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GEOLOGICAL REPORT, UNGAVA EXPLORATION PERMIT 731

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GEOLOGICAL REPORT
on
UNGAVA EXPLORATION PERMIT 731
N.T.S. 35-H/5,6,11
Latitude 61°30' North
Longitude 73°30' West
Northern Québec

April 14, 1987

on behalf of
COVE ENERGY CORPORATION
Calgary, Alberta

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INTRODUCTION

This report summarizes the results of the 1986 exploration program carried out by Taiga Consultants Ltd. on Exploration Permit 731 in the Ungava region of northern Québec. This permit is held jointly by Cove Energy Corporation and Delaware Resources Corp. The permit is situated within the Cape Smith Fold Belt which has recently been shown to contain elevated concentrations of platinum group elements (PGE's). The 1986 reconnaissance geological mapping and lithogeochemical sampling program delineated several large, differentiated mafic to ultramafic sills on the property which exhibit anomalous PGE values. These encouraging results indicate that the property displays potential for hosting PGE deposits.

Recommendations are made for a further, systematic exploration program to investigate prospective geological environments and anomalous PGE showings located during 1986.

Property Status

This 113 sq.km Povungnituk Permit (PE30731) was granted for a five-year period commencing June 15, 1986. It can be reduced in size to a minimum of 2.5 sq.km and, presumably, taken to claims at any time. The annual rental is \$60 per sq.km for a total of \$6,780). The work commitment is as follows:

<u>Year</u>	<u>Per Sq.Km</u>	<u>Total</u>
First	\$100	\$11,300
Second	200	22,600
Third and Fourth	500	56,500
Fifth	1,000	113,000

The terms of the permit stipulate that preference or consideration shall be given with regard to employment of professionals, labourers, and technicians from Québec. The permit corners are defined by UTM coordinates but must be marked by a post or monument. A permit holder must file a proposed exploration

program by the first of March for the current year. Assessment work must be filed annually, within 90 days of the end of each year of the permit. The results of all the assessment work must be filed. Excess expenditures may be carried forward to the following years.

