



53G05SW0002 27 KIPPEN LAKE

010

DIAMOND DRILLING

AREA: KIPPEN LAKE

REPORT NO: 27

WORK PERFORMED FOR: Cameco - A Canadian Mining & Energy Corp.

RECORDED HOLDER: Same as Above [xx]  
: Other [ ]

| <u>Claim No.</u> | <u>Hole No.</u> | <u>Footage</u> | <u>Date</u> | <u>Note</u> |
|------------------|-----------------|----------------|-------------|-------------|
| 570883           | KP-88-27        | 102.1m         | Sept/88     | (1)         |
| 570870           | KP-88-26        | 120.4m         | Sept/88     | (1)         |
|                  | KP-88-25        | 120.4m         | Sept/88     | (1)         |
| 570869           | KP-88-24        | 121m           | Sept/88     | (1)         |
| 975977           | KP-88-23        | 121.9m         | Sept/88     | (1)         |

NOTES: (1) W8902.004, date filed April/89

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 \* PROJECT NO.: 653 CORE SIZE: BR HOLE AZ: 130 \*  
 \* DRILL HOLE: KF-88-027 DRILL FIRM: Longyear HOLE DIP: -50 \*  
 \* DRILLED: 9/13/88 TO 9/14/88 HOLE COORD: 16400N \*  
 \* GEOLOGGED: 9/16/88 : 1150E \*  
 \* GEOLOGGED BY: Doug Panagako HOLE LENGTH: 102.1 Metres \*  
 \* ASSISTED BY: TH COLLAR ELEVATION: \*  
 \* COORDINATE SYSTEM: Grid GRID AZM: 40 degrees \*  
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*Douglas A. Panagako.*

0.0 M - 3.7 M OVERBURDEN

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3.7 M - 102.1 M MAFIC VOLCANIC FLOW

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RECOVERY= 99% QUARTZ= 20% CARBONATE= 10% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 30%  
 COLOURS: s. dark green GRAIN SIZE = fine to medium  
 OTHER MINERALS: <1% pyrite <1% pyrrhotite  
 ALTERATION: moderate CAL: moderate DOL: fresh CHL: strong  
 SER: fresh FUC: fresh SIL: moderate HEM: fresh  
 TEXTURES: foliated mod. competent microveined equigranular  
 FRACTURING: very lightly fx DIP= \*\*

TYPICAL FINE GRAINED FOLIATED TO LOCALLY MASSIVE MVOL.

4.4-4.8M 15% CALCITE VEINING.

VEINING PERCENTAGE OVERALL IS ABOUT 5%.

STRUCTURE: quartz veining DIP= ?? FROM 15.0M TO 15.1M COARSE BLEB OF CPY

UNIT IS MASSIVE TO VERY WEAKLY FOLIATED THROUGHOUT.

20.2M 1CM CALCITE VEIN WITH CPY.

22.4M STOCKWORK OF NARROW QUARTZ VEINS, UNMINERALIZED.

STRUCTURE: quartz veining DIP= ?? AT 24.7M 2CM WIDE

26.05M HAIRLINE CALCITE VEINLET WITH PO, CPY.

27.9-28.5M 15% CALCITE VEINING, NO MINERALIZATION.

30.5M PO IN CALCITE VEINLET.

FOLIATION AT: 31M DIP = 55 des relative to core axis

MINOR NARROW CONCENTRATIONS OF BIOTITE, MAY BE FILLOW SELVAGES.

STRUCTURE: quartz veining DIP= ?? FROM 34.1M TO 34.3M 10% CALCITE, MINOR PY

36.9-37.6M MVOL IS VERY SOFT, 15% CALCITE VEINING, POSSIBLY A FAULT

ZONE ALTHOUGH NO GOUGE IS PRESENT.

FOLIATION AT: 40M DIP = 65 des relative to core axis

STRUCTURE: calcite veining DIP= ?? FROM 42.8M TO 42.9M

43.05M CALCITE VEIN WITH MINOR PO.

43.3-43.4M MASSIVE PO (70%) AND MINOR CPY OVER 10 CM.

44.05-44.1M CALCITE VEINING WITH 5% PO AND CPY AS COARSE BLEBS.

50.0-53.5M ABUNDANT HAIRLINE FRACTURE FILLINGS, PRIMARILY QUARTZ FILLED.

52.0M CLOTS OF PYRITE.

54.9-55.2M 5% FINE GRAINED PYRITE IN SILICIFIED MVOL.

STRUCTURE: quartz veining DIP= ?? AT 55.3M PY, MINOR CPY

55.4-55.7M FAULT ZONE, MVOL IS VERY SOFT AND BROKEN UP.

FOLIATION AT: 57M DIP = 50 des relative to core axis

STRUCTURE: calcite veining DIP= ?? AT 58.8M

60.5-61.8M VEINED AND BRECCIA ZONE; 30% INTERSTITIAL CARBONATE AND VEINS

FRAGMENTS OF MVOL IN CARBONATE MATRIX, 1-2% DISSEMINATED PYRITE.

FOLIATION AT: 64M DIP = 65 des relative to core axis

STRUCTURE: calcite veining DIP= ?? FROM 65.3M TO 65.4M SOME QUARTZ

66.9-68.0M ABUNDANT HAIRLINE CALCITE VEINLETS CUT CORE AT RANDOM ANGLES.

70.8-71.0M SEVERAL FRACTURES PARALLEL TO CORE AXIS.

73.4M 3CM WIDE QUARTZ VEIN.

