**MAP NO.:** 115N 2

**ASSESSMENT REPORT** X
**PROSPECTUS**
**CONFIDENTIAL**
**OPEN FILE** X

**DOCUMENT NO:** 093105
**MINING DISTRICT:** WHITEHORSE
**TYPE OF WORK:** TRENCHING
BULK SAMPLING

**REPORT FILED UNDER:** MOOSEHORN EXPLORATION PROGRAM LIMITED

**DATE PERFORMED:** MAY 9 OCT 7, 1988 **DATE FILED:** 1993

**LOCATION:** **LAT.:** 63°04'N **AREA:** MOOSEHORN RANGE

**LONG.:** 140°55'W **VALUE $:** ED88-02

**CLAIM NAME & NO.:** REEF 1-4 (YA78081-84)
REEF 5-10 (YA82517-22)
REEF 11-15 (YA97444-48), REEF 16-20 (YB08092-96)

**WORK DONE BY:** I WARRICK, K ROBERTSON

**WORK DONE FOR:** MOOSEHORN EXPLORATION PROGRAM LIMITED PARTNERSHIP

| **DATE TO GOOD STANDING:** | |
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**REMARKS:** TRENCHING PROGRAM USED TO DISCOVER MORE HIGH GRADE GOLD SULPHIDE VEINS.

EXPLORATION INCENTIVES PROGRAM

DESIGNATION NUMBER ED88-2

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# TRENCHING AND BULK SAMPLING REPORT

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QUARTZ CLAIMS REEF 1-4 INCLUSIVE (YA78081-84)

QUARTZ CLAIMS REEF 5-10 INCLUSIVE (YA82517-22)

QUARTZ CLAIMS REEF 11-15 INCLUSIVE (YA97444-48)

QUARTZ CLAIMS REEF 16-20 INCLUSIVE (YB08092-96)

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YUKON TERRITORY CLAIM SHEET 115-N-2

63°04'N 140°55'W

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BY IAN WARRICK AND KATHERINE ROBERTSON

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MOOSEHORN EXPLORATION PROGRAM LIMITED PARTNERSHIP

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MAY 9,1988 TO OCTOBER 7,1988

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# PROPERTY OWNERSHIP

The following property is held in good standing by Ian Warrick:

-Quartz claims Reef 1-4 inclusive (YA78081-84)
-Quartz claims Reef 16-20 inclusive (YB08092-96)

The following property is held in good standing by Katherine Robertson:

-Quartz claims Reef 5-10 inclusive (YA82517-22)
-Quartz claims Reef 11-15 inclusive (YA97444-48)

## INTRODUCTION

The 1988 Moosehorn exploration season began in March when the General Partner, along with a trucking contractor, hauled heavy machinery and supplies on a winter road that connects the Alaska Highway north of Beaver Creek and the foot of the Moosehorn Range. A hi-boy semi-tractor/trailer, along with a 4-wheel drive truck and trailer, were used to make several trips along this 75 km. long winter ice road. Materials were cached at the bottom of the current placer workings on Swamp Creek (which is located at the Alaska/Yukon border on the Moosehorn Range). Because the area has only winter road access, all equipment (such as the mill and heavy machinery) are committed for at least one year.

Later in the spring (on April 23rd) the General Partner, along with three airplane-loads (Cessna 207) of supplies, flew in to the Claymore Airstrip which is located halfway up the west slope of the Moosehorn Range. The previous season's summit camp was re-opened, and while waiting for spring breakup the next month was spent freighting equipment and fuel the rest of the way to the claim group. This time was also spent maintaining and repairing the portable mill and heavy machinery.

On May 21, two employees (equipment operators) were flown in for the season. A considerable amount of work was done at this point upgrading the Moosehorn Airstrip.

A hardrock exploration program of trenching and sampling on the Reef Quartz Claims was carried out. At various times during the season the partnership also conducted a separate sampling program on the Kate placer claims.

The General Partner along with several employees were continuously engaged in exploration until the end of the season. On October 7th the camps were shut down for the year and the crew was flown out.

# THE HARDROCK PROGRAM

## INTRODUCTION

The Moosehorn Exploration hardrock program is designed to test the viability of developing a small high-grade hardrock gold mine on the Reef Quartz Claim group.