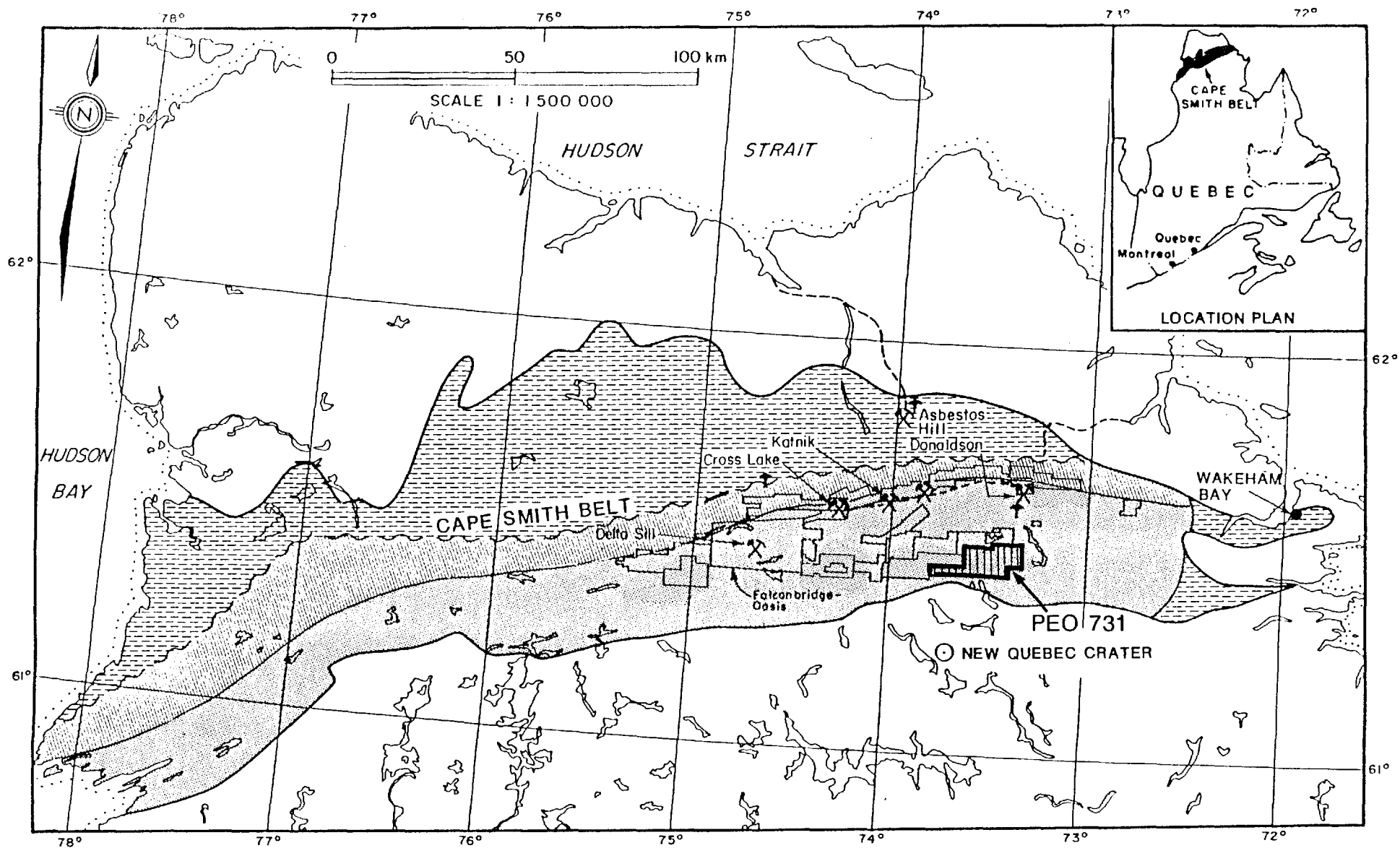
Agreements






The permit was originally taken out by Geotest Corporation. It was subsequently transferred to Delaware Resources Corp. and Cove Energy Corporation, each owning an unencumbered 50% working interest.


Location, Access, Physiography




The property is situated in the Ungava region of northern Québec (Figure 1). It is located near the middle of the New Québec Crater (35-G) map-sheet and is centered about 61°30' North latitude and 73°30' West longitude. The region is served by Nordair from Montréal to Frobisher Bay on a daily basis. Access to the permit area is by chartered aircraft to Asbestos Hill, and thence by helicopter to the base camp. Helicopters were utilized for crew transport.

The permit occurs within the Povungnituk Hills which form a series of northeasterly to easterly trending ridges and valleys. Hilltop elevations range between 300 and 500 m above sea level.



- LEGEND**
-  DELAWARE RESOURCES CORP. - COVE ENERGY LTD.
 -  FAULT
 -  ROADS
 -  LANDING STRIP
 -  MINERAL DEPOSITS

- ARCHEAN ROCKS**
-  Paragneiss, orthogneiss and granitic rocks

- PROTEROZOIC ROCKS**
-  Chukotat Group
 -  Povungnituk Group
 -  Upper greenschists and amphibolites (Spartan and Walls Groups)

REGIONAL GEOLOGY - UNGAVA

FIGURE 1

HISTORY OF EXPLORATION

Since the mid-1950's, the Cape Smith Fold Belt has been intermittently explored for copper/nickel deposits. Several currently sub-economic deposits were found and explored by geophysics, geochemistry, diamond drilling, and underground work. Cominco Ltd. actively explored the southern part of the belt from 1974 to 1980 and located several small Cu/Ni deposits.

In 1986, Falconbridge Ltd. and Oasis Resources carried out a reconnaissance exploration program on a property adjoining the Forcier Lake permit to the west. Some 4700 samples were taken and have yielded results up to 3600 ppb or 0.105 oz/ton Pt (Northern Miner, March 16/87).

The Québec Ministry of Energy and Resources has been carrying out geological mapping in the belt for the past several years.

REGIONAL GEOLOGY

The permit is situated within the early Proterozoic Cape Smith Fold Belt (Figure 2). This belt comprises the southern boundary zone of the Churchill Structural Province and unconformably overlies the Archean Superior Province to the south. The fold belt trends over 300 km from Ungava Bay west-southwest to Hudson Bay, varying in width from 50 to 90 km. From south to north, it is composed of the following, structurally superimposed lithostratigraphic groups: the Povungnituk Group, the Chukotat Group, and the Watts Group.

The Povungnituk Group is subdivided into two units: the Lamarche Subgroup, a unit of clastic metasediments; and the Beauparlant Subgroup, mostly composed of tholeiitic basalts with continental affinity. A number of ultramafic to mafic differentiated sills intrude this group.

The Chukotat Group is made up of komatiitic, magnetite-rich ultramafic to mafic metabasalts of oceanic affinity, and metapyroclastics probably formed in an island arc environment.

