

MAP No.

105 D 10

ASSESSMENT REPORT  
PROSPECTUS  
CONFIDENTIAL  
OPEN FILE



DOCUMENT NO.: 091937  
MINING DISTRICT: WHITEHORSE  
TYPE OF WORK: DIAMOND DRILLING

REPORT FILED UNDER: Hudson Bay Mining and Smelting Co. Ltd.

DATE PERFORMED: Nov. 3-10, 1986

DATE FILED: March 26, 1987

LOCATION	LAT.	60°34'N
	LONG.	135°53'W

AREA:  
WHITEHORSE COPPER BELT

CLAIM NAME & NO.

ACE 1 - 85428

VALUE \$	
WORK DONE BY:	G. Bidwell
WORK DONE FOR:	Hudson Bay Mining and Smelting Co. Ltd.
DATE TO GOOD STANDING	REMARKS:
	#213 COWLEY PARK

091937



ASSESSMENT REPORT

ON

WHITEHORSE COPPER MINES PROPERTY

ACE 1 (85428)

DIAMOND DRILLING PROGRAM

WHITEHORSE MINING DISTRICT

YUKON TERRITORY

NOVEMBER 1986



G. BIDWELL  
December 17, 1986

091937

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1. INTRODUCTION

The Whitehorse copperbelt is a 30 km long district of over 30 copper-bearing skarn occurrences located to the west of Whitehorse, Yukon Territory. In the period 1967 to Dec. 1982 Whitehorse Copper Mines milled 10,247,000 tonnes of ore from six open pits and an underground operation at the Little Chief deposit. The bulk of the tonnage (7.25 million) came from the Little Chief deposit. The recovered grades were 1.20% Cu, 0.69 gm/tonne gold and 8.7 gm/tonne silver.

Since production stopped in 1982 exploration on the property has been limited to necessary expenditures required to keep the bulk of the claims in good standing.

2. LOCATION AND ACCESS

The Whitehorse copperbelt is located in the Whitehorse Mining District predominantly within the city limits of Whitehorse. The copper-gold occurrences are localized in skarnified carbonate along a Cretaceous intrusive contact. The linear trend of the occurrences parallels the Alaska Highway 3 km to the west of the road (see Fig. 1).

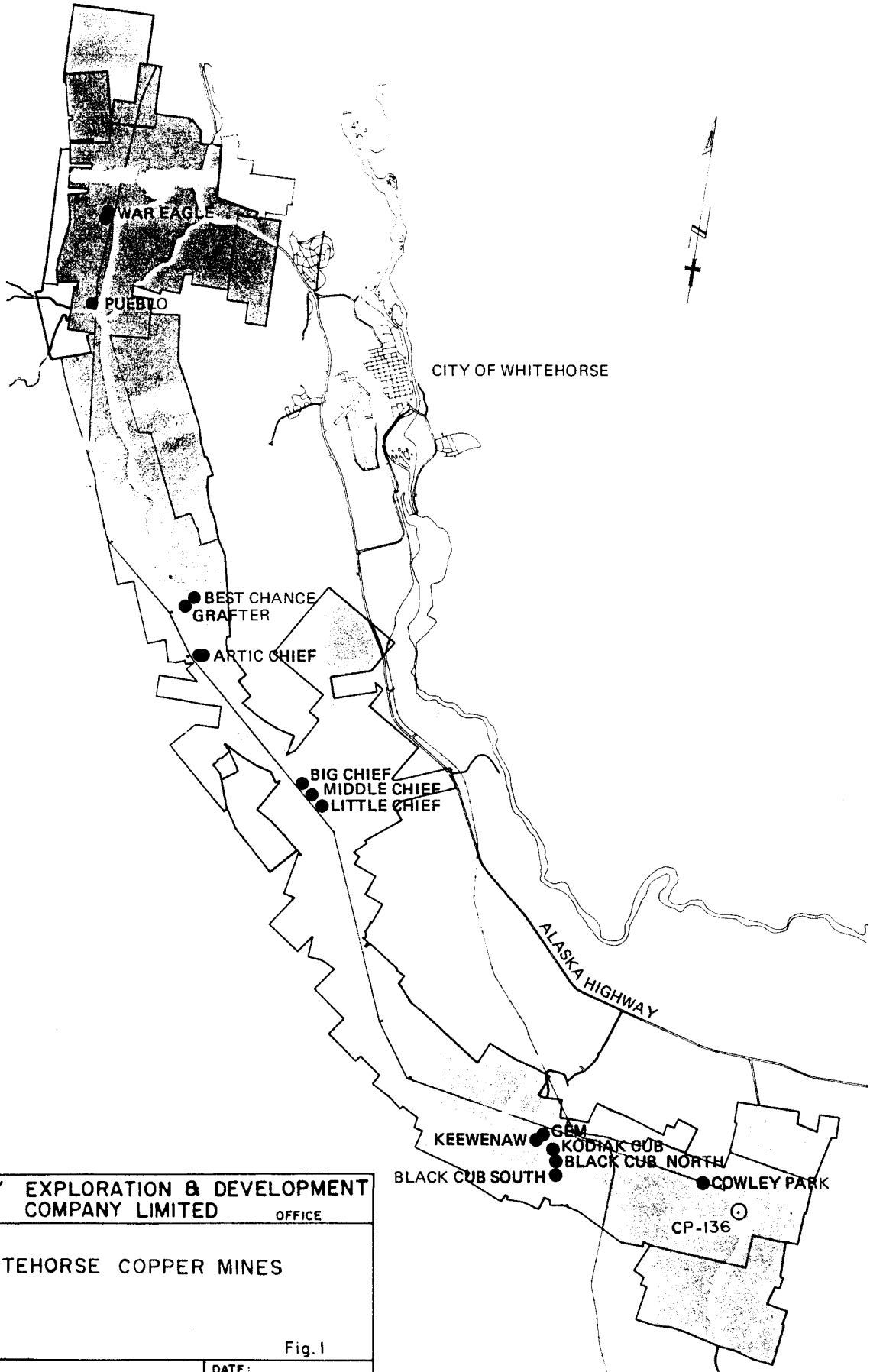
Access to the copperbelt is available at several points along the Alaska Highway. The main entry points are the Fish Lake road in the northern section, WCM plant site access road in the central portion and the Carcross Road in the southern section. A mine haulage road runs the length of the copperbelt.