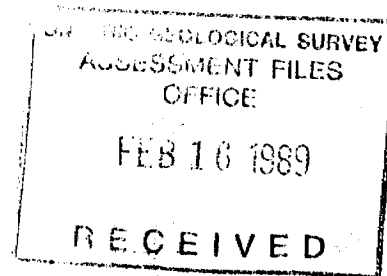
FOLIATION AT: 78M DIP = 60 des relative to core axis

77.0M PO BLEB IN CALCITE VEINLET.

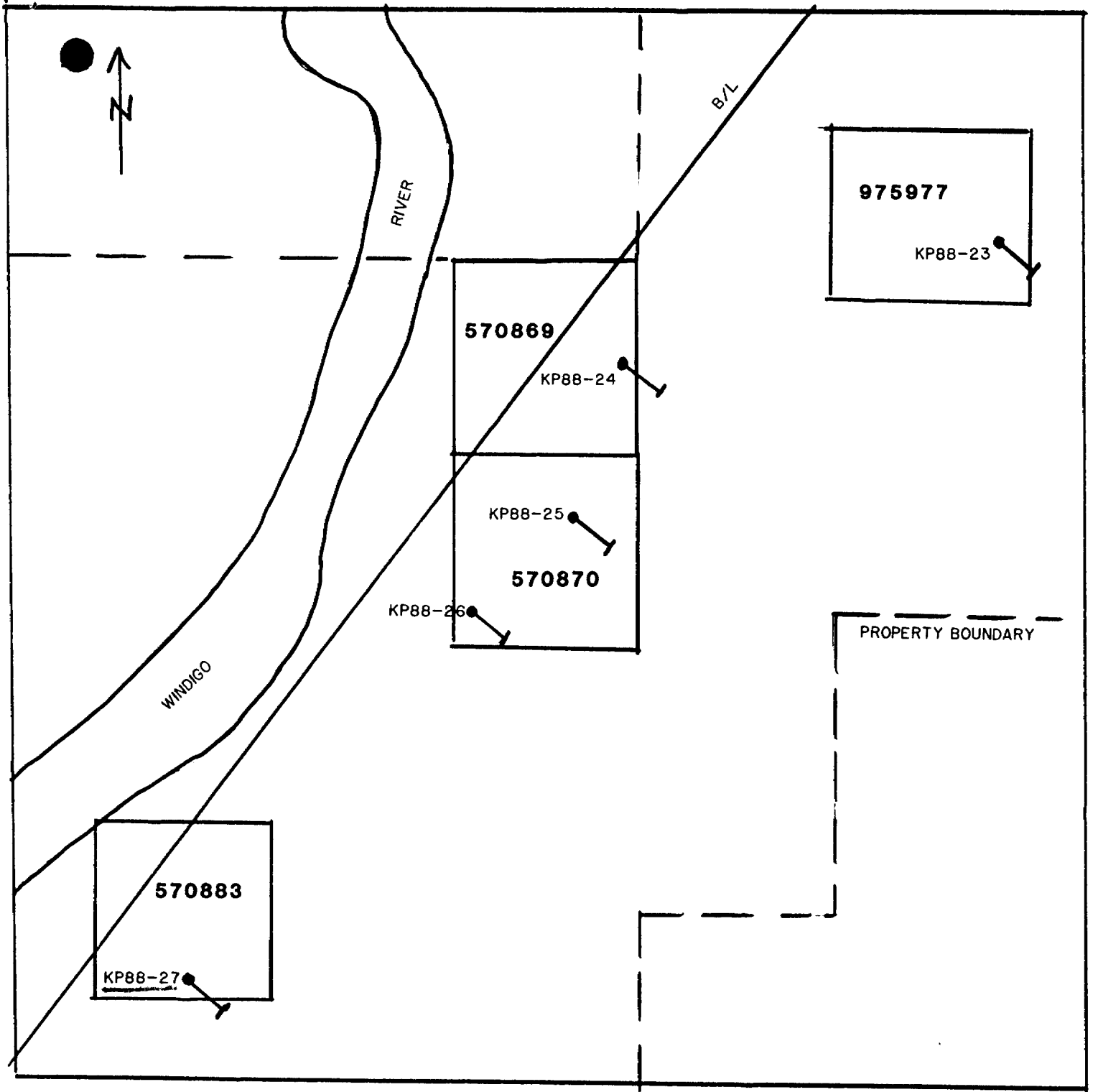
78.1M LARGE PO BLEB IN SILICIFIED MVOL.

78.3-79.8M FELDSPAR PORPHYRY DIKE; ABUNDANT WHITE FSP PHENOCRYSTS

IN A BLACK SILICIFIED MATRIX.



CHENOCRYSTS COMPRISE 15% OF UNIT AND ARE SUBHEDRAL TO EUHEDRAL.  
 84.5-84.7M MASSIVE PO+CPY OVER 5CM IN SILICIFIED MVOL.  
 84.5-84.7M QUARTZ-CALCITE VEIN.  
 FOLIATION AT: 88M DIP = 60 deg relative to core axis  
 MINOR FOLIATION PARALLEL CALCITE VEINLETS THROUGHOUT.  
 DISSEMINATED PO AND CPY IN NARROW CALCITE VEINLETS AT: 89.4, 89.6-89.8,  
 89.9-90.1M.  
 91.6M CPY FILLED FRACTURE.  
 STRUCTURE: calcite veining DIP= 45 FROM 92.1M TO 92.2M  
 NARROW CALCITE FILLED FRACTURES COMMON.  
 TRACE DISSEMINATED SULPHIDES IN FRACTURES.  
 93-102M MVOL IS MASSIVE TO WEAKLY FOLIATED.  
 102.1M END OF HOLE.  
 CASING PULLED.  
 17 CORE BOXES USED.  
 PROGRAM TERMINATED WED SEPT 14 DUE TO PROBLEMS WITH LOCAL INDIAN BAND.



