APPLICATION FOR

MINING DEVELOPMENT LOAN

Pursuant to
Sections 302 and 303
of the

DEFENSE PRODUCTION ACT OF 1950

Submitted To

DR. JAMES A. BOYD, ADMINISTRATOR
DEFENSE MINERALS ADMINISTRATION
DEPARTMENT OF THE INTERIOR

WASHINGTON 25, D.C.

By

NEBO IRIS MINING COMPANY
Draper, Utah

Applicant

NEBO IRIS MINING COMPANY

DRAPER, UTAH

December 1, 1950

Dr. James A. Boyd, Administrator
Defense Minerals Administration
Department of the Interior
Washington 25, D.C.

Dear Sir:

We are submitting herewith three copies of an application for a Mine Exploration and Development Loan, pursuant to Sections 302 and 303 of the Defense Production Act of 1950, and in accordance with the recent information releases from your department covering this subject. Any additional information which may be required will be promptly forwarded to you upon request.

Thank you for your kind consideration in this matter.

Very truly yours,

NEBO IRIS MINING COMPANY
By
Herbert D. A. Molyneux
Herbert Molyneaux

K

UTAH LAKE
COMPROMISE LEVEL 4489
PROVO
Springville
Mapleton
Spanish Fork
Benjamin
Salem
Payson
Spring Lake
Santaquin
Mapla Dell
Thistle
Castilla
Asphaltum
Indianola
Whittaker
Hillton
Millburn
Mona
Mount Nebo
NEBO
MANTI
UTAH CO.
SAN PETE CO.
NEPHI
Divide
Burriston
Starr
York
Fines
Windy Pass
Slate Can
Kolob Basin
Grangeville
Maple
Spanish Fork
Crowd Can
Water Can.
Salvation Marsh
Dry Mtn.
Thomas Hol.
Paces Hol.
Gardner Hol.
Cedar Knoll
Mona Basin
Water Hol.
Birch Can.
Pine Spr.
Gravel Spr.
Bear Can.
Northern Branch
Mt. Belay
Peters Cedar Hol.
Oak Pine
Josephine
Calliphwood
Dead Spr. Hol.
Water Hollow
Rock Can.
Loafer Mtn.
Deer Hol.
Spencer Hollow
Coarse Rock
Geo Rock
Bill Can.
Gate Hol.
Pine Spr.
Rock Can.
Ambrosia
Sixto
Rocky Ridge Can.
Gravel Spr.
Water Hollow
Dead Spr. Hol.
Calliphwood
Tent Mtn.
Diamond Fork
Red Pipe
Narrows
Thistle
Nebo Tri-Mtn.
Mona Reservoir
Salt Creek
Meridian
Lake
T.9 S.
T.10 S.
T.11 S.
T.12 S.
T.13 S.
10'
40'
00'
50'
40'

NOV 28 1950

APPLICATION

FOR DEVELOPMENT LOAN

Submitted By

NEBO IRIS MINING CO.

I. Name of Mine

Old workings were known as the Tip Top Mine and are located in an unsurveyed part of Township 11 S., Range 1 and 2 E., S.L.B. & M.

Present owner is the Nebo Iris Mining Company, Draper, Utah, Box 266, incorporated two years ago by men who have owned the ground for about twenty years.

II. There was considerable early production but no information is available on tonnage and grade. There is no present production.

History. The Tip Top No. 1 was located September 10, 1924, and surveyed for patent October 15, 1927. Other unpatented claims have been located from time to time. During 1950 the present owners built about four and one-half miles of road to the proposed adit site.

III. (a) The new program of development is as follows:

1. Drive an adit N. 35 degrees west about 1200 feet to intersect the main bedding fissure which strikes about N. 55 E. and dips about 35 degrees to the southeast from the outcrops on the Tip Top No. 1.

2. Drift northeasterly and southwesterly along the ore zone 1000 feet, and drive 500 feet of raises on the ore beddings. A map is submitted to show the proposed work.

3. Cost -

1200 Ft.	Crosscut	@	$30.00	$36,000
1000 "	Drifting		30.00	30,000
500 "	Raising		25.00	12,500
				$78,500

(b) Only present equipment is one Willys 1-ton Jeep truck, one mine car and 1200 feet of secondhand rail.

