

019952

To: V.A. Preto

Copies To: T.G. Schroeter, J. Gammon, R. Crook, *A. Wilcox*

Property Examination

PROPERTY NAMES: GOLDEN BEAR, MUDDY LAKE

ZONE: BEAR ZONE

NTS MAP: 104K/1 MINFILE NUMBER: 104K 079

LATITUDE: 58 13' LONGITUDE: 132 18'

MINING DIVISION: Atlin DEPOSIT TYPE: vein, hydrothermal

COMMODITY: Au, Ag

HOST: predominant host is silicified or dolomitized Permian limestone

TECTONIC BELT: Intermontane RECIPIENT OF 1986 FAME GRANT

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LOCATION AND ACCESS: The Golden Bear property is located 137 kilometres west of Dease Lake. It is accessible by fixed wing aircraft (floats or wheels) from Dease Lake, Telegraph Creek, Atlin or Whitehorse. North American Metals B.C. Corp. is proposing to construct a 147 kilometre access road in 1987.

CLAIMS AND OWNERSHIP: The Bear Zone is covered by the Bear claim. This claim is part of a larger property owned by Chevron Canada Resources Ltd. Chevron joint ventured most of their property, including the Bear claim, with North American Metals B.C. Corp. in 1986. The latter company is the operator and must spend \$9 million to earn a 50% interest.

CURRENT ACTIVITY: This year North American Metals B.C. Inc. has completed 1457m of surface diamond drilling and approximately 500m of underground workings. A 1000m underground drilling program and further underground development were in progress at the end of November. As well, a compilation of existing data from the Fleece Bowl and Totem Silica areas is in progress.

An extensive underground sampling programme is in progress with samples of muck from every round (6'), chip samples on the face before every round, panel samples on both walls and sludge samples from test drill holes every 5m along the drift. Geological mapping of the underground workings is also comprehensive.

LOG NO: <i>12-2286</i> K
ACTION: <i>off confid June 1987</i> <i>AW</i>
FILE NO:

104K079 MUDDY LAKE

**CONFIDENTIAL** PROPERTY FILE

7391  
8474411 Dave

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*Off Confid*  
*June 1987*

Preliminary field work was completed on the proposed road access to the property. This is a critical part of the proposed mine plan because it will affect the capital costs to start the mine and North American Metals wishes to complete it within a relatively short period of time.

**GEOLOGY:** The geology of the Muddy Lake (Golden Bear) property has been summarized by T. Schroeter (1986).

The mineralization in the Bear zone occurs within and between the Hangingwall and Footwall faults. The highest grade mineralization occurs in a quartz breccia zone between the faults and a highly altered, pyritic tuff found along the Hangingwall fault. North American Metals staff report that the Ag/Au ratio increases towards the Footwall vein. Typically Ag/Au values range from ratios of 1:1 to ~3:1, although the pyritic tuff can contain values of 15 to 28 g/t Au with approximately 2 g/t Ag. Detailed underground sampling is delineating some areas with grades of more than 40 g/t Au over widths of 4 to 9m. These higher grades were not anticipated and can be expected to raise the overall grade of the reserves for this deposit.

The upper portion of the orebody appears to have been lost due to the landslide. Two of the 1986 crosscuts finished drifting in the unconsolidated landslide material after cutting the Hangingwall Fault. The mineralization continues right up to the base of the landslide and Chevron intersected mineralized rock in diamond drill holes in areas now inferred to be landslide debris. The Hangingwall Fault appears to have been the zone of weakness which failed to initiate the landslide. Within the ore zone near the surface there are several major fractures, some of them open to the surface. These fractures may be related to the landslide event. If so, there is a potential ground instability problem in this area.

Both the Hangingwall and Footwall faults are part of a regional fault zone, called the Ophir Break, which can be traced to the north more than 10 km. It is the presence of gold mineralization and alteration at several sites along this fault zone which best demonstrates the potential of the Golden Bear project. To-date there has been only limited drilling away from known zones of mineralization along this structure. Other deposits undoubtedly exist along this Break.

J. Franzen indicated that North American Metals would be interested in research work on the Bear zone, possibly a M. Sc. thesis. Further research in this area is definitely warranted.

