GM 40284

GEOLOGICAL REPORTS ON A, B, C, D, E, F & G GRIDS, EASTMAIN RIVER PROJECT, VENTURE 116

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GEOLOGICAL REPORTS ON

"A", "B", "C-D-E", "F" & "G" GRIDS

EASTMAIN RIVER PROJECT, QUEBEC

VENTURE 116

BY

PLACER DEVELOPMENT LIMITED

Toronto, Ontario
January 1983

M. Drouin

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PART I - GRID "A"

GEOLOGICAL REPORT

ON

'A' GRID

EASTMAIN RIVER PROJECT, QUEBEC

VENTURE 116

BY

PLACER DEVELOPMENT LIMITED

Toronto, Ontario
January 1983

M. Drouin

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INTRODUCTION

This grid was cut to cover several Rexhem II airborne electromagnetic conductors. The ground was acquired in January 1982 and geological mapping was initiated late June and terminated early July (1982).

Mapping (by H. Thiboutot, J. Giroux) was carried out at a scale of 1:2500. The following report summarizes the geological features encountered.

GRID DESCRIPTION

The A grid is located in the northeast corner of the projected township 2334. 30 claims (Table I) are either totally or partially covered by the grid.

T A B L E I

Claims covered by A Grid

Licence	Claims
406832	1,2,4,5
406833	3,4
406834	2,3
406835	3,4,5
406836	1,2,3
406837	1,3,4,5
406838	1,2,3
406839	1,2,3,4,5
406840	1,2,3,4

LOCATION AND ACCESS (Figure 1)

The property is situated some 320 km (200 air miles) north of the mining town of Chibougamau, Quebec. More precisely the grid is found in the northeast corner of township 2334 in the territory of Mistassini (NTS Sheet 33-A-8E). The Eastmain River is approximately 9 km north of the grid.

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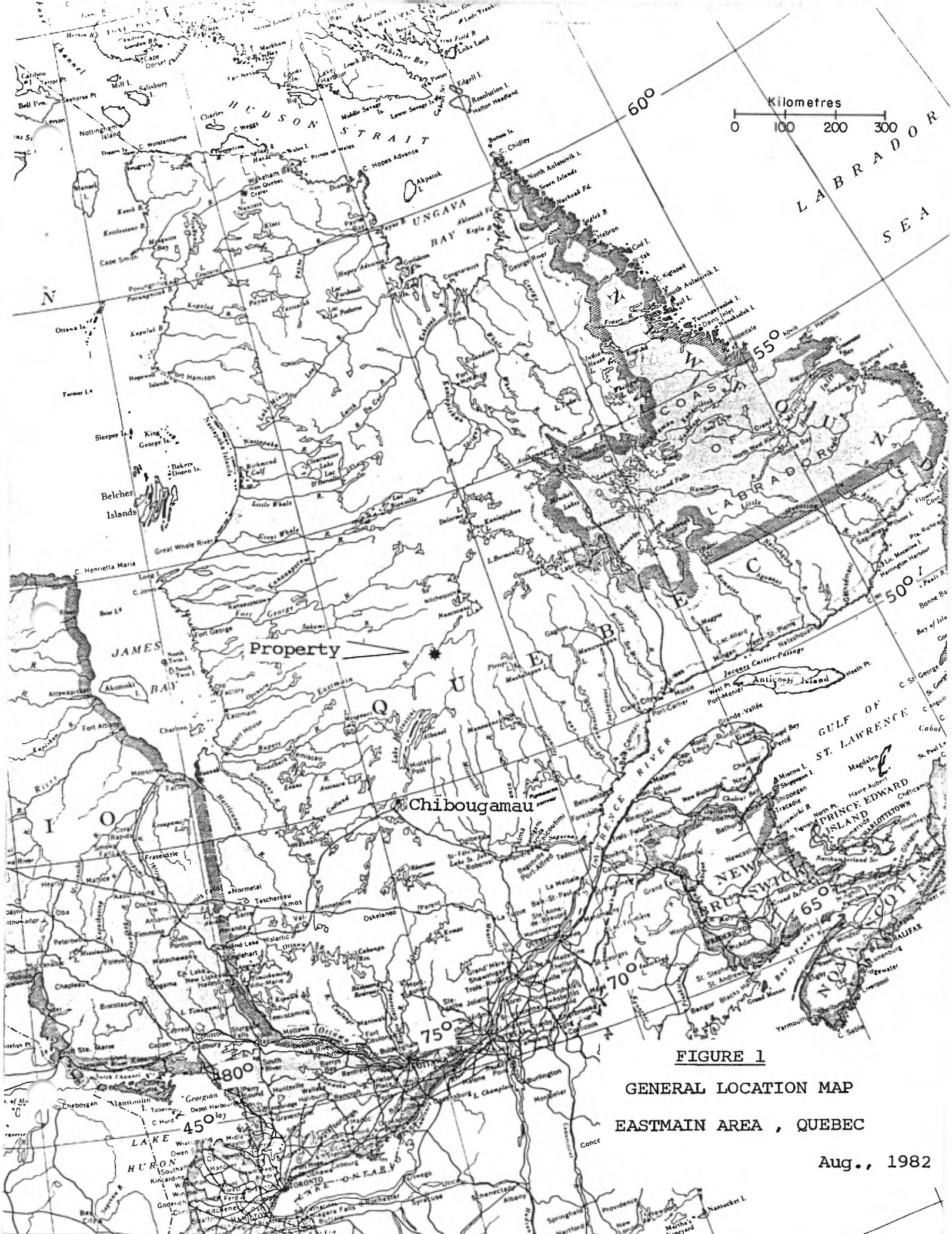