(c) New Equipment Needed

Buildings and bins	$ 5,000.00
Powder magazine	500.00
Fuel storage tank	1,000.00
Compressor, 500 cu. ft. diesel, portable with accessories	12,000.00

Drills and drill accessories	$ 4,000.00
Ore cars - 3 @ $150.00	450.00
Pipe lines	1,000.00
Blacksmith tools and supplies	300.00
Timber framing equipment	500.00
Eimco mucking machine	2,800.00
Slusher and tugger	1,500.00
Blower and vent pipe	2,000.00
Saw mill	1,500.00
Powder and mine supplies	2,000.00
Camp buildings and equipment	10,000.00
	$44,550.00

(d) No employees at present.

(e) Based on an estimated production of 50 tons per day, we will require 10 men.

Experienced labor is available in this area because of the nearness to the Tintic Mining District and the large towns of Nephi and Provo, and the numerous small towns in the Salt Lake Valley.

(f) If ore must be milled, it is planned that it will be shipped to the Combined Metals Reduction Company at Bauer, Utah, easily reached by truck or truck and railroad. Distance is about ninety miles.

(g) Production should be at the rate of about 50 tons per day.

(h) The proposed work should be completed in ten months to one year.

(i) The mine is accessible by good truck road. The loop road from Nephi to Payson is maintained by the Forest Service. The private road - four and one-half miles - will be maintained by the company.

(j) Under present price levels for wages, freight, treatment and operating supplies, the present market prices are adequate; namely, silver $0.90 per ounce; lead $0.17 1/2 per lb.; zinc $0.17 1/2 per lb.

IV Estimated Ore Reserves

(a) Measured ore None
(b) Indicated ore None
(c) Inferred ore The occurrence of ore near the outcrop on the Tip Top No. 1 is along a bedding fissure which is believed to be a continuation of the fissure mined in the Little Eva Mine which adjoins on the south. The proposed crosscut will intersect the vein at a slope depth below the outcrop of 900 feet. It seems reasonable to expect at least fifty thousand tons of ore to be made available by the proposed work. Based on sampling on the Tip Top No. 1 Claim a grade is assumed of 3 ounces silver, 18% lead and 30% zinc.

V. A report by R. E. Wimber is submitted herewith.

VI. Mr. H. A. Molyneuax will be in charge of the operation. He has had many years' experience in mining in several of the important mining districts of Utah and Nevada.

VII. This district has had very little production for many years. If this project is successful, other mines in the area will probably be opened.

VIII. Banking regulations have made it impossible to secure a loan at the banks at which requests were made.

Amount applied for - $125,000.00.

Respectfully submitted,

NEBO IRIS MINING COMPANY
By
Herbert A. Molyneux
Pres.

K

MINING REPORT

NEBO - IRIS MINING COMPANY

Juab County -- Utah

by

Raymond E. Wimber
Mining Engineer & Geologist

June 28, 1949

MINING REPORT

Nebo Iris Mining Company

Summary and Conclusions.

The holdings of the company comprise a rectangular tract of unpatented mining land of approximately 132 acres in area situated in the Mt. Nebo Mining District, Juab County, Utah. The terrain is steep to precipitous with estimated elevations ranging between 8500 and 9500 feet above sea level. Massive limestone beds of Carboniferous age form a homoclinal structure having major faults for boundaries. Individual beds strike N 45—50° E and dip SE 26—31°. A thin sill of felsitic igneous rock was observed that usually occurred a few feet below the outcrop of the ore bed. Splits from this sill often penetrated the ore bed. Lead, zinc and silver mineralization in sulfide form accompanied by quartz, calcite and possibly dolomite, formed elliptical pipe-like replacement channels and other irregular masses of small size near the top of the ore bed. The ores are almost completely oxidized now. Mineral outcrops were prospected by 5 short tunnels over a surface distance of 900 feet on the Tip Top No. 1 claim. A small tonnage of ore was shipped prior to 1915 of unknown grade and value. Conditions in this area appear to be greatly similar to those on the Little Eva group, adjoining to the South, where mining before 1920 appears to have produced a fair tonnage of high-grade lead carbonate ore from a single shoot said to have been about 500 feet in pitch length. It is therefore concluded that:-

1. The occurrence of good lead and zinc mineralization at several places along the outcrop of the ore bed over a linear distance of approximately 900 feet makes this property a prospect of considerable merit and worthy of additional exploration.