Mineralization consists of many parallel, gently dipping, narrow, hydrothermal quartz veins containing abundant sulphides and visible gold. Common base metal minerals include galena, arsenopyrite, sphalerite, jamesonite, and boulangerite, with minor amounts of pyrrhotite, anglesite, cerrusite, chalcopyrite, molybdenite, and calcite. Visible gold occurs in association with the sulphides, and surface assays average 4 oz. Au/ton along 300 feet of the strike of the "M vein" (the only vein so far closely examined). Quartz vein alteration consists of oolitic limonite, smithsonite, and cervantite (usually in association with visible gold in quartz float). All the economic mineralization so far discovered occurs within the granodiorite pluton. It is possible that the porphyritic plug immediately south of the property could be the source of the hydrothermal solutions. Evidence of this is the transition of the vein minerology to the north. Vein occurrences here contain increasing amounts of carbonates and low gold/high silver, with some tetrahedrite at the boundary.

## HISTORY

In 1974, high assays of gold in grab samples obtained by M. Kenyon on the summit of the Moosehorn Range resulted in the staking of the 58 LORI Claims. Claymore Resources purchased the claims from Kenyon, and conducted an exploration program during the summer of 1975. There is no record of previous staking or other work having been done on the property.

The exploration program consisted of a geo-physics program over the "M vein", a geo-chemical soil sampling program over most of the property, an eighteen hole diamond drilling program consisting of 2,050 feet of BQ wireline drilling, and a geological survey of the ridgetop.

The geophysical, geochemical, and diamond drilling programs failed to give any meaningful response over the subcropping M vein, although the quartz float and soils covering this vein contain large amounts of visible native gold.

Because of the discouraging results, and low gold prices at the time, no further work was done, and after eight years, the assessment work ran out, and the claims were allowed to lapse.

In 1983, prospectors K. Robertson and I. Warrick discovered and staked a gold bearing quartz vein (Reef 1-4) bordering the LORI claims. When the LORI claims lapsed in 1984, the Reef claim group was extended over the newly lapsed ground (Reef 5-10).

Other subcropping quartz veins also located on the property contain high-grade gold mineralization, and have no history of previous work. During the 1986 and 1987 exploration seasons, Moosehorn Exploration conducted prospecting and bulk sampling programs (EIP 86-006 and EIP 87-001) using a portable mill and processing plant to produce blended bulk samples from the "M vein". The vein was found to contain 2,500 tons of reserve with an average grade of 2.81 oz./ton Au.

Late in the 1987 season, quartz veins containing visible gold were found in-situ in the bedrock exposed by the placer workings at the top of Kenyon Creek. These veins, along with large amounts of similar float found in the Swamp Creek placer deposit and the summit ridge vein systems, suggest a vein frequency of approximately 100 yards on an east-west line across the Moosehorn pluton. Therefore, the Reef claim group was extended to the southwest by the staking of ten additional claims (Reef 11-20) in order to cover the new discoveries.

## THE TRENCHING AND SAMPLING PROGRAM

The target area was the southwest slope of the Moosehorn summit ridge, which is located directly above Kenyon and Swamp Creeks. Both these creeks contain abundant quartz vein float with high-grade gold mineralization. Approximately 100,000 oz. of gold have been deposited in these two creeks in the form of placer deposits which have been derived from this vein float.

Unfortunately, there is no bedrock outcrop on the Reef claim group apart from the narrow summit ridge and a small area onehalf mile to the west which was the site of the old placer workings. The rest of the claim group consists of a long, willow covered slope which contains many high-grade quartz veins subcropping four to twelve feet under the vegetation.

Apart from a few small well-drained drier areas, the soils consist of a permanently frozen layer of organic material and loess ("muck"). Underlying this are the residual soils of the granodiorite pluton. Usually they consist of three to four feet of frozen, coarse-grained sand, intermixed with angular slide rock (boulders up to 20' in diameter). The bedrock horizon itself is difficult to distinguish, as the granodiorite has decomposed to an unknown depth, and even though it is in-situ it can be hand shovelled. Because of the latter characteristic, it has been found that mechanical trenching of the top three feet of bedrock is possible, and structures such as propylitic alteration zones and mineralized quartz veins can be viewed in cross section along the trench walls.