#### REFERENCES:

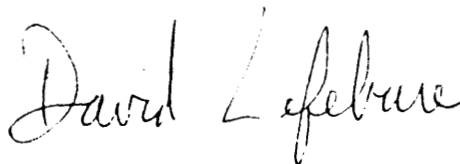
Schroeter, T.G. 1986. Muddy Lake Project. British Columbia Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, Paper 1986-1, p. 175-183.

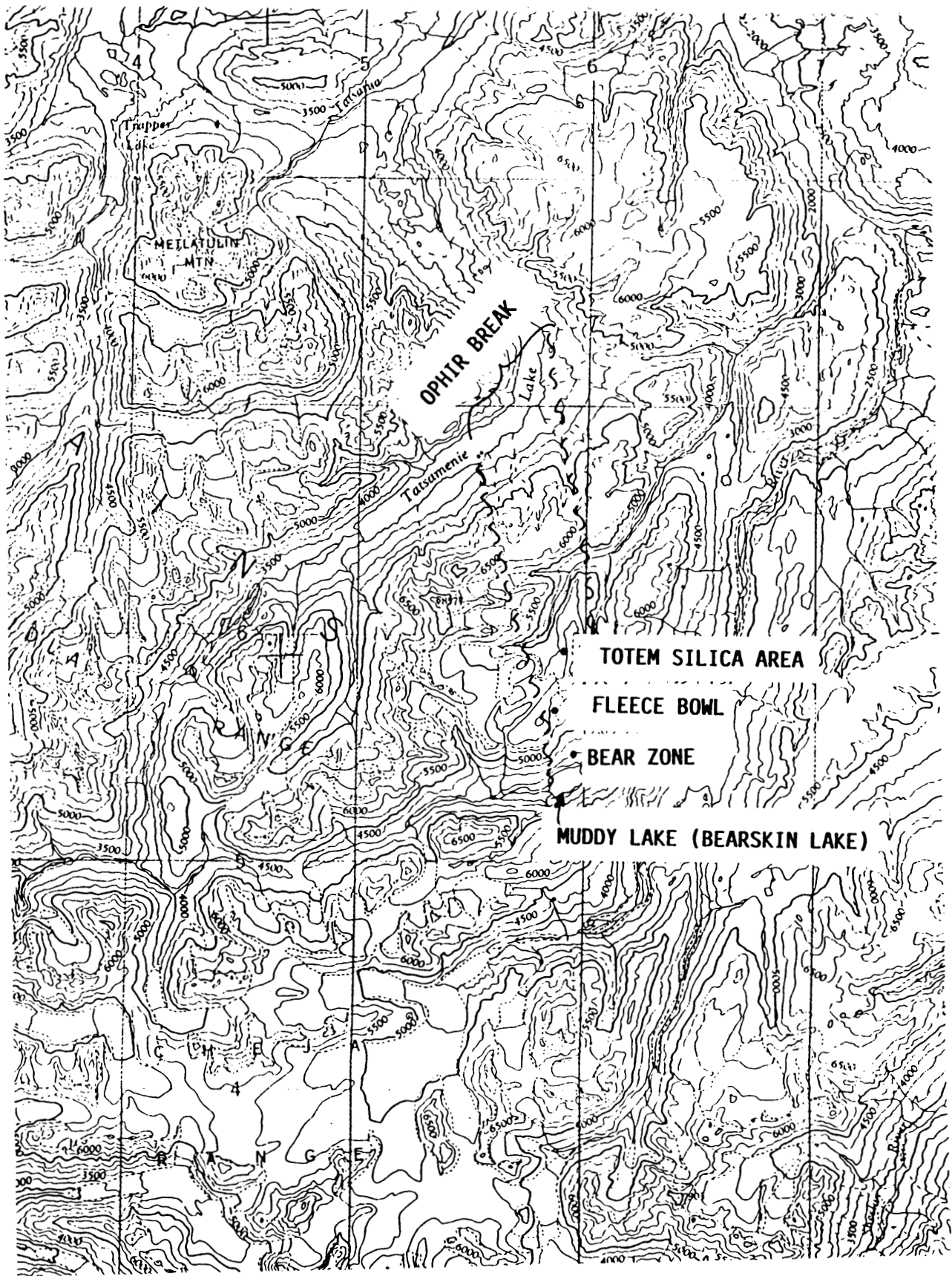
SUBMITTED BY: D.V. Lefebure

DATE: December 15, 1986

Encls. Location Map  
