5290 0080

345 Middlefield Road
Menlo Park, California 94025

November 20, 1970

Mr. F. W. Lewis
Best Chance Mining Co.
120 Greenridge Drive
Reno, Nevada 89502

Dear Mr. Lewis:

Thank you for your complimentary letter of November 17, 1970, and for your notes, reports, and maps on the White Pine mining district.

So far, I have been able only to skim through this impressive quantity of data. Your introductory comment--about finding additional ore bodies--that "where are they EXACTLY is the harder question and challenge" hits the nail squarely on the head. I wish you every success in meeting that challenge, and hope that my observations will contribute to your success.

Your invitation to inspect recent drill core that you have in Reno is appreciated for two reasons: it will provide an opportunity to meet you, and it will be of technical interest. The next time I can get to Reno I shall call in advance for an appointment.

Sincerely yours,

Roscoe M. Smith

cc: R. M. Smith

RMSmith:mkh

BEST CHANCE MINING CO.

120 GREENRIDGE DRIVE
RENO, NEVADA 89502
PHONE: (702) 323 - 0303

November 17, 1970

Roscoe Smith
U S Geological Survey
Geologic Division
345 Middlefield Rd.
Menlo Park
California

Dear Mr. Smith:

Recently I had occasion to talk to Mr. Lutz of the Nevada Bureau of Mines and he suggested I write to you.

I have a fair amount of information on the White Pine Mining District, Hamilton, Nevada. My interest in the area is that of a large Property holding, and so accumulation of data, and the development of the District is in our Interest.

I thought you might like to go over my notes. I have enclosed a copy of this for you. In additon to this we have some shallow drill holes which you might like to Inspect. I have them here in Reno and you are freely welcome to look them over.

You are welcome to reporduce or copy any part of these notes that are of interest. I would be MOST greatful if you find any errors in my conclusions or suggestions if you would call them to my attention, or correction.

I enjoyed, profited, and admired your informative suggestions relative to "Treasure Hill Reinterpreted". I call to your attention that the California Mine at the South End of Treasure Hill is cut by a fault (The Eberhardt Fault, and not the Eberhardt Mine Fault). A shaft on this fault discloses that it is filled by a massive amount of Black, Brown, and White (Smoky?) Calcite. This fault is on what appears to be the most Intrusive trend, and a good deal of the mineralization is in evidence along this fault. The Eberhardt fault could be thought to be one of the Main channels for the Intrusive Calcite, and it may harbor great quantities of this material. As a matter of fact the Eberhardt Fault becomes a Thrust fault along its East End (Humphrey), It dips fairly shallowly Southward at the South end of Treasure Hill, so by flattening as it trends upward it could easily have been the main channel for the Calcite that you speak about, connected by the Thrust under the Pilot shale? An airial photo of this fault appears with the section of the report relating to the I P Anomoly and its map.

Let me hear from you

Good Luck,

F. W. Lewis

NOTE BISMUTH OCCURANCES NEAR ZADOW AREA. WHAT DO YOU MAKE OF THAT?

REPORT AND SUMMARY

BEST CHANCE MINES
WHITE PINE MINING DISTRICT
(HAMILTON) NEVADA

FORWARD

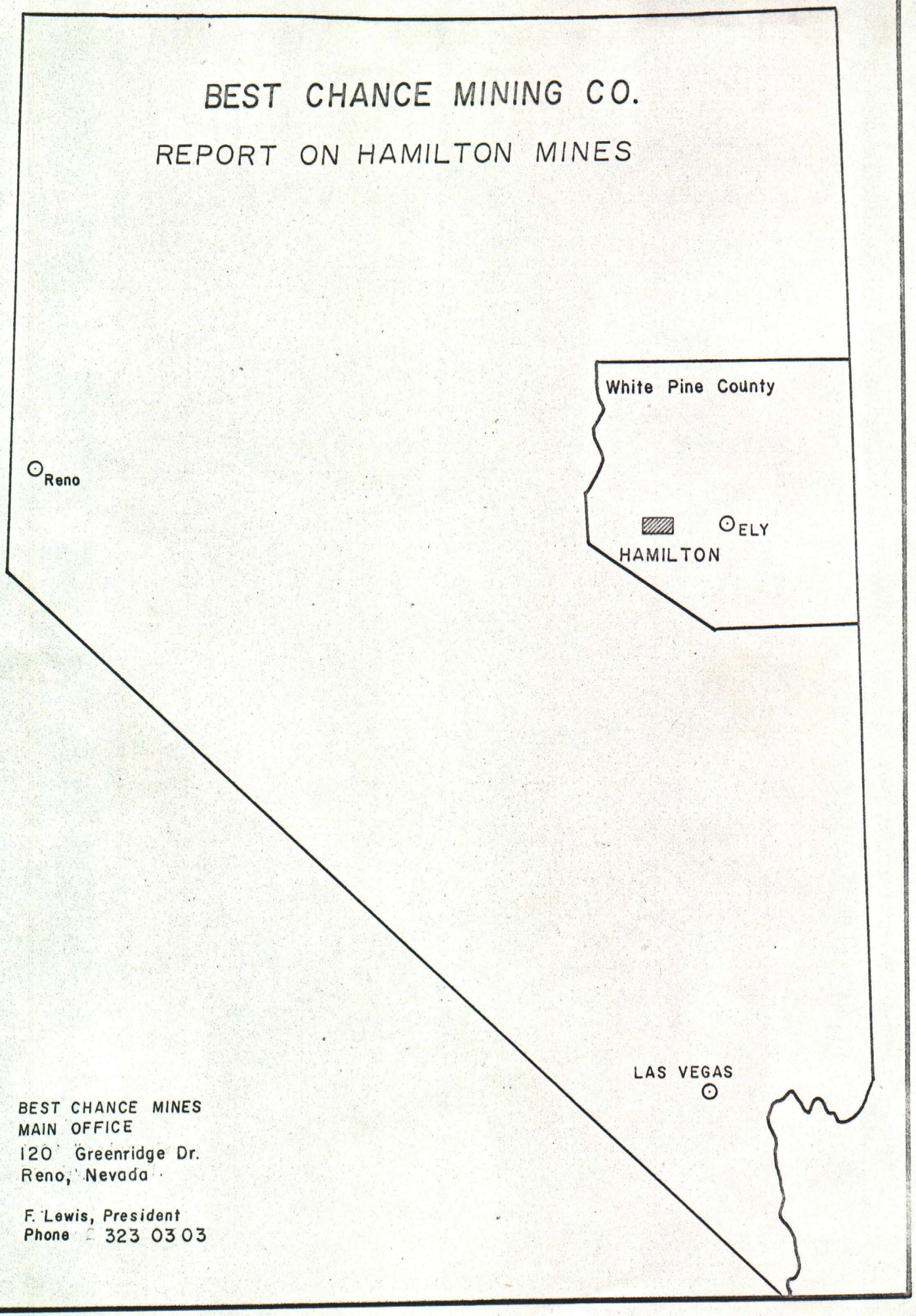
The following is an accumulation of notes, facts, opinions, and historical references to guide in exploration at Hamilton, Nevada. Most exploration geologists, prospectors, and engineers who have viewed the area in any detail believe it likely major ore bodies should occur in the district. But, where are they EXACTLY is the harder question and challenge.

FWL

Address:
Best Chance Mining Company
F. W. Lewis, President
120 Greenridge Drive
Reno, Nevada 89502
Phone: (code 702) 323-0303

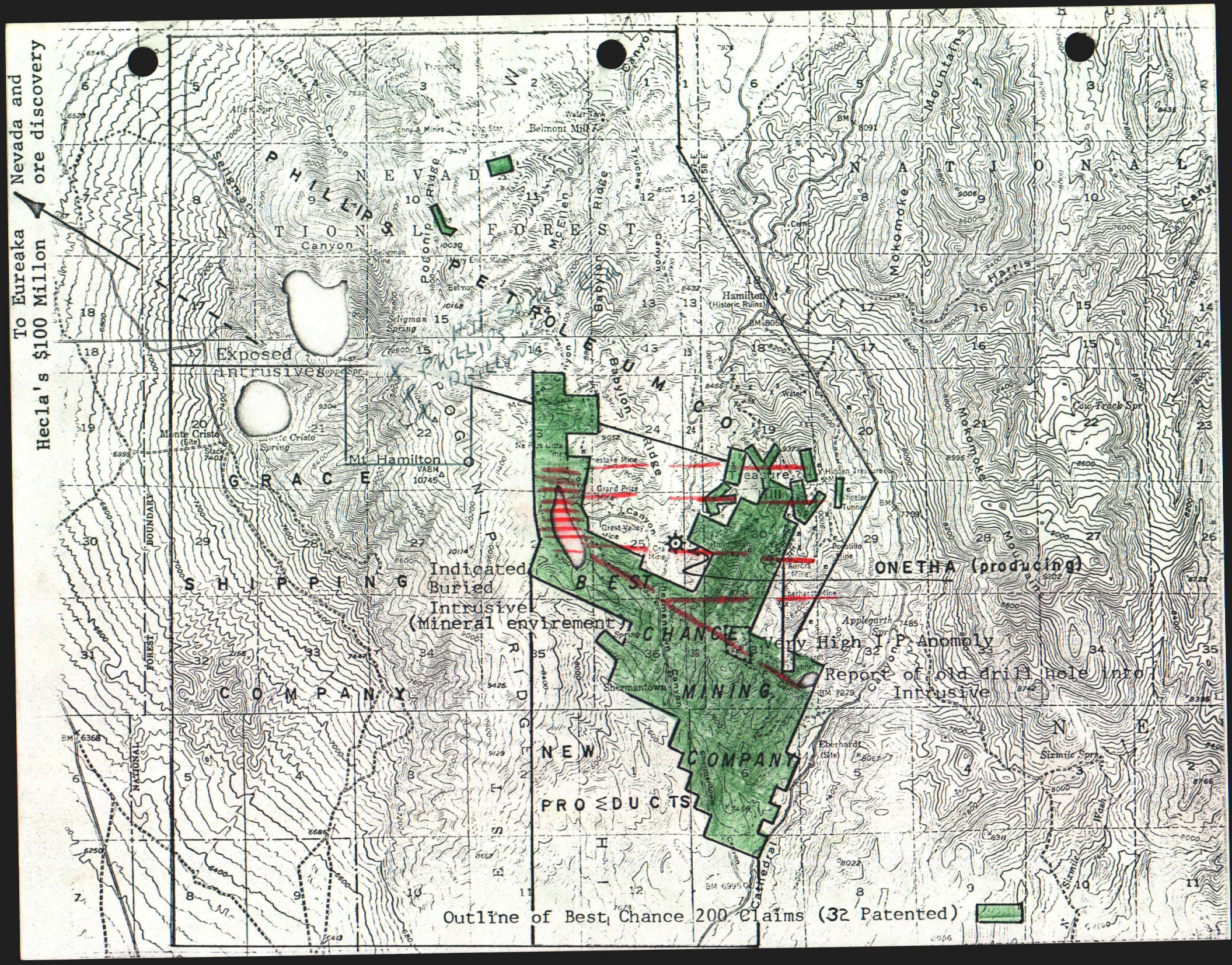
BEST CHANCE MINING CO.

REPORT ON HAMILTON MINES



BEST CHANCE MINES
MAIN OFFICE
120 Greenridge Dr.
Reno, Nevada

F. Lewis, President
Phone 323 0303


To Eureka Nevada and
Hecla's $100 Millon ore discovery
PHILLIPS
NEVADA
NATIONAL FOREST
Exposed
intrusives
Mt Hamilton
GRACE
SHIPPING
COMPANY
Indicated
Buried
Intrusive
(Mineral enviirement)
BEST CHANCE
MINING
COMPANY
NEW
PRODUCTS
Very High I P Anomoly
Report of old drill hole into
Intrusive
ONETHA (producing)
Outline of Best Chance 200 Claims (32 Patented)

PROPERTY SUMMARY

Mining Claims approximately 200
(Patented Claims 32)

50 Various size lots and blocks,
Hamilton Townsite

Various Trailers

Storage Facilities

Light Plants

Machinery

Head Frames, Hoists, Shafts, Hoist House,
Various other improvements

9+ Various Water Rights, Dams, Steel Tank
Reservoirs, Pipelines

7½ Acres Fenced and Surveyed

There is overstaking and overlapping of property in the Hamilton area. Important areas are patented or free of conflicts.

RESUME OF ECONOMIC TARGETS

The targets of the area might be classified as follows:

1. Deposits between the limestone and shale.
2. East and West striking fissures.
3. Beds or chambers in the limestone parallel to the stratification in the rocks.
4. A very high geophysical anomaly has been developed on the property.
5. In the regular seams or joints across the rocks and along North South pre-mineral faults and broken zones.
6. Manto bodies of ore.
7. Chainman shale contact.
8. Quartzites (especially the Eureka Quartzite).
9. Hamburg shale.
10. Eldorado dolomite - these same beddings made the ore at Eureka, Nevada. Facies change but same and receptive.
11. Pioche shale (made the ore at Pioche).
12. Granitic intrusive which has been proven under the area.
13. Thrust fault controlled daming of solutions.

Any one of these horizons offers good possibilities in this district, and are sufficient reason to sustain a major exploration endeavor. The presence of all these systems lends credence that Hamilton is capable of developing into a principal metalographic province.

RESUME OF ORE: MINED
BLOCKED OR INFERRED

ROUGH ESTIMATES

Tailings approximately 10,000 tons, milling grade.	10,000 tons
Ore in sight Zadow Mine, estimated 300 tons.	300 tons
Ore on Passayank, estimate of open trench project. Milling grade tonnage figure not available but it may prove to be substantial.	
Stafford estimated in sight. Shipping grade (needs development).	100 tons +
Various dumps unmeasured rough estimate, milling grade.	20,000 tons
Lola Shaft, shipping grade, high grade.	50 tons
Open pit on Treasure Peak Mines. No estimate given but large bedding (and dumps) of open pit ore reserves.	
Fay dumps, milling ore.	250 tons
Imperial	100 tons
Surface and other evidence indicates an open pit high grade ore body may be uncovered on the Homestake Mine.	

ASSAYS OF TAILINGS

California Placer

Number	Au oz ton	Ag oz ton	Hg lbs ton	Cu	Pb %	
C-1	.005	5.40				
C-2	.005	5.10				
C-3	.01	6.20				2,000
C-4	.01	6.90				
C-5	.01	10.10				to
Cal			2.4			
Composite					.2	4,500
Composite				.15		
6 Borings			2.40			tons
Composite 3, 4, 7			1.90			

Slag Placer

ST #1	.035	4.62	1.2		4.85

Quartz Mill

Composite	.005	6.3	.60		

Compensation & Good Luck

Tailings		7.65			

Upper

U-3	.01	6.10			

Hamilton Townsite Placer

HT			1.4			
HT 1	Tr	19.5				
TS 1	.01	8.8				
2	.01	6.7				
3	.01	5.9				7,000
4	.01	6.0				
5	.01	6.8				to
6	.01	10.3				
7	.01	6.9				12,500
TS 8-133	.055	5.95				
6 Borings			1.3			tons
Comp. 4-7			1.90			
Comp. 1-3			1.60			
Comp. 3,4,5				.25	.9	
HT 3	.03	7.30				
4	.02	4.40				
5	.02	8.80				
HT 1	Tr	20.2				
HT 2	Tr	4.5				

BEST CHANCE MINES
WHITE PINE COUNTY (HAMILTON), NEVADA

INTRODUCTION

The Best Chance Mines at Hamilton are located in the White Pine Mining District (Hamilton), Nevada. T. 16 N., Rgs. 57 and 58 E., MDBM.

One should read Bulletin 57 "Geology of the White Pine Mining District, White Pine County, Nevada," by Fred L. Humphrey, University of Nevada, 1960. Mr. Humphrey's report is general and provides an excellent general understanding of the area to form the base for more detailed work and study.

Mr. Humphrey did not map the principal east west ore fissures, the most important economic control for ore thus far in evidence. The East West fissures that cross the area introduced the mineral. Therefore the East West system is the one to concentrate on for they are the controlling factor and the source that brought the mineralization up. All of the mineralization will be associated with this system. To understand this is to give direction to one's exploration. Furthermore, this system evidences a doming structure in the center of this district. The mineralization itself points downward to the magma which formed the mineral. Its secretions permeated the fissures thus depositing the mineral where favorably inclined. The system is further complicated by thrust faulting.

It is true that some of the more favorable beddings trend North and South and that some of the brecciated zones and pre-mineral faults in which the ore deposited are North and South trending; still it is obvious that to begin the exploration along these North South systems is to look for discontinuous ore bodies and runs counter to the source.

The East-West hypothesis suggested gives a different approach to the exploration of the district than has typified past endeavors.

The Treasure Hill silver ore beds occurred in the guillmete formation, the top of the Nevada Limestone of the Devonian Era. This formation was capped by the Pilot Shale of the early Mississippian Era. The general elongation of the remnant replacable bed North-South has given the impression of North-South mineralization. The bed has numerous fractures East-West and North-South, making it somewhat difficult to

discern the origin of the mineralization, if only this bed were apparent. The Treasure Hill ores occurred as pods and were quite shallow and confined principally to this horizon. Most of the productive mines align themselves along in an East-West course from Treasure Hill to the Zadow Mining Property. These westerly mines did not have as high grade silver bearing ores but carried additional values in lead, copper, and zinc, revealing a semblance of mineral zoning. But the zoning is probably more vertical, not horizontal.

Silver assays seem higher in the Zadow Rocco area than the central lead area, at the Onetha.

The quantity of silver mined in the shallow workings should have a direct bearing on the quantity of the more basic ores that can be expected.

It is found in a correlation of assays that the sulphide ores carry more silver than the oxidized portions of the vein. From this then, one can derive that the deeper ores may carry more silver value. Then too, the ore at the sulphide level should be enriched from leaching downward of values. No drilling has been done in the Central mineral area. It seems especially significant to note this lack of exploration in the central most mineralized area of the district.

The White Pine Mining District has been a prolific producer of high-grade silver ores. The production of the district has been estimated to be between $40,000,000 to $70,000,000. This was derived from the shallow surface workings and principally from Treasure Hill. The ore occurred as a bedding replacement of favorable host limestone formations. This mining activity took place prior to 1890. After 1890, there was a gradual dying down of the district. A national shortage of copper and silver, with a better understanding of subsurface geology, has rekindled interest in the Hamilton mining area.

There has been no testing of the principal zones where mineral should occur at depth.