Heavy equipment used to trench was as follows:

- a rubber tracked Nodwell with Case backhoe

- a John Deere 350 bulldozer with detachable backhoe

- a Cat D-4

- an International 125C track loader

- a Pionjar rock drill was also available

There were many difficulties encountered in the trenching program: machinery breakdowns with long waits for repair parts caused many delays during the short season, spring breakup on the steep slopes produced at times impassable conditions, and the slow rate of permafrost melt at high altitude all contributed to slowing progress.

After much trial and error, it was found that the best trenching technique was as follows:

1. the willow and moss layer was bulldozed off the proposed trench line,

2. the exposed permafrost was allowed to thaw (3"-4" per day),

3. a tracked backhoe was parked in the trench and worked its way downhill, piling the excavated material to the sides behind it.

In the typical conditions of thawed muck it was necessary to have the winch-Cat ready to support the backhoe, as even a tracked machine could not drive downhill. Because this technique was not developed until the latter part of the season, trenching to bedrock was suspended in some trenches until the 1989 season.

As expected, many new quartz veins were discovered in the trenches. They appear to be hosted in 40'-100' wide propylitic alteration zones that strike north-south and dip between 60° and 25° to the east. Several quartz stringers did vary from this dip - sometimes by as much as 90°.

Vein mineralization was consistent with previous discoveries: namely, 1"-6" thick erratic quartz veins hosting laminated sulphide mineralization and high-grade gold values. Sampling methods consisted of crushing 20 to 30 pounds of vein material in the portable mill and using gravity concentration and visual estimation of the grade of the sample. Samples varied from spectacular quantities of coarse gold to very small amounts of extremely fine colours (100 mesh). Due to the nugget effect, it was felt that the erratic mineralization did not warrant the use of accepted assay methods as a means of determining grade. The previous consistency of high-grade gold values in similar veins on the claim group suggest that these veins host economic quantities of ore.

## CONCLUSION

The 1988 trenching and sampling program has confirmed the existence of numerous ore structures in the Reef claim group. In the coming years, the partnership plans development of a small hardrock gold mine on the property.

A proposed mill site is planned at the site of the old Kenyon Creek placer camp. A ball mill (approximately 25 tons per day) along with a 10"x14" jaw crusher and jig is warranted to process the network of veins that have been, and are yet to be, discovered on the slope above. A network of roads linking trenches and open-pitted veins would link the mill site with the numerous high-grade showings. An air track drill supporting an excavator loading a medium-sized rock dump truck is the proposed method of mining and transport.

The partnership plans to continue its trenching program during the 1989 and 1990 seasons using the developed techniques of backhoe and Cat excavation to establish further reserves.

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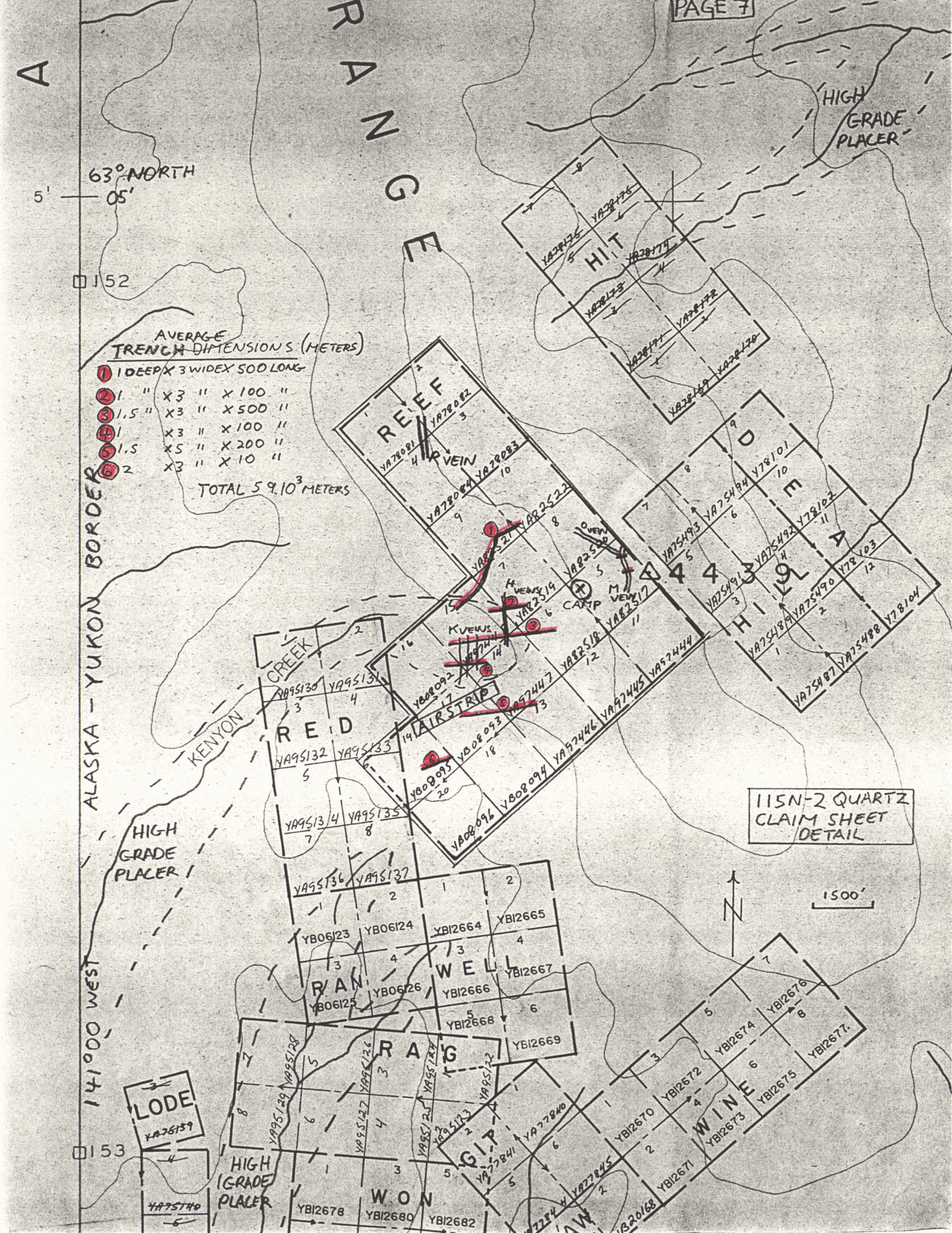
A
RANGE
63° NORTH
5' — 05'
152
153
ALASKA – YUKON BORDER
141°00' WEST
HIGH GRADE PLACER
HIGH GRADE PLACER
HIGH GRADE PLACER
KENYON CREEK
AVERAGE TRENCH DIMENSIONS (METERS)
1 1 DEEP X 3 WIDE X 500 LONG
2 1 " X 3 " X 100 "
3 1.5 " X 3 " X 500 "
4 1 X 3 " X 100 "
5 1.5 X 5 " X 200 "
6 2 X 3 " X 10 "
TOTAL 5 9.10³ METERS
REEF
VEIN
HIT
DELTA
HILL
RED
RAN
WELL
RAG
GIP
WINE
WON
LODE
AIRSTRIP
CAMP
K VEWS
M VEWS
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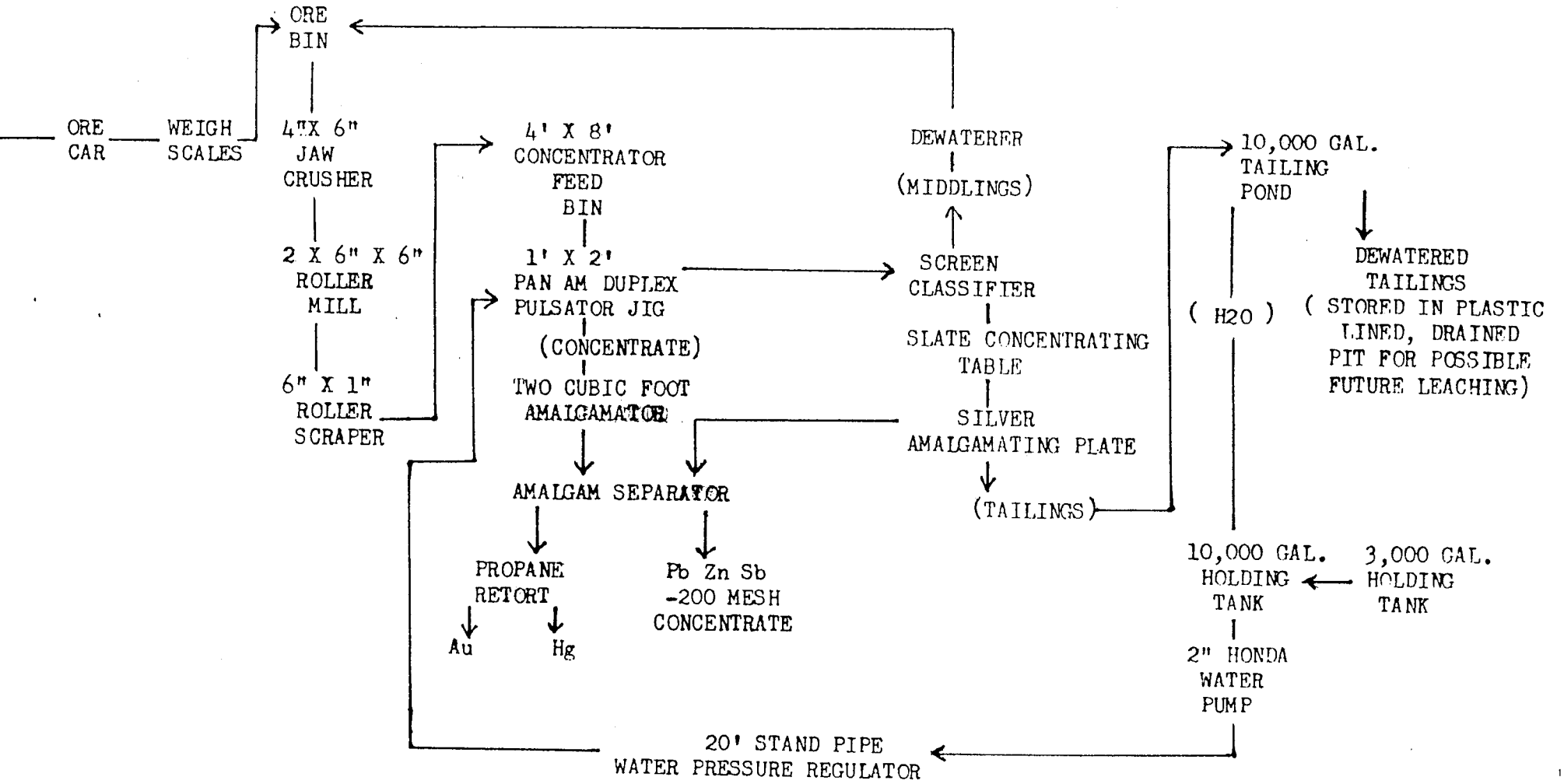
115N-2 QUARTZ CLAIM SHEET DETAIL
1500'
N