2. The samples taken show that the lead mineralization is of worth-while grade.

3. The property adjoins the Little Eva group that has produced carbonate lead ore of excellent shipping grade. H.A. Molyneux said that this ore channel gradually increased in sectional area and was the largest where it terminated against a fault. The Little Eva group is now being prepared for additional undergroundexploration by the New Park Mining Company.

4. Geologic features in this area indicate that this mineralization arose along unseen fractures forming a part of the major fault structure passing northwesterly through the divide between North and Wash canyons. Such conditions are expected to create stronger replacement of the ore bed at points nearer to the source of the mineralization. By reason the the greater distance of the outcrops from the source of the mineralization it is believed that no more extensive development work should be done in the old workings of the Tip Top No. 1 claim. Another good reason for changing the site of the major development effort is in the fact that the old area is deeply covered by snow for 8 months of the year. The most feasible way of reaching the most favorable locality in the ore horizon is to drive a cross-cut tunnel northwesterly from a sheltered spot on the south-facing side of the mountain to the ore bed and then drift along its strike where other ore channels will be found.

Recommendations.

It is recommended that funds be raised and the following work done.

1.	The Tip Top No's. 2,3,4,5,6, 7 claims be surveyed and certain additional open ground be located. Cost, surveyor and helper	$200.00
2.	A tranist survey of the terrain from the No. 2 tunnel to a proposed tunnel site that is to be driven northwesterly from a site sheltered from snowslides and situated near the common sideline of the Tip Top 5 and 6. Cost	175.00
3.	Erection of 2 camp buildings 12 by 24 feet. Frame construction, and composition lining and covering @ $4.00 per square foot	2304.00
4.	Erect shop building and change house at tunnel portal. 16 by 24 feet frame construction. Cost	800.00
5.	Grading tunnel site and short road to it. Cost	300.00
6.	Allowance for 1200 feet of untimbered tunnel 4½ by 6½ feet. To be driven in shale and limestone with exact distance to be determined by survey. Cost @ $20.00 per linear foot for labor, supplies and supervision	24,000.00
7.	Allowance for timbering 100 feet at portal and 100 linear feet in casual spots elsewhere in the tunnel at $10.00 per foot	2,000.00
8.	Equipment Needed: New price figures.	
	Four-wheel drive light service truck	2,000.00
	Air compressor, 220 c.f.m. gasoline powered and skid mounted. (Add $1,000.00 for diesel power)	4,000.00
	One rock drill and accessories	800.00
	2 Mine cars at used price	130.00
	5 tons Mine Rail 12-lb size	600.00
	Ventilation fan and gasoline engine	300.00
	1200 feet of 10-inch ventilation pipe @ 75¢ per foot	900.00
	Small tools	150.00
TOTAL ESTIMATED COST		$38,659.00

It is expected that the above outlined program will take one year of time to complete.

Considerable and important savings may be effected by the careful purchase of good used equipment in the local area. It should be obtained for 60 % of the cost of the new item.

General Discussion.

Location: The area considered in this report is situated in Juab County, Utah and northeast of the town of Mona which is 84 miles south of Salt Lake City via U. S. Highway 91. It is called the Mt. Nebo mining district.

The mine access road branches off Highway 91 about one mile north of Mona. It is an unimproved dirt road of easy grade for a distance of one mile. The roadway proceeds nearly to the head of Pole Canyon, then crosses over a low divide into the upper part of North Canyon, crosses this stream, and then climbs the northerly slope of North Canyon towards the divide leading into Wash Canyon. Much work has recently been done on this 7 miles of road in order to place it in a passable condition. This canyon roadway is nor traversable by horse and wagon, four-wheel drive or track-type automotive equipment only. Standard two-wheel drive vehicles can not negotiate the steep grades which range between 10 and 30 per cent. Winter conditions on this road will be most difficult in that this road passes over two snow-slide runs near the head of Pole Canyon, and also descends a north-facing slope of North Canyon over a series of steep switchbacks.

The area covered by the seven claims(see attached map), of the client encompass most of the saddle or pass extending from North Canyon northwesterly into Wash Canyon. Tip Top 2,3,4,5 and 6 claims cover the slope facing southerly into North Canyon. Tip Top 1 and 7 are upon the northwest slopes into Wash Canyon. Elevations range between 8500 and 9500 feet above sea level.