The Watts Group comprises a series of metasedimentary and metavolcanic rocks intruded by complex sills, separated from the Chukotat by the Bergeron Fault, a major thrust fault extending 350 km along the entire length of the trough. Recent work (Hervet, 1986) suggests that the Watts Group may represent an island arc complex.

Metamorphism in the Cape Smith Fold Belt is in the greenschist facies which has overprinted earlier amphibolite facies metamorphism in the Archean rocks to the south.

Structures in the Superior Province trend northwest in general, whereas those in the Churchill Province trend chiefly east-northeast. A second, younger fold direction in the Cape Smith Fold Belt trends northwest, while a third trends northward. Both re-fold the major east-northeast trending folds, producing a very contorted distribution of lithotypes. Steeply dipping strike faults are also prominent within the fold belt.

Microfilm

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Several significant nickel/copper deposits have been discovered within the Cape Smith Fold Belt. The grades and tonnages of the most important deposits are listed in Table 1.

TABLE 1
Tonnage and Grades of Selected Deposits
in the Cape Smith Fold Belt
(Coats, 1982)

<u>Deposit</u>	<u>Tonnage</u>	<u>Ni %</u>	<u>Cu %</u>	<u>Pt ppm</u>	<u>Pd ppm</u>
Cross Lake (1)	7,982,000	1.7	0.87	-	-
Katiniq	5,519,000	3.35	0.935	-	-
Donaldson (2)	4,227,000	3.44	0.80	2.2	4.4

(1) total of Cross Lake C1 and C2 deposits.

(2) total of East and West Donaldson deposits.

The nickel/copper deposits occur within concordant ultramafic lenses intruded into the Chukotat volcanic sequence. Mineralization is concentrated in the lower parts of the intrusive masses and commonly at the contact. Kilburn et al. (1982) reported that, in the Cross Lake occurrence, nickel sulphide is concentrated in depressions at the lower contact of the intrusions and in lenses and net sulphides above the contact.

During the past several years, the Québec Ministère de l'Énergie et des Ressources has discovered several PGE showings situated within what is now a Falconbridge permit area. The most significant showing occurs in the lowest differentiated unit of the Delta Sill - one of a series of mafic to ultramafic bodies which intrude the Povungnituk Group metavolcanic and metasedimentary rocks (see Figure 2).

Delta Sill

Giovenazzo (1985) reports that the Delta Sill measures about 6 km long and up to 500 m thick, strikes east-west, and dips to the north. It forms a stratiform complex consisting of two differentiated cycles (Figure 3). The lower cycle displays layered peridotite at the base resting on a thin pyroxenitic chilled margin, overlain by a clinopyroxene cumulate, followed by a gabbro