FIGURE 1

GENERAL LOCATION MAP

EASTMAIN AREA , QUEBEC

Aug., 1982

Access to the project area is by float plane only. Propair maintains a float plane base on the Temiscamie River approximately 8 km S.E. of Lake Albanel. The base can be reached from Chibougamau via an all-weather gravel road, a distance of 167 km (104 miles). From the air base it is 167 km (104 miles) farther northeast to the Placer camp.

Access to the grid was by helicopter based at the Placer camp.

PREVIOUS WORK

1963-64:	Government of Canada	- Airborne Magnetic Survey Map #20326; 1:63,360
1976:	Quebec Dept.of Natural Resources, M. Hocq	- Region du Lac Cadieux DPV.433; 1:250,000
1981:	Placer Development	- Rexhem II Airborne E.M. and Mag. Survey
Unknown:	Author unknown	- X-Ray Drill Hole

REGIONAL GEOLOGY

The property lies within the synclinally folded (M. Hocq, DPV.433) Eastmain River volcanics. The belt is Archean in age and has a local maximum thickness of 7 km.

Typically the volcanics consist of several northwest trending, shallow dipping mafic to felsic episodes. The mafic portion is largely dominant. Basaltic flows and to a lesser extent, intermediate to acid fine grained tuffs are the more common rock types encountered. Intrusive within the volcanics is a younger, large granodioritic to granitic mass. Mafic to ultramafic intrusives are found throughout the stratigraphy. Presumably younger, quartz-rich, garnetiferous volcanoclastic sediments are found to the north and to the west of the A grid.

contd. ...

Metamorphic grade is of the upper greenschist/lower amphibolite facies. Biotite and garnets are the characteristic metamorphic minerals.

GRID GEOLOGY

The A grid consists of 14 lines 1.5 km in length and an equal number of lines 0.5 km in length. All lines are 100 meters apart. The grid covers two lakes separated by a major hill from which most of the geological information was obtained.

Rock types encountered include NW/SE trending basalts with sills of gabbro. Locally well bedded rhyolite tuffs were found. Descriptions of the individual units follows.

Basalts: All basalts are characterized by their dark green colour and by their fine to medium grain size. Texturally several varieties of basalts are present.

The massive basalts are generally medium grained and may be amygdular or vesicular. Grid alteration (mutually perpendicular fractures) is present in these basalts as well as epidote in some of the fractures. Secondary nodules and patches of quartz were found. Disseminated magnetite occurs within these mafic flows.

The pillow basalts observed may be amygdular or vesicular. One outcrop of pillowed variolitic basalt was mapped. Size of pillows is variable. One outcrop contained megapillows having a long axis up to 4 m in length. Associated with the pillowed flows are bands of pillow breccias characterized by rusty weathering remnants of pillow rims in a mafic matrix. Again epidote is present along fractures and forms occasional patches.

contd. ...

Very good examples of flow top breccias are found on the grid. Between 10% and 40% basaltic fragments up to .5 m in size are found in a more easily erodable, rusty weathering, often garnetiferous basaltic matrix.

Gabbro: The gabbros are medium to coarse grained and massive to foliated. They appear to form sills within the basalts. Grid alteration was observed in this unit. A spotted appearance may be observed due to the local concentration of plagioclase and quartz. Minor disseminated magnetite is present as well as epidote along fractures.

Rhyolite tuffs: A single outcrop of well bedded, fine grained rhyolite tuffs was found on the grid. The tuffs have an overall greyish tint and contain minor epidote. The contacts between the tuffs and the massive basalts appeared silicified.

Structure: The grid covers a pronounced bend in the volcanic sequence. Bedding in the rhyolite tuffs found in the east half of the grid varied between 270° and 290°. Within the basalts found in the western half strikes were consistently between 70° and 80°. Dips in both cases averaged between 70° and 80° north.

Two major foliation directions (180° and 100°) were noted on the mafic units. Fractures forming the grid alteration patterns had a general orientation of 355° and 55°.

The megapillows found on line 8E suggest probable tops towards the north.

contd. ...

Metamorphism: The rock units have undergone a rather intense thermal metamorphism which is especially evident within the basalts. Abundant garnets are frequently found within the pillow rims and the matrix of the flow breccias. The flows have also undergone a certain amount of amphibolitization characterized by the presence of recrystallized hornblende crystals.

Mineralization: Within the grid sulphide mineralization varied from trace to 30% pyrite and pyrrhotite. All gold assays returned trace values. The best copper and zinc values were 358 ppm and 1960 ppm respectively. Three significant sulphide occurrences are discussed.