The central, most mineralized portion of the White Pine Mining District, is one of the undeveloped mineral provinces left in the Western United States.

GEOLOGY

Rocks of the region are limestones, shales, quartzites, (and underlying porphyry?) Treasure Hill is located in the Nevada Limestone of the Devonian Age. West of the Onetha, we again have the Devonian Limestone outcrops. About two and one-half miles West of the Onetha shaft, a North-South block of Cambrian Limestone is exposed. The East side, the Zadow property,

NOTE: Joining and/or possible convergence of two Major productive Belts at HAMILOTN

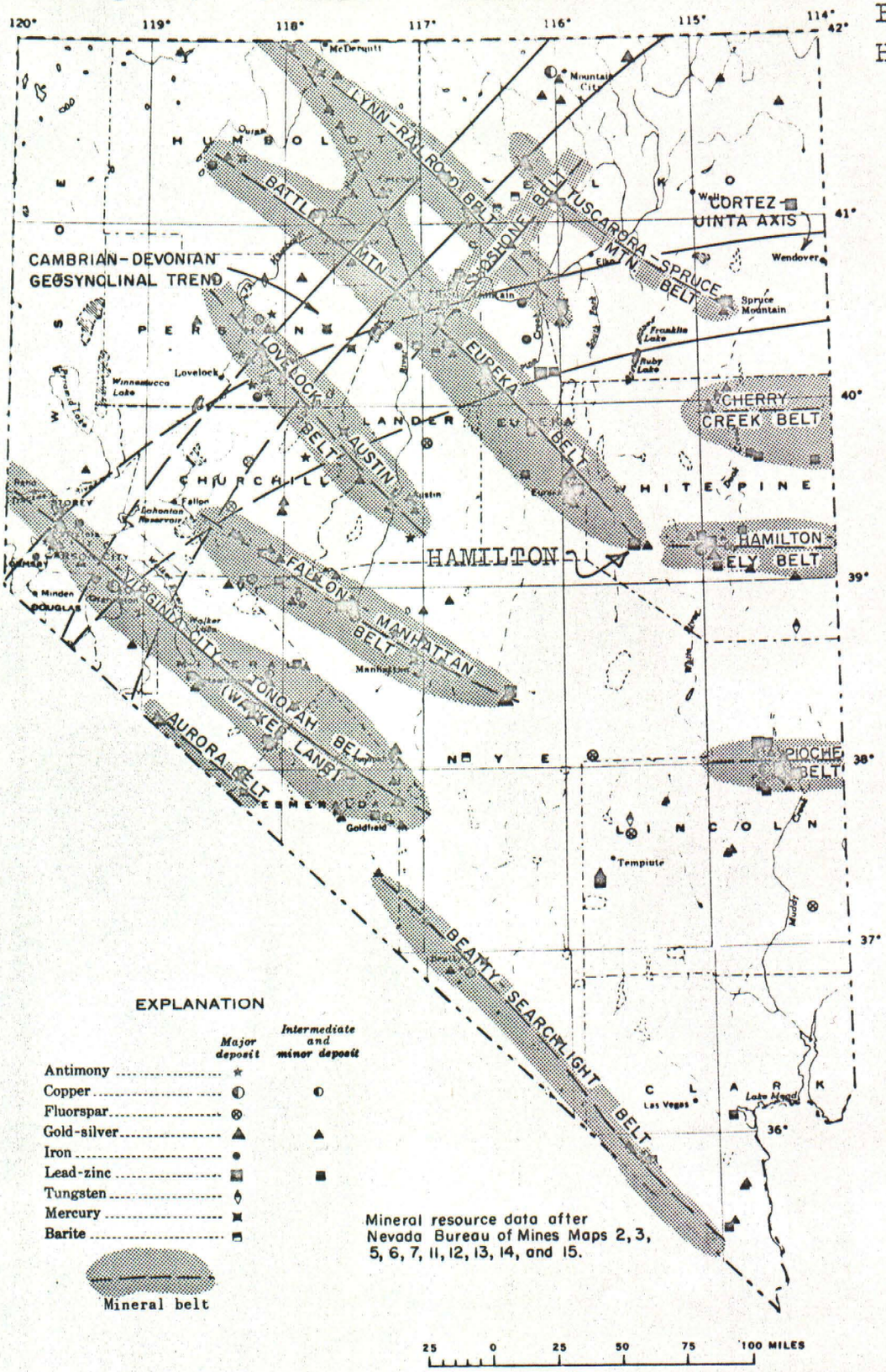
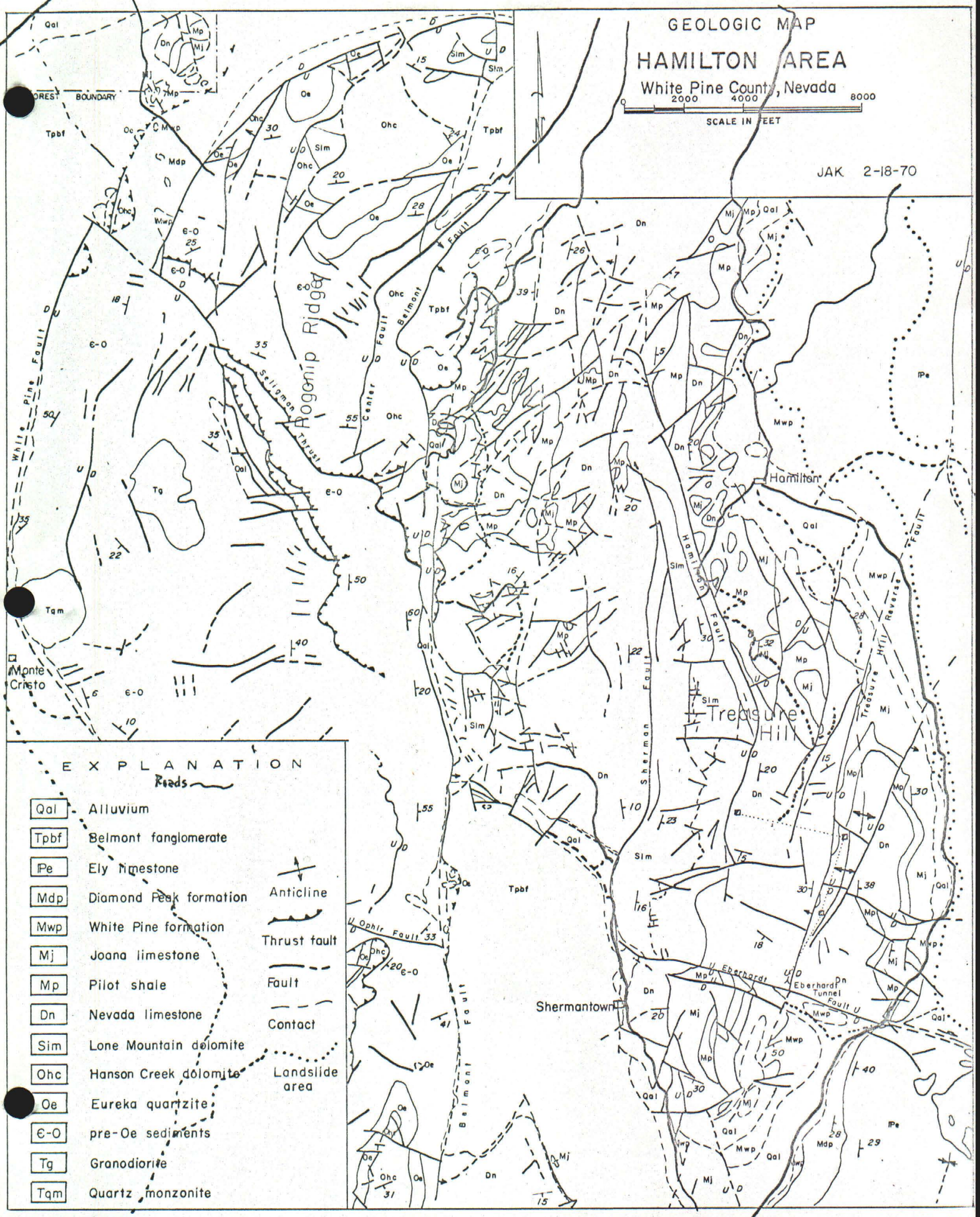


FIGURE 7. Mineral belts and principal ore deposits in Nevada.



Geology from Nev Bur Mines Bulletin 57, Plate I

INT-70-26

is the downthrow side of the North-South fault. A quartzite member is exposed at the Belmont Mine in the Northwest part of the mining district. The replaceable bed members are located near the top of the Nevada Limestone of the Devonian Era. The beds have a slight inclination about 15 to 20 degrees Easterly and strike Northeast-Southwest. The general attitude of the bedding is about the same throughout this particular region.

The Westmost part, White Pine Mountain, west of the Zadow property has intrusions of granitic rocks that may have some distant relationship to the formation of the ore deposits.

The area had been broken by North-South trending mountain building faults. Later in Jurassic time, it was broken again Easterly and Westerly and mineralized along this fault pattern. Again, at a later time, it had re-occurrent movement along the North-South faults. This is evidenced by some drag ore in some of these faults.

The so-called Lone Mountain dolomite underlies the Nevada limestone. It has been suggested that the Lone Mountain dolomite as mapped previously in the district is actually Lower Devonian sevy and simonson formations, and the true thickness of silurian strata in the area is much less than heretofore supposed. This is an important possibility.

Much is needed in the way of a careful study of geology and its relation to ore deposition in this district.

Subsequent to the period(s) of mineralization the area underwent further diastrophism (Tertiary?) and the major North-South fault zones in the district further developed.

The presumption that the mineralizations in the White Pine District is directly attributable to the Monte Cristo and Saligman Stocks west of Mount Hamilton is hardly reasonable. It is much more probable there is a mineralizing stock thrusting along the main doming structure roughly parallel to the East-West fracturing. Recent evidence indicates this may roughly parallel the Eberhardt Fault. This lineament would place the district in strike with the Battle Mountain - Eureka Mineral Belt.

Prospecting along the Eberhardt Fault has developed several mineral outcrops. Geophysical work on one of the more altered and mineralized areas showed an IP anomaly approximately 30

times the background count. Drilling was not done to intersect the anomaly but was drilled to either side. Additional work and drilling may develop ore along this anomaly.

Geology may suggest that the Eberhardt Fault is directly associated with the deep controls or channeling of the intrusive. Deeper drilling and geophysical work would greatly add to understanding of this possibility. Best Chance Mining Company controls approximately 2½ miles along this mineralizing trend.

The Hamilton Mining District appears to be a continuation of the Battle Mountain - Eureka trend mineral belt where it turns and becomes the Hamilton - Ely belt, or else it continues on to Pioche and Ely as a spur of the main trend.

The intrusive faulting pattern evident in the area lines up most directly with the Battle Mountain - Eureka trend.

This trend is felt to be the most productive in Nevada and has been the focus for numerous 100 million dollar (plus) ore bodies, many of which have been discovered during the last ten years. This trend includes Battle Mountain (Duval), Lewis Mining District (Betty O'Neal, size not known yet), Cortez, Buckhorn, Eureka (Hecla), Union, to name a few. As a matter of fact, if one views the Ely District as a part of the trend we have the most productive mine in Nevada's history (Kennecott), as well as the recent 600 million dollar discovery announced at the Ward Mine.

If many more discoveries are made in this major mineral trend one will find that all the historical productive mines on this belt persist in depth, and make major sized ore bodies - a startling statement, but one only has to look at the map.

The White Pine Mining District at Hamilton, produced some of the highest grade silver ore ever mined on earth from replacement and crushed zone fillings in Nevada Limestone; ore fed into a North-South fault system under Pilot Shale cap. These ore deposits were fed by the East West fissures, from an intrusive source, and perhaps controlled by thrust faulting.

There are numerous favorable beds in the district, most of which have had only superficial or no investigation at all; including the Lone Mountain Dolomite (certain black limestone beds), Eureka Quartzite, and intrusive granite on the bottom.

These manto type target horizons offer a large productive series of targets, one after the other, of high grade ore zones where cut and filled by the fissure and fault systems; with the porphyry system itself on the bottom and perhaps intruding near the surface.

Working down the pay shoots on the fissure system should lead one to the most likely sites for maximum sized manto ore deposits.

Simply stated, one way to explore this district is to mine in ore all the way, and stay with the vein even where it thins down.

MINERALIZATION

Mineralization is believed to have occurred during Jurassic time, with possible re-occurrent secondary mineralization. The principal ore mineral of the Zadow is cerrusite, the lead carbonate with the yellow silver mineral cerargyrite. Other ore minerals are anglesite, smithsonite, malachite, azurite, galena, chalcopyrite, sphalerite and the lead oxides, zinc oxides, silver salts, tungsten minerals, bismuth, and other related minerals.

The gangue minerals are major quartzing, silicification, black calcite and iron oxides.

LOCATION AND ACCESSIBILITY

The Best Chance Mine property is located in the White Pine Mining District, sometimes known as the Hamilton Mining District, in White Pine County, Nevada. It may be reached by traveling 40 miles west on the Ely-Eureka Highway, then traveling south 10 miles on a gravel and dirt road to the ghost town of Hamilton, then turning toward Shermantown south, a distance of three miles. The Best Chance workings are located on Treasure Hill, west of Treasure Hill, and the south end of Treasure Hill. The mine is accessible throughout the year with occasional snow removal to open the road.

CLIMATE AND PRECIPITATION

The climate of the area is mild and comfortable in summer. However, the winters can be severe, with a medium snowfall

in the higher elevations. Year around operations can be carried on with occasional snow removal from the roads. The property is easily reached from U.S. Highway 50 approximately 11 miles to the north, via a well graded and maintained dirt road. The property is also easily accessable from the south via Currant, Nevada, and Highway 6, the latter road being open all year with no appreciable grades.

TOPOGRAPHY

The Hamilton area can be generally classified as being rugged and mountainous.

ALTITUDE

The elevation at the property varies from 7,000 feet at Shermantown to 9,000 feet at Treasure Peak.

VEGETATION

The area is covered by sparse growth, pinion pine, spruce, fir, cedar and mahogany. Some timber may be available in the district. The lower regions are covered by desert grasses and sagebrush.

WATER

Several springs for processing ores at Hamilton are controlled by Best Chance Mining Company. The springs are improved by pipelines, tanks, dams, etc.

TRANSPORTATION

Ely, Nevada, is serviced by the Nevada Northern Railroad. The region is also serviced by various trucking firms and is connected to the outside by the United Airlines and Lewis Brothers Stages. Hamilton has no transportation facilities.

Ore can be hauled to the railhead at Ely, then from Ely shipped to the United States Smelting & Refining Company at the Salt Lake City, Utah, plant.

TENOR

The Best Chance Mines lack sufficient development to remark about tenor with exactitude. However, a long history of leasing on the Onetha Mines permits some insight as to what

one might expect. Possibly a quote from the Hamilton Corporation Report (about the producing Onetha) might lend some insight:

"....the direct shipping ore comprises about two-elevenths of the total ore developed. This ore will average about 20 per cent lead per ton, two and one-half per cent zinc per ton, one per cent copper per ton, six ounces silver per ton, and .0125 ounces gold per ton, having a gross value of $61.45 per ton. The lower grade ore will average about 10 per cent lead per ton, 10 per cent zinc per ton, one per cent copper per ton, five ounces silver per ton, and .0125 ounces gold per ton, having a gross value of $55.79 per ton.

"The values as noted in the above figures are quite close. The inability to make a separation between the lead and the zinc, the lower grade ore, as is designated above, does not bring a true value as a direct smelting ore.

"Assays taken on the other mines of the Hamilton Corporation's holdings run from a few ounces to over 100 ounces silver per ton. There could be no definite block ore tonnage given on these ore sections as they are not developed.

"On the explored property the Onetha vein shows that the better ore sections occur along the more brecciated areas, fissure intersections, the more favorable host formations and the flatter vein areas.

"The ore on the Onetha vein carries as good a value to the depth explored as was evidenced at the outcrops.

"The walls at the lower levels being loose brecciated limestone seem to show more movement than was apparent at the upper levels. This may be due to a downward joining of some of the minor fissuring.

"The vein has a strike from North 70 degrees East, to East and West and dips slightly to the North 80 degrees. The strike of the vein corresponds very well to the general strike of the most productive systems in this region. This deposit could be classified as a mesothermal type with ore expectations to continue downward to the limitations of mining.

"The epithermal Treasure Hill silver ore deposits indicate the upper reaches of mineralization showing that most of the ore horizons should still lie deeper than these surface deposits."*

The ores of the Zadow are not identical to the ores of the Onetha, nor is the geologic setting the same. The Zadow ores contain additional minerals such as bismuth, tungsten, tin, and very much more silver. A corresponding lead assay to the above shipping grade ores referred to on the Onetha would have a silver assay in the Zadow of 25 ounces of silver, or more. Also a higher temperature quartz is apparent in the Zadow veins, although this quartz is still a minor part of the vein gangue, it indicates a closer relation to the magma underlying the area.

REMARKS AND A CONCLUSION

The White Pine Mining District is one of the major untested ore horizons in the Western United States.

The unusually high tenor of ore, confined as it is to doming structure cut by productive mineral veins, bodes well for large scale mining at depth and ore horizons indicated at favorable beddings.

*A portion of the Engineer's Report, Sam Bida, E.M. Reprinted with permission of Morris Engle of Hamilton Corporation.

ZADOW MINE

The Zadow Mine is developed by a main shaft on the Zadow Canyon side which has been sunk to the 220 foot level. The development here is on the principal zone of dolimatization striking along the series of East-West fissures from the central area of Treasure Peak through the Onetha Mine, the producing mine in the district.

A workings map of the Zadow Mine is enclosed as Plate I showing the mineral occurrence at this point. The strong veins indicated on this map seem to coincide with the strike and attitude of the Onetha vein which has steadily produced over the last 10 years lead ore with values of silver and copper. It produced solely from lessees on a day to day basis with junk eqiupment paying a 30% royalty. In 1966 they shipped 7 cars all of which netted out after shipping and smelting charges, approximately $5,000.00 each. Shipping is continuing in good ore.

The history of the sinking of the Zadow shaft follows: Two brothers by the name of Baptiste sunk in the early days prior to 1912. They cut off the ore values at 30 ounces of silver and 50% of lead in order to ship by horse-pack and then wagon 35 miles or more over the mountains to the smelters at Eureka, Nevada. The work was mostly prospecting and closed when the Eureka smelters ceased buying ore.

The ore is occurring in the bedding of dolomite which is just above the bedding that contains the ore of the Onetha property.

