (MoO_3)	
									0.37	

REMARKS:

CHARGES \$

14.50

CRISMON & NICHOLS

BY

R. R. Casto

MINE MANAGEMENT
OPERATIONAL CONSULTING

MINE EXAMINATIONS
MINING ENGINEERING

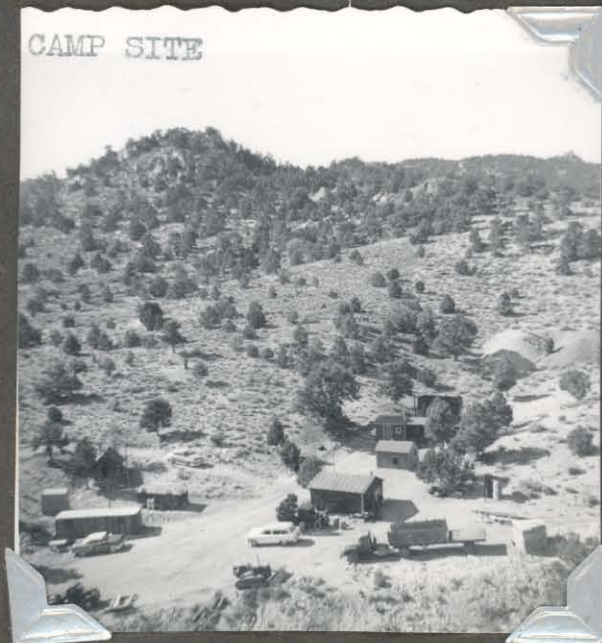
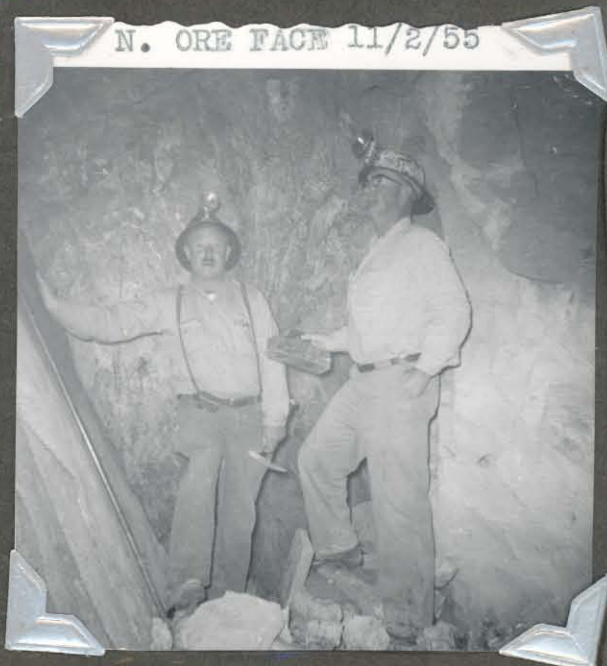
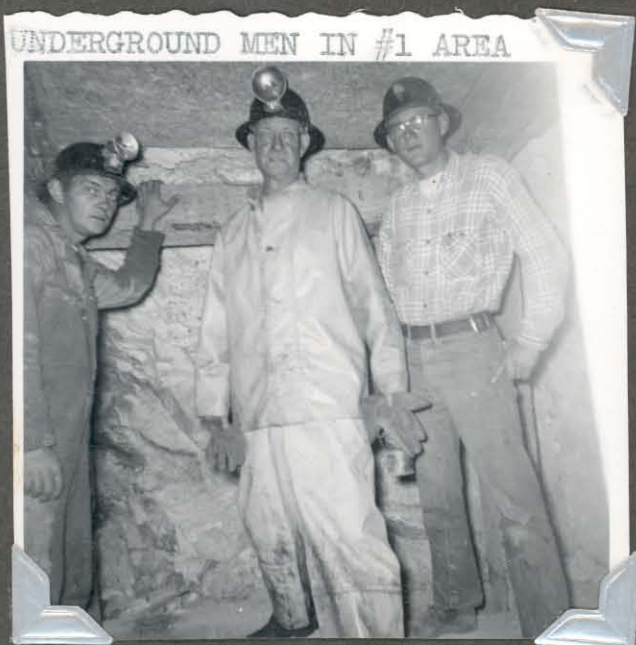
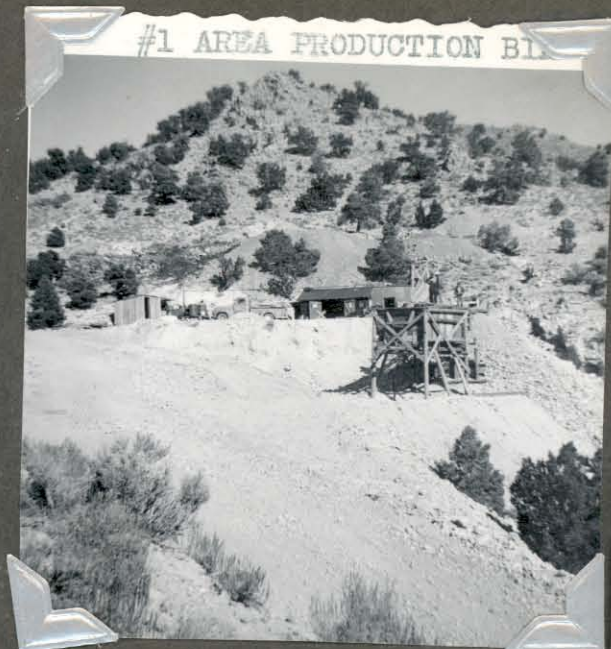
INVESTOR'S REPORTS
EFFICIENCY STUDIES