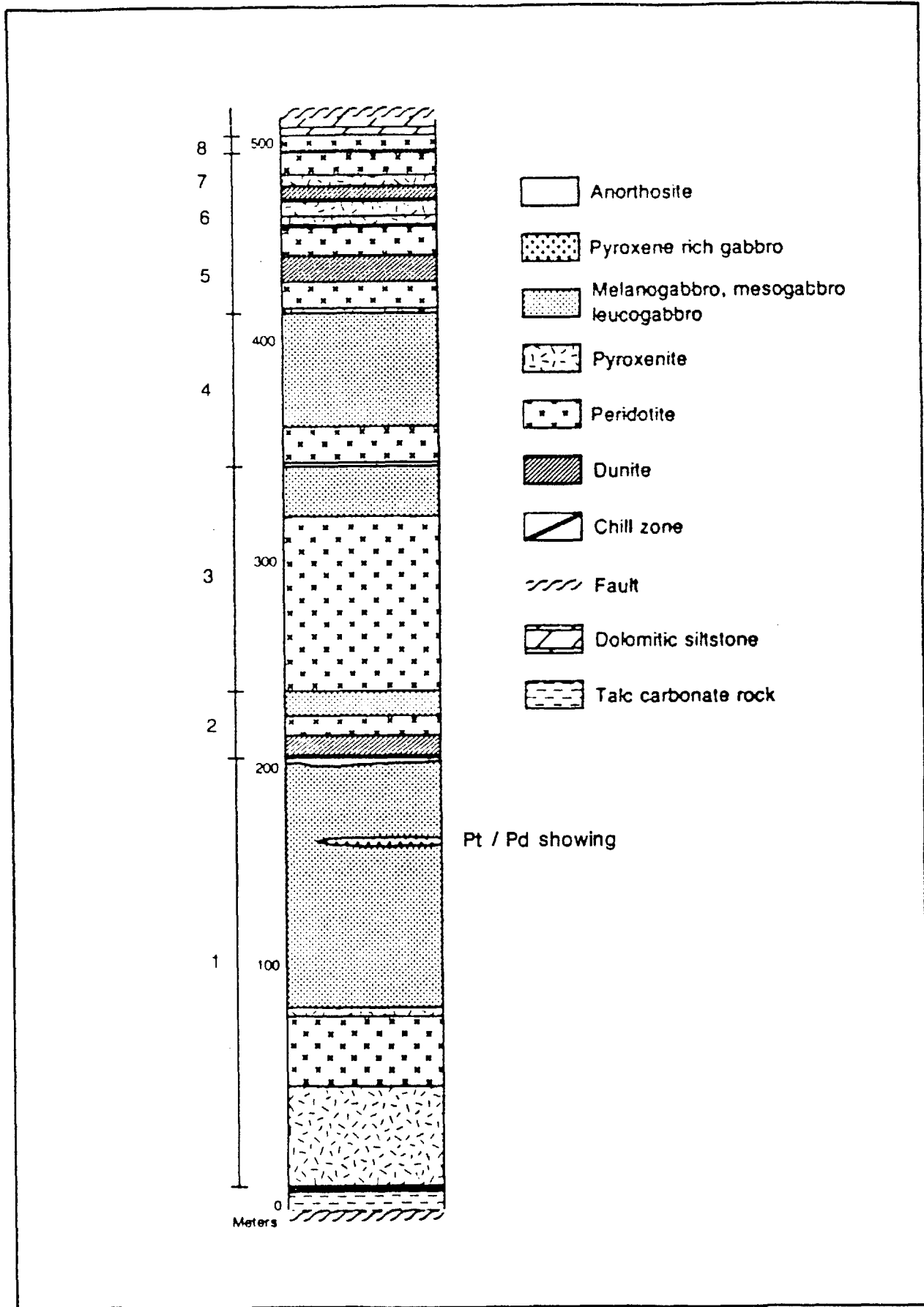


FIGURE 3

STRATIGRAPHY OF THE DELTA SILL

horizon progressively enriched in plagioclase and capped (in the lower cycle only) by a thin layer of anorthosite gabbro.

Lamothe et al. (1987) report that the mineralization in the South Delta Sill occurs in an ultramafic dyke cutting through metasediments. The numerous Cominco drill holes show fault contacts with the enclosing rocks and a complex relationship to the main body of the sill, for which the dyke is the most likely feeder. It consists of a zoned assemblage of pyroxenite, peridotite, and minor gabbro, apparently resulting from the fractionation of the magma as it passed through the duct (Bédard et al., 1984).

Most of the mineralization occurs in a lens of net textured, massive sulphides up to 10 m thick, 130 m long, and extending to a depth of 130 m. The assay results published by Cominco (Table 2) show a strong enrichment in PGE's, ranging up to 11.0 g/t platinum, in 8 different one-metre core sections taken from four drill holes (Samis, 1977). Falconbridge Ltd. reportedly re-sampled some of the Cominco drill core (presumably from the South Delta Sill) and obtained values up to 2.9 g/t platinum and 5.3 g/t palladium over 9.5 feet (Northern Miner, March 16/87).

North Delta Sill

This PGE showing occurs about 30 m below the basal olivine cumulate of the second cycle and 60 m above the first appearance of plagioclase. The mineralization is localized within a thin (20 cm) sulphide-rich olivine pyroxenite horizon in the plagioclase-rich gabbro. The sulphides are net textured, partly remobilized, and locally form up to 80% of the rock. The pyroxene-rich gabbro immediately above this horizon contains between 20% and 40% sulphides which decrease in abundance upward. Pyrrhotite, cobaltiferous pentlandite, chalcopyrite, cobaltite, violarite, linnaeite, vallerite, native copper, covellite, native gold, magnetite, and illmenite have been identified from the showing. Table 2 presents the Québec government analyses from this showing. The best assays (1.16 g/t Pt, 1.19 g/t Pd) were obtained from a grab sample of pyroxenite containing 80% sulphides.

TABLE 2

Analytical data from showings in the Delta sill.