The veins which come through the old workings all carry values in varying amounts. One must presume that these veins are controlled by some as yet to be seen system that allowed them to perculate laterally and then upward along cracks or fissures. There are just too many of them not to have some such explanation. The ore seems to be emanating from some bedding, or the recently discovered thrust fault, or other source.

One thought offered is that the intrusive stock has mineralized the district and it comes close to the surface at this point. This is more obvious from surface examination and recent magnetic anomalies. This postulation is born out by the occurrence of high temperature quartz which is occurring in the veins of the Zadow which do not occur in any of the other mineral veins reported in the district.

Pocket: Plan Map, Zadow Shaft.

Picture: Surface at Zadow Shaft.

F. W. LEWIS
120 GRE IDGE DRIVE
RENO, NEVADA 89502

ZADOW MINE ASSAY REPORTS

Level	Map Ref. No.	oz. Au.	oz. Ag.	% Pb.	% Cu.	% Zn.	% Bi.	% WO3	Material & Description
61'	P1	0.025	19.2	Trace	0.55	Nil			Yellow, red & black inter-mixed
61'	P2	0.025	10.6	Trace	0.40	0.2			
61'	3	Trace	0.4	0.6	0.15	0.7			Black material, 18" in vein on west side
98'	5	0.020	7.3	12.0					
150'	X2	0.01	52.71	26.38	.085		.27	.015	Ore out of vein showing Cerussite
150'	X	0.020	7.8	31.5	0.45	0.2			High-grade looking material from ceiling
150'	X2	0.010	0.3	28.2	0.20	0.6			Ceiling material
150'	1	0.010	4.0	8.6	0.35				Flat fissure SE side of drift (close to shaft)
150'	2	0.010	4.1	5.7					Pillar sample, flat vein
150'	4	Trace	1.1	2.1	Nil	0.6			(A . vein) General sample
150'	6	Trace	Trace	0.6	0.20	0.8			(A . vein)
150'	7	0.010	0.7	22.3	Nil				(A . vein)
150'	8	Trace	0.2	1.7	0.40	7.7			(A . vein) coppery-looking material
150'	9	Trace	0.2	0.1	0.30	1.3			(A . vein) yellow & principally black, soft
150'	10	Trace	0.9	Trace	Nil				(A . vein) blue-looking quartz pieces, across from Prospect hole and raise
150'	150-1	.03	20.77	13.52	.239	2.55			Quartz
150'	11	Trace	0.4		0.20				(A . vein) copper right in red, soft materia
150'	G2	.02	35.72	29.4	Nil				Underhand at bottom of winze 20 ft. lower than 149 ft. level
150'	X	Trace	33.34	19.64	.182			.014	Ore out of vein showing Galena
164'	164-1	.03	37.34	43.68	.26	Trace	.22		Quartz
164'	DS	.005	2.60	7.2					Footwall of shaft, vein gangue
164'	D1	.01	12.20	23.2	0.22	1.2			Ore shoot at end of drift
164'	164	Trace	20.54	33.17	.118		.32		Pillar of stope
Dump	N3	0.005	13.60						Ore on dump shows good Cu.
Dump	N4	0.01	27.80	30.5					Dump ore no Cu.
Dump	G7	.01	14.05	22.35	13.65				Dump ore pile - coppery material
Dump	G8	.02	15.70	18.1	Nil				Dump ore pile - black

Assay Sources

Mineral Services, Inc.
Mineral Assay Office
White Pine Assay
Nichols Lab., Inc.
Colorado Assaying Co.

Comment: The higher grade of silver ore, and lead, make in lumps, and stopes within the iron vein, expecially when the surrounding rock formation tightens up. This explains the wide disparity between ore samples and vein gangue iron oxide type material. The vein gangue does, however, carry bismuth to be valuable, which was only recently established. With ore depth and/ or a change in formation one would expect the ore values to improve. Improvement can also be expected when less oxidization has occurred, and perhaps some secondary enrichment will be a factor with depth.

Another thought of explanation for the abundance of mineral veins is that being close against the Belmont Fault has brought the mineral fissures or fissure into a bedding or condition that has made a flat ore body. Pressure forming this ore body in turn has leaked up into the overlying dolomite along cracks, vugs, and fissures. The complete brecciation of the dolomite may be an indication of the invasion of mineral and heat under pressure.

Only more depth and study will answer the question but it bodes well for the property to have such an abundance of veins, all mineralized, coming up in such a wide zone. The zone exceeds 700 feet of width and length. The Onetha vein is 3 miles long, as presently traced.

Depth also brings into the consideration another factor. The vein noted on the Zadow workings map as the strong vein has a direct mathematical increase in values with depth. On the surface the vein assays only an ounce or two of silver. On the 60 foot level the values increase but are very sporadic, possibly averaging 3 or 4 ounces of silver; only a very little lead. Then on the 100 foot level, although the vein is small its values increase importantly. Then on the 150 foot level where the old timers found sufficient ore to do some stoping the values go up to around $60. Then on the 170 foot level another increase to $150 per ton. The incidence of the ore and its values seem to be increasing.

The increase in the values with depth and the increase in the extent of the mineralization leads one to assume that a sinking program possibly 100 feet into virgin territory should put the Zadow Mine shaft into paying production on high grade of ore.

- -

It takes ones breath away to think of the size of the ore bodies that could occur at the Eureka quartzite. In Rocco Canyon some very important production of high grade of ore occurred in the inch to one foot quartzite beddings of the so called member 3 (the member above the white porcelaneous dolomite of the Zadow shaft area.) Think of these same mineralizing fissures coming through some 350 feet of thickness at the Eureka quartzite. This member should prove amenable to ore deposition.

The Zadow Mine is capable of some small immediate production.

Following is an opinion by Mr. Sam Bida, Registered Mining Engineer, 2160 Crawford Street, Ely, Nevada, written in 1964:

"I am very well acquainted with the Hamilton District and have been for a number of years. My first deductions on analyzing the potential possibilities of the area have been since proven. This was based on the assumption that the area was mineralized by an eastward and westward trending, faulting, breaking or fossilizing, whereby the upper beds were metalized with the higher grade ores of SILVER derived from these fissure breaks. The upper beds were mineralized under the impervious pilot shale. The shale tended to serve as a barrier to stop and divert the upperward migration of gases, ore, and solutions distilling from the hotter metaliferous ores underneath.

"Treasury Hill, the prolific silver producer, is essentially of Devonian Age overlaid by the pilot shale of the Mississippian Age. The Zadow property has this same sequence, but in addition to this it is on the east-west trending fissure system and also is intersecting a large north-south fault pattern. This combination would lead one to believe that there could be a large ore body in the Zadow area.

"INDICATIONS POINT TO THE POSSIBILITY OF A MAJOR ORE DISCOVERY BY DEEPER EXPLORATIONS IN THE ZADOW AREA. THE QUARTZ CONTENT OF THE ORE INDICATES THE PROXIMITY OF AN INTRUSIVE ROCK. THE LARGER ORES DERIVED FROM THIS ROCK AND ABOVE THIS ROCK AND THE NUMEROUS FISSURES AND BREAKS IN THE ZADOW AREA WOULD TEND TO MAKE ROOM FOR AND CHANNEL THE MINERALIZING SOLUTIONS."

F TUNNEL

F Tunnel is one of several East and West trending veins near the Zadow area.

The F Tunnel lies approximately 1,000 feet East of the Zadow shaft area.

Roughly 600 tons of ore are blocked in this tunnel and immediate production is possible.

B TUNNEL

B Tunnel lies parallel and about 100 feet or so North of F Tunnel, and 300 to 500 tons of ore is in sight along the drift in this tunnel and trenching along the surface indicates the ore is blocked out.

Immediate production is possible.

The F Tunnel vein and the B Tunnel vein both trend Easterly and appear to be continuous in depth.

MANILLA MINE

The Manilla Shaft is approximately 700 feet northerly of the Zadow Shaft.

This development is a shaft 25 feet deep prospecting a strong continuous north-east, south-west trending vein.

Assays of ore follow:

	Ag	Cu	Pb	Zn	Bi	Sb
Manilla 12 ft. down channel. Sample of ore body (about 3 ft thick)	37.80		4.40	.19	1.18	.25
Manilla 1 ft. of coppery footwall	1.63	1.88	1.20			
10 ft. of iron vein gangue	1.14	.25	1.10	.05	Tr	

This vein can be developed by drifting off the Zadow Shaft or by sinking at the outcrop.

This strong lead should be drifted on and appears to be of sufficient strength to develop commercial ore. It can be seen to continue easterly through the Rocco Canyon area and may be a continuation of the "Mobile and Equality" vein which fed the north end of Treasure Peak.

HOMESTAKE MINE

Past production of lead silver ore according to Couch and Carpenter (1943) is $349,000.

One importance of the Homestake area is the replacement of its thin quartzite beddings of high value ore. This replacement of these inch to one foot beddings is a demonstration of the tenor of ore which should lie in greatly thicker sections at the Eureka quartzite horizon which underlies the district, but has never been drilled or tested, in a mineralized environment.

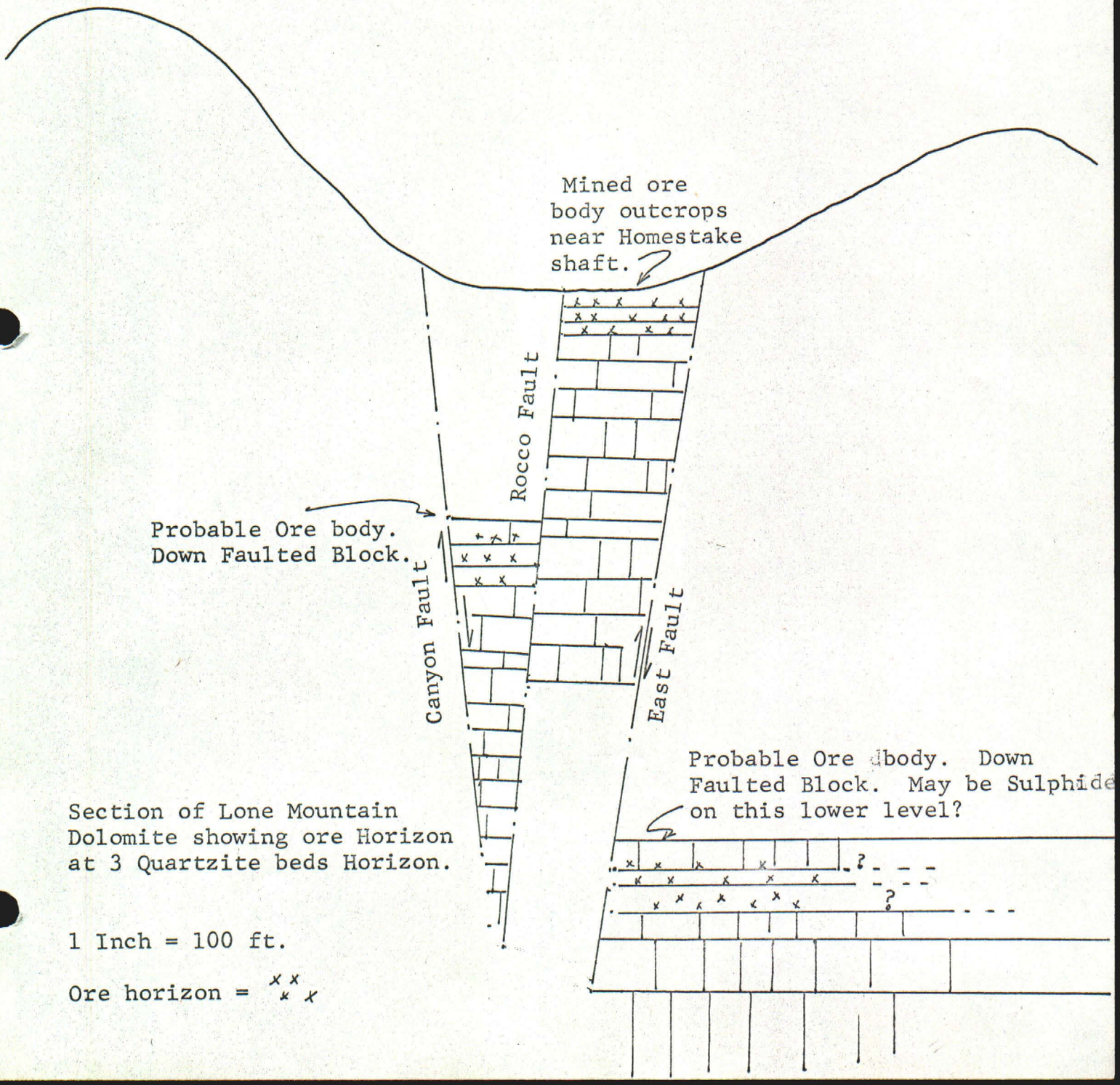
The same veins which fed the Homestake quartzite beddings must have first perculated up through the very thick (estimated to be 350 feet thick) Eureka quartzite beddings.

This target would make a major mine in the world.

An up-faulted en echelon segment of this ore body has recently been indicated. Although not yet confirmed, it lies close to the surface and can be developed by open pitting, and prospected by trenching with a large bulldozer.

ROCCO CANYON

Looking North from Homestake Shaft area.



Section of Lone Mountain Dolomite showing ore Horizon at 3 Quartzite beds Horizon.

1 Inch = 100 ft.

Ore horizon = xxxx

FAY MINE

The Fay Mine was an obvious high grade ore body and one of the first mines located at Hamilton. The ore was, however, impossible to work by the early day methods of extraction which were limited either to the Amalgam Pan or early stamp mills. The ore is high grade, but complex.

A sample of the ore assayed as follows:

Gold	.06	oz.
Silver	14.60	oz.
Copper	3.20	%
Lead	10.40	%
Zinc	1.8	%
Bismuth	.018	%
Vanadium Pentoxide	.72	%

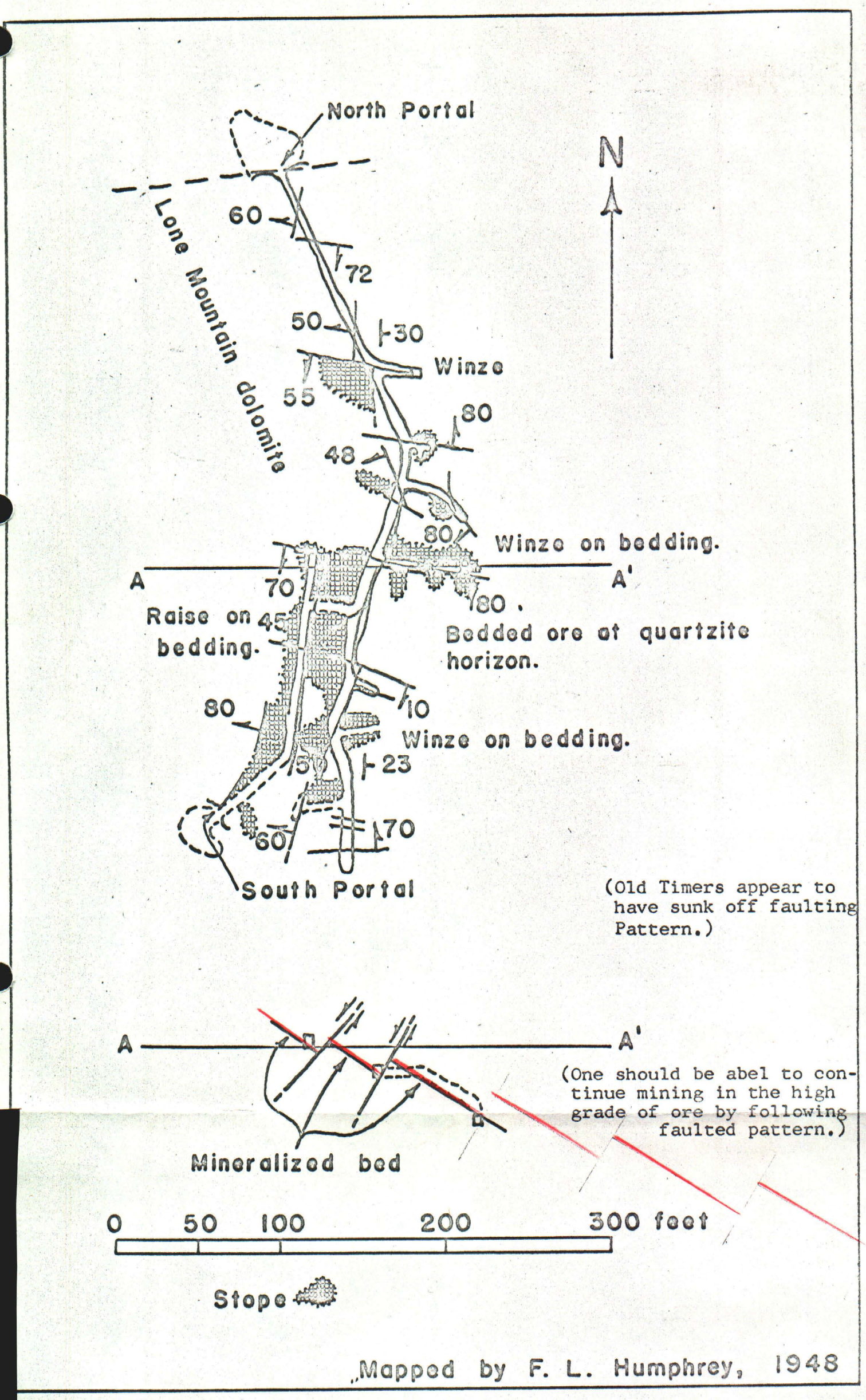


FIGURE 22. Geologic map and section of the Fay mine.

This sample was not a select sample but would probably be typical of the ore that was mined and could be mined on the average from the bedded deposits filled by the east west mineralizing fissures, except it is lower in Silver and Copper than much of the ore mined. The gangue of the vein (bedding) is silicious and also runs approximately 10% iron and various other metals, some of which might also pay; such as Mercury and Molybdenum.

There are probably extensions of this ore bedded horizon which can be mined by additional work.

An important aspect of this horizon is that it shows the replacement characteristics which accompany favorable horizons and structure when cut by the important mineral feeders. A remarkable similarity exists between the thin quartzite beds at this horizon and the quartzite at the Eureka Quartzite horizon which is several hundred feet thick.

It is reasonable to expect that an additional ore horizon for bedded ore will occur in the Eureka Quartzite horizon similar to the Fay type ore deposits which have already been mined. The replacement of the Fay type of quartzite beds is not an isolated occurrence as they also made similar ore bodies in other localities in the district, such as the productive Homestake Mine.