Climatic Conditions: Severe winter operational conditions are prevalent. The known ore showings are all upon the Tip Top No. 1 claim upon the northwest slope of the mountain. Terrain slopes vary from 30° to precipitous. Snow accumulations and snow slides prevent work in the mineralized area from October until July under ordinary conditions.

A tunnel could be driven from a sheltered area of ground selected upon Tip Top 5 or 6 that would enable practically year-round work to be conducted. All year operations could be further simplified by the construction of an estimated 4 miles of road leading easterly from the mining area to the Forest and Scenic road that skirts Mt. Nebo on the east side at the top of the old plateau. The new road could be kept upon southerly facing slopes throughout most of its length. A preliminary survey of such a road is believed to have been made by the Forest Service for grazing, access and timber disposal purposes.

Timber: There is an adequate supply of native timber upon the ground and in the immediate area of these claims for ordinary mine usage.

Water: Culinary water can be had from a small spring near the proposed tunnel site.

Power: Electric power is not available in the area. Gasoline or diesel engines will be the most economical sources of power.

Property and Title: The property is composed of a group of 7 contiguous lode claims,(see attached claim map). The group ties onto the Little Eva No. 4(Mineral Survey 5934), upon its north endline and east sideline. By reason of this land tie the Tip Top No. 2 is a fractional claim. The Tip Top No. 1 lode claim(T 11 S, Rgs 1 & 2 E, S.L.B.&M.), was surveyed for patent in 1926 under Mineral Survey 6915. It was found to be 600 by 1294.9 feet long. Patent was not granted upon this claim and the reason for such is not presently known. Title was subsequently deeded by the locator, James Gliggy of Mona, Utah to the present owner, H.A. Molyneux. Molyneux states that he located the Tip Top 2 to 7 claims at a recent date. Location notices for these last named claims were not seen upon the ground. No examination of records has been made. Nor survey has been made of the six claims last named. Reliance for ownership is placed in the statements of Molyneux who was in undisputed possession of the property at the time of the examination.

Improvements: Improvements other than mine workings are limited to a single log cabin barely large enough to shelter two men. The camp buildings of the early operations were destroyed in a snowslide.

History: Very little recorded information has been found as of this date. Molyneux states that he helped with the loc tion of the Little Eva group during the years 1908 or 1909 and that he has been in and out of this area at various times since that date. The Tip Top No. 1 was originally located as the Little Chief claim. The most active period of operation was believed to have been about 1912. Some short drifts were driven and some ore stoped in two places. No records were found regarding the metal content of this ore and the tonnage of it produced.

Geology

Sedimentary Rocks: Massive blue-grey limestone beds form the most of the outcrops examined. There are two intercalated quartzite members each of which is less than 100 feet in thickness. A carboniferous shale is also present but no indication of its thickness can be given as it is entirely covered by limestone detrital material.

The best outcrops occur on the Tip Top No. 1 claim. The beds here form a homoclinal succession with an average strike of N 45° E and dipping SE 26 to 30 degrees. The outcrop is reasonably continuous showing some offsetting by normal faults with displacements varying from 1 to 20 feet.

A black crystalline bed that may be dolomitic in composition and is about 15 feet thick forms the most suitable host rock for the ore mineralization. All of the ore found to date has been in this bed.

Intrusive Igneous Rocks: A few feet stratigraphically below the ore bed is a small sill of tan-colored igneous rock. In hand specimen it is a soft, clayey felsitic mass, somewhat porous, showing a few inclusions of limestone.

This sill is very erratic in occurrence and position. It frequently splits showing two members. The upper member is quite discontinuous weaving in and out of the ore horizon.

Folding and Faulting: The intense local folding involving the rocks of the Mt. Nebo region is not prevalent on this property.

A fault zone of major proportions crosses the property striking about N 20° W. This structure creates the saddle or divide between Wash and North canyons. It is mo t likely the fracture system that permitted the mineralization to rise through the black dolomitic bed depositing the ore that has been found in the Little Eva and Tip Top groups.

Mineralization: The usual fissure-vein type of mineralization was not seen. Two types of replacement mineralization were found. The most important seen was that of channel or pipe-like replacement in the limeston. One of these channels seemed to have a strike of N 65° W and dips with the beds 26° SE. This type may be a single pipe or it may be divided into two or three. In local areas the mineralization may spread out from 5 to 10 feet from the central axis of the channel. The central part of the pipe is now a mass of soft, sandy carbonates of lead and zinc containing nodules of Galena weighing up to 5 pounds.