		1	2	3	4	5	6	7	8
Ni	%	3,32	2,25	—	3,1	0,56	0,33	0,21	0,13
Cu	%	0,39	0,34	—	0,75	0,16	0,078	0,57	0,76
Co	ppm	0,18%	680	—	0,1 %	187	171	128	47
Cr	ppm	89	82	—	7	94	230	834	41
Au	ppb	150	180	—	330	40	—	33	67
Ag	g/t	1,30	0,8	—	2,9	0,5	—	2,0	1,0
Pd	g/t	1,19	11,7	2,5	17,3	0,30	0,21	0,74	0,67
Pt	g/t	1,16	0,7	5,3	0,8	—	—	—	0,86
Ir	ppb	8,0	34,0	—	11,0	—	7,0	5,0	12,0
Ni/Cu		8,5	6,6	—	4,1	3,5	4,1	0,37	0,17
Pd/Pt		1,02	16,9	0,47	21,6	—	—	—	0,77
Pd/Ir		148,7	344,12	—	1572,73	—	30,0	148,0	55,8

1. Pyroxenite, 80% sulfides, Unit 1 (Delta showing).
2. Olivine pyroxenite, 60% sulfides, Unit 1 (Delta showing).
3. Olivine pyroxenite, 60% sulfides, Unit 1 (Delta showing).
4. Gabbro, 40% sulfides, Unit 1 (Delta showing).
5. Gabbro, 20% sulfides, Unit 1 (Delta showing).
6. Leucogabbro, 20% sulfides, Unit 3.
7. Pyroxenite, 20% sulfides, Unit 1.
8. Mottled anorthosite, 15% sulfides, Unit 1.

Analysis 3: It also contains 0,6 g/t Rh. Analysis by C. Picard, University of Grenoble, personal communication.

All other analyses performed by the Centre de Recherches minérales, Québec.

Analyses of core samples from the South Delta sill.

		1	2	3	4	5	6	7	8
Ni	%	8,22	1,40	0,8	4,84	5,80	6,82	1,48	4,40
Cu	%	0,96	2,21	2,70	2,12	1,0	1,525	0,71	0,86
Co	%	0,22	0,031	0,32	0,098	0,124	0,15	0,038	0,13
Cr	ppm	60	820	4600	40	40	180	1480	—
Au	ppb	6900	50	100	30	30	132	141	—
Ag	g/t	3,5	5,1	6,0	5,7	3,3	4,1	2,3	—
Pd	g/t	0,60	0,45	2,0	0,8	0,68	2,32	0,43	0,35
Pt	g/t	1,0	0,5	0,4	1,1	2,15	1,26	0,225	11,0
Ni/Cu		8,25	0,6	0,29	2,28	5,8	4,47	2,08	5,1
Pd/Pt		0,6	0,9	5	0,72	0,316	1,84	1,9	0,03
Length of intersection	m	11	1,3	2,6	0,6	0,8	0,4	—	0,4

1. Massive sulfides, 95%, in a chloritized matrix (peridotite); gold analysis is for 1 m of core, DDH 77-29.
2. Pyroxenite with disseminated sulfides; DDH 77-29.
3. Peridotite with disseminated sulfides; DDH 77-29.
4. Pyroxenite, 70% sulfides; DDH 77-31.
5. Pyroxenite, 90% sulfides; DDH 77-31.
6. Massive sulfides, average of 4 horizons; in olivine pyroxenite; DDH 77-32 (0.4 m each over 8 m core length).
7. Sulfide-bearing olivine pyroxenite horizons between massive sulfide bands of analysis 6, DDH 77-32.
8. Pyroxenite with 50% sulfides; DDH 80-71.

All results are from Samis (1977, 1980), Cominco year-end reports.

Bravo Sill

A mineralized zone occurs in a chloritic lens at the contact between meta-sediments and a dunitic unit. The mineralization consists of chalcopyrite, pyrite, pentlandite, and cobaltite. Table 3 lists the Québec government analytical results (Lamothe et al., 1987).

TABLE 3
Analytical Results from the Bravo Sill

<u>Sample</u>	<u>Ni %</u>	<u>Cu %</u>	<u>Co ppm</u>	<u>Cr ppm</u>	<u>Ag ppm</u>	<u>Pt ppm</u>	<u>Pd ppm</u>
B-1	0.8	4.9	410.	300.	9.5	0.6	0.12
B-2	1.25	0.44	0.12	-	1.02	1.27	0.8

Vaillant Lake Sill

This sill is located 40 km east of the Delta sills and is compositionally similar, although simpler. A preliminary grab sampling of sulphide lenses produced values of 0.150 ppm Pt and 0.415 ppm Pd (Lamothe et al., 1987).

PROPERTY GEOLOGY

General

The area is underlain by a volcanosedimentary assemblage belonging to the Proterozoic Povungnituk Group, and intruded by a number of differentiated ultramafic sills with chemical affinities to komatiitic basalts of the overlying Chukotat Group which is exposed north of the permit. Even though the present level of mapping does not allow a rigorous structural evaluation of the area, it is clear that broad, open, northwest trending folds (such as the southeast plunging anticline enclosing the ultramafics in the central part of the permit) refold earlier isoclinal structures resulting in a rather complex distribution of the various units.

Mafic Metavolcanics (Units 1,1a,1b,1c)

These units are generally restricted to the northern part of the area and consist of dark greenish grey, chloritized, generally aphanitic mafic metavolcanics. Locally well defined, moderately stretched pillow structures are preserved (1a), but generally the volcanics are massive with local small phenocrysts of pyroxene, chloritized olivine, or less frequently, plagioclase (1b,1c). In the northeastern section of the permit, the units are intruded by a number of undifferentiated sills composed of pyroxene and plagioclase which are evidently hypabyssal intrusives within the Povungnituk sequence and unrelated to the gabbros associated with the ultramafic sills.

Metasediments (Unit 3c)

Metasediments are generally restricted to the lowlands north and south of the Povungnituk River and consist of arkosic metagreywacke composed of plagioclase, quartz, and mafic fragments in a chlorite-mica matrix. Argillitic siltstone was observed locally with the greywackes as well as in rubble at the contact with an ultramafic sill in the east portion of the permit.

Ultramafic Sills (Units 4b,4c,5a,5b)

Ultramafic sills display a crude stratification due to gravitational settling of mineral content after emplacement with olivine cumulates (peridotite) at the base grading to pyroxenite and gabbro toward the top of the intrusives. No fine-scale mineral layering was observed and the compositional variation within the sills is mainly borne out by the characteristic reddish brown weathering surface of the peridotite and the distinctive dark to medium grey weathering of pyroxenites and gabbro. These weathering characteristics are a convenient mapping tool, even though the field units may not conform to the strict definitions of geological nomenclature. Peridotite may contain up to 70% pyroxenite, and pyroxenite (as defined here) frequently contains plagioclase. Due to structural complexities evident in the differentiated sill in the central part of the permit, an estimate for the true thickness of this body is difficult to arrive at, but a maximum of 300 m appears to be indicated. The relatively uniform peridotite sill occurring in the eastern portion of the permit appears to be no thicker than 100 m.

Mineralization

A number of sulphide gossans were encountered during prospecting of the permit area, and a total of 18 samples collected from 14 separate localities were forwarded to Bondar-Clegg & Co. of Ottawa for analysis of Co, Ni, Cu, Pb, Zn, Ag, Pd, Pt, and Au. Even though the results do not warrant immediate follow up for the majority of samples collected, it should be emphasized that mapping and prospecting carried out so far have been only of a reconnaissance nature and that significant further mineralization may have been overlooked, particularly where this has not resulted in the formation of extensive surface gossans. Two occurrences have been previously reported from the area. One occurrence in a peridotite sill (sample sites 15130, 15131, 15132) has previously been trenched by New Quebec Mines (Dugas, 1971), and reportedly yielded values up to 0.34% Ni and 0.15% Cu. Our present results do not indicate anomalous PGE contents associated with the mineralization which is visible as

scattered gossans over a 100 x 100 m area. The second occurrence is reported as a quartz-carbonate zone in volcanics, also investigated by New Quebec Mines. Mineralization was reported to consist of galena and chalcopyrite in a 15 m wide zone extending for 25 m. Even though scattered grains identified as galena were noted in arkosic greywacke subjacent to a peridotite sill (sample 15151), the reported mineralization could not be identified in the present survey. Three showings encountered in the 1986 program appear to be of further interest and are discussed in some more detail below.

Showing 1. Mineralization consists of gossans in float consisting of pyroxenite with scattered pyrite and chalcopyrite. Surrounding outcrops of metavolcanics suggest mineralization close to the upper contact of the sill. Values for Pd and Pt of 387 ppb and 134 ppb (sample 15142) are noteworthy and slightly anomalous values for PGE associated with anorthositic gabbro (23 ppb Pd, 16 ppb Pt; 15141) and mafic volcanics (54 ppb Pd; 15143) in a similar stratigraphic position may indicate further exploration possibilities in this area.