To posit that ore should occur in the Eureka Quartzite beds is born out by the mines two miles northwest of the Fay Mine in the Belmont area of the White Pine District, where ore replacement occurs in the Eureka Quartzite horizon in very feint east west feeder veins; as the Belmont Mines are north west of the main uplift and ore zone and mineralized area. Despite the fact the Belmont area is over two miles from the most mineralized area, the area was productive and is presently being drilled out by Phillips Petroleum who has recently exercised options in the area based on drilling and other study of the area.

The Fay bedding replacement type ore body was a pre-mineral bedding plane of quartzite, also cut by pre-mineral fault pattern. The last phase of fault was the mineral fissure which introduced the ore solutions. As the mineral worked from the outcrop along the 20° dip of the bed they sank on the ore. However, in doing so they got off the up-fault pattern and ran out of ore. The pattern for this ore can be

observed in looking at Figure 22 "Geologic Map and Section of the Fay Mine", as mapped by Fred Humphrey, following this comment, Figure 22.

It should be a relative small amount of work to test this ore occurrence at the proper horizon above the old sinking level by raising up or driving in a new drift at this level.

This pattern of occurrence should persist approximately 1,000 feet easterly to the east boundary fault, which would displace this occurrence on a down fault pattern approximately 500 to 1,000 feet. Even then one can expect it to persist on this lower level.

Following these comments are reports and notes by various geologists and engineers relative to the history of the Fay Mine.

- -

Notes of Survey No. 57
C. T. Fay Lode
July 31, 1872
Thomas J. Read, U.S. Deputy Mineral Surveyor

"The Continental Silver Mining Company's claim upon the C. T. Fay Lode . . . . . is found in a North and South fissure in the Limestone, dipping about 20° to the East and varys from 2 to 4 feet in width. The ore is carbonate and galena and required working by the smelting process, and yields from $75.00 to $100.00 per ton in Silver with a high percentage of lead. About 250 tons of ore have been extracted from the mine, 200 tons of which are still in the dump at the mine".

FAY MINES

Nevada Bureau of Mines Bulletin 57, "Geology of the White Pine Mining District, White Pine County, Nevada," 1960, P. 101.

The mine workings are at the horizon of the quartzite beds of the Lone Mountain dolomite.

Couch and Carpenter (1943) list the production of the Fay Mine between 1870 and 1893 at 287 tons with a gross yield of $15,857. Rough calculations based on the approximate size of the stopes indicate that at least 1,200 tons of rock were mined.

Since the lead smelters erected in this area in the 1870's were reportedly unsuccessful, it was apparently not until about 1890 that the base metal ores in the district were mined and treated profitably. The complex nature of the ore no doubt created a difficult metallurgical problem. Seemingly good ore was placed on the dump and most of it was later screened and shipped.

Three samples taken from the mine for assay yielded the following:

	Copper Percent	Lead Percent	Zinc Percent	Silver Ounces/Ton
No. 1	8.0	5.2	9.4	20.20
No. 2	4.2	6.7	1.3	18.80
No. 3	25.2	Trace	8.1	0.80

Sample No. 1 was taken from a small stock pile on the dump. Sample No. 2 is from a pillar about 100 feet from the face of the main drift. Sample No. 3 was taken from approximately 15 feet below the collar of the winze shown on the cross section. The ore is a copper ore with subordinate lead and zinc. Apparently the silver is associated with the lead.

The beds dip approximately 25° E. The ore is cut by at least three west-dipping faults with 8 to 15 feet of displacement, but the ore control is primarily related to the south-dipping east-west fractures. The ore values diminish toward the face of the main drift, probably due to the lack of good mineralizing cross-fractures. The series of small north-dipping faults at the face cut off the remnants of the mineralization. The drag on the bedding indicates reverse movement along this fault zone.

Similar mineralization might be expected elsewhere on the west slope of Treasure Hill where the quartzite beds intersect zones of pre-mineral faulting and shearing.

C. O. D. MINE

The C. O. D. Mine is located along the main fissure vein which is probably the main feeder vein for the Fay Mine.

The C. O. D. vein is developed by two shafts which can no longer be entered without putting in new ladders. Little mining beyond prospecting was done.

An assay of some of the ore taken off the dump follows:

Gold	.01	oz
Silver	33.00	oz
Copper	20.40	%
Lead	29.1	%
Zinc	16.0	%
Bismuth	0	
Vanadium Pent.	.003	%

The ore gangue is silicious, with 6 to 8 Percent of Iron and a signifigant amount of Molybdenum, Mercury, and Germanium present in the ores.

The following notes depict the Engineer's opinion who was in the mine when it was patented.

- -

Notes of Survey No. 53
C. O. D. Lode
May 14, 1872
Thomas J. Read, U.S. Deputy Mineral Surveyor

"The Lode is found in an East and West fissure of the Limestone and extending downward nearly vertical through the horizontal strata of limestone. The average width of the vein matter is 5 feet and is well defined as far as explorations have extended.

The ore is carbonate and galena. Samples have yielded as high as $500 to the ton. The average value may be stated at $45.00 per ton. It will require working by the dry crushing and roasting or by the smelting process. No ore from the mine has been worked".

Imperial Mine

The Imperial Mine is upon the strongest vein system developed in the Hamilton mining area. This vein protrudes near the exact center of the uplift at the most mineralized center of the district. The vein makes very rich ore along an ore shoot several hundred feet long on an east west trend. The vein width was stoped out as much as 15 feet wide and has a tendency to pinch and swell. The early miners could not work the ore with much success despite the high silver grade due to the complexity of the ore which contains a high percentage of Copper, Lead, Zinc, and other metals.

Lessees worked the mine at a later time than the early period and one recorded shipment made in 1911 ran 70.5 oz. Silver, 4.32% Copper, and 35.6% Lead.

The property is simply a strong fissure vein with every appearance of continuing down dip in good ore. The early lessees worked only the surface and no attempt was made to do any sort of sinking and development work.

The Onetha vein which does not carry nearly as high a percentage of Copper, Lead, or Silver, is a parallel vein approximately 1,000 feet south of the Imperial vein and it has been proven to continue in depth as they have sunk to the 160 foot level without the ore diminishing in strength or value. As a matter of fact, the opposite seems to be taking place as the veins come together in one stronger shoot. The Imperial vein should be stronger yet.

The Imperial vein and the C. O. D. vein are probably one vein, being on different ore shoots.

The tenor of the ore from the veins is best summarized by the above shipping record. However, the following assays also give some idea of the ore values which should persist at depth on the Imperial ore shoot.

OUR MOTTO: — WHAT THERE IS IN IT, NO MORE NO LESS.

EDMUND E. PHILLIPS, VICE-PRES.—GEN. MGR. M. E. PHILLIPS, SECRETARY

THE COLORADO ASSAYING COMPANY

(INCORPORATED)

ASSAYERS AND CHEMISTS

2244 BROADWAY

DENVER 1, COLORADO Sept. 12, 1969.

COPY

REPORT ON DETERMINATIONS MADE FOR— Mr. Frank W. Lewis,
120 Greenridge Drive,
Reno, Nevada. 89502.

SAMPLE MARKS	METALS	Amount per Ton Ozs.	Amount per Ton Hds.	PER CENT	Value per Ton Dollars	Value per Ton Cents
(1) Gobin Vein IMPERIAL CLAIM (vein continues. More ore here. On main Tunnel Level under ladder) Indication that this same vein would continue down on Strike and dip on Rake of ore.	Gold		.01			
	Silver		25.70			
	Copper			7.65%		
	Lead			23.7		
	Zinc			13.1		
	Bismuth			none		
(2) U. P. Raise IMPERIAL CLAIM (Up raise. Above wooden ore shoot Much yellow and green. Reminant of shipping grade. Some of this type material can be mined where reminant.)	Gold		.01			
	Silver		47.40			
	Copper			7.20%		
	Lead			29.2		
	Zinc			5.5		
	Bismuth			none		
(3) I.M.P. #1 IMPERIAL CLAIM (1 foot flat ore, seems to be continuing. East end of Imperial. Up raise from Lowest tunnel in Ore chamber.) Brown Limonite, a little green Calcite. Not much Qtz.	Gold		.01			
	Silver		52.80			
	Copper			7.05%		
	Lead			33.0		
(4) I.M.P. #2 IMPERIAL CLAIM (same place as above only in ceiling. Vug of ore. Brown crushed up. Calcitic. Showed cerrusite)	Gold		.01			
	Silver		29.70			
	Copper			1.14%		
	Lead			37.1		
	Zinc			17.0		
	Bismuth			none		
(5) # 3rd Tunnel U. P. IMPERIAL CLAIM There is about 1 foot of this ore continuing on up. It is close to the surface and also appears to go down. West of Shaft. Short prospect drift. No road.	Gold		.03			
	Silver		97.60			
	Copper			10.75%		
	Lead			29.1		
	Zinc			2.7		
	Bismuth			0.01		
(6) # C.O.D. Vein Dump PC2 C.O.D. CLAIM Pieces of small ore Pile on dump. Can't get down shaft but vein looks fairly small where visable. But, it is continuous and probably makes stopes along the vein. Second shaft East of Fay South Portal on C O D Patent claim.	Gold		.01			
	Silver		33.00			
	Copper			20.40%		
	Lead			13.2		
	Zinc			16.0		
	Bismuth			none		
	Vanadium Pentoxide			0.003		

GOLD AT _____ PER OUNCE SILVER AT _____ PER OUNCE

LEAD AT _____ PER UNIT COPPER AT _____ PER UNIT

THE COLORADO ASSAYING COMPANY

E. E. Phillips

Iva Mines Group

The IVA MINES GROUP of claims covers the lower Shermantown Canyon area, south of Hamilton, Nevada.

Ore horizons exist northerly, southerly, westerly, and some small fractures showing Silver and Copper occur upon the ground.

The main structure is the Shermantown Fault itself.

The ore intrusive horizon may be associated with the Shermantown Fault and it may lead to ore bearing channels fed by the main intrusive. Drilling, soil sampling, mapping, and careful geological studies may well develop ore bodies of several types.

The assays on the following page were collected from various small dumps from old prospect shafts and pits.

One of the best showings uncovered in the Iva area is a vein system showing two parallel veins with ore in the hanging wall vein, and ore in the foot wall. These two veins make a total vein of about 4 to 5 feet. If the ore spreads and makes the total system ore it could make an important ore body. The area is near the top of the Nevada Limestone, and has a shale hanging wall and reminant shale in this immediate vicinity. This set of geological conditions is identical to the ones that made the fabulously rich deposits on Treasure Hill.

I would recommend an open cut along this feeder vein system and uncover it where it is still capped by the Pilot Shale, which is the same shale that capped and held the large high grade ore bodies on the Treasure Hill and Eberhardt Mines. An ore body would occur at junctures of north and south faulting.

The footwall of this system assayed:

Gold	Tr
Silver	6.20

This establishes the fact the vein is a mineral feeder system.

The Iva Mines Group is more of an exploration target than the Fay, C.O.D., and Imperial systems which have been productive.

OUR MOTTO: — WHAT THERE IS IN IT, NO MORE NO LESS.

EDMUND E. PHILLIPS, VICE-PRES.—GEN. MGR. M. E. PHILLIPS, SECRETARY

THE COLORADO ASSAYING COMPANY

(INCORPORATED)

ASSAYERS AND CHEMISTS

2244 BROADWAY

DENVER 1, COLORADO April 19, 1968

REPORT ON DETERMINATIONS MADE FOR— Mr. Frank W. Lewis
Van Nuys, Calif.

SAMPLE MARKS	METALS	Amount per Ton Ozs.	Amount per Ton Hds.	PER CENT	Value per Ton Dollars	Value per Ton Cents
SS#1 ½ ton LOWER VEINS ORE PILE	Gold		.01			.35
	Silver		14.80		29	.60
	Copper			0.35	2	.80
	Mercury			none		
SS#1 VERY SMALL V. QUARTZ + LIME, BUT SHOWED SOME ORE MTL.	Gold		.01			.35
	Silver		1.50		3	.00
	Copper			0.05		.40
	Lead			0.2		.50
SS#1 3 ton waste, NO COLORS.	Gold		trace			
	Silver		2.10		4	.20
SS#1 20 ton Ore Pile BLACK + WHITE	Gold		.005			.18
	Silver		4.60		9	.20
Irvine - Ore Pile EAST	Gold		.01			.35
	Silver		4.10		8	.20
Irvine - West End BROWN SILICA (SOME LIME) LARGE PILE, NO CU SHOWING	Gold		.01			.35
	Silver		6.20		12	.40
	Copper			0.04		.32
	Lead			0.1		.25
IRVINE (RIDGE) — X SS#1 LOWER VEINS ARROWS CAT WORK						
□ OLD MILL IN SHERMAN TOWN CANYON						

REMARK
EAST + WEST VEINS CUT LIMESTONE
A CONTINUATION OF MAIN HAMILTON SOURCE PARALLEL MINERALIZATION

THE COLORADO ASSAYING COMPANY

GOLD AT $35. PER OUNCE SILVER AT $2. PER OUNCE
LEAD AT $2.50 PER UNIT COPPER AT $8. PER UNIT

Ed Phillips

Irvine

The Irvine Patent is parallel and a short distance north of the Iva showing.

This vein is a strong east-west mineral break. Development shows quartz and calcite in the vein down a shaft dipping about 45° down the vein.

One should assay, map and sample the Irvine Patent as a principal mineral break.

The ore is running only about 4 to 6 ounces in silver. However the amount of quartz and size of vein is exceptionally strong for the district, making the Irvine ore shoot a principal target.

One sample 10 feet along a vertical fault assayed:

Au	Trace	
Ag	18.8	
Pb	None	
Zn	None	
Hg	None	(trench and 20 ft. shaft)

East and West fault intersecting several smaller faults.

PILOT SHALE AND GUILMETTE LIMESTONE

THRUST FAULT DEPOSITS

The high grade deposits on Treasure Hill, Pogonip Flat, Eberhardt Mine, and the California Mine were of similar types. These were the bonanza deposits of the district.

These deposits were found outcropping in the district by early prospectors between 1864 and 1868.

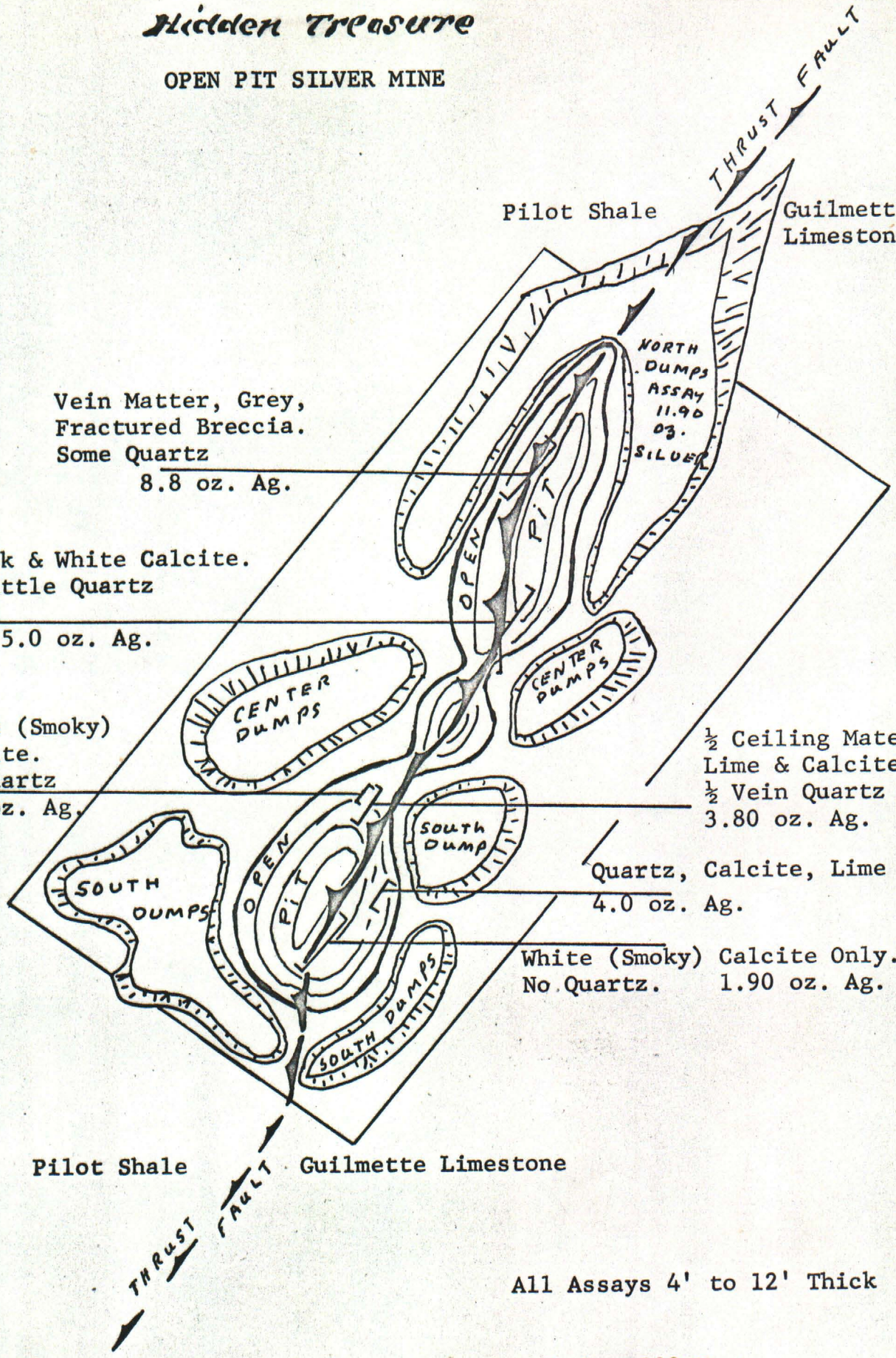
The system which produced these mines was not understood and therefore the early discoveries were limited to outcropping ore bodies.

Recent work suggests additional deposits of this class should be uncovered by drilling into areas covered by Pilot Shale.

The following notes give some historical background and description of the Best Chance Mines property in this environment along with some suggested exploration programs.

Hidden Treasure

OPEN PIT SILVER MINE



Vein Matter, Grey, Fractured Breccia. Some Quartz
8.8 oz. Ag.

Black & White Calcite. A Little Quartz
5.0 oz. Ag.

White (Smoky) Calcite. No Quartz
2.4 oz. Ag.