*Douglas A. Panayydo*

**KIPPEY DRILL HOLE LOCATION SKETCH**

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 \* PROJECT NO.: 653 CORE SIZE: BR HOLE AZ: 130 \*  
 \* DRILL HOLE: KP-88-026 DRILL FIRM: LONGYEAR HOLE DIP: -50 \*  
 \* DRILLED: 9/11/88 TO 9/12/88 HOLE COORD: 22+00N \*  
 \* GEOLOGGED: 9/13/88 : 1+40E \*  
 \* GEOLOGGED BY: Doug Panayotko HOLE LENGTH: 120.4 M \*  
 \* ASSISTED BY: TH COLLAR ELEVATION: \*  
 \* COORDINATE SYSTEM: GRID GRID AZM: 40 DEGREES \*  
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*Douglas A. Panayotko*

0.0 M - 4.0 M OVERBURDEN

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4.0 M - 120.4 M MAFIC VOLCANIC FLOW

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RECOVERY= 99% QUARTZ= 20% CARBONATE= 10% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 30%  
 COLOURS: a. dark green GRAIN SIZE = fine to medium  
 ALTERATION: moderate CAL: moderate DOL: fresh CHL: strong  
 SER: fresh FUC: fresh SIL: moderate HEM: fresh  
 TEXTURES: foliated mod. competent veined  
 FRACTURING: lightly fractured DIP=

MVOL CONTAINS ABUNDANT MICROFRACTURES FILLED WITH CALCITE; FRACTURES OFTEN AT HIGH ANGLES TO FOLIATION.

FOLIATION AT: 7M DIP = 55 des relative to core axis

0.5-1% DISSEMINATED PO AND PY OCCURS THROUGHOUT.

9.2-9.3M 10% SULPHIDES, MAINLY PO.

STRUCTURE: quartz veining DIP= ?? AT 12.7M 5CM THICK

12.2M CPY FILLED FRACTURES IN QUARTZ VEINLETS.

FOLIATION AT: 13M DIP = 50 des relative to core axis

STRUCTURE: calcite veining DIP= ?? FROM 19.1M TO 19.3M SEVERAL NARROW VEINS

STRUCTURE: quartz veining DIP= 80 AT 20.4M 5CM MINOR CPY

FOLIATION AT: 22M DIP = 55 des relative to core axis

25.7M 5CM QUARTZ CARBONATE VEIN

MICROFRACTURES QUITE COMMON THROUGHOUT, CONTAIN EITHER QUARTZ OR CARB.

15-26M TRACE DISSEMINATED PO, CPY.

FOLIATION AT: 33M DIP = 60 des relative to core axis

31.1-31.2M ABUNDANT CALCITE VEINING.

31.6-33.0M 20% CALCITE AS NARROW VEINLETS AND CONCENTRATIONS.

STRUCTURE: quartz veining DIP= ?? AT 37.2M

26-37M VERY LOW SULPHIDE CONTENT.

37.8-38.5M NUMEROUS FRACTURES AT 25 DEG TO C.A.

43.5-45.2M CALCITE FILLED FRACTURES SUBPARALLEL TO C.A., CORE IS HIGHLY BROKEN UP.

MVOL IS MODERATELY SILICIFIED.

45.8M 5CM QUARTZ VEIN, UNMINERALIZED.

46.2-48.1M FELDSPAR PORPHYRY DIKE, MEDIUM TO DARK GREY, STRONGLY FRACTURED.

FOLIATION AT: 59M DIP = 50 des relative to core axis

49.9-52.5M MVOL IS LIGHT GREEN DUE TO ALTERATION; ABUNDANT FRACTURES FILLED WITH QUARTZ AND CALCITE.

50.2-50.4M YELLOWISH BROWN COLOUR DUE TO LIMONITE STAINING.

53.35M 2CM QUARTZ VEIN WITH DISSEMINATED CPY.

54-62M MINOR FOLIATION PARALLEL CALCITE VEINING, TRACE CPY IN VEINLETS.

62.6-64.8M FELDSPAR PORPHYRY DIKE (CRTF), WEAKLY FOLIATED, DARK GREY.

60.5M MINOR PO IN FRACTURE.

FOLIATION AT: 65M DIP = 55 des relative to core axis

64.8-65.5M RYOTITE RICH BANDS COMPRISE 10% OF UNIT.

68.35M 1CM THICK BED OF MASSIVE PO.

68.9-72.45M CRYSTAL TUFF DIKE, SIMILAR TO ABOVE.

STRUCTURE: quartz veining DIP= ?? FROM 69.5M TO 69.6M UNMINERALIZED

FOLIATION AT: 70M DIP = 45 des relative to core axis

TUFF CUT BY NARROW CALCITE VEINLETS, NO SULPHIDES.

STRUCTURE: quartz veining DIP= 80 AT 72.6M

ONTARIO GEOLOGICAL SURVEY  
 ASSESSMENT FILES  
 OFFICE  
 FEB 10 1989  
 RECEIVED

0-78.7M ABUNDANT NARROW CALCITE VEINLETS CUT MVOL AT RANDOM ANGLES.  
 2M CALCITE VEINLET WITH 2% CHALCOPYRITE.