Photographs

104K097 DVL December 15, 1987





**MAP 1.** Location of Bear Zone on Golden Bear property (104K 079). North is towards top of page.

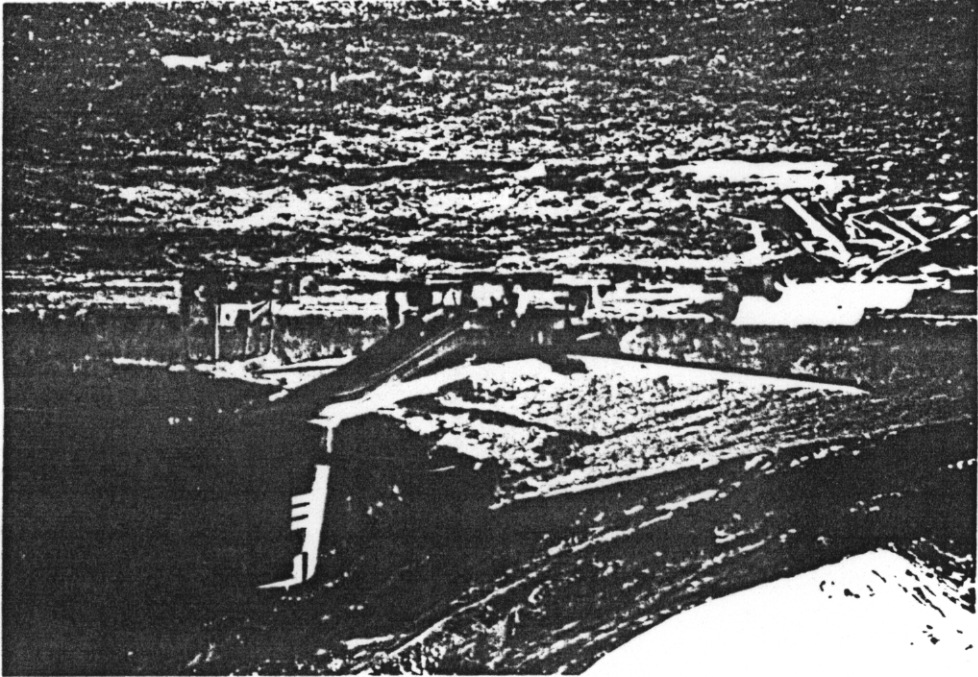


Figure 2. Cariboo used to freight fuel and equipment from Dease Lake to Golden Bear project. (R#45-5a)