Other irregular replacement masses of lead and zinc minerals were seen in brecciated areas in the ore bed. These ranged from a few inches to several feet in diameter. The ore in these areas is lower in grade than that found in the channels or pipes. These irregular spots of mineralization may be found outcropping along the exposure of the ore bed in at least six places in a linear distance of 900 feet.

The primary ore minerals were Galena and Sphalerite. Residual lumps of these original minerals remain. The secondary carbonates of lead and zinc, Cerrusite, Smithsonite, and Hydrozincite are the most abundant now. There is some Calamine(zinc silicate).

There is a local abundance of white, carbonate gangue mineral which appears to be Calcite in hand specimen. Actually a large percentage of this may be Dolomite. Occasional masses of white quartz and transparent quartz crystals were found in brecciated areas of the ore bed.

Vein Structures: The commonly known filled fissure veins or replacement vein structures having approximate plane surfaces for walls were not seen on the property. The prospecting done to date has not disclosed such structures though it is reasonable to suppose that they may exist and are covered by the heavy overburden prevalent over most of the area of the claims. The mineralization seen had been localized by small fractures such that the long channels or pipes of ore were developed.

Sampling: No extensive sampling could be done by reason of the fact that faces and workings were covered by rock falls and debris resulting from the many years of inactivity.

Two samples were taken in Tunnel No. 2 on the Tip Top No. 1 claim at points shown on the accompanying level map. The results are:-

	Au(gold)	Silver	Lead	Zinc
No 1 Residual ore from bottom of pipe previously mined.	Trace	3.1oz	17.7 %	30.05%
No 2 Ore from small pipe	0.01oz	6.7oz	43.2 %	14.75%
No 3 Grab from pile of ore	Trace	6.4oz	8.1 %	32.35%

Sample No. 3 was taken from a pile of ore containing about 25 tons that remained from an earlier mining operation. It is about 150 yards up on the side of the mountain from the existing cabin.

The three samples taken show the existence of attractive values in both lead and zinc.

Previous Development Work: Five short tunnels have been driven into the ore-bearing limestone upon the Tip Top No. 1 claim. They generally follow the strike of this bed. The greatest strike length prospected was 150 feet. Short cross-cut drifts up to 25 feet in length were frequently made. The drift work totals approximately 635 feet.

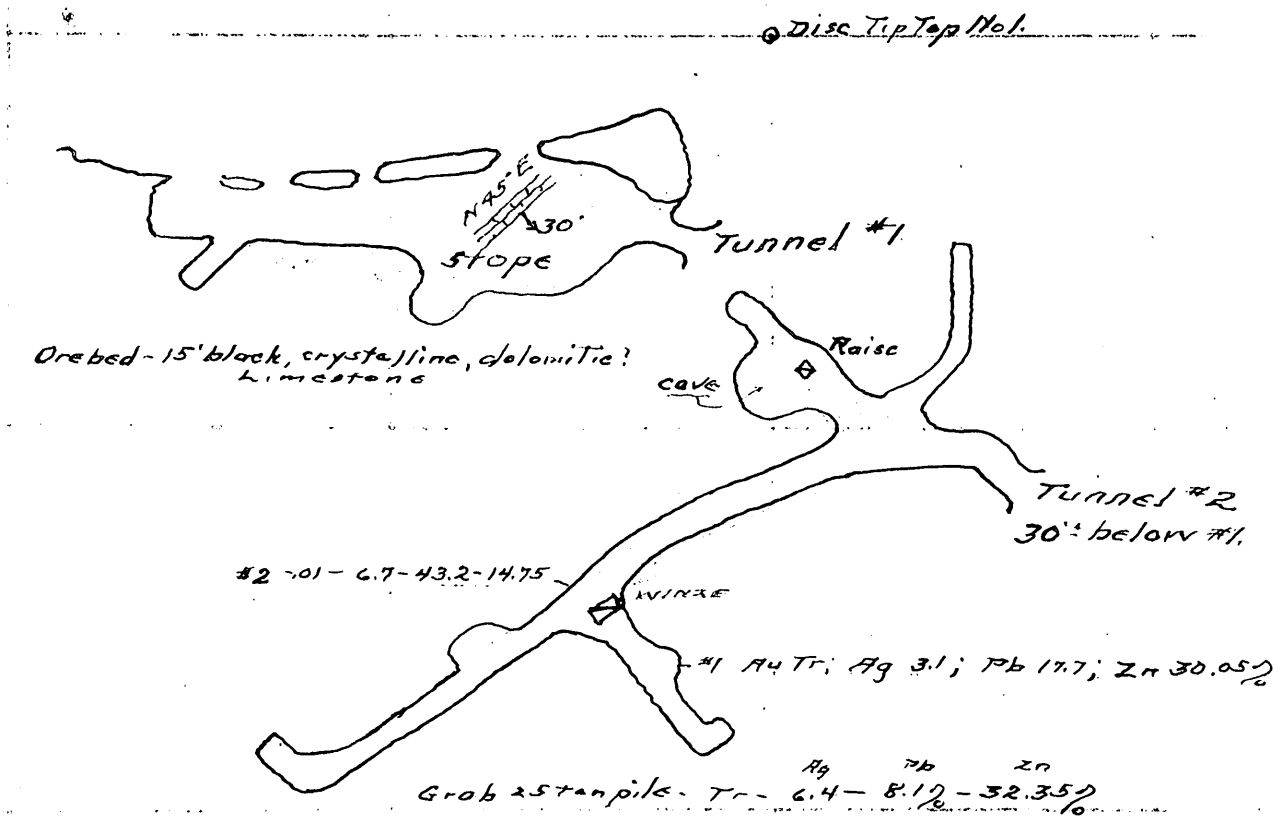
Ore Reserves: There is no measureable tonnage of blocked out ore ready for immediate mining.