3. PERSONNEL

Drill contractor - E. Caron Diamond Drilling Limited  
Supervisor - G. Bidwell

4. CLAIM OWNERSHIP

The holdings of Whitehorse Copper Mines, a wholly owned subsidiary of Hudson Bay Mining and Smelting Co. Ltd. consist of 510 quartz claims, 27 crown grants, 9 mineral leases and 5 surface leases in the Copperbelt area. The claims are located on claim map 105 D.10, 11 and 14 centered at  $60^{\circ}37'N$  and  $135^{\circ}05'W$ .



HUDSON BAY EXPLORATION & DEVELOPMENT  
WHITEHORSE COMPANY LIMITED OFFICE

WHITEHORSE COPPER MINES

Fig. 1

SCALE:

1 inch = 2 miles (approx.)

DATE: 1985

DRAWN BY:

5. DIAMOND DRILLING

One diamond drill hole was drilled on the Copperbelt in 1986. The hole is located in the Cowley Park area as shown on Figure 1 and 2.

In 1985 three rotary holes (RH - 1 to 3) in the Cowley Park area on magnetic anomalies failed to reach bedrock. The 1986 diamond drill hole was another attempt to locate the source of the magnetic target. The hole was collared in the same location as RH-1 (see Whitehorse Copper Mines assessment report dated January, 1986) to intersect a north trending magnetic anomaly.

The drill hole encountered 161.0 feet of overburden, passed through a 71.5 foot intersection of Miles Canyon Basalt (161.0-232.5) and returned to overburden from 232.5 to 308.0. At 308.0 feet a massive coarse grained granodiorite to quartz diorite was intersected and the hole remained in the intrusive until drilling stopped at 460.0 feet.

Some sections of the Miles Canyon basalt were found to be magnetic and were the obvious cause of the anomaly.

6. CONCLUSIONS

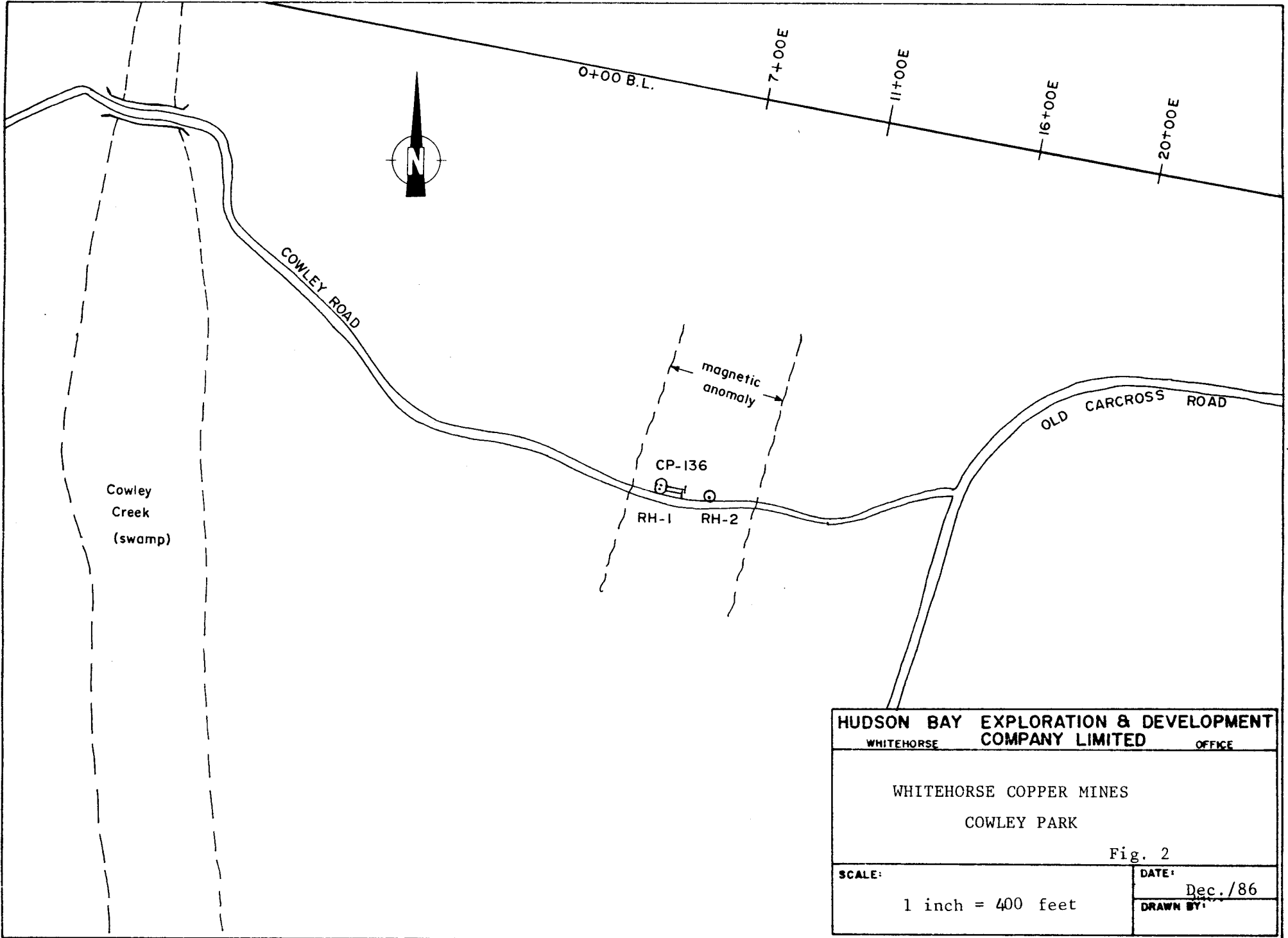
Drill hole CP-136 determined that the cause of the major north trending magnetic anomaly in this area east of Cowley Creek is due to a local flow lobe of Miles Canyon Basalt. This is not surprising as earlier drill holes in the Cowley Creek area also intersected this Quaternary basalt.

Drill hole CP-136 also indicated the main intrusive - sediment contact is further to the east and that the area has deep overburden cover, ie approximately 300 feet.

No further work is planned in the vicinity.



G. D. Bidwell



HUDSON BAY EXPLORATION & DEVELOPMENT  
 WHITEHORSE COMPANY LIMITED OFFICE

WHITEHORSE COPPER MINES  
 COWLEY PARK

Fig. 2

SCALE:  
 1 inch = 400 feet

DATE:  
 Dec./86  
 DRAWN BY:

ALASKA

HIGHWAY

WHITEHORSE COPPER MINES

NTS 105D/10 1" = 1/2 mile

COWLEY PARK

CARROSS ROAD

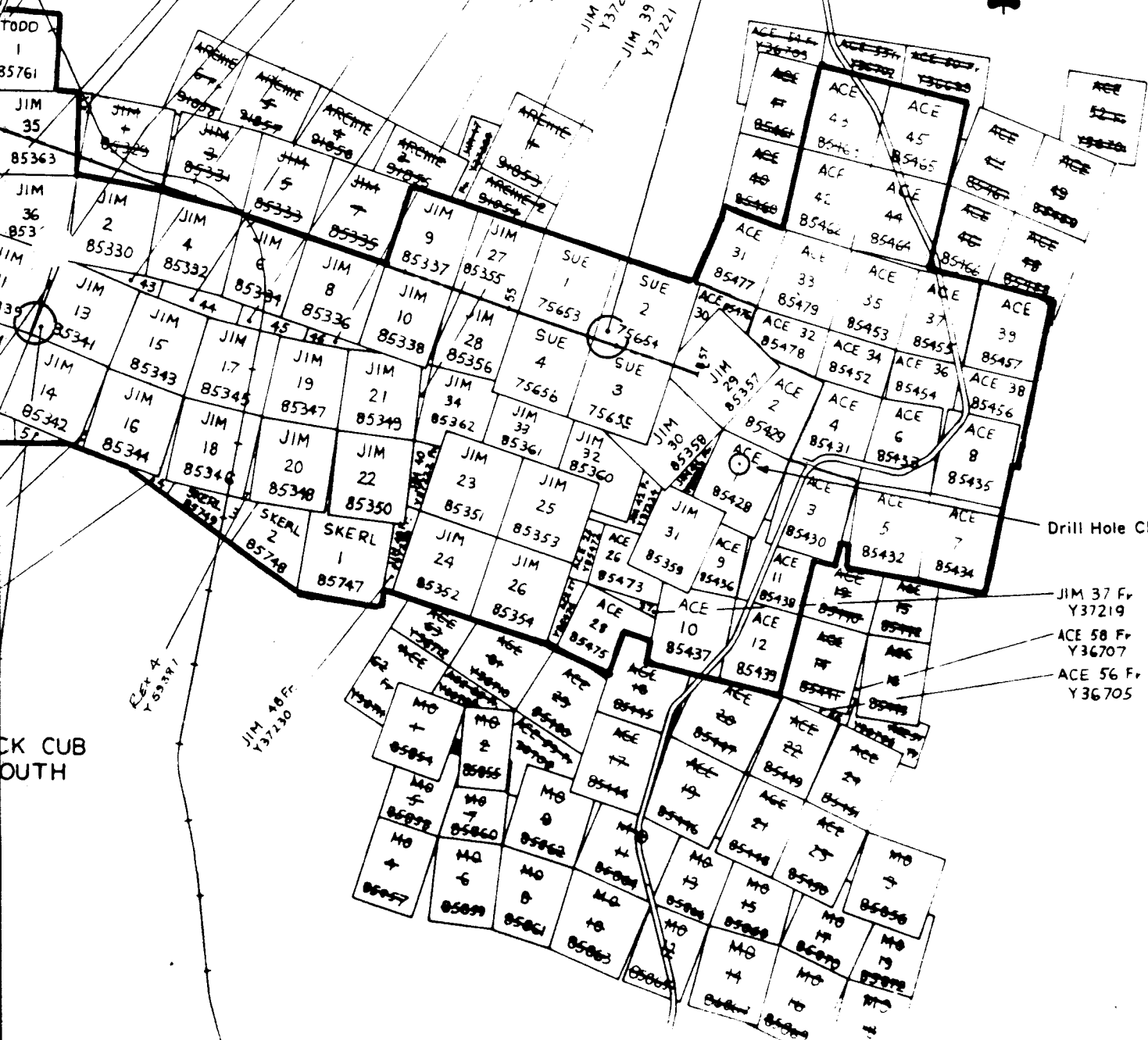


DENNIS 6 F.  
91466  
DENNIS 3 F.  
91289  
DENNIS 2 F.  
91288  
DENNIS 4 F.  
91290

DENNIS 5 F.  
91291

RIA 2  
Y36758  
JIM 9 1/2 F.  
Y37225  
JIM 4 1/4 F.  
Y37226

JIM 45 F.  
Y37227  
JIM 46 F.  
Y37228  
JIM 38 F.  
Y37220  
JIM 39 1/2 F.  
Y37221



Drill Hole CP-136

JIM 37 F.  
Y37219  
ACE 58 F.  
Y36707  
ACE 56 F.  
Y36705

BLACK CUB SOUTH



APPENDIX I - REVIEW OF EXPENDITURES

Diamond Drill Hole CP-136

Contractor's Charges	-	13,863.00	(see invoice)
Supervision by G. Bidwell			
- 3 days @ \$200/day		<u>600.00</u>	

\$ 14,463.00



E. CARON DIAMOND DRILLING LTD.

7 Roundel Road Whitehorse, Yukon Y1A 3H3

Phone (403) 668-2424 Telex 036-8-337

November 10, 1986

Invoice #-2024

IN ACCOUNT WITH:

Hudson Bay Mining & Exploration Ltd.,  
Box 4280,  
Whitehorse, Yukon  
Y1A 3T3

Drilling Charges November 3 to 10, 1986: (Cowley Park)

Drilling  
0 to 460 = 460 ft. @ \$25.00 per ft. = \$11,500.00

Items Consumed & Chargeable

130 ft. NQ rods	@ \$70.00 each	= \$ 910.00		
90 ft. HWL rods	@ \$90.00 each	= \$ 810.00		
1 BW shoe	@ \$261.00each	= \$ 261.00		
1 NW shoe	@ \$382.00 each	= \$ 382.00	\$ 2,363.00	\$13,863.00

Total Invoice \$13,863.00



APPENDIX II

The 1986 program was supervised by:

GERALD E. BIDWELL

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

Education: B. A. in Geology - University of Saskatchewan  
Graduated in 1967

Employment: 1967 - Hudson Bay Exploration and Development Co. Ltd.  
1967 - 1970 - mine geological work and surface exploration  
geological mapping, Snow Lake, area, Manitoba.  
1970 - 1976 - Project Geologist, Vancouver, Office.  
1976 - 1981 - Resident Geologist, Whitehorse, Office.  
1981 - 1986 - Exploration Manager, Northwest District.

Professional  
Association: Fellow of Geological Association of Canada  
Association of Yukon Geoscientists

APPENDIX III

DIAMOND DRILL LOG

CP - 136

HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LIMITED

DIAMOND DRILL LOG

Claim: ACE 1 (85428)

Location: Whitehorse Copper Mines  
Cowley Park Area

Mining Division Whitehorse

Hole Nº: CP- 136

Angle: -80°

Direction: grid East

Depth: 460 ft.

Grid Nº: Cowley Park

Co-Ordinates: 6+00E/13+00S

Date Started: Nov. 3/86

Finished: Nov. 10/86

Logged By: G. Bidwell

Drilled By: Caron Diamond Drilling

DEPTH		DESCRIPTION OF CORE
From	To	
0.0	161.0	Overburden
161.0	232.5	Miles Canyon Basalt 161.0 - 173.0 - dark green vesicular basalt flows (10-20% vesicule - fine groundmass - minor infilling or partial filling of vesicules with calcite - vesicules up to .4" in diameter 173.0 - 179.0 - less vesicules, majority calcite filled 179.0 - 190.0 - same as 161-173 specimen sample taken @ 183.0 - no appreciable magnetite 190.0 - 200.0 - light grey-green porous basalt - minor coarse light green translucent crystals (olivine) as clots sample taken @ 193.0 - no appreciable magnetite 200.0 - 204.0 - dark green vesicular basalt - same as 161.0-173.0 204.0 - 232.5 - dark green vesicular (amygdaloidal) basalt - same as 173-179 - sample taken @ 205 (magnetic)
232.5	308.0	unconsolidated material (regolith)
308.0	460.0	Granodiorite - gradational to quartz diorite in places 308-310 - slightly rusty 310-322 - highly sheared rusty ≈ 10% recovery sample taken @ 315

DEPTH		DESCRIPTION OF CORE
From	To	
		322 - 328 - less intense shearing ≈25% recovery
		328 - 434 - massive coarse grained granodiorite (to quartz diorite) 100% recovery
		434 - 435 - fractured granodiorite with 15% quartz epidote veining
		435 - 441 - massive granodiorite
		441 - 442-sheared granodiorite with quartz veining, malachite stain, minor disseminated pyrite
		442 - 460 - massive granodiorite sample taken @ 459
	460	End of Hole