½ Ceiling Material Lime & Calcite ½ Vein Quartz
3.80 oz. Ag.

Quartz, Calcite, Lime
4.0 oz. Ag.

White (Smoky) Calcite Only. No Quartz.
1.90 oz. Ag.

All Assays 4' to 12' Thick

1 Inch = 100 Feet

CHARTER OAK MINE*

"Charter Oak, belonging to the White Pine Mutual Milling and Mining Company, is situated on the east side, toward the north end; adjoins the Emersley, of which it is a continuation, and is almost due north of the Hidden Treasure, and about 500 feet below the summit. May 17 the shaft was 50 feet deep, and contained good ore all the way. A large amount has been reduced at their mill, in Hamilton, parts of which yielded $450 per ton. Some of the ore found at 50 feet depth has a light yellowish green color when taken out, but on exposure to the sun it changes to a purplish hue. The mine is owned in Philadelphia, and was located June 10, 1868. It contains chloride and sulphide of silver. The vein is believed to be 30 feet wide. July 10, 1869, the shaft was down 70 feet. The north drift, in 12 feet from the 35-foot level, was in $60 ore."

HIDDEN TREASURE MINE*

"This was the first mine discovered on Treasure Hill. The locality was shown to A. J. Leathers, the blacksmith of the Monte Christo Company, by an Indian. But the unusual formation of the deposit bewildered him so, that for fear of missing the ledge, he did not locate his claim until the middle of September, and not before he had drawn Mr. Marchand, the superintendent of the Monte Christo Company, into the secret.

When the Eberhardt and other mines were discovered, the excitement began, and the district was soon filled with people. The Hidden Treasure still holds its rank as one of the first mines in point of value as well as discovery. It is worked mainly by open cuts, and the deposit lies between a stratum of clay slate above and limestone below, its dip necessarily following that of the strata on the hill. It crops out on the east side of the summit very near the crest, and at that place lies quite flat. It has been stripped for 600 feet in length, and many large excavations have been made. The ore abounds in horn-silver, and as at present opened the mine can easily raise 100 tons per day. The shipments during the past summer have varied from 10 to 40 tons per day, most of which were packed on mules. It is difficult to give the thickness of

HIDDEN TREASURE MINE*
(continued)

the vein; one cut run across it seemed to indicate a width of 97 feet, but that inference was based upon the supposition that the dip was forty-five degrees. If the angle of the dip should be less, as is almost certainly the case, the length of the cut would give the real thickness of the deposit considerably too high. However, the vein is large enough to satisfy the most rapacious company which ever mined for silver. A tunnel was in, on June 26, 98 feet. Surveys indicated that 52 feet more would strike the ledge at a depth of 200 feet from the surface, but this is again based upon what is probably a false supposition of the dip. The open cut has been run across to the west or hanging wall, and the whole body of the ledge thus exposed is being breasted to the south by open work. July 10, the south breast was not yielding as well as it had been, but a new deposit was found west of what had been supposed to be the west wall. A suit is pending for a large portion of this mine. The locators of the Hidden Treasure complied with the laws of the district in putting their notice on the ground, but it is claimed that they did not cause the same to be recorded for a long time after the ten days which are allowed by law from the time of posting the notice. The locators of the Rathbun mine near by, thinking they had a point on the Hidden Treasure in this, ran their claim over a portion of the Hidden Treasure ground (I think about four hundred feet) and got their claim recorded first. The Hidden Treasure being in possession, instituted an action to quiet title, thereby compelling the Rathbun men to go to their proofs and defend their claim or forever hold their peace. The Hidden Treasure men, while they admit the patent fact that their notice was not recorded in time, claim that it was delivered to the recorder before the Rathbun notice, and that it was mere inadvertence in the recorder to enter the Rathbun notice out of its order, and that they cannot be made to suffer for this fact. The matter will probably be compromised after a strong show of fight on both sides, as it is very dangerous work to litigate at title in White Pine where so much is involved. Both parties are generally taken very much by surprise by the testimony introduced before they get through. It is astonishing how witnesses will turn up who happen to know always just what is necessary to suit the particular wants of the case. The stock of the Hidden Treasure

HIDDEN TREASURE MINE*
(continued)

stands pretty firm at $30 per share. There are 16,000 shares, which puts the present market price of the mine at $480,000.

Hidden Treasure Consolidated is the first extension north of the Hidden Treasure. It has been pretty well prospected and the ledge uncovered about one hundred feet. June 4, they had 50 or 60 tons of ore on the dump, which resembled that from the original. Two inclines are being sunk with satisfactory results. The ledge improves, so far, in width and appearance, and there is scarcely room for a doubt that it is the same 'contact vein' opened in the original, as it rests on the same bed of limestone and has the same clay slate above. There is no indication between the two mines of any disturbance. July 10, the mine was looking well; both shafts had got into fair ore. The incline was down 60 feet, at which depth a winze had been sunk eight feet in a mixture of limestone, quartz, and spar stained with chloride. North shaft down 15 feet in ore. Incorporated; 12,000 shares; capital stock, $1,200,000. Stock holds pretty steadily at $2.50 per share."

HIDDEN TREASURE SOUTH MINE*

"Working steadily with good returns."

HEMLOCK MINE*

"July 3, was sinking and drifting in ore. Fifty sacks were on the dump and a large body in sight. July 10, was running a cut east and west, south of the shaft, which showed ore of good quality within three feet of the surface for its entire length."

* Statistics of Mines and Mining in the States and Territories West of the Rocky Mountains, by Rossiter W. Raymond, 1870.

SWEET WATER MINE

The Sweet Water Mine includes the Hidden Treasure and other patents on Treasure Peak.

The area was one of the earliest producers of rich silver ores.

The high grade ore replaced the Nevada Limestone under the doming influence of Pilot Shale. This example of the influence of shale on concentration of ores suggests another target horizon where White Pine and Hamilton Shale could cup and fold and hide important silver deposits in a geologic setting similar to Treasure Hill, but no where tested in the district.

This area on Treasure Peak offers large dumps and close to the surface open pit bedded ore which would offer large tonnages of mill grade feed.

The tonnages of dumps and the replaced bedding should be engineered and measured.

Phillips Petroleum Corporation has drilled in this area, and according to their reports, commercial ore beddings are prospect. Phillips has overlapped and adjoin the patents of Best Chance. Possibly a joint effort at development would be most feasable due to the property picture.

EUGENE ROBINSON MINE

Telegraph Peak is covered by Joana Limestone and underlying shale (as are the Sweetwater Patent, the two Emerald Isle Patents, Nimrod Patent, and several other claims in this area).

Recent work by Roscoe Smith of the U.S. Geological Survey, points out the thrust fault along the Pilot Shale - Guilmette Limestone contact channeled the high grade ore.

These areas should be close interval drilled through the shale to test for additional bonanza type ore bodies or low grade open pit type material.

STAFFORD MINE

The Stafford Mine is improved by a 400 foot shaft being one of the deepest workings on Treasure Hill.

The ore formed at a juncture of east west faulting and the Treasure Hill North-South Fault.

There is some 35 ounce silver ore remaining in the mine. Additional ore may be developed.

Sam Bida, Engineer of Mines, investigated this property and expresses the opinion that the shaft as sunk on the Stafford Mine followed the north south trend of the Treasure Hill fault and therefore passed southerly off the juncture of favorable bedding and east west mineralizer.

Therefore he concluded additional ore should be developed by drifting easterly along the favorable bedding horizon.*

* Verbal communication
Sam Bida, Professional Engineer of Mines
2160 Crawford Street
Ely, Nevada

MAZEPPA MINE*

"On the south side, below the California, and southeasterly from it, in the canon leading to Eberhardt City. It is considered one of the leading mines of that neighborhood. June 19, was working in rich ore. An incline from the old shaft had reached a depth of 28 feet, where 2 9-foot breast was being pushed into the rich ore. June 26, the principal work was done at a depth of 23 feet; on this level a breast 15 feet wide by 8 feet in height had been pushed 15 feet to the north in a large body of good ore. To the west another breast 15 feet broad by 12 high had been driven 20 feet, descending gradually with the dip of an apparent foot-wall which is, in fact, only a stratum of limestone separating the upper deposit from one beneath, which has been cut by the shaft. The west breast was all ore, save the limestone under foot, and of a higher grade than that in the northern one. The principal work was then being done west, and the intention was to breaden the breast into a vast chamber, with sufficient pillars left to secure the roof. July 3, sinking in the shaft was continued with the intention to go down 40 feet; the west breast, 23 feet in, was being cleared preparatory to sinking an incline. Work in the north breast was stopped. The intention was to open another chamber at a depth of 35 feet beneath the layer of limestone, on top of which breasting was then carried on. The shaft which had penetrated this stratum was in good ore July 10. The west ore breast had been followed to a point where the limestone stratum beneath (penetrated by the shaft) had changed into a red conglomerate of lime spar and quartz, carrying chloride. Workings showed the ore under this stratum continuous and good. This Mazeppa is not incorporated. The incorporated Mazeppa quoted on the San Francisco stock board is an undeveloped extension.*

* Statistics of Mines and Mining in the States and Territories West of the Rocky Mountains, by Rossiter W. Raymond, 1870.

CALIFORNIA MINE*

"This is the most noted mine on the south side below the Eberhardt. It was bought from the original locators in July, 1868, by John Moffet, and by him sold to one of the Stanford brothers, of California, in December of the same year, for $50,000 coin. At the time this price was paid for it there had not been much over $1,000 worth of work done on it. The Stanfords began stripping the dirt off the ledge, and very soon uncovered it for 400 feet in length, finding it very uniform in its course and width. The mine is situated about one mile south of the Eberhardt. It is 50 feet wide; hanging wall, red shaly rock; foot-wall, limestone. The ore is rich in chloride and bromide of silver. There is more of the latter present at this mine than in any other mine in the district. The crushed ore, up to May 13, yielded from $300 to $1,000 per ton. The course of the "vein" is east and west; the dip 48° south. Much of the ore resembles the cinders of a blacksmith's forge mixed with ashes. The company has never employed a very large force of men in the mine, as they have been busy since its purchase erecting their mill at Eberhardt City - the Stanford mill spoken of in connection with the Aurora South. June 19 they had 400 tons of ore on the dump, besides 100 sacks of 175 pounds each of selected ore, worth $1,000 per ton. July 2 the last of 120 sacks of this rich ore was shipped to the Big Smoky mill for reduction. It was expected they would have 2,000 tons of the average-grade ore ready for the mill September 1. The mine is worked by shafts and connecting drifts. Incorporated January 29, 1869; 15,000 shares; capital stock, $1,500,000; 800 feet in the location."

* Statistics of Mines and Mining in the States and Territories West of the Rocky Mountains, by Rossiter W. Raymond, 1870.

CALIFORNIA FISSURE

The California Fissure is at the Southerly end of the claims as shown on the Ownership Map of Properties, Plate I.

The occurrence appears to be typical of the district, being a replacement of favorable limestone under the Pilot shale which has eroded away and left the ore exposed on the surface.

One assay of material in the open cut went as follows:

.02 oz. Au; 802.44 oz. Ag; .16 Cu; .94 Pb

The early prospectors soon ran out of this high grade material and in an attempt to find where it came from they sank a 200+ foot shaft on the Eberhardt Fault as it is the structurally dominating feature and no doubt seemed to be the source for the ore. The ore appeared to be at the contact of this tremendous black and white calcite filled fault. They encountered no ore in this shaft and although they drifted back into the footwall on 3 levels, they developed no mineralization. (See Plate III).

The early prospectors assumed the south dipping Eberhardt Fault was the mineralizer. This appears to be an error. There is on the surface a steeply dipping vein that is a little North of the Eberhardt Fault, the California Fissure. It dips in the opposite direction and strikes North West at this point, but is generally what would be classified as an East West vein.

None of the exploration that the early prospector did would have cut the mineralizer as indicated on Plate III.

LONG HOLE EXPLORATION - CALIFORNIA PATENT

Therefore one of the first exploration endeavors is to long hole or drift into the area that would explore this vein, the hanging wall of the California Fissure. The sketches are noted as Plate VII. One might think this a small target but not only would this type of exploration lead to increased knowledge of the patterns of mineralization but one might find an ore shoot on the fissure that would lead downward. Then too, one should remember that the White Pine Mining District produced some of the richest silver ore ever found on Earth - 3 millions of dollars worth being taken from a space 70 feet long by 40 feet wide by 25 feet deep on the old Eberhardt Claim. (This claim is on the next East West fissure northerly of the California Fissure.) There is no rule of nature why additional ore bodies like this could not be found nor why they could not be very much larger.

Drifting along these East West fissures would be an ideal method of prospecting. Drifting and sinking is no inexpensive task unless one is in ore at least part of the time to offset expenses and give credence to the target or vein. This should be the case along this vein.

CALIFORNIA FISSURE - VEIN OFFSET (EASTERLY)

The second target on the California Fissure should be to look for the extension of the California ore body across the Eberhardt Fault Easterly (Southeasterly) at the Devonian Limestone, Pilot shale contact. (See Plate VII.)

The East West mineralizers followed the North South faulting. Therefore it should not be difficult to locate the vein, if offset by local post-mineral movement of the Eberhardt Fault. This is a very important target easily explored for by shallow drilling, although drifting would be the best method. The target here is high grade ore; an exciting prospect of drilling into a virgin area of high grade.

It may be there is no faulting at all but simply a steep rake of the ore easterly.

PRELIMINARY DISCRIPTION

CALIFORNIA VEIN EXTENSION PROSPECT

This prospect is based on the likelihood of the California Mineral Vein extending beyond the Eberhardt Fault. The extension would necessarily lie buried beneath the Mississippian Pilot shale and younger rocks which outcrop on the surface south of the Eberhardt Fault. Preservation of the uppermost beds of Devonian Nevada limestone beneath the Pilot Shale (eroded away north of the Eberhardt Fault) would produce a situation not unlike the Treasure Hill area to the north. Replacement and mineralization of these uppermost beds of Nevada limestone adjacent to the vein is a distinct possibility.

The location of this possible vein extention south of the fault is based on photogeology and reconnaissance work on the ground. There is no evidence for lateral displacement along the Eberhardt Fault in the area of the California Patent Claim, although this possibility should not be ruled out. The area should be maped in detail prior to drilling.

Robert C. Gardner

Robert C. Gardner
Geologist

PASSAYANK

EXPLORE WESTERLY ALONG CALIFORNIA FISSURE

Another target would be to go into the area Northwest of the California Shaft. This area can be described as having two parallel North and South workings two hundred feet or so apart. They both produced similar high grade ore. A series of shallow cuts, pits and drifts close to the surface explored the two North South ore zones. These workings lie approximately 1000 feet Westerly (Northwesterly) from the California Patent Shaft and the center of them appears to be on strike with the California Fissure. These type bedding replacements offer open pit or open cut possibilities for Copper Silver ore.

We observe a pattern of chasing these North South breaks and removing the high grade ore where it was exposed on the surface. Cross breaks in favorable beddings channeled this high grade.

The extent of the ore along the North South pattern seems to be limited both to the North and South by the alteration pattern. That is, when the North South breaks approach the sides of the East West alteration zone, which may vary from a few feet to a few hundred feet, the mineralization peters out and stops, seeming to limit the mineral along the North South breaks to the width of the alteration zone that accompanys the East West break. The depth is further limited by the depth of the Breccia zone or favorable bedding. This might prove to be the general explanation that is the limit of the ore along the upper fissures as well, although this zone may be wider, locally in bedding replacements or wider shears. (Then too, one needs to keep in mind thick favorable beddings could make huge deposits.)

One target area then is the California Fissure vein where it leaves the California Shaft and strikes Westerly (Northwesterly.) This may not be as easy as one might imagine due to two factors. The first feature is that these East West fissures are not huge channels but cracks or fissures that allowed the solutions to ascend. Only locally will they have ore shoots. On the surface they tend to heal over and are often impossible to follow exactly. In this type of limestone they almost seem to disappear, locally. Fortunately the alteration zone itself that accompanys the breaks

is more evident with some good boundaries, generally. Underground by drifting the veins are much easier to follow, and often make ore shoots (as at the Onetha Mine).

Notice how there were three distinct mineral showings. First the open cut at the California, then the two parallel showings North and South trending. By themselves they offer no opportunity for either depth or strike length. Now then apply the theory that they are associated with the California Fissure and all the area between the two and off both ends offer target area, as well as depth.

Some of the assays taken in this area follow:

Ag. oz. per ton	Cu%	Pb%	
12.98	8.03	8.17	Old ore sorting pile.
11.36	6.32	10.76	Small vein in open cut.
13.94	17.31		Ore pile 60 ft. above shaft.
3.16	2.75	1.52	Second prospect above shaft.
.98	.672	.98	Country rock 20 ft. from vein.

I. P. ANOMALY

An I. P. Anomaly with highs as much as 88 times background was developed on the property.

Three shallow 250 ft. incline holes were spotted so as to pass underneath the anomaly, evidently reasoning an intrusive mass may underlie the area.

None of the holes intersected the anomaly. No anomalous material was discovered; therefore, the anomaly remains untested.