FLOW DIAGRAM OF THE TEN TON PER DAY PORTABLE MILL USED DURING THE 1988 MOOSEHORN EXPLORATION PROGRAM

FOR THE PROCESSING OF BLENDED BULK SAMPLES



Typical vein intersection during trenching. Coarse blebs of gold are usually visible along weathered fractures after alteration of laminated sulphides.

Bulldozers stripping prior to backhoe trenching (removal of vegetation facilitates thawing of permafrost.

Claymore Airstrip within Reef Claim Group.
(K veins located in placer workings at lower right of picture). Note lack of outcrop on claim group.

Backhoe trenching decomposed in-situ bedrock. Vein and wallrock alteration dipping at 30° can be seen to the lower right of backhoe bucket.

Bulldozer trenching drier ground.
Note in-situ propylitic alteration zone in granodiorite. Vein float in center of photograph has been loosened from high-grade vein within alteration zone.

Trenching to bedrock through thawed ground.

Typical conditions in thawed permafrost.

## EXPLORATION CREW

| | |
|---|---|
| General Partner & Operator | I. Warrick,<br>Box 4707,<br>Whitehorse, Yukon<br>Y1A 3V7 |
| General Partner & Camp Cook | K. Robertson,<br>Box 4707,<br>Whitehorse, Yukon<br>Y1A 3V7 |
| Heavy equipment operator,<br>welder, & blaster's helper | C. Walker,<br>33041-Dewdney Trunk Road,<br>Mission, B.C.<br>V2V 5X4 |
| Heavy equipment operator | T. Dolynny,<br>General Delivery,<br>Cobble Hill, B.C.<br>V0R 1L0 |
| Labourer | J. McMahon,<br>10511 Suncrest Dr.,<br>North Delta, B.C.<br>V4C 2N1 |

## REPORT PREPARATION

This report was prepared in two days by the General Partner and Operator of the 1988 season Moosehorn Exploration Program (as follows):

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