FOLIATION AT: 75M DIP = 55 des relative to core axis

FOLIATION AT: 80M DIP = 45 des relative to core axis

78.3M MINOR FY, CPY IN CALCITE VEIN ZONE.

STRUCTURE: quartz veinings DIP= ?? FROM 85.9M TO 86.1M GREY QUARTZ, 10% PD+CPY

91.0-92.5M BROKEN CORE DUE TO EXCESSIVE FRACTURING.

QUARTZ CARBONATE VEINING MINOR AND SPORADIC.

FOLIATION AT: 100M DIP = 55 des relative to core axis

95-100M UNIFORM TEXTURED MVOL, MINOR VEINING.

100.3-102.1M ABUNDANT CALCITE AS VEINS AND INTERSTITIAL MATERIAL.

104.5-105.0M FELDSPAR PORPHYRY DIKE, SIMILAR TO CRYSTAL TUFF.

STRUCTURE: quartz veinings DIP= ?? FROM 106.8M TO 107.0M MINOR PD

FOLIATION AT: 106M DIP = 50 des relative to core axis

CARBONATE VEINING AT 106.9M CONTAINS MINOR PD.

111.1M DISSEMINATED CPY OVER 3cm.

112.6-112.75M 10% DISSEMINATED PD+CPY.

FOLIATION AT: 108M DIP = 45 des relative to core axis

114.9M DISSEMINATED CPY.

STRUCTURE: quartz veinings DIP= 50 AT 116.1M MINOR CPY, PD

BIOTITE PERCENTAGE INCREASES SLIGHTLY NEAR END OF HOLE.

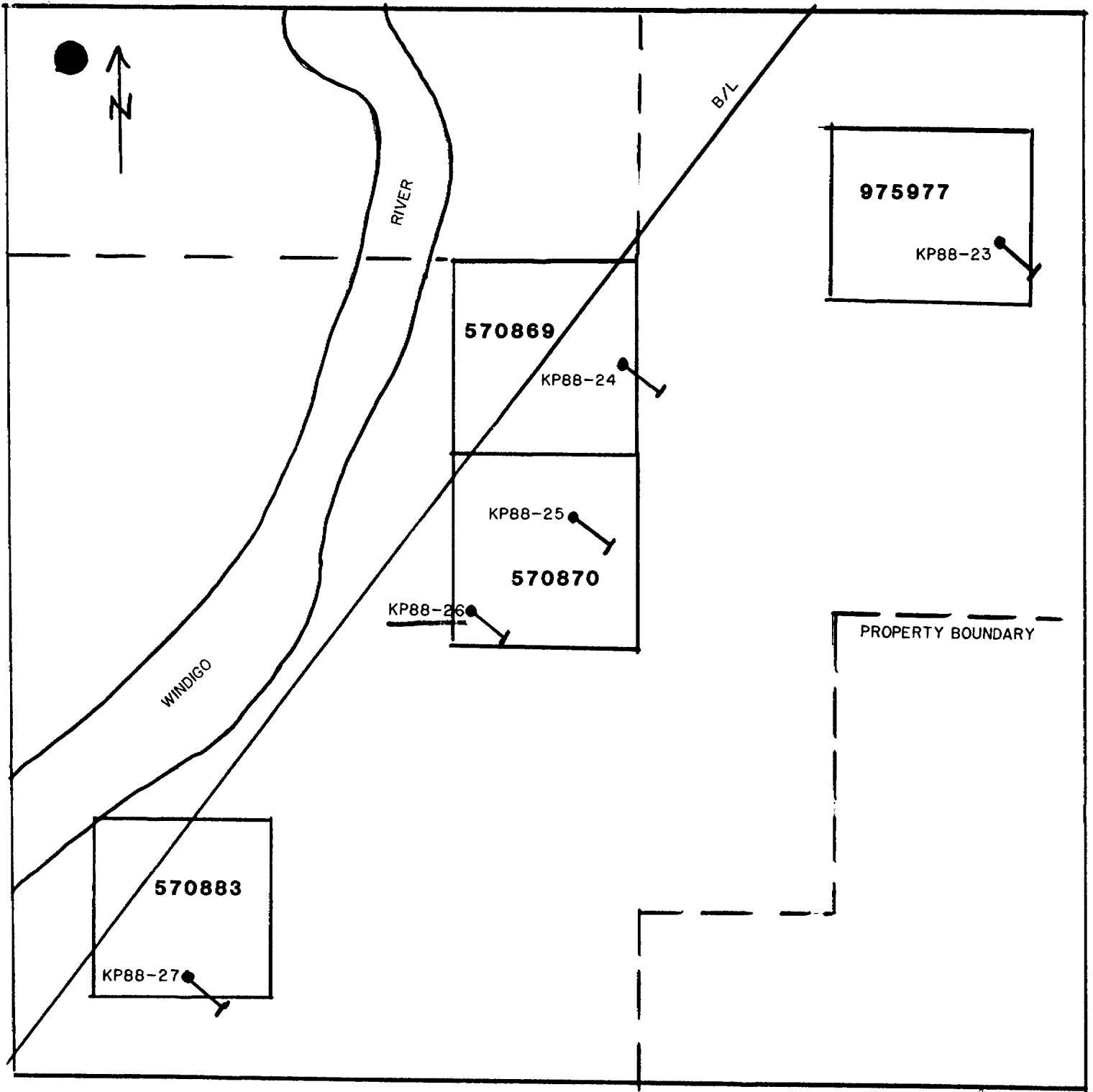
117.3M MINOR PYRRHOTITE ASSOCIATED WITH CALCITE VEINING.