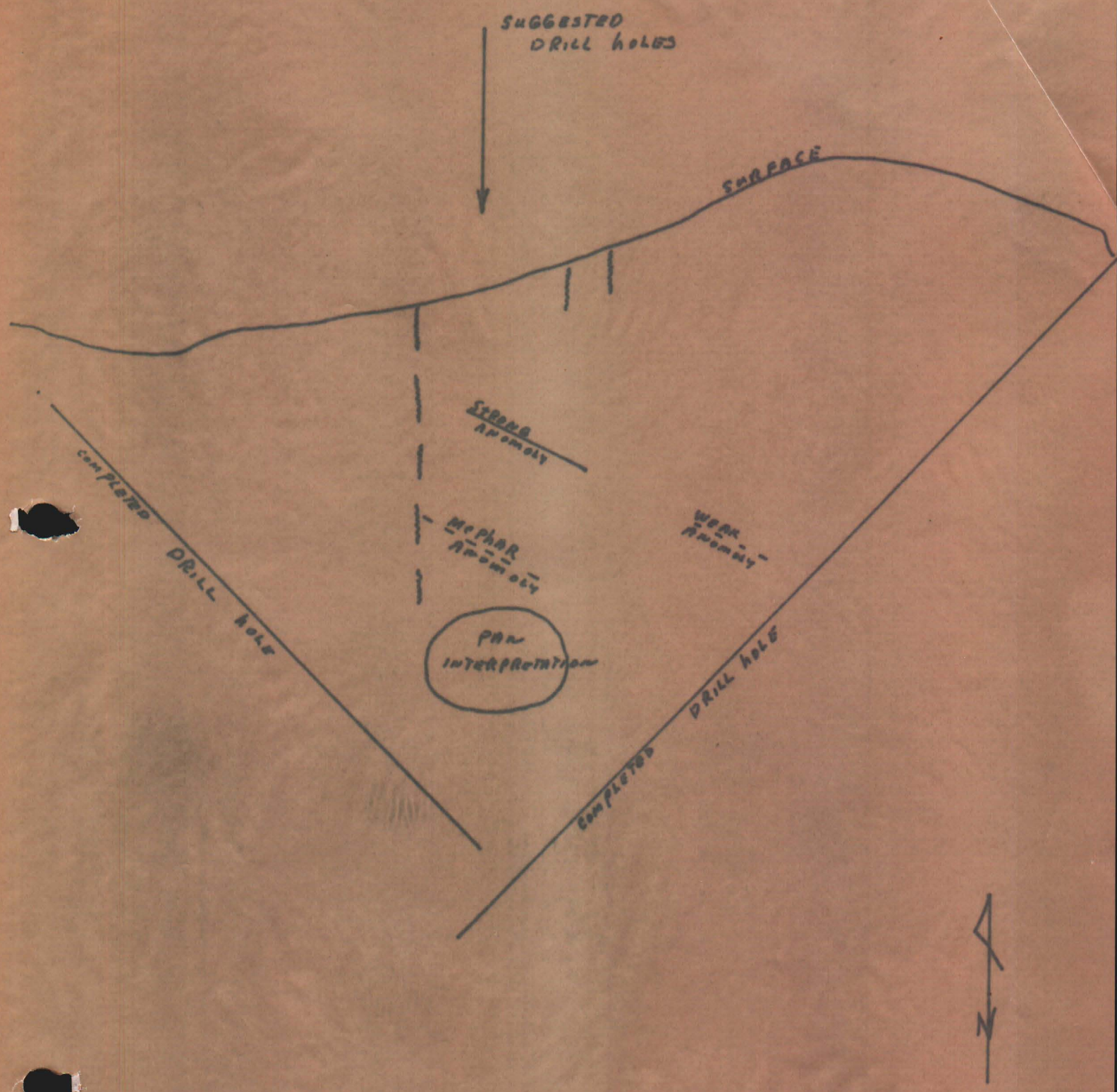
Two targets are suggested by the anomaly.

The first is the productive Pilot Shale Guilmette contact. Dr. Einar Erickson, geologist, suggests this horizon exists 50 to 150 feet below the surface at the site of the anomaly, with north and south limiting faulting suggested to the east and to the west. Shallow vertical drilling would quickly test this horizon. Three interpretations of the depth of the strong anomaly have been given; at 50 feet, 100 feet, and 150 feet. The previous drilling passed to the side of and under all three.

I. P. Anomoly Map

Picture. Shows I. P. Anomoly and realationship to california Mine, and Eberhardt Fault.

F. W. LEWIS
120 GRE RIDGE DRIVE
RENO, ADA 89502



Side view

1 inch = 50 FT

The second target is related to mineralization following east-west mineralizers.

In drilling three shallow 250 foot incline holes, the east-west control was ignored and the holes were themselves drilled east and west, away from east-west mineral veins, thus precluding the possibility of intersecting elongated mineral veins like those found elsewhere in the district.

On the Eberhardt claim 3 to 5 million ounces of silver ore was developed along an east-west mineralizing fissure. The size of the ore body (remaining after erosion) was 40 feet deep, by 70 feet long, by 25 feet wide, with lower grade ore surrounding the main mass.

On the California claim which is approximately 750 feet southwest of the Passayank anomaly, on strike, the ore body was about 300 feet long and 50 feet wide and 15 to 20 feet deep in a flat cigar shape. Much of the ore went over $1,000 per ton. East west veins are obvious with the lode.

One ore chamber on Treasure Hill weighed 50 tons; it was pure silver.

The chance of hitting this type of ore body 50 to 150 feet underground without planning ones holes relative to the geology would be nearly zero. Drilling along the strike of the vein would greatly reduce ones chance of hitting one of these high grade ore bodies, which would be very difficult in any event.

However, the fact that we were able to predict where this ore body (anomaly) might occur bodes well for finding and predicting silver ore bodies of the Treasure Hill type.

No law of nature exists that these ore bodies for silver in terms of 2% to 20% silver (as mined in the early days) could not occur in very large economic units in re-occurring patterns.

The prospector of the 1860's was limited to high grade ore bodies that were exposed on the surface, or blind sinking. The geologist today is not so limited in that he is challenged to find the explanations for these early day discoveries

and then project the findings so that he can find additional ore bodies that do not expose themselves. Silver oxides as well as silver sulphides are conductive of electrical current.

Finely tuned geophysical methods and a careful understanding of ore genises and geology may lead us to a predictable pattern of ore occurrence.

You are invited to read again the Historical Note written in 1870, from Statistics of Mines and Mining in the States and Territories West of the Rocky Mountains, by Rossiter W. Raymond. The description of the California Mine which describes the eroded remnant of the California ore body as being rich in "chloride and bromide of silver . . . . . much of the ore resembling the cinders of a black smith's forge mixed with ashes."

The I.P. Anomaly is most likely caused by a bedded high grade silver ore body of this type, or a series of such ore bodies lying more or less parallel to each other along east-west breaks.

However, as thes I.P. methods are not discerning it may be desirable to conduct more geophysical studies to pin point this anomalous material more exactly. Geophysical instrument experience in dealing with low volume (high value) silver must be gained.

Drilling on a vertical pattern by rotary methods would be desirable and much less expensive.

Geophysical techniques applied underground down the drill holes themselves may be a more efficient measurement of depth of target as well as directional.

IP work was done upon a very local scale limited to outcropping areas of obvious minerals and limited to very shallow depths of 200 feet or less.

The entire claim group should be gone over by IP methods, with emphasis on correlating the work with geology.

One should do both shallow and deep work. For example, the anomalies on the Passayank area were still progressing in all 4 directions, although they seemed to be getting somewhat weaker toward the sides. This may be due to deepening of an ore body, just as well as a diminution of the anomalous material. Much more geophysical work is called for.

NO. 5 PROSPECT

The No. 5 Prospect is an apparent westward extension of the California-Passayank vein system.

Ore from an outcrop assays as follows:

Au.	Ag.	Cu.	Pb.
Tr	43.90	9.54	1.70

No work has been done as there is no road to the prospect.

It is situated on the Link Number 5 Claim.

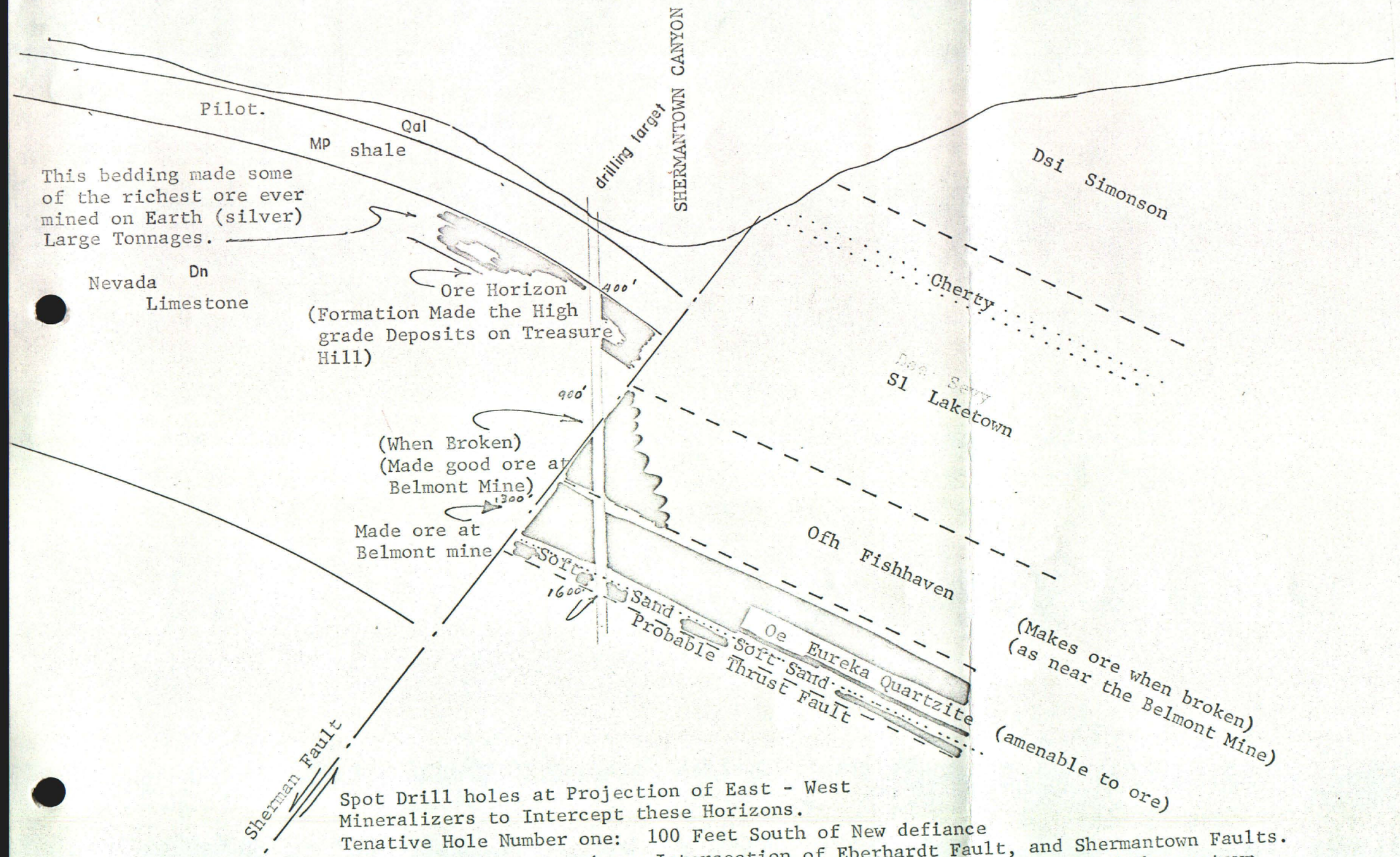
WHITE PINE AND HAMILTON
SHALE HORIZON

The White Pine formation (upper and lower Mississippian) has sections similar to that which produced the high grade ore on Treasure Peak; that is, shale overlying limestone.

It is very possible the same conditions of daming by shale to cause flooding of solutions should prevail.

Where these formations are cut by the Eberhardt Fault and east-west mineralizer veins should be given special attention.

Looking Northerly



Spot Drill holes at Projection of East - West
Mineralizers to Intercept these Horizons.
Tenative Hole Number one: 100 Feet South of New defiance
Patent claim corner. (near Intersection of Eberhardt Fault, and Shermantown Faults.
Tenative site no. 2. 100 Ft. North of Log Cabin and Narrows South of Shermantown.
(Shallow Holes on Target No. 2 for Nevada Limestone horizon 200 ft. ±

SUMMARY AND COMMENT
OF THE
FOLLOWING FOUR BEDDED TYPE TARGETS

EUREKA QUARTZITE
HAMBURG DOLOMITE
ELDORADO DOLOMITE
PIOCHE SHALE

The mineralization of Hamilton and vicinity is controlled by East-West mineralizers.

Even west of Mount Hamilton the strike of the ore horizon appears to continue where Shell Oil Company drilled copper silver (moly gold) at depth for several years. (The Grace Company is now continuing this work.)

Further east at Ruth, Nevada, the same trend is observed as the principal productive magma is controlled East-Westerly.

The following economic units are thrust up within possible economic depths near the Belmot 9,000 foot Fault, the Eureka Quartzite on the east of the Fault, and the Eldorado Dolomite, Pioche Shale, or Hamburg Dolomite on the west.

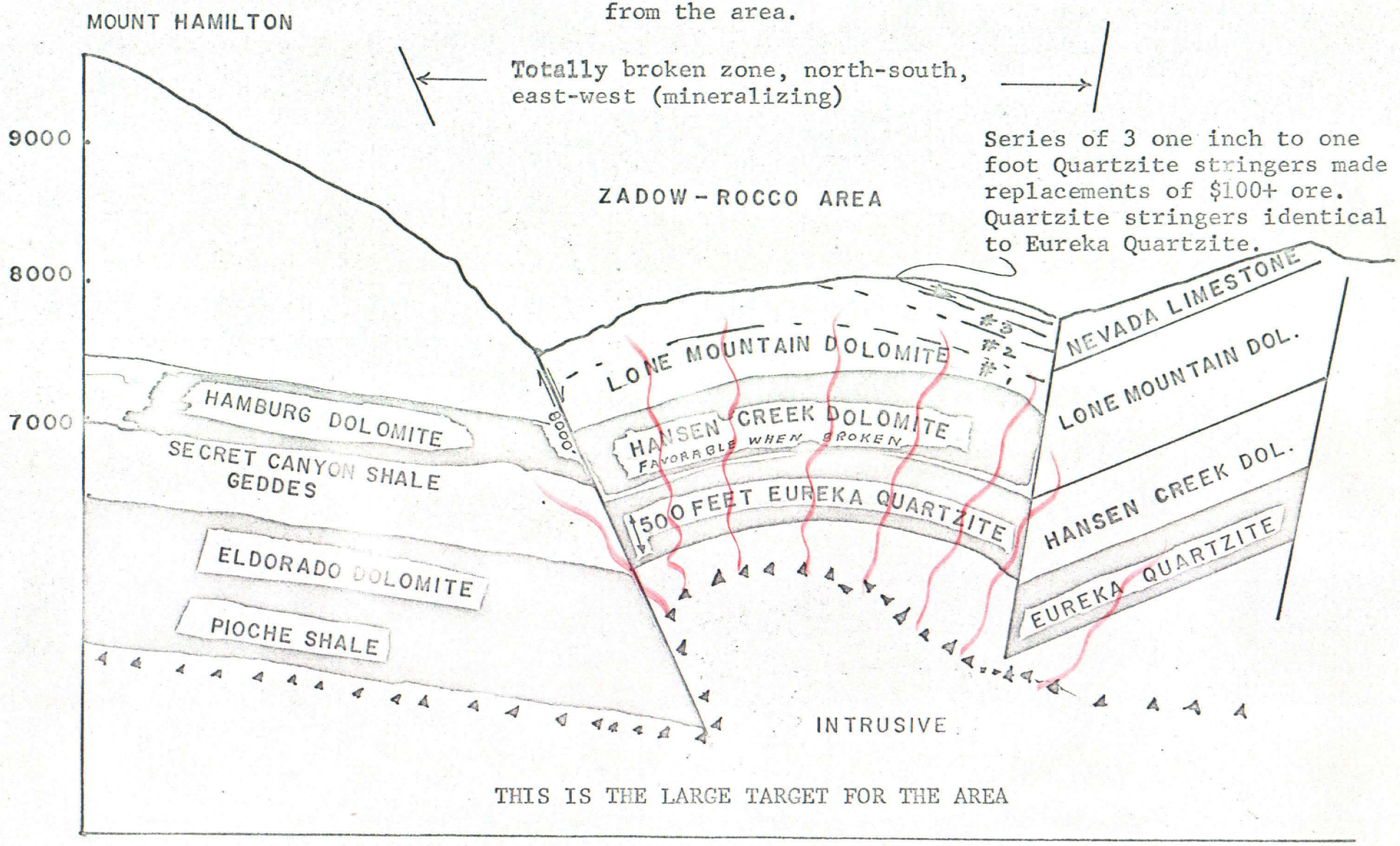
Under this and perhaps closer to the surface here, than elsewhere, is the intrusive horizon, indicated by:

More quartzing of mineral veins;
More frequency of mineral veins;
Greater faulting;
Wide spread heat alteration; (Much marbelization)
Strikes of veins take on a hub or radiating series of strikes;
Magnetic anomaly.

TARGET ZONE

ZADOW-ROCCO CANYON MINES

Surface Geology dolomite (brecciated) cut by series of high grade ore stringers radiating from the area.



THIS IS THE LARGE TARGET FOR THE AREA

DARK = KNOWN FAVORABLE TO ORE-SPECULATIVE.

1 INCH = 1000 FEET

EUREKA QUARTZITE

There are three thin one inch to one foot flat-type quartzite stringers in the Rocco Canyon area, which made high grade ore.

These quartzite stringers were in the general vicinity of the east-west mineralizers of the district.

The quartzite stringers are identical to the Eureka quartzite which attains thicknesses of 500 feet underlying the area.

All three of the thin quartzite stringers were replaced by high grade mineral. Therefore, the very much thicker Eureka quartzite horizon below the Zadow-Rocco Canyon area should also be mineralized.

To further illustrate this point the Eureka quartzite itself made replacement ore body of the Belmont Mine where thrust up near the surface despite the fact the area is 3 miles northerly of the principal east-west mineral system.

This bedding alone would make a major mine in the world.

HAMBURG DOLOMITE

Fred Humphrey stated in his Report No. 57 that the Hamburg Dolomite was absent in the Hamilton area. However, recent studies indicate it is present.

It is an important economic structure for the area due to its amenability to ore deposition (as at Eureka, Nevada) for it further extends the lateral ore possibility and also makes it closer to the surface at the Belmont Fault area. More careful mapping would tend to answer this.

THRUST FAULTS

Fred Humphrey notes . . . ."that the majority of the folds either have thrusts exposed within their limbs or are underlain by thrusts. Thus, at many localities the surface mapping represents a thin veneer of rocks which constitutes the upper plate of a thrust fault."*

The above was written before the discovery of the ore relationship (relating to Carlin, Cortez, etc., ore bodies) of the Roberts thrust in Eastern Nevada, and would no doubt have occasioned more scrutiny if the excitement of thrust faulting and control of mineralization had been as well understood at the time; relating to major ore bodies in Eastern Nevada.

As noted on Humphrey's geology map, the Eureka Quartzite, one of the more favorable horizons for thick bedded ores, is at a thrust fault contact where the great Belmont 9,000 foot displacement fault is in contact with the Eureka Quartzite. This exposure is both north and south of the central mineral district. Thus, a thrust fault is indicated under the central mineral area. A further benefit from this fault would be a brecciation of the bottom layer of the Eureka Quartzite which might be a further benefit to ore deposition.

Thrust faulting may be one of the explanations for the widespread nature of the rich ore fissures, and in fact, the thrust fault system may itself be the channel for the ore distribution and be a major target of itself, where it forms against favorable horizons.

The intrusive may even come into close juxtaposition with the thrusting system, and it would seem most likely to do so near, along, and south of the area of most broken and altered formation. So we are again studying the Zadow area and the altered zone immediately north and south of it.

*Bulletin No. 57, Geology of the White Pine Mining District, 1960, page 66.

ELDORADO DOLOMITE

The Belmont Fault is a 9,000 foot fault which thrust up Mount Hamilton west of the Zadow-Rocco Canyon area.

This thrust brings within economic sight the Eldorado dolomite which made the rich ores of Eureka, Nevada - on strike with the trend of the east-west mineralizers.

Recent drilling on to the west of Mount Hamilton near Monte Cristo has proven ore type mineralization does in fact permeate this horizon. This mineralization may be leaking over and along this bedding from the more mineralized Zadow-Belmont area.

PIOCHE SHALE

The Pioche Shale mineral horizon also may contain ore bodies where it is cut by the west trending fissures and zone under Mount Hamilton. This zone may be within economic depths under the Zadow-Rocco area.

INTRUSIVE HORIZON

Underlying the other targets of the area lies an intrusive. The intrusive must underlie the Zadow-Rocco area. This is the only possible explanation for the intense faulting and then intrusive mineralization.

The area is highly heat altered and marbelized over a wide area. Even zoning can be shown from the ore of this area as one moves from lead to the copper silver, then silver areas of Treasure Peak.

A magnetic high anomaly has also been found in the area. From a report by Lloyd A. Hewitt, Hewitt Enterprises Geophysical Exploration Co., 792 East 10600 South, Salt Lake City Utah:

"Basic Findings from Work Performed.

"The Hamilton District is underlain by an intrusive. The intrusive mass, in its shallowest location probably lies off the map area near 4,000 west 6,500 south. (S.E. of Zadow). Between 500 west and 2,000 east the intrusive appears to have been faulted in a North South Trending Horst. (This refers to the Shermantown Reverse Fault and the Hamilton Reverse Fault).

- - - - - - - - - - - -

"The presence of an intrusive, in the Hamilton District, is evident. Since the intrusive is present, further exploration should be centered to the South West (Zadow area), where the intrusive is much shallower. The geologic evidence of this intrusive should also be stronger in the southwest area, both in the form of brecciation and alteration. Higher temperature mineralization may also be present in this area.

"It is felt magnetic data is going to be of considerable value in developing the mineral potential in this district."

2160 Crawford Street
Ely, Nevada 89301
January 15, 1968

Mr. Frank Lewis
6904 Woodman Avenue
Van Nuys, California

Re: Hamilton

Dear Frank:

The most favorable areas from surface indications in your located and patented areas appear to be in the vicinity of or southerly from the Zadow Mine.

The Anderson location, as I mentioned to you on the phone, is the locality where numerous faults have crossed. We have, as according to Humphrey's Report, the Belmont Fault which is very evident here; and, we have the Eberhart Fault; and we have other faults which possibly do not show on the Humphrey Report. I will check this.

The Belmont fault is a north-trending fault and appears to dip easterly. The Eberhart fault is a northwest-trending fault and dips southerly (?). Then we have a cross fault that trends toward the southwest and we have another fault, which I will call the Cuba fault, which strikes westerly but dips northerly. This goes through Claim No. N.U. 30. These all seem to cross in an area about one-fourth of a mile south of the Zadow shaft. This, in turn, gives the surface a rubbled up appearance together with an evident bleached area.

I have not resolved the low-angle fault which I pointed out to you at a prior time, but this also shows in the same area making a short discourse on the area in the eastern part of your claims. The Eberhart fault looks like it continues further eastward. This may be responsible for the alignment of the mineralization from east to west.

Coming back to the first area, which I lightly covered, it is possible that an intrusive may lie quite close to the surface in this particular place. I cannot, at this time, hope to guess at its distance below the surface. The continuation of the work at the Zadow might help this problem somewhat.

Sincerely yours,

Sam Bida

Sam Bida, E.M.

SB:cjl

EBERHARDT FAULT

The Eberhardt Fault is a large displacement fault. Elsewhere in this report in reference to the California Mine prospect it was suggested this fault did not form the California Mine. This is probably true for the local explanation of that particular ore body.

However, this fault contains white, brown, and black calcite and assays from .10 to 1 ounce of Silver.

The fault bears easterly and westerly and connects to the Zadow Mine hub area, and thence all along the south end of Treasure Hill.

The gaseous deposits forming Silver as the upper telescoping deposit did not depost except where damed. The fact the fault filling is not ore does not eliminate it as a prospect. The large size of the Eberhardt Fault causes one to give it careful consideration as it may be a main intrusive channel at depth where favorable horizons occur. The amount of Silver indicates it was connected at the time of segregation with the mineral solutions.

Secondly, one notes the filling of calcite which is usually the final phase of segregation. This also indicates its connection to the mineralizing magma.

The Eberhardt Fault is a structurally dominating phenomenon which is 'apparently' of economic significance. It deserves much study and drilling to favorable horizons.

SUMMARY OF TARGETS

The geologic setting of the Zadow-Rocco area is in the center of the district. It is fractured by north south faulting - then mineralized by east west vein mineralization.

The mineralization of the area is most intense where the faulting is most intense at the hub Zadow-Rocco area. Here a unique geologic condition brought about by intense faulting showing a continuous series of some of the most favorable thick beddings in the world to lie one under the other at the exact center of a radiating system of mineral fissures.

Radiating out from this buried intrusive mineralized hub are a multitude of large and small mineral targets.

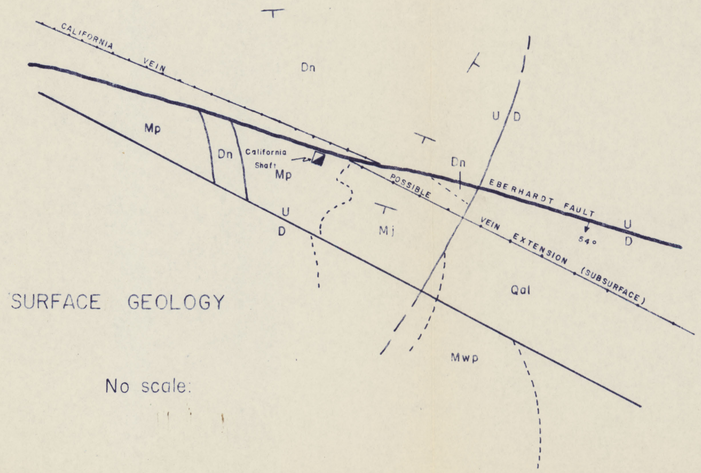
Activity in the Vicinity:

Umont (Grace shipping) is exploring ½ mile west, and Phillips Petroleum is along the north and east side.

A subsidiary of Texas American Oil is shipping from the Onetha which is the same vein as the Zadow on the west and Stafford on the east. Several lesser companies are exploring at various sites in the district.

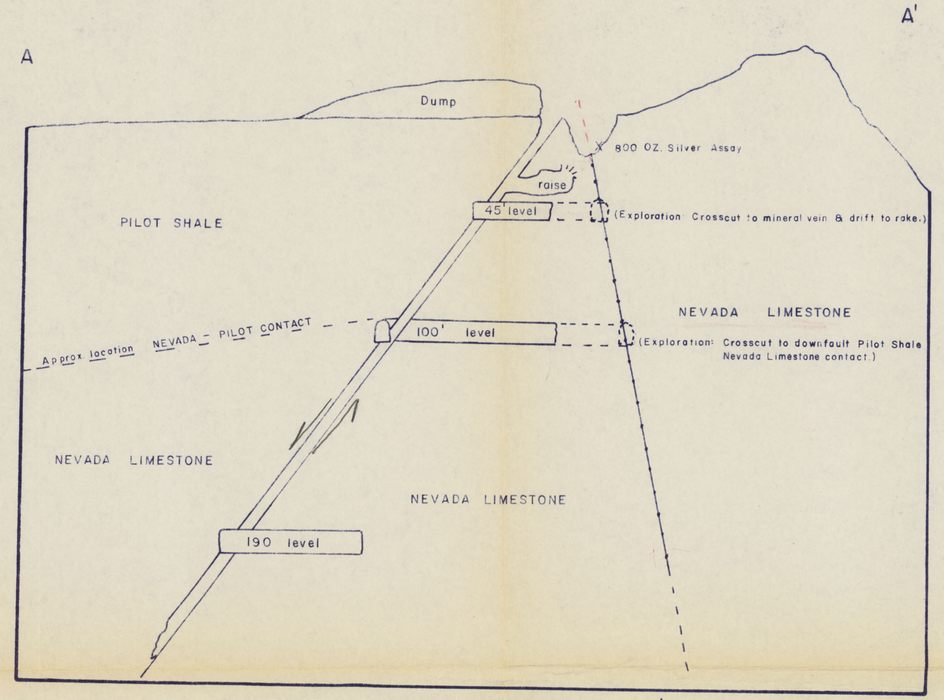
PLATE III

CALIFORNIA MINE



SURFACE GEOLOGY

No scale.



SCHEMATIC CROSS SECTION A – A'

CALIFORNIA VEIN EXTENSION PROSPECT

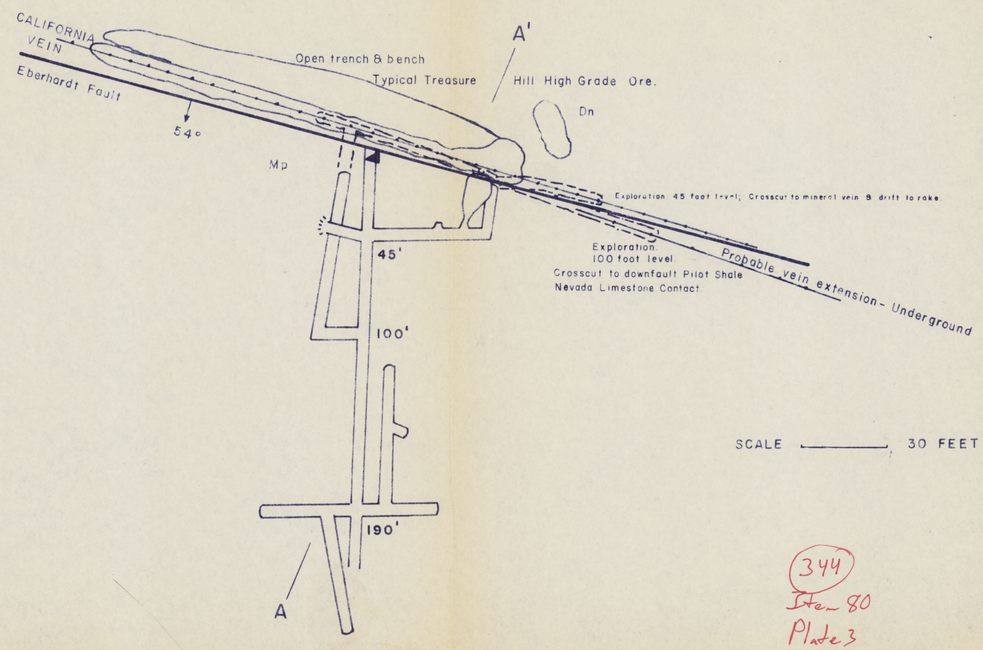
WHITE PINE MINING DISTRICT

HAMILTON, NEVADA

N

BEST CHANCE MINING COMPANY

Qal	Quaternary Alluvium
Mwp	White Pine Formation – Mississippian
Mj	Joana Limestone – "
MP	Pilot Shale – "
Dn	Nevada Limestone – Devonian



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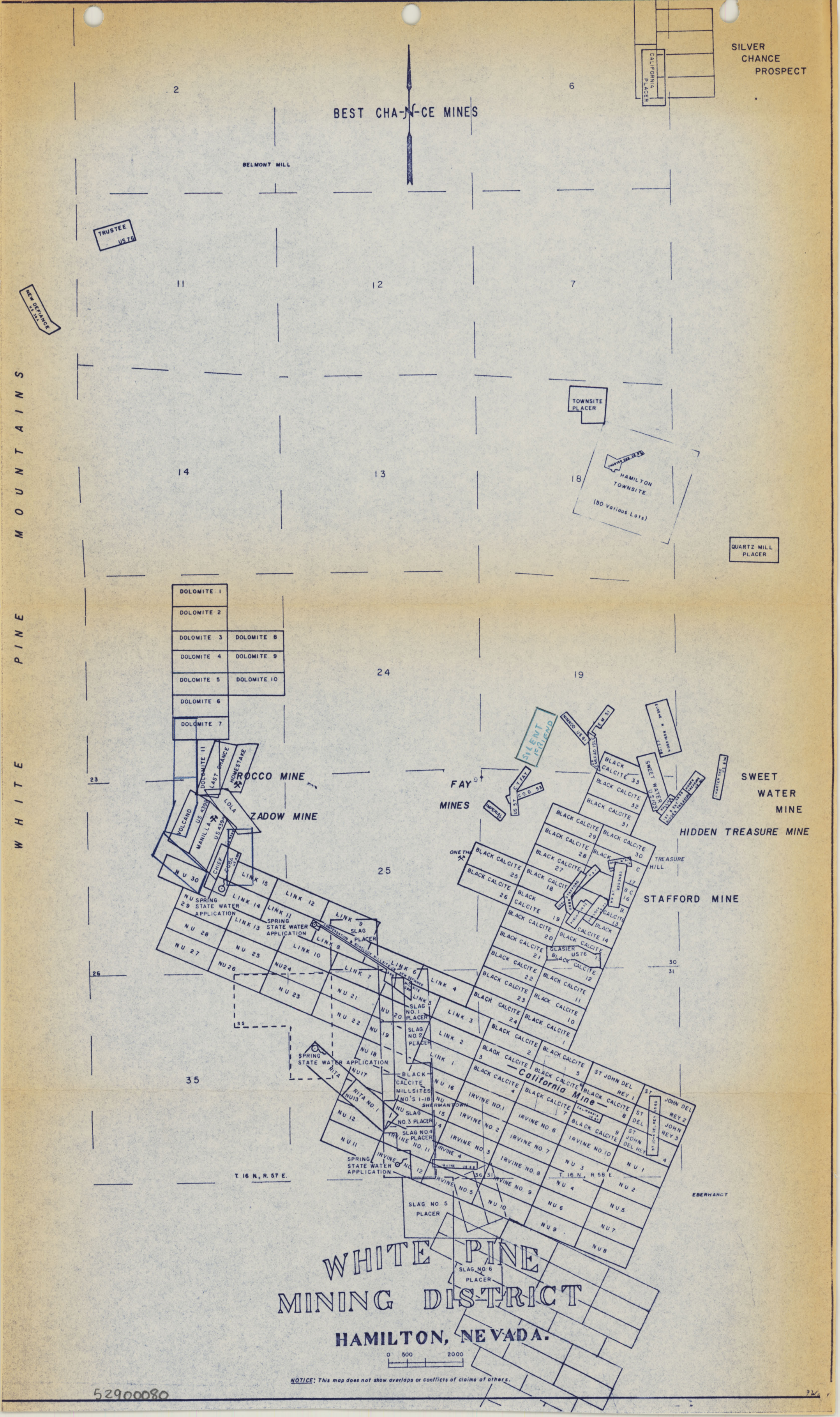
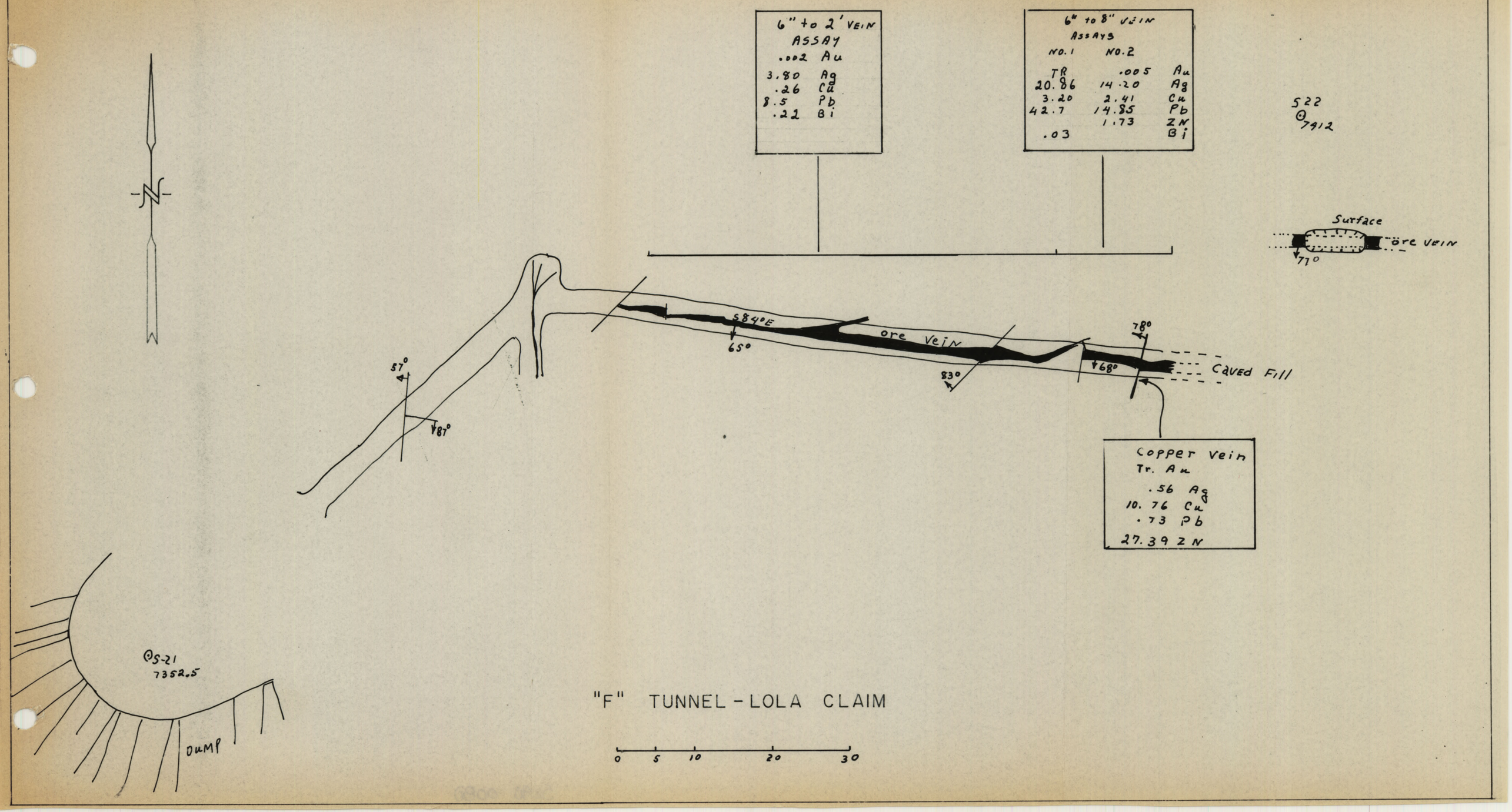
Item 80
Plate 3