Showing 2. Scattered gossans are intermittently exposed over a strike length of 200 m at the contact of peridotite with argillitic metasediments as indicated by surface float. Pd and Pt contents of 225 ppb and 114 ppb, respectively (sample 15136), in the presence of only minor Ni and Cu mineralization must be regarded as highly anomalous. Mineralization may laterally be quite extensive as indicated by gossans 1.5 km west of this showing.

Showing 3. This showing consists of local chalcopyrite mineralization containing 0.34% Cu in a sheared greywacke. Although somewhat anomalous Pd and Pt values (52 and 19 ppb respectively) are present, the fact that no ultramafics are evident in the immediate vicinity of the showing downgrades the significance of this occurrence.

1986 EXPLORATION PROGRAM

The one-week field program on the permit was highlighted by 70 km of reconnaissance geological mapping and prospecting traverses. The work was hampered by extremely adverse weather conditions and the presence of a polar bear in the eastern part of the permit.

Eighteen samples were collected, with 16 of them analyzed for a variety of elements. Most of these samples were collected from gossans or sulphide-bearing outcrops.

Geochemical Results

The geochemical results are attached in the Appendix. The Pt, Pd, and Au results are plotted on Map 1. The analyses were carried out by Bondar-Clegg and Company Ltd. in Ottawa. Atomic absorption techniques were utilized for Co, Ni, Cu, Zn, Ag, and Pb; X-ray fluorescence for Cr; and fire assay for Pt, Pd, and Au.

A review of the platinum, palladium, and gold results indicates that the anomalous values are characterized by a threshold of 100 ppb. Two anomalous results were obtained: Sample 15136 (114 ppb Pt, 225 ppb Pd) and Sample 15142 (134 ppb Pt, 387 ppb Pd). The Pt results are particularly significant as most of the values (12 of the 16 samples) are below the detection limit.

CONCLUSIONS

The Cape Smith Fold Belt, traditionally known for its copper/nickel deposits, has recently been shown to contain significant concentrations of platinum group elements. The Ni/Cu deposits and the elevated PGE concentrations are hosted by lenticular ultramafic to mafic differentiated sills which intrude metavolcanic and metasedimentary rocks. The dimensions of individual intrusive suites as well as small-scale cyclic layering in metagabbro suggests the suites represent fold-repeated portions or imbricate thrust slices of a larger body. The Stillwater Complex, and to a lesser extent, the Bushveld Complex, are possible analogies. These layered intrusions produce most of the Free World's PGEs.

The best PGE values (up to 11 ppm Pt) obtained to date are associated with Ni/Cu/Fe sulphides in the upper gabbroic parts of the lowermost cycle in the stratified Delta and South Delta Sills. Geological mapping has shown that mafic to ultramafic intrusions similar to the Delta Sill are present on Permit 731. Pyroxenitic and gabbroic phases of these intrusions have returned very anomalous PGE values (>100 ppb) from sulphide-bearing grab samples. This association of elevated PGE values and prospective lithologic units indicates that the permit exhibits potential for hosting significant concentrations of platinum group elements.

It must be pointed out that the normal basic rocks of the Bushveld Complex (producer of 90% of the Free World's PGE) contain levels of around 20 to 50 ppb Pt and 15 to 60 ppb Pd (Wedepohl, 1972). In the Merensky unit, Lee (1983) reports levels of Pt between 10 and 50 ppb in anorthosite and norite which occur only about 2 m away from the productive Merensky Reef. This 30 cm thick reef grades 15-25 ppm Pt, and is not particularly sulphide enriched.

It is apparent that a considerable amount of sampling (rock, sediment, soil) will be required to locate and delineate these thin but likely continuous stratiform cycles.

RECOMMENDATIONS

In order to further evaluate the PGE potential of the permit, the following systematic program is recommended:

1. Reconnaissance stream sediment sampling. This technique has proven successful in the exploration for PGE in Greenland and has the advantage of providing blanket coverage of an entire area. This area has a reasonably well developed drainage pattern and Schimann (1978) has shown that stream geochemistry is successful in locating Cu, Ni, and Co occurrences. The stream geochemistry would be followed up by detailed soil and rock geochemistry.
2. Reconnaissance and semi-detailed geological mapping and prospecting. Areas not evaluated in 1986, areas of anomalous lithogeochemical results, and areas mapped as ultramafic to mafic sills should receive coverage.
3. Continuous channel sampling. Outcrops which returned anomalous PGE values should be sampled.

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REPORT: 016-3782 (COMPLETE)

REFERENCE INFO:

CLIENT: DELAWARE RESOURCES CORP.
 PROJECT: DELAWARE UNGAVA

SUBMITTED BY: KO GRIEP
 DATE PRINTED: 10-007-86

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Co Cobalt	58	1 PPM	HCl-HNO ₃ , (1:3)	Atomic Absorption
2	Ni Nickel	58	2 PPM	HCl-HNO ₃ , (1:3)	Atomic Absorption
3	Cu Copper	58	1 PPM	HCl-HNO ₃ , (1:3)	Atomic Absorption
4	Zn Zinc	58	1 PPM	HCl-HNO ₃ , (1:3)	Atomic Absorption
5	Ag Silver	58	0.1 PPM	HCl-HNO ₃ , (1:3)	Atomic Absorption
6	Pb Lead	58	2 PPM	HCl-HNO ₃ , (1:3)	Atomic Absorption
7	Cr Chromium	10	2 PPM		X-Ray Fluorescence
8	Pd Palladium	58	2 PPM	AQUA REGIA	FireAssay/DC Plasma
9	Pt Platinum	58	15 PPM	AQUA REGIA	FireAssay/DC Plasma
10	Au Gold	58	1 PPM	AQUA REGIA	FireAssay/DC Plasma

SAMPLE TYPE	NUMBER	SIZE (MILLIONS)	NUMBER	SAMPLE PREPARATIONS	NUMBER
ROCK	58	-200	58	CRUSH, PULVERIZE -200	58
				CERAMIC PREP -200	10

REMARKS: 2 BAGS USED FROM.

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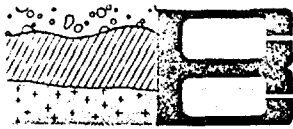
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REPORT: 016-3782

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SAMPLE NUMBER	ELEMENT UNITS	Co PPM	Ni PPM	Cu PPM	Zn PPM	Ag PPM	Pb PPM	Cr PPM	Pd PPB	Pt PPB	Au PPB
15130		71	45	920	18	0.7	10		<2	<15	4
15131		12	17	840	18	0.3	7		<2	<15	5
15132		46	133	270	25	0.1	7		11	<15	3
15133		61	677	106	73	0.2	5		6	<15	<1
15134		58	48	640	73	0.3	6		<2	<15	2
15135		10	53	170	44	0.3	11		2	<15	5
15136		54	426	960	57	0.2	7		225	114	3
15138		38	163	3870	39	0.2	5		52	19	2
15139		37	108	84	54	0.8	2		<2	<15	2
15141		18	92	360	42	<0.1	6		23	16	4
15142		130	2340	1500	29	0.3	6		387	134	13
15143		35	185	320	81	<0.1	7		54	<15	1
15152		32	66	320	68	<0.1	8		3	<15	1
15153		33	48	27	61	0.1	7		3	<15	3
15154		27	24	88	99	<0.1	7		<2	<15	<1
15157		26	57	184	19	0.2	4		12	<15	<1

SAMPLE NUMBER	ELEMENT UNITS	Co PPM	Ni PPM	Cu PPM	Zn PPM	Ag PPM	Pb PPM	Au PPB
15137				11	51	0.2	50	<5
15151				97	21	0.1	8	<5



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ORDER	ELEMENT	NUMBER OF ANALYSES	LOWEX DETECTION LIMIT	EXTRACTION	METHOD
1	Co	68	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption
2	Ni	68	2 PPM	HCl-HNO3, (1:3)	Atomic Absorption
3	Cu	68	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption
4	Zn	68	1 PPM	HCl-HNO3, (1:3)	Atomic Absorption
5	Ag	68	0.1 PPM	HCl-HNO3, (1:3)	Atomic Absorption
6	Pb	68	2 PPM	HCl-HNO3, (1:3)	Atomic Absorption
7	Cr	10	2 PPM		X-Ray Fluorescence
8	Pd	68	3 PPM	AQUA REGIA	FireAssay/DC Plasma
9	Pt	68	15 PPM	AQUA REGIA	FireAssay/DC Plasma
10	Au	68	1 PPM	AQUA REGIA	FireAssay/DC Plasma

SAMPLE TYPE	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
ROCK	68	-200	68	CRUSH, PULVERIZE -200	58
				CERAMIC PREP -200	10

REMARKS: 2 HEAVY METALS ANAL.

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