STRUCTURE: calcite veinings DIP= 40 AT 119.5M 8CM

120.4M END OF HOLE.

CASING PULLED.

21 CORE BOXES USED.



*Douglas A. Panagiotis.*

**KIPPEY DRILL HOLE LOCATION SKETCH**

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 \* PROJECT NO.: 653 CORE SIZE: BQ HOLE AZ: 130 \*  
 \* DRILL HOLE: KP-88-025 DRILL FIRM: Longyear HOLE DIP: -50 \*  
 \* DRILLED: 9/ 9/88 TO 9/11/88 HOLE COORD: 24+00N \*  
 \* GEOLOGGED: 9/11/88 1+80E \*  
 \* ASSISTED BY: TH Hous Panaspko HOLE LENGTH: 120.4 Metres \*  
 \* COORDINATE SYSTEM: Grid COLLAR ELEVATION: \*  
 \* GRID AZM: 40 degrees \*  
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*Douglas A. Panaspko.*

0.0 M - 7.9 M OVERBURDEN

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7.9 M - 64.0 M MAFIC VOLCANIC FLOW

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RECOVERY= 99% QUARTZ= 20% CARBONATE= 10% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 30%  
 COLOURS: m. dark grey GRAIN SIZE = fine to medium  
 ALTERATION: moderate CAL: moderate DOL: fresh CHL: strong  
 SER: fresh FUC: fresh SIL: moderate HEM: fresh  
 TEXTURES: foliated competent microveined  
 FRACTURING: very lightly fx DIP=

FOLIATION AT: 9M DIP = 50 des relative to core axis  
 ABUNDANT NARROW FRACTURES CONTAIN SMALL QUANTITIES OF PO, PY AND CPY.  
 FRACTURES ARE ALSO CALCITE FILLED.

MINERALIZATION: .3 % pyrrhotite (fx coatings)  
 MINERALIZATION: .3 % chalcopryte (microveins, fx)

QUARTZ VEINING IS VERY MINOR.  
 SULPHIDES CONCENTRATED AT: 15.2-15.3, 16.2-16.6, 16.8-17.3, 17.9-18.0M.

FOLIATION AT: 18M DIP = 50 des relative to core axis

FOLIATION AT: 23M DIP = 50 des relative to core axis

STRUCTURE: quartz veinings DIP= ?? AT 19.6M

LOCAL BIOTITE RICH INTERBEDS GIVE ROCK A BROWN COLOUR.

SULPHIDE PERCENTAGE DECREASES BELOW 18M.

24.6-25.3M CORE HIGHLY FRACTURED AND BROKEN UP.

STRUCTURE: calcite veinings DIP= 20 FROM 25.3M TO 25.6M HAIRLINE FRACTURE FILLINGS

FOLIATION AT: 27M DIP = 55 des relative to core axis

MVOL IS MODERATELY TO STRONGLY SILICIFIED.

MINOR CONCENTRATIONS OF CPY AT: 28.7, 30.35M.

FOLIATION AT: 33M DIP = 60 des relative to core axis

MINOR BIOTITE RICH BANDS FROM 30 TO 45M.

1-2% PYRITE IN CONCENTRATIONS FROM 32.2 TO 32.8M.

FOLIATION AT: 37M DIP = 55 des relative to core axis

FOLIATION AT: 44M DIP = 50 des relative to core axis

34.7-34.9M ABUNDANT QUARTZ AND SILICIFICATION WITH CPY AND SPHALERITE (2%)

35.5M MINOR VEINING AND CPY DISSEMINATED.

ABUNDANT MICROFRACTURES WITH CALCITE THROUGHOUT.

45.6M CONCENTRATION OF CPY AND PY IN QUARTZ VEINLET.

46.9-48.6M FELDSPAR PORPHYRY DIKE, MEDIUM TO DARK GREY, ABUNDANT FSP

PHENOCRYSTS.

MINOR MVOL INCLUSION FROM 48 TO 48.2M.

MVOL BELOW DIKE IS VERY FINE GRAINED, SILICIFIED.

49.15-49.3M 15% BEDDED PYRITE, FINE GRAINED.

49.6M MINOR QUARTZ VEINING WITH PO, CPY AS FRACTURE FILLINGS.

STRUCTURE: quartz veinings DIP= ?? AT 52.2M

3CM MINOR PO, CPY

FOLIATION AT: 57M DIP = 60 des relative to core axis

MVOL IS MODERATELY TO STRONGLY SILICIFIED.

56.3M 1-2% PO AS FRACTURE FILLINGS.

53-60M MVOL IS MASSIVE TO WEAKLY FOLIATED, ONLY HAIRLINE CALCITE VEINLETS.

61.8-61.9M CONCENTRATION OF PY, PO AND CPY OVER 10CM, SOME QUARTZ.

SHARP LOWER CONTACT MARKED BY DECREASE IN CHLORITE PERCENTAGE.