28 June 1949.

Raymond B. Wimber,
Mining Engineer & Geologist.
State of Oregon, Cert. 1742.
State of Nevada, Cert. 160.

REGISTERED PROFESSIONAL ENGINEER 1742 OREGON SEPT. 6, 1935

A	COMBINED METALS REDUCTION CO.	9/30/50 19.
REFERENCED Map by. R. E. Wimbler June 28, '49	NEBO IRIS MINING CO. MT. NEBO MINING DISTRICT. JUAB COUNTY, UTAH	MADE BY EBY
		TRACED BY "
		CHECKED BY
		SCALE 1" - 30'



FORM 29

COMBINED METALS REDUCTION CO.

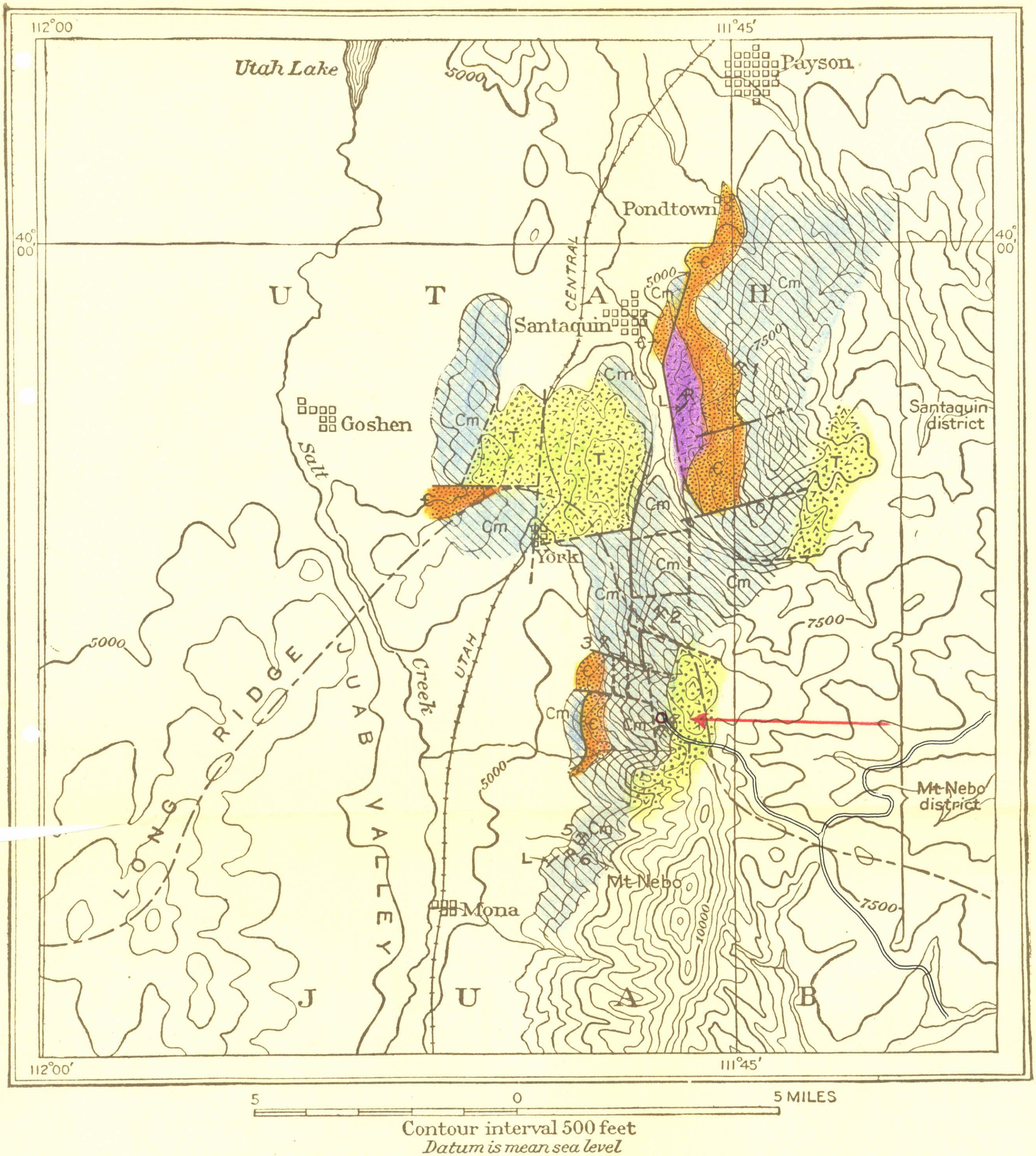
BAUER PLANT

NEBO - IRIS MINE
UTAH

Samples Date OCTOBER 4, 1950.