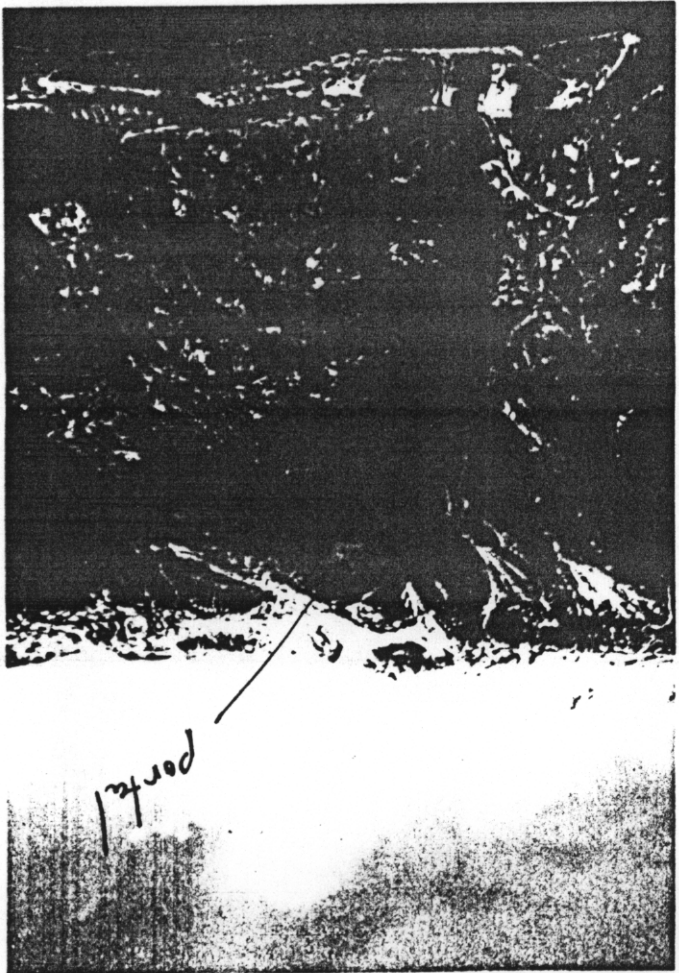


Figure 1. Looking north over Muddy Lake and camp towards the Bear Zone and portal. (R#45-4a)



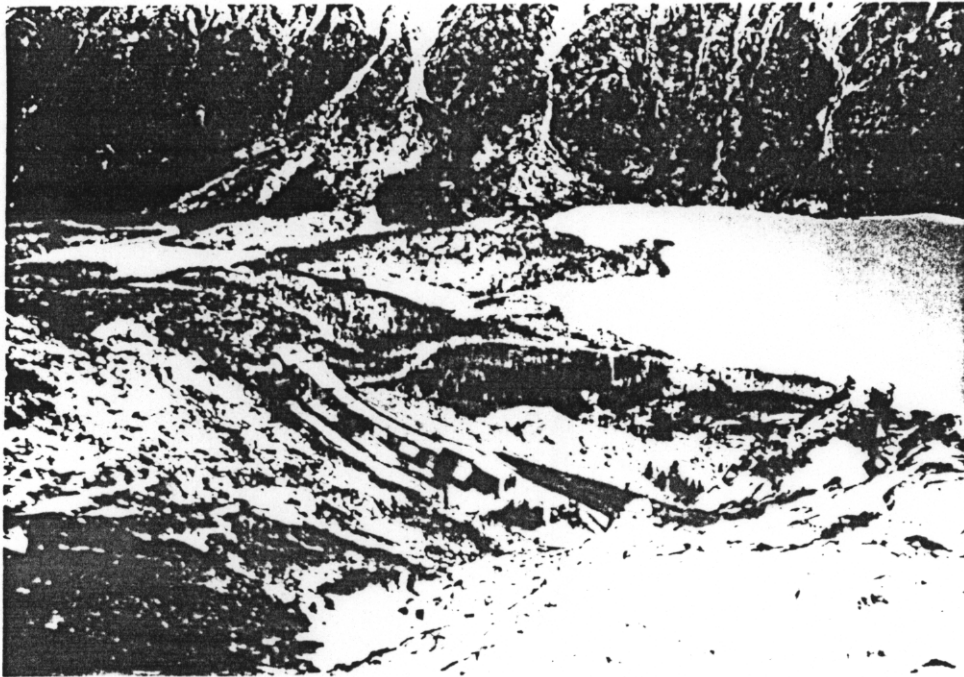


Figure 3. Buildings at portal in the foreground. Blue ventilation pipe leads to portal. Buildings and ground near lake underlain by landslide material. (R#45-13a)