ONTARIO GEOLOGICAL SURVEY  
 ASSESSMENT FILES  
 OFFICE  
 FEB 16 1989  
 RECEIVED



64.0 M - 67.1 M CRYSTAL TUFF

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RECOVERY= 99% QUARTZ= 30% CARBONATE= 05% SERICITE= % FELDSPAR= 45% FUCHSITE= % CHLORITE= 10%  
 COLOURS: m. dark grey GRAIN SIZE = fine to medium  
 OTHER MINERALS: 10% mica  
 ALTERATION: moderate CAL: fresh DOL: fresh CHL: weak  
 SER: fresh FUC: fresh SIL: strong HEM: fresh  
 TEXTURES: porphyritic weakly foliated uniform texture  
 FRACTURING: slightly fractured DIP= \*\*

SIMILAR CRYSTAL TUFF TO THAT SEEN IN PREVIOUS HOLES, MASSIVE, SILICEOUS.  
 FOLIATION AT: 66M DIP = 60 deg relative to core axis  
 64.35M NARROW QUARTZ VEIN WITH PO, CPY.  
 SEVERAL FRACTURES AT 20 DEG TO C.A. IN THIS UNIT.  
 67.0-67.1M QUARTZ VEIN WITH 5% PO AND MINOR CPY.  
 SHARP LOWER CONTACT WITH INCREASE IN CHLORITE CONTENT.

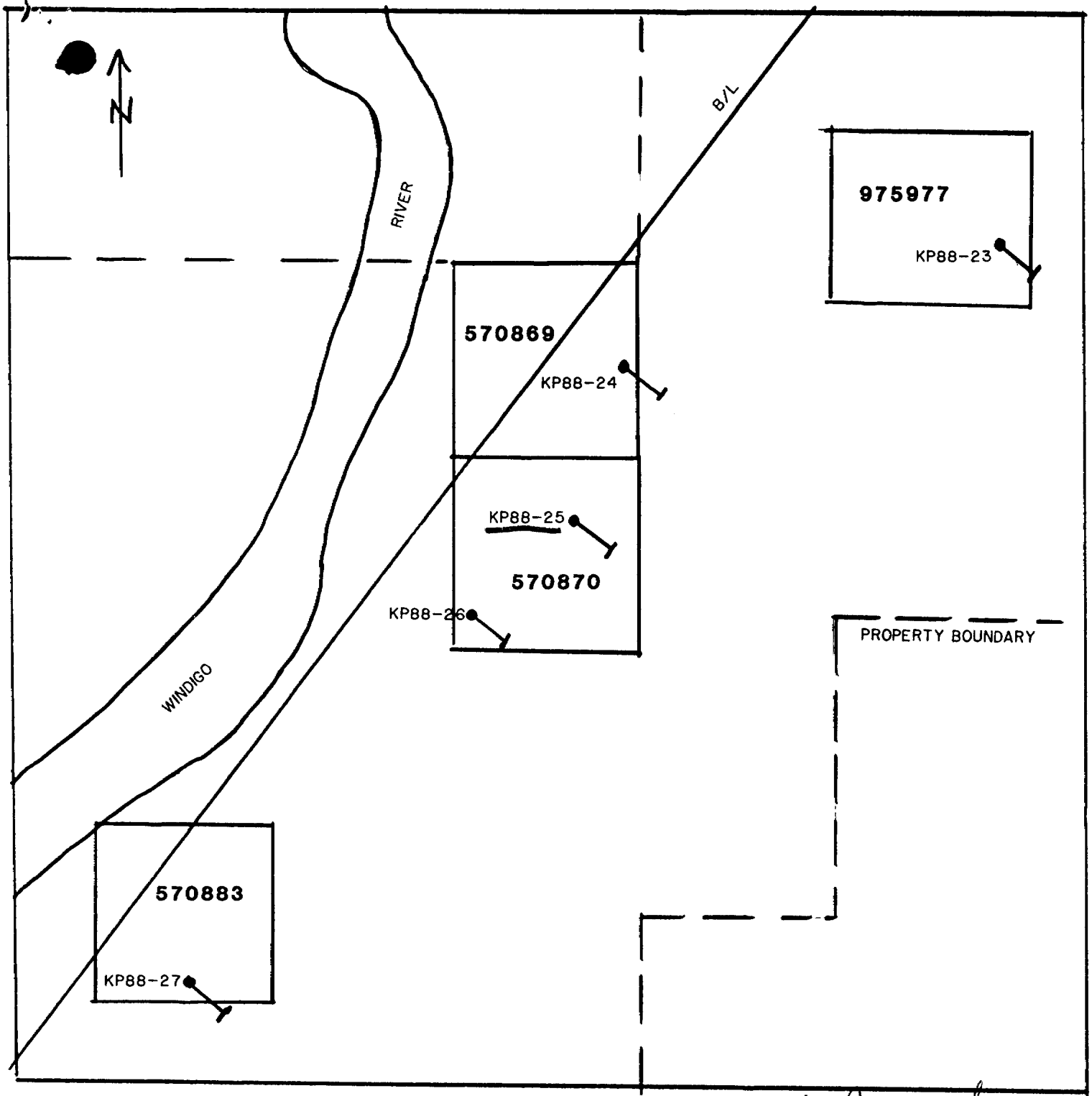
67.1 M - 120.4 M MAFIC VOLCANIC FLOW

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RECOVERY= 99% QUARTZ= 20% CARBONATE= 15% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 25%  
 COLOURS: m. dark green GRAIN SIZE = fine grained  
 ALTERATION: moderate CAL: weak DOL: fresh CHL: strong  
 SER: fresh FUC: fresh SIL: moderate HEM: fresh  
 TEXTURES: foliated competent microveined  
 FRACTURING: very lightly fr DIP=

