REPORT ON
GEOPHYSICAL WORK

MACDIARMID 33/42
MACDIARMID TOWNSHIP

NTS: 42-A/12 PROJ # 8036

FOR
FALCONBRIDGE LIMITED

JULY 2000

D. LONDRY
TIMMINS GEOPHYSICS LTD

SUMMARY AND RECOMMENDATIONS

Magnetic and HLEM were carried out over the Macdiarmid 33/42 property for Falconbridge Limited in August, 1999.

The magnetic survey mapped north-south striking diabase dikes and northwest striking ultrabasics. The HLEM survey detected a number of northwest striking conductors. A number of EM anomalies to the northwest of the ultrabasic have a long strike length and represent formational graphitic sediments.

Three zones of fair to good conductivity do not appear to have been tested by diamond drilling. Anomaly 'K' is identified on three lines, however, may continue to the northwest in the flank of the response from conductor 'H'. Anomalies 'Q' and 'S' are located to the south of the ultrabasic and have short strike lengths. Intermediate lines, on either side of Line 5700 East, would have to be surveyed in order to determine the strike of conductor 'S'.

Three zones of poor conductivity (anomalies 'D', 'N' and 'O') are associated with the ultrabasic. Anomalies 'D' and 'N' have a direct correlation with the magnetic high anomalies. A hole drilled by Canadian Johns Manville in the vicinity of anomaly 'N' intersected disseminated chalcopyrite in gabbro and felsic volcanics.

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INTRODUCTION

Magnetic and horizontal loop electromagnetic (HLEM) surveys were carried out on the Macdiarmid 33/42 property for Falconbridge Limited, in August, 1999. This work is an extension of surveys which were carried out on the Macdiarmid 51 property in September, 1998 and previously reported on. It is part of a joint venture between Falconbridge Limited, Hudson Bay Exploration & Development Ltd. and Explorers Alliance Ltd.

The property is located approximately 27 kilometres northwest of the city of Timmins (Figure 1(a)) in the west central portion of Macdiarmid Township, Porcupine Mining Division. The west edge of the grid can be accessed by all-terrain vehicle in the summer or snowmobile in the winter along bush roads which run east and then south from the Abitibi Camp 50 road; this road is accessed from Highway 576 which runs north from Kamiskotia Lake. The east edge of the grid can be accessed by boat along the Mattagami River.

The grid on the Macdiarmid 33/42 property and Macdiarmid 51 property covered part of 44 contiguous mining claims which consist of 60, forty acre claim units (Figure 1(b)). A list of the claim numbers is given in Apendix A.

The HLEM survey was carried out by B. Pigeon and L. Eden and the magnetic survey was run by J. derWeduwen.

GENERAL GEOLOGY

Macdiarmid Township is located near the west end of the Abitibi greenstone belt which consists of predominantly east-west striking, steeply dipping Archean sediments and ultramafic to felsic volcanics. These rocks have been intruded by ultramafic to felsic bodies, north-south striking Matachewan diabase dikes and east northeast striking Keweenawan diabase dikes.

In 1970, the Ontario Division of Mines carried out a regional magnetic survey in Macdiaramid and Loveland Townships. These results were compiled with existing surveys, which were submitted for assessment work credits, and the geology of the two townships was interpreted on map 2288 at a scale of

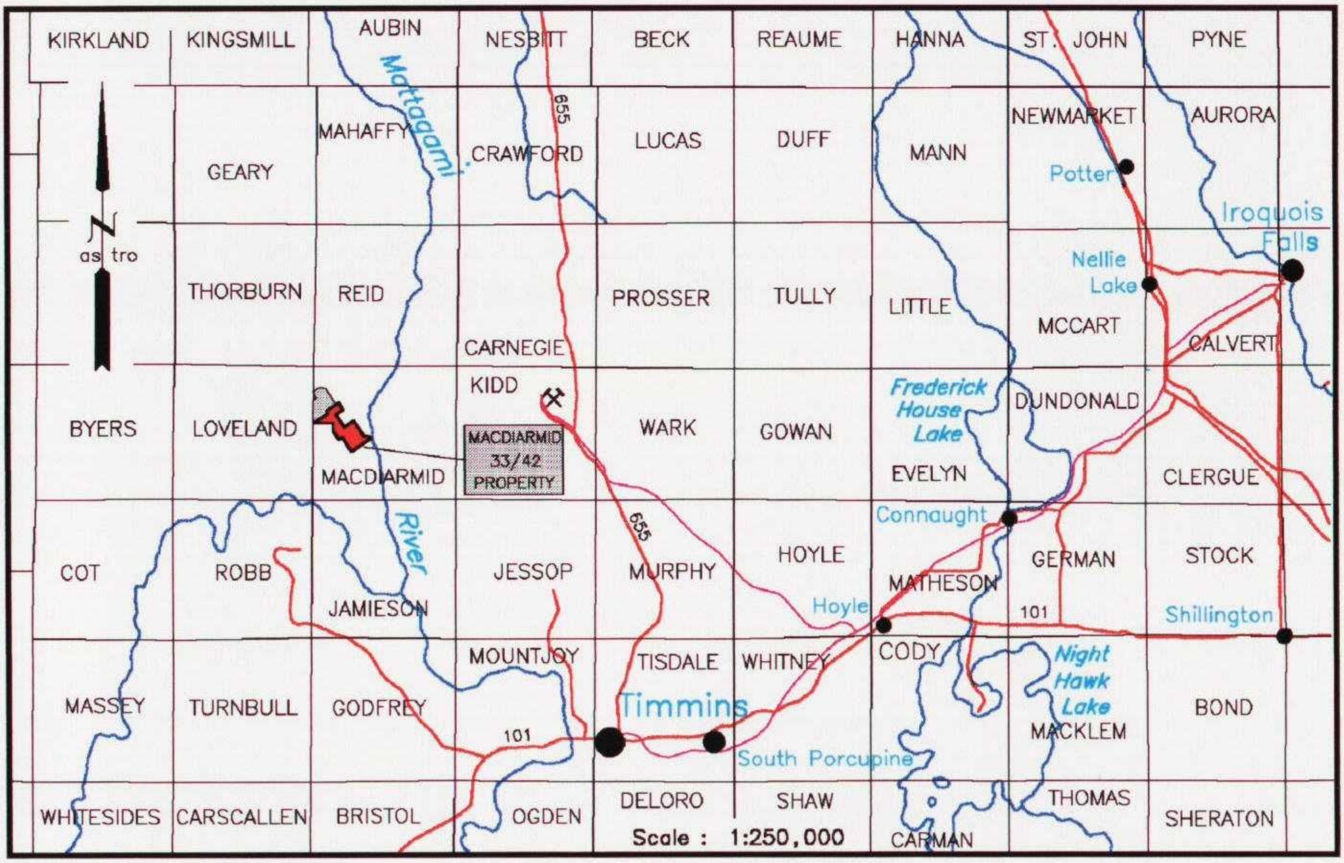

Figure 1(a) : Location Map

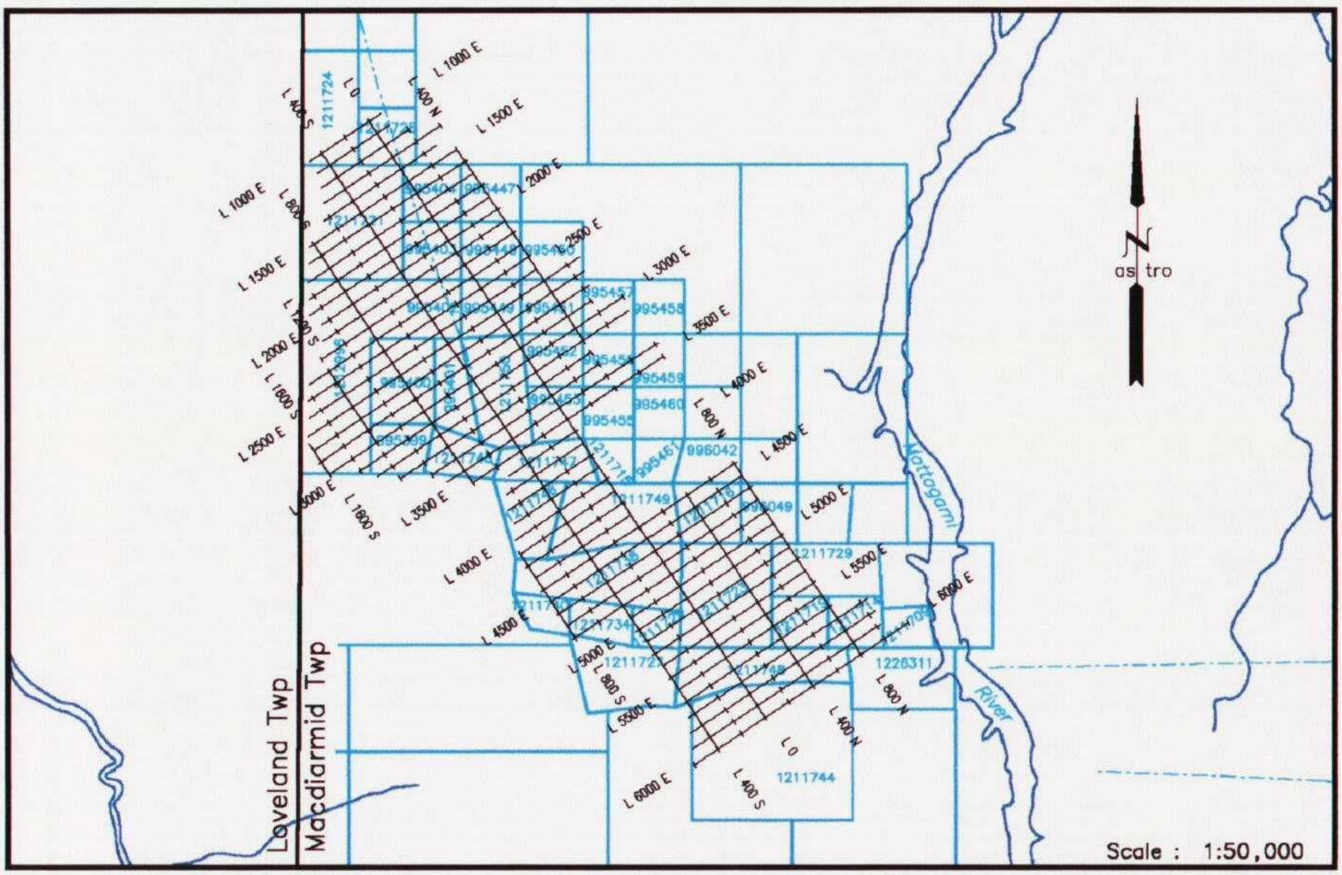

Figure 1(b) : Claim Map

1 inch to ½ mile (Middleton, 1974). The geology of Macdiarmid Township is also presented on map 2205 at a scale of 1 inch to 4 miles (Pyke, 1973) on map P3379 at a scale of 1:100,000 (Ayer etal, 1998).

Previous surveys and drilling in the vicinity of the Macdiarmid 33/42/51 property suggest that it is underlain by northwest striking felsic and intermediate volcanics and graphitic sediments. An ultramafic complex, comprised of peridotite, dunite, serpentinite and gabbro, trends northwest through the middle of the property. All of the rocks have been intruded by north northwest striking diabase dikes.

PREVIOUS WORK

The following is a description of previous exploration work carried out on the property and submitted for assessment work credits (Table 2).

In 1946, **Inco** filed the results from eight holes which were drilled on their 35 claim block in the area of the present Macdiarmid 33/42 property; all of the holes intersected the ultrabasic complex. In 1960, Inco filed the results from two more holes which also intersected the ultrabasic.

In 1961, **Texasgulf Sulphur Co. Ltd.** filed the results from two drill holes (M33-1 and M41-1), located within the present survey area. A number of graphite zones within felsic volcanics were intersected in each hole.

In 1964, **Silver-Miller Mines Limited** held eight claims in Macdiarmid Township along the Macdiarmid /Loveland township line, **Silvertown Mines Limited** held a block of ten claims directly to the south of Silver-Miller and **Lovejoy Mining and Exploration Limited** and **Mistango River Mines Limited** held a block of 35 claims directly to the east of the Silver-Miller property (Figure 2). All three companies ran magnetic and HLEM surveys on northeast-southwest lines spaced every 400 feet. The magnetic surveys were run with a vertical field, fluxgate magnetometer and the HLEM survey was run with a coil separation of 200 feet at a frequency of 876 Hertz. Lovejoy also ran a vertical loop electromagnetic (VLEM) survey to detail conductivity which was detected in their HLEM survey.

YEAR	COMPANY	GEOPHYSICS	DRILL HOLES	AFRI FILE
1946 1960	Inco		6241 to 6248 18127, 18128	Timmins T-194 42A12NE0545
1961 1961	Texasgulf		M33-1 M41-1	42A12NE0542 42A12NE0544
1964	Conwest Exploration Ltd.	Amag, AEM		42A11NW0029
1964	Silver-Miller Mines Limited	Mag, HLEM	SM-1 to 6	42A12NE0569 42A12NE0937
1964 1965	Silvertown Mines Limited	Mag, HLEM	ST-1, ST-2	42A12NE0770 42A12NE0541
1964	Bruce-Presto Mines Limited		MAC-1 TO 7	42A11NW0539
1964 1967	Mistango River Mines Ltd. Mistango (Asarco)	Mag, HLEM, VLEM	M-1 to M-4	42A12NE0837 42A12NE8373
1964 1965	North Rankin Nickel Mines Ltd.	Mag, HLEM	NRK-65-1 to 7	42A12NE0762 42A12NE0538
1965 1966 1968	Mespi Mines Limited	Mag, VLEM Mag, VLEM Mag, VLEM		42A12NE0557 42A12NE0558 42A12NE0836
1969	Noranda Exploration	Mag, VLEM	M69-1	42A11NE0554 42A11NE0532
1971/72 1973	Hollinger Mines Limited	Mag, HLEM	M3-1-73, M3-2-73	42A11NW0630 42A12NE0536
1972 1973 1977	Canadian Johns-Manville Co. Ltd.	Mag Mag, VLEM	MAC73-1 TO 6	42A12NE0548 42A12NE0530 42A12NE0528
1977	Geophysical Engineering limited	EM	P-1, P1-4	42A12NE0527
1977	Phelps Dodge Corp of Canada Limited	Mag, HLEM		42A11NW0624
1977 1978	Amax Minerals Exploration	Mag, HLEM Geology	MAC-1,2	42A12NE0524 42A11NW0614
1988 1988 1996	Falconbridge Limited	Mag, HLEM	MCD42-1,2 MCD42-3,4,5	42A12NE0509 42A12NE0508 42A12NE0074

Table 1. Summary of previous assessment work.

Silver-Miller drilled five holes on what are now claims 995400 and 1212996 and one other to the south of these claims. They intersected gabbro and felsic volcanics, however, no conductivity was evident in the holes, to explain targeted EM anomalies. Silvertown sank two diamond drill holes on their property, one of which was totally within a gabbro and the other in gabbro and felsic volcanics. In 1967, **Asarco** drilled at least four holes (M-1 to M-4) on Lovejoy's property to test EM anomalies.

In 1964, **North Rankin Nickel Mines Ltd.** conducted magnetic and HLEM surveys over 20 of 35 optioned claims, to the north of the Silver-Miller property. The grid on this property consisted of lines spaced every 300 feet and oriented N35°E. The magnetic survey was run with a fluxgate magnetometer and the HLEM was run with a coil separation of 300 feet and a frequency of 876 Hertz. Eight holes (NRK-65-1 to 8) were drilled to test EM anomalies. In 1965, the company optioned eight more claims to the east and carried out magnetic and HLEM surveys along north-south lines spaced every 200 feet.

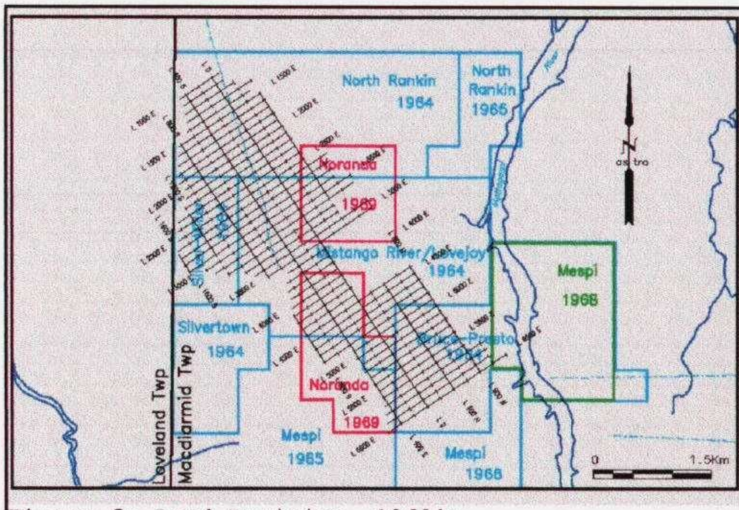

Figure 2: Land Position, 1960's

In 1964, **Bruce-Presto Mines Limited** held a block of 35 claims which straddled the Mattagami River and covered the east end of the present survey area. A grid consisting of east-west lines spaced every 400 feet was established on the property, however, no survey results were filed for assessment credits. Seven holes (Mac-1 to 7) intersected felsic volcanics and ultrabasics; graphite with pyrite and pyrrhotite mineralization was encountered in a number of the holes.

In 1965, **Mespi Mines Limited** ran magnetic and VLEM surveys over a forty claim block in southwest Macdiarmid and southeast Loveland Townships. The grid on the property consisted of east-west lines spaced every 400 feet. The magnetic readings were taken with a fluxgate magnetometer and the VLEM readings were taken with a coil separation of 300 feet at frequencies of 1800 and 480 Hertz. In 1966, Mespi ran the same surveys along north-south lines spaced every 400 feet on a block of 9 claims directly to the east. In 1968, Mespi also ran these surveys along east-west lines spaced every 400 feet on a block of 20 claims located to the east of the present Falconbridge survey area. No drilling was submitted for assessment credits.

In 1969, **Noranda Exploration** conducted magnetic and VLEM surveys on a 12 claim block and a 9 claim block, both of which covered part of the present survey area. The surveys were run along grid lines oriented N35°E and spaced every 400 feet. The magnetic survey was run with a vertical field, fluxgate magnetometer. One hole (M69-1), which was drilled on the 12 claim block, intersected felsic volcanics but no conductors.

In 1972, **Canadian Johns-Manville Ltd.** carried out a magnetic survey on a block of 30 claims which covered most of the present Macdiarmid 33/42 property (Figure 3). The survey was run with a fluxgate magnetometer along grid lines spaced every 400 feet and oriented northeast-southwest. In 1973, six diamond drill holes (Mac73-1 to 6) were sunk to test magnetic anomalies; all of the holes intersected a peridotite body with gabbro along the contact. In 1977, magnetic and vertical loop electromagnetic surveys were run over one other adjoining claim. The claims were brought to lease and were not re-opened for staking until 1999, when they were staked by Falconbridge Limited.

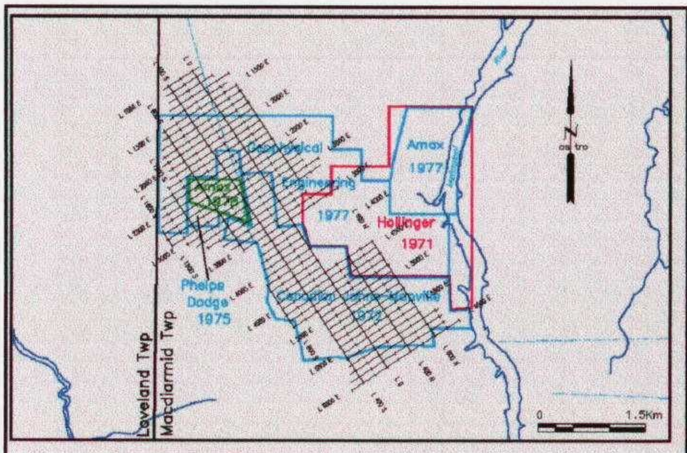

Figure 3: Land Position, 1970's

In 1971 and 1972, **Hollinger Mines Limited** carried out magnetic and HLEM survey over thirteen claims located along the west edge of the Mattagami River, to the northeast of the present survey area. The surveys were run along grid lines oriented 10° east of north and spaced every 400 feet. The magnetic survey was run with a torsion wire magnetometer and coil separations of 300 and 400 feet were used in the HLEM survey.

In 1975, **Phelps Dodge Corporation of Canada Limited** ran geophysical surveys on four claim groups in Macdiarmid Township. The most western group consisted of three claims which are presently claims 995400, 995401 and 995402. Magnetic and HLEM surveys were run on these claims, along lines oriented northeast-southwest and spaced every 400 feet. The magnetic survey was run with a fluxgate magnetometer and the HLEM survey was run with a coil separation of 400 feet at a frequency of 1600 Hertz. Although no drilling was filed, Amax later reported finding a drill site and drill core in the middle of what is now claim 995400.

In 1977, **Geophysical Engineering Limited** held a block of 31 claims in west central Macdiarmid Township. They filed the logs from two diamond drill holes (P-1 and P1-4); one hole was completely within gabbro and the other intersected a graphitic slate at the contact between gabbro and felsic volcanics.

In 1977, **Amax Minerals Exploration** carried out magnetic and HLEM surveys on eight contiguous claims which were located along the west edge of the Mattagami River, directly to the north of the Macdiarmid 33/42 property. They were run along grid lines spaced every 125 metres and oriented 10° north of west. The magnetic survey was run with a total field, proton precession magnetometer and the HLEM survey was run with a coil separation of 600 feet and frequencies of 444 and 1777 Hertz. In 1978, two diamond drill holes were sunk to test EM anomalies; both holes, MAC-1 and MAC-2, intersected graphitic tuffs. A geological survey was also carried out on two claims which are presently 995400 and 995401.

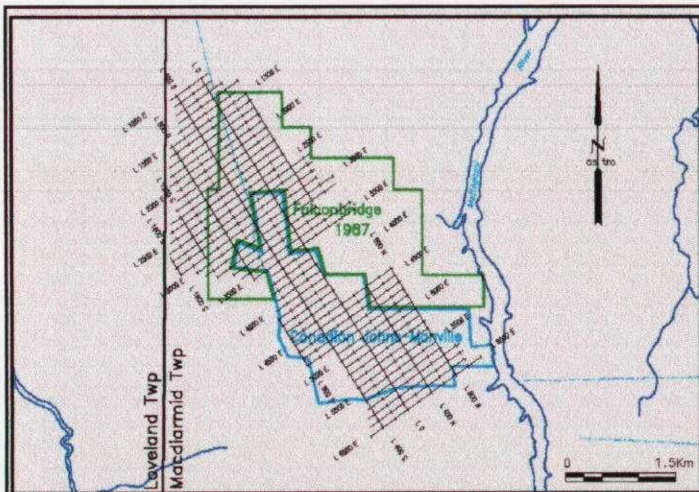

Figure 4: Land Position, 1980's

In 1987, the **Ontario Geological Survey** carried out a combined airborne magnetic and EM survey in the Timmins area which included Macdiarmid Township (OGS, 1988). This survey was flown along north-south lines spaced approximately every 200 metres.

In 1988, **Falconbridge Limited** carried out magnetic and HLEM surveys over a block of 33 claims

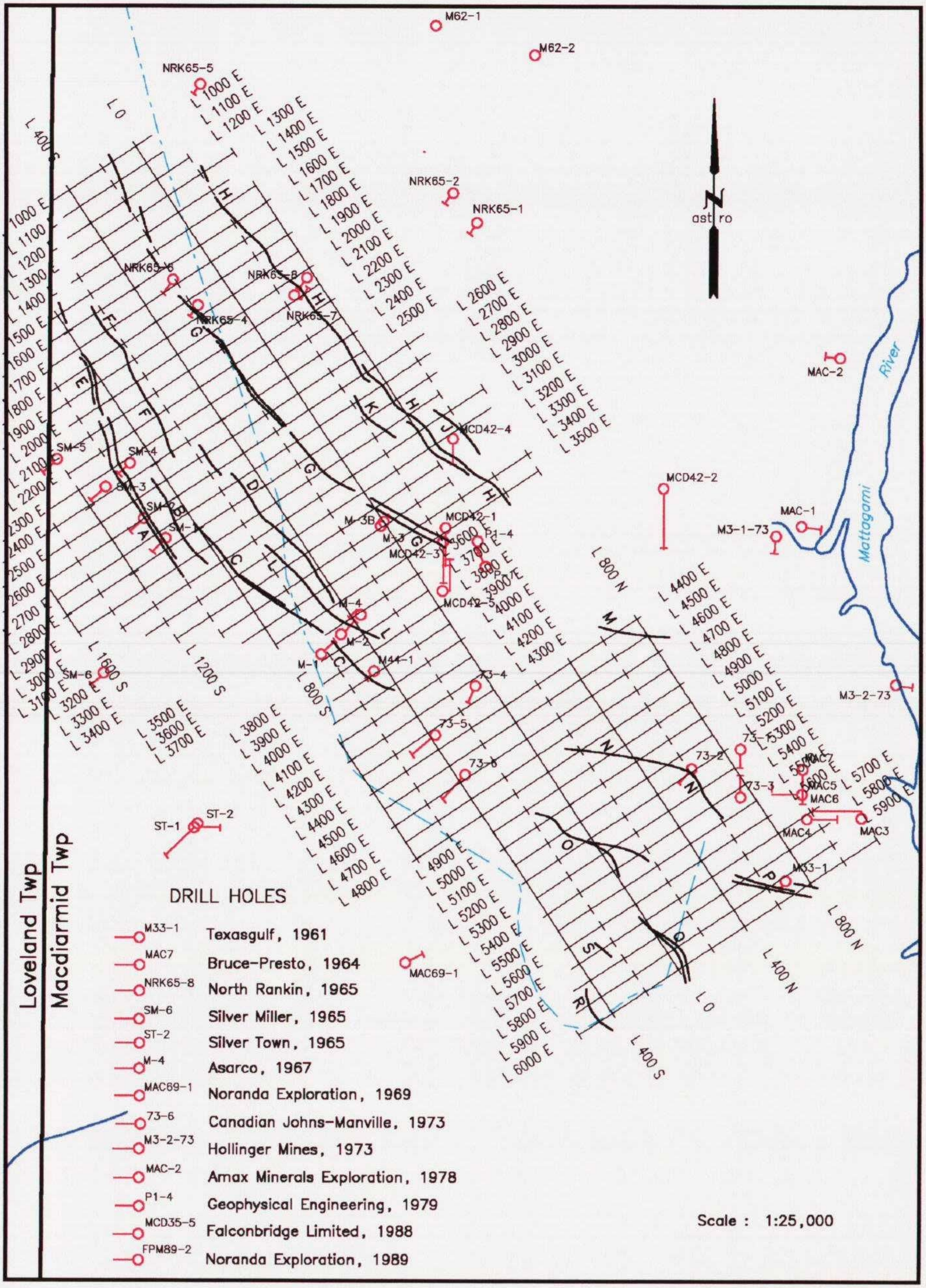

Figure 5 : Approximate Location of Previous Drill Holes

located directly to the north of the patented Canadian Johns-Manville claims (Figure 4). The surveys were run along north-south lines spaced every 100 metres; the magnetic survey was run with a total field, proton precession magnetometer and the HLEM survey was run with a coil separation of 120 metres at frequencies of 444 and 177 Hertz. At least five drill holes were sunk to test EM anomalies.

SURVEY DESCRIPTIONS

The surveys were run on grid lines spaced every 100 metres and oriented at 55° Az (Figure 1(b)). Tie lines were cut every 400 metres and all of the lines were picketed every 25 metres except for Lines 3200 to 3500 East, north of 0 North, which were picketed every 20 metres.

The magnetic readings were taken every 12.5 metres with a Scintrex IGS-2/MP-4. This instrument is a proton precession magnetometer which measures the earth's total magnetic field to an accuracy of 0.1 nT. Diurnal variations were monitored every 10 seconds with a Scintrex MP-3 base station magnetometer, located off the grid at 10200 East, 10360 North; the base station value to which all of the readings were levelled is 59237 nT. A total of 4672 readings were taken along 55.4 kilometres of line.

The horizontal loop EM survey was carried out with the Apex Parametrics MaxMin I-5. This instrument measures the in-phase and quadrature components of the secondary field as a percentage of the primary field; the depth of penetration is approximately half of the coil separation. Readings were taken every 25 metres using a coil separation of 200 metres and frequencies of 222, 444 and 1777 Hertz. A total of 2040 stations were read along 56.8 kilometres of line.

MAGNETIC RESULTS

The magnetic results are contoured every 100 nT on map 4 at a scale of 1:5000. The results have compiled with the Macdiarmid 51 survey and are presented in Figure 6 at a scale of 1:25,000.

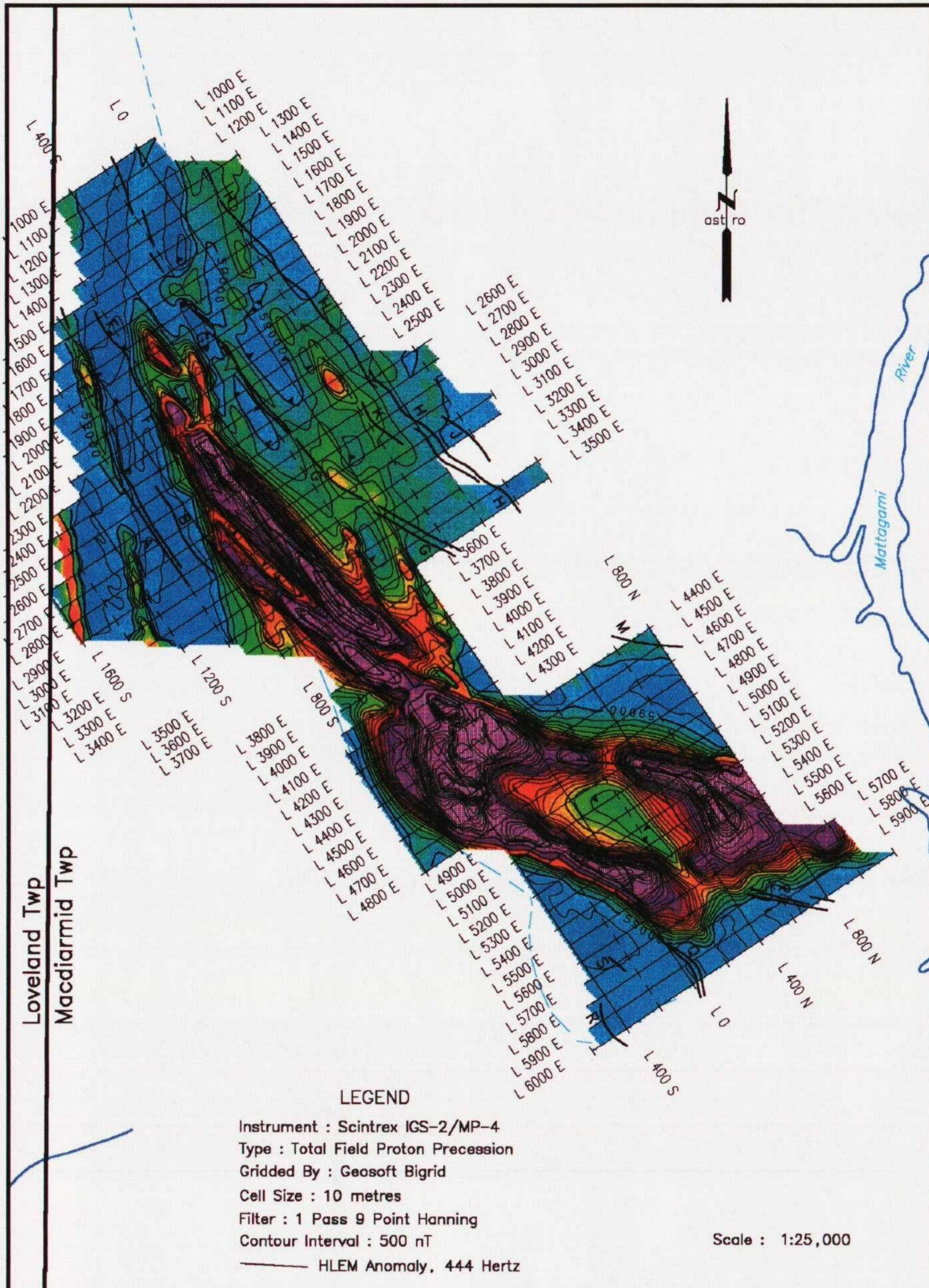

Figure 6 : Total Magnetic Field, Macdiarmid 33/42/51

The most prominent feature in the magnetic results is a very high amplitude anomaly which strikes northwest through the middle of the property. This anomaly represents an ultrabasic body which has been drilled by Inco in 1946 and Canadian Johns Manville in 1973.

To the southwest of the ultrabasic, the magnetic field is uniformly low except for two linear north-south striking magnetic highs which represent diabase dikes. To the northeast of the ultramafic there are also at least two more north-south striking diabase dikes. Other linear magnetic high anomalies in this area, with the same amplitude as the dikes, strike northwest and may represent ultramafic intrusives or flows. They may also be diabase dikes which have been diverted parallel to stratigraphy at a geological contact or fault zone.

EM anomalies 'D' and 'N' coincide with magnetic high anomalies which represent the ultrabasic. Both of these anomalies reflect poor conductivity.

HLEM RESULTS

The results of the HLEM survey are profiled on maps 1, 2 and 3 at a scale of 1:5000; the profile scale used is 1 cm = 20 % for all of the frequencies. The 444 Hertz results have also been compiled with the Macdiarmid 51 results and are presented in Figure 7 at a scale of 1:25,000.

There is a strong inversion of the quadrature component on most of the anomalies on the property which is due to very conductive overburden. The interpretation of the anomalies was taken from the lowest frequency, however, the inversion is still apparent in these results and the interpreted conductivity and depth are likely higher than the true values. Some of the conductors on the property are closely spaced which also makes an interpretation of the individual anomalies difficult.

The labelling of the anomalies has been kept consistent with the labels of anomalies to the northwest on the Macdiarmid 51 property.

Anomaly 'C' is a very high amplitude anomaly which is located between 765 South on Line 3000 East and 505 South on Line 3900 East. The quadrature component of the anomaly is inverted because of conductive overburden and the response is, no doubt, partially influenced by the response from conductor L, located directly to the north. The interpreted parameters suggest very good conductivity at a shallow depth (Table 2).

This anomaly was likely the target of Hole M-1 which was drilled by Asarco on Mistango River's ground in 1967. The hole intersected graphitic tuffs and felsic volcanics. It was also the target of Hole M41-1 which was drilled by Texasgulf in 1961; this hole also intersected a graphitic zone in felsic volcanics.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
3000 E	765 S	10	-33	-8	38	156	
3100 E	765 S	10	-29	-9	42	137	
3200 E	720 S	10	-27	-5	50	219	
3300 E	680 S	10	-36	-4	40	299	
3400 E	645 S	?	-22	?	?	?	
3500 E	590 S	?	-42	-4	30	312	
3600 E	?	?	?	?	?	?	
3700 E	535 S	?	-52	-12	<20	200	
3800 E	525 S	?	-52	-9	<20	239	
3900 E	505 S	10	-38	-13	24	119	

Table 2: Anomaly 'C' Interpretation, 444 Hz, 200 metre coil separation.

Anomaly 'D' is located between 525 South on Line 2700 East and 425 South on Line 3200 East. It is mainly a quadrature response and represents poor conductivity. This anomaly has a direct correlation with a linear high magnetic field which represents the ultrabasic body.

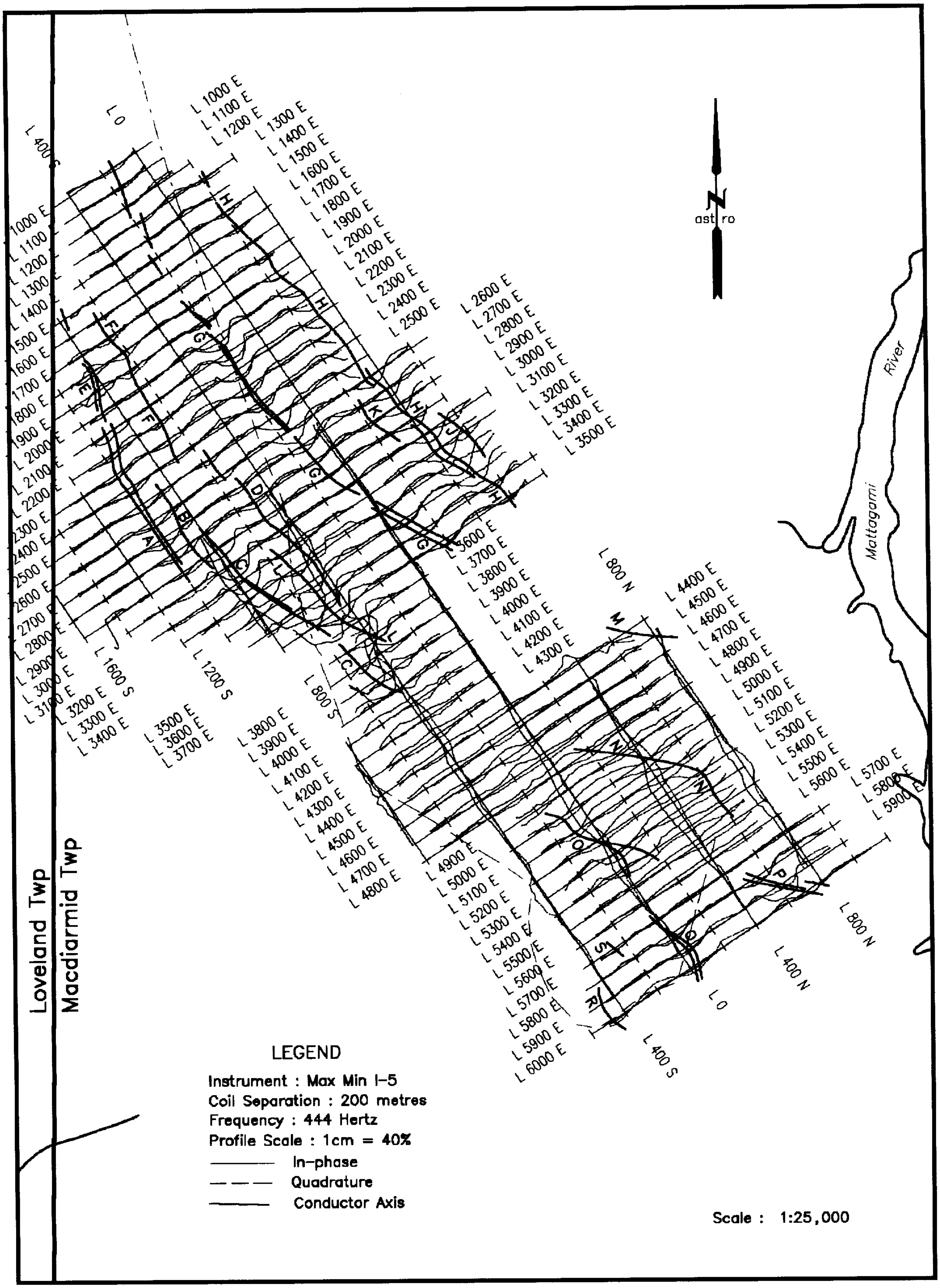

Figure 7 : HLEM Results, 444 Hertz, 200 metre coil separation, Macdiarmid 33/42/51

Anomaly 'G' strikes southeast from 144 South on Line 2700 East to 180 North on Line 3500 East. The source of the anomaly is good conductivity at a depth which ranges from 60 to 100 metres (Table 3). The large widths interpreted for this anomaly are likely due to multiple conductors rather than one broad zone.

This anomaly was the target of Hole M-3B which was drilled by Asarco on the Mistango River ground in 1967 and Hole MCD42-1 which was drilled by Falconbridge in 1988; both holes intersected graphitic tuffs. The anomaly continues to the northwest through the Macdiarmid 51 grid and was likely the target of two holes (NRK65-4 and NRK65-6) drilled by North Rankin in 1965. It was also the target of two holes drilled by Geophysical Engineering (P-1 and P1-4) to the southeast in 1979.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
2700 E	144 S	20	-17	-5	70	119	
2800 E	137 S	25	-7	-5	88	36	
2900 E	112 S	25	-7	-5	88	36	
3000 E	80 S	35	-6	-4	100	37	
3100 E	?	?	?	?	?	?	
3200 E	40 N	30	-8	-6	80	31	
3300 E	80 N	40	-13	-10	56	31	
3400 E	130 N	60	-10	-8	64	28	
3500 E	180 N	40	-13	-9	60	36	

Table 3: Anomaly 'G' Interpretation, 222 Hz, 200 metre coil separation.

Anomaly 'H' strikes southeast between 360 North on Line 2600 East and 580 North on Line 3500 East. The source of the anomaly is a narrow zone of very good conductivity at a depth which ranges from 40 metres on Lines 3100 and 3200 East to 80 metres at the southeast end of zone (Table 4). The greater width interpreted on Lines 3100 East to 3300 east is likely to multiple conductors where they occur en-echelon.

The width can not be determined on Lines 2700 to 2900 East because of interference from anomaly 'K' to the southwest.

Anomaly 'H' was the target of Hole MCD42-4, which was drilled by Falconbridge in 1988; it intersected a number of graphitic sedimentary units. This anomaly also continues to the northwest through the Macdiarmid 51 grid and was likely the target of two holes (NRK65-7 and NRK65-8) drilled by North Rankin in 1965.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
2600 E	360 N	?	-25	-7	50	154	
2700 E	370 N	?	-21	-5	60	185	
2800 E	385 N	?	-21	-4	62	219	
2900 E	405 N	?	-19	-8	56	97	
3000 E	425 N	narrow	-22	-6	56	165	
3100 E	450 N	50	-29	-7	46	156	
3200 E	460 N	40	-31	-7	44	199	
3300 E	490 N	20	-28	-4	52	273	
3400 E	560 N	narrow	-15	-6	70	100	
3500 E	580 N	narrow	-9	-5	86	51	

Table 4: Anomaly 'H' Interpretation, 222 Hz, 200 metre coil separation.

Anomaly 'J' is located approximately 125 metres to the north of anomaly 'H' on Line 3000 to 3200 East. It is a poorly defined, mainly quadrature response which is likely surficial.

Anomaly 'K' is located approximately 200 metres south of anomaly 'H' on Lines 2700 to 2900 East. The source of the anomaly is very good conductivity at a depth of approximately 100 metres (Table 5). The width and dip can not be determined because of interference from anomaly 'H'.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
2700 E	200 N	?	-10	-4	92	102	
2800 E	200 N	?	-11	-3	94	151	
2900 E	230 N	?	-9	-2	104	188	

Table 5: Anomaly 'K' Interpretation, 222 Hz, 200 metre coil separation.

Anomaly 'L' strikes southeast between 560 South on Line 3100 East to 375 South on Line 3700 East. It is a only a partial anomaly because of its location, on the north flank of the stronger response from conductor 'F'. The width and dip can not be determined since the south shoulder of the anomaly is not defined. The depth of the source is shallow on Line 3600 East and increases to the northwest and southeast. The conductivity is very good (Table 6).

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
3100 E	560 S	?	-8	-6	80	34	
3200 E	525 S	?	-15	-10	56	37	
3300 E	500 S	?	-20	-13	41	37	
3400 E	500 S	?	-19	-17	30	24	
3500 E	485 S	?	-12	-16	26	11	
3600 E	440 S	?	-20	-24	<20	14	
3700 E	375 S	?	-10	-11	48	17	

Table 6: Anomaly 'L' Interpretation, 444 Hz, 200 metre coil separation.

Anomaly 'M' strikes east southeast across the north end of Line 4400 East and west end of Tie Line 800 North. The source of the anomaly is good conductivity at a depth of 40 metres (Table 7). It is only partially defined on both lines and the dip and width of the conductor can not be determined. This anomaly may be the east extension of anomaly 'G'.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
4400 E	700 N	?	-2	-9	<20	1	
800 N	4500 E	?	-2	-8	<20	1	

Table 7: Anomaly 'M' Interpretation, 222 Hz, 200 metre coil separation.

Anomaly 'N' is located between 115 South on Line 4500 East and 580 North on Line 5400 East. It is mainly a quadrature response in the low frequency results and represents poor conductivity. There is an in-phase response on Lines 5100 to 5300 East, suggesting better conductivity which is difficult to calculate because of poorly defined background. It coincides with a linear, high magnetic anomaly which represents the ultrabasic body.

Anomaly 'O' also represents poor conductivity between 235 South on Line 4800 East and 150 North on Line 5400 East. This anomaly is located along the north flank of one of the ultrabasic bodies.

Anomaly 'P' strikes east-west between 537 North on Line 5800 East and 720 North on Line 6000 East. The source of the anomaly is a 25 metre wide zone of good conductivity at a depth which ranges from 50 metres to 70 metres (Table 8). The dip of the conductor is to the north.

This anomaly was likely the target of Hole M33-1 which was drilled by Texasgulf in 1961. The hole intersected a number of graphite zones with nodules and stringers of pyrite and pyrrhotite mineralization within felsic volcanics.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
5800 E	537 N	25	-11	-7	74	37	
5900 E	615 N	25	-25	-7	50	153	
6000 E	720 N	25	-6	-7	62	14	

Table 8: Anomaly 'P' Interpretation, 222 Hz, 200 metre coil separation.

Anomaly Q is located between 12 South on Line 5700 East and 37 North on Line 6000 East. The source of the anomaly is a 25 metre zone of poor to good conductivity (Table 9). The depth to the conductivity increases from less than 20 metres on Line 6000 East to 100 metres on Line 5700 East. The poor conductivity, shallow depth and the high quadrature response to the south on Line 6000 East suggest that the source of the anomaly on this line is surficial and may not be part of the same anomaly on Lines 5700 to 5900 East.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
5700 E	12 S	25	-4	-3	100	28	
5800 E	12 N	25	-12	-9	60	34	
5900 E	50 N	25	-4	-6	50	9	
6000 E	37 N	25	-1	-6	<20	3	

Table 9: Anomaly 'Q' Interpretation, 222 Hz, 200 metre coil separation.

Anomaly 'R' is a partially defined response at the south end of Lines 5900 and 6000 East. The in-phase/quadrature ratio suggests that the source is poor conductivity. It is located on the south flank of a bedrock high and likely represents a surficial conductor.

Anomaly S is a one line anomaly which is centered at 262 South on Line 5700 East. The source of the anomaly is a 25 metre wide zone of fair conductivity at a depth of 64 metres (Table 10). The dip can not be determined because the south shoulder is not defined.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
5700 E	262 S	25	-4	-5	64	9	

Table 10: Anomaly 'S' Interpretation, 222 Hz, 200 metre coil separation.

July 29, 2000
Date

D. Landry
Timmins Geophysics Limited

REFERENCES

Ayer, J.A. and Trowell, N.F.
1998: Geological Compilation of the Timmins Area, Abitibi Greenstone Belt; Ontario Geological Survey, Preliminary **Map P.3379**, scale 1:100,000.

Middleton, R.S.
1974: Magnetic Survey of Loveland and Macdiarmid Townships, District of Cochrane; Ontario Division of Mines, GPR2, 26 p. Accompanied by **Map 2288**, scale 1 inch to ½ mile.

Ontario Geological Survey
1988: Airborne Electromagnetic and Total Intensity Survey, Timmins Area, Macdiarmid Township, Districts of Cochrane and Timiskaming Ontario; by Geoterrex Limited, for Ontario Geological Survey. Geophysical/Geochemical Series **Map 81061.** Scale 1:20,000. Survey and compilation from March 1987 to October 1987.

Pyke, D.R., Ayres, L.D. and Innes, D.
1973: Timmins-Kirkland Lake Sheet; Ontario Division of Mines, Geological Compilation Series, **Map 2205**, scale 1" = 4 miles.

APPENDIX A

CLAIM #	# of UNITS	RECORDING DATE	RECORDED HOLDER	TOWNSHIP
995399	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995400	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995401	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995402	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995403	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995404	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995447	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995448	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995449	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995450	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995451	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995452	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995453	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995455	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995456	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995457	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995458	1	May 21, 1987	Falconbridge Limited	Macdiarmid
995459	1	May 21, 1987	Falconbridge Limited	Macdiarmid
996042	1	May 21, 1987	Falconbridge Limited	Macdiarmid
996049	1	May 21, 1987	Falconbridge Limited	Macdiarmid
1211709	1	June 7, 1999	Falconbridge Limited	Macdiarmid
1211714	1	June 7, 1999	Falconbridge Limited	Macdiarmid
1211715	1	June 7, 1999	Falconbridge Limited	Macdiarmid
1211716	1	June 7, 1999	Falconbridge Limited	Macdiarmid
1211718	3	June 7, 1999	Falconbridge Limited	Macdiarmid
1211719	1	June 7, 1999	Falconbridge Limited	Macdiarmid
1211720	2	June 7, 1999	Falconbridge Limited	Macdiarmid
1211721	4	May 29, 1998	Falconbridge Limited	Macdiarmid
1211723	3	June 7, 1999	Falconbridge Limited	Macdiarmid
1211724	3	May 29, 1998	Falconbridge Limited	Macdiarmid
1211727	2	June 7, 1999	Falconbridge Limited	Macdiarmid
1211728	1	May 29, 1998	Falconbridge Limited	Macdiarmid

CLAIM #	# of UNITS	RECORDING DATE	RECORDED HOLDER	TOWNSHIP
1211729	1	June 7, 1999	Falconbridge Limited	Macdiarmid
1211734	1	June 7, 1999	Falconbridge Limited	Macdiarmid
1211738	2	June 7, 1999	Falconbridge Limited	Macdiarmid
1211740	1	June 7, 1999	Falconbridge Limited	Macdiarmid
1211744	6	July 23, 1998	Falconbridge Limited	Macdiarmid
1211746	2	June 7, 1999	Falconbridge Limited	Macdiarmid
1211747	2	June 7, 1999	Falconbridge Limited	Macdiarmid
1211748	2	June 7, 1999	Falconbridge Limited	Macdiarmid
1211749	4	June 7, 1999	Falconbridge Limited	Macdiarmid
1211750	2	June 7, 1999	Falconbridge Limited	Macdiarmid
1212996	3	July 29, 1998	Falconbridge Limited	Macdiarmid

Table 1 : Property Description

2.21032

HOLE NUMBER: MCD32-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 03/31/2001
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: KIDD/HBED/EAL JV
PROJECT NUMBER: 435
CLAIM NUMBER: P1211744, Target 608a
LOCATION: MacDiarmid 33

PLOTTING COORDS GRID: UTM
NORTH: 5389490.00N
EAST: 458950.00E
ELEV: 290.00

ALTERNATE COORDS GRID: 99MCD33
NORTH: 1+25S
EAST: 57+ 0E
ELEV: 0.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 251.00M
START DEPTH: 0.00M
FINAL DEPTH: 251.00M

COLLAR ASTRONOMIC AZIMUTH: 237° 0' 0"
GRID ASTRONOMIC AZIMUTH: 57° 0' 0"

DATE STARTED: 11/22/1999
DATE COMPLETED: 11/25/1999
DATE LOGGED: 12/08/1999

COLLAR SURVEY: YES
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: Bradley Bros.
CASING: 76m NW Pulled
CORE STORAGE: Minesite
UTM COORD.:

COMMENTS : Hole drilled to test SpectrEM target 608a - Intersected two conductive graphite horizons
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
86.00	244° 0' 0"	-47°30' 0"	S	OK		-	-	-	-	-	
172.00	245° 0' 0"	-47° 0' 0"	S	OK		-	-	-	-	-	
188.00	244° 0' 0"	-46°30' 0"	S	OK		-	-	-	-	-	
239.00	246° 0' 0"	-46°30' 0"	S	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
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020

Greg Collins
Mar 31, 2001

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 76.30	«┤ob├»					-76m of NW and NQ casing pulled from hole.
76.30 TO 83.30	«2,e,bx»	INSITU BRECCIATED AMYGDULAR MAFIC VOLCANICS -Dark green, fine grained massive to insitu brecciated mafic volcanics. -Mafics host 1-2% qtz/carbonate filled amygdules. -Unit is moderately fractured. Ground water leaching along fracture appears to have leached out carbonate material and has deposited minor amounts of hematite along fracture surfaces. -Fractures are commonly sub-parallel to a weakly defined foliation cleavage defined by chloritic partings, 45 to 50 deg TCA, and produce blocky core. -Insitu brecciation texture is highlighted by minor fracture controlled carbonaceous alteration. -Downhole contact is leached and broken, but appears to be parallel to schistocity, 48 deg TCA.		-Minor fracture controlled qtz/carbonate alteration. -Minor fracture controlled carbonaceous alteration. Carbonacoeus alteration appears to increase towards lower contact.	-No sulphides observed	-Magnetic susceptibility ranges between 0.01 and 0.02.
83.30 TO 83.85	«5,a,g»	GRAPHITIC ARGILLITE -Dark grey to black finely laminated mudstone and graphitic argillite. -Laminations are mm scale, oriented parallel to the cleavage foliation, 48 deg TCA -Unit is leached and broken. Ground water controlled hematite is observed along fracture surfaces. -Minor qtz/carbonate veining within what resembles a healed gouge observed near uphole contact. -Downhole contact is sharp, but broken, 70 deg TCA.		-Minor fracture controlled qtz/carbonate veining.	-No sulphides observed.	-Interval is weakly conductive. Appears to be a poor conductor.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
83.85 TO 93.05	«7,a»	FINE GRAINED DIORITE -Light green, fine to medium grained diorite. Unit appears to be finer grained near the upper and lower contact, suggesting chilling against the previous and following units. -Unit is massive and testure, overprinted by minor fracture controlled qtz/albite veining. -Downhole contact is indistinct, marked by a fining in grain size and the re-appearance of volcaniclastic textures related to the following unit.		-Minor fracture controlled qtz/albite veining.	-No sulphides observed.	-Magnetic susceptibility ranges from 0.1 to 0.4
93.05 TO 110.60	«2,e,bx»	INSITU BRECCIATED AMYGDULAR MAFIC VOLCANICS -Fine grain dark green massive to brecciated mafic volcanics. Unit hosts 1 to 2% qtz/carbonate filled amygdules. -Massive sections are interspaced by insitu brecciated intervals that locally develop into hyaloclastitic textures. -Unit is overprinted by weak, hairline fracturing infilled by minor qtz/carbonate alteration. -Downhole contact is sharp, 38 deg TCA.		-Minor fracture controlled qtz/carbonate and carbonaceous alteration.	-Trace disseminated Py/Po	
110.60 TO 113.30	«7,a»	FINE GRAINED DIORITE -Light green fine grain diorite. Unit is identical in appearance to diorite observed uphole. -Diorite is massive in texture, and is observed to be finer grained near the uphole and donhole contacts. -Downhole contact is sharp, 45 deg TCA.		-Trace fracture controlled qtz/carbonate alteration.	-No sulphides observed.	-Magnetic susceptiblities are identical to mafic volcanics, ranging between 0.1 and 0.3.
113.30 TO 162.40	«2,e,bx»	IN SITU BRECCIATED AMYDULAR MAFIC VOLCANICS -Dark green, fine grained massive to in situ brecciated mafic volcanics. Unit hosts 1 to 2% qtz/carbonate filled amygdules. Amygdules do not display any specific zoning.		-Fracture controlled qtz/carbonate veining renders unit moderately pervasively carbonatized. -Qtz/carbonate/albite veinlets greater than 10cm in diameter observed between	-Trace disseminated Py/Po observed throughout unit. -Disseminated Py becomes 0.5 to 1% abundant approaching the dowwnhole contact. Minor amounts of rusty red	-Unit interpreted to be thick flow/flows -Magnetic susceptibility comparable to previous units.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-Unit is similar in appearance to mafics observed uphole. -Wispy subparallel hairline fractures appear to define flow shear laminatons -Downhole from 138.5m, unit becomes increasingly fractured, infilled by abundant hairline thick qtz/carbonate veinlets. -Unit is relatively massive, and non-foliated. Intervals of broken and blocky core observed between 134.5 and 135.5m, and 142.3 and 143.0m. -Downhole contact is sharp, 50 deg TCA.		124.0 and 124.1m, and 125.4 and 125.5m. -Weak pervasive carbonaceous alteration increases towards lower contact.	coloured Sph observed 1cm from lower contact.	
162.40 TO 169.60	«5,a,g»	CONDUCTIVE GRAPHITIC ARGILLITE -Dark grey to black, finely laminated graphitic argillite, mudsone, and greywacke. Argillite hosts 2-3% fracture controlled, nodular and earthy disseminated Py. -Argillite is finely laminated, exhibiting a strong slatey cleavage, parallel to bedding, 50 deg TCA. -Graphitic intervals are moderately to strongly conductive, occupying 60% of unit. Graphitic sections are interspaced by crudely bedded muddy to silty greywacke. -Load structures observed at greywacke/argillite contact at 166.3m indicates a downhole facing direction. No other clear facing indicators were observed. -Downhole contact is sharp but irregular, roughly 70 deg TCA.		-Fracture controlled qtz/carbonate veining occupies 2-4% of unit. -Greywacke sections appear to be overprinted by strong pervasive carbonaceous alteration.	-Minor fracture controlled Po, and nodular, and brassy/earthy fine disseminated Py. -Unit hosts 2-3% pyritic sulphides. No base metal sulphides observed.	-Interval is moderately to strongly conductive.
169.60 TO 200.45	«2,p,e,n»	VARIOLITIC MAFIC VOLCANICS -Dark green, fine grained massive to pillowed variolitic mafic volcanic flows. Mafics host 1 to 2% disseminated qtz/carbonate filled amygdules. -Pillows are poorly defined. Locally, vague		-Minor fracture controlled qtz/carbonate alteration. -Strong pervasive carbonaceous alteration is developed around the uphole contact between 169.6 to 170.5m, and in patches near the lower	-Trace, fine disseminated Po observed near the downhole contact, between 197.3 and 200.45m.	-Magnetic susceptibilities of 0.1 and 0.2 observed.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		swelvage features area observed. Massive intervals are interspaced by variolitic patches, and by minor amounts of hyaloclastitic material. -Between 195.0 and 198.0m, flow shear laminations are observed. -Intervals of blockey, broken core noted between 174.9 and 175.2m, 176.5 and 176.8m, 181.4 and 181.6m, and 182.4 and 183.5m. -Downhole contact is sharp, 20 deg TCA.		contact between 97.3 and 98.1m.		
200.45 TO 217.20	«5,a,g»	GRAPHITIC ARGILLITE AND SILICEOUS MUDSTONE -Dark grey to black, finely laminated graphitic argillite interspaced by minor ammounts of fine grained siliceous mudstone and argillite. -Unit hosts 3 to 5% fracture controlled, nodular and disseminated Po and Py. -Unit exhibits a stronlgy developed slatey cleavage ranging from 25 to 30 deg TCA throughout unit. Between 201.2 and 201.5m, a small parasitic fold closure is observed. -Very siliceous, finely laminated beds of cherty mudstone observed between 210.7 and 211.1m, 212.5 and 213.6m, and 214.8 and 216.8m. -Badly broken core, and minor gouge observed on slip surfaces between 203.8 and 204.2m. -Downhole contact is marked by broken, leached core and a 40cm qtz/albite vein hosting minor Py/Po.		-Minor fracture controlled qtz/carbonate veining.	-Unit hosts 3 to 5% fracture controlled, nodular and fine disseminated Py/Po. -Nodules of Po, rimmed with coarser grained Py are 1-2% abundant between 200.45 and 203.0m. -Between 211.1 and 212.5, graphite host bands of finely disseminated sulphide (earthy Py/Sph?) occupy 5-10% of interval.	-Unit marked by multiple intervals of moderately to strongly conductive material.
217.20 TO 224.60	«3,4,a,t»	FINELY LAMINATED FELSIC TO INTERMEDIATE TUFFS -Light grey to green, finely laminated felsic to intermediate tuffs. Cherty, light grey tuffaceous material is interbedded with lighter green beds. -Unit is extremely fine grained, none of the tuffaceous material would be coarser than fine silt.		-Minor fracture controlled qtz/carbonate veining.	-Trace fracture controlled and patchy Po mineralization. -Faint Sph staining observed in interval of felsic tuff at 221.6m.	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-Thin hairline intercalations of carbonaceous material observed. -Bedding is parallel to a weakly developed slatey cleavage surface ranging from 25 to 30 deg TCA. -Downhole contact is irregular and discordant to bedding laminations, 45 deg TCA.				
224.60 TO 229.50	«3,C,f»	HETEROLITHIC DEBRIS FLOW -Base of unit composed of relatively monolithic, mafic lapilli to framework supported agglomeritic material. -Downhole from 226.2m, unit becomes increasingly heterolithic hosting up to 30% lapilli sized qtz/phyric felsic clasts, and abundant feldspar phenocrysts. -Between 226.2 and 229.5 a breakdown of the clast population and size range is as follows: Type / Size Range / Abundance Mafic Volcanic / 0.2 to 3cm / 55% Felsic Volcanic / 0.1 to 2cm / 30% Feldspar Pheno / 1 to 2mm / 15% Rare Po Frags / 0.5 to 1cm / <1% -Unit exhibits a weak foliation defined by flattened fragments, 45 deg TCA. -Downhole contact is sharp, 30 deg TCA, marked by minor qtz/carbonate veining.		-Regional greenschist metamorphism.	-Rare Po bearing fragments (possibly replaced argillite fragments) and minor fracture controlled Po observed.	-Unit similar in appearance to heterolithic fragmental observed in MCD41-01.
229.50 TO 251.00	«7,a,m»	FINE TO MEDIUM GRAINED DIORITE -Fine to medium grained dark green, leucoxene bearing diorite. -Unit hosts 0.5 to 1% fine disseminated leucoxene grains. -Diorite is massive and non foliated, locally developing weakly defined ophitic textures. -Weak fracturing is accompanied by minor fracture controlled qtz/carbonate veining and gash filling chlorite.		-Minor fracture controlled qtz/carbonate veining. -Minor gash fillin chlorite observed.	-No sulphides observed.	-Magnetic susceptibility of unit ranges between 0.5 and 0.6

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-Thin intervals of aphanitic material interpreted to be mafic dykelets noted between 236.0 and 236.2m, 239.9 and 240.1m, 243.7 and 244.1m, and 244.4 and 244.7m.				
251.00 TO 251.00	«EOH»					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S ppm	Se ppm	As ppm	Hg ppb	Sb ppm
KA03953	83.30	83.85	0.55	51	28	15	14.0	0	0									
KA03954	161.00	162.50	1.50	28	36	1	44.0	3	0									
KA03955	162.50	164.00	1.50	76	486	12	50.0	3	0									
KA03956	164.00	165.50	1.50	72	172	9	44.0	0	0									
KA03957	165.50	167.00	1.50	84	320	19	104.0	0	0									
KA03958	167.00	168.50	1.50	43	138	11	27.0	0	0									
KA03959	168.50	170.00	1.50	58	228	5	58.0	0	0									
KA03960	200.45	201.50	1.05	77	1110	30	171.0	3	0									
KA03961	201.50	203.00	1.50	49	107	4	12.0	0	0									
KA03962	203.00	204.50	1.50	65	412	11	77.0	10	0									
KA03963	204.50	206.00	1.50	54	406	16	76.0	0	0									
KA03964	206.00	207.50	1.50	45	212	16	33.0	10	0									
KA03965	207.50	209.00	1.50	60	162	5	23.0	3	0									
KA03966	209.00	210.50	1.50	58	217	10	35.0	10	0									
KA03967	210.50	212.00	1.50	50	250	14	49.0	0	0									
KA03968	212.00	213.50	1.50	38	320	13	60.0	10	0									
KA03969	213.50	215.00	1.50	80	396	19	86.0	3	0									
KA03970	215.00	216.50	1.50	20	92	1	26.0	0	0									
KA03971	216.50	217.30	0.80	21	64	7	32.0	17	0									

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
KA03909	77.00	80.00	3.00	64.71	14.90	3.18	2.62	4.06	1.19	5.54	0.60	0.17	0.18		2.33	99.48	20	140					35	190	30	165	2,e,bx	3(j)	177
KA03910	89.00	92.00	3.00	50.45	15.05	9.07	5.44	2.53	0.45	11.10	1.41	0.20	0.19		3.68	99.57	15	110					65	120	60	190	7,a,m	7jw	125
KA03911	104.00	107.00	3.00	48.11	15.66	9.77	7.51	1.65	1.73	10.58	0.78	0.10	0.18		3.65	99.72	10	50					80	85	130	180	2,e,bx	2(j)u	119
KA03912	137.00	140.00	3.00	54.82	15.20	8.38	5.85	2.43	0.81	8.79	0.78	0.11	0.15		2.52	99.84	15	80					70	60	110	220	2,e,bx	2(j)w	131
KA03913	158.00	161.00	3.00	62.91	15.04	4.38	1.76	4.12	2.00	4.57	0.62	0.16	0.14		3.91	99.61	15	140					20	85	25	165	2,bx	3j	143
KA03914	173.00	176.00	3.00	61.70	15.36	4.67	3.11	3.47	0.85	7.02	0.67	0.19	0.10		2.55	99.69	20	160					20	95	25	145	2,p,e,n	3j	171
KA03915	197.00	200.00	3.00	62.92	15.25	4.77	1.89	4.59	1.07	5.01	0.60	0.17	0.13		3.34	99.74	15	140					60	50	25	175	2,m,e	3j	146
KA03916	215.60	215.70	0.10	81.77	8.75	1.12	0.31	2.84	1.42	2.11	0.16	0.06	0.04		0.96	99.54	20	200					5	40	10	600	5,a,Si	5	163
KA03917	220.25	220.50	0.25	70.61	13.83	1.51	0.67	5.13	1.20	4.68	0.32	0.08	0.10		1.49	99.62	40	340					15	70	<5	100	3,a,t	4jB	176
KA03918	221.35	221.70	0.35	79.48	9.51	1.29	0.29	2.60	1.68	2.92	0.30	0.10	0.03		1.54	99.74	20	200					25	85	5	250	4,a,t	4jB	171
KA03919	227.00	228.50	1.50	61.85	14.41	2.94	3.22	3.57	0.56	9.34	0.82	0.22	0.17		2.58	99.68	25	200					180	195	10	120	3,C,f	3j	204
KA03920	248.00	251.00	3.00	48.33	15.50	8.88	7.12	2.31	0.52	12.50	1.36	0.22	0.17		2.88	99.79	15	90					55	80	95	210	7,a,m	7(j)u	132

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
KA03909	77.00	80.00	3.00			20		0.02	80																				
KA03910	89.00	92.00	3.00			35		0.01	185																				
KA03911	104.00	107.00	3.00			40		0.03	180																				
KA03912	137.00	140.00	3.00			35		0.03	155																				
KA03913	158.00	161.00	3.00			15		1.50	75																				
KA03914	173.00	176.00	3.00			15		0.12	80																				
KA03915	197.00	200.00	3.00			15		1.13	75																				
KA03916	215.60	215.70	0.10			<5		0.38	5																				
KA03917	220.25	220.50	0.25			<5		0.19	5																				
KA03918	221.35	221.70	0.35			<5		0.75	10																				
KA03919	227.00	228.50	1.50			15		0.68	60																				
KA03920	248.00	251.00	3.00			40		0.16	200																				

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	HG PPB	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
KA03909	77.00	80.00	3.00											5						10			<10		0.53	0.21	11	34	47
KA03910	89.00	92.00	3.00											10						20			10		0.54	0.60	11	34	47
KA03911	104.00	107.00	3.00											5						25			<10		0.63	0.62	17	45	52
KA03912	137.00	140.00	3.00											5						20			<10		0.61	0.55	19	38	25
KA03913	158.00	161.00	3.00											5						10			<10		0.48	0.29	14	31	21
KA03914	173.00	176.00	3.00											5						10			<10		0.51	0.30	8	33	27
KA03915	197.00	200.00	3.00											5						10			<10		0.47	0.31	13	24	11
KA03916	215.60	215.70	0.10											<5						5			<10		0.26	0.13	32	30	14
KA03917	220.25	220.50	0.25											5						5			<10		0.25	0.11	7	22	14
KA03918	221.35	221.70	0.35											<5						5			<10		0.19	0.14	17	34	33
KA03919	227.00	228.50	1.50											5						10			<10		0.45	0.20	3	37	55
KA03920	248.00	251.00	3.00											5						25			10		0.58	0.57	13	41	35

2.21032

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 03/31/2001
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: KIDD/HBED/EAL JV
PROJECT NUMBER: 8036
CLAIM NUMBER:
LOCATION: Macdiarmid TWP.

PLOTTING COORDS GRID: UTM Zone 17
NORTH: 5390220.00mN
EAST: 459180.00mE
ELEV: 290.00

ALTERNATE COORDS GRID: 99MCD33
NORTH: 4+75N
EAST: 52+ 0E
ELEV: 220.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 251.00M
START DEPTH: 0.00M
FINAL DEPTH: 251.00M

COLLAR ASTRONOMIC AZIMUTH: 57° 0' 0"
GRID ASTRONOMIC AZIMUTH: 57° 0' 0"

DATE STARTED: 11/18/1999
DATE COMPLETED: 11/21/1999
DATE LOGGED: 11/30/1999

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: YES
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: Bradley's
CASING: NW
CORE STORAGE: Mine
UTM COORD.:

COMMENTS : Testing SpectrEm target 603. Caused by magnetite veinlets in ultramafic intrusive.
WEDGES AT: none

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
59.00	91° 0' 0"	-62° 0' 0"	S		Affected by magnetism in rx	-	-	-	-	-	
119.00	57°30' 0"	-62° 0' 0"	S	OK		-	-	-	-	-	
179.00	67° 0' 0"	-62°45' 0"	S		Affected by magnetic rx	-	-	-	-	-	
251.00	53°30' 0"	-63° 0' 0"	S	OK		-	-	-	-	-	
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030

LOGGED BY: V.Peckham/G.Collins

Greg Coll[illegible]
Mar 31, 2001

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 49.00	«⊣ob⊢»	OVERBURDEN - NW casing in hole. - capped				
49.00 TO 215.25	«6,c,Sr,Tk»	ULTRAMAFIC INTRUSIVE: DUNITE Dark green-brown, coarse-grained, massive, serpentinite-talc altered dunite. - rounded, 0.2 - 0.5cm, green-brown recrystallized, serpentinized, and partially talc altered olivine grains (92%). - rare (5%) euhedral olivine crystals up to 0.5 x 1.25cm. Euhedral grains become 30% abundant below 150.0m and grain size increases to 0.4 to 0.7cm. Magnetic susceptability, and talc alteration becomes stronger here as well. - on a broken surface, the rock is a massive green/black, recrystallized-altered, fine-grained mass- no grains visible. - 1.5% interstitial "wispy" magnetite grains and needles that envelop and define the olivine in an otherwise massive green-brown dunite. - a moderate S1 foliation is devoloped at 70 to 85°TCA. Foliation surfaces are lined with 0.2cm talc and chrysotile. - notable absense of any type of sulfide. - throughout the unit there are 0.3 to 10cm zones of silica (?) flooding where the original rock is bleached to a white-blue color and hardness increases slightly. - These silica zones occur at: 133.26, 133.90, 145.50, 172.18, 192.35, 195.58, 196.10 and 214.75m. They cut the core at 50° to 85°TCA with sharp planar contacts. Typically these zones contain complete or partial replacement of original textures. Occasionally relict olivine grains are observed. VEINS: Veins of banded magnetite +/- lizardite occur throughout the entire hole. 49.0 - 74.5m: - 40 magnetite veinlets/veins (one 0.3cm veinlet every 0.63m).		SrPM: (49.00 - 186.00): - moderate, pervasive, serpentinizaton of olivine. - olivine grains are green-brown due to alteration often with cores altering to green/clear talc. SrPW: (186.00 - 215.25m): - trace to weak, pervasive serpentinization. - olivine grains are mostly brown and unaltered. TkPM: (49.00 - 206.0m): - moderate, pervasive talc alteration. Core is very slick and difficult to pick-up. TkPW: (206.0m - 215.0m): - weak, pervasive talc alteration. TkFW: (49.0 - 150.0m): -Talc/chrysotile alteration in micro-fractures (between olivine grains) fills 0.1cm wide gaps or foliation (S1) surfaces (?) @85°TCA and is weak except @ 56.96, 66.57, 74.58, 75.77, 76.34, 82.00, 89.59, 124.22, 126.43 - 130.00. Here there are 3 to 10cm intervals (except where noted) that have moderate to intense talc/clay alteration. Alteration is intense from 56.96 to 82.00m @ <5cm. TkFM: (150.0 - 206.0m):	- 3% magnetite throughout. - nil sulphides- depleted?	- mag. susceptability = 10.1 (at top of hole) increasing gradually to 15.6 units at 120m. - from 120m to 150m mag. sus. varies from 16.8 to 22.4 units. - from 150.0m to 215.25m, in intense talc altered zone, susceptability is generally 35-48 units with sections from 15 to 20 units occassionally.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- larger veins, 0.5 to 2cm, contain lizardite and minor talc as well @ 51.86, 56.25, 57.94, 59.05, 59.54, 61.16, 62.73, 66.57, 69.25, and 70.95. - 80% of veinlets/veins dip moderately (35-60°TCA). The remainder dip 10 - 80°TCA. 74.5 - 92.0m: - 29 magnetite +/- lizardite vein/veinlets (one 0.3cm veinlet every 0.18m). - larger veins, 0.5 to 3cm, contain lizardite and minor talc as well @ 76.34, 77.05, 77.60, 77.92, 81.28, 82.00, 88.81, and 89.66m. - 70% of veinlets/veins dip moderately (30 - 65°TCA). The remainder dip 15 - 75°TCA. 92.0 - 101.0m: - 12 magnetite veinlets (one 0.2-0.3cm veinlet every 0.75m). - 3 lizardite + magnetite veins at 95.50, 96.30, and 99.77m. - 50% of veinlets are shallow; 15 - 30°TCA; 50% are steep; 50 - 85°TCA. 101.0 - 113.0m: - 30 magnetite veinlets (one 0.2-0.5cm veinlet every 0.40m). - 75% contain lizardite + magnetite. - 90% of the veins are shallowly dipping; 10 - 35°TCA; the remainder are steeply dipping at 70°. 113.0 - 122.0m: - 18 magnetite + lizardite veins (one 0.3 - 0.6cm vein every 0.50m). - 60% of veins are steeply dipping (60 - 75°TCA); 20% are shallowly dipping (30 - 45°TCA). 122.0 - 134.0m: - 26 magnetite +/- lizardite +/- chrysotile veins (one 0.3 - 5cm veins every 0.46m). - veins are at various core angles. - interval is dominated by a 0°TCA vein from 126.60 to 130.00m with banded magnetite + lizardite. Adjacent wallrock is strongly talc-altered. - chrysotile in one vein at 124.22m, but doesn't		Talc/chrysotile alteration is moderate in micro-fractures (0.1 - 0.2cm wide) @60 to 90°TCA.		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		appear again until 154m. 134.0 - 215.25m: - 107 magnetite +/- lizardite +/- chrysotile veins/veinlets (one 0.3 - 1.5cm veins every 0.76m) - 85% of veins are moderate to steep (40 - 70° TCA). The remainder are shallow (20 - 35°TCA). - veins are wider in thiss interval. 60% of the veins are banded and <2cm wide, banded lizardite + magnetite + talc. - from 194.50 to 196.20m, there is a broken section of core with 3 or 4 thin chrysotile veins (0.5cm). Lower contact is sharp and irregular.				
215.25 TO 216.81	«9,a,Si or vein»	FELSIC INTRUSIVE: DYKE Fine-grained to aphanitic, light grey, felsite dyke or silica flooding along fractures (?). - 40% quartz; 50% plagioclase. - wallrock (dunite) appears to be partially digested or overprinted at 215.35m by silica. - @215.69m, lizardite+magnetite vein @35°TCA, 5cm wide, with rounded 0.75 X 2cm fragments of dunite in lizardite matrix with magnetite infills. - unidentified red, mineral at upper selvage @215.25m (0.2cm wide)- hematite?!? Lower contact is sharp and curved at ~55°TCA.		SiPW: - pervasive, weak, silicification.		- mag. sus.= 0.34 - 0.47 units.
216.81 TO 251.00	«6,c,Tk»	ULTRAMAFIC INTRUSIVE: DUNITE Chocolate brown, rounded, medium to coarse-grained dunite. - similiar to dunite above (49.00 - 215.25). - 98% olivine. - olivine grains are better preserved here due to only weak alteration. - grains are 0.2 to 0.5cm sq. and enveloped by thin veneers of magnetite. VEINS:		(SrPW): - minor, pervasive, serpentinization. (SrFW): - weak serpentine in veins and fractures. (TkFW): - weak, talc +/- chrysotile infilling minor fractures from 241 to 245m. (TkPW): - minor talc pervasive throughout-still easily scratched.	- nil	- mag. sus.= 22.3 to 288 units. With an average of 55 units.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- magnetite veining is moderate (54 veins over 35.75m- one vein every 0.66m) with veins and serpentine (lizardite) altered vein selvages up to 2cm wide. - veins are 0.5 to 3cm wide. - weak foliation (S1) from 241.60 to 245.20m, defined by thin talc linings on foliation surfaces. - there are 5 light grey "dykes/veinlets" of similiar composition to the "felsite dyke" @215.25-216.81m. Four are 2-6cm wide and 20 - 40°TCA. The 5th is @235.14m, and 18cm wide with contacts @55-60°TCA. - relict olivine crystals within the veins suggest "veins" are narrow zones of intense silica replacement. CRUSHED ROCK/MINOR GOUGE: - 226.90-227.20m: intense chrysotile infilling in serpentinized zone with 0.2cm fractures causing rock to be soft. - 234.46m-234.60m: moderate pervasive talc/chrysotile with contacts @50 to 55°TCA. - 232.16m: gouge consisting of talc, magnetite grains and serpentine to 232.21m - 246.05m: chrysotile vein with crushed serpentine.				
251.00 TO 251.00	«EOH»					

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT03697	50.00	53.00	3.00	33.46	0.57	0.06	41.38	0.01	0.04	6.45	0.02	0.01	0.09		17.16	99.25	<5	<10					<5	10	1215	3340	6,c,Sr,6M!		518
AT03698	80.00	83.00	3.00	33.67	0.49	0.14	41.47	0.01	0.07	6.57	0.02	0.01	0.10		16.72	99.27	<5	<10					<5	25	1325	2985	6,c,Sr,6M!		223
AT03699	110.00	113.00	3.00	34.11	0.73	0.26	41.46	0.02	0.04	6.38	0.03	<0.01	0.10		16.18	99.32	<5	<10					<5	<5	755	4080	6,c,Sr,6M!		228
AT03700	140.00	143.00	3.00	35.14	0.62	0.22	42.13	<0.01	<0.01	5.92	0.03	0.02	0.09		14.99	99.18	<5	<10					<5	10	1285	3655	6,c,Sr,6M!		258
KA03801	170.00	173.00	3.00	35.48	1.00	0.12	42.58	<0.01	0.05	5.86	0.04	0.01	0.10		14.24	99.49	<5	<10					<5	10	1365	3205	6,c,Sr,6M!		556
KA03802	200.00	203.00	3.00	35.13	0.65	0.09	42.36	<0.01	0.01	6.71	0.03	0.01	0.11		14.10	99.21	<5	<10					<5	15	1410	2465	6,c,Sr,6M!		591
KA03804	215.82	215.97	0.15	40.40	12.27	23.91	7.21	0.02	0.44	12.13	0.79	0.08	0.30		1.89	99.44	15	60					5	105	110	225	9,a,Si 7(h)u		50
KA03803	230.00	233.00	3.00	34.96	0.52	0.12	41.48	<0.01	<0.01	7.77	0.03	0.01	0.11		14.16	99.18	<5	<10					<5	20	1670	2770	6,c,Sr,6M!		371

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AT03697	50.00	53.00	3.00			65		<0.01	10																				
AT03698	80.00	83.00	3.00			65		<0.01	10																				
AT03699	110.00	113.00	3.00			60		<0.01	15																				
AT03700	140.00	143.00	3.00			65		<0.01	15																				
KA03801	170.00	173.00	3.00			70		<0.01	20																				
KA03802	200.00	203.00	3.00			65		<0.01	15																				
KA03804	215.82	215.97	0.15			40		0.04	170																				
KA03803	230.00	233.00	3.00			60		<0.01	20																				

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	HG PPB	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT03697	50.00	53.00	3.00											<5						5			<10		0.95	0.11	29	100	1000
AT03698	80.00	83.00	3.00											<5						5			<10		0.95	0.29	32	100	2500
AT03699	110.00	113.00	3.00											<5						5			<10		0.95	0.36	18	99	250
AT03700	140.00	143.00	3.00											<5						5			<10		0.95	0.35	31	99	1000
KA03801	170.00	173.00	3.00											<5						5			<10		0.95	0.12	32	100	1000
KA03802	200.00	203.00	3.00											<5						5			<10		0.95	0.14	33	100	1500
KA03804	215.82	215.97	0.15											5						25			10		0.59	1.95	15	24	5250
KA03803	230.00	233.00	3.00											<5						5			<10		0.93	0.23	40	100	2000

2.21032

HOLE NUMBER: MCD32-03

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 03/31/2001
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: KIDD/HBED/EAL JV
PROJECT NUMBER: 435
CLAIM NUMBER: P1211712, Target 603b
LOCATION: MacDiarmid 33

PLOTTING COORDS GRID: UTM
NORTH: 5389650.00N
EAST: 459580.00E
ELEV: 290.00

ALTERNATE COORDS GRID: 99MCD33
NORTH: 5+ 0N
EAST: 59+ 0E
ELEV: 0.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 231.00M
START DEPTH: 0.00M
FINAL DEPTH: 231.00M

COLLAR ASTRONOMIC AZIMUTH: 237° 0' 0"
GRID ASTRONOMIC AZIMUTH: 57° 0' 0"

DATE STARTED: 12/01/1999
DATE COMPLETED: 12/06/1999
DATE LOGGED: 12/07/1999

COLLAR SURVEY: YES
RQD LOG: NO
HOLE MAKES WATER: YES

PULSE EM SURVEY: YES
PLUGGED: YES
HOLE SIZE: BQ

CONTRACTOR: Bradley Bros.
CASING: 25m NQ Rods left in Hole
CORE STORAGE: Minesite
UTM COORD.:

COMMENTS : Hole drilled to test SpectrEM target 630b Failed to intersect conductive material
WEDGES AT:

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
35.00	247° 0' 0"	-48° 0' 0"	S	OK		-	-	-	-	-	
95.00	247° 0' 0"	-48° 0' 0"	S	OK		-	-	-	-	-	
155.00	249° 0' 0"	-48° 0' 0"	S	OK		-	-	-	-	-	
180.00	247° 0' 0"	-48° 0' 0"	S	OK		-	-	-	-	-	
205.00	250° 0' 0"	-48° 0' 0"	S	OK		-	-	-	-	-	
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42A12NE2031 2.21032 MACDIARMID

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Greg Collins
mar 31, 2001

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 25.30	«┤ob├»					26m casing left in hole. Casing re-set after hole caved with sand
25.30 TO 80.00	«2,a,m»	MASSIVE FINE GRAINED MAFIC VOLCANICS -Light green, fine grained massive mafic rocks. Mafics are massive and blocky in character. -Unclear to logger whether rocks are intrusive or extrusive in character. Fine grain size and rare chlorite filled amygdules support extrusive formation, juxtaposition of finer grained chilled looking intervals that appear to cross-cut mafics suggest the interval may contain dykes or sills. -A dominant, or consistant schistocity is not observed throughout interval. Erratically oriented jointing focussed on thin qtz/albite/chlorite veinlets is common. -Jointing produces intervals of blocky core with poor RQD's between 38.5 and 38.7m, 55.6 and 56.4m, 60.2 and 60.4m, 61.3 and 63.9m, 75.7 and 76.3m, 77.8 and 78.0m, and 79.2 and 81.8m. -Ground core accompanying minor qtz/carbonate veining between 69.2 and 69.4m may define a small fault. -Between 65.0 and 68.0m, cm scale parallel fractures oriented 30 deg TCA are observed. -Downhole contact is indistinct, marked by gradual darkening of core.		-Minor fracture controlled qtz/carbonate, and qtz/albite/epidote veining. -Viening is characterized by mm scale fractures focussed along erratically oriented joints. Veining occupies 1-2% of rock. -Veinlets greater than 10cm in diameter noted between 33.0 and 33.1m, and 69.1 and 69.2m.	-Unit essentially devoid of sulphides. -Rhochrosite? observed on fracture surface at 64.6m.	-Magnetic susceptibility ranges from 0.2 to 0.3
80.00 TO 132.40	«2,a,m,*s»	MASSIVE HORNFELSED FINE GRAINED MAFIC VOLCANICS -Darker green to grey coloured fine grained mafic volcanics. -Unit is much harder than previous unit. Dark colour may be attributable to abundant fine grained hornblend. Fracture and joint controlled to pervasive epidote and potassic alteration render abundant throughout unit.		-Darker colour observed throughout unit appears to be the product of pervasive chlorite/epidote alteration and hornblend. -Unit crosscut by numerous erratically oriented qtz/carbonate-albite epididote vienlets. Vienlets control weak to moderately strong pervasive epidotization and potasic alteration.	-Minor disseminated Py observed between 81.5 and 83.0m, and 102.9 and 104.4m. ╣81.5-83.0╠ «1-2% DPY» ╣102.9-104.4╠ «1-2%DPY»	-Unit retains same magnetic susceptibility as previous interval. -No conductive material observed.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-Rare cm scale albite/epidote filled amygdules observed throughout interval. -Numerous eratically oriented joints produce blocky core throughout intervals. Rock is massive and non-foliated. -Interval of badly broken core observed between 81.9 and 82.5m. Fracture sets occurring on the 10-30cm scale observed throughout remainder of nterval. -Weakly magnetic aphanitic black dykes observed between 108.45 and 109.4, and 111.9 and 112.6m -Dykes have similar magnetic susceptibility to following unit. -Downhole contact is marked by badly broken core.		-Qtz/carbonate/albite veinlets controlling potassic alteration greater than 10 cm in diameter observed between 116.5 and 117.0m, and 130.65m.		
132.40 TO 231.00	«6,m,*J»	PYROXENITIC GABBRO -Dark grey fine to medium grained pyroxenitic gabbro observed to host phlogopite/biotite. -Unit is massive in texture overprinted by weak fracturing accompanied by minor chlorite serpentinite veining. -A breakdown of mineralogy of the intrusive is as follows: Plagioclase - 25% Albite - 10% Pyroxene - 50% Phlogopite - 13% Magnetite - 1% Unidentified - 1% -Unit is fairly homogenous in composition. -Near the uphole contact, a fining in grain size is observed, suggesting a chill zone is developed over several meters. -Unit becomes coarser grained towards end of hole. -Talc/Serpentine filled fractures are observed throughout unit, occupying 1 to 2% of core. Fracture surfaces commonly erratically oriented slickensides suggesting minor slip across most		-Minor fracture controlled talc/serpentine alteration.	-Trace disseminated Py.	-Unit is similar in appearance to pyroxenitic gabbro mapped in outrcops located in northwestwern portion of the property, however phlogopite/biotite was not identified to the north west. -Magnetic susceptibility rangews from 1.5 to 3.5 throughout unit. -Unit apears to have "dyked out" conductor.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		fracture surfaces. Fracturing produces blocky core. -Intervals with very blocky core observed between 132.4 and 134.0m, 136.7 and 137.0m, 138.2 and 138.4m, 142.0 and 143.0m, 154.1 and 156.0m, 170.0 and 173.5m, 189.5 and 194.0m, 214.8 and 216.0m, and 224.0 and 226.5m. -A 20cm thick seam of talcose fault gouge observed between 214.9 and 215.1m. ╣214.9-215.1╠ «┤FAI├» -A block of dark grey aphantic material hosting 1-2% disseminated Py is observed between 227.1 and 228.3m. Material resembles hornfelsed mafic volcanics/intrusives observed uphole.				
231.00 TO 231.00	«EOH»					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S ppm	Se ppm	As ppm	Hg ppb	Sb ppm
KA03951	81.50	83.00	1.50	69	37	1	74.0	7	0									
KA03952	102.90	104.40	1.50	160	35	1	77.0	0	0									

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
KA03901	26.00	29.00	3.00	55.60	15.74	6.11	4.81	3.65	1.28	9.05	0.81	0.13	0.17		2.39	99.74	10	110					105	140	70	170	2,a,m	3j	143
KA03902	53.00	56.00	3.00	55.01	15.80	6.12	5.07	3.23	1.23	9.38	0.80	0.13	0.14		2.94	99.85	10	110					65	95	70	160	2,a,m	3j	149
KA03903	83.00	86.00	3.00	54.33	15.86	4.72	6.22	2.62	2.51	9.22	0.87	0.13	0.09		2.92	99.49	10	110					145	35	90	190	2,a,m,	*2jw	161
KA03904	98.00	101.00	3.00	55.27	16.11	3.99	6.33	3.12	2.67	8.66	0.94	0.15	0.12		2.12	99.48	15	120					55	55	65	135	2,m,*s	2jw	165
KA03905	128.00	131.00	3.00	54.27	14.68	7.58	4.37	4.30	2.91	8.28	0.88	0.14	0.15		2.01	99.57	10	110					75	55	65	110	2,a,m	3j	99
KA03906	140.00	143.00	3.00	50.79	9.89	7.62	16.17	1.26	0.66	10.82	0.52	0.10	0.18		1.24	99.25	10	60					85	70	390	2355	7,6,m,	J6H	104
KA03907	185.00	188.00	3.00	50.49	8.97	7.13	18.07	1.15	0.51	11.47	0.52	0.08	0.19		0.88	99.46	10	60					125	50	475	2805	6,m,J	6J	102
KA03908	221.00	224.00	3.00	50.46	9.30	7.23	17.48	1.15	0.62	10.92	0.52	0.09	0.19		1.33	99.29	10	60					80	80	470	2705	6,m,J	6H	103

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
KA03901	26.00	29.00	3.00			30		0.02	135																				
KA03902	53.00	56.00	3.00			30		<0.01	135																				
KA03903	83.00	86.00	3.00			35		0.02	155																				
KA03904	98.00	101.00	3.00			30		<0.01	160																				
KA03905	128.00	131.00	3.00			25		<0.01	140																				
KA03906	140.00	143.00	3.00			50		<0.01	150																				
KA03907	185.00	188.00	3.00			60		<0.01	150																				
KA03908	221.00	224.00	3.00			55		<0.01	150																				

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	HG PPB	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
KA03901	26.00	29.00	3.00											5						20			10		0.56	0.39	15	38	38
KA03902	53.00	56.00	3.00											5						20			<10		0.56	0.39	14	40	29
KA03903	83.00	86.00	3.00											5						20			<10		0.62	0.30	14	54	13
KA03904	98.00	101.00	3.00											5						20			<10		0.64	0.25	10	56	18
KA03905	128.00	131.00	3.00											5						20			10		0.56	0.52	15	38	13
KA03906	140.00	143.00	3.00											5						25			<10		0.78	0.77	24	65	56
KA03907	185.00	188.00	3.00											5						25			<10		0.79	0.79	26	69	43
KA03908	221.00	224.00	3.00											5						25			<10		0.80	0.78	27	68	70

2.21032

HOLE NUMBER: MCD41-01

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 03/31/2001
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: KIDD/HBED/EAL JV
PROJECT NUMBER: 8036
CLAIM NUMBER: P995400,JV18,SpectrEM606a
LOCATION: Macdiarmid Twp.

PLOTTING COORDS GRID: UTM
NORTH: 5391565.00mN
EAST: 456675.00mE
ELEV: 220.00

ALTERNATE COORDS GRID: 98MCD51
NORTH: 8+75S
EAST: 27+ 0E
ELEV: 220.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 213.00M
START DEPTH: 0.00M
FINAL DEPTH: 213.00M

COLLAR ASTRONOMIC AZIMUTH: 235° 0' 0"
GRID ASTRONOMIC AZIMUTH: 55° 0' 0"

DATE STARTED: 11/15/1999
DATE COMPLETED: 11/17/1999
DATE LOGGED: 11/22/1999

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: YES
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: Bradley's
CASING: NW casing in hole-capped
CORE STORAGE: Mine
UTM COORD.:

COMMENTS : Drilled to test SpectrEM target 606a: 50mhos. Explained by two zones of semi-massive Po@134&157m
WEDGES AT: NONE

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
68.00	237°30' 0"	-49°10' 0"	S	OK		-	-	-	-	-	
128.00	240°30' 0"	-49°30' 0"	S	OK		-	-	-	-	-	
188.00	245°30' 0"	-49° 0' 0"	S	OK		-	-	-	-	-	
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G. Collins for V. Peckham
Mar 31, 2001

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 58.00	«┤ob├»	OVERBURDEN				
58.00 TO 120.25	«2,a,e,p»	MAFIC VOLCANIC: AMYGDALOIDAL AND PILLOWED Medium-green, locally pale green-white, fine-grained, occasionally amygdaloidal, pillowed mafic volcanic. 58.00 - 98.03m: - selvages are distinct and mostly planar, and 2-5cm wide with weak chlorite alteration +/- quartz +/- albite +/- carbonate alteration or veining. - selvages are on average spaced 40 to 60cm apart. - 40% of selvages contain angular chloritized fragments (0.2 to 1cm). - two triple-points observed @73.05m and 83.95m - there is a concentration of amygdules within 10cm of selvages. - amygdule/selvage relationships suggest tops up (northeast) with a low degree of confidence @ 82.90m, 84.80m, and 88.50m. - at 88.85m, tops up (moderate) indicated by amygdule/selvage relationship and an apparent partially eroded selvage with subsequent pillow deposition. - amygdules are 0.2-0.3cm, round to oval, often with irregular and diffuse boundaries largely due to chloritization. - amygdules are quartz +/- carbonate-filled. VEINS: - overall weak veining (<5%). - 0.5 to 3cm wide, 15 to 40°TCA, quartz +/- carbonate +/- albite veining. - veins are spaced 1.5 to 3m apart on average. - larger quartz veins (@71.75 and 80.75m) are composed of coarse, euhedral crystals, 0.5 X 2cm, that grow from the wall towards the centre of the vein. Carbonate is interstitial to quartz crystals. - albitization (+ carbonate) takes vein form <1cm wide @58.15 and 76.00 to 79.00m.		- weak chlorite alteration (ChSW) in amygdules from 63.0 to 63.3m. - pale green to white, moderate albitization (AbPM). Most often in cores of pillows. Occassionally within pillow selvages. Albitization occurs over 10 to 20cm intervals, however, it is also found in 0.2-0.5cm wide veins and in fractures at 58 to 64m. - Albitization zones have a pale green/white "mottled" texture and irregular, diffuse boundaries. - 35% of core is albitized. - pervasive sericitization (SePW) in Ab altered zones.	- 0.1% disseminated Po (<0.1cm). Partially filling scattered amygdules with quartz. - 2% disseminated Po from 64.0m to 64.8m. Minor (<0.1%) Po in veinlets <0.5cm. - trace (<0.1%) Cp and Py within or along selvages and disseminations of Po and Po veinlets (<0.5cm).	- mag. sus.= 0.00-0.74 units; except 1.81 units where there is (2% Po). - tops up (northeast) based on amygdule/selvage relationships (low). - 75% recovery from 58.00 - 59.00m.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Lower contact is veined at 25°TCA. 98.03 - 98.50m: Quartz-Carbonate vein: Light brown, fine-grained, dense and needle-like quartz-carbonate (75%), intergrown with white, coarse crystalline quartz (22%) with minor green chlorite stains (3%) and discontinuous selvage linings. - brown, carbonate-stained quartz needles are 0.2 x 2cm. Lower contact is sharp and undulating at 10°TCA.				- mag. sus.= 0.11 units.
		98.50 - 120.25m: - same as (58.00 - 98.03m). - pillow selvages are spaced 30 to 40cm apart. - tops up (northeast) based on amygdules/selvage relationship @ 99.25, 100.70, 102.95, 107.35, 110.65, 119.80m. Tops down (southwest) at 114.60, 114.80, 117.50, 118.85, 120.25m. - all tops indicators have a low degree of confidence except at 119.80m where amygdules become larger and more dense at selvage at "top" of pillow and the lower selvage at 120.25m has flattened and elongated amygdules parallel to selvage indicating tops up (moderate). VEINS: - minor (5%) quartz-carbonate veins from 109.15 to 115.00m @ 0 to 40°TCA. - white quartz veins occur at selvages, either cross-cutting or parallel to them and are 1 to 2.5cm wide with minor pale brown interstitial albite. - no veins elsewhere.		- Weak pervasive carbonitization (CbPW) overall; except moderate pervasive carbonitization (CbPM) from 105.85 to 120.35m. - Albitization (AbPW) occurs as discontinuous 20cm zones in pillow cores and along fractures and flooding into adjacent wallrock from fractures.	- 0.1% disseminated Po as partial infills in amygdules. - < 0.1% Cp in amygdules with Po.	- mag. sus.= 0.00 - 0.75 units.
120.25 TO 134.44	«2,a,e»	MAFIC VOLCANIC: AMYGDALOIDAL Medium-green, fine-grained, amygdaloidal, weakly foliated, mafic volcanic. - unit could be one thick pillow? - amygdules are 0.1cm to 1cm long and up to 0.5cm		- moderate, pervasive carbonitization along foliation surfaces (CbPM). - albite in fractures (AbFW).	- 0.1% Po disseminations from 120.25 to 133.00m. - 3% Po from 133 to 134.44m parallel to foliation. Po increases towards lower contact.	- mag. sus.= 0.17 - 1.81 units- increases towards lower contact.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		wide and quartz-Po filled. - amygdules comprise 5% of unit and are larger and more dense at upper contact/selvage suggesting tops is up (moderate). - moderate foliation @55°TCA defined by plagioclase grains and Po disseminations (133 to 134.44m). VEINS: - white, irregular carbonate +/- quartz veinlets comprise 5% of unit @ 45 to 60°TCA with one vein at 129m parallel TCA. All are < 0.5cm wide. - @ 133.85m - 134.10m one white and brown quartz-carbonate vein with 2.5% Po as blebs within quartz and lining selvage at upper contact. Wallrock fragment contained within vein (2 X 3cm). Lower contact is sharp and planar @57°TCA.				
134.44 TO 134.79	«2,a,s»	MAFIC INTRUSIVE: 25% PYRRHOTITE Light green mafic volcanic (75%) in alternating 0.5cm wide undulating (amplitude = 0.5cm) bands with interstitial brassy pyrrhotite (25%) with ~3% white quartz. Mineralization occurred late with quartz deposition along a pillow selvage(?) 55°TCA. Pyrrhotite drapes grains of quartz and mafic volcanic. Lower contact sharp and planar @55°TCA.			- 20-25% Po.	- strong conductor - explains conductor for this hole. - mag. sus.= 6.28 - 19.3 units.
134.79 TO 156.96	«2,a,e,bx»	MAFIC INTRUSIVE: AMYGDALOIDAL Medium-green, fine-grained, amygdaloidal mafic volcanic flow with angular brecciated sections: 142.66 - 143.95m; 145.00 - 146.60; 149.70 - 151.50m. - amygdules are evenly dispersed throughout unit.		- trace, pervasive albitization/ silicification throughout.		
		134.79 - 138.15m: - massive, mafic flow. - weak carbonate veinlets (0.5cm wide) throughout at 25 to 40°TCA.		- weak, pervasive albitization (AbPW).	- 1.2% total Po as interstitial disseminations both in wallrock and quartz veins (0.5cm) @136 and 137.75m.	- mag. sus.= 0.61 - 1.18 units.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- 0.1 X 0.3cm laths of plagioclase.				
		138.15 - 138.85m: - possible selvage that has been flooded by a low angle quartz-carbonate vein. 0.2 X 0.5cm angular mafic fragments from 138.25 to 138.70m in centre of vein.		- trace pervasive albitization (AbPW).	- 1.5% Po disseminated mostly in one large mafic fragment (5cm sq.). Also found throughout.	- mag. sus.= 1.00 - 11.1 units.
		138.85 - 142.66m - massive mafic flow; weakly brecciated with carbonate fracture-fillings/veinlets.		- weak carbonitization in matrix (CbFW).	- 2.5% Po: 1% as dense infills in 0.2cm veinlets and 1.5% as fine disseminations. - < 0.1% Cp: trace in Po + Qt veinlet.	- mag. sus.= 0.21 - 4.84 units.
		142.66 - 143.85m: - 0.3cm sq. to 2 X 5cm angular fragments oriented 55°TCA. Carbonate fills matrix with albite (20% matrix).		- moderate carbonate in veins and breccia matrix (CbFM). Veins are 0.5cm wide on average and comprise 5-10% of section.		- mag. sus.= 0.43 - 1.59 units.
		143.85 - 156.96m: - 0.3 x 0.4cm, oval, quartz and carbonate-filled amygdules, with 20 to 60cm sections of jig-saw brecciated mafic volcanic. (144.60-146.60;149.70-150.90m. - low angle, 1.5cm quartz vein (156.50m) with Po(3%) blebs 0.5 x 1cm. Wallrock is albitized, pale green-yellow within 50cm of upper and lower vein contact. Lower contact is sharp and planar @55°TCA.		- (AbPW;SePW) Weak, pervasive albitization and trace sericite alteration around vein @156.50m.	- 3.5% (total) Po in amygdules (0.5%) and in matrix, fractures, and coarse disseminations at upper contact (143.85 - 144.10m) (2.5%). Po occurs as disseminations in albitized zone and coarse blebs in quartz vein (156.50m; 0.5%). - 0.2% Cp in Po within quartz veinlet @ 152.40m.	- mag. sus.= 0.23 - 8.89 units
156.96 TO 157.12	«┤VEIN├»	QUARTZ (50%) - PYRRHOTITE (50%): Secondary, late Po, coarse and interstitial to white quartz grains 0.2 to 4 X 5cm, and minor mafic volcanic fragments, < 0.5cm sq. Vein occurs at contact between mafic flows and fine-grained debris flow. Lower contact is sharp and veined @55°TCA.			- 50% Po- interstitial to quartz. - 0.1 % Cp. Intergrown with Po. - strong conductor.	- mag. sus.= 1.52 - 2.46 units.
157.12 TO 158.25	«2,*a,*n»	MAFIC TUFF Medium-green, equigranular, upward-fining, rhythmically bedded mafic tuff with flattened chert fragments 1 X 4cm- (2% of unit). - at least five distinct ~15-20cm wide beds		- weak silicification (SiSW) from 157.12 to 157.52m because of flooding from uphole quartz vein.	- 3% Po from 157.12 to 158.10m. it occurs as elongated grains (0.1 x 1.5cm) parallel to bedding. - 0.1% finely disseminated Po from	- mag. sus.= 0.00 - 0.28 units. - tops up- to the northeast (mod). Based on graded bedding over entire unit.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		present. Lower contact is sharp and planar (erosional) @65°TCA.			158.10 to 158.25m.	
158.25 TO 158.83	«2,a,e»	MAFIC VOLCANIC Light-green, fine-grained, weakly amygdaloidal, massive mafic volcanic. - amygdules are 0.2-0.4cm, round and carbonate-quartz filled Lower contact is sharp, planar, erosional(?) and @65°TCA.			- 0.1% Po; fine disseminations (<1mm).	- mag. sus. = 0.00 - 0.18 units.
158.83 TO 160.75	«2,C,*b,*i»	HETEROLITHIC, MATRIX-SUPPORTED, MAFIC TUFF Medium-green, with angular fragments 0.1 to 3 X 5cm. Average size is 0.7 X 1.25cm. Matrix (65%) is composed of mafic grains <0.2cm. - clast composition includes: grey chert 40%; felsic volcanic 40%; mafic volcanic 20%. - clast lineation (bedding) is 62°TCA. - unit fines upward indicating tops up (moderate) towards the northeast. Lower contact is sharp and planar- bedding surface- at 65°TCA.			- 0.3% Po as rare flattened, secondary blebs 0.3 X 3cm and disseminations in mafic fragments.	- mag. sus. = 0.07 - 0.18 units - tops northeast (mod)
160.75 TO 162.05	«2,*b,*n»	MAFIC LAPILLI TUFF Medium-green, bedded, mafic tuff to lapilli tuff (<0.1 to 6cm fragments). Larger fragments (>0.2cm; 2%) are felsic volcanic and albitized mafic rocks and occur at the base of the unit (161.75 to 162.05m). - there are 9 graded beds within the unit. Each bed becomes finer and thiner compared to the one below. The basal bed is 45cm wide with fragments ~6cm X 3cm. The top bed is 3cm wide with the largest fragment being 0.3cm.			- 0.5% finely disseminated (<0.2cm) Po throughout.	- mag. sus. = 0.23 - 0.46 units.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Lower contact is sharp, planar and erosional @65°TCA.				
162.05 TO 169.21	«3,a,e»	INTERMEDIATE VOLCANIC: VESICULAR Light green, fine-grained, quartz-filled vesicular, flow. - 40% round to oval vesicles 1-2mm to 164.50m and <1mm from 164.50m to 169.21m all are filled with quartz and trace chlorite. This rock likely has a felsic or intermediate chemistry. Vesicles possibly filled later- alteration? - groundmass is plagioclase-rich (50%) with chloritized mafic groundmass (10%?). - rounded grey chert clast @ 162.73m is 3 X 5cm. Lower contact is sharp, irregular, and chilled @~60°TCA.		- (AbPW); (SePW); (SiSW) weak pervasive albitization, trace to weak sericitization and spotty silicification from 162.05m to 163.18m. Alteration hosts most of the pyrrhotite in this unit.	- 3.5% Po: 2% Po as fine disseminations from 162.05 to 164m. 1.5% as 6 massive and semi-massive Po bands from 162.05 to 164.75m. The thickest is at 162.96m @70°TCA and is massive Po. - from 164 to 169.21m, 0.1% Po as fine disseminations. - 0.1% Py disseminated in bands of Po.	- mag. sus. = 0.15 - 2.96 units. Values decrease downhole.
169.21 TO 171.35	«7,a»	MAFIC INTRUSIVE DYKE Light green, fine-grained, weakly plagioclase phyric, diorite(?) dyke. - 60% plagioclase, 40% chloritized mafics. - from 169.93 to 170.05m, medium-grained, with 70% plagioclase laths up to 0.2 X 0.4cm. Lower contact is sharp, planar and chilled over 1cm @ 65°TCA.		- (ChFW) black chlorite fills minor 1-3mm irregular fractures (0.2% of unit) often with trace Po +/- Cp.	- 0.1% finely disseminated Po mostly associated with Ch alteration. - <0.1% finely disseminated Cp within Po disseminations.	- mag. sus. = 0.36 to 0.67 units.
171.35 TO 213.00	«2,a,e,p»	MAFIC VOLCANIC: AMYGDALOIDAL AND PILLOWED Light-green, fine-grained to weakly plagioclase phyric, amygdaloidal and pillowed mafic volcanic flow. - anhedral to subhedral plagioclase phenocrysts, 1 to 3mm, comprise 3% of 50cm sections throughout the unit. - some selvages are poorly preserved and ~1m spaced to 178m and 194.50 to 213.00m, but become more abundant and more closely spaced (~50cm apart) from 178 to 194.50m. - selvages usually more strongly chloritized and quartz veined and sometimes brecciated and pyrhhotite-rich.		- (ChFM) Chlorite alteration is moderate over 10cm wide zones around selvages. - (ChSW) Weak chloritization of amygdules with quartz. - (AbSW) Weak albitization/ silicification from 195.60m to 213.00m due to flooding from veins.	- 0.3% Po total. - 0.1% Po as fine disseminations and amygdule fillings. - 3% Po in selvages between 180.20 to 190.45m only.	- mag. sus. = 0.17 to 3.11 from 170.35 to 191m; ~0.30 to 0.70 units to 213.00m

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- conflicting tops from amygdule/selvage relationships and amygdule concentrations. - moderate tops indicated from amygdule/selvage relationship at 183.00m. - amygdules represent 5% of rock and are up to 0.75 X 2cm and quartz +/- chlorite between 176.40 and 177.00m and 178.00 and 197.50m. - elsewhere amygdules are 0.2 to 0.4cm sq.. - veining is weak (~10% of unit), irregular, 0.3 to 0.5cm wide and quartz-carbonate veining. Only trace (<2%) from 171.35 to 191.60m. - moderate quartz (trace carbonate) veining (20% of unit) from 207.41m to EOH (213.00m). Veins are 20 to 25°TCA and white/brown with dark green chlorite patches as in large veins higher in the hole. - brecciation is healed by quartz-carbonate veining - flow-top brecciation between 194.75 and 201m. Fragments are angular and 0.5 X 1cm to 3cm sq. Breccia veins are 10 to 15cm wide. - fragments in selvages are <0.5cm sq. and found in <5cm wide zones.				
213.00 TO 213.00	«EOH»					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S ppm	Se ppm	As ppm	Hg ppb	Sb ppm
KA03611	133.00	133.79	0.79	76	108	1	96.0	0	0									
KA03620	133.79	134.44	0.65	71	130	1	79.0	14	0									
KA03612	134.44	134.79	0.35	434	172	18	95.0	7	0									
KA03613	134.79	136.00	1.21	103	92	1	97.0	7	0									
KA03608	156.00	156.96	0.96	33	56	1	9.0	0	0									
KA03609	156.96	157.12	0.16	184	57	43	49.0	14	2									
KA03610	157.12	158.25	1.13	19	51	1	8.0	0	0									
KA03614	160.75	162.05	1.30	14	68	1	10.0	10	0									
KA03615	162.05	163.55	1.50	54	21	1	96.0	7	0									
KA03616	163.55	165.05	1.50	51	50	1	92.0	3	0									
KA03617	179.75	181.25	1.50	57	72	1	67.0	0	0									
KA03618	181.25	182.75	1.50	83	196	1	72.0	7	0									
KA03619	182.75	184.25	1.50	56	78	1	63.0	3	0									

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME / CHEM ID	ALUM
AT03685	64.00	67.00	3.00	57.04	17.33	8.27	2.32	3.29	1.11	6.00	1.22	0.18	0.16		2.51	99.43	20	130					<5	110	65	195	2,a,e,p2(j)w	137
AT03686	90.00	93.00	3.00	58.81	17.43	7.38	1.81	4.09	0.91	5.47	1.15	0.17	0.09		2.02	99.33	20	120					605	100	80	225	2,a,e,p2(j)w	141
AT03687	117.00	120.00	3.00	57.97	16.32	6.45	2.50	4.47	0.33	7.27	1.22	0.17	0.15		2.64	99.49	20	130					<5	140	85	255	2,a,e,p2(j)w	145
AT03688	123.00	126.00	3.00	55.39	15.04	7.24	3.05	3.73	0.98	7.47	1.15	0.17	0.19		5.24	99.65	20	120					<5	75	60	185	2,a,e 2(j)w	126
AT03689	126.00	129.00	3.00	47.38	17.80	7.39	3.91	3.55	0.10	13.30	1.71	0.21	0.42		3.67	99.44	30	120					<5	145	75	220	2,a,e,b2(h)w	161
AT03691	152.00	155.00	3.00	64.14	15.39	4.07	0.92	4.15	2.06	5.68	0.96	0.32	0.11		1.91	99.71	40	250					<5	75	10	90	2,a,e,b3(j)y	150
AT03692	158.25	158.83	0.58	52.93	16.02	7.12	4.53	2.65	1.79	7.87	0.81	0.13	0.21		5.36	99.42	15	120					<5	110	75	135	2,a,e 3j	139
AT03693	165.05	168.05	3.00	59.15	16.53	6.17	2.95	3.71	0.93	6.25	0.72	0.14	0.10		2.91	99.56	20	160					<5	80	80	120	2,*b,*n3j	153
AT03694	169.21	172.21	3.00	46.46	16.15	11.40	8.77	0.98	1.04	10.59	0.66	0.05	0.17		3.47	99.74	15	30					85	95	165	255	7,a 7hu	120
AT03695	173.00	176.00	3.00	60.17	15.42	5.97	2.98	3.88	0.73	6.78	0.70	0.14	0.12		2.97	99.86	20	140					20	90	60	125	2,a,e,p3(j)	146
AT03696	203.00	206.00	3.00	60.85	14.89	6.84	2.99	3.69	0.65	6.32	0.68	0.14	0.11		2.68	99.84	20	140					40	80	55	160	2,a,e,p3(j)	133

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AT03685	64.00	67.00	3.00			35		0.22	165																				
AT03686	90.00	93.00	3.00			35		0.11	160																				
AT03687	117.00	120.00	3.00			35		0.13	155																				
AT03688	123.00	126.00	3.00			30		0.09	145																				
AT03689	126.00	129.00	3.00			45		0.55	250																				
AT03691	152.00	155.00	3.00			20		0.24	30																				
AT03692	158.25	158.83	0.58			30		0.10	130																				
AT03693	165.05	168.05	3.00			30		0.04	100																				
AT03694	169.21	172.21	3.00			40		0.12	165																				
AT03695	173.00	176.00	3.00			25		0.50	100																				
AT03696	203.00	206.00	3.00			20		0.27	95																				

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	HG PPB	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT03685	64.00	67.00	3.00											5						20			<10		0.48	0.48	28	23	33
AT03686	90.00	93.00	3.00											5						20			10		0.44	0.42	44	19	24
AT03687	117.00	120.00	3.00											5						25			<10		0.45	0.40	34	21	31
AT03688	123.00	126.00	3.00											5						20			<10		0.49	0.48	20	27	20
AT03689	126.00	129.00	3.00											5						35			10		0.41	0.42	19	27	41
AT03691	152.00	155.00	3.00											5						15			10		0.28	0.26	11	27	18
AT03692	158.25	158.83	0.58											5						20			<10		0.58	0.44	17	39	42
AT03693	165.05	168.05	3.00											5						15			<10		0.53	0.37	27	28	22
AT03694	169.21	172.21	3.00											<5						25			10		0.66	0.71	19	44	97
AT03695	173.00	176.00	3.00											5						15			10		0.51	0.39	20	27	23
AT03696	203.00	206.00	3.00											5						15			10		0.53	0.46	18	26	22

2.21032

HOLE NUMBER: MCD41-02

FALCONBRIDGE LIMITED
DRILL HOLE RECORD

DATE: 03/31/2001
IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: KIDD/HBED/EAL JV
PROJECT NUMBER: 435
CLAIM NUMBER: P1211750,JV18,SpectrEM607
LOCATION: Macdiarmid Twp.

PLOTTING COORDS GRID: UTM Zone 17
NORTH: 5391415.00mN
EAST: 457314.00mE
ELEV: 220.00

ALTERNATE COORDS GRID: 98MCD33
NORTH: 4+10S
EAST: 32+ 0E
ELEV: 220.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 268.21M
START DEPTH: 0.00M
FINAL DEPTH: 268.21M

COLLAR ASTRONOMIC AZIMUTH: 242° 0' 0"
GRID ASTRONOMIC AZIMUTH: 57° 0' 0"

DATE STARTED: 11/11/1999
DATE COMPLETED: 11/13/1999
DATE LOGGED: 11/13/1999

COLLAR SURVEY: NO
RQD LOG: NO
HOLE MAKES WATER: NO

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: BQ

CONTRACTOR: Bradley's
CASING: NW casing in hole-capped
CORE STORAGE: Mine
UTM COORD.:

COMMENTS : Drilled to test SpectrEM 607. Explained by graphitic argillite at 152.70-153.17m; 153.17-153.95m
WEDGES AT: NONE

DIRECTIONAL DATA:

Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (M)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
47.00	228° 0' 0"	-46°45' 0"	A	OK	Azimuth doubtful-mod.mag.	-	_	_	-	-	
107.00	225°30' 0"	-50° 0' 0"	A	OK	Azimuth doubtful-mod.mag.	-	_	_	-	-	
167.00	230°30' 0"	-50°30' 0"	S	OK	Ok Azimuth?	-	_	_	-	-	
227.00	227°30' 0"	-50°45' 0"	A	OK	Azimuth doubtful-mod.mag.	-	_	_	-	-	
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060

G. Collins for V. Peckham
Mar 31, 2001

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 37.00	«┤ob├»	overburden NQ outer casing removed. NW casing left for geophysics. Hole is capped.				
37.00 TO 96.50	«6,a,Sr,Tk»	ULTRAMAFIC INTRUSIVE: DUNITE Dark green and black, fine-grained, massive, serpentinized-talc altered dunite. 37.00 - 40.66m - 95% fine-grained, rounded, serpentinized olivine; 3% talc-altered plagioclase; 2% pin-head magnetite. 40.66 - 41.55m - Banded lizardite-magnetite-chrysotile vein 20°TCA. 0.3cm chrysotile @ wallrock contacts, 1.2cm magnetite, and >3.5cm of fibrous, green-black lizardite. 41.55 - 69.20m - 95% fine to medium-grained, rounded, serpentinized olivine with sections of euhedral olivine (51.50-52.00m and 65.00-65.10m) 0.2cm X 0.5cm in size; 3% talc altered plagioclase; 1-2% pin-head magnetite. - ~30cm spaced 0.2cm wide veinlets of chrysotile, 20-50°TCA. Six veinlets are 0.5cm with magnetite concentrated along selvages. - 1 to 2cm wide lizardite veins @ 54.4, 60.0 and 63.0m dipping 20 and 50°TCA. 69.20 - 69.48m - Banded, fibrous lizardite-magnetite vein 55°TCA. 69.48 - 89.20m - Same as 41.55 - 69.20m. Olivine is euhedral to subhedral. The "talc" is the weathering product of olivine here - not plagioclase. - Twelve evenly spaced, 0.3 to 0.5cm wide		37.00 - 40.66m - Moderate,pervasive,serpentinization of olivine. - Plagioclase has weak,spotty talc alteration in cores of olivine; 3%. 40.66 - 41.55m - vein 41.55 - 69.20m - sections of moderate, pervasive serpentinized olivine 20cm wide with sections of unaltered rock between. 69.20 - 69.48m - vein 69.48 - 89.20m - weak, pervasive, intermittent serpentinization in the following intervals: 73.55-73.73m; 76.80-76.88m; 77.10-77.25m; 80.25-82.25m		- magnetic susceptability gradually increases from 22 to 55 units from 37m to 96.50m. 60% recovery from 37-38m.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		magnetite veinlets 20 to 30°TCA. - Five, 0.5cm lizardite veins at 15 to 30°TCA from 69.48m to 80.15m . Minor chrysotile and magnetite in selvages. 89.20 to 96.50m - 95% subhedral, equigranular olivine; 3.5% interstitial, pin-head magnetite; 1.5% interstitial talc alteration. - Fourteen, 0.5cm wide magnetite veinlets 50 to 70°TCA. Lower contact @96.50m is 60°TCA with fault gouge.		89.20 - 96.50m - weak to moderate, pervasive serpentinized olivine. - trace disseminated talc alteration except for 91.90-92.00m where talc is weak and pervasive.		
96.50 TO 97.00	«┤FAI├»	Lizardite-magnetite-chrysotile vein that has been faulted creating minor gouge (5cm wide) within the chrysotile band. - vein also contains 5cm massive, steel-grey magnetite and 40cm of soft, "churned" bright green lizardite fragments; 0.2x0.4cm with blades of magnetite; 0.1x0.4cm and anhedral, black, grains up to 0.2cm. - original texture of vein has been destroyed Lower contact is sharp and @50°TCA.		- moderate, pervasive serpentinization (lizardite). - trace pervasive talc alteration.		- start of wide fault zone (96.50 - 104.30m). - mag. sus. averages 22 units.
97.00 TO 99.00	«6,b,Sr»	ULTRAMAFIC INTRUSIVE: DUNITE Olive-drab green, medium-grained, sub-equigranular, rounded, massive, moderately magnetic dunite with magnetite veins. - hardness increases from h=3 to h=4 @98.20m. - seven 0.5 to 0.7cm dense magnetite veins @ 40-60°TCA. Lower contact is sharp and veined @55°TCA.		Moderate to strong serpentinized olivine grains.		- magnetic suseptablitity increase from 22 at 97.5m to 51 at 98.0m.
99.00 TO 99.82	«6,b,*p»	«┤FAI├» Olive green, crushed, medium-grained, anhedral dunite fault gouge. 99.00 - 99.15m - white, powdered chrysotile-talc(?), serpentinized olivine, and 0.1cm magnetite gouge. - lower contact is talc veined.				- magnetic suseptability varies from 2 or 9 units in strong gouge zones to 24 units in more competent pieces of core.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		99.15 - 99.34m - anhedral,elongated, medium-grained olivine with 3% magnetite. - olivine grains are aligned @35°TCA with interstital talc.		- moderately serpentinized olivine		
		99.34 - 99.48m - Fault gouge. Fine-grained,powdered chrysotile. - 2% anhedral magnetite grains 0.4cm sq. - lower contact is sharp @55°TCA				
		99.48 - 99.82m - Blades of transparent green olivine in a matrix of talc/chrysotile orientated @40°TCA. Lower contact is veined (0.4cm) with magnetite @68°TCA.		- strongly serpentinized olivine.		
99.82 TO 101.30	«6,b,Sr»	ULTRAMAFIC INTRUSIVE: DUNITE Green, medium-grained, moderately serpentinized, partially recrystallized dunite with ribbons of magnetite 0.4cm wide.		-moderately serpentinized.		- mag. sus.= 40-56 units.
101.30 TO 101.70	«┤FAI├»	- white, pulpy, chrysotile fault gouge with serpentinized olivine and fine grained magnetite. - original rock is obliterated by fault. Lower contact is sharp and irregular.				- mag. sus.= 19 units.
101.70 TO 104.30	«6,*t,Sr»	ULTRAMAFIC INTRUSIVE: DUNITE Green, medium-grained, moderately foliated - sheared, dunite with 0.1cm veneers of chrysotile on shear surfaces. - olivine grains are irregular (recrystallized?), rounded and aligned, and occassionally stretched 0.2X0.4cm. - warped foliation @~60°TCA. - 3% magnetite parallel to foliation. - aligned olivine grains are separated by 0.1cm wide veneers of white chrysotile. - this is the sheared region on downhole side of fault?- almost out of influence of fault? Lower contact is ground -core has spun- but RQD		- moderate serpentinization of olivine		- mag. sus.= 37 to 47 units.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		is good.				
104.30 TO 121.92	«6,b,Sr»	ULTRAMAFIC INTRUSIVE: DUNITE Green-black, medium-grained, moderately magnetic, moderately serpentinized massive dunite. - five 0.4cm wide magnetite veinlets at 30 to 50° TCA. - rare chrysotile veinlets throughout. Lower contact is gradational from 121.92 to 123m into unaltered to trace serpentinized olivine. Trace serpentinization by 123m.		- pervasive serpentinization.		- mag. sus.= 30-40 within 3m of the contacts, but increases to 50-60 units in the center.
121.92 TO 136.60	«6,a»	ULTRAMAFIC INTRUSIVE: DUNITE Black, massive, fine-grained, pyroxene-bearing dunite. - equigranular, 0.1cm, rounded olivine grains; 90-95%. - fine-grained, pin-head size magnetite; 3%. - 0.1cm rounded pyroxene grains; 2%. - interstitial plagiocase; 1%. - from 128.90 to 133.50m, there are seven banded veins, of 0.2cm wide magnetite on uphole and downhole selvages with dark black lizardite in the center. Vein width varies from 1 to 1.5cm with a 1 to 2.5cm white talc-muscovite(?) alteration halo with 3% interstital magnetite. Lower contact gradational into olivine gabbro-norite; 136.60m to 137.00m.		- trace pervasive serpentinization. - weak, pervasive, talc alteration of serpentinite.	- 0.1% pyrrhotite.	- mag. sus.= 47-66 (variable throughout)
136.60 TO 147.90	«7,a»	MAFIC INTRUSIVE:GABBRO-GABBRONORITE Fine-grained, grey/black, massive gabbro. - 85% rounded plagioclase less than 1mm sq. 10% pyroxene up to 1x2mm needles (3%) and rounded grains <0.5mm, 7%. 3% interstitial magnetite. - 5% olivine at gradational, upper contact (136.60-136.90m) and from 143.00 to 145.00m. - 1cm wide, black-green lizardite/serpentinite vein @10-30°TCA with flooding into wallrock (143 to 145m) - black lizardite-magnetite-chrysotile vein 2.5cm wide @139.30m- 15°TCA.		- black-green lizardite-serpentinite fracture infillings and veins.	- 0.2% disseminated pyrrhotite. Irrregular grains 0.1 to 0.5mm. - one 0.7cm wide banded pyrrhotite-lizardite vein 35°TCA @147.35m.	- mag. sus.= 17-63 (variable; 63 at 145.5m).

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- poorly developed gabbro texture- grains are rounded to subrounded- generally, more like a cummulate texture. Lower contact is gradational from 147.90-148.60m to a mafic volcanic. Marked by decrease in plagioclase grain size and vesicle/amygdule development.				
147.90 TO 152.70	«2,a,m»	MAFIC VOLCANIC:BASALT Green-grey, fine-grained, massive basalt. - 50% rounded and anhedral, 0.5mm plagioclase. - 45% interstitial, anhedral pyroxene grains. - texture visible with aid of 14X handlens or binocular microscope. - 0.5 to 1cm oval amygdules (146 to 146.4 and 152 to 152.70m) 1%. Lower contact is sharp and anastomosing @35°TCA.			- 5-7% extremely fine-grained, interstitial and fracture lining pyrrhotite and chalcopyrite (0.2%) disseminated. - two mineralized veins: @149.50m (40°TCA);1cm white quartz and 1cm lizardite+ magnetite and @151.40m (30°TCA);2cm pyrrhotite+ lizardite.	- mag. sus.= 1.39-50 units; low reading @152-152.70m.
152.70 TO 153.17	«5,g,*x,*u»	PYRRHOTITE-BEARING (8%) GRAPHITIC ARGILLITE Black, thinly (0.5cm) laminated, soft-sedimentary folded (tight), silicified argillite with 5% blue-grey rounded and wispy mafic volanic fragments (up to 5cm sq.). There are two tight soft-sedimentary folds defined by 0.3cm wide laminations of mafic material. Lower contact is sharp and veined @20°TCA.		- strongly silicified. - silica flooding from underlying quartz vein.	- 8% pyrrhotite in 0.2 to 1cm oval blebs that are confined to laminations (6%). Pyrrhotite also found along lamination selvages (2%) (0.1cm).	- highly conductive. - explains SpectrEM target 607. - mag. sus.= 18-50 units (variable).
153.17 TO 153.95	«5,g,*g,Si»	GRAPHITIC ARGILLITE Grey-black, thinly laminated, silicified and quartz veined argillite. 153.17 - 153.72m - laminated, grey-black, silicified argillite. - bedding laminations @35-40°TCA and 0.5-0.7cm wide.		- strongly silicified.		- mag. sus.= 0-0.09 units.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- variable silica intensity highlights bedding. 153.72 - 153.95m «┤VEIN├» - white quartz vein with angular argillite clasts 0.2 to 0.5cm x 1 to 2cm. Lower contact is sharp and highly irregular @10°TCA.				
153.95 TO 155.75	«2,a,bx,Si»	MAFIC VOLCANIC BRECCIA Dark grey, fine-grained, amygdaloidal, mafic volcanic breccia with a silicified argillite matrix. - amygdules from 0.15 X 0.3cm up to 0.3 X 0.7cm from 155.00 to 155.20m stretched 50°TCA. - breccia fragments are subangular to subrounded, and 1 to 5cm. - matrix is composed of (0.1 to 0.3cm) thick veneers of silicified argillite and quartz. Lower contact is sharp @55°TCA.		- strong, pervasive silicification.		- mag sus.= 0-2.11 units.
155.75 TO 156.58	«5,g,*g,Si»	GRAPHITIC ARGILLITE Black, fine-grained, graphitic, thinly laminated, strongly silicified, pyrrhotite-bearing argillite. - laminations are 0.5cm wide @45°TCA and are identified by slight colour changes. - At upper contact, 1cm wide white quartz vein parallel to CA is cut suggesting the argillite was eroded on its upper surface and the mafic breccia is a flow top deposited on the unconformity Lower contact is sharp @		- pervasive silicification.	- 1% pyrrhotite(0.5mm) widely disseminated throughout, parallel to laminations Within 10cm of lower contact there are 0.5 X 2cm blebs parallel to laminations .	- mag. sus. =0.8 units. - conductor #2; strong conductor-explains anomaly.
156.58 TO 156.83	«2,a,m»	MAFIC VOLCANIC Medium-grey, fine-grained, massive mafic volcanic flow. Lower contact sharp @70°TCA.				- mag. sus. = 0.8 units.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
156.83 TO 157.03	«5,g»	GRAPHITIC ARGILLITE Black, massive, graphitic argillite. Lower contact is fragmental @~35°TCA.		-pervasive strong silicification.	- 0.5%; three 0.5 x 2cm blebs of Po.	- mag. sus.= 0.52 units. - strong conductor (conductor #3).
157.03 TO 172.92	«2,a»	MAFIC VOLCANIC Dark grey-black, fine-grained basalt. - <0.1cm anhedral plagioclase (52%), euhedral (0.5 x 1mm) muscovite(?) needles that overgrow plagioclase and 0.2cm euhedral pyroxene (45%) - fragmental upper contact (157.03-158.25m)- flow top?- with argillite and quartz (0.2-0.4cm) surrounding subrounded fragments of 1cm sq. to >15cm. - two minor (<10cm) sections of plagioclase and pyroxene needles up to 0.5cm x 0.2cm- crystal settling? - subtle contacts defined by slight, sharp color and grain size contrasts at moderate to high (45 to 60°) TCA. Evidence of flow composition changes, minor unconformities or cross-cutting features? - numerous graphite (<0.1cm) coatings on fractures. Lower contact is gradational from 171.80-172.92m. It is marked by a sharp increase in pyroxene grain size to 0.2 x 1cm that acummulate in 5cm intervals until 172.92m where coarse pyroxene becomes continuous into next unit.		- weak silicification at upper brecciated zone (157.03-158.25m).	-trace (0.4%), fine disseminated Po and Py.	- mag. sus.= 0.22 to 0.77 units. - poor RQD from 164 to 164.20m. 1cm to 5cm irregular graphite coated fractured fragments at start of run.
172.92 TO 178.10	«7,a,P»	MAFIC INTRUSIVE: GABBRO-GABBRONORITE Grey-black, fine-grained, pyroxene-porphyritic gabbro-gabbronorite. - medium-grey, fine-grained (<0.1cm), plagioclase-muscovite-pyroxene groundmass with variable concentrations of black pyroxene needles (0.2 x 0.5cm) dispersed throughout unit and often growing around plagioclase-rich portions (3 to 5cm in diameter).			- trace (0.1%) disseminated blebs of Po with minor Cpy up to 0.25cm sq. from 177.15 to 178.10m.	mag. sus.= 0.22 to 0.66 units.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Lower contact is gradational starting at 177.80m with an increase in sulphide content and becoming uniformly medium-grained by 178.10m.				
178.10 TO 231.75	«7,a,m,Ch»	MAFIC INTRUSIVE: GABBRO Medium green, fine to medium-grained, massive gabbro.				- mag. sus.= 0.00 to 0.60 units.
		178.10 - 194.60m - medium green, fine-grained, equigranular (<0.1cm) to weakly plagioclase phyric. - 60% plagioclase; 40% chlorite altered pyroxene. - lower contact is gradational over 10cm.		- moderate, pervasive chlorite alteration. - all pyroxenes are altered.	- 0.1% disseminated (0.1cm to 0.3cm grains.) Po. - < 0.1% disseminated Cpy. - 0.1% Po disseminations 0.1cm.	
		194.60 - 197.25m - medium green, fine-grained, equigranular (<0.1cm) gabbro with irregular patches (0.2cm to 1cm) of massive, fine-grained, recrystallized plagioclase aggregates. - lower contact is gradational over 10cm.		- moderate, pervasive chlorite alteration.		
		197.25 - 216.05m - same as 178.10 to 194.60m. - lower contact is sharp and diffuse @80°TCA.				
		216.05 - 231.75m - 70%, medium-grained (0.2cm),euhedral and anhedral plagioclase; 30%, fine and medium-grained subhedral pyroxene.		- moderate pervasive chlorite alteration.	- 0.1% disseminated Po <0.1cm sq.	
		Lower contact is gradational from 231.75 to 232.60m and is identified by change in composition to less plagioclase and alteration change.				
231.75 TO 238.35	«7,b,m,Ch»	MAFIC INTRUSIVE: OLIVINE GABBRONORITE(?) Light-green, medium-grained, olivine gabbronorite. - massive, with an increase of grey-black, altered olivine downhole from 1% to 7% that give the rock a "mottled" texture. - olivine altered to another mafic mineral or serpentine(?) and talc.		- moderate, pervasive chlorite alteration. - moderate, pervasive epidote alteration(?) or fuchsite(?)- unknown green mineral.		- mag. sus.= 0.20 to 0.40 units. - G.Collins took sample @233.20-233.30m to identify unknown green mineral.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- 40% plagioclase: 0.5mm grains in groundmass (35%) and 1mm subhedral laths (5%). - 45% chlorite altered pyroxene in groundmass. - 10% bright green pervasive replacement mineral-fuchsite? Forms green, rounded (0.3cm) grains possibly replacing olivine(?) and patches of the groundmass. - black, olivine-rich dyke (237.92-238.98m) @35°TCA with two angular gabbronorite fragments (2 and 5cm). - increasing olivine content downhole.				
238.35 TO 250.24	«7,a,b»	MAFIC INTRUSIVE: TROCTOLITE-OLIVINE GABBRONORITE Dark grey-black, fine and medium-grained, moderately magnetic (mag.+Po), troctolite or olivine gabbronorite (?) - an olivine cummulate rock which grades from a dominantly pyroxene-plagioclase to a olivine-plagioclase rock from 237.75m to 238.35m (upper contact). - ten 0.5cm magnetite veinlets (0.3-0.5cm) @40-60°TCA from 243 to 245m. One has Cp 0.2cm wide.				- mag. sus.= 24 to 35 units.
		238.35-242.00m - 70% olivine: 30% subhedral to rounded olivine; 40% fine-grained groundmass. - 30% plagioclase: in groundmass. - dark green/black veinlets (3% of subunit), (0.2 to 0.5cm) of lizardite (serpentinite) +/- magnetite, pyrrhotite, and chalcopyrite @45 to 65°TCA.		- strong, pervasively veined serpentine.	- 0.7% Po. <0.1cm disseminations and along olivine grain selvages. 1.2% Po from 240 to 241m. - 0.3% Cp. disseminations within Po and < 0.1cm disseminations throughout. - 1-3mm disseminations in two low angle TCA, serpentine + talc veins (1-2cm wide) @ 239.6 and 240.5m.	
		242.00-244.65m - fine-grained, black, olivine + plagioclase rock with 0.2 to 0.4cm veinlets of black, pervasive serpentinite (50% of subunit). Veinlets at 45° TCA. Could be a foliation?		- weak, pervasive serpentine+talc alteration.	- 0.5% Po dustings/ disseminations. - 0.1% Cp dustings/ disseminations.	
		244.65-250.24m				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		- black, medium-grained, weak, pervasively serpentine + talc altered olivine. Olivine possibly psuedomorphed by fine-grained pyroxene? - 0.5cm sq. olivine+talc replaced olivine grains. Cores are mostly plagioclase with mostly unaltered rims of olivine. Lower contact is sharp and planar @55°TCA			- 1% Po in fine disseminations.2-3% between 247.30 and 247.95m. - no Po after 247.95m	
250.24 TO 251.53	«7,a,m»	MAFIC INTRUSIVE: GABBRO Light green, fine-grained, equigranular, massive, altered gabbro dyke with dark green chill margins at upper and lower contacts (250.24 -250.42m and 251.34- 251.53m). - 70% plagioclase in groundmass and irregular shaped aggregates 0.5cm sq. to > 10cm sq.(20%); 30% euhedral, chlorite altered pyroxene. - all grains are <0.1cm. - similiar to gabbro from 178.10 to 231.75m. Lower contact is sharp, planar, and chilled @70°»TCA.		- weak, pervasive chlorite alteration of pyroxene throughout. - 0.5cm sq. patches of plagioclase aggregates are stained flesh colour? - 2% irregular, dark green patches of moderate chlorite alteration 1 to 3cm sq.	- 0.1% Po fine disseminations.	- mag. sus.= 0.14 to 0.35 units.
251.53 TO 252.90	«7,b»	MAFIC INTRUSIVE: OLIVINE GABBRONORITE - GABBRONORITE Dark grey-black, medium-grained, equigranular olivine gabbronorite. - fine-grained, serpentine + magnetite (matrix) surrounds altered, white-grey talc + serpentine altered, round, 0.3 to 1cm olivine grains. - weakly magnetic. Lower contact is sharp and anastomosing @~50°TCA.		- weak pervasive serrpentinization and talcification of olivine.	- 0.1% Po; <0.1cm dissemenations.	- mag. sus.= 1.88 to 2.00 units.
252.90 TO 268.21	«7,a,b,Sr»	MAFIC INTRUSIVE: OLIVINE GABBRONORITE Medium-green, fine and medium-grained, equigranular, weakly plagioclase and pyroxene porphyritic olivine gabbronorite. - 65% plagioclase; mostly interstitial grains (0.1cm to 0.4cm). - 30% serpentinized olivine. - 3-5% euhedral, prismatic, and interstitial		- moderate, pervasive serpentinization and weak talc alteration of olivine grains		- mag. sus.= 10 to 14 units to 265m; 0 to 0.15 units from 265 to 268.21m.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		magnetite. - 2% euhedral, prismatic pyroxene. - grain size is fine from 252.90m to 257.00m and is coarse to end of hole (268.21m). - two 0.5cm quartz-carbonate veins at upper contact. - diorite zenolith 5 X 5cm @268.45m; black and white, medium-grained "salt and pepper" texture. At upper contact of zenolith there is 5cm of massive, fine-grained, olive green serpentine with a 1.5 x 4cm long euhedral quartz crystal inside.				
268.21 TO 268.21	«EOH»					

Sample	From (M)	To (M)	Leng. (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Cu/Zn	Co ppm	Pt ppb	Pd ppb	S ppm	Se ppm	As ppm	Hg ppb	Sb ppm
AU04638	147.90	149.40	1.50	149	31	1	1290.0	0	0									
AU04639	149.40	150.90	1.50	130	32	1	1140.0	7	0									
AU04640	150.90	152.40	1.50	181	26	1	1110.0	3	0									
AU04641	152.40	152.70	0.30	165	138	1	888.0	86	0									
AU04642	152.70	153.17	0.47	380	68	14	625.0	3	0									
AU04643	153.17	153.95	0.78	217	34	2	94.0	10	0									
AU04644	153.95	154.95	1.00	83	62	4	1120.0	3	0									
AU04645	154.95	155.75	0.80	96	320	6	1060.0	0	0									
AU04646	155.75	156.58	0.83	84	500	7	400.0	7	0									
AU04647	156.58	156.83	0.25	155	254	7	1090.0	0	0									
AU04648	156.83	157.03	0.20	91	2660	13	651.0	34	0									
AU04649	156.83	157.03	0.20	88	139	6	1090.0	0	0									
KA03601	238.50	240.00	1.50	546	53	1	430.0	0	0									
KA03602	240.00	241.50	1.50	967	58	1	502.0	0	0									
KA03603	241.00	243.00	2.00	549	54	1	720.0	0	0									
KA03604	243.00	244.50	1.50	288	51	1	943.0	27	0									
KA03605	244.50	246.00	1.50	106	50	1	928.0	113	0									
KA03606	246.00	247.50	1.50	59	41	1	801.0	10	0									
KA03607	247.50	249.00	1.50	135	31	1	863.0	7	0									

Sample	From (M)	To (M)	Leng. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	CR2O3 %	LOI %	SUM %	Y PPM	ZR PPM	BA PPM	RB PPM	SR PPM	CO2 %	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM
AT03670	49.50	52.50	3.00	37.18	1.93	0.13	40.58	0.07	0.02	5.04	0.09	0.01	0.11		13.82	98.98	<5	10					<5	5	1015	5490	6,a,Sr,	6M!	877
AT03671	82.50	85.50	3.00	36.04	1.31	0.03	40.90	0.09	0.06	6.79	0.06	0.02	0.12		13.71	99.13	<5	10					<5	30	1075	3070	6,a,Sr,	6M!	728
AT03672	93.50	96.50	3.00	36.03	1.28	0.03	40.76	0.12	0.02	6.99	0.07	0.01	0.11		13.71	99.13	<5	10					<5	30	1275	2840	6,b,Sr,	6M!	753
AT03673	104.30	107.30	3.00	37.02	1.78	0.02	40.26	0.14	0.02	6.47	0.09	0.01	0.08		13.44	99.33	<5	10					<5	10	1280	2245	6,b,Sr	6M!	989
AT03674	123.60	126.60	3.00	37.10	2.09	0.04	38.68	0.13	0.01	8.30	0.10	0.01	0.11		12.67	99.24	<5	10					<5	25	1530	2275	6,a	6L!	1161
AT03675	141.40	144.40	3.00	40.89	5.29	8.10	29.04	0.18	0.03	7.93	0.26	0.03	0.15		7.68	99.58	5	20					<5	70	1150	2310		1,6L	64
AT03676	167.00	170.00	3.00	44.67	8.08	7.94	22.55	0.82	0.03	10.06	0.39	0.03	0.11		5.03	99.71	10	30					<5	35	635	1990	2,a	1J	92
AT03677	173.00	176.00	3.00	47.30	10.19	9.71	15.48	1.99	0.13	10.93	0.48	0.05	0.16		3.39	99.81	15	30					<5	65	170	685	7,a,P	6H	86
AT03678	183.00	186.00	3.00	50.90	14.56	7.17	5.00	4.69	0.21	14.15	0.97	0.08	0.21		1.63	99.57	30	70					<5	100	10	35	7,a,Ch	7hv	121
AT03679	210.00	213.00	3.00	52.51	13.33	8.99	3.57	2.39	0.17	15.36	1.10	0.09	0.24		1.82	99.57	30	70					<5	170	10	80	7,a,Ch	7hv	115
AT03680	220.00	223.00	3.00	47.68	16.27	13.50	8.00	1.83	0.20	9.51	0.39	0.03	0.17		2.00	99.58	10	30					<5	85	15	85	7,a,Ch	9hA	105
AT03681	232.75	235.75	3.00	49.04	5.08	17.14	18.10	0.33	<0.01	7.34	0.28	0.03	0.16		1.86	99.37	10	10					160	30	105	2165	7,b,m,C	6J	29
AT03682	249.00	250.00	1.00	45.92	6.58	7.70	23.67	0.47	0.04	9.34	0.34	0.03	0.11		5.11	99.31	10	30					<5	40	740	1720	7,b	6J	80
AT03683	251.00	251.10	0.10	36.52	18.37	15.37	10.56	0.23	0.02	11.97	0.88	0.06	0.28		5.20	99.46	15	40					<5	145	160	185	7,a	7hu	118

Sample	From (M)	To (M)	Leng. (M)	AG PPM	AU PPB	CO PPM	PB PPM	S PPM	V PPM	AS PPM	SN PPM	CD PPM	SB PPM	BI PPM	SE PPM	HF PPM	TA PPM	W PPM	MO PPM	TH PPM	U PPM	B PPM	CS PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	GD PPM
AT03670	49.50	52.50	3.00			50		0.03	25																				
AT03671	82.50	85.50	3.00			60		<0.01	20																				
AT03672	93.50	96.50	3.00			65		<0.01	25																				
AT03673	104.30	107.30	3.00			60		<0.01	30																				
AT03674	123.60	126.60	3.00			70		<0.01	35																				
AT03675	141.40	144.40	3.00			65		0.10	75																				
AT03676	167.00	170.00	3.00			55		0.32	120																				
AT03677	173.00	176.00	3.00			50		<0.01	155																				
AT03678	183.00	186.00	3.00			40		0.16	225																				
AT03679	210.00	213.00	3.00			40		0.09	245																				
AT03680	220.00	223.00	3.00			35		0.02	145																				
AT03681	232.75	235.75	3.00			45		0.02	155																				
AT03682	249.00	250.00	1.00			60		0.25	90																				
AT03683	251.00	251.10	0.10			45		0.06	190																				

Sample	From (M)	To (M)	Leng. (M)	DY PPM	ER PPM	LU PPM	OS PPB	IR PPB	RU PPB	RH PPB	PT PPB	PD PPB	LI PPM	BE PPM	MN PPM	GA PPM	GE PPM	IN PPM	TL PPM	SC PPM	BR PPM	YB PPM	NB PPM	HG PPB	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT03670	49.50	52.50	3.00											<5						5			<10		0.96	0.07	25	100	71
AT03671	82.50	85.50	3.00											<5						5			<10		0.94	0.02	26	100	333
AT03672	93.50	96.50	3.00											<5						5			<10		0.94	0.02	31	100	250
AT03673	104.30	107.30	3.00											<5						5			<10		0.94	0.01	32	100	71
AT03674	123.60	126.60	3.00											<5						5			<10		0.92	0.02	40	100	192
AT03675	141.40	144.40	3.00											<5						15			<10		0.90	1.53	40	78	389
AT03676	167.00	170.00	3.00											<5						20			<10		0.85	0.98	28	72	43
AT03677	173.00	176.00	3.00											<5						25			<10		0.77	0.95	11	57	33
AT03678	183.00	186.00	3.00											5						25			10		0.46	0.49	2	31	21
AT03679	210.00	213.00	3.00											5						25			<10		0.35	0.67	3	25	71
AT03680	220.00	223.00	3.00											<5						25			<10		0.67	0.83	2	35	46
AT03681	232.75	235.75	3.00											<5						40			<10		0.86	3.37	6	51	91
AT03682	249.00	250.00	1.00											<5						15			<10		0.86	1.17	31	74	85
AT03683	251.00	251.10	0.10											5						30			<10		0.68	0.84	15	40	630

ONTARIO MINISTRY OF NORTHERN DEVELOPMENT AND MINES

Work Report Summary

Transaction No:	W0160.00134	**Status:**	APPROVED
Recording Date:	2001-APR-05	**Work Done from:**	1999-AUG-01
Approval Date:	2001-JUN-22	**to:**	2000-JUL-31

Client(s):

130679 FALCONBRIDGE LIMITED

Survey Type(s):

EM LC MAG PDRILL

Work Report Details:

Claim#		Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
P	986731	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	986732	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	986733	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	986734	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	986735	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995399	$373	$373	$400	$400	$0	0	$0	$0	2004-MAY-21
P	995400	$14,590	$14,590	$400	$400	$4,590	4,590	$9,600	$9,600	2002-MAY-21
P	995401	$9,200	$9,200	$400	$400	$4,800	4,800	$4,000	$4,000	2002-MAY-21
P	995402	$466	$0	$400	$400	$66	0	$0	$0	2002-MAY-21
P	995403	$466	$0	$400	$400	$66	0	$0	$0	2002-MAY-21
P	995408	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995409	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995410	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995443	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-13
P	995447	$187	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995448	$466	$0	$400	$400	$66	0	$0	$0	2002-MAY-21
P	995449	$466	$466	$400	$400	$66	66	$0	$0	2002-MAY-21
P	995450	$93	$93	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995451	$466	$466	$400	$400	$66	66	$0	$0	2002-MAY-21
P	995452	$466	$466	$400	$400	$66	66	$0	$0	2002-MAY-21
P	995453	$466	$466	$400	$400	$66	66	$0	$0	2002-MAY-21
P	995455	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995456	$187	$187	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995457	$140	$140	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995458	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995459	$93	$93	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995460	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995461	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995476	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995477	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995480	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	995481	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996042	$47	$47	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996043	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996044	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21

ONTARIO MINISTRY OF NORTHERN DEVELOPMENT AND MINES

Work Report Summary

Transaction No: W0160.00134 **Status:** APPROVED

Recording Date: 2001-APR-05 **Work Done from:** 1999-AUG-01

Approval Date: 2001-JUN-22 **to:** 2000-JUL-31

Work Report Details:

Claim#		Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
P	996048	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996049	$187	$187	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996050	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996067	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996068	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996069	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996070	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996071	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996072	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996073	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996074	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996075	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996076	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	996077	$0	$0	$400	$400	$0	0	$0	$0	2002-MAY-21
P	1211709	$47	$47	$400	$400	$0	0	$0	$0	2002-JUN-07
P	1211712	$5,165	$5,165	$400	$400	$2,765	2,765	$2,000	$2,000	2002-JUN-07
P	1211714	$373	$373	$400	$400	$0	0	$0	$0	2002-JUN-07
P	1211715	$47	$47	$400	$400	$0	0	$0	$0	2002-JUN-07
P	1211716	$466	$466	$400	$400	$66	66	$0	$0	2002-JUN-07
P	1211718	$28,076	$28,542	$1,200	$1,200	$6,876	8,274	$20,000	$19,068	2002-JUN-07
P	1211719	$466	$466	$400	$400	$66	66	$0	$0	2002-JUN-07
P	1211720	$8,673	$8,673	$800	$800	$181	181	$7,692	$7,692	2002-JUN-07
P	1211721	$1,632	$0	$0	$0	$0	0	$1,632	$0	2002-MAY-29
P	1211723	$10,099	$10,099	$1,200	$1,200	$0	0	$8,899	$8,899	2002-JUN-07
P	1211724	$233	$0	$800	$800	$0	0	$0	$0	2002-MAY-29
P	1211727	$93	$93	$800	$800	$0	0	$0	$0	2002-JUN-07
P	1211728	$326	$0	$400	$400	$0	0	$0	$0	2002-MAY-29
P	1211729	$373	$373	$400	$400	$0	0	$0	$0	2002-JUN-07
P	1211734	$140	$140	$400	$400	$0	0	$0	$0	2002-JUN-07
P	1211738	$1,399	$1,399	$800	$800	$0	0	$599	$599	2002-JUN-07
P	1211740	$50	$50	$400	$400	$0	0	$0	$0	2002-JUN-07
P	1211744	$700	$700	$0	$0	$0	0	$700	$700	2001-JUL-23
P	1211745	$140	$140	$400	$400	$0	0	$0	$0	2002-JUN-07
P	1211746	$700	$700	$800	$800	$0	0	$0	$0	2002-JUN-07
P	1211747	$466	$466	$800	$800	$0	0	$0	$0	2002-JUN-07
P	1211748	$466	$466	$800	$800	$0	0	$0	$0	2002-JUN-07
P	1211749	$233	$233	$1,600	$1,600	$0	0	$0	$0	2002-JUN-07
P	1211750	$9,759	$13,069	$800	$800	$0	746	$8,959	$11,523	2002-JUN-07
P	1212996	$1,866	$1,866	$0	$0	$0	0	$1,866	$1,866	2001-JUL-29
		$100,347	$100,347	$34,400	$34,400	$19,806	$21,752	$65,947	$65,947	

Work Report Summary

Transaction No:	W0160.00134	**Status:**	APPROVED
Recording Date:	2001-APR-05	**Work Done from:**	1999-AUG-01
Approval Date:	2001-JUN-22	**to:**	2000-JUL-31

External Credits: $0

Reserve:

$65,947	Reserve of Work Report#: W0160.00134
$65,947	Total Remaining

Status of claim is based on information currently on record.

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

GEOSCIENCE ASSESSMENT OFFICE
933 RAMSEY LAKE ROAD, 6th FLOOR
SUDBURY, ONTARIO
P3E 6B5

Tel: (888) 415-9845
Fax:(877) 670-1555

Date: 2001-JUN-22

FALCONBRIDGE LIMITED
SUITE 1200, 95 WELLINGTON STREET WEST
TORONTO, ONTARIO
M5J 2V4 CANADA

Submission Number: 2.21032
Transaction Number(s): W0160.00134

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

Assessment work credit has been redistributed, as outlined on the attached Work Report Summary to better reflect the location of work.

If you have any question regarding this correspondence, please contact LUCILLE JEROME by email at lucille.jerome@ndm.gov.on.ca or by phone at (705) 670-5858.

Yours Sincerely,

Ron Gashinski
Supervisor, Geoscience Assessment Office

Cc: Resident Geologist

Falconbridge Limited
(Claim Holder)

Assessment File Library

Falconbridge Limited
(Assessment Office)

42A12NE2031 2.21032 MACDIARMID 200

MINISTRY OF NORTHERN DEVELOPMENT AND MINES
PROVINCIAL MINING RECORDER'S OFFICE

MINING LAND TENURE MAP

Date / Time of Issue Apr 5 2001 14:20h Eastern

TOWNSHIP / AREA: MACDIARMID
PLAN: G-3242

ADMINISTRATIVE DISTRICTS / DIVISIONS

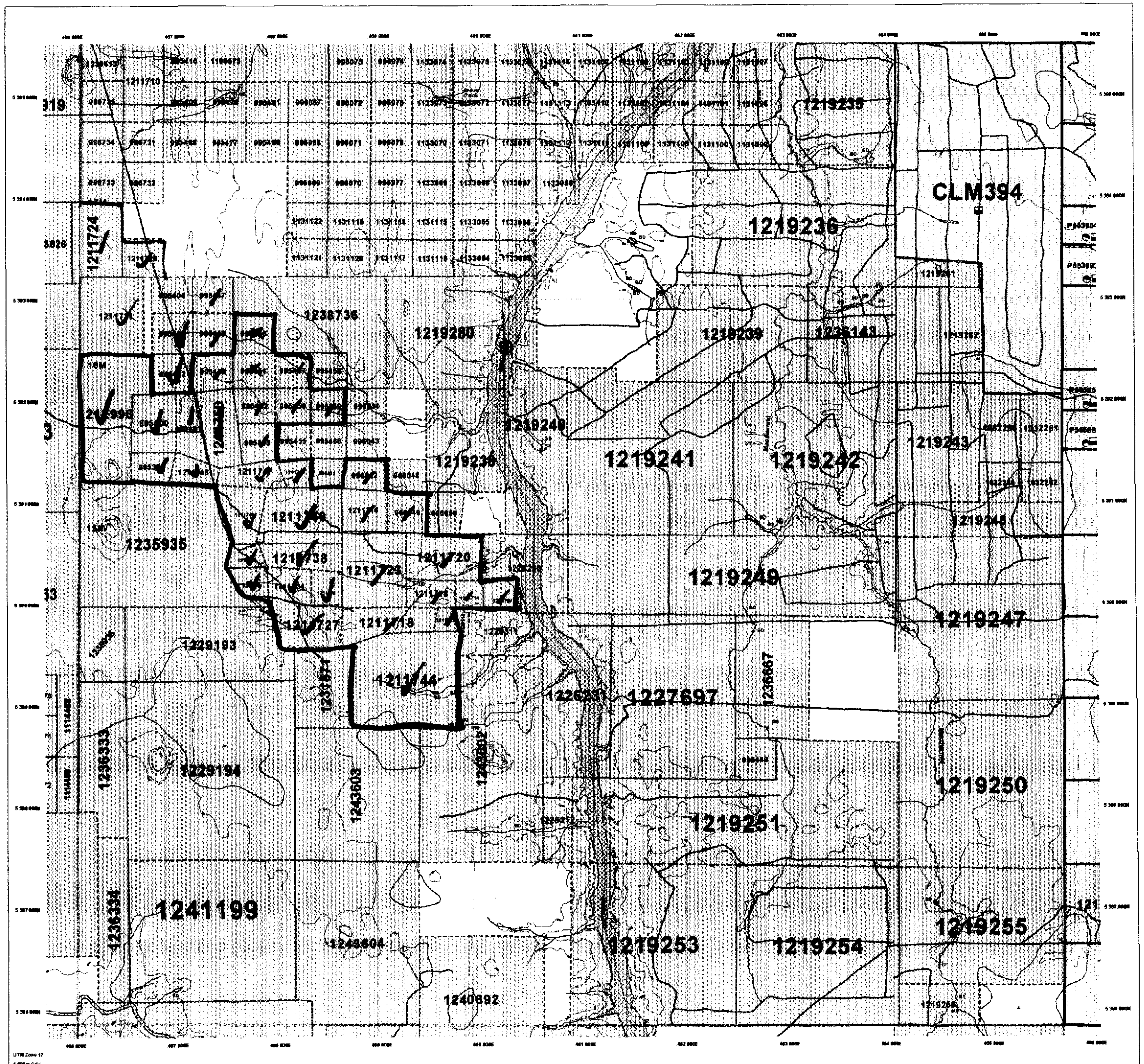
Mining Division	Porcupine
Land Titles/Registry Division	COCHRANE
Ministry of Natural Resources District	TIMMINS

TOPOGRAPHIC

LAND TENURE

LAND TENURE WITHDRAWALS

IMPORTANT NOTICES



LAND TENURE WITHDRAWAL DESCRIPTIONS

IMPORTANT NOTICES

General Information and Limitations

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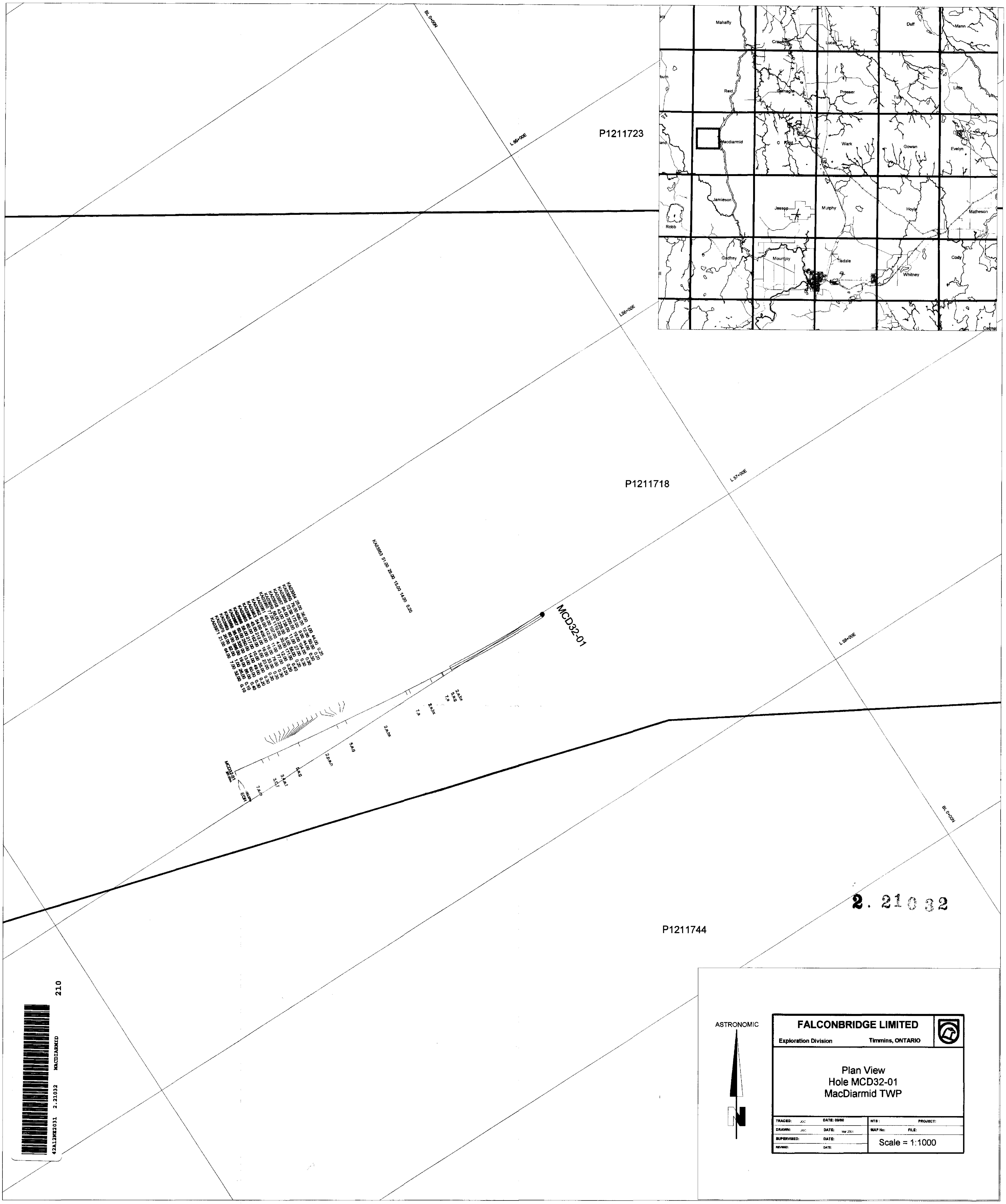

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L 55+00E
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Mahaffy
Reid
Carnegie
Prosser
Macdiarmid
Wark
Gowan
Evelyn
Jamieson
Robb
Jessop
Murphy
Hoyle
Matheson
Godfrey
Mountjoy
Tisdale
Whitney
Cody
Duff
Mann
Lucas
Little
ASTRONOMIC
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FALCONBRIDGE LIMITED
Exploration Division
Timmins, ONTARIO
Plan View
Hole MCD32-01
MacDiarmid TWP
Scale = 1:1000

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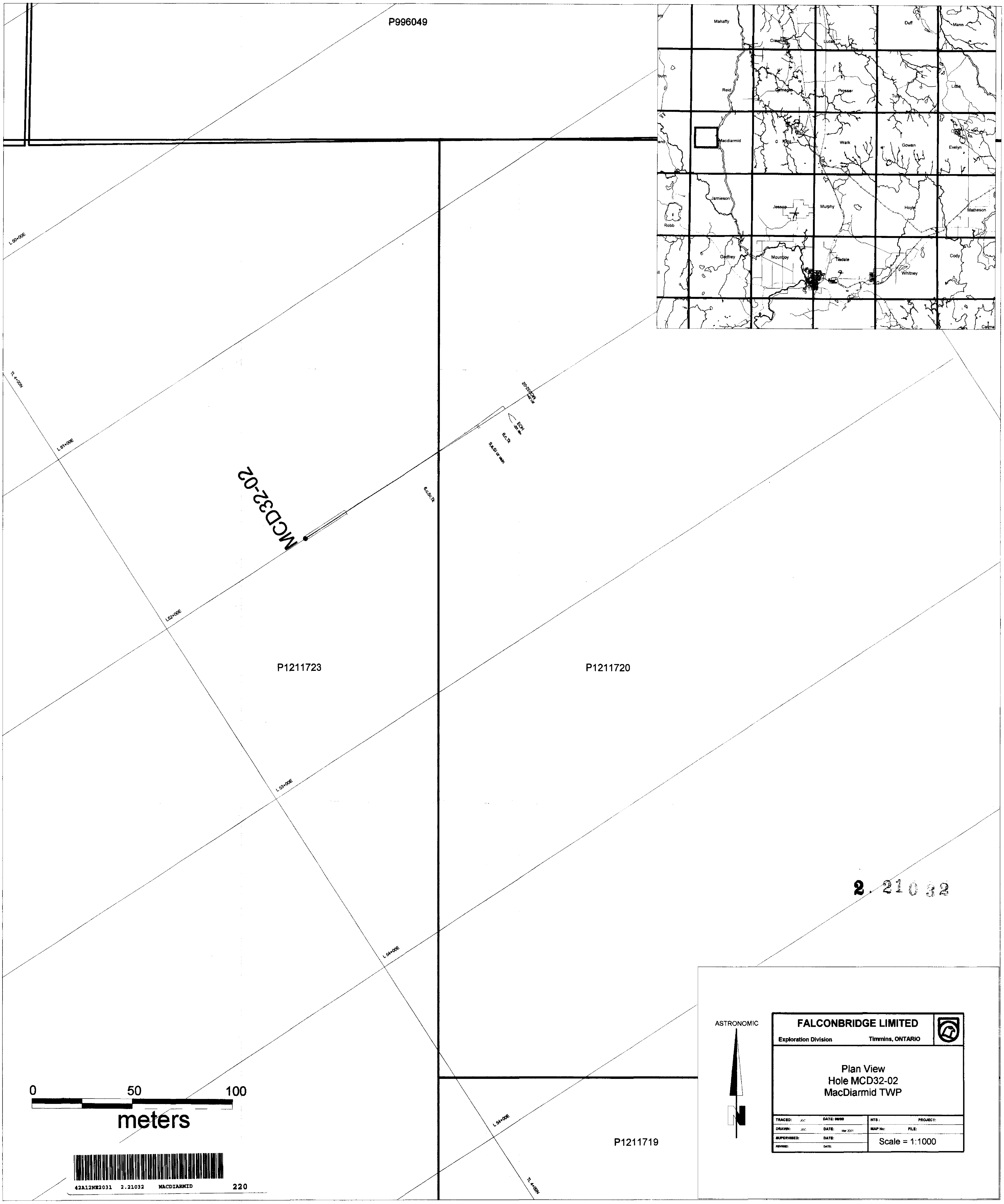
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TL 4+00N
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Exploration Division
Timmins, ONTARIO
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MacDiarmid TWP
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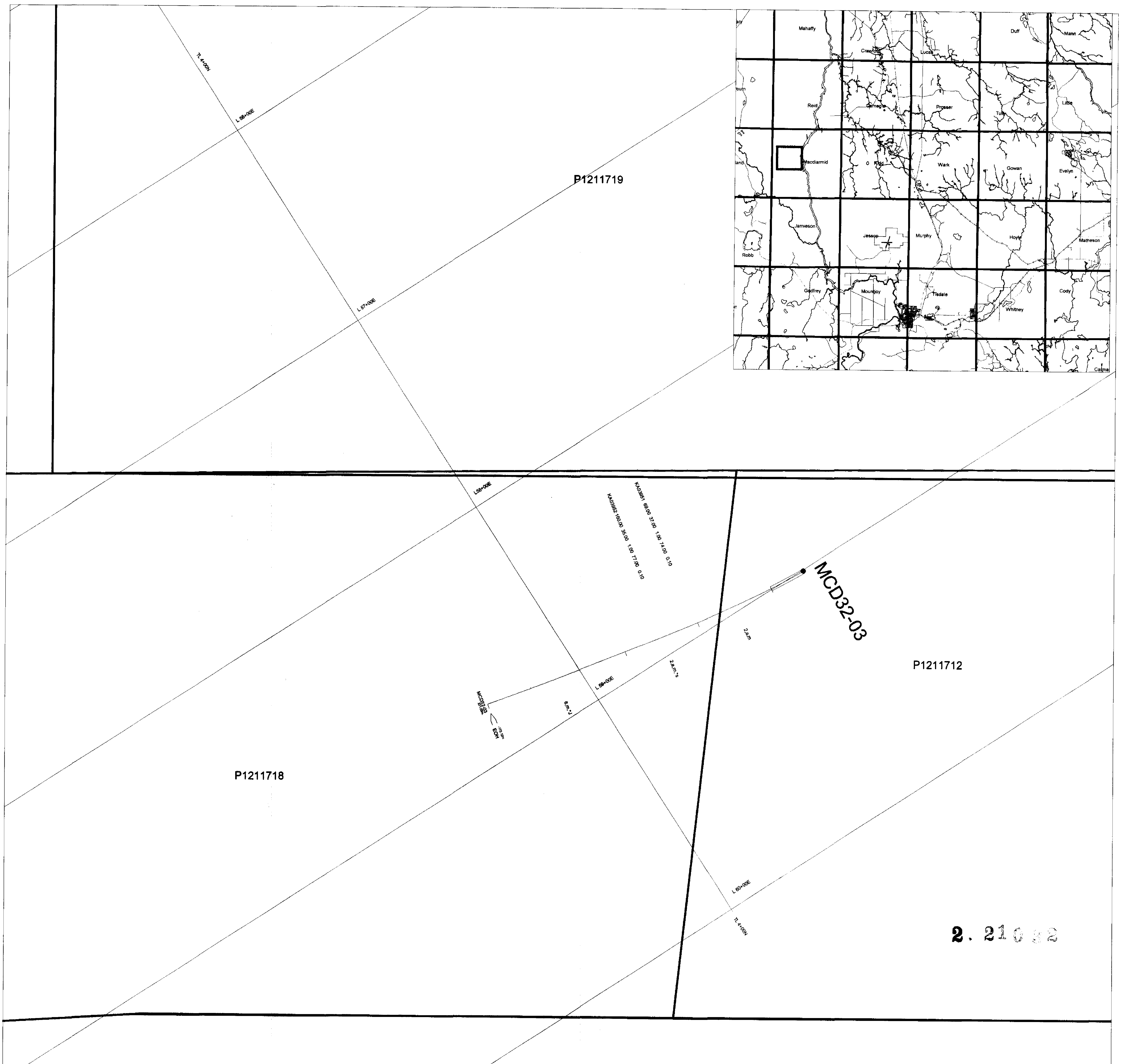
42A12NE2031 2.21032 MACDIARMID 220



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ASTRONOMIC

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FALCONBRIDGE LIMITED

Exploration Division — Timmins, ONTARIO

Plan View
Hole MCD32-03
MacDiarmid TWP

TRACED: JOC	DATE: 09/00	NTS:	PROJECT:
DRAWN: JOC	DATE: Mar 2001	MAP No:	FILE:
SUPERVISED:	DATE:	Scale = 1:1000	
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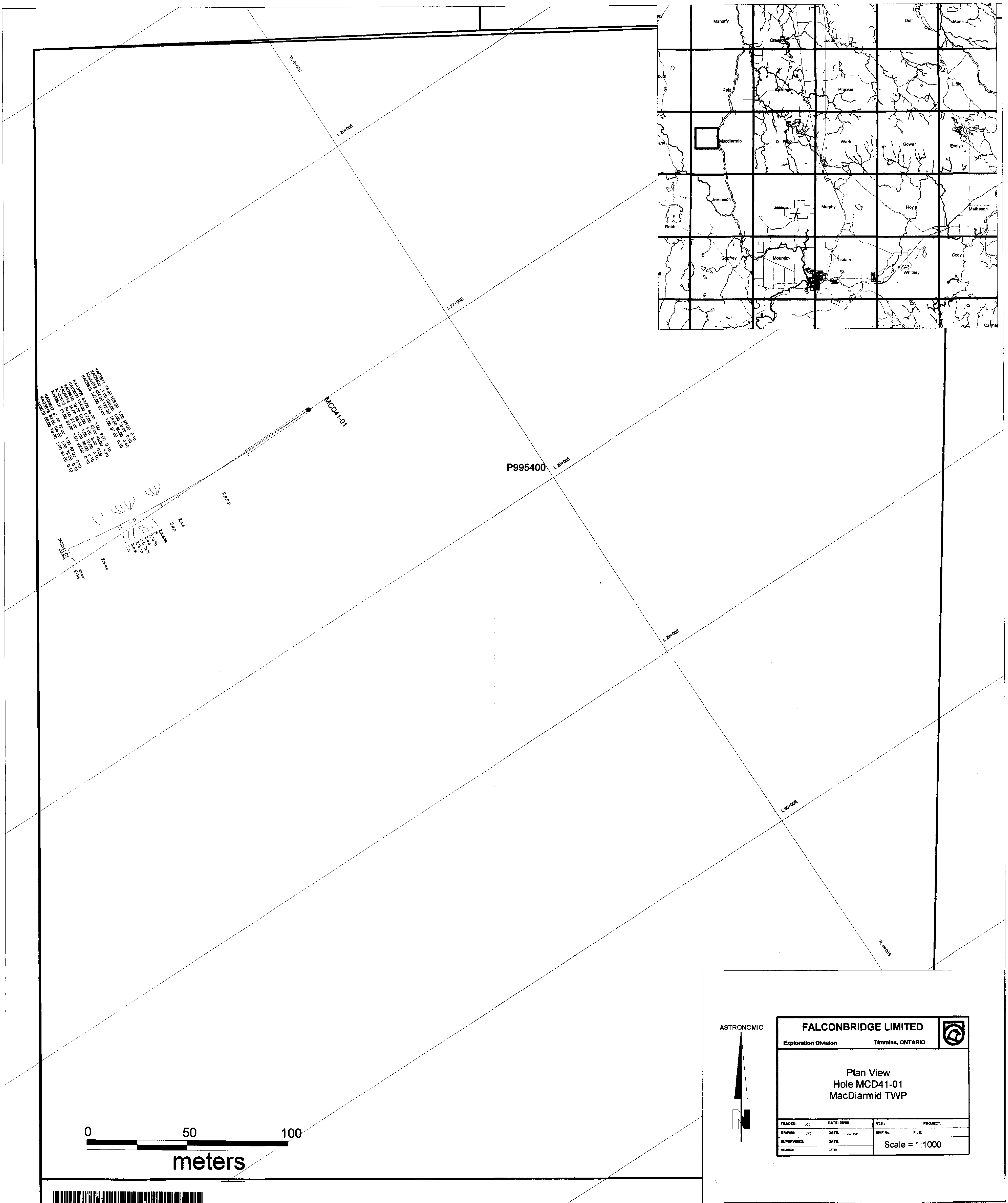

FALCONBRIDGE LIMITED

Exploration Division **Timmins, ONTARIO**

Plan View
Hole MCD41-01
MacDiarmid TWP

TRACED: JGC	DATE: 09/00	NTS :	PROJECT:
DRAWN: JGC	DATE: Mar 2001	MAP No:	FILE:
SUPERVISED:	DATE:	Scale = 1:1000	
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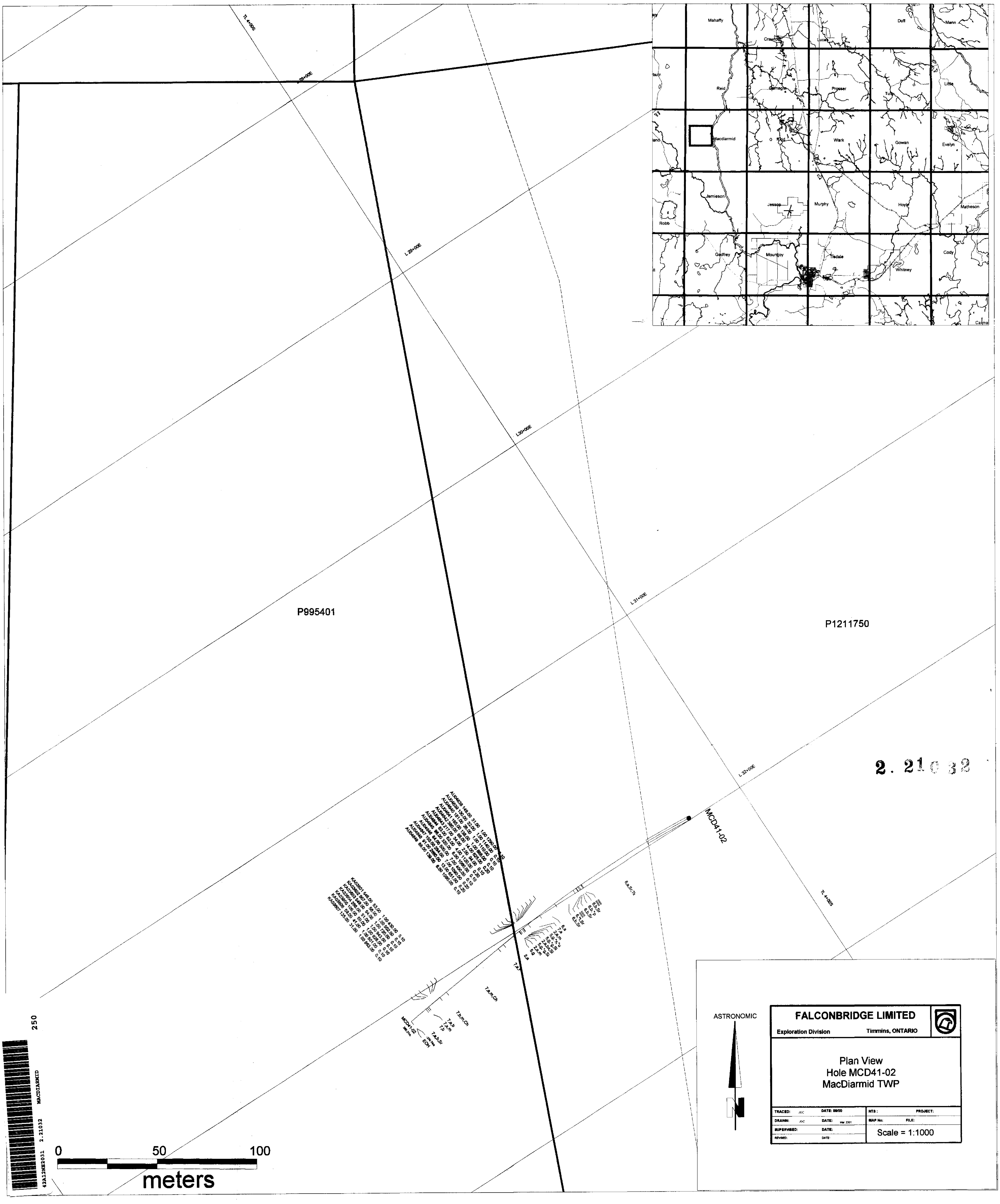
42A12NE2031 2.21032 MACDIARMID 240



Mahaffy
Duff
Mann
Reid
Carnegie
Prosser
Little
Macdiarmid
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Gowan
Evelyn
Jamieson
Jessop
Murphy
Hoyle
Matheson
Robb
Godfrey
Mountjoy
Tisdale
Whitney
Cody
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L30+00E
L 31+00E
L 32+00E
TL 4+00S
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MCD41-02
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FALCONBRIDGE LIMITED
Exploration Division
Timmins, ONTARIO
Plan View
Hole MCD41-02
MacDiarmid TWP
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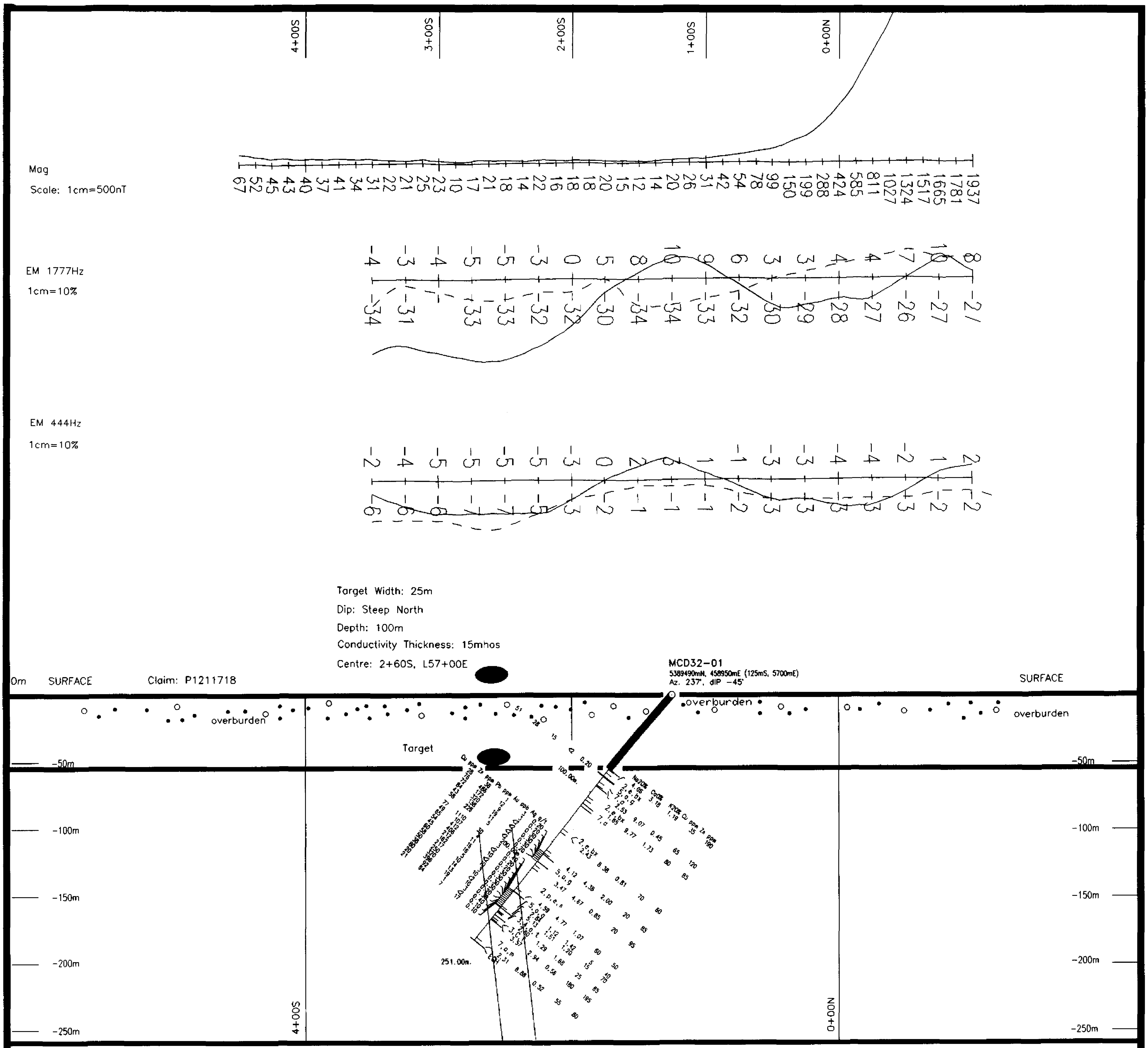
42A12NE2031 2.21032 MACDIARMID



Target Property AQ19

SectrEM Target 608a

KIDD/HBED/EAL JV GEOCHEM TABLE MCD32-01

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	LOI %	SUM %	Y PPM
KA03909	77.00	80.00	3.0	64.71	14.90	3.18	2.62	4.06	1.19	5.54	0.60	0.17	0.18	2.33	99.48	20
KA03910	89.00	92.00	3.0	50.45	15.05	9.07	5.44	2.53	0.45	11.10	1.41	0.20	0.19	3.68	99.57	15
KA03911	104.00	107.00	3.0	48.11	15.66	9.77	7.51	1.65	1.73	10.58	0.78	0.10	0.18	3.65	99.72	10
KA03912	137.00	140.00	3.0	54.82	15.20	8.38	5.85	2.43	0.81	8.79	0.78	0.11	0.15	2.52	99.84	15
KA03913	158.00	161.00	3.0	62.91	15.04	4.38	1.76	4.12	2.00	4.57	0.62	0.16	0.14	3.91	99.61	15
KA03914	173.00	176.00	3.0	61.70	15.36	4.67	3.11	3.47	0.85	7.02	0.67	0.19	0.10	2.55	99.69	20
KA03915	197.00	200.00	3.0	62.92	15.25	4.77	1.89	4.59	1.07	5.01	0.80	0.17	0.13	3.34	99.74	15
KA03916	215.60	215.70	0.1	81.77	8.75	1.12	0.31	2.84	1.42	2.11	0.16	0.06	0.04	0.96	99.54	20
KA03917	220.25	220.50	0.2	70.61	13.83	1.51	0.67	5.13	1.20	4.68	0.32	0.08	0.10	1.49	99.62	40
KA03918	221.35	221.70	0.3	79.48	9.51	1.29	0.29	2.60	1.68	2.92	0.30	0.10	0.03	1.54	99.74	20
KA03919	227.00	228.50	1.5	61.85	14.41	2.94	3.22	3.57	0.56	9.34	0.82	0.22	0.17	2.58	99.68	25
KA03920	248.00	251.00	3.0	48.33	15.50	8.88	7.12	2.31	0.52	12.50	1.38	0.22	0.17	2.88	99.79	15

SAMPL. No.	ZR PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM	CO PPM	S PPM	V PPM	BE PPM	SC PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
KA03909	140	35	190	30	165	2,e,bx	3(j)	177	20	0.02	80	5	10	<10	0.53	0.21	11	34	47
KA03910	110	65	120	60	190	7,o,m	7jw	125	35	0.01	185	10	20	10	0.54	0.60	11	34	47
KA03911	50	80	85	130	180	2,e,bx	2(j)u	119	40	0.03	180	5	25	<10	0.63	0.62	17	45	52
KA03912	80	70	60	110	220	2,e,bx	2(j)w	131	35	0.03	155	5	20	<10	0.61	0.55	19	38	25
KA03913	140	20	85	25	165	2,bx	3j	143	15	1.50	75	5	10	<10	0.48	0.29	14	31	21
KA03914	160	20	95	25	145	2,p,e,	3j	171	15	0.12	80	5	10	<10	0.51	0.30	8	33	27
KA03915	140	60	50	25	175	2,m,e	3j	146	15	1.13	75	5	10	<10	0.47	0.31	13	24	11
KA03916	200	5	40	10	600	5,a,Si	5	163	<5	0.38	5	<5	5	<10	0.26	0.13	32	30	14
KA03917	340	15	70	<5	100	3,a,t	4jB	176	<5	0.19	5	5	5	<10	0.25	0.11	7	22	14
KA03918	200	25	85	5	250	4,o,t	4jB	171	<5	0.75	10	<5	5	<10	0.19	0.14	17	34	33
KA03919	200	180	195	10	120	3,C,f	3j	204	15	0.68	80	5	10	<10	0.45	0.20	3	37	55
KA03920	90	55	80	95	210	7,o,m	7(j)u	132	40	0.16	200	5	25	10	0.58	0.57	13	41	35

KIDD/HBED/EAL JV ASSAYS TABLE MCD32-01

SAMPL. No.	FROM (M)	TO (M)	Int (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Ga %	ROCK T
KA03953	83.30	83.85	0.5	51	28	15	14	<2	0.2							5,o,g
KA03954	161.00	162.50	1.5	28	36	1	44	3	0.2							2,e,bx
KA03955	162.50	164.00	1.5	76	486	12	50	3	0.2							5,o,g
KA03956	164.00	165.50	1.5	72	172	9	44	<2	0.3							5,o,g
KA03957	165.50	167.00	1.5	84	320	19	104	<2	0.3							5,o,g
KA03958	167.00	168.50	1.5	43	138	11	27	<2	0.3							5,o,g
KA03959	168.50	170.00	1.5	58	228	5	58	<2	0.2							5,o,g
KA03960	200.45	201.50	1.1	77	1110	30	171	3	0.4							5,o,g
KA03961	201.50	203.00	1.5	49	107	4	12	<2	0.2							5,o,g
KA03962	203.00	204.50	1.5	65	412	11	77	10	0.2							5,o,g
KA03963	204.50	206.00	1.5	54	406	16	76	<2	0.3							5,o,g
KA03964	206.00	207.50	1.5	45	212	16	33	10	0.3							5,o,g
KA03965	207.50	209.00	1.5	60	162	5	23	3	0.3							5,o,g
KA03966	209.00	210.50	1.5	58	217	10	35	10	0.3							5,o,g
KA03967	210.50	212.00	1.5	50	250	14	49	<2	0.2							5,o,g
KA03968	212.00	213.50	1.5	38	320	13	60	10	0.3							5,o,g
KA03969	213.50	215.00	1.5	80	396	19	86	3	0.4							5,o,g
KA03970	215.00	216.50	1.5	20	92	1	26	<2	0.1							5,o -
KA03971	216.50	217.30	0.8	21	64	7	32	17	0.1							5,o,QV

FALCONBRIDGE LIMITED

Exploration Division Timmins ONTARIO

ROTATED SECTIION LOOKING 327°

DDH MCD32-01

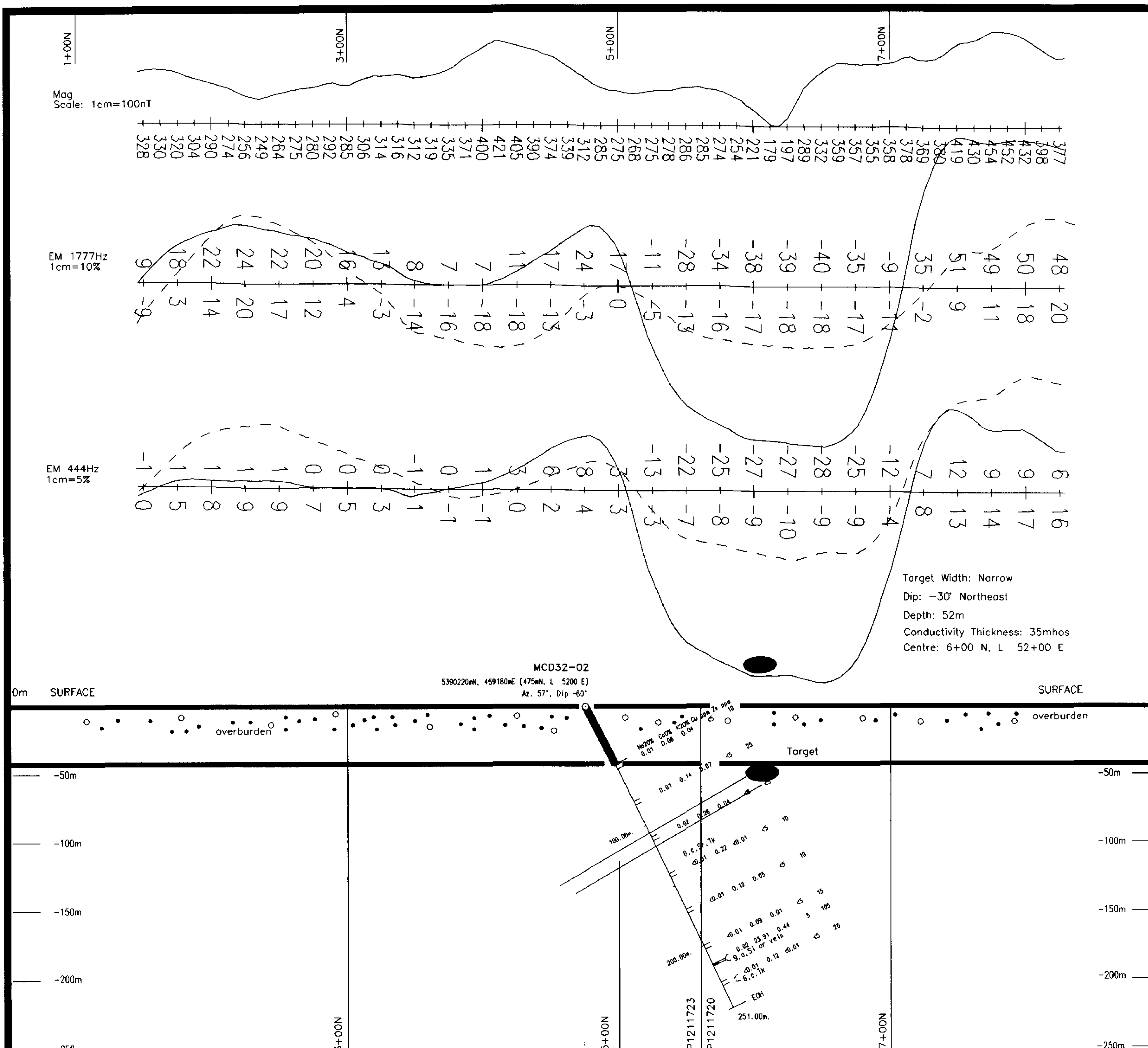
GRID 99MCD33

Az 237° MacDiarmid Twp.

Target Property #: AQ19

SCALE 1:2,500 (metres) 0 28 56 84 112

Project #: 435



Target Property AQ19

SectrEM Target 603

KIDD/HBED/EAL JV MCD32-02																																			
SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	LOI %	SUM %	Y PPM	ZR PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM	CO PPM	S PPM	V PPM	BE PPM	SC PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT03697	50.00	53.00	3.0	33.46	0.57	0.06	41.38	0.01	0.04	6.45	0.02	0.01	0.09	17.16	99.25	<5	<10	<5	10	1215	3340	6,c,Sr	6M!	518	65	<0.01	10	<5	5	<10	0.95	0.11	29	100	1000
AT03698	80.00	83.00	3.0	33.67	0.49	0.14	41.47	0.01	0.07	6.57	0.02	0.01	0.10	16.72	99.27	<5	<10	<5	25	1325	2985	6,c,Sr	6M!	223	65	<0.01	10	<5	5	<10	0.95	0.29	32	100	2500
AT03699	110.00	113.00	3.0	34.11	0.73	0.26	41.46	0.02	0.04	6.38	0.03	<0.01	0.10	16.18	99.32	<5	<10	<5	<5	755	4080	6,c,Sr	6M!	228	60	<0.01	15	<5	5	<10	0.95	0.36	18	99	250
AT03700	140.00	143.00	3.0	35.14	0.62	0.22	42.13	<0.01	<0.01	5.92	0.03	0.02	0.09	14.99	99.18	<5	<10	<5	10	1285	3655	6,c,Sr	6M!	258	65	<0.01	15	<5	5	<10	0.95	0.35	31	99	1000
KA03801	170.00	173.00	3.0	35.48	1.00	0.12	42.56	<0.01	0.05	5.86	0.04	0.01	0.10	14.24	99.49	<5	<10	<5	10	1365	3205	6,c,Sr	6M!	556	70	<0.01	20	<5	5	<10	0.95	0.12	32	100	1000
KA03802	200.00	203.00	3.0	35.13	0.65	0.09	42.36	<0.01	0.01	6.71	0.03	0.01	0.11	14.10	99.21	<5	<10	<5	15	1410	2465	6,c,Sr	6M!	591	65	<0.01	15	<5	5	<10	0.95	0.14	33	100	1500
KA03804	215.82	215.97	0.2	40.40	12.27	23.91	7.21	0.02	0.44	12.13	0.79	0.08	0.30	1.89	99.44	15	60	5	105	110	225	9,o,SI	7(h)v	50	40	0.04	170	5	25	10	0.59	1.95	15	24	5250
KA03803	230.00	233.00	3.0	34.96	0.52	0.12	41.48	<0.01	<0.01	7.77	0.03	0.01	0.11	14.16	99.18	<5	<10	<5	20	1670	2770	6,c,Sr	6M!	371	60	<0.01	20	<5	5	<10	0.93	0.23	40	100	2000

FALCONBRIDGE LIMITED

Exploration Division — Timmins ONTARIO

ROTATED SECTIION LOOKING 327°

DDH MCD32-02

GRID 99MCD33

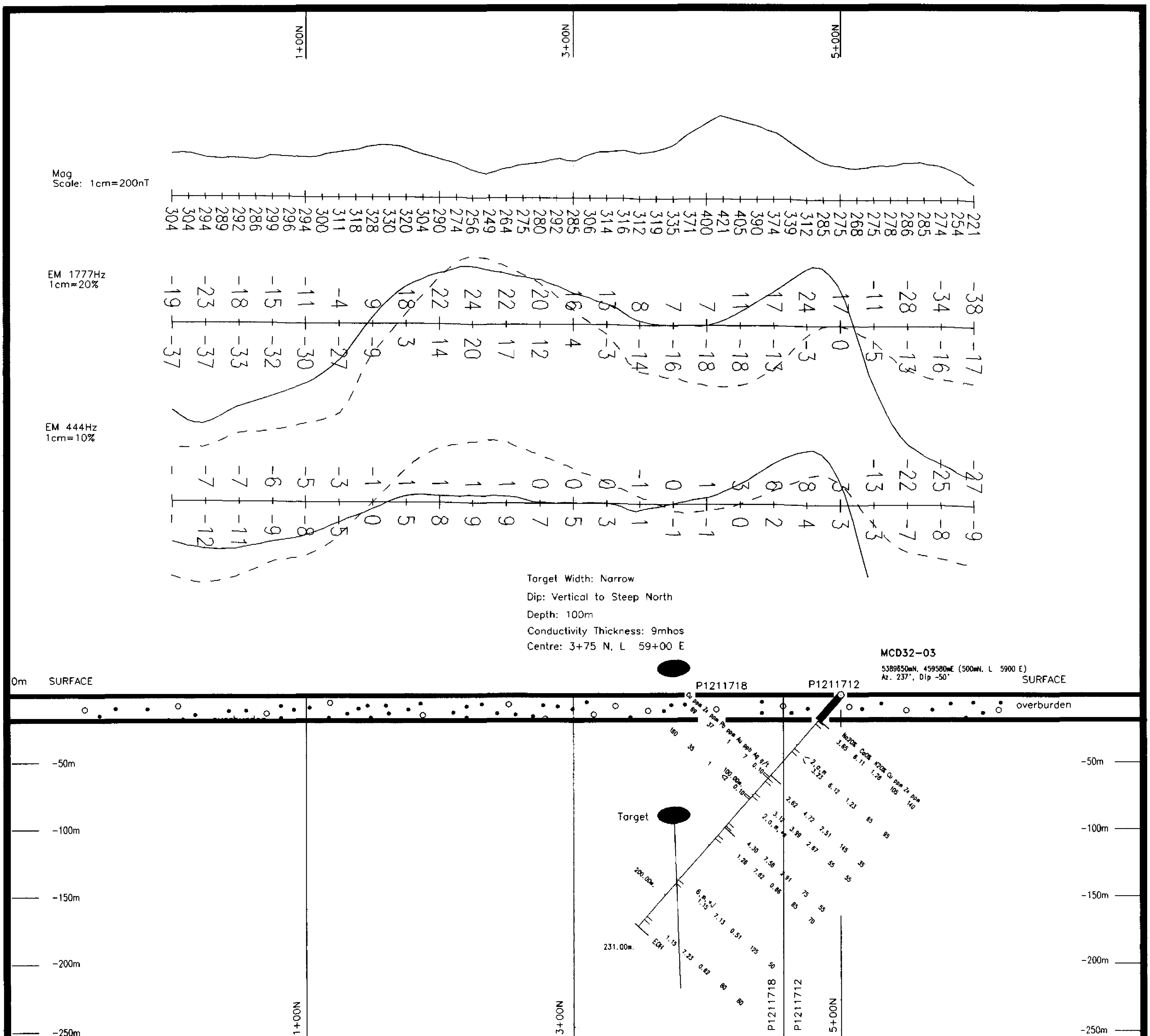
MacDiarmid Twp.

Target Property #: AQ19

Project #: 435

SCALE 1:2,500 (metres) 0 28 56 84 112

42A12NE2031 2.21032 MACDIARMID 270



Target Property AQ19

SectrEM Target 603b

KIDD/HBED/EAL JV GEOCHEM TABLE MCD32-03																		
SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	LOI %	SUM %	Y PPM	ZR PPM	CU PPM
KA03901	26.00	29.00	3.0	55.60	15.74	6.11	4.81	3.65	1.28	9.05	0.81	0.13	0.17	2.39	99.74	10	110	105
KA03902	53.00	56.00	3.0	55.01	15.80	6.12	5.07	3.23	1.23	9.38	0.80	0.13	0.14	2.94	99.85	10	110	65
KA03903	83.00	86.00	3.0	54.33	15.86	4.72	6.22	2.62	2.51	9.22	0.87	0.13	0.09	2.92	99.49	10	110	145
KA03904	98.00	101.00	3.0	55.27	16.11	3.99	6.33	3.12	2.67	8.66	0.94	0.15	0.12	2.12	99.48	15	120	55
KA03905	128.00	131.00	3.0	54.27	14.68	7.58	4.37	4.30	2.91	8.28	0.88	0.14	0.15	2.01	99.57	10	110	75
KA03906	140.00	143.00	3.0	50.79	9.89	7.62	16.17	1.26	0.66	10.82	0.52	0.10	0.18	1.24	99.25	10	60	85
KA03907	185.00	188.00	3.0	50.49	8.97	7.13	18.07	1.15	0.51	11.47	0.52	0.08	0.19	0.88	99.46	10	60	125
KA03908	221.00	224.00	3.0	50.46	9.30	7.23	17.48	1.15	0.62	10.92	0.52	0.09	0.19	1.33	99.29	10	60	80

SAMPL. No.	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM	CO PPM	S PPM	V PPM	BE PPM	SC PPM	NB PPM	MGO/F	CA/AL	NI/MGO	ISHIKW	ZN/NA2
KA03901	140	70	170	2,o,m	3j	143	30	0.02	135	5	20	10	0.56	0.39	15	38	38
KA03902	95	70	160	2,o,m	3j	149	30	<0.01	135	5	20	<10	0.56	0.39	14	40	29
KA03903	35	90	190	2,o,m,	2jw	161	35	0.02	155	5	20	<10	0.62	0.30	14	54	13
KA03904	55	65	135	2,m,ts	2jw	165	30	<0.01	160	5	20	<10	0.64	0.25	10	56	18
KA03905	55	65	110	2,o,m	3j	99	25	<0.01	140	5	20	10	0.56	0.52	15	38	13
KA03906	70	390	2355	7,6,m,	6H	104	50	<0.01	150	5	25	<10	0.78	0.77	24	65	56
KA03907	50	475	2805	6,m,J	6J	102	60	<0.01	150	5	25	<10	0.79	0.79	26	69	43
KA03908	80	470	2705	6,m,J	6H	103	55	<0.01	150	5	25	<10	0.80	0.78	27	68	70

KIDD/HBED/EAL JV ASSAYS TABLE MCD32-03																
SAMPL. No.	FROM (M)	TO (M)	Int (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK T
KA03951	81.50	83.00	1.5	69	37	1	74	7	0.1							2,m,ts
KA03952	102.90	104.40	1.5	160	35	1	77	<2	0.1							2,m,ts

FALCONBRIDGE LIMITED

Exploration Division Timmins ONTARIO

ROTATED SECTIION LOOKING 327°

DDH MCD32-03

GRID 99MCD33

Az 237° MacDiarmid Twp.

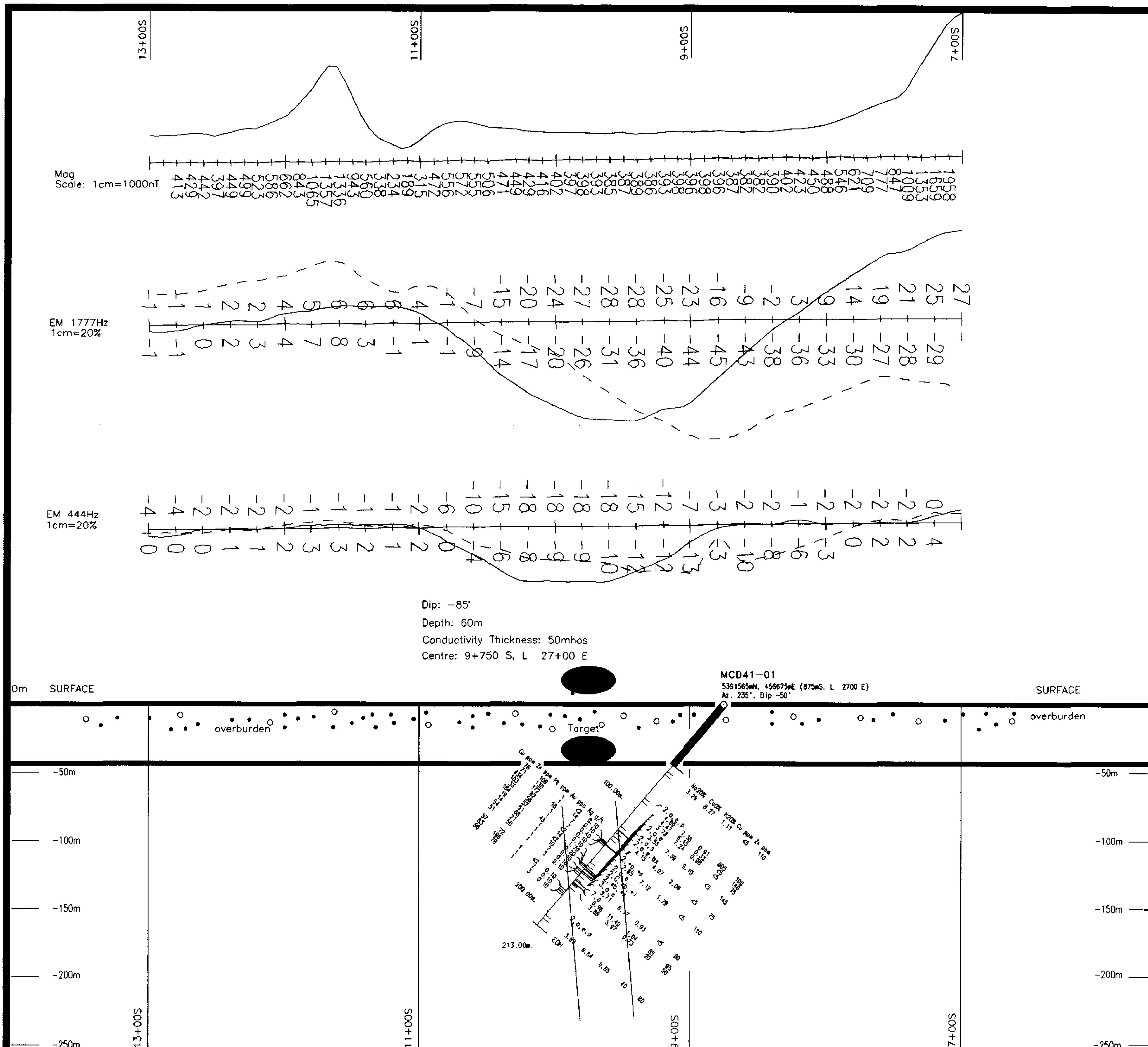
Target Property #: AQ19

Project #: 435

SCALE 1:2,500 (metres)

0 28 56 84 112

42A12NE2031 2.21032 MACDIARMID



Target Property JV18
SpectrEM Target 606a
Claim: P995400

KIDD/HBED/EAL JV MCD41-01

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	LOI %	SUM %	Y PPM	ZR PPM
AT03685	64.00	67.00	3.0	57.04	17.33	8.27	2.32	3.29	1.11	6.00	1.22	0.18	0.16	2.51	99.43	20	130
AT03686	90.00	93.00	3.0	58.81	17.43	7.38	1.81	4.09	0.91	5.47	1.15	0.17	0.09	2.02	99.33	20	120
AT03687	117.00	120.00	3.0	57.97	16.32	6.45	2.50	4.47	0.33	7.27	1.22	0.17	0.15	2.64	99.49	20	130
AT03688	123.00	126.00	3.0	55.39	15.04	7.24	3.05	3.73	0.98	7.47	1.15	0.17	0.19	5.24	99.65	20	120
AT03689	126.00	129.00	3.0	47.38	17.80	7.39	3.91	3.55	0.10	13.30	1.71	0.21	0.42	3.67	99.44	30	120
AT03691	152.00	155.00	3.0	64.14	15.39	4.07	0.92	4.15	2.06	5.68	0.96	0.32	0.11	1.91	99.71	40	250
AT03692	158.25	158.83	0.6	52.93	16.02	7.12	4.53	2.65	1.79	7.87	0.81	0.13	0.21	5.36	99.42	15	120
AT03693	165.05	168.05	3.0	59.15	16.53	6.17	2.95	3.71	0.93	6.25	0.72	0.14	0.10	2.91	99.56	20	160
AT03694	169.21	172.21	3.0	46.46	16.15	11.40	8.77	0.98	1.04	10.59	0.66	0.05	0.17	3.47	99.74	15	30
AT03695	173.00	176.00	3.0	60.17	15.42	5.97	2.98	3.88	0.73	6.78	0.70	0.14	0.12	2.97	99.86	20	140
AT03696	203.00	206.00	3.0	60.85	14.89	6.84	2.99	3.69	0.65	6.32	0.68	0.14	0.11	2.68	99.84	20	140

SAMPL. No.	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM	CO PPM	S PPM	V PPM	BE PPM	SC PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT03685	<5	110	65	195	2,a,e,	2(j)w	137	35	0.22	165	5	20	<10	0.48	0.48	28	23	33
AT03686	605	100	80	225	2,a,e,	2(j)w	141	35	0.11	160	5	20	10	0.44	0.42	44	19	24
AT03687	<5	140	85	255	2,a,e,	2(j)w	145	35	0.13	155	5	25	<10	0.45	0.40	34	21	31
AT03688	<5	75	60	185	2,a,e	2(j)w	126	30	0.09	145	5	20	<10	0.49	0.48	20	27	20
AT03689	<5	145	75	220	2,a,e,	2(h)w	161	45	0.55	250	5	35	10	0.41	0.42	19	27	41
AT03691	<5	75	10	90	2,a,e,	3(j)y	150	20	0.24	30	5	15	10	0.28	0.26	11	27	18
AT03692	<5	110	75	135	2,a,e	3j	139	30	0.10	130	5	20	<10	0.58	0.44	17	39	42
AT03693	<5	80	80	120	2,*b,*	3j	153	30	0.04	100	5	15	<10	0.53	0.37	27	28	22
AT03694	85	95	165	255	7,a	7hu	120	40	0.12	165	<5	25	10	0.66	0.71	19	44	97
AT03695	20	90	60	125	2,a,e,	3(j)	146	25	0.50	100	5	15	10	0.51	0.39	20	27	23
AT03696	40	80	55	160	2,a,e,	3(j)	133	20	0.27	95	5	15	10	0.53	0.46	18	26	22

KIDD/HBED/EAL JV MCD41-01

SAMPL. No.	FROM (M)	TO (M)	Int (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gr %	ROCK T
KA03611	133.00	133.79	0.8	76	108	1	96	<2	0.1		3					2,a,e
KA03620	133.79	134.44	0.7	71	130	1	79	14	0.1		3					Qtvs
KA03612	134.44	134.79	0.3	434	172	18	95	7	0.4		20					2,a,s
KA03613	134.79	136.00	1.2	103	92	1	97	7	0.1		0.5					2,a,e
KA03608	156.00	156.96	1.0	33	56	1	9	<2	0.1		3.5		0.2			2,a,e,
KA03609	156.96	157.12	0.2	184	57	43	49	14	1.7		50		0.1			Qtvs
KA03610	157.12	158.25	1.1	19	51	1	8	<2	0.2		2.5					2,*a,*
KA03614	160.75	162.05	1.3	14	68	1	10	10	0.1		3					2,*b,*
KA03615	162.05	163.55	1.5	54	21	1	96	7	0.1		3					3,a,e
KA03616	163.55	165.05	1.5	51	50	1	92	3	0.1		0.2					3,a,e
KA03617	179.75	181.25	1.5	57	72	1	87	<2	0.1		0.1					2,a,e,
KA03618	181.25	182.75	1.5	83	196	1	72	7	0.1		1					2,a,e,
KA03619	182.75	184.25	1.5	56	78	1	83	3	0.1							2,a,e,

42A12NE2031 2.21032 MACDIARMID 290

FALCONBRIDGE LIMITED

Exploration Division — Timmins ONTARIO

ROTATED SECTIION LOOKING 325°

DDH MCD41-01

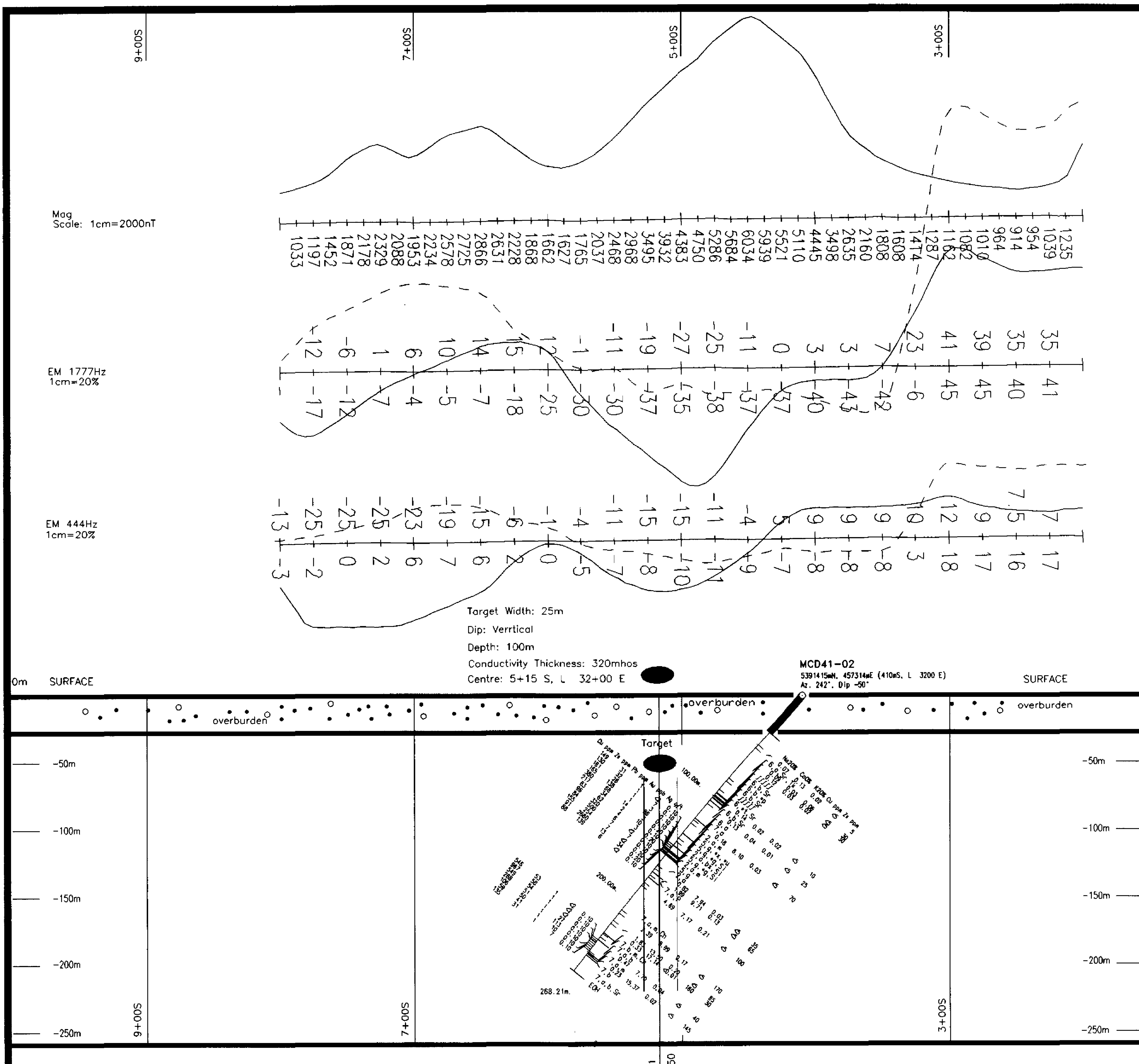
GRID 99MCD33

Az 235° — MacDiarmid Twp.

Target Property #: JV18

Project #: 36

SCALE 1:2,500 (metres)
0 28 56 84 112



Target Property AQ19

SectrEM Target 607

KIDD/HBED/EAL JV MCD41-02

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	TIO2 %	P2O5 %	MNO %	LOI %	SUM %	Y PPM	ZR PPM	CU PPM	ZN PPM	NI PPM	CR PPM	FIELD NAME	CHEM ID	ALUM	CO PPM	S PPM	V PPM	BE PPM	SC PPM	NB PPM	MGO#	CA/AL	NI/MGO	ISHIKW	ZN/NA2
AT03670	49.50	52.50	3.0	37.18	1.93	0.13	40.58	0.07	0.02	5.04	0.09	0.01	0.11	13.82	98.98	<5	10	<5	5	1015	5490	6,o,Sr	6M!	877	50	0.03	25	<5	5	<10	0.96	0.07	25	100	71
AT03671	82.50	85.50	3.0	36.04	1.31	0.03	40.90	0.09	0.06	6.79	0.06	0.02	0.12	13.71	99.13	<5	10	<5	30	1075	3070	6,o,Sr	6M!	728	60	<0.01	20	<5	5	<10	0.94	0.02	26	100	333
AT03672	93.50	96.50	3.0	36.03	1.28	0.03	40.78	0.12	0.02	6.99	0.07	0.01	0.11	13.71	99.13	<5	10	<5	30	1275	2840	6,b,Sr	6M!	753	65	<0.01	25	<5	5	<10	0.94	0.02	31	100	250
AT03673	104.30	107.30	3.0	37.02	1.78	0.02	40.26	0.14	0.02	6.47	0.09	0.01	0.08	13.44	99.33	<5	10	<5	10	1280	2245	6,b,Sr	6M!	989	60	<0.01	30	<5	5	<10	0.94	0.01	32	100	71
AT03674	123.60	126.60	3.0	37.10	2.09	0.04	38.68	0.13	0.01	8.30	0.10	0.01	0.11	12.87	99.24	<5	10	<5	25	1530	2275	6,o	6L!	1161	70	<0.01	35	<5	5	<10	0.92	0.02	40	100	192
AT03675	141.40	144.40	3.0	40.89	5.29	8.10	29.04	0.18	0.03	7.93	0.26	0.03	0.15	7.88	99.58	5	20	<5	70	1150	2310		1,6L	64	65	0.10	75	<5	15	<10	0.90	1.53	40	78	389
AT03676	167.00	170.00	3.0	44.67	8.08	7.94	22.55	0.82	0.03	10.06	0.39	0.03	0.11	5.03	99.71	10	30	<5	35	635	1990	2,o	1J	92	55	0.32	120	<5	20	<10	0.85	0.98	28	72	43
AT03677	173.00	176.00	3.0	47.30	10.19	9.71	15.48	1.99	0.13	10.93	0.48	0.05	0.16	3.39	99.81	15	30	<5	65	170	685	7,o,P	6H	86	50	<0.01	155	<5	25	<10	0.77	0.95	11	57	33
AT03678	183.00	186.00	3.0	50.90	14.56	7.17	5.00	4.69	0.21	14.15	0.97	0.08	0.21	1.63	99.57	30	70	<5	100	10	35	7,o,Ch	7hv	121	40	0.16	225	5	25	10	0.46	0.49	2	31	21
AT03679	210.00	213.00	3.0	52.51	13.33	8.99	3.57	2.39	0.17	15.36	1.10	0.09	0.24	1.82	99.57	30	70	<5	170	10	80	7,o,Ch	7hv	115	40	0.09	245	5	25	<10	0.35	0.67	3	25	71
AT03680	220.00	223.00	3.0	47.68	18.27	13.50	8.00	1.83	0.20	9.51	0.39	0.03	0.17	2.00	99.58	10	30	<5	85	15	85	7,o,Ch	9hA	105	35	0.02	145	<5	25	<10	0.67	0.83	2	35	46
AT03681	232.75	235.75	3.0	49.04	5.06	17.14	18.10	0.33	<0.01	7.34	0.28	0.03	0.16	1.86	99.37	10	10	180	30	105	2165	7,b,m,	6J	29	45	0.02	155	<5	40	<10	0.86	3.37	6	51	91
AT03682	249.00	250.00	1.0	45.92	6.58	7.70	23.67	0.47	0.04	9.34	0.34	0.03	0.11	5.11	99.31	10	30	<5	40	740	1720	7,b	6J	80	60	0.25	90	<5	15	<10	0.86	1.17	31	74	85
AT03683	251.00	251.10	0.1	36.52	18.37	15.37	10.56	0.23	0.02	11.97	0.88	0.06	0.28	5.20	99.46	15	40	<5	145	160	185	7,o	7hu	118	45	0.06	190	5	30	<10	0.68	0.84	15	40	630

KIDD/HBED/EAL JV MCD41-02

SAMPL. No.	FROM (M)	TO (M)	Int (M)	Cu ppm	Zn ppm	Pb ppm	Ni ppm	Au ppb	Ag ppm	Est.Ni %	Est.Po %	Est.Py %	Est.Cp %	Est.Sp %	Est.Gn %	ROCK T
AU04638	147.90	149.40	1.5	149	31	1	1290	<2	0.1		0.5		0.1			2,o,m
AU04639	149.40	150.90	1.5	130	32	1	1140	7	0.1		0.5		0.1			2,o,m
AU04640	150.90	152.40	1.5	181	26	1	1110	3	0.1		3.5		0.1			2,o,m
AU04641	152.40	152.70	0.3	165	138	1	888	86	0.1		1					2,o,m
AU04642	152.70	153.17	0.5	380	68	14	625	3	0.2		8					5,g,vu
AU04643	153.17	153.95	0.8	217	34	2	94	10	0.1							5,g,vg
AU04644	153.95	154.95	1.0	83	62	4	1120	3	0.2		0.1					2,o,bx
AU04645	154.95	155.75	0.8	96	320	6	1060	<2	0.1		0.1					2,o,bx
AU04646	155.75	156.58	0.8	84	500	7	400	7	0.1		1					5,g,Si
AU04647	156.58	156.83	0.2	155	254	7	1090	<2	0.2							
AU04648	156.83	157.03	0.2	91	2660	13	651	34	0.2		0.5					5,g,s
AU04649	156.83	157.03	0.2	88	139	6	1090	<2	0.1							5,g,s
KA03601	238.50	240.00	1.5	546	53	1	430	<2	0.1		1.5		0.2			7,b
KA03602	240.00	241.50	1.5	967	58	1	502	<2	0.1		1		0.2			7,o
KA03603	241.00	243.00	2.0	549	54	1	720	<2	0.1		1		0.2			7,o
KA03604	243.00	244.50	1.5	288	51	1	943	27	0.1		1		0.2			7,o
KA03605	244.50	246.00	1.5	108	50	1	928	113	0.1		0.5		0.1			7,o
KA03606	246.00	247.50	1.5	59	41	1	801	10	0.1		1.5		0.1			7,b
KA03607	247.50	249.00	1.5	135	31	1	863	7	0.1		1					7,b

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Exploration Division — Timmins ONTARIO

ROTATED SECTIION LOOKING 332°

DDH MCD41-02

GRID 99MCD33

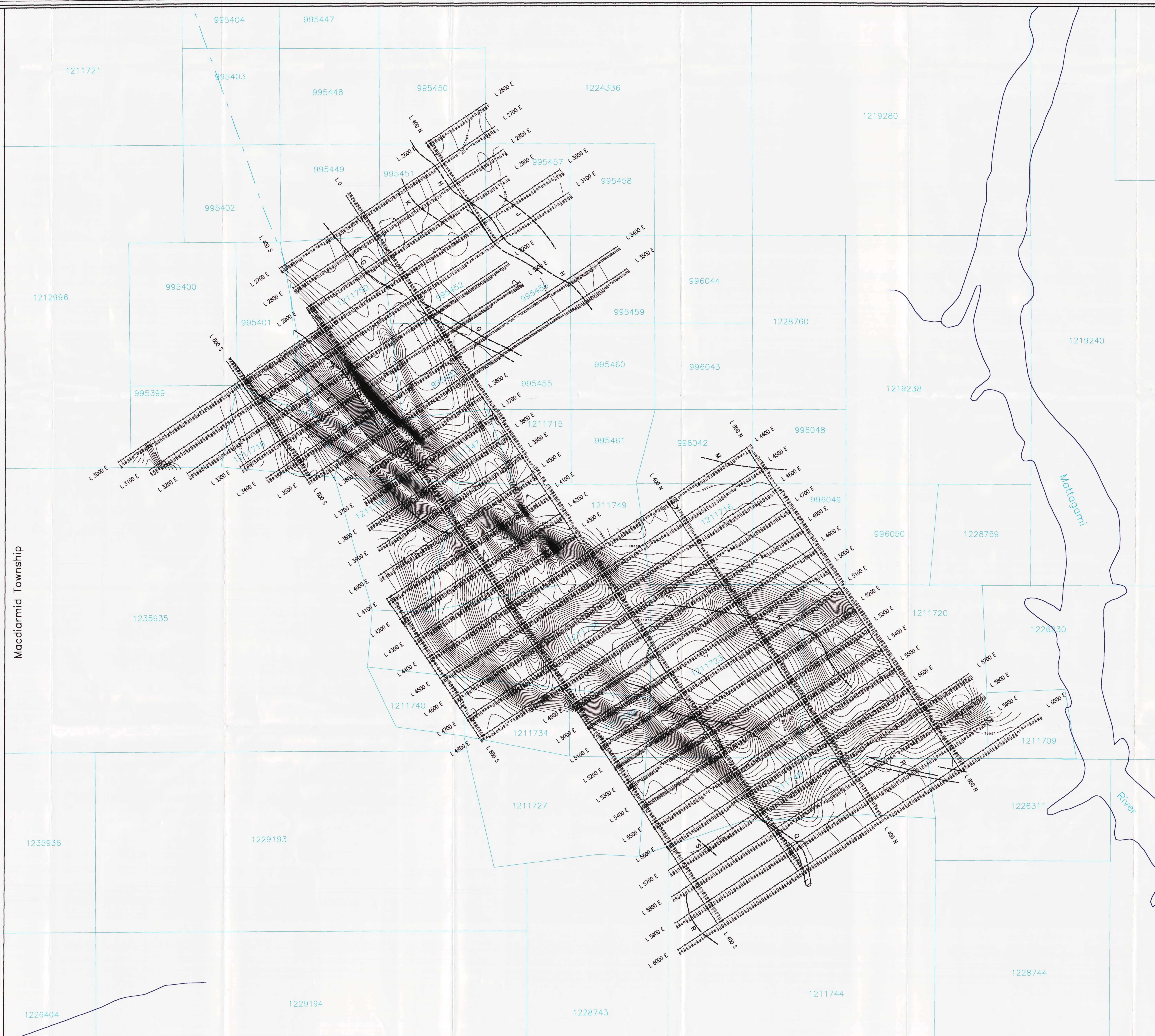
Az 242° — MacDiarmid Twp.

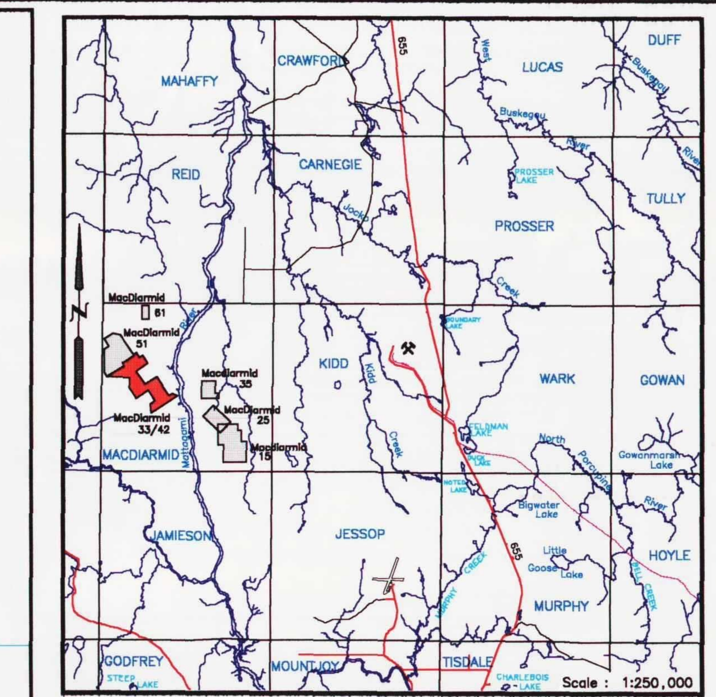
Target Property #: AQ19

Project #: 435

SCALE 1:2,500 (metres) 0 28 56 84 112

42A12NE2031 2.21032 MACDIARMID 300





LEGEND

Instrument : Scintrex IGS-2/MP-4
Type : Total Field Proton Precession
Datum Level : 59000 nT
Contour Interval : 200 nT
Gridded By : Geosoft Bigrid
Cell Size : 10.0 metres
Filter : 1 Pass 9 Point Hanning
— — — EM Anomaly, 444 Hertz

0 | 100 m | 200 m | 300 m | 400 m | 500 m

Scale : 1:5000

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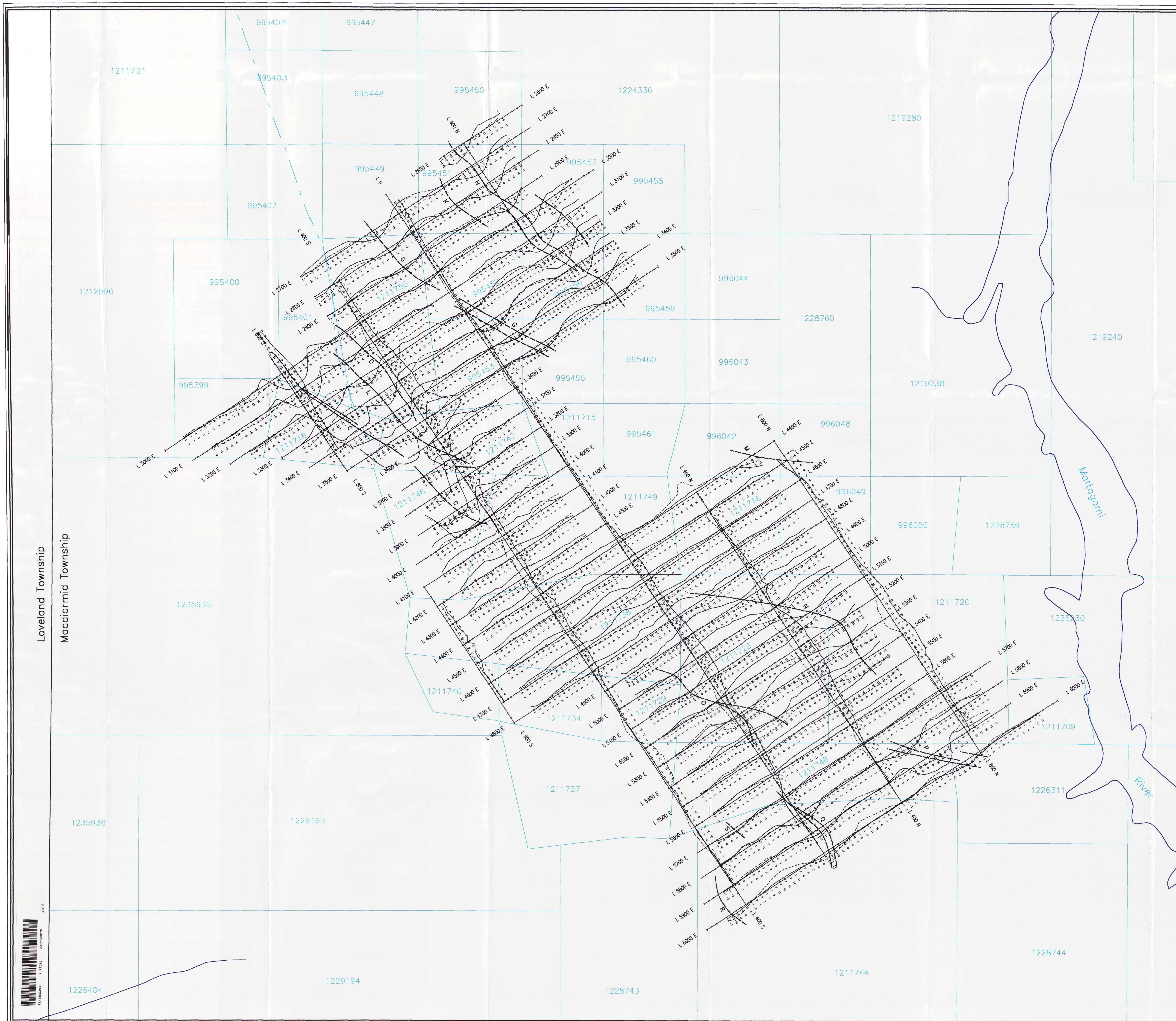
MAGNETIC SURVEY

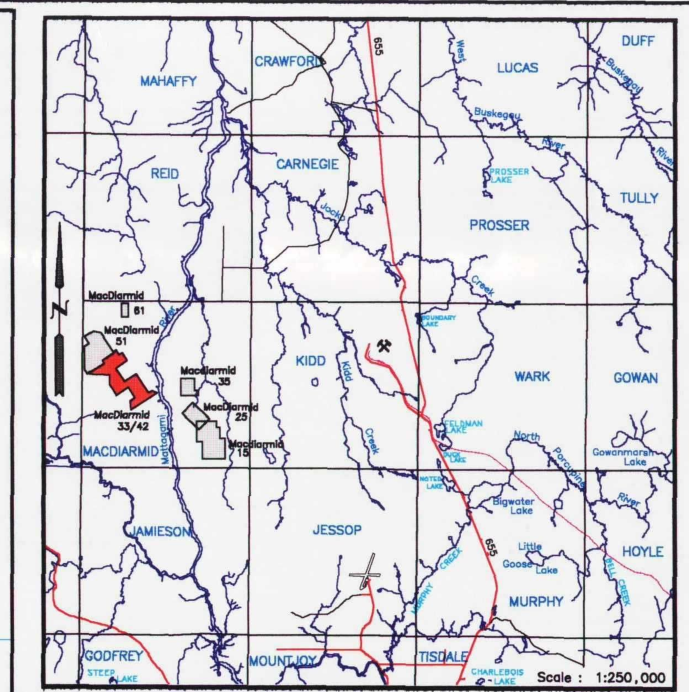
MACDIARMID 33/42

MACDIARMID TOWNSHIP

File : M51.XYZ	Date : August, 1999
NTS : 42-A/12	Proj # : 8036
WORK BY : Timmins Geophysics Ltd.	

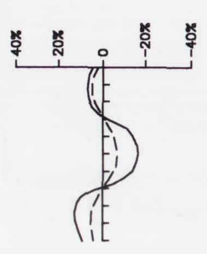

Loveland Township
Macdiarmid Township
Mattagami
River
INDEX MAP
Scale : 1:250,000
LEGEND
Instrument : Apex Parametrics MaxMin I-5
Coil Separation : 200 metres
Frequency : 222 Hertz
Profile Scale : 1cm = 20%
In-phase
Quadrature
2. 21032
0 100 m 200 m 300 m 400 m 500 m
Scale : 1:5000
FALCONBRIDGE LIMITED
HLEM SURVEY (222 Hz)
MACDIARMID 33/42
MACDIARMID TOWNSHIP
File : M33HL.XYZ
Date : August, 1999
NTS : 42-A/12
Proj # : 8036
WORK BY : Timmins Geophysics Ltd.





LEGEND

Instrument : Apex Parametrics MaxMin I-5
Coil Separation : 200 metres
Frequency : 444 Hertz
Profile Scale : 1cm = 20%



In-phase ————
Quadrature – – – –

2. 21032

0 100 m 200 m 300 m 400 m 500 m
Scale : 1:5000

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HLEM SURVEY (444 Hz)	
MACDIARMID 33/42	
MACDIARMID TOWNSHIP	
File : M33HL.XYZ	Date : August, 1999
NTS : 42-A/12	Proj # : 8036
WORK BY : Timmins Geophysics Ltd.	

Loveland Township
Macdiarmid Township
Mattagami
River
INDEX MAP
Scale : 1:250,000
LEGEND
Instrument : Apex Parametrics MaxMin I-5
Coil Separation : 200 metres
Frequency : 1777 Hertz
Profile Scale : 1cm = 20%
40%
20%
0
-20%
-40%
In-phase
Quadrature
2. 21032
0
100 m
200 m
300 m
400 m
500 m
Scale : 1:5000
FALCONBRIDGE LIMITED
HLEM SURVEY (1777 Hz)
MACDIARMID 33/42
MACDIARMID TOWNSHIP
File : M33HL.XYZ
Date : August, 1999
NTS : 42-A/12
Proj # : 8036
WORK BY : Timmins Geophysics Ltd.