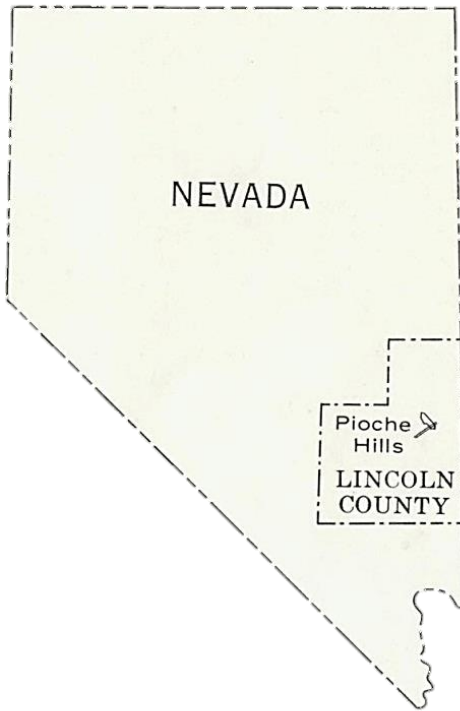


# PROPOSAL TO EXPLORE FOR Zn-Ag-Pb DEPOSITS NEAR PIOCHE, NEVADA

## LOCATION MAP



- Pioche Site Of Large Hydrothermal System With Widespread Mineralization.
- Significant Historical Production Of Zinc.
- Pioche Area Has Seen Little Modern Exploration.
- Located In Mining –Friendly State Of Nevada.
- Mature Infrastructure Including Mainline Railroad, High Voltage Power And An Intact Flotation Mill.
- Climate Allows For Year-round Exploration.

# REPLACEMENT DEPOSITS IN CARBONATE ROCKS

**Most of the Zinc Mined Historically in the United States Has Been Produced From Replacement Deposits, Especially “MISSISSIPPI VALLEY TYPE” Deposits of the Mid-Continent.**

**In the Western United States Significant Zinc Production Has Occured From Replacement Deposits Associated With INTRUSIVE CENTERS.**

**Examples Include:**

- **GILMAN, COLO. ----- 1.9 BILLION POUNDS ZINC**
- **BINGHAM CANYON, UTAH -----1.7 BILLION POUNDS ZINC**
- **LEADVILLE, COLO. -----1.6 BILLION POUNDS ZINC**
- **TINTIC, UTAH -----1.5 BILLION POUNDS ZINC**
- **PARK CITY, UTAH -----1.4 BILLION POUNDS ZINC**

## PAST PRODUCTION FROM PIOCHE AREA

### Highgrade Ag Veins in Quartzite (1870s):

- Approximately 20 million oz. Ag

### Mn-Ag Ores Shipped as Smelter Flux:

- 700,000 tons grading 2% Zn,

### Caselton “Ore Channel”:

- 3.2 million tons grading 12% Zn, 4.5% Pb, 4.9 opt Ag, .044 opt Au

**Gross Value of Caselton Production at Current Metal Prices = \$1,805,760,000**

### Pan American Mine (Highland Range):

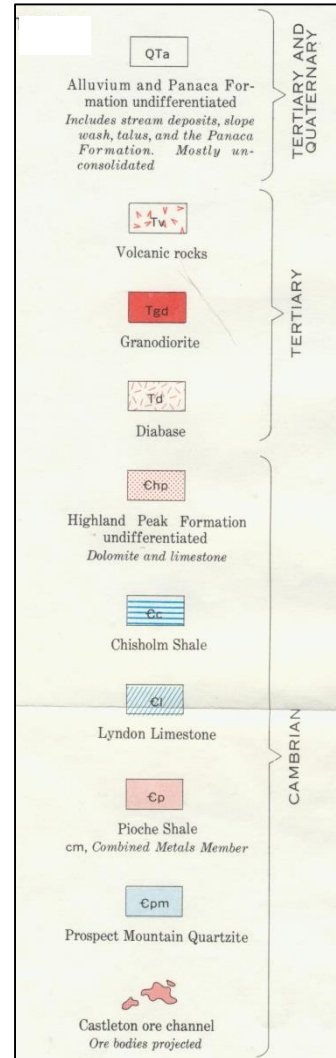
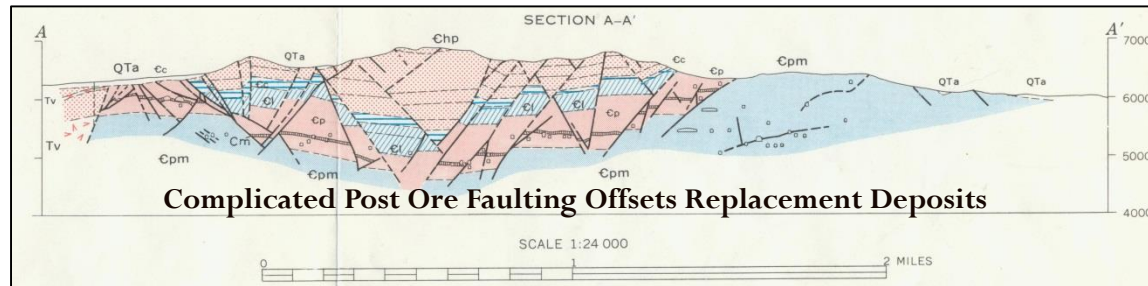
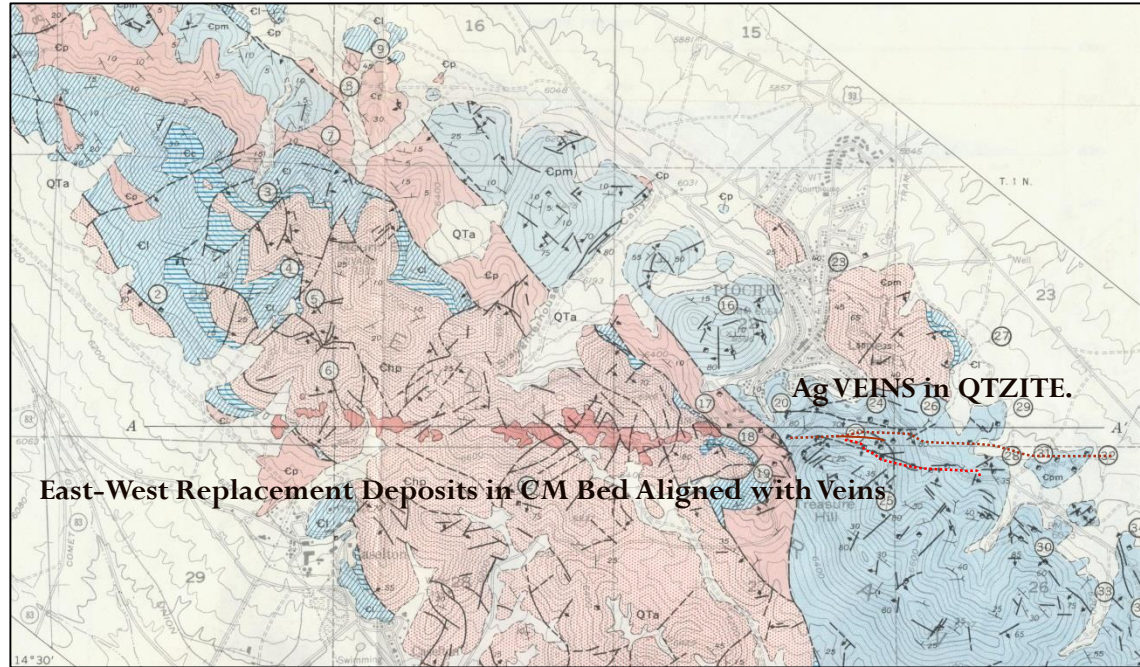
- 1.8 million tons grading 2.4% Zn, 1.2% Pb, 1.8 opt Ag

**Total Historical Zinc Production for Pioche Area Approximately 880 million lbs**

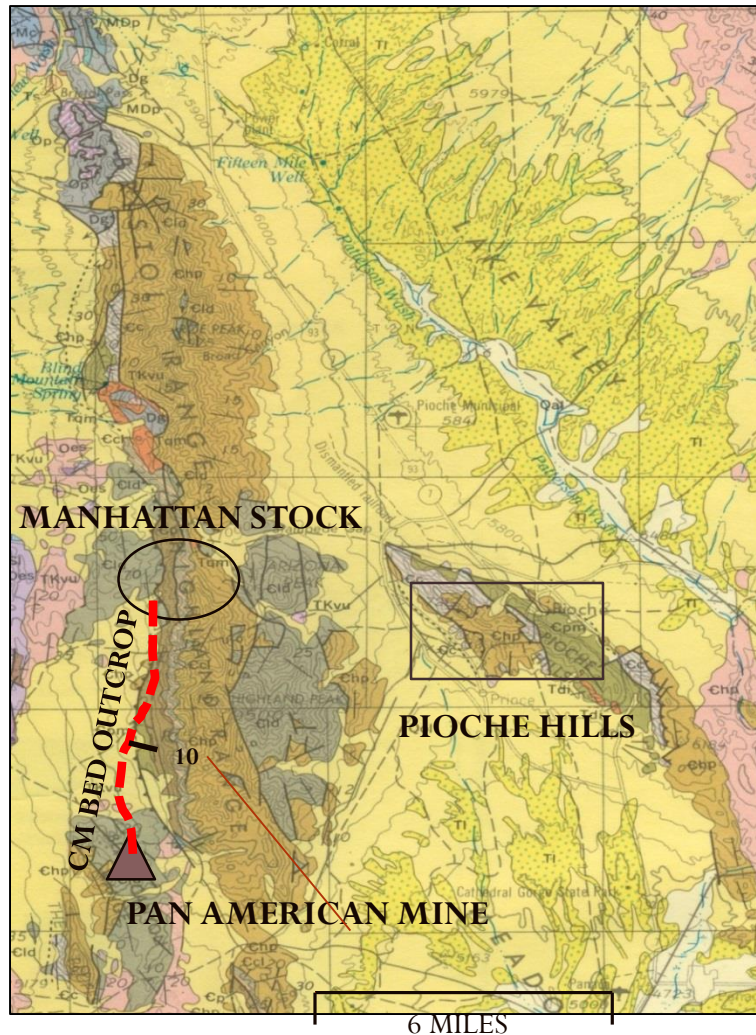
# PIOCHE HILLS, CASELTON REPLACEMENT DEPOSITS

- First Limestone Bed (“CM“ Bed) Above Basement Quartzite Best Mineralized. “CM” Bed (within Pioche Shale) Typically 40 feet Thick, Half or More of Which May be Well Mineralized.
- East-West Caselton “Ore Channel” Fed by Several Small Structures Not Always of East-West Strike. **Width of Mineralized Channel (Stoped) = 100 to 300 feet; Length = 9000 feet.**
- Numerous Post-Ore Faults Offset “Ore Channel”.
- Ore Intimately Intergrown Pyrite, Sphalerite and Galena; Gangue of Manganiferous Siderite, Silica and Carbonate.
- Siderite More Widespread Than Sulphides.

# PIOCHE HILLS, CASELTON "ORE CHANNEL"



## PAN AMERICAN MINE, HIGHLAND RANGE GEOLOGY

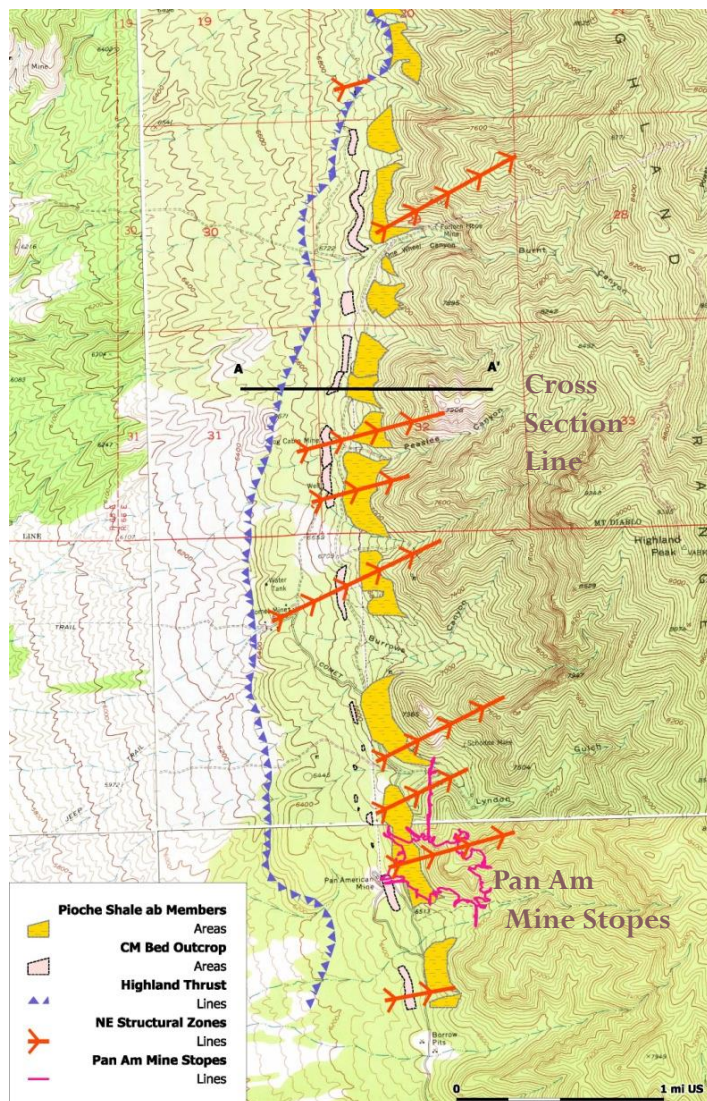


- Small Exposure Of Quartz Monzonite at Manhattan Gap Shows Intense Phyllic Alteration, Qtz. Stockwork Veining and Sparse Chalcopyrite & Molybdenite. Adjacent “CM “ Bed Replaced by Massive Pyrite, Pyrrhotite and Magnetite.
- Outcrop of “CM” Bed Between Manhattan and Pan American Mine Contains Several Previously Identified Areas Showing Evidence of Mineralized Northeasterly Trending Structures. Have Seen Generally Cursory Exploration to Date.
- Speculate That Pan Am Orebodies Represent More Distal Style Mineralization With Potential for Higher Grade, Caselton Type Mineralization Further North.

# **PAN AMERICAN MINE REPLACEMENT DEPOSITS WEST FLANK OF HIGHLAND RANGE**

- **CM Bed Up to 100 feet Thick. Dark Grey and Fine Grained Where Un-mineralized. Lighter Colored, Coarser Grained and Dolomitized Where Mineralized.**
- **Structures Controlling “Ore Channels” Trend Northeasterly. Channel Widths up to 100 feet. Diffuse Mineralization Between Channels. Sulphides Not as Massive as Caselton.**
- **Post Mineral Faulting Exists But Much Less Extensive Compared to Caselton.**
- **Historical Mechanized Stoping Encompassed Channels and Low Grade Mineralization Between Channels.**
- **Mineralized Outcrops Oxidized and Leached of Metals, Particularly Zinc.**

# HIGHLAND DISTRICT, GEOLOGY

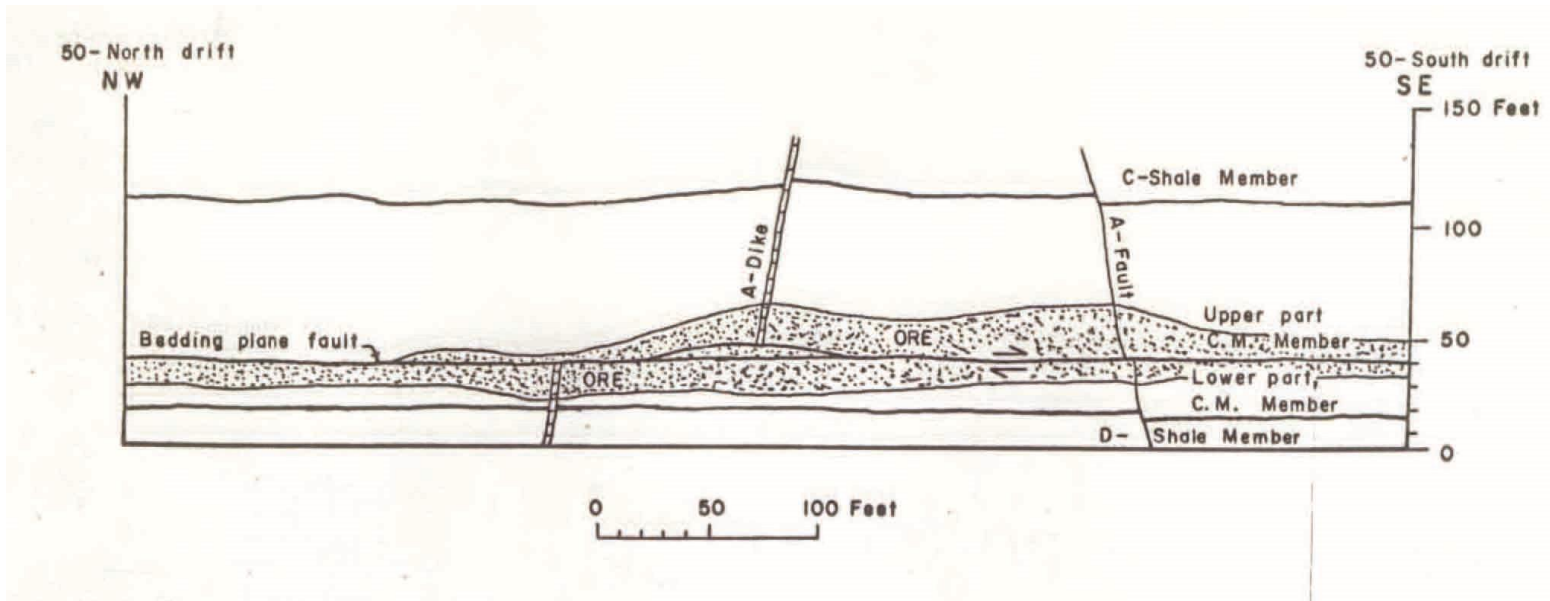


- Highland Low Angle Fault Crops-out on West Side of Range Front. Younger Paleozoic Rocks Over-ride and Cover “CM” Bed in North Portion of Area. Outcropping Upper Beds of Pioche Shale Suggest “CM” Bed Short Distance Below Surface.
- Several NE Trending Structural Zones With Some Mineralization/ Alteration Occur North of Pan Am Mine.
- **Lamprophyre Dikes** are Localized by Many Seemingly Minor Structures Suggesting Deep-seated Conduits for Fluid Flow.





## STRUCTURAL CONTROLS OF ORE, PAN AM MINE



- Idealized Section Showing Relationship Between Thickness of Ore and Northeast Trending Fault - Veins and Lamporphyre Dikes.

AFTER FITCH, 1969

## MINERALIZED “CM” BED NORTH OF PAN AMERICAN MINE



- Siliceous Gossan Abruptly Changes to Weakly Altered Limestone at Iron Blanket Zone.

## MINERALIZED “CM” BED LEACHED OF SULPHIDES

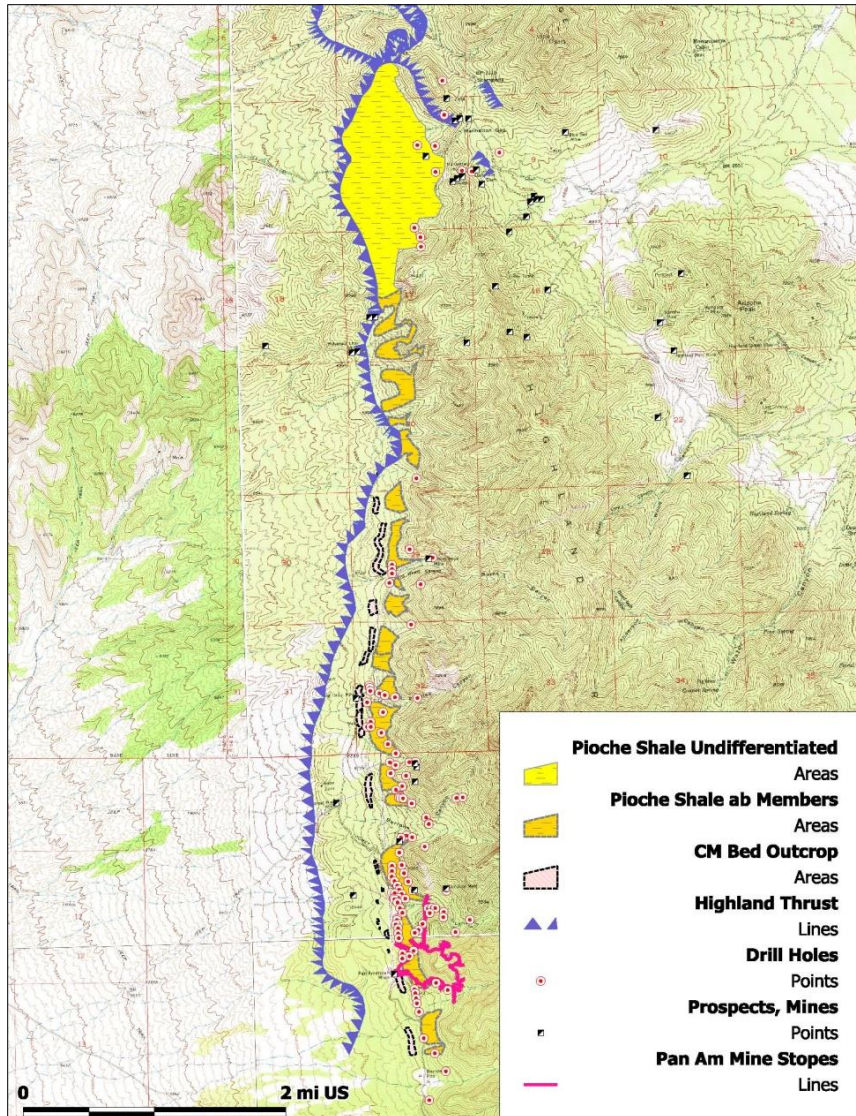


- Lower Portion of Bed Mineralized At Intersection With Narrow Northeast Trending Structure, Log Cabin Incline North of Pan Am Mine.

## PAST EXPLORATION SHORTCOMINGS

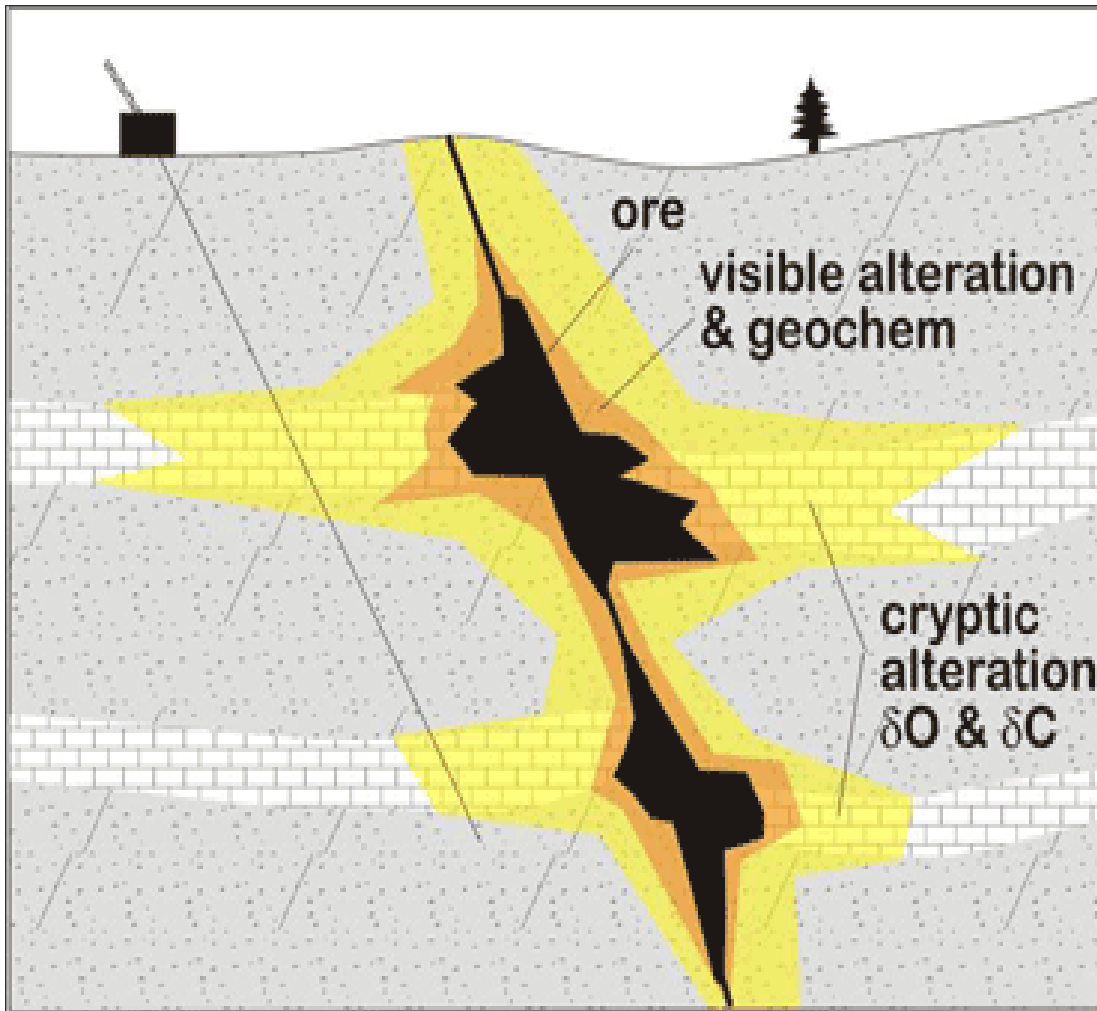
- Past Drillhole Spacing Designed in the Expectation That Oregrade Mineralization Would Extend a Significant Distance From “Feeding” Structures. Much Too Wide to Find “Caselton Type” Channel Deposits.
- Bedding Plane Faults Offset Dikes and Veins Which Mark the “Feeding” Structural Zones, Making Projections From Surface Exposures Not Straight Forward.
- Metals Have Been Leached From Mineralized Outcrops and Up To 500 Feet Downdip (e.g. Pan Am Incline) Making the Results of Shallow Drilling Suspect.
- Important “Feeding” Structures Insignificant in Appearance at Surface (e.g. “A” Fault, Pan Am Mine ----Fitch, 1969)
- Visible And Geochemical Alteration Extends Only a Few Feet From Mineralization.

## PAST DRILLING, PROSPECTS, MINES



- Past Drilling Concentrated in Pan American Mine Area.
- Sparse, Wide Spaced Drilling North of Pan Am Mine.
- Prospect Pits and Shafts in Northern Area Located in Carbonate Rocks Stratigraphically Above the “CM” Bed which is poorly or not exposed.

## OXYGEN AND CARBON ISOTOPE ANALYSES AS TARGETING TOOL



Carbonate-Hosted Mineral Deposits have Narrow Alteration Envelopes with Subdued Geochemical Responses. However, the Cryptic Alteration Halo that Reflects Fluid:rock Interactions and Exchange of Oxygen & Carbon with Mineralizing Fluids, have a Broader Footprint, thus Improving Targeting and Recognizing Near-misses.

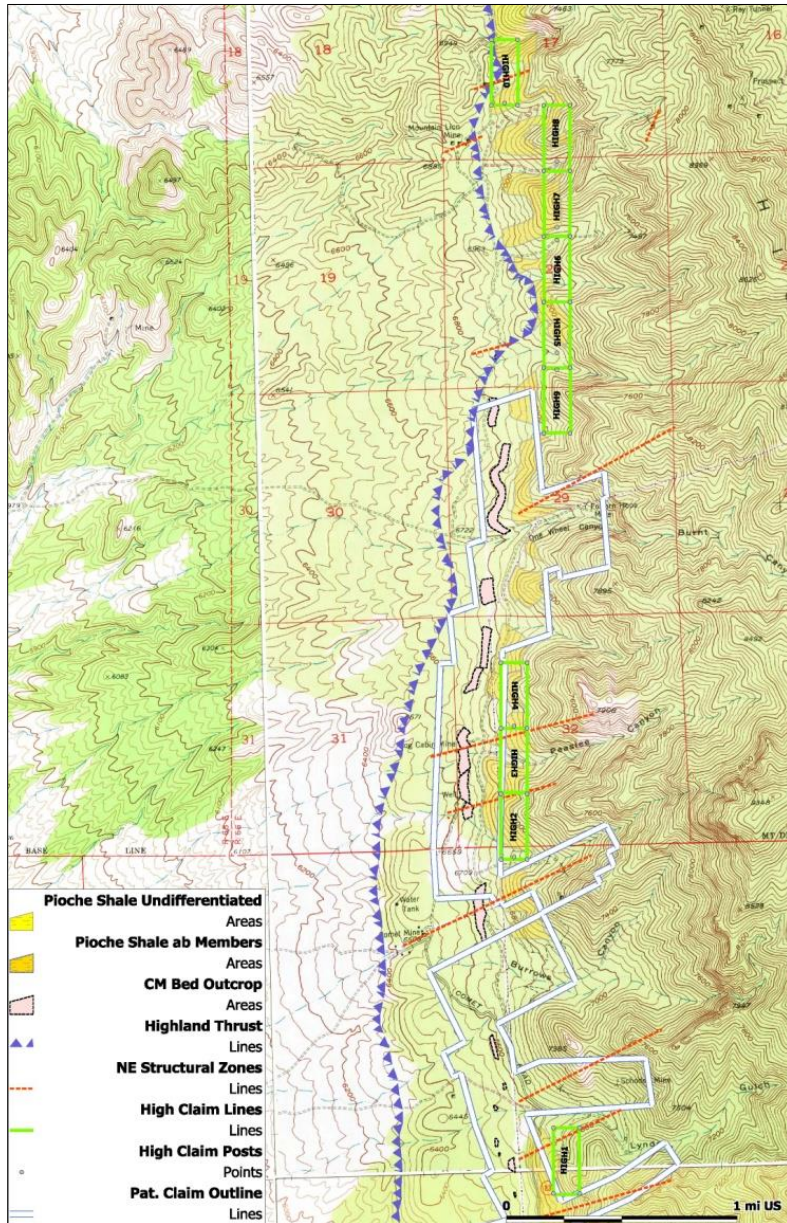
AFTER UBC "Carbonate Footprints"

## ENVISIONED EXPLORATION PROGRAM

- Objective will be to Discover Higher Grade Sulphide Replacement Deposits North of the Pan American Mine.
- Integrate Detailed Surface Mapping of Northeast Trending Structural Areas with Results of Oxygen And Carbon Isotope Sampling to Help Define Drill Targets.
- Evaluate the Use of Modern Geophysical Methods (Magnetics, EM) to Help in Defining Structural Zones.
- Position Drill Holes to Test Best Estimate of Intersection of Structural Zones and “CM” Bed at Least 500 Feet Downdip of Outcrop.
- Oxygen and Carbon Isotopic Analysis Will be Used to Evaluate Drill Intercepts of “CM” Bed to “Zero In” on High-grade “Ore-channels”.



# PROPERTY



- Ten Un-Patented Mining Claims (HIGH x Claims) Recently Staked (Lippoht) Immediately East of Patented Claim Block Over the Down-dip Projection of the Favorable “CM” Bed Within the Pioche Shale.
- 43 Patented Claims Cover the Outcrop of the “CM” Bed. Extralateral rights do not apply to bedded/manto type deposits
- Numerous Existing Drill Roads Access Many Parts of Property. Public Lands Administered by the BLM.

## Appendix: Pan American Mine History

- Exploration and Modest Production 1950s by Combined Metals Reduction Co.
- Grand Development Mining (Charlie Steen Of Uranium Fame) JV with Combined Metals 1964 to 1967 Developed and Mined Some Ore. Steen Introduced Trackless Mining.
- Patrick Harrison & Co. Produced 1973 -1976, Subleased to Bunker Hill 1976-1978. Closed in Part Due to Slumping Zinc Prices.
- International Silver, Inc. Headquartered in Tucson, Arizona Signed a Lease-option Agreement With the Property Owner (Combined Metals Reduction Co. Or Successors) In 2011. International Silver Did Not Carry-Out Any Work on the Pan American Property. Their Main Interest was the Acquisition of the Flotation Mill at Caselton Where They Explored the Historical Tailings and a Non-sulphide Zinc Deposit in the Pioche District. In early 2017 a new company, Altair Resources, staffed by many of International Silver people, acquired the Pan Am property and Caselton mill.



## Pan American Mine Underground Conditions



Pillars Holding Well, 40 Years After Stopping.

Large Excavations Possible  
With Simple/Minimal Ground  
Support Suggestive of Low  
Mining Costs.



## CASELTON MILL

- Design Capacity of 1500 tons per day with Room for Expansion.  
Zn, Pb and Carbon Concentrate.
- Last Operated By Bunker Hill in 1978; Good condition, Some Rehabilitation and Updating Will of Course be required.
- Water Rights with Property
- Relatively Inexpensive Power Rates
- Approximately 20 Road Miles from Pan American Mine
- Railhead 26 Highway Miles

# CONTACT

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