ABUNDANT CONCENTRATIONS OF SULPHIDES TO 71.4M ESPECIALLY AT FOLLOWING  
 INTERVALS: 67.1-67.5, 68.25-68.4 (WITH QUARTZ VEIN), 68.9-69.15,  
 69.2-69.4, 69.5-69.65, 70.0-70.1M.  
 SULPHIDES ARE PO AND PY WITH MINOR CPY, AND ARE USUALLY ASSOCIATED  
 WITH QUARTZ CONCENTRATIONS, LOCALLY UP TO 30% PO OVER NARROW INTERVALS.  
 STRUCTURE: quartz veinings DIP= ?? AT 68.3M MASSIVE PO, SOME CPY  
 FOLIATION AT: 71M DIP = 50 deg relative to core axis  
 BLEBS OF CHALCOPYRITE OCCUR IN FRACTURES IN THE ABOVE NOTED ZONES.  
 STRUCTURE: calcite veinings DIP= 30 AT 69.5M 1CH  
 FOLIATION AT: 77M DIP = 55 deg relative to core axis  
 72.7-73.0M FELDSPATHIC ALTERATION, POSSIBLY A NARROW DIKE; CONSISTS OF  
 FELDSPAR FRAGMENTS SET IN A SILICIFIED MATRIX (WITH TOURMALINE?).  
 75.45-75.6M QUARTZ VEIN WITH 10% PY, PO, AND CPY.  
 BELOW 74M UNIT BECOMES SLIGHTLY MORE COARSE GRAINED, RESEMBLES A  
 GABBROIC TEXTURE.  
 78.9M MINOR NARROW QUARTZ VEINING WITH CPY.  
 79.0-79.3M DISSEMINATED PO IN GABBROIC MVL.  
 1% FINELY DISSEMINATED PO TO 80M.  
 81.1M NARROW QTZ VEINS WITH FRACTURES OF PO AND CPY.  
 STRUCTURE: quartz veinings DIP= ?? FROM 81.2M TO 81.3M CONTAINS PO, PY  
 FOLIATION AT: 81M DIP = 55 deg relative to core axis  
 STRUCTURE: quartz veinings DIP= ?? FROM 82.5M TO 83.5M MASSIVE, WHITE  
 QUARTZ VEIN CONTAINS 1-2% PO, CPY IN COARSE BLEBS PRIMARILY NEAR  
 UPPER AND LOWER CONTACTS.  
 FOLIATION AT: 86M DIP = 55 deg relative to core axis  
 86.75M MINOR QUARTZ VEINING WITH PO, PY.  
 STRUCTURE: quartz veinings DIP= 30 AT 87.8M MINOR SULPHIDES  
 88.4M NARROW CALCITE VEINLET WITH CPY.  
 92.0-97.0M COARSE GRAINED TEXTURE PREDOMINATES, POSSIBLY CENTRE OF FLOW.  
 90.15-90.25M GREY QUARTZ VEIN, MINOR PYRITE.  
 90.4-90.8M ABUNDANT CALCITE VEINING, MINOR BROWN AMPHIBOLE (TREMOLITE).  
 99.4-99.55M MASSIVE SULPHIDES; 30% PO, 5% CPY.  
 100.0-100.3M FELDSPAR PORPHYRY DIKE, MINOR QUARTZ VEINING.  
 FOLIATION AT: 99M DIP = 60 deg relative to core axis  
 102-106M UNIFORM FINE GRAINED SILICIFIED MVL, TRACE SULPHIDES.  
 108.7-111.1M OXIDE FACIES BANDED IRON FORMATION; ABUNDANT MAGNETITE LAYERS.  
 MINOR PO AND CPY FILLED FRACTURES.  
 IRON FORMATION CONTAINS 15-20% CHLORITE RICH BANDS.  
 BEDDING AT: 110M DIP = 60 deg relative to core axis  
 FOLIATION AT: 114M DIP = 55 deg relative to core axis  
 115.7-116.7M FELDSPAR PORPHYRY DIKE, MINOR CHALCOPYRITE FILLED FRACTURES.  
 STRUCTURE: quartz veinings DIP= ?? FROM 115.5M TO 115.6M MINOR SULPHIDES  
 117-120.4M MASSIVE FINE GRAINED MVL, UNMINERALIZED.  
 120.4M END OF HOLE.

CASING FULLED,  
CORE BOXES USED.



*Douglas A. Panayypho*

**KIPPEY DRILL HOLE LOCATION SKETCH**

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 \* PROJECT NO.: 653 CORE SIZE: 80 HOLE AZ: 130 \*  
 \* DRILL HOLE: KP-88-024 DRILL FIRM: Longyear HOLE DIP: -50 \*  
 \* DRILLED: 9/ 7/88 TO 9/ 9/88 HOLE COORD: 26+00N \*  
 \* GEOLOGGED: 9/10/88 : 1+80E \*  
 \* GEOLOGGED BY: Dous Panagapko HOLE LENGTH: 121.0 Metres \*  
 \* ASSISTED BY: TH COLLAR ELEVATION: \*  
 \* COORDINATE SYSTEM: GRID GRID AZM: 40 degrees \*  
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*Douglas A. Panagapko*

0.0 M - 7.9 M OVERBURDEN  
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7.9 M - 43.4 M MAFIC VOLCANIC FLOW  
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RECOVERY= 99% QUARTZ= 15% CARBONATE= 15% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 30%  
 COLOURS: m. dark green GRAIN SIZE = fine to medium  
 ALTERATION: moderate CAL: moderate DOL: fresh CHL: strong  
 SER: fresh FUC: fresh SIL: moderate HEM: fresh  
 TEXTURES: foliated mod. competent microveined  
 FRACTURING: very lightly fx DIP=

VOLCANIC IS SIMILAR TO THAT SEEN IN 88-23, HOWEVER THIS ROCK IS MUCH MORE FRACTURED AND MICROVEINED, DISSEMINATED FO AND CPY TO 18.5M. MINOR BIOTITE RICH ZONES MAY BE INTERPILLOW MATERIAL.