Showing #1 - L13E, 1+80N

The mineralized zone consists of a quartz injected, epidotized basalt containing 10% to 15% pyrite and pyrrhotite. The mineralized zone is .3 m to 1.8 m in width and is exposed over a length of 1.8 m. The host rock is a pillowed basalt.

Showing #2 - L9+50E, 4+00N

Disseminated pyrite and pyrrhotite is found in the matrix of a flow brecciated basalt. The mineralization is exposed over an area some 15 m x 5 m. Most of the sulphides appear to have been leached out leaving only a rusty weathering matrix containing between 1% and 5% fresh sulphides.

Showing #3 - L8E, 4+50N

Massive to pillowed, medium grained basalts are host to a sulphide concentration attaining 30% pyrite, pyrrhotite. A rusty weathering zone 3 m in length accompanies the mineralization. The actual sulphides are exposed only over a small area on the west side of a steep overburden covered hill.

contd. ...

GEOPHYSICS

Three major and 2 minor conductive bands have been located by the MaxMin and VLF surveys. All have a distinct, above background, magnetic signature. The 3 principal conductors are formational in nature.

The location of the 3 sulphide occurrences, previously described, corresponds very closely to the conductor axis of anomaly MM2 (see Gaucher's report). Hence this electromagnetic conductor is well accounted for.

The reader is referred to the geophysical report for a complete description of the geophysical procedures and results.

DIAMOND DRILLING

An x-ray hole setup was found on line 4+60E at 0+40m north. The hole, by an unknown party, was drilled down dip and is situated at the tail end of a VLF response. It appears to have been collared right on the anomaly axis.

CONCLUSIONS

The grid appears to be principally underlain by mafic flows and sills. Minor rhyolite tuffs are present. Three occurrences of barren sulphides within mafic flows were mapped. All three belong to the same horizon. At least two conductive systems remain to be drilled.

contd. ...

RECOMMENDATIONS

The drilling of conductors MM1 on lines 19+00 or 20+00E and of conductor MM7 on line 6+00E is recommended. Two 110 meter long holes are necessary.

Respectfully Submitted

Michel Drouin

MD/of

PART II - GRID "B"

GEOLOGICAL REPORT

ON

'B' GRID

EASTMAIN RIVER PROJECT, QUEBEC

VENTURE 116

BY

PLACER DEVELOPMENT LIMITED

Toronto, Ontario
January 1983

M. Drouin

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INTRODUCTION

This grid was cut to cover several Rexhem II airborne electromagnetic conductors. The claims were acquired in September 1981 and January 1982. Geological mapping was performed in July 1982 by Jean Giroux at a scale of 1:2500. The following report summarizes the geological features encountered.

GRID DESCRIPTION

The B grid is located in the north central portion of projected township 2334. 25 claims (Table I) are either totally or partially covered by the grid.

T A B L E I

Claims covered by B Grid

Licence	Claims	Date
403326	1,2,3,4	September 1981
404988	3,4,5	"
404989	1,2,4,5	"
404990	1,2,5	"
404991	1,2,3	"
406842	3,4,5	January 1982
406843	1	"
406849	2,3,4,5	"

LOCATION AND ACCESS (Figure 1)

The property is situated some 320 km (200 air miles) north of the mining town of Chibougamau, Quebec. More precisely the grid is found in the north central portion of township 2334 in the territory of Mistassini (NTS Sheet 33-A-8E). The Eastmain River is approximately 9 km north of the grid.

contd. ...

FIGURE 1

GENERAL LOCATION MAP

EASTMAIN AREA , QUEBEC

Aug., 1982

Access to the project area is by float plane only. Propair maintains a float plane base on the Temiscamie River approximately 8 km S.E. of Lake Albanel. The base can be reached from Chibougamau via an all-weather gravel road, a distance of 167 km. From the air base it is another 167 km farther northeast to the Placer camp.

Access to the grid was by helicopter based at the Placer camp.

PREVIOUS WORK

1963-64:	Government of Canada.	Airborne Magnetic Survey Map #20326; 1:63,360
1976:	Quebec Dept.of Natural Resources, M. Hocq	Region du Lac Cadieux, DPV.433, 1:250,000
1981:	Placer Development Ltd.	Rexhem II Airborne E.M. + Mag. Survey

REGIONAL GEOLOGY

The property lies within the synclinally folded (M. Hocq, DPV.433) Eastmain River volcanics. The belt is Archean in age and has a local maximum thickness of 7 km.

Typically the volcanics consist of several northwest trending, shallow dipping, mafic to felsic episodes. The mafic portion is largely dominant. Basaltic flows and to a lesser extent, intermediate to acid fine grained tuffs are the more common rock types encountered. Intrusive within the volcanics is a younger, large granitic to granodiorite mass. Mafic to ultramafic intrusives are found throughout the stratigraphy. Presumably younger, quartz rich, garnetiferous volcanoclastic sediments are found to the north and to the west of the B grid.

contd. ...

Metamorphic grade is of the upper greenschist/lower amphibolite facies. Biotite and garnets are the characteristic metamorphic minerals.