J. H. WREN & CO.
CONSULTING ENGINEERS

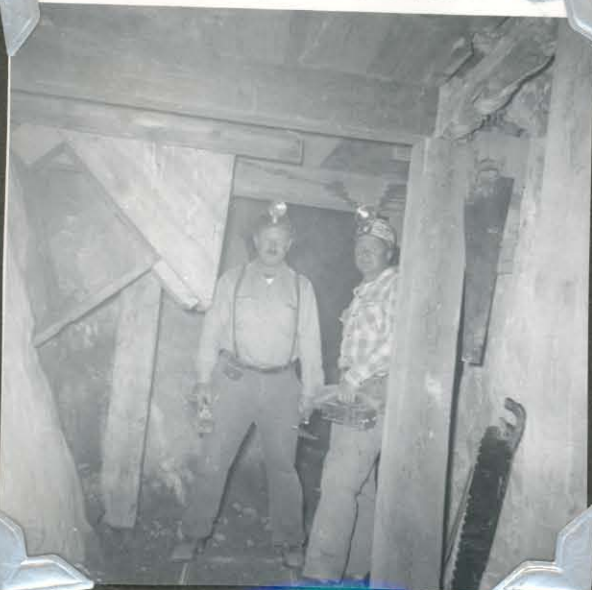
CABLE ADDRESS
WRENCO

PHONE HILLCREST 6-0922
4297 D STREET
SACRAMENTO, CALIF.

PHOTOS



Ore Chute 87' Level.



#5 AREA PORTAL



HI-GRADE IN DRIFT BOTTOM 87'



#4 AREA PORTAL



#1 AREA SHOP & HEADFRAME



SCALE 1" = 1 FOOT

STORAGE

FILTER BOTTOM
TANK

MOLYBDENUM

WASHING

TO WASTE

COPPER

WALFRAMITE

TABLING

SHEELITE

FILTER BOTTOM TANKS

TO WASTE

SIMPLE CIRCUIT FOR WASHING AND RECOVERY OF
MOLYBDENUM-COPPER SULPHIDES-
AND TUNGSTEN

AA ROSENHAN

MIDVALE UTAH

64
Item

2660 0015