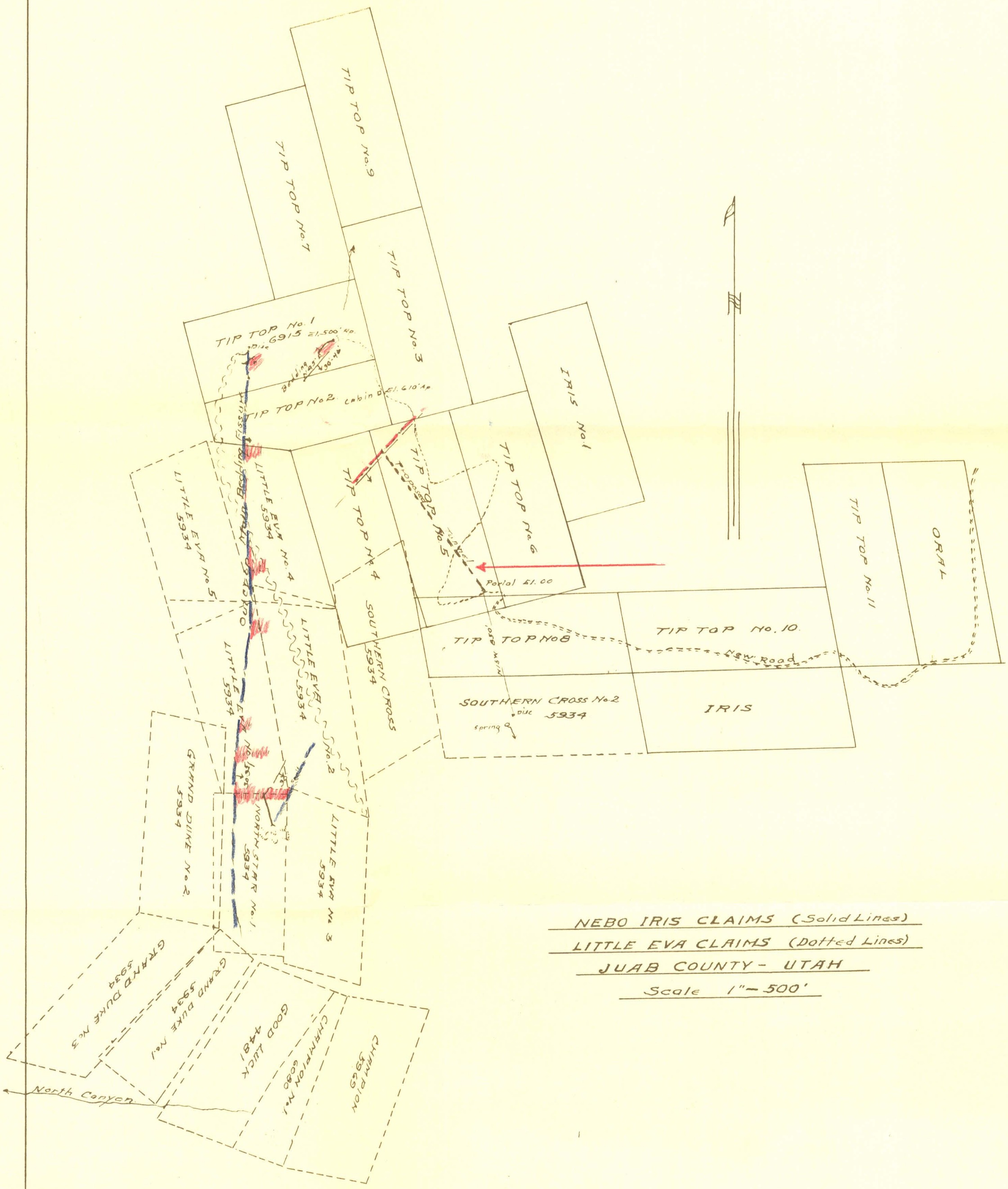
No.	DESCRIPTION	Au Oz.	Ag Oz.	Pb %	Zn %	Fe %	Ins. %	Mn %	CaO %	Cu %
								NONSULPHIDE		
								Pb.	Zn.	
	SAMPLE NO. 2425 Taken: Sept. 28, 1950 by L.G.Thomas 6.0 foot cut across ore bed at outcrop stope of: Nebo - Iris Mine No.1	Tr.	4.84	9.8	19.5			5.2	18.2	
	SAMPLE NO. 2426 Taken 9/28/1950 by LGT. Nebo - Iris Mine No.1 2.0 foot cut across bedding of purple shale which overlies the ore bed and Sample No. 2425.	0	Tr.	.6	Tr.			.2	0	
	SAMPLE NO. 2427 Taken 9/28/1950 by LGT. Nebo - Iris Mine No.1. Grab of sorted ore from dump at No.1 outcrop stope. (H.G. lead has probably been picked out of the pile - leaving mostly oxidized zinc).	Tr.	4.72	3.7	40.3	1.4	3.2	3.6	32.6	

HENRY HANSEN
Assayer



Contour interval 500 feet
Datum is mean sea level

FIGURE 40.—Geologic sketch map of Santaquin and Mount Nebo region. R, Pre-Cambrian granite; Є, Cambrian quartzite; Cm, Mississippian and earlier limestones; T, Tertiary conglomerate and volcanic rocks L, Lamprophyre dikes. Mines: 1, Union Chief; 2, Santaquin Chief and Santaquin King; 3, Big Nebo; 4, Eva and Nebo Highland; 5, Spider; 6, Freddie Lode (Eureka Leasing Co.).


TIP TOP No. 9
TIP TOP No. 7
TIP TOP No. 1
6915
TIP TOP No. 3
TIP TOP No. 2
IRIS No. 1
TIP TOP No. 6
TIP TOP No. 4
TIP TOP No. 5
Portal El. 00
SOUTHERN CROSS 5934
TIP TOP No. 8
TIP TOP No. 10
TIP TOP No. 11
ORAL
New Road
SOUTHERN CROSS No. 2
5934
IRIS
LITTLE EVA 5934
LITTLE EVA No. 5
LITTLE EVA No. 4
LITTLE EVA No. 2
LITTLE EVA No. 3
NORTH STAR No. 1
5934
GRAND DUKE No. 2
5934
GRAND DUKE No. 3
5934
GRAND DUKE No. 1
5934
GOOD LUCK
4481
CHAMPION No. 1
6080
CHAMPION
5965
North Canyon
NEBO IRIS CLAIMS (Solid Lines)
LITTLE EVA CLAIMS (Dotted Lines)
JUAB COUNTY - UTAH
Scale 1" = 500'