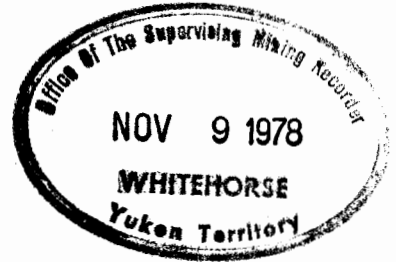




ASSESSMENT REPORT

DIAMOND DRILLING PROGRAM

August 1977



SAM CLAIMS 1 - 98

Whitehorse M.D.

115-J-9 and 115-I-12

by

G. E. BIDWELL - B.A., F. G. A. C.

October 23, 1978

021347

115-5-9

ANGLO AMERICAN CORPORATION OF
CANADA EXPLORATION LTD

SAM 89, 90, 92, 95-96

YA 8277, YA 8278, YA 8280, YA 8283
YA 8284

11 HOLOS 1605 FT

AUG 1978

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Claim Map

(folder) with grouping appl's

Diamond Drill Plan

(folder) " Form C

Introduction and Summary

The Sam claims No.'s. 1-86 were staked on October 25th, 1975 and No.'s 87-98 were staked in Mid-October, 1976. Geochemical soil sampling was conducted in the summers of 1976 and 1977.

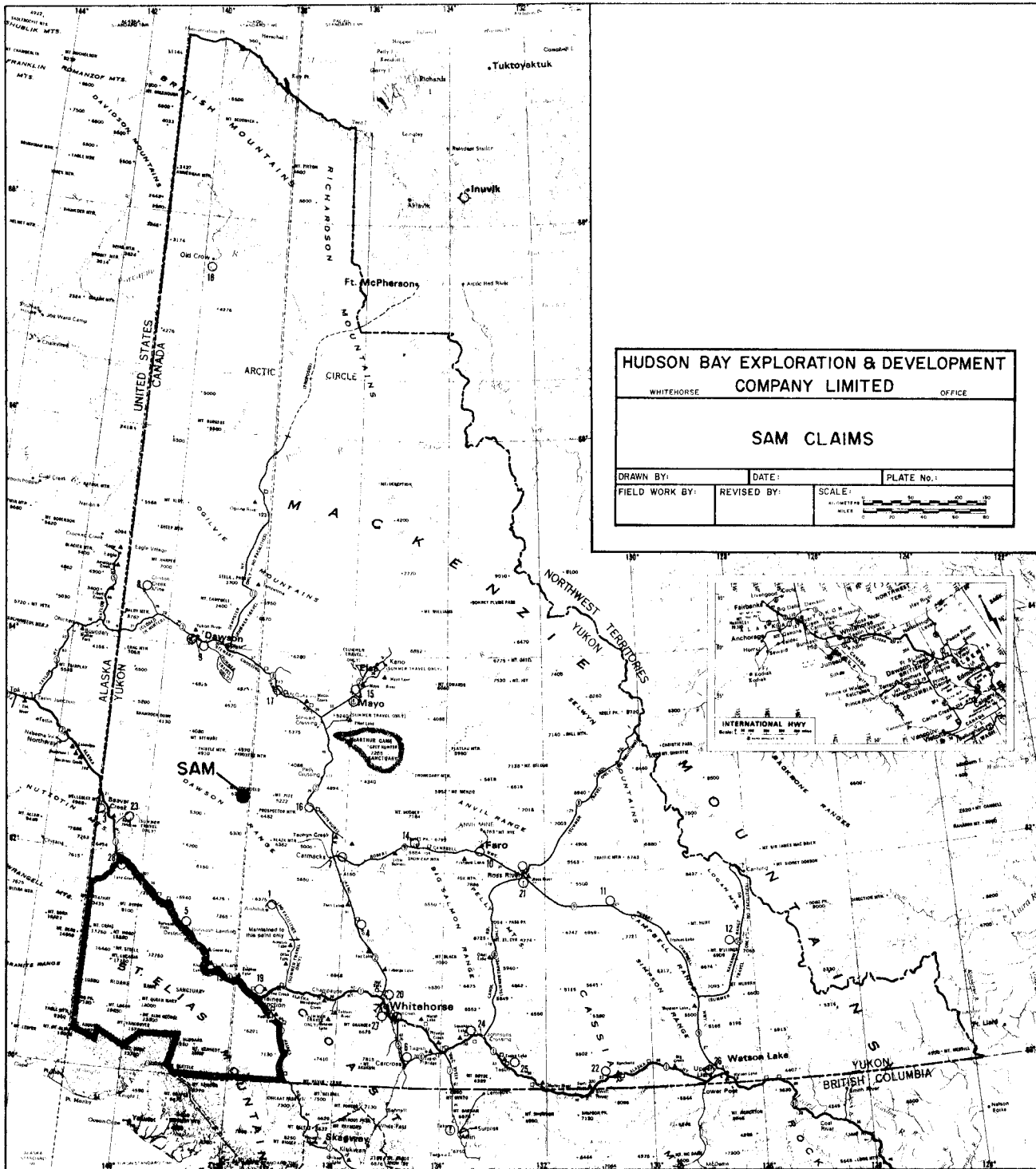
The 1978 field work consisted of minor soil sampling, cat trenching and 1606 feet of diamond drilling. It was carried out from June 15 to August 29.