GRID GEOLOGY

The B grid consists of 12 lines 1.9 km in length and of 4 lines 1 km in length. All lines are 100 m apart. The grid is underlain by low swampy ground.

Only four outcrops were found on the grid. Rock types encountered were one outcrop of a massive, featureless fine to medium grained basalt and gabbros. The gabbros are typically medium grained and well foliated (260^{o}). Quartz feldspar, epidote filled fractures ($340-360^{o}$) are abundant. A highly magnetic, dense gabbroic to pyroxenitic outcrop was found on line 51E at 11+00S. Ground magnetic surveys suggest the presence of at least one other such unit.

Mineralization: 3% pyrite, 5% pyrrhotite and traces chalcopyrite were observed in the highly magnetic gabbro. Assays returned trace gold and silver.

GEOPHYSICS

Two main conductive zones situated at each extremity of the grid have been located by the electromagnetic surveys. Each zone appears to consist of two distinct conductors. All conductors are associated with an anomalous above background magnetic signature.

The reader is referred to the B grid geophysical report for a complete description of the geophysical procedures and results.

contd. ...

CONCLUSIONS AND RECOMMENDATIONS

The extreme lack of outcrops on the B grid prevent any meaningfull conclusions other than a sampling of the conductors by diamond drilling is necessary.

A minimum of 3 holes testing conductors MM2, MM4 and MM5 are recommended.

Respectfully Submitted,

MD/of

Michel Drouin

PART III - GRIDS "C", "D","E"

GEOLOGICAL REPORT

ON

C-D-E GRIDS

EASTMAIN RIVER PROJECT, QUEBEC

VENTURE 116

BY

PLACER DEVELOPMENT LIMITED

Toronto, Ontario
January 1983

M. Drouin

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INTRODUCTION

These grids were cut to cover several Rexhem II airborne electromagnetic conductors. The ground was acquired in September 1981 and January 1982. Geological mapping was carried out in July 1982 by Jean Giroux and Herve Thiboutot at a scale of 1:2500. The following report summarizes the geological features encountered.

GRID DESCRIPTION

The C-D and E grids are found in the north central portion of projected township 2334. Claims either partially or totally covered by the grids are listed below. (Table I).

T A B L E I

Claims covered by C-D-E Grids

Grid	Licence	Claims	Date
C	403325	2,3	September 1981
	404986	1,2	"
	406843	4,5	January 1982
D	403324	1	September 1981
	404982	1,2	"
	404984	1	"
	406844	2,3	January 1982
	406848	1	"
E	404977	1,2	September 1981
	404979	3	"
	406845	1,2	January 1982
	406847	1,2	"

LOCATION AND ACCESS (Figure 1)

The property is situated some 320 km north of the mining town of Chibougamau, Quebec. More precisely the grid is found in the north central portion of township 2334, in the territory of Mistassini (NTS Sheet 33-A-8E). The Eastmain River is approximately 10 km north of the grid.

contd. ...

FIGURE 1

GENERAL LOCATION MAP

EASTMAIN AREA , QUEBEC

Aug., 1982

Access to the project area is by float plane only. Propair maintains a float plane base on the Temiscamie River approximately 8 km S.E. of Lake Albanel. The base can be reached from Chibougamau via an all-weather gravel road, a distance of 167 km. From the air base it is another 167 km farther northeast to the Placer camp.

Access to the grids was by helicopter based at the Placer camp.

PREVIOUS WORK

1963-64:	Government of Canada.	Airborne Magnetic Survey Map #20326, 1:63,360
1974:	Nordore Mining	EM/Mag.Survey - E Grid
1976:	Nordore Mining	X-ray drill hole - E Grid
1976:	Quebec Dept.of Natural Resources, M. Hocq	Region du Lac Cadieux DPV.433; 1:250,000
1981:	Placer Development Ltd.	Rexhem II Airborne EM+Mag. Survey

REGIONAL GEOLOGY

The property lies within the synclinally folded (M. Hocq, DPV.433) Eastmain River volcanics. The belt is Archean in age and has a local maximum thickness of 7 km.

Typically the volcanics consist of northwest trending, shallow dipping, mafic to felsic episodes. The mafic portion is largely dominant. Basaltic flows and to a lesser extent, intermediate to acid fine grained tuffs are the more common rock types encountered. Intrusive within the volcanics is a younger, large granodiorite to granitic mass. Mafic to ultramafic intrusives are found throughout the stratigraphy. Presumably younger, quartz rich, garnetiferous volcanoclastic sediments are found to the northwest of the grids.

contd. ...

Metamorphic grade is of the upper greenschist/lower amphibolite facies. Biotite and garnets are the characteristic metamorphic minerals.

GRID GEOLOGY

No outcrops were found on the C and D grids. On the E grid outcrops, with one exception, are confined to the southwest corner.

On the E grid amphibolitized, massive to pillowed basalts were the principal rock types encountered. The basalts are fine to medium grained and possess a good east-west foliation. A strong east-west flattening of pillows was observed. K-feldspar and epidote filled fractures are frequent. One outcrop of amphibolitized gabbro is present on the grid.