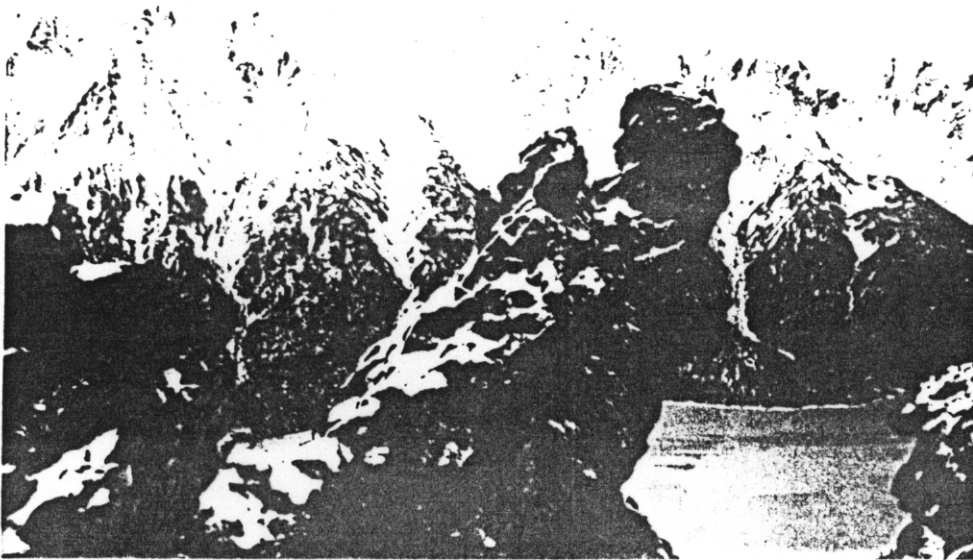


Figure 4. Backside of "Bear's Paw" which consists of weakly silicified dolomite. The "Bear's Paw" is located immediately above the portal. (R#45-11a)

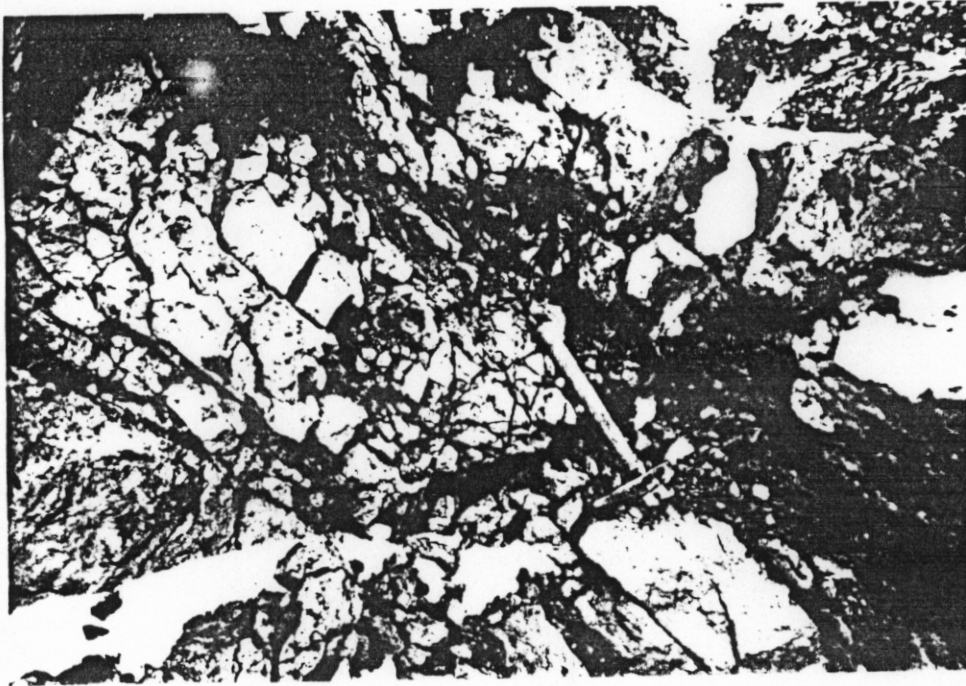


Figure 5. Altered breccia with sericitic tuff fragments and siliceous matrix/veinlets. The yellowish stain is reportedly jarosite, a common constituent of limonitic gossans.  
(R#45-12a)