The cat trenching and diamond drilling was contracted out to E. Caron Diamond Drilling Limited of Whitehorse, Y.T. by Hudson Bay Exploration and Development Company Limited who were operators of the property on behalf of Anglo American Corporation of Canada Exploration Ltd.

Location and Access

The Sam claims are located in the Whitehorse Mining District at $62^{\circ}39'N$, $138^{\circ}02'W$ on the boundary of claim sheets 115-J-9 and 115-I-12. The claim group is bordered by Hayes Creek to the north and east and by Butterfield Creek to the south. These creeks are tributaries of the Selwyn River which empties into the Yukon River 35 miles downstream from Fort Selkirk, Yukon Territory.

The property is accessible in summer by helicopter only but cat roads from Minto and Mt. Freegold can be used the remainder of the year. The camp for the 1978 program was located on the ridge at the head of Sonora Gulch.



HUDSON BAY EXPLORATION & DEVELOPMENT
 COMPANY LIMITED

WHITEHORSE OFFICE

SAM CLAIMS

DRAWN BY: DATE: PLATE No.:

FIELD WORK BY: REVISED BY:

SCALE:
 KILOMETERS 0 20 40 60 80
 MILES 0 20 40 50

Personnel

The drilling program was contracted by E. Caron Diamond Drilling Limited with head office in Whitehorse, Yukon Territory. Four qualified drillers were employed.

Mr. G. Douglas of Hudson Bay Exploration and Development Company Limited was the drill geologist throughout the project. Mr. G. E. Bidwell, Resident Geologist, Whitehorse supervised the program. The summary of qualifications of Mr. Douglas and Mr. Bidwell are included in the report.

Claim Ownership

All the Sam Claims, No.'s 1-98 are owned by Anglo-American Corporation of Canada Exploration Ltd. It should be noted that claims Sam 19 and Sam 36 have been superseded by Sam 88 and Sam 87 respectively. There are, therefore a total of 96 claims.

Diamond Drilling Program

The diamond drilling program commenced August 7 and was completed by August 29, 1978. The equipment was hauled by truck to Minto (closest point by road) and from there was taken by boat 45 miles down the Yukon River and airlifted by helicopter the last 10 miles to the property. The equipment was moved on the property by a cat which was walked into the property in the spring.

During the drilling period eleven holes were completed for a total of 1606 feet. The location of the holes are shown on the diamond drill plan included with the report. The core was left on the property and is stored in trays and stacked

at the camp.

Geology

The Sam claims lie within the unglaciated area of West Central Yukon and consequently the property is covered by residual soil. Bedrock exposure is negligible even on the tidge tops and geological mapping is restricted to float. However, movement of rock fragments away from their source is not thought to be significant.

Three main rock units have been recognized:

1. "Coffee Creek" granite/quartz monzonite
2. Rhyolite porphyr intrusives
3. Yukon Group meta-sediments

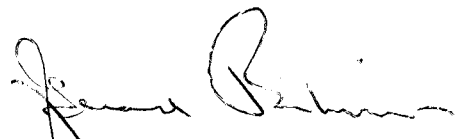
Descriptions of these rock types are given in the 1977 Geo-chemical, Electromagnetic and Geological Assessment Report filed by A. A. Walker for the same claim group.

In the drilling program the rhyolite porphyry and meta-sedimentary units were encountered. Details of the geology are found in the diamond drill logs accompanying this report.

Conclusions

The location of diamond drill holes were based on the results of the surface soil sampling and cat trenching carried out earlier in the summer. The soils and trenches gave somewhat anomalous values in gold but as can be seen in the drill assay sheets these results could not be duplicated in the drilling. All holes were assayed from top to bottom for gold (in parts per billion) and silver (in parts per million).

Only very minor precious metal values were received and these are believed to be associated with lead, copper sulphosalts (Boulangerite, Bourmonite) which occur with pyrite in quartz calcite veins within strong northeast trending shear zones.



G. E. Bidwell,
Resident, Geologist.

October 23, 1978.

APPENDIX A

Diamond Drill Logs

| DEPTH | | WIDTH | | ROCK UNIT | DESCRIPTION | ESTIMATE | | | ALTERATION | | | GRAPHIC LOG | | | |
|-------|----|---------|--------|-----------|--------------------------|----------|--|--|------------|--|--|-------------|------|----------|------|
| FROM | TO | DRILLED | R'CVRD | | | Py | | | | | | Scale | Frac | Shr. Fit | Vein |
| | | | | | 78 - 1 | | | | | | | | | | |
| | | | | | Page 4 of 4 | | | | | | | | | | |
| | | | | | <u>CORE ANGLES</u> | | | | | | | | | | |
| | | | | | 18.5 Joint 25° | | | | | | | | | | |
| | | | | | 19.5 30° | | | | | | | | | | |
| | | | | | 20.0 40° | | | | | | | | | | |
| | | | | | 20.2 40° | | | | | | | | | | |
| | | | | | 23.0 65° | | | | | | | | | | |
| | | | | | 23.5 60° | | | | | | | | | | |
| | | | | | 26.5 25° | | | | | | | | | | |
| | | | | | 28.5 5° | | | | | | | | | | |
| | | | | | 30.0 15° | | | | | | | | | | |
| | | | | | 31.5 3° | | | | | | | | | | |
| | | | | | 35.0 5° | | | | | | | | | | |
| | | | | | 39.0 30° | | | | | | | | | | |
| | | | | | 41.0 55° | | | | | | | | | | |
| | | | | | 46.5, 56.0 55° | | | | | | | | | | |
| | | | | | 45° | | | | | | | | | | |
| | | | | | 57.0 10° | | | | | | | | | | |
| | | | | | 69.0 45° | | | | | | | | | | |
| | | | | | 55° | | | | | | | | | | |
| | | | | | 99.0 45° | | | | | | | | | | |
| | | | | | 105. 40° | | | | | | | | | | |
| | | | | | 50° | | | | | | | | | | |
| | | | | | 146. pyrite stringer 55° | | | | | | | | | | |

at 70° to each other

at 70° to each other

at 70° to each other

at 70° to each other

| DEPTH | | WIDT | | ROCK UNIT | DESCRIPTION | ESTIMATE | | | ALTERATION | | | | GRAPHIC | | | |
|-------|-------|---------|--------|-----------|------------------------------|--|--|--|------------|--|--|--|---------|--|--|--|
| FROM | TO | DRILLED | R'CVRD | | | Py | | | | | | | | | | |
| | | | | | 78 - 3 | | | | | | | | | | | |
| | | | | | 68.9 - 70.3 | carbonitized zone, soft | | | | | | | | | | |
| | | | | | 75.5-85.2 | chloritized, shear zones - fractures filled with carbonate stringers | | | | | | | | | | |
| | | | | | 76.1 - 76.8 | carbonitized | | | | | | | | | | |
| | | | | | 85.6 | hairline fracture at 45°, pyrite on surface | | | | | | | | | | |
| | | | | | 88.8 - 89.0 | calcite vein pyrite and sulphosalts? or chlorite | | | | | | | | | | |
| | | | | | 96.0-96.5 | 3% - 5% disseminated pyrite | | | | | | | | | | |
| | | | | | 102.0-102.8 | 5% " " | | | | | | | | | | |
| | | | | | 104.7-104.8 | calcite-pyrite seam. very soft and crumbly at CA 45° | | | | | | | | | | |
| 105.2 | 112.2 | | | | Metagreywacke | quartz pebbles, slate fragments chloritized calcite stringers trace pyrite | | | | | | | | | | |
| 112.2 | 130.2 | | | | Fault Zone | very soft crumbly sections interbedded with rhyolite porphyry carbonitized | | | | | | | | | | |
| | | | | | 112.0-117.0 | 3.5' lost core | | | | | | | | | | |
| 130.2 | 148.2 | | | | Rhyolite porphyry | | | | | | | | | | | |
| 148.2 | 151.0 | | | | Silicified rhyolite porphyry | | | | | | | | | | | |
| 151.0 | | | | | END OF HOLE | | | | | | | | | | | |