Strikes varied between 270° and 276° while dips between 45° and 60°N were measured.

Mineralization: Trace sulphides were noted in some of the pillow rims. 5-7% disseminate pyrite and pyrrhotite were present in the gabbro.

GEOPHYSICS

Both on the C and D grids two conductors of moderate intensity and having definite magnetic signatures are present.

On the E grid a strong fairly wide e.m. response with a strike length of at least 800 meters has been defined. A rather broad, ill-defined magnetic correlation is observed.

The reader is referred to the geophysical reports for a complete description of the geophysical procedures and results.

contd. ...

DIAMOND DRILLING

On the E grid an x-ray drill hole setup was found on line 91+30E at 0+90S. The hole, drilled by Nordore Mining, cut 16' of 5% to 20% pyrite and pyrrhotite. The hole was collared at -55° and had an ultimate depth of 164'. Gold and copper assays returned trace to nil values.

CONCLUSIONS AND RECOMMENDATIONS

Mapping yielded only very minor geological information. Sampling of the conductors is therefore necessary. One hole is recommended to test the best responses on the C and D grids.

It is probable that the x-ray hole on the E grid has not fully tested the electromagnetic conductor. A second drill testing of this anomaly is therefore recommended.

Respectfully Submitted,

Michel Drouin

MD/of

PART IV - GRID "F"

GEOLOGICAL REPORT

ON

'F' GRID

EASTMAIN RIVER PROJECT, QUEBEC

VENTURE 116

BY

PLACER DEVELOPMENT LIMITED

Toronto, Ontario
January 1983

M. Drouin

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INTRODUCTION

The grid was cut to cover several isolated Rexhem II airborne electromagnetic conductors. One of these conductors drilled in 1970 by Canex contained interesting gold values.

The ground having been staked in January and September 1981 was geologically mapped during the first half of June 1982. Mapping at a scale of 1:2500 was carried out by J. Giroux, R. Moyle, H. Thiboutot and M. Drouin. The following report summarizes the geological features encountered.

GRID DESCRIPTION

The F grid is situated in projected townships 2434 and 2334. Forty-two claims (Table I) are either totally or partially covered by the grid.

T A B L E I

Claims covered by F Grid

Licence	Claims
399289	2,3,4,5
399290	2,3,4,5
399291	2,3,4,5
399292	3,4,5
399293	4,5
404965	5
404967	5
404968	1,2,3,4,5
404969	1
404970	2,3,4
404973	4,5
404975	3,4,5
404976	1,2,3
404978	1,2,3
404980	4
404995	4,5

contd. ...

LOCATION AND ACCESS (Figure 1)

The property is situated some 320 km (200 air miles) north of the mining town of Chibougamau, Quebec. More precisely the grid is found in townships 2334 and 2434 in the territory of Mistassini (NTS Sheet 33-A-8E). The Eastmain River is approximately 6 km north of the grid.

Access to the project area is by float plane, Propair maintains a float plane base on the Temiscamie River some 8 km southeast of Lake Albanel. The base can be reached from Chibougamau via an all-weather gravel road, a distance of 167 km (104 miles). From the air base it is 167 km (104 miles) farther northeast to the Placer camp.

A helicopter fly camp was established on the grid.

PREVIOUS WORK

1963-64:	Government of Canada.	Airborne Magnetic Survey Map #20326; 1:63,360
1970:	Canex Aerial Explor.	Airborne E.M. Survey X-ray drill holes A9-1 and A9-1A
1975-76:	Nordore Mining	Ground geophysical survey 2 x-ray drill holes reported
1976:	Quebec Dept.of Natural Resources, M. Hocq	Region du Lac Cadieux DPV.433, 1:250,000
1981:	Placer Development	7 drill holes - 716 m Airborne electromagnetic and magnetic survey (Rexhem II)

contd. ...

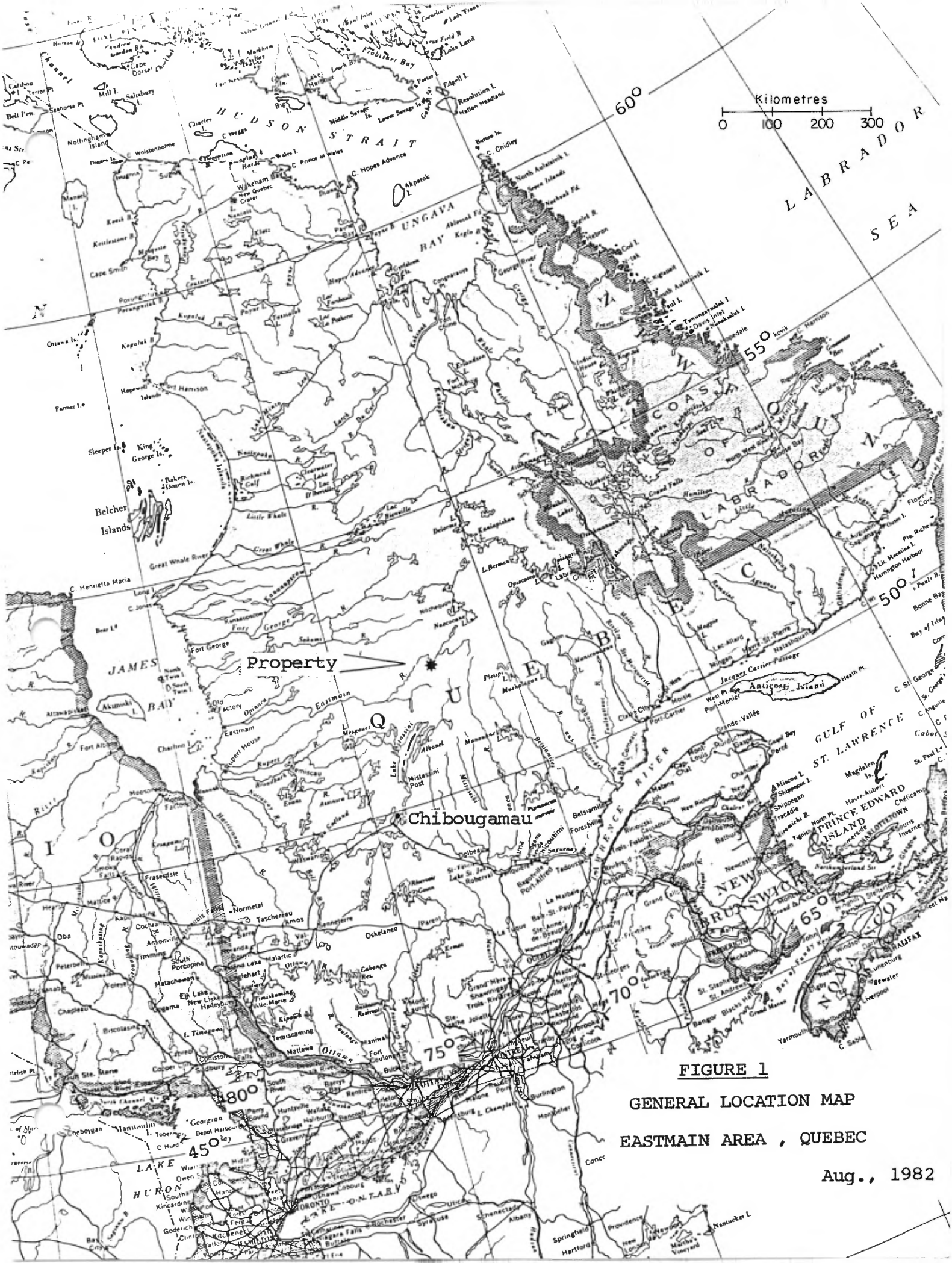

FIGURE 1

GENERAL LOCATION MAP

EASTMAIN AREA , QUEBEC

Aug., 1982

REGIONAL GEOLOGY

The property lies within the synclinally folded (M. Hocq, DPV.433) Eastmain River volcanics. The belt is Archean in age and has a local maximum thickness of 7 km.

Typically the volcanics consist of several northwest trending, shallow dipping mafic to felsic episodes. The mafic portion is largely dominant. Basaltic flows and to a lesser extent, intermediate to acid fine grained tuffs are the more common rock types encountered. Intrusive within the volcanics is younger, large granitic to granodioritic mass. Mafic to ultramafic intrusives are found throughout the stratigraphy. Presumably younger, quartz rich, garnetiferous volcanoclastic sediments are found to the southwest of the F grid.

Metamorphic grade is of the upper greenschist/lower amphibolite facies. Biotite and garnets are the characteristic metamorphic minerals.

GRID GEOLOGY

The grid consists of a total of 82.4 km of cut line. 75 one km long picket lines were cut at 50 m intervals using a 3.7 km baseline and tie line.

Less than 1% outcrop is present on the grid. Rock types encountered include massive to pillowed basalts, gabbros, and one outcrop of rhyolite tuff. The basalts are occasionally intruded by gabbroic and granitic dykes.

contd. ...

The dark green massive basalts are generally medium to coarse grained. Good examples of grid alteration characterized by silica filled fractures striking approximately 60° and 340° are found in the massive basalts. Pillows where present are well preserved and can reach 2 m in length (mega-pillows). Some pillows displayed vesicules, amygdules and polygonal cooling textures.

Pillows indicate that tops are south. They strike between 320° and 370°. Dips are north and vary between 30° and 55°N. These volcanics are therefore overturned.

Good schistosity (312°/55°N) is only locally present within the mafic lavas.

One outcrop of rhyolite tuffs was found on L17+50E at 3+75S. The rhyolite tuffs are interbedded with basalts in this particular locality. These aphanitic tuffs have a light apple green (sericitic) fresh surface and are weakly biotitic. The width of the individual beds varied between 0.5 m and 1 m. Observed contacts were striking 330° and dipping 40°N. Trace sulphides were noted.

Coarse grained gabbros were noted in several localities. Amphiboles forming clusters up to 2 cm long were frequent. One outcrop (L10+30E, 4+70S) displayed a brecciation that can best be described as an internal or in-situ breccia due to some sort of explosion. The gabbros are slightly magnetic and contain no noticeable mineralization.