FOLIATION AT: 10M DIP = 45 des relative to core axis  
 13.9-14.25M FELDSPAR PORPHYRY DIKE, DARK GREY, WHITE PHENOCRYSTS.  
 0.5-1.0% CHALCOPYRITE OVERALL AS FRACTURE FILLINGS.

MOST ABUNDANT SULPHIDE CONCENTRATIONS AT: 7.9, 10.7, 17.9-18.3M.  
 STRUCTURE: quartz veinings DIP= 45 FROM 17.4M TO 17.6M  
 SEVERAL PARALLEL VEINLETS, MINOR PY, CPY.

FOLIATION AT: 16M DIP = 45 des relative to core axis  
 FOLIATION AT: 25M DIP = 50 des relative to core axis  
 STRUCTURE: quartz veinings DIP= ?? FROM 23.5M TO 24.1M MASSIVE WHITE QUARTZ  
 STRUCTURE: calcite veinings DIP= ?? FROM 28.4M TO 29.6M  
 30-40% CALCITE, SUBPARALLEL TO CORE AXIS

STRUCTURE: quartz veinings DIP= ?? FROM 29.8M TO 30.7M  
 SUBPARALLEL TO C.A., 5% PY, TR CPY

30.7-32.6M HIGHLY BROKEN CORE.  
 BELOW 32.6M CORE CONTAINS NUMEROUS QUARTZ MICROVEINS AT RANDOM ANGLES TO C.A.

33.7-33.9M 3% FINE GRAINED BEDDED PYRITE.  
 STRUCTURE: quartz veinings DIP= 45 AT 34.7M 2CM WITH FO, CPY  
 STRUCTURE: dyke DIP= ?? FROM 35.7M TO 35.9M FINE GRAINED GRANITIC

36.1-38.1M 2% PY MINOR CPY THROUGHOUT THIS ZONE.  
 38.1-41.2M MVOL IS STRONGLY SILICIFIED, MINERALIZED WITH PY AND CPY.

FOLIATION AT: 37M DIP = 55 des relative to core axis  
 39.2-39.5M QUARTZ FILLED FRACTURE PARALLEL TO C.A.  
 42.0-42.3M QUARTZ CALCITE VEIN, MASSIVE, MINOR COUNTRY ROCK.  
 42.7-43.0M QUARTZ VEIN STOCKWORK, MINOR PY.  
 LOWER CONTACT GRADATIONAL, MINOR CRYSTAL TUFF AT 43.3M.

43.4 M - 52.4 M CRYSTAL TUFF  
 \*\*\*\*\*

RECOVERY= 99% QUARTZ= 40% CARBONATE= 05% SERICITE= % FELDSPAR= 45% FUCHSITE= % CHLORITE= 10%  
 COLOURS: m. dark grey GRAIN SIZE = medium grained  
 OTHER MINERALS: <1% pyrite  
 ALTERATION: moderate CAL: weak DOL: fresh CHL: weak  
 SER: fresh FUC: fresh SIL: strong HEM: fresh  
 TEXTURES: tuffaceous porphyritic competent weakly foliated  
 FRACTURING: very lightly fx DIP= \*\*

ONTARIO GEOLOGICAL SURVEY  
 ASSESSMENT FILES  
 OFFICE  
 FEB 16 1989  
 RECEIVED

FOLIATION AT: 45M DIP = 60 des relative to core axis  
 CONTAINS 10-15% SUBHEDRAL WHITE FELDSPAR PHENOCRYSTS IN A DARK  
 SILICEOUS GROUNDMASS.  
 PYRITE OCCURS AS FRACTURE FILLINGS AND WITH NARROW QUARTZ VEINS.  
 STRUCTURE: quartz veinings DIP= ?? FROM 47.1M TO 47.2M MASSIVE  
 47.1-48.1M MAFIC VOLCANIC RAFT WITHIN CRYSTAL TUFF, MINOR PO IN FRACTURES.  
 STRUCTURE: quartz veinings DIP= ?? AT 49.3M CONTAINS FLECKS OF PO  
 STRUCTURE: quartz veinings DIP= ?? AT 50.3M  
 50.9-52.4M ABUNDANT QUARTZ AND CALCITE VEINING, COMPRISES ABOUT 50%  
 OF SECTION.  
 LOWER CONTACT MARKED BY END OF MASSIVE VEINING.

52.4 M - 56.8 M MAFIC VOLCANIC FLOW  
 \*\*\*\*\*

RECOVERY= 99% QUARTZ= 15% CARBONATE= 15% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 30%  
 COLOURS: medium green GRAIN SIZE = fine to medium  
 OTHER MINERALS: 01% pyrite  
 ALTERATION: moderate CAL: weak DOL: fresh CHL: strong  
 SER: weak FUC: fresh SIL: moderate HEM: fresh  
 TEXTURES: foliated veined mod. competent  
 FRACTURING: very lightly fr DIP= \*\*  
 MVOL IS MORE SILICIFIED WITH ABUNDANT NARROW QUARTZ VEINS, FOLIATED.  
 FOLIATION AT: 55M DIP = 50 des relative to core axis  
 54.2-54.4M QUARTZ VEIN WITH INTERSTITIAL CALCITE.  
 55.2-55.5M QUARTZ-CALCITE VEIN.  
 MINOR PY AND CPY ASSOCIATED WITH QUