0118-22560

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

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093810

1997 ASSESSMENT REPORT ON THE

BAR PROPERTY

ENG 1-141 YB45997- YB46140

DIAMOND DRILLING

MAY 1 - 20, 1997

WATSON LAKE M.D., YUKON

105 C/8,9

LAT: 60°30' ; LONG: 132°14'

JANUARY, 1998

DARREN A. SENFT

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of $________________.

Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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1997 ASSESSMENT REPORT ON THE BAR PROPERTY YUKON TERRITORY

1.0 SUMMARY

The BAR property, comprising 144 units extending east from the banks of the Wolf River, is located 43 km northeast of Teslin, in south-central Yukon. A 50 km long cat trail originating from the Alaska Highway south of Teslin traverses the western edge of the property along the Wolf River. Direct access to the property is by helicopter.

The BAR property was staked by Cominco in 1993 to cover the area previously held by D.C. Syndicate. The major interest in this property is centered on numerous rusty seeps and gossanous zones, as well as minor surface showings of py-sph-gal associated with massive barite and silica.

The geology of this part of southcentral Yukon is predominantly sedimentary and volcaniclastic rocks, ranging in age from Mississippian to lower Permian. The general property stratigraphy is limestone, limestone conglomerate and calcareous mudstone overlain by tuffaceous silts, chert, chert breccia and chert pebble conglomerate. Massive barite-sulphide occurs above the silicicified fragmental, and is overlain by fine to coarse grained volcaniclastic material, and finer grained chert (silicified rhyolite?). This sequence is capped by Pennsilvanian to Permian limestones.

Work on the BAR property in 1997 consisted of the drilling of two diamond drill holes for a total of 536.4 metres. Both holes intersected minor sphalerite and galena mineralization, as well as several intervals of veined to massive pyrite, the thicker of which were encountered in the second hole. Though only trace amounts of economic mineralization were found, the amount of pyrite intersected suggests the presence of a large sulphide system in the area, which has not yet been sufficiently tested. Results from the 1997 drilling indicate that the mineralization-hosting barite stratigraphy thickens as it trends off the existing grid to the northwest part of the property. Future work should be localized in this area.

2.0 LOCATION AND ACCESS

The BAR property is located 43 km northeast of Teslin, in south-central Yukon, east of the Wolf River. A 50 km long cat trail originating from the Alaska Highway south of Teslin traverses the western edge of the property along the Wolf River. Direct access to the property is by helicopter.

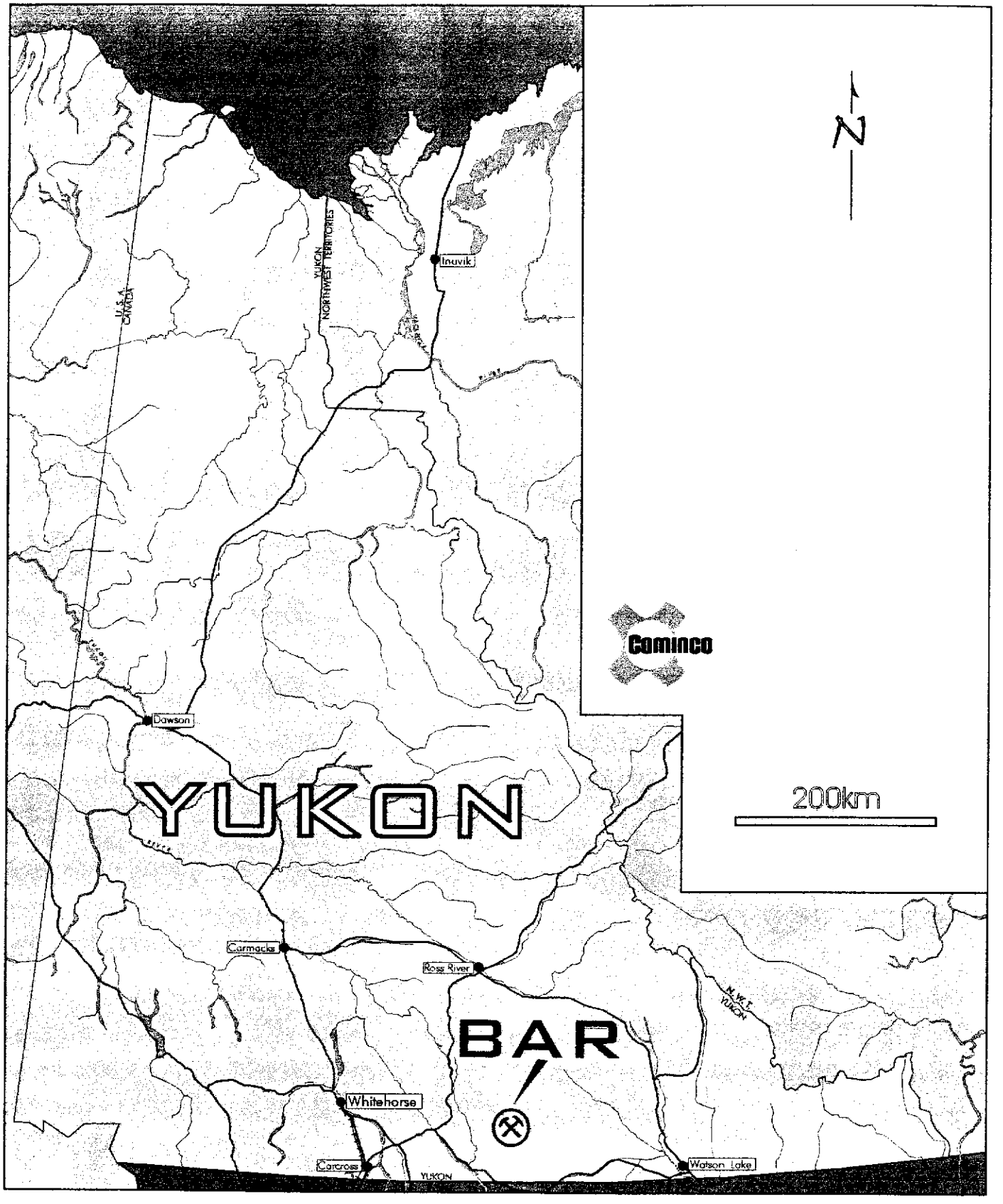
3.0 PROPERTY AND OWNERSHIP

The BAR property is comprised of 144 contiguous claims, 100% owned by Cominco Ltd.

NAME	UNITS	CLAIM NO.	DUE DATES
ENG 1-144	144	YB45997-6140	Feb. 9/98

4.0 PREVIOUS WORK

The gossanous zones on the BAR property have been previously staked by prospectors as AMBER SPRING and RED TOP (1956), SUPERIOR (1957), KEY (1969), and SMEG (1971). The property was first staked as the BAR claims in 1976 by D.C. Syndicate. J. C. Stephen Explorations Ltd. conducted initial mapping and soil sampling of the area in 1976, followed by linecutting and a geophysical IP/Resistivity (IP/Res) survey later that same year. A magnetometer survey, as well as several trenches, were completed by J.C. Stephens in 1978, followed by 340 metres of diamond drilling in four short holes in 1980, all of which drilled in the footwall stringer zone. The best intercept from this drilling was 1.88% Zn, 0.12% Pb and 0.5 oz. Ag/t across 3m in hole 80 B-1.



BAR PROPERTY LOCATION MAP

n.t.s. 105 C/8,9	Scale: As Shown	Date: January, 1998	Plate: 1

In 1981 and 1982 Chevron Minerals optioned the claims and carried out geological mapping and extensive soil sampling on the property. Comox Resources acquired the claims in 1983 and completed IP/Res and VLF geophysical surveys as well as minor geological mapping. In 1985, Comox completed 608 metres of diamond drilling in five holes, testing IP anomalies for possible epithermal gold targets. Though no appreciable gold values were recovered, the best assay returned 2.77% Zn, 0.43% Pb and 0.9 oz. Ag/t over a 1m interval in hole 85 B-6.

Cominco re-staked the BAR claims in 1993, and began work on the property in the summer of 1994. A total of 22 kms of UTEM and Magnetic geophysical surveying was completed on the property, as well as 1.4 kms of gravity. The surveyed area was found to be underlain by moderately conductive formations, making the detectance of a low conductance target difficult.

5.0 PROPERTY GEOLOGY

The BAR property is predominantly underlain by sedimentary and volcaniclastic sedimentary rocks, ranging in age from Mississippian to lower Permian. The general stratigraphy is lower limestone, limestone conglomerate and calcareous mudstone overlain by tuffaceous silts, chert, chert breccia and chert pebble conglomerate. Massive barite-sulphide occurs above the silicicified fragmental, and is overlain by fine to coarse grained volcaniclastic material, and finer grained chert (silicified rhyolite?). This sequence is capped by Pennsilvanian to Permian limestones.

6.0 MINERALIZATION

Disseminated pyrite mineralization occurs at surface in many of the units on the BAR property, but most significantly within the barite±silica horizon, where trace amounts of sphalerite and galena have been noted occuring with the barite. The best core assays of mineralized barite from the 1997 drill program yielded 2.5% Zn, 0.6% Pb, and 22% Ba over a 1m core length.

7.0 1997 EXPLORATION DIAMOND DRILLING

The 1997 program on the BAR property consisted of 536.4 m of drilling in two diamond drill holes. A third hole was planned, but was negated due to excessive helicopter mobe/demobe costs. The two holes that were drilled tested the pyrite-barite mineralized horizon over a 400 m strike length, to depths of 295.6 m and 240.8 m. Drilling commenced on May 5, 1997, and was completed May 16, 1997. The average drilling rate, including moves, was 45 m/day.

The drilling was performed by D.J Drilling, based out of Watson Lake, who carried out drilling 24 hours a day on a two shift basis. Personel for this program included 4 drillers and 1 geologist (D. Senft), as well as a Trans North helicopter pilot. Mobilization to the property occurred on May 3 and 4, utilizing a Frontier Bell 205 helicopter to transport all the fuel and supplies needed, as well as the Longyear LF 70 diamond drill to be used for the drilling.

Core was logged by the writer, and all mineralized sections were split and analysed for copper, lead, zinc, silver, barium and iron at the Cominco Lab in Vancouver. The core is stored on the property at the grid location 9725E on line 11000N. Detailed diamond drill logs and assay data for the holes are included in Appendices II and III. Following is a brief synopsis of the two holes drilled.

HOLE #	GRID COORD.	OBJECTIVE	RESULTS	ASSAYS (%Zn/m)
BAR97-01 Collar: -55°, 065 295.6m	94+50E 112+00N	Drilled to test the barite-silica-pyrite horizon at depth.	1-2 metres of veined to massive pyrite. Trace sphalerite and galena mineralization.	2.5/1
BAR97-02 Collar: -55°, 065 240.8m	94+30E 116+00N	Drilled to test the barite-silica-pyrite horizon at depth.	Two intervals, 3 and 5 metres thick, of massive pyrite. Minor sphalerite mineralization with trace galena.	2.6/1

DDH BAR97-01 encountered several interbedded sedimentary units in the upper 135 m, comprising mainly graphitic mudstone, silicified siltstone, chert and chert breccia, with local barite-silica veins. Inclusive in this interval was a 35 m thick section of silicified rhyolite containing a 2 m thick layer of pyritic mafic tuff. Disseminated pyrite was observed throughout most of the sedimentary units. The bottom half of the hole comprised felsic volcanics (rhyolite, crystal tuff), silicified siltstone, fossiliferous limestone (crinoids), and intervals of locally brecciated, silicified barite. Occuring within the barite and one interval of siliceous siltstone were blebs and disseminations of sphalerite and galena, locally up to 1%. Pyrite occurs within all of these units, averaging 10% throughout, with local 1-2 m thick sections containing up to 80% pyrite. This hole ended in a unit of tuffaceous, silicified siltstone with minor interbedded graphitic mudstone.

Drilling on DDH BAR97-02 commenced on May 11. This hole intersected interbedded siltstone, mudstone and chert breccia in the upper 110 m, occuring with minor vein and disseminated pyrite throughout. Interbedded siliceous rhyolite and locally brecciated, silicified barite/pyrite dominated the next 100 m of the hole. Minor disseminated galena and sphalerite was observed within the quartz-rich barite and brecciated barite sections. Pyrite content averages 15% thoughout these units, occurring mostly as veins and veinlets, as well as forming the matrix of the quartz-barite breccia. Two sections of massive pyrite (3 m and 5 m thick) also occurred within the quartz-barite breccia zone. Sampling of these intervals did not return any appreciable Zn/Pb values. This hole ended in silicified, tuffaceous silitstone.

8.0 CONCLUSIONS and RECOMMENDATIONS

Two drill holes, for a total of 536.4 m, were drilled on the BAR property in 1997. Minor sphalerite and galena mineralization was intersected in both of these holes, as well as intervals of veined to massive pyrite. Though only trace amounts of economic mineralization were found, the amount of pyrite intersected suggests a large sulphide system is present that has not yet been sufficiently tested. Results from the 1997 drilling suggest that the mineralization-hosting barite stratigraphy thickens as it trends off the existing grid to the northwest part of the property. It is evident from review of the existing data that this area has not been worked on in any detail.

Future work on the BAR property should include extending the cut grid to the northwest to facilitate detailed mapping, soil geochemistry, and a Gravity geophysical survey. Additional diamond drilling should be contemplated based on the results of this work.

9.0 REFERENCES

HEAGY, A.E., 1985. SUMMARY REPORT ON THE 1985 DRILLING PROGRAM ON THE BAR CLAIM GROUP, WATSON LAKE M.D., YUKON ; Report for Comox Resources Ltd.

STEPHEN J.C. and DePAOLI G.M., 1981. DATA SUMMARY - BAR CLAIM GROUP : 1976 - 1980. Report by J. C. Stephens Explorations Ltd. for D. C. Syndicate.

LAJOIE, J.J., 1994. UTEM ELECTROMAGNETIC, MAGNETIC, AND GRAVITY GEOPHYSICAL SURVEYS ON THE BARENG PROPERTY, YUKON. Cominco Assessment Report.

Report by:

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Manager, Exploration
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DAS/

DISTRIBUTION:
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APPENDIX I

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Darren A. Senft, of #4-2415 W. 4th Ave., Vancouver, B.C. hereby declare that I:

1. Graduated from The University of British Columbia, Vancouver, B.C. with a B.Sc. in Geology in May, 1994.

2. Have been actively engaged in mineral exploration in Western Canada as a geological assistant with Cominco Ltd during the summers of 1992-94, as a contract geologist with Cominco Ltd from May, 1995 to May 1997, and as a permanent geologist with Cominco Ltd since May, 1997.

Date: January, 1998

D.A. SENFT, B.Sc.
GEOLOGIST I

APPENDIX II

1997 DIAMOND DRILL LOGS

HOLE NO: BAR97-01 SECTION: 11200N GRID:BAR

PROJECT CODE :WD126
TENEMENT :
PROSPECT :PB-ZN IN BARITE
GRID :BAR
MAP REFERENCE :105 C/8,9
LOCATION :WOLF RIVER
HOLE TYPE NQ

*** COLLAR COORDINATES AND RL ***

NOMINAL	11200.00mN	9450.00mE	1178.00RL

Pre-collar depth: Final depth: 295.60
Purpose of hole: TEST BARITE HORIZON
Hole status:
Comments:

*** SURVEY DATA ***

Survey Method: ACID TEST

Depth	Azimuth	Inclination
0.00	65.00	-55.00
295.60	65.00	-59.00

*** SUMMARY LOG ***

0.00	10.70	OVERBURDEN
10.70	20.60	SILTSTONE
20.60	24.40	ARGILLACEOUS MUDSTONE
24.40	26.20	SILICIFIED SILTSTONE
26.20	27.90	ARGILLACEOUS MUDSTONE
27.90	36.90	CHERT SILICIFIED RHYOLITE
36.90	38.70	SILICIFIED MAFIC TUFF
38.70	64.30	CHERT SILICIFIED RHYOLITE
64.30	65.80	SILICIFIED MUDSTONE BRECCIA
65.80	80.60	SILICIFIED SILTSTONE
80.60	83.00	CHERT
83.00	84.90	SILICIFIED MUDSTONE
84.90	89.90	CHERT BRECCIA SILTSTONE
89.90	97.60	SILICIFIED SILTSTONE
97.60	105.70	CHERT BRECCIA CHERT PEBBLE CONGLOMERATE
105.70	114.60	CHERT SILICIFIED RHYOLITE
114.60	135.30	CHERT BRECCIA
135.30	144.80	SILICIFIED BASALT
144.80	153.90	SILICIFIED RHYOLITE
153.90	160.20	FELSIC TUFF
160.20	193.40	CHERT SILICIFIED RHYOLITE
193.40	203.30	SILICIFIED SILTSTONE

*** DRILLING SUMMARY ***

DIAMOND DRILL	0.00 295.60 HQ
Drill contractor:	DJ DRILLING
Drill rig:	LONGYEAR LF70
Date started:	5/5/97
Date finished:	10/5/97
Logged by:	DAS
Relogged by:	
Sampled by:	DAS

Material left in hole:
Base of complete oxidation:
Top of fresh rock: 10.7
Water first encountered:
Water inflow estimate:

*** SIGNIFICANT ASSAYS ***

From	To	Width
30.40	30.50	0.10
31.50	31.60	0.10
37.40	37.50	0.10
51.20	51.30	0.10
64.70	64.80	0.10
82.40	82.50	0.10
90.40	90.50	0.10
93.60	93.70	0.10
96.20	96.30	0.10
99.50	99.60	0.10
101.50	101.60	0.10
103.10	103.20	0.10
104.30	104.40	0.10
110.20	110.30	0.10
112.10	112.20	0.10
115.10	115.20	0.10
118.90	119.00	0.10
120.50	120.60	0.10
124.60	124.70	0.10
129.00	129.10	0.10
130.50	130.60	0.10
132.00	132.10	0.10
133.00	133.10	0.10
134.20	134.30	0.10
136.50	136.60	0.10
170.60	170.70	0.10
172.80	172.90	0.10
176.70	176.80	0.10
191.50	191.60	0.10
192.90	193.00	0.10
212.60	212.70	0.10
214.30	214.40	0.10
217.50	217.60	0.10
220.00	220.10	0.10
234.50	237.50	3.00
252.00	253.00	1.00

Checked and signed: _____ Date: _____

HOLE NO: BAR97-01 SECTION: 11200N GRID:BAR

203.30	209.00	SILICIFIED FOSSILIFEROUS LIMESTONE
209.00	222.10	CHERT SILICIFIED RHYOLITE
222.10	261.60	SILTSTONE BRECCIA LIMESTONE
261.60	281.20	SILICIFIED BARITE SILTSTONE
281.20	295.60	SILICIFIED SILTSTONE MUDSTONE
295.60		END OF HOLE

From	To	Width
264.00	272.00	8.00

Checked and signed: _____ Date: _____

BAR DRILLING : BAR97-01
NQ DRILL LOG

From	To	Geological Log	SAMP_ID
0.00	10.70	OVERBURDEN CASING	
10.70	20.60	siltstone Light green-grey, massive fine grained, with minor graphitic laminations. Gradual increase in amount of graphitic laminations down unit, locally up to 20% of rock. Rusty-brown limonitic stain on fracture surfaces in upper 2m of unit. 18.40-18.50 Core to bedding angle at 75 degrees.	
20.60	24.40	argillaceous mudstone Dark grey to black, very fine grained argillic mudstone with local thin interbeds of grey-green siltstone and coarser sandstone. Minor pyrite occurs as disseminations and small clots. 23.50-24.40 quartz Sediments are quartz-flooded, fractured and broken up, with contorted bedding and possible fault gouge at lower contact.	
24.40	26.20	silicified siltstone Massive, silicified siltstone with minor graphitic laminations, similar in appearance to previous siltstone. No observed mineralization. 25.90-26.00 Core to bedding angle at 45 degrees.	
26.20	27.90	argillaceous mudstone Local quartz flooding and veining, bedding is contorted. Most of unit is quite broken up, especially near contact margins.	
27.90	36.90	chert silicified rhyolite Variably blue-green to white, silica-rich rock, locally cut by 2-10mm thick quartz veins. Minor disseminated red hematite, local vuggy textures and silica forms. Pyrite occurs as thin wispy bands, small clots and disseminations. Rock is quite broken up near contacts, though no fault gouge is evident. 32.10-32.20 Vague bedding at 85 degrees to core angle.	B97-01 B97-02
36.90	38.70	silicified mafic tuff Fine to medium grained, dark grey-green moderately silicified mafic tuff, with up to 50% massive pyrite. Chlorite also occurs along fractures.	B97-03
38.70	64.30	chert silicified rhyolite Massive, blue-grey to white siliceous rock, similar to interval from 27.9 to 36.9m. Minor disseminated pyrite along fractures. Most of unit is broken up. 47.60-49.30 hematite altered Hematite alteration zone, giving pinkish colour to rock. Small white quartz nodules are also visible within the pink interval of rock. 50.50-58.60 breccia Interval with several small zones of brecciation. Chert clasts and quartz nodules are set in a siliceous, locally hematitic matrix. Pyrite occurs along fractures.	B97-04
64.30	65.80	silicified mudstone breccia 80% fine grained mudstone clasts in a quartz-rich matrix. Minor pyrite and chlorite occur along fracture surfaces, trace sphalerite locally.	B97-05
65.80	80.60	silicified siltstone Light grey, fine grained, massive silicified siltstone, cut by 1-5mm thick quartz veins. Vuggy, open space features occur locally along fractures and within quartz veins. Trace disseminated pyrite and hematite grains. 75.70-75.80 Core to bedding angle at 58 degrees.	
80.60	83.00	chert Light green to grey massive texured, locally brecciated chert. Minor hematite along fractures, up to 15% pyrite locally.	B97-06
83.00	84.90	silicified mudstone Silicified, graphitic black mudstone. Minor quartz veining.	
84.90	89.90	chert breccia siltstone Locally brecciated grey chert interbedded with fine grained light grey siltstone. Good sedimentary textures in the siltstone, including cross-bedding and fining upward graded bedding. Fine pyritic laminations and small clots throughout unit. 89.10-89.20 Core to bedding angle at 75 degrees.	

BAR DRILLING : BAR97-01
NQ DRILL LOG

From	To	Geological Log	SAMP_ID
89.90	97.60	silicified siltstone Massive, fine grained, light grey silicified siltstone with locally massive pyrite and barite banding. Cut by thin quartz and quartz-calcite-hematite veinlets. Pyrite occurs as thin laminations and stringers, locally massive.	B97-07 B97-08 B97-09
97.60	105.70	chert breccia chert pebble conglomerate Cherty matrix is light green to grey, clasts are generally white. Clasts and rounded fragments range in size from 1-10mm. Pyrite occurs as small fragments, and where more massive, as matrix. 104.10-104.50 pyrite Massive vein pyrite, up to 70% of rock.	B97-10 B97-11 B97-12 B97-13
105.70	114.60	chert silicified rhyolite Light grey-green siliceous rock. Highly fractured, sealed by quartz or pyrite. Small brecciated sections are formed with pyrite as matrix where rock is more fractured.	B97-14 B97-15
114.60	135.30	chert breccia Chert clasts and quartz nodules range in size from 2mm to 3cm. Clasts are dominantly white, though are locally pink to red. Pyrite and barite occur along fractures and locally as matrix where more massive. 129.80-134.80 pyrite barite Massive veined pyrite-barite section, with 60-90% pyrite locally.	B97-16 B97-17 B97-18 B97-19 B97-20 B97-21 B97-22 B97-23 B97-24
135.30	144.80	silicified basalt Medium grained, dark grey-green, locally mottled texured silicified basalt. Comprised mainly of mm-sized quartz and chlorite-altered biotite grains. Possible flow top or transition zone in upper 50cm of unit. Local quartz veins and quartz-chlorite sealed fractures. Pyrite occurs as thin veinlets and disseminations. Trace sphalerite occurs associated with chlorite near the base of the unit. 142.00-142.10 Vague bedding (mineral lineations) at 55 degrees to core angle. 144.70-144.80 quartz vein 10cm thick quartz vein at base of unit.	B97-25
144.80	153.90	silicified rhyolite Massive texured, highly fractured siliceous rock, locally containing small quartz eyes/nodules. Fractures are sealed by quartz and pyrite. Pyrite also occurs as thin veinlets. 147.10-147.70 chloritic alteration Chlorite altered section with quartz-chlorite veinlets and stringers.	
153.90	160.20	felsic tuff Medium grained, light grey felsic crystal tuff. Granular quartz-rich layers separated by close-spaced chlorite altered muscovite/sericite laminations. Local vein and disseminated pyrite. 155.20-155.30 Laminations occur at 85 degrees to core angle.	
160.20	193.40	chert silicified rhyolite Massive, white to light grey siliceous rock with local barite banding. Pyrite occurs disseminated, as veins, along fractures, and locally massive associated with barite. Small brecciated zones in the upper 5m of the unit contain chert fragments, 1-5mm in size.	B97-26 B97-27 B97-28 B97-29 B97-30
193.40	203.30	silicified siltstone Light grey-green, fine grained siliceous siltstone. Locally cut by thin quartz veinlets. Mottled texture evident in upper 5m of unit.	
203.30	209.00	silicified fossiliferous limestone Light grey silicified fossiliferous limestone containing crinoids (?) 2-20mm in size.	
209.00	222.10	chert silicified rhyolite Massive siliceous rock, locally brecciated, with minor 10-20cm thick interbeds of the overlying fossiliferous limestone in the upper 5m of the unit. Approximately 20% pyrite occurs over the unit in fractures, forming small breccia zones locally, also occuring with vein barite.	B97-31 B97-32 B97-33 B97-34

From	To	Geological Log	SAMP_ID
222.10	261.60	siltstone breccia limestone Light grey, siliceous siltstone breccia interbedded with white, siliceous, fossiliferous limestone. Brecciated fragments range in size from 2mm to 5cm. Matrix is generally quite quartz-rich. Local sections of siltstone up to 2m in width are massive and not brecciated. Limestone is similar to previous unit of fossilized limestone. Minor pyrite occurs throughout along fractures and as thin veinlets, which become 1-2cm thick near the base of the unit. Local trace disseminated sphalerite. 234.50-237.50 silicification sphalerite Interval which contains several small zones of intensely silicified cherty siltstone with minor, pale yellow sphalerite blebs 1-3mm in size. 252.60-252.70 quartz vein galena Coarse grained quartz vein with 1-2mm thick galena laminations and trace disseminated sphalerite.	B97-35 B97-36 B97-37 B97-38
261.60	281.20	silicified barite siltstone Massive silicified white barite interbedded with light grey siliceous siltstone and up to 15% pyrite. Minor disseminated sphalerite and galena occurs locally. 264.40-271.70 sphalerite galena Quartz-pyrite-barite rich zone with disseminated galena and siliceous pale yellow sphalerite.	B97-39 B97-40 B97-41 B97-42 B97-43 B97-44 B97-45 B97-46
281.20	295.60	silicified siltstone mudstone Light grey, fine grained, locally brecciated siliceous siltstone interbedded with minor argillaceous mudstone. 5-10% pyrite occurs along fractures throughout unit.	

*** END OF HOLE *** 295.60

HOLE NO: BAR97-02 SECTION: 11600 GRID:BAR

PROJECT CODE :WD126
TENEMENT :
PROSPECT :PB-ZN IN BARITE
GRID :BAR
MAP REFERENCE :105 C/8,9
LOCATION :WOLF RIVER
HOLE TYPE :NQ

*** COLLAR COORDINATES AND RL ***

NOMINAL	11600.00mN	9430.00mE	1170.00RL

Pre-collar depth: Final depth: 240.80

Purpose of hole: TEST BARITE HORIZON
Hole status:
Comments:

*** SURVEY DATA ***

Survey Method: ACID TEST

Depth	Azimuth	Inclination
0.00	65.00	-55.00
115.80	0.00	-60.00
240.80	0.00	-59.00

*** SUMMARY LOG ***

0.00	6.10	OVERBURDEN
6.10	48.90	GRAPHITIC MUDSTONE SILTSTONE
48.90	58.40	CHERT MUDSTONE
58.40	65.40	INTERBEDDED GRAPHITIC MUDSTONE SANDSTONE
65.40	71.30	SILTSTONE
71.30	73.10	INTERMIXED LIMESTONE SILTSTONE
73.10	82.10	ARGILLACEOUS GRAPHITIC MUDSTONE
82.10	88.30	BLACK CHERT
88.30	95.40	SILTSTONE
95.40	108.30	SILICIFIED ARGILLACEOUS MUDSTONE
108.30	136.40	SILICIFIED RHYOLITE
136.40	148.40	CHERT BRECCIA
148.40	163.20	BARITE PYRITE QUARTZ
163.20	168.10	SILICIFIED RHYOLITE CHERT
168.10	188.20	BARITE QUARTZ BRECCIA
188.20	206.60	SILICIFIED RHYOLITE CHERT
206.60	225.10	GRAPHITIC MUDSTONE
225.10	240.80	SILTSTONE
240.80		END OF HOLE

*** DRILLING SUMMARY ***

DIAMOND DRILL	0.00 240.80 NQ
Drill contractor:	DJ DRILLING
Drill rig:	LONGYEAR LF 70
Date started:	11/5/97
Date finished:	16/5/97
Logged by:	DAS
Relogged by:	
Sampled by:	DAS

Material left in hole: 20' CASING
Base of complete oxidation:
Top of fresh rock: 6.1
Water first encountered:
Water inflow estimate:

*** SIGNIFICANT ASSAYS ***

From	To	Width
108.30	136.40	28.10
143.50	143.60	0.10
146.20	146.30	0.10
148.40	148.50	0.10
150.80	150.90	0.10
151.70	151.80	0.10
154.80	154.90	0.10
160.50	160.60	0.10
162.40	162.50	0.10
163.20	168.20	5.00
168.90	169.90	1.00
173.60	173.70	0.10
177.10	182.10	5.00
184.70	186.70	2.00
188.20	188.30	0.10
189.10	189.20	0.10
190.50	190.60	0.10
193.80	193.90	0.10
200.80	200.90	0.10

Checked and signed: _____ Date: _____

BAR DRILLING : BAR97-02
NQ DRILL LOG

From	To	Geological Log	SAMP_ID
0.00	6.10	OVERBURDEN	
6.10	48.90	graphitic mudstone siltstone Dark grey to black, very fine grained carbonaceous mudstone interbedded with light grey-green fine grained siltstone. Flame structures are evident at contacts between the two units. Bedding is also contorted with local brecciated sections where the two units are mixed. The mudstone is the more prominent of the two units, and is cut by thin quartz veinlets throughout. The upper 6m of rock are quite broken-up. 17.30-17.40 Core to bedding angle is at 70 deg. 26.30-26.40 Core to bedding angle is at 60 deg. 34.40-37.00 fault zone Very rubbly core, approximately 60% recovery. 37.20-37.30 Core to bedding angle is at 85 deg. 39.70-48.90 fault zone Fault gouge present, approximately 80% recovery of rubbly core. Rock is becoming quite siliceous near base of fault.	
48.90	58.40	chert mudstone Cherty, black mudstone, very siliceous, inundated with a stockwork of graphitic laminations. Quartz veining/flooding is apparent throughout, locally forming small brecciated sections. Trace disseminated pyrite. 58.30-58.40 Sharp basal contact at 73 degrees to core angle.	
58.40	65.40	interbedded graphitic mudstone sandstone Approximately 4 metres of this interval is comprised of the graphitic/argillaceous mudstone. The remainder consists of medium grained, yellow and grey salt-and-pepper texured sandstone interbeds. Extensive carbonate veining occurs throughout both units. A 40cm interval of graphitic laminated, black chert occurs near the base of the units. 65.30-65.40 Sharp basal contact at 85 degrees to core angle.	
65.40	71.30	siltstone Green-grey, fine grained siltstone. Rock is moderately calcareous, and cut by both calcite and quartz veinlets. Local graphitic laminations. No observed mineralization.	
71.30	73.10	intermixed limestone siltstone Small zone of intermixed light grey limestone and siliceous green-grey siltstone, giving the rock a mottled texture. No observed mineralization.	
73.10	82.10	argillaceous graphitic mudstone Dark grey to black, locally silicified, very fine grained graphitic/argillaceous mudstone with minor quartz veining. No observed mineralization.	
82.10	88.30	black chert Very siliceous black chert with minor graphitic laminations. 83.30-87.90 fault zone Core very fractured and broken up, with approximately 50% recovery. Minor fault gouge also occurs in this interval.	
88.30	95.40	siltstone Pale grey, fine grained, massive textured siltstone with graphitic laminations throughout. Rock is not silicified, though contains minor quartz veinlets locally. There is an increase in the frequency of graphitic laminations near the base of this unit. 88.40-89.50 fault zone Minor fault gouge occuring with rubbly core. Good recovery.	
95.40	108.30	silicified argillaceous mudstone Dark grey to black, silicified, argillaceous mudstone with graphitic partings throughout. Minor quartz veining locally. No observed mineralization. 98.60-98.70 Core to bedding angle is at 70 deg. 101.70-101.90 fault zone 20cm of very fine grained, loosely consolidated, graphitic fault gouge. 105.30-108.30 intermixed zone Transitional mixing zone of dark grey mudstone with green-grey siltstone. Layers vary in thickness from 2mm to 10cm. The lower 80cm of this transitional zone are quite broken up.	

From	To	Geological Log	SAMP_ID
108.30	136.40	silicified rhyolite Pale grey, massive textured, silicified rhyolite. Locally quartz flooded, forming small brecciated sections, often containing white quartz-rich clasts 1-6mm in size. Well formed pyritohedral crystals, 1-2mm in size, occur within thin quartz veins. Fine grained disseminated pyrite is also seen along fractures. Small vugs occur locally, containing small (1-2mm), well formed quartz crystals. 119.70-122.40 hematite altered Reddish-coloured hematite-altered zone. Contains numerous thin hematitic veins, as well as minor jasper clots locally. 123.90-125.30 dyke Quartz-rich intrusive dyke, with 1-2mm biotite-altered hornblende phenocrysts. 128.20-128.30 fault zone Small zone of fault gouge.	B97-47
136.40	148.40	chert breccia Brecciated chert clasts range in size from 2mm to 6cm, in a mostly siliceous, locally pyritic matrix. Encountered small fault at the lower contact of this unit (148.4m), and the hole began producing water.	B97-48 B97-49
148.40	163.20	barite pyrite quartz Massive, fine grained, grey-white barite with fine grained pyrite and minor quartz. Textures are quite irregular, very likely vein-related. Small vein-breccia zones occur locally, with barite clasts in a pyrite +/- quartz matrix. Trace sphalerite and galena mineralization is seen locally associated with the vein pyrite and quartz.	B97-50 B97-51 B97-52 B97-53 B97-54 B97-55
163.20	168.10	silicified rhyolite chert Light grey, very fine grained, siliceous rhyolite or chert with up to 15%, locally massive, fine grained pyrite. The pyrite occurs in vein stockworks, often associated with barite. Thin quartz veins also occur locally.	B97-56
168.10	188.20	barite quartz breccia Brecciated barite and quartz clasts, 2mm to 10cm in size, occur in a dominantly pyritic matrix with trace sphalerite and galena. A few intervals of more massive barite and quartz occur locally, as do zones of more massive pyrite. 169.50-169.70 quartz vein galena Quartz-flooded section containing a 2mm thick vein of galena. 177.10-182.30 massive pyrite Approximately 90% of this interval is massive pyrite, with local quartz and barite clasts, as well as trace sphalerite disseminations. 184.40-187.20 massive pyrite Same as previous interval of massive pyrite.	B97-58 B97-57 B97-59 B97-60 B97-61 B97-62 B97-63 B97-64 B97-65 B97-66
188.20	206.60	silicified rhyolite chert Massive texured siliceous rhyolite or chert. 10-15% pyrite occurs as veins throughout, locally forming small breccia zones where density of veining is greater. Pyrite veins and veinlets generally range in size from 1-15mm. Minor barite, trace sphalerite and galena also occur within this interval. Quartz veins occur sporadically, often containing small pyritohedrons in vugs. A 40cm thick breccia zone occurs at the base of this unit, formed by quartz flooding, with no pyrite present.	B97-67 B97-68 B97-69 B97-

From	To	Geological Log	SAMP_ID
			0 B97-71
206.60	225.10	graphitic mudstone Dark grey to black, very fine grained graphitic, locally argillaceous, mudstone. Upper contact is quite sharp. Disseminated pyrite and thin pyrite laminations occur throughout. Rock is also cut by thin quartz veinlets. A gradual lightening in the colour of the rock occurs near the base of this unit. 213.80-213.90 Core to bedding angle is at 72 deg.	
225.10	240.80	siltstone Light to medium grey, fine grained siltstone. Upper contact is transitional from the overlying mudstone. Unit is occasionally cut by thin quartz and calcite veinlets, and is locally silicified. Pyrite disseminations occur throughout, with thin laminations of graphite and pyrite locally.	

*** END OF HOLE *** 240.80

APPENDIX III

GEOCHEMICAL ANALYSES OF DRILLCORE

LAB NO	FIELD NUMBER	DRILL INTERVAL from (metres)	to	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ba(4) ppm	Fe %
R9707239	B97-1 BAR97-01	30.40	30.40	15	166	34	14.3	9648	11.4
R9707240	B97-2 BAR97-01	31.50	31.50	15	73	23	2.6	E38498	4.33
R9707241	B97-3 BAR97-01	37.40	37.40	21	81	79	2.9	E13942	18.5
R9707242	B97-4 BAR97-01	51.20	51.20	9	25	846	<.4	200	4.73
R9707243	B97-5 BAR97-01	64.70	64.70	4	<4	71	<.4	2345	1.1
R9707244	B97-6 BAR97-01	82.40	82.40	81	195	107	11.4	8290	14.1
R9707245	B97-7 BAR97-01	90.40	90.40	18	223	161	.4	E27631	20.4
R9707246	B97-8 BAR97-01	93.60	93.60	5	123	258	<.4	E92193	6.04
R9707247	B97-9 BAR97-01	96.20	96.20	7	433	2350	<.4	E41384	25.6
R9707248	B97-10 BAR97-01	99.50	99.50	6	70	38	<.4	E29369	6.54
R9707249	B97-11 BAR97-01	101.50	101.50	10	198	133	<.4	E51461	9.9
R9707250	B97-12 BAR97-01	103.10	103.10	4	287	31	.5	E109168	8.7
R9707251	B97-13 BAR97-01	104.30	104.30	4	176	53	.5	E97765	17
R9707252	B97-14 BAR97-01	110.20	110.20	5	146	18	<.4	E82295	8.3
R9707253	B97-15 BAR97-01	112.10	112.10	2	198	14	.5	E21797	6.25
R9707254	B97-16 BAR97-01	115.10	115.10	3	93	30	.8	E14103	5.47
R9707255	B97-17 BAR97-01	118.90	118.90	2	67	37	.8	E90967	5.48
R9707256	B97-18 BAR97-01	120.50	120.50	3	88	52	<.4	E99779	12
R9707257	B97-19 BAR97-01	124.60	124.60	2	50	118	.6	E255794	12.3
R9707258	B97-20 BAR97-01	129.00	129.00	2	169	120	.7	E103894	11.7
R9707259	B97-21 BAR97-01	130.50	130.50	7	314	191	.8	E107845	16.5
R9707260	B97-22 BAR97-01	132.00	132.00	6	274	169	2.7	E120847	21.9
R9707261	B97-23 BAR97-01	133.00	133.00	5	199	63	1.8	E32384	18.8
R9707262	B97-24 BAR97-01	134.20	134.20	7	535	190	1.5	8111	30
R9707263	B97-25 BAR97-01	136.50	136.50	6	156	15	3.1	E12213	15.2
R9707264	B97-26 BAR97-01	170.60	170.60	8	90	358	1.3	E238921	15.6
R9707265	B97-27 BAR97-01	172.80	172.80	4	105	212	2.9	E122733	9.4
R9707266	B97-28 BAR97-01	176.70	176.70	6	238	901	2.5	E220722	6.83
R9707267	B97-29 BAR97-01	191.50	191.50	7	224	119	1.9	E93641	17.5
R9707268	B97-30 BAR97-01	192.90	192.90	13	259	203	3.4	7716	18.9
R9707269	B97-31 BAR97-01	212.60	212.60	6	281	989	5.7	E222177	17.6
R9707270	B97-32 BAR97-01	214.30	214.30	10	362	1180	6	E190222	17.8
R9707271	B97-33 BAR97-01	217.50	217.50	8	226	334	4	E264742	13.5
R9707272	B97-34 BAR97-01	220.00	220.00	4	206	401	2.8	E258996	13.8
R9707273	B97-35 BAR97-01	234.50	235.50	6	177	319	4.3	E268257	1.99
R9707274	B97-36 BAR97-01	235.50	236.50	22	286	883	4.6	E158616	9.8
R9707275	B97-37 BAR97-01	236.50	237.50	14	208	300	2	E98617	10.2
R9707276	B97-38 BAR97-01	252.00	253.00	11	8690	1060	7.9	E248892	12.2
R9707277	B97-39 BAR97-01	264.00	265.00	9	1910	2040	5.1	E178473	12.2
R9707278	B97-40 BAR97-01	265.00	266.00	9	5680	E14600	3.7	E217511	4
R9707279	B97-41 BAR97-01	266.00	267.00	5	6140	E24900	5.7	E129906	5.45
R9707280	B97-42 BAR97-01	267.00	268.00	4	422	301	2.1	E125077	4.07
R9707281	B97-43 BAR97-01	268.00	269.00	4	348	457	2	E104705	7.77
R9707282	B97-44 BAR97-01	269.00	270.00	5	1790	6800	1.9	E156638	7.66
R9707283	B97-45 BAR97-01	270.00	271.00	8	193	782	2	E232855	3.21
R9707284	B97-46 BAR97-01	271.00	272.00	17	1150	2850	1.7	E212782	5.57
R9707285	B97-47 BAR97-02	108.30	136.40	6	15	81	<.4	E12675	1.59
R9707286	B97-48 BAR97-02	143.50	143.50	7	2150	609	17.1	E85532	28.4
R9707287	B97-49 BAR97-02	146.20	146.20	5	776	124	3.4	E84717	12
R9707288	B97-50 BAR97-02	148.40	163.20	4	670	227	2.4	E229901	7.4
R9707289	B97-51 BAR97-02	150.80	150.80	5	650	217	2.4	E308524	7.58

LAB No	FIELD NUMBER	DRILL INTERVAL from (metres) to		Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ba(4) ppm	Fe %
R9707290	B97-52 BAR97-02	151.70	151.70	5	160	38	1	E187611	5.34
R9707291	B97-53 BAR97-02	154.80	154.80	11	296	531	4.3	E238110	9.4
R9707292	B97-54 BAR97-02	160.50	160.50	6	1440	1230	3	E156594	18
R9707293	B97-55 BAR97-02	162.40	162.40	10	637	802	4.7	E150340	12.1
R9707294	B97-56 BAR97-02	163.20	168.10	5	462	220	4.3	E96501	12.7
R9707295	B97-57 BAR97-02	168.90	169.90	8	791	333	1.6	E45473	10.3
R9707296	B97-58 BAR97-02	168.10	188.40	13	886	1420	2.6	E33478	26.1
R9707297	B97-59 BAR97-02	173.60	173.60	99	1120	4510	5.1	E38426	26.3
R9707298	B97-60 BAR97-02	177.10	178.10	7	1100	2250	1.5	E74919	26.1
R9707299	B97-61 BAR97-02	178.10	179.10	10	970	2570	1.5	E78699	25.7
R9707300	B97-62 BAR97-02	179.10	180.10	12	1360	2730	1.8	9121	33.1
R9707301	B97-63 BAR97-02	180.10	181.10	15	1090	2120	1.8	E23182	31.6
R9707302	B97-64 BAR97-02	181.10	182.10	12	1090	2090	1.7	E34913	32.2
R9707303	B97-65 BAR97-02	184.70	185.70	8	1540	1930	2.8	E36829	32.3
R9707304	B97-66 BAR97-02	185.70	186.70	12	1600	2570	2.3	E12910	32.9
R9707305	B97-67 BAR97-02	188.20	206.60	24	487	627	4.1	E12521	14.3
R9707306	B97-68 BAR97-02	189.10	189.10	29	1170	2350	1	E15170	25.7
R9707307	B97-69 BAR97-02	190.50	190.50	16	1300	E26300	3.6	7584	26
R9707308	B97-70 BAR97-02	193.80	193.80	28	971	3240	5.4	E10131	24.2
R9707309	B97-71 BAR97-02	200.80	200.80	24	802	690	5.3	E14035	19.1

I-insufficient sample K-small sample E-exceeds calibration C-being checked R-revised
If requested analyses are not shown ,results are to follow

ANALYTICAL METHODS

Cu	Aqua regia decomposition / AAS
Pb	Aqua regia decomposition / AAS
Zn	Aqua regia decomposition / AAS
Ag	Aqua regia decomposition / AAS
Ba(4)	X-Ray fluorescence / pressed pellet
Fe	Aqua regia decomposition / AAS

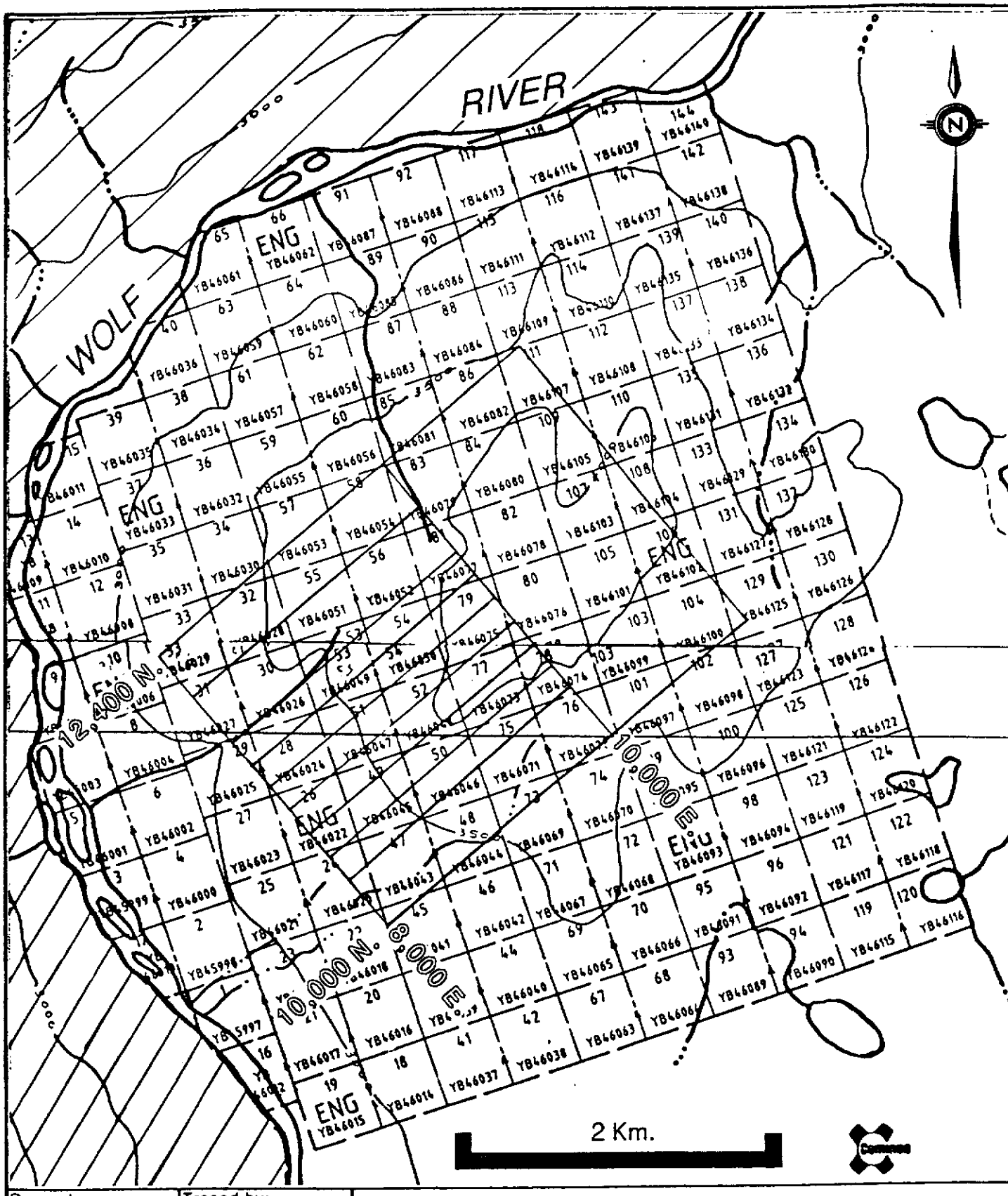
APPENDIX IV

STATEMENT OF EXPENDITURES

BAR PROPERTY

BAR PROPERTY

EXPENDITURE ITEM	COST $
STAFF COSTS	3,700
DOMICILE	6,455
MOBILIZATION	5,500
CONTRACT DRILLING (536.4m in 2 holes)	51,250
HELICOPTER : 206	33,750
205	47,450
ASSAYS	700
COMMUNICATIONS	400
DRAFTING/REPRODUCTIONS	400
TOTAL	**149,605**



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

BAR PROPERTY – YUKON
CLAIM MAP

Scale:	Date:	Plate:
AS SHOWN	JAN./98	2

NCI 112A CL


WOLF RIVER
650000
132|15'
651000
652000
653000
654000
N
6712000
6711000
6710000
6709000
6708000
6707000
60|30'
1300
1250
1200
1150
1100
1050
1000
950
900
BAR97-02
BAR97-01
80-B1
80-B2
80-B3
80-B4
85-B5
85-B6
85-B6a
85-B7
85-B8
DM CG
DM CH
DM BA
DM V
ML
BASALT DYKE
Ba+py float
500 metres
CASSIAR TERRANE (North American Margin)
MISSISSIPPIAN
ML
FINE CRYSTALLINE LIGHT GREY CRINOIDAL LIMESTONE AND MINORDOLOSTONE: LOCALLY WITH IRREGULAR MASSES AND NODULES OF CHERT.
DMCH
GREENISH-GREY CHERT, AND TUFFACEOUS (?) MUDSTONE. COMMONLY PYRITIC AND SILICIFIED. (SOURCE OF LARGE I.P ANOMALY DRILLED IN 1985)
DMBA
BARITE, WHITE TO RUSTY WEATHERING, COMMONLY CONTAINS IRREGULAR PATCHES OF py AND LESSER sph AND gal. COMMONLY INTERMIXED WITH SILICA. CONTACTS WITH FOLIATED UNIT DCmg.
DMCG
CHERT PEBBLE TO COBBLE CONGLOMERATE; FOLIATED, STRETCHED CLASTA. GREENISH-GREY SHALE AND TUFFACEOUS SANDSTONE INTERBEDS. (STRONG VOLCANIC COMPONENT) (MAYBE DISTAL FACIES OF UNIT Mv). THIS UNIT IS COMMONLY SILICA-FLOODED AND CUT BY QUARTZ VEINS.
DEVONIAN and MISS.
DM V
COARSE GRAINED VOLCANICLASTIC DEBRIS FLOWS. DEBRIS FLOW BRECCIAS ARE CLAST-SUPPORTED MATRIX IS GLASSY, FINE GRAINED VOLCANICLASTICS.
MAFIC DYKE
OLD CAMP
BARITE +/- py (sph/gal) FLOAT
TRANSPORTED GOSSAN
HAND TRENCH
PREVIOUS DRILL HOLES - 1980, 1985
1997 DRILL HOLES
GEOLOGICAL CONTACT
OLD WINTER ROAD
093810
DIAND - YUKON REGION, LIBRARY
N.T.S. 105 C/8,9
BAR PROPERTY
Drawn by: DAS
Traced by: DAS
BAR_TOPO
GEOLOGY,
DRILL HOLE LOCATIONS
SCALE: 1:7,500
DATE: Jan. '97
PLATE NO : 3

1250 –

1200 –

1150 –

1100 –

1050 –

1000 –

950 –

9450E

9500E

9550E

9600E

DDH BAR97-01

MUDSTONE, SILTSTONE

SILICIFIED RHYOLITE / CHERT

INTERBEDDED SEDIMENTS – Graphitic Siltstone, Mudstone, Chert

SILICIFIED RHYOLITE / CHERT

SILTSTONE / LIMESTONE

SILICIFIED RHYOLITE / CHERT

SILTSTONE / LIMESTONE

BARITE – PYRITE – QUARTZ

MUDSTONE, SILTSTONE

EOH 295.6m

093810

1997 BAR DRILLING

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105 C/8,9

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Revised by	Date	Revised by	Date

DDH BAR97-01

SECTION 11200, LOOKING NORTH

Scale: 1:500 | Date: JAN. 1998 | Plate: 4

Deakin 1015

1200 —

9450E

9500E

9550E

DDH BAR97-02

1150 —

INTERBEDDED SEDIMENTS – Graphitic Siltstone, Mudstone, Chert, Limestone

1100 —

SILICIFIED RHYOLITE / CHERT

1050 —

BARITE – PYRITE – QUARTZ

SILICIFIED RHYOLITE / CHERT

BARITE – PYRITE – QUARTZ

SILICIFIED RHYOLITE / CHERT

1000 —

MUDSTONE, SILTSTONE

EOH 240.8m

950 —

093810

1997 BAR DRILLING

DIAND - YUKON REGION, LIBRARY

105 C/8,9

Drawn by: DAS		Traced by:	
Revised by	Date	Revised by	Date

DDH BAR97-02

SECTION 11600, LOOKING NORTH

(3)

Scale: 1:500	Date: JAN. 1998	Plate: 5

Deakin 1015