WHITE PINE MOUNTAINS
BEST CHANCE MINES
SILVER CHANCE PROSPECT
CALIFORNIA PLACER
BELMONT MILL
TRUSTEE US 76
NEW DEFIANCE
TOWNSITE PLACER
HAMILTON TOWNSITE (50 Various Lots)
QUARTZ MILL PLACER
DOLOMITE 1
DOLOMITE 2
DOLOMITE 3
DOLOMITE 4
DOLOMITE 5
DOLOMITE 6
DOLOMITE 7
DOLOMITE 8
DOLOMITE 9
DOLOMITE 10
DOLOMITE 11
LAST CHANCE
HOMESTAKE
ROCCO MINE
LOLA
ZADOW MINE
VOLCANO
MANILLA
CHIEF
FAY MINES
SILENT FRIEND
IMPERIAL
SWEET WATER MINE
HIDDEN TREASURE MINE
TREASURE HILL
STAFFORD MINE
ONE THIRD
GLASIER US 76
California Mine
SPRING STATE WATER APPLICATION
SLAG PLACER
SLAG NO. 1 PLACER
SLAG NO. 2 PLACER
SLAG NO. 3 PLACER
SLAG NO. 4 PLACER
SLAG NO. 5 PLACER
SLAG NO. 6 PLACER
BLACK CALCITE MILLSITES NO'S 1-18
SHERMANTOWN
IRVINE NO. 1
IRVINE NO. 2
IRVINE NO. 3
IRVINE NO. 4
IRVINE NO. 5
IRVINE NO. 6
IRVINE NO. 7
IRVINE NO. 8
IRVINE NO. 9
IRVINE NO. 10
IRVINE NO. 11
IRVINE NO. 12
ST JOHN DEL REY 1
ST JOHN DEL REY 2
ST JOHN DEL REY 3
ST JOHN DEL REY 4
NU 1
NU 2
NU 3
NU 4
NU 5
NU 6
NU 7
NU 8
NU 9
NU 10
NU 11
NU 12
NU 13
NU 14
NU 15
NU 16
NU 17
NU 18
NU 19
NU 20
NU 21
NU 22
NU 23
NU 24
NU 25
NU 26
NU 27
NU 28
NU 29
NU 30
LINK 1
LINK 2
LINK 3
LINK 4
LINK 5
LINK 6
LINK 7
LINK 8
LINK 9
LINK 10
LINK 11
LINK 12
LINK 13
LINK 14
LINK 15
RITA
RITA NO. 1
T. 16 N., R. 57 E.
T. 16 N., R. 58 E.
EBERHARDT
WHITE PINE MINING DISTRICT
HAMILTON, NEVADA.
0 500 2000
NOTICE: This map does not show overlaps or conflicts of claims of others.

52900080

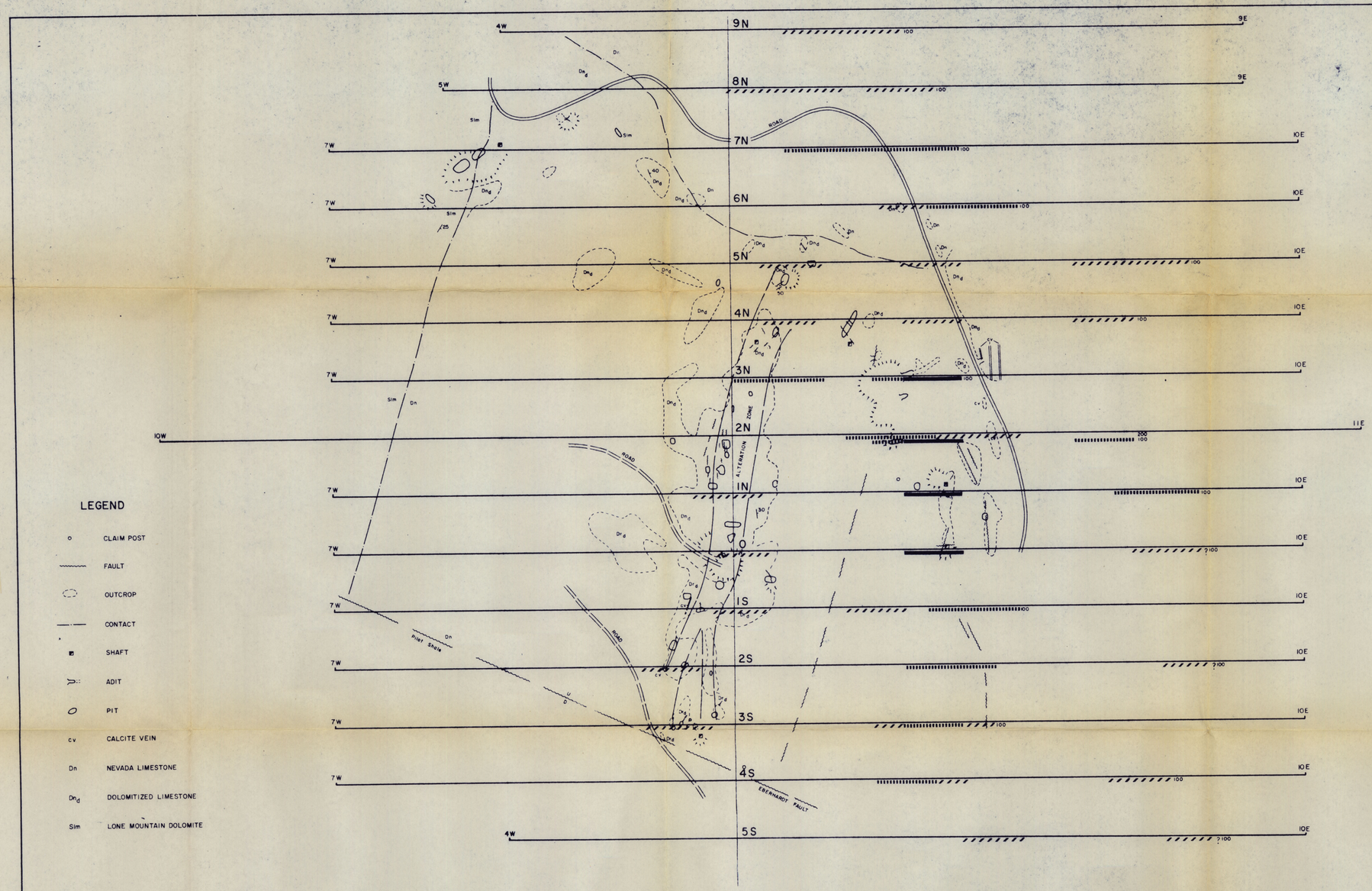


"F" TUNNEL - LOLA CLAIM

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

Number at the end of anomaly indicates spread used

PAN-NEVADA INC.

PASSAYANK GROUP, HAMILTON VICINITY, WHITE PINE CO., NEVADA.

SCALE

FEET 100 0 100 200 300 400 500 FEET

1 INCH EQUALS 100 FEET

DRAWN M.C.C.

DATE MAY SIC NOV 1968

APPROVED R. A. Bell

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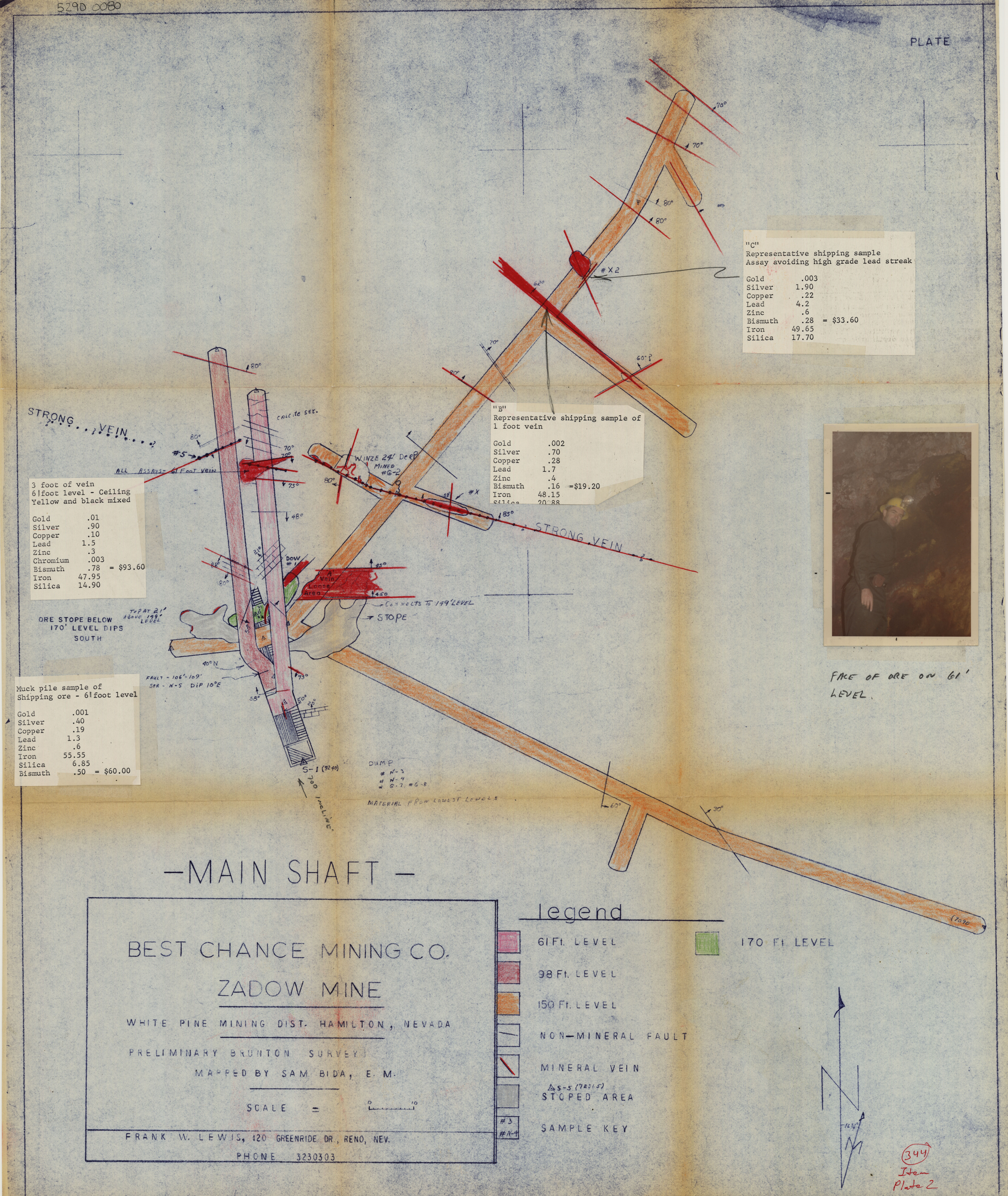
PLATE 4

DWG. IPP-3341

DWG. IPP-3341

5290 0080

PLATE



3 foot of vein
61 foot level - Ceiling
Yellow and black mixed

Gold	.01	
Silver	.90	
Copper	.10	
Lead	1.5	
Zinc	.3	
Chromium	.003	
Bismuth	.78	= $93.60
Iron	47.95	
Silica	14.90	

Muck pile sample of
Shipping ore - 61 foot level

Gold	.001	
Silver	.40	
Copper	.19	
Lead	1.3	
Zinc	.6	
Iron	55.55	
Silica	6.85	
Bismuth	.50	= $60.00

"B"
Representative shipping sample of
1 foot vein

Gold	.002	
Silver	.70	
Copper	.28	
Lead	1.7	
Zinc	.4	
Bismuth	.16	=$19.20
Iron	48.15	
Silica	20.88	

"C"
Representative shipping sample
Assay avoiding high grade lead streak

Gold	.003	
Silver	1.90	
Copper	.22	
Lead	4.2	
Zinc	.6	
Bismuth	.28	= $33.60
Iron	49.65	
Silica	17.70	

FACE OF ORE ON 61' LEVEL.

—MAIN SHAFT—

BEST CHANCE MINING CO.

ZADOW MINE

WHITE PINE MINING DIST. HAMILTON, NEVADA

PRELIMINARY BRUNTON SURVEY

MAPPED BY SAM BIDA, E. M.

SCALE = 0 10

FRANK W. LEWIS, 120 GREENRIDE DR., RENO, NEV.
PHONE 3230303

legend

61 Ft. LEVEL
98 Ft. LEVEL
150 Ft. LEVEL
NON—MINERAL FAULT
MINERAL VEIN
S-5 (7231.5) STOPED AREA
#3 #N-4 SAMPLE KEY
170 Ft. LEVEL

N

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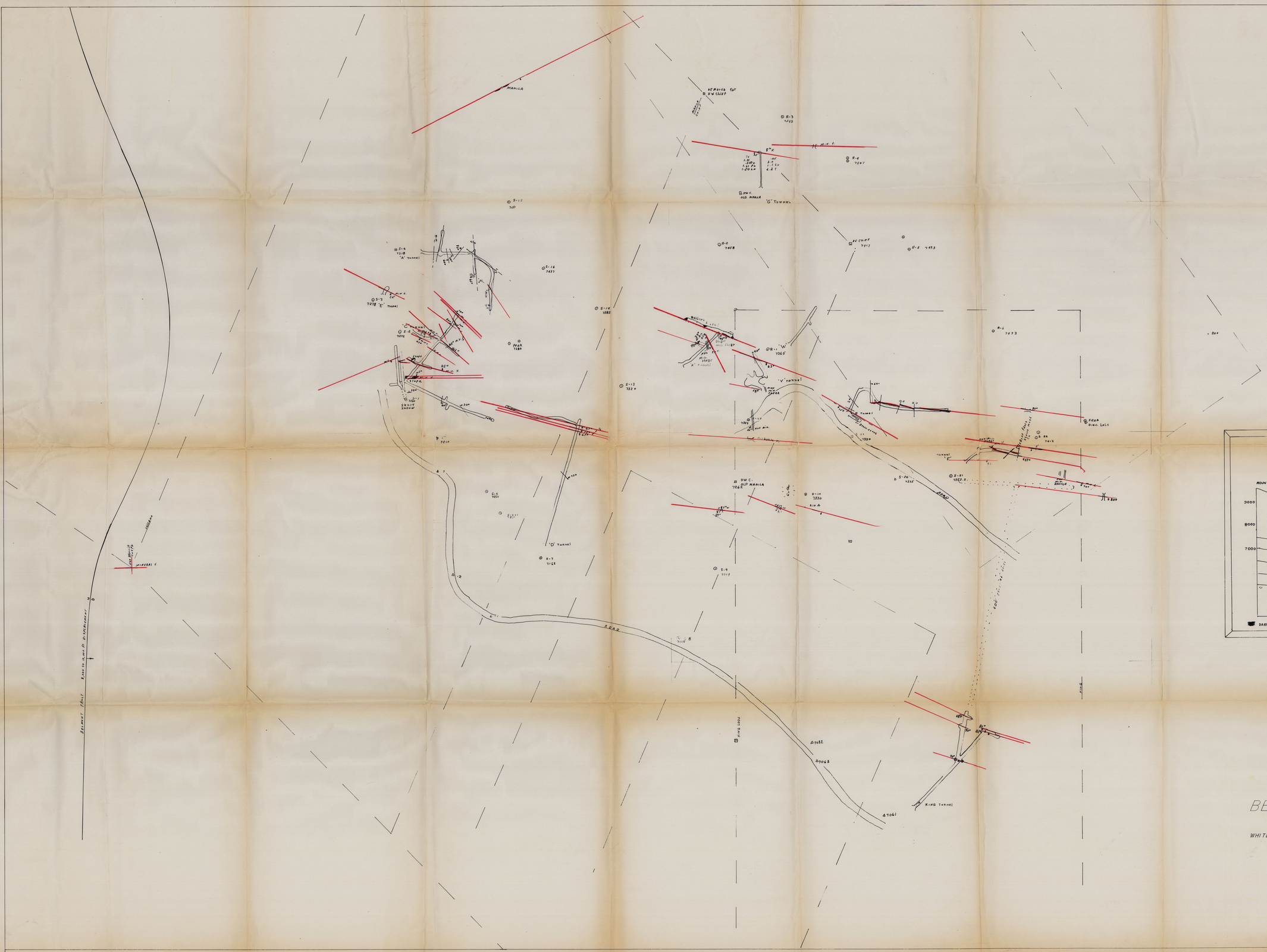
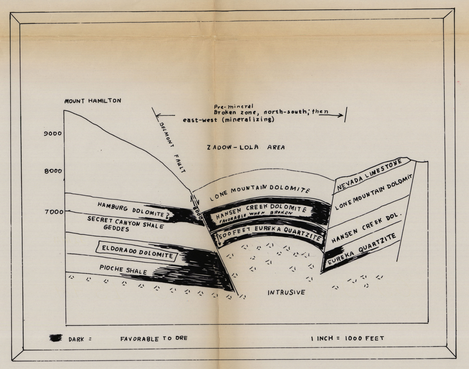
Item Plate 2

TARGETS ZADOW-LOLA AREA

1. EAST-WEST VEINS THEMSELVES.
2. BEDDING DEPOSITS WERE MINERALIZED BY EAST-WEST VEINS THESE VEINS CUT FAVORABLE HOSTS. SAME HOSTS MADE 100 MILLION DOLLAR CLASS ORE BODIES AT EUREKA AND PIOCHE, NEVADA.
3. INTRUSIVE HORIZON ITSELF INTRUSIVE MAY BE AS CLOSE AS 500 FEET BELOW THE SURFACE.





BEST CHANCE MINING CO.

ZADOW-LOLA MINES

WHITE PINE MINING DISTRICT, HAMILTON, NEVADA

SCALE 1 INCH = 40 FEET

K. W. LEWIS, 120 GREENRIDGE, RENO, NEVADA

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PLATE 14