| DEPTH | | WID | | ROCK UNIT | DESCRIPTION | ESTIMATE | | ALTERATION | | | | GRAPHIC LOG | | | |
|-------|----|---------|--------|--------------|--------------------|----------|--|------------|--|--|--|-------------|--|--|--|
| FROM | TO | DRILLED | R'CVRD | | | Py | | | | | | | | | |
| | | | | | <u>CORE ANGLES</u> | | | | | | | | | | |
| | | | | | 21.6 joint 80° | | | | | | | | | | |
| | | | | | 22.6 50° | | | | | | | | | | |
| | | | | | 27.5 60° | | | | | | | | | | |
| | | | | | 33.5 45° | | | | | | | | | | |
| | | | | | 40.7 50° | | | | | | | | | | |
| | | | | | 51.0 35° | | | | | | | | | | |
| | | | | | 54.5 45° | | | | | | | | | | |
| | | | | | 58.0 40° | | | | | | | | | | |
| | | | | | 63.0 40° | | | | | | | | | | |
| | | | | | 67.0 25° | | | | | | | | | | |
| | | | | | 67.5 35° | | | | | | | | | | |
| | | | | | 74.0 25° | | | | | | | | | | |
| | | | | | 83.5 25° | | | | | | | | | | |
| | | | | | 85.0 55° | | | | | | | | | | |
| | | | | | 85.6 45° | | | | | | | | | | |
| | | | | | 92.5 30° | | | | | | | | | | |
| | | | | | 95.0 25° | | | | | | | | | | |
| | | | | | 98.0 35° | | | | | | | | | | |
| | | | | | 106.5 35° | | | | | | | | | | |
| | | | | | 107.0 35° | | | | | | | | | | |
| | | | | | 130.0 45° | | | | | | | | | | |
| | | | | | 132.0 55° | | | | | | | | | | |
| | | | | | 135.0 30° | | | | | | | | | | |
| | | | | | 142.0 10° | | | | | | | | | | |
| | | | | | 149.0 25° | | | | | | | | | | |
| | | | | | 151.0 45° | | | | | | | | | | |

78 - 3

| DEPTH | | WID | | ROCK UNIT | DESCRIPTION | ESTIMATE % | | | ALTERATION | | | | GRAPHIC LOG | | | | |
|-------|----|---------|-------|-----------|--|------------|--|--|------------|--|--|--|-------------|--|--|--|--|
| FROM | TO | DRILLED | R'VRD | | | Py | | | | | | | | | | | |
| | | | | | 104.1 joint at 15° coated with pyrite (50%) | | | | | | | | | | | | |
| | | | | | 106.1 pyrite veinlet (<1mm) in joint | | | | | | | | | | | | |
| | | | | | 110.8 " " " " at 25° | | | | | | | | | | | | |
| | | | | | 116.4 " " " " 40° | | | | | | | | | | | | |
| | | | | | 119.1 55° | | | | | | | | | | | | |
| | | | | | 117.5-120.0 1' core lost | | | | | | | | | | | | |
| | | | | | 125.2 3mm calcite vein at 45°, very soft and muddy (black) | | | | | | | | | | | | |
| | | | | | 132.5 - 132.6 mud seam (black) 5% disseminated pyrite | | | | | | | | | | | | |
| | | | | | 133.1 - 133.5 5 mm pyrite vein at CA 20° | | | | | | | | | | | | |
| | | | | | 133.0-150.0 silicified, very hard, 2-3% pyrite | | | | | | | | | | | | |
| | | | | | 145.7 1mm pyrite stringer | | | | | | | | | | | | |
| | | | | | 145.8 - 147.0 carbonatized | | | | | | | | | | | | |
| | | | | | 146.1 1mm pyrite stringer at 60° | | | | | | | | | | | | |
| 150.0 | | | | | END OF HOLE | | | | | | | | | | | | |

| DEPTH | | WIT 4 | | ROCK UNIT | DESCRIPTION | ESTIMATE | | % | ALTERATION | | | | GRAPHIC LOG | | | | |
|-------|----|---------|--------|-----------|---|----------|--|---|------------|--|--|--|-------------|--|-------|------|-----|
| FROM | TO | DRILLED | R'CVRD | | | Py | | | | | | | | | Scale | Frac | Shr |
| | | | | | 91.5-92.0 calcite vein, quartz crystals, brecciated sulphosalt | | | | | | | | | | | | |
| | | | | | along O.C. at 45° | | | | | | | | | | | | |
| | | | | | 94.3 3mm calcite stringer at 45° | | | | | | | | | | | | |
| | | | | | 92.0-125.0 lightly epidotized feldspars, core takes on a greenish grey colour | | | | | | | | | | | | |
| | | | | | 92.0-92.5 very weakly developed foliation at 35-40° | | | | | | | | | | | | |
| | | | | | 98.8 2 hairline calcite stringers at 25° | | | | | | | | | | | | |
| | | | | | 99.6 1 mm pyrite stringer at 60° | | | | | | | | | | | | |
| | | | | | 99.9-100.0 2-5mm calcite - sulphosalt stringers. One at 60° | | | | | | | | | | | | |
| | | | | | has disseminated (50%) sulphosalt along L.C. in the wedge formed by the intersection of another stringer (at 40°) | | | | | | | | | | | | |
| | | | | | a few crystals of sphalerite are developed. Some chips of broken mineralized core present. | | | | | | | | | | | | |
| | | | | | 100.8-102.0 brecciated, carbonatized, black mud seams | | | | | | | | | | | | |
| | | | | | 102.6-104.5 broken core, sulphosalt stringers to 4mm, core angles appear to range from 10-50° | | | | | | | | | | | | |
| | | | | | 104.7-106.0 calcite - chlorite stringer at 10° ranges from 1 - 5 mm thick | | | | | | | | | | | | |
| | | | | | 107.3-107.4 2 - 5 mm sulphosalt - calcite-galena? pyrite-sphalerite stringers at 45° | | | | | | | | | | | | |
| | | | | | 108.0-108.5 carbonatized, black mud, soft and crumbly | | | | | | | | | | | | |
| | | | | | 109.7 2 mm sulphosalt stringer | | | | | | | | | | | | |
| | | .5 | .1 | | 111.5-112. 0.4' lost core | | | | | | | | | | | | |
| | | 2 | 1.2 | | 112.0-114.0 0.8' lost core, 2 thin sulphosalt stringers | | | | | | | | | | | | |
| | | | | | 115.2-117.5 black mud along fracture at 0° | | | | | | | | | | | | |
| | | | | | 118.2-118.6 1 mm sulphosalt at 10° | | | | | | | | | | | | |

78 - 8

| DEPTH | | WIDTH | | ROCK UNIT | 78 - 8 | Page 5 of 6 | ESTIMATE % | | | ALTERATION | | | | GRAPHIC | | | |
|-------|----|---------|--------|-----------|---|-------------|-------------|----|--|------------|--|--|--|---------|--|-----|------|
| FROM | TO | DRILLED | R'CVRD | | | | DESCRIPTION | Py | | | | | | | | Sch | Proc |
| | | | | | 170.3 | | | | | | | | | | | | |
| | | | | | 172.0-172.5 | | | | | | | | | | | | |
| | | | | | 175.0-176.2 | | | | | | | | | | | | |
| | | | | | carbonatized, soft crumbly core. Pyrite stringers at CA 20 in upper and lower part of section | | | | | | | | | | | | |
| | | | | | 181.3 | | | | | | | | | | | | |
| | | | | | 181.7 | | | | | | | | | | | | |
| | | | | | 182.9 | | | | | | | | | | | | |
| | | | | | 184.0 | | | | | | | | | | | | |
| | | | | | 2mm calcite-sulphosalt stringer at 70°, sulphosalt at UCand LC | | | | | | | | | | | | |
| | | | | | 189.0-197.0 | | | | | | | | | | | | |
| | | | | | chloritized, medium green in colour except 192.0-195.0 which is carbonatized, soft but still solid, thin black mud seams at 192.- and 193.3 | | | | | | | | | | | | |
| | | | | | 193.0 | | | | | | | | | | | | |
| | | | | | 193.2 | | | | | | | | | | | | |
| | | | | | 1 mm sulphosalt stringer at 60° } 4 - 5 mm displacement fault? | | | | | | | | | | | | |
| | | | | | 200.0 | | | | | | | | | | | | |
| | | | | | END OF HOLE | | | | | | | | | | | | |

| DEPTH | | WIDTH | | ROCK UNIT | DESCRIPTION | ESTIMATE % | | ALTERATION | | | | GRAPHIC | | | |
|-------|-------|---------|----------|-----------|---|------------|--|------------|--|--|--|---------|-------|------|----------|
| FROM | TO | DRILLED | RECORDED | | | Py | | | | | | | Scale | Frac | Shr. Fit |
| 48.0 | 49.5 | | | | 48.0-49.5 fault? - soft muddy limonitized throughout | | | | | | | | | | |
| 49.5 | 55.0 | | | | 49.5-55.0 quartz sericite schist | | | | | | | | | | |
| | | | | | 52.5-52.7 soft muddy, limonitized | | | | | | | | | | |
| 55.0 | 86.0 | | | | 55.0-86 quartz biotite chlorite schist | | | | | | | | | | |
| | | | | | 55.2 3mm pyrite stringers at 10° grades into quartz sericite schist at 68.0', up to 2% disseminated pyrite. | | | | | | | | | | |
| | | | | | 58.9-60.5 brecciated, quartz veins to 1 cm, shearing, limonite parallel joints | | | | | | | | | | |
| | | | | | 60.5-62.0 quartz sericite schist, limonite parallel fracture and joints | | | | | | | | | | |
| | | | | | 68.5-68.6 bull quartz vein at 80° | | | | | | | | | | |
| | | | | | 74.0-80.0 occasional chlorite carbonate veins parallel to foliation, 3% pyrite in fine hairline stringers | | | | | | | | | | |
| | | | | | 74.2-74.3, 74.6-74.7, 75.1-75.2, 76.0-76.1, 77.4-77.6, 78.8-78.9 | | | | | | | | | | |
| | | | | | 80.8 5 mm vuggy calcite at 45°, bull quartz fragments at UC | | | | | | | | | | |
| | | | | | 84.9-85.0, 85.8-85.9 calcite-chlorite veins | | | | | | | | | | |
| 86.0 | 93.5 | | | | 86.0- 93.5 quartz talc schist | | | | | | | | | | |
| | | | | | 91.1-91.6 chloritized, 10% pyrite in stringers at CAs 0-45° calcite; to 5 mm thick | | | | | | | | | | |
| 93.5 | 151.0 | | | | Quartz chlorite sericite schist, finely laminated well foliated, numerous thin pyrite stringers light greyish brown in colour to light greyish green according to amount of chlorite. | | | | | | | | | | |
| | | | | | 98.5-98.7 6-7mm quartz vein at 10°, disseminated pyrite and hematite at contact. | | | | | | | | | | |
| | | | | | 103.25-103.5 10% disseminated pyrite | | | | | | | | | | |
| | | | | | 110.25-110.5 bull quartz vein | | | | | | | | | | |
| | | | | | 110.7 - 110.8 " " " | | | | | | | | | | |

APPENDIX B

Diamond Drill Assays

APPENDIX D

Qualifications of Supervision

GERALD E. BIDWELL

Address: 62 Klondike Rd.,
Whitehorse, Y. T.

Education: B. A. in geology - University of Saskatchewan
graduated in 1967.

Employment: 1967 - 1978 Hudson Bay Exploration and
Development Company Limited

1967 - 1970 - mine geological work and surface
exploration geological mapping Snow Lake,
area, Manitoba.

1970 - 1976 - supervisor of exploration programs
in British Columbia and Yukon Territory.

1976 - 1978 - Resident Geologist, Whitehorse
Office, Hudson Bay Exploration and Development
Company Limited.

G. B. Douglas

Education: BSc (Eng) Geological sciences - 1970
Queens University

1974 - M Sc - Geology McMaster University

Professional Engineer Ontario 1975

Employment: 1970-71 - Hudson Bay Expl. & Dev., Geologist -
Geophysical Geochemical Geological Surveys
Siamond Drill supervision in N. W. Ontario & NW Quebec

1974 (jan-Apr) TOMBILL Mines, geologist Gold Exploration in
Geraldton-Beardmore area, NW Ontario, drilling geochemistry

1977 Hudson Hay Expl & Dev.
1977 Uranium Exploration E. Ontario
1978 Base Metal Exploration E. Ontario
1978 Gold Exploration (Drilling) Sonora Gulch