Mineralization: No significant mineralization was noted within the outcrops. However a chalcopyrite bearing boulder was found by R. Moyle on line 2+50E at 0+75S.

contd. ...

The boulder is tabular in shape and of rhyolitic composition. Approximate dimensions are .3 m x .3 m x .6 m. The boulder contains between 5-10% chalcopyrite and minor pyrite in lensoid patches. Trace amounts of graphitic material is present. The boulder appears to be non-conductive. Assays returned 1.9% Cu, 4.46 gt Ag and 2.83 gt Au.

GEOPHYSICS

Ground geophysical surveys outlined 4 conductors of primary interest. Magnetic correlation is present in all cases.

The reader is referred to the geophysical report for a complete description of the geophysical procedures and results.

DIAMOND DRILLING

Two x-ray holes were drilled by Canex in 1970. Both encountered gold values. In 1976 two x-ray holes were drilled by Nordore. One hole was lost in overburden and the second hole cut weak (1 gt Au) gold values over .6 m. One page of the log of this hole is missing in the Quebec Department of Natural Resources files. Seven holes or 716 m were drilled by Placer in 1981. The results of the drilling are described in a separate report.

CONTD. ...

CONCLUSIONS AND RECOMMENDATIONS

The mapping carried out in June 1982 has yielded only a poor ill-defined picture of the subsurface geology. Sufficient information is, however, available to warrant further exploration. Future geological data will have to be obtained by drilling. Several drill holes are needed to establish the nature of the conductors.

It is also recommended that an attempt be made to locate the source of the mineralized boulder.

Respectfully Submitted,

Michel Drouin

MD/of

PART V - GRID "G"

GEOLOGICAL REPORT

ON

'G' GRID

EASTMAIN RIVER PROJECT, QUEBEC

VENTURE 116

BY

PLACER DEVELOPMENT LIMITED

Toronto, Ontario
January 1983

M. Drouin

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INTRODUCTION

This grid covers an isolated Rexhem II airborne electromagnetic conductor. The ground having been acquired in September 1981 and January 1982 was mapped by H. Thiboutot during July 1982.

Mapping was carried out at a scale of 1:2500. The following report summarizes the geological features encountered.

GRID DESCRIPTION

The G grid is located in the southeast corner of projected township 2434. Four claims (Table I) are either totally or partially covered by the grid.

T A B L E I
Claims covered by G Grid

Licence	Claims	Date
404965	1,2	September 1981
406856	1,2	January 1982

LOCATION AND ACCESS (Figure 1)

The property is situated some 320 km (200 air miles) north of the mining town of Chibougamau, Quebec. More precisely the grid is found in the southeast corner of township 2434 in the territory of Mistassini (NTS Sheet 33-A-8E). The Eastmain River is but a few kilometers north of the grid.

Access to the project area is by float plane only. Propair maintains a float plane base on the Temiscamie River approximately 8 km S.E. of Lake Albanel. The base can be reached from Chibougamau via an all-weather gravel road, a distance of 167 km (104 miles). From the air base it is 167 km (104 miles) farther north to the Placer camp.

contd. ...

FIGURE 1

GENERAL LOCATION MAP

EASTMAIN AREA , QUEBEC

Aug., 1982

Access to the grid is either by boat or by helicopter based at the Placer camp.

PREVIOUS WORK

1963-64:	Government of Canada.	Airborne Magnetic Survey Map #20326; 1:63,360
1975-76:	Nordore Mining	Geophysical surveys (e.m.+mag.) One x-ray hole 120 m S.E. of grid.
1976:	Quebec Dept.of Natural Resources, M. Hocq	Region du Lac Cadieux DPV.433, 1:250,000
1981:	Placer Development	Rexhem II Airborne mag.+e.m. survey

REGIONAL GEOLOGY

The property lies within the synclinally folded (M. Hocq, DPV.433) Eastmain River volcanics. The belt is Archean in age and has a local maximum thickness of 7 km.

Typically the volcanics consist of several northwest trending, shallow dipping mafic to felsic episodes. The mafic portion is largely dominant. Basaltic flows and to a lesser extent, intermediate to acid fine grained tuffs are the more common rock types encountered. Intrusive within the volcanics is a younger, large granitic to granodioritic mass. Mafic to ultramafic intrusives are found throughout the stratigraphy. Presumably younger, quartz rich, garnetiferous volcanoclastic sediments are found to the southwest of the grid.

contd. ...

Metamorphic grade is of the upper greenschist/lower amphibolite facies. Biotite and garnets are the characteristic metamorphic minerals.

GRID GEOLOGY

Fairly abundant outcrops are found on the grid. Massive to pillowed basalts interbedded with rhyolites, rhyolite tuffs and agglomerates were mapped. Gabbros and numerous dykes, ranging from mafic to felsic in composition, intrude the volcanics.

Basalts: The mafic flows consist of fine to coarse grained massive to pillowed to pillow brecciated basalts. Amygdules, vesicules and cooling textures are observable in the pillow basalts. Concentrations of biotite and garnets as well as minor amounts of epidote and potassic feldspars are locally present. Strong, well preserved grid alteration ($220^{o}/340^{o}$) is present within the basalts.

Rhyolite Flows and Pyroclastics: Massive rhyolites are found in the central portion of the grid as well as a few outcrops immediately southwest of the grid. The rhyolites have a whitish coloured weathered surface and contain between 1% and 5% blue quartz eyes. Micas (biotite, vermiculite? muscovite) are a significant component of the rhyolites. Local auto brecciation is observed.

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Overlying or interbedded with the rhyolites are generally well bedded, fine grained rhyolite tuffs, feldspar crystal tuffs and lapilli tuffs. Between 10% and 15% felsic fragments are found in the lapilli tuffs.

A thin rhyolitic agglomerate horizon was mapped immediately southwest of the grid. The agglomerate is interbedded with rhyolite tuffs and flows. 10% to 15% acid fragments ranging in size from 2 mm to 10 cm are found in a rhyodacitic matrix.

Gabbro: Gabbros are found at both extremities of the grid. These very dark green intrusives are medium to coarse grained and only locally magnetic. Basaltic and rhyolitic xenoliths are found in the gabbros. Epidote, quartz, calcite filled fractures are occasionally present.

Dykes: Dykes of four different compositions were mapped. They are as follows:

1) Fine grained granitic dykes cutting basalts and gabbros.

2) Granitic, quartz porphyritic dykes 1 to 5 meters in thickness, found within basalts, gabbros and the above fine grained granitic dykes.

3) Dacitic to rhyodacitic fine grained dykes cross cutting all of the above units.

4) Feldspar porphyritic basaltic dykes up to 2 meters in thickness. They very much resemble the porphyritic basalt marker horizon and are thought to be the feeder dykes for this marker horizon.

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Structure: Pillows indicate a south facing sequence. Strikes of pillows vary between 120° and 135°. Dips are northerly varying between 50° and 70°. The volcanics are thus overturned.

The tuff horizons were strikeing 130° and dipping 70°N.

Mineralization: An excellent example of typical volcanogenic mineralization was stripped and cleaned on this grid. Auriferous, stratabound rhyolite tuffs overlying massive rhyolites and in turn overlain by pillow basalts is present on line 2+80S at 1+75W. The mineralization consists of disseminated to locally semi-massive pyrite, pyrrhotite and chalcopyrite. As with the F grid gold accompanies the chalcopyrite. A grab sample containing chalcopyrite mineralization returned 8.26 gt Au, 7.3 gt Ag, 27,200 ppm Cu and 106 ppm Zn.

Sulphide fragments or nodules are found in the rhyolites and the rhyolite pyroclastics lying just off the grid.

The sulphides consist of pyrite and pyrrhotite with only trace chalcopyrite. Samples returned nill or trace gold values with one sample yielding 0.45 gt Au.

GEOPHYSICS

One weak MaxMin anomaly with a direct magnetic coincidence was partly defined. The conductor extends to the southeast beyond the grid. Conductor strength also appears to increase in the same direction. Geologically the electromagnetic conductor corresponds to the auriferous rhyolite tuffs.

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The reader is referred to the geophysical report for a complete description of the geophysical procedures and results.

DIAMOND DRILLING

An x-ray hole by Nordore Mining was found some 120 meters southeast of the grid. Ultimate depth of the hole was 33 m (107'). The hole intersected .45 m of massive magnetite, 0.15 m of massive pyrrhotite as well as local disseminations of pyrite, pyrrhotite and splashes of chalcopyrite. Three copper assays returned .21%, .01% and .14% Cu. Strangely enough gold assays were trace.

CONCLUSIONS AND RECOMMENDATIONS

The grid covers a very favourable geological context. The presence of stratabound, auriferous sulphides and an associated e.m. conductor is motivating.

The grid should be extended to the southeast to allow for a complete definition of the conductor. A proper evaluation of the Nordore hole will then be possible. Based on prior experience one should not hesitate to discount the short x-ray hole and drill a new hole.

Respectfully Submitted,

Michel Drouin

MD/of

STATEMENT OF EXPENDITURES FOR 1982 - EASTMAIN RIVER PROJECT. V.116

Camp Operations	$ 22,892.00
Communications	1,839.00
Vehicle Expense	5,695.90
Freight Costs	13,538.68
Travel Costs	22,185.91
Helicopter Costs	96,491.38
Fixed Wing Transportation	83,223.46
Geological Mapping	30,863.83
Core Logging - core splitting, drill supervision	15,775.00
Geological Studies including computer time for drill logs and sections	89,275.03
Assaying	7,877.50
Drilling Costs	377,479.84
Report Preparation	15,767.83
Downhole Geophysics & Deep E.M.	8,075.20
Total	$ 790,980.56

The above figures taken from our records are believed to be an accurate representation of expenditures for drilling, mapping, supervision and report preparation on the Eastmain Project for the year 1982.

PLACER DEVELOPMENT LIMITED

GDJB/of

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Exploration Manager, Eastern Canada