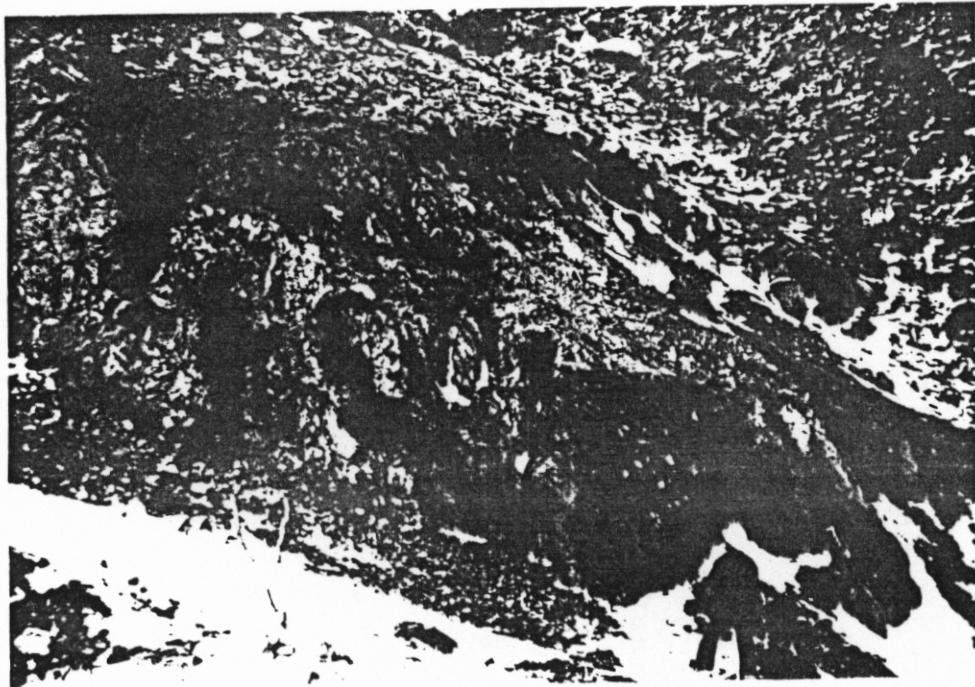


Figure 6. Surface expression of the Bear Zone. North of portal. Note large horsts of rocks caught up in strongly sheared zone.  
(R#45-14A)



Figure 7. Banded quartz zone at left of Figure 6. Although not clear in photograph, the banding appeared folded in one spot on outcrop.  
(R#45-16a)

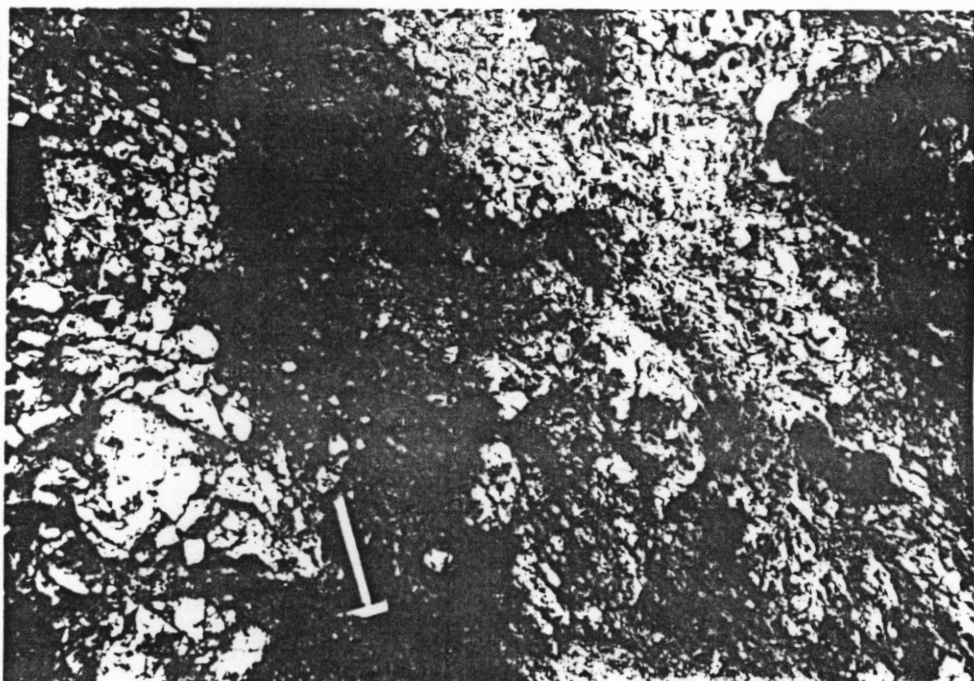


Figure 8. Close up of black gouge in western margin of fault zone seen in Figure 6. Note gray quartz breccia to right.  
(R#45-17a)





Figure 9. Close-up of altered and brecciated zone which E. Titley (in photograph) reported contained up to 1 oz gold. Reddish stain (limonite)? characteristic of certain zones in Bear Zone. Flat veinlets are composed of ankerite. (R#45-18a)

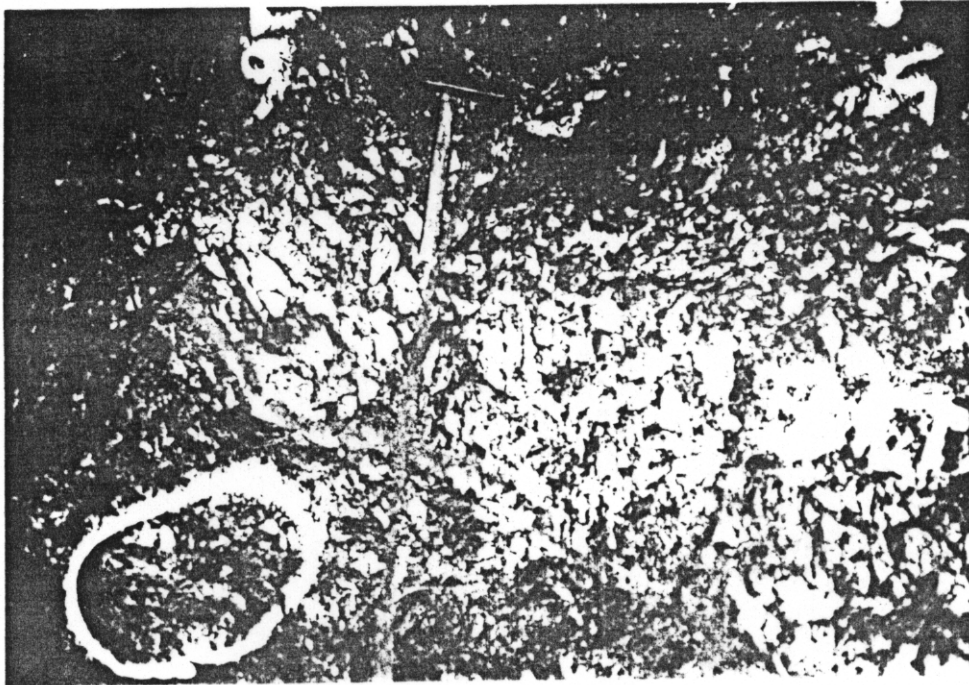


Figure 10. Silicified breccia underground. (R#45-22a)



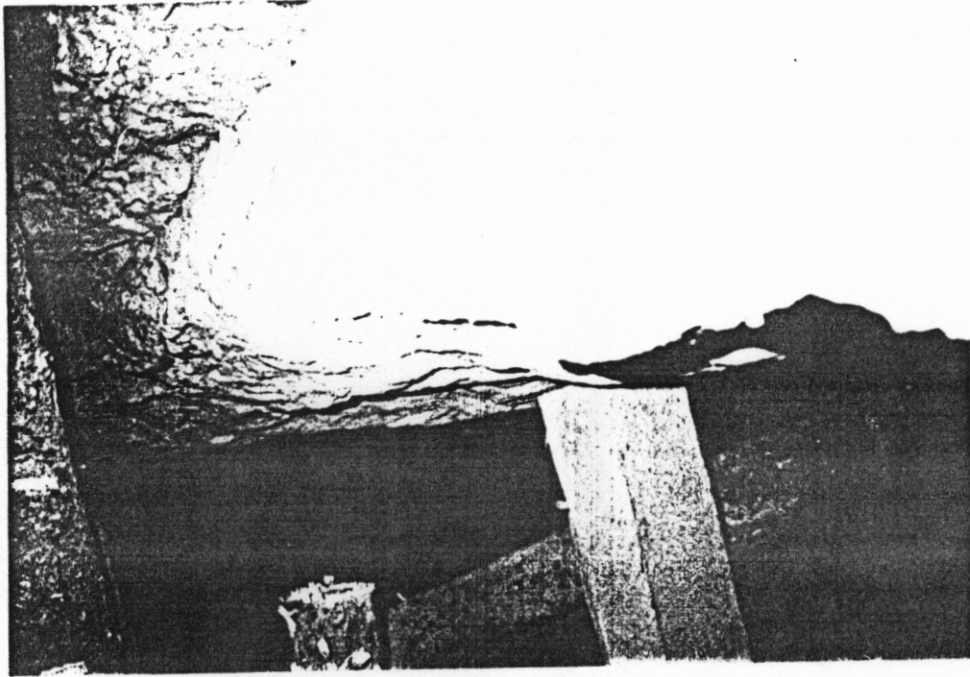


Figure 11. One of the large fractures underground which maybe related to landslide event.  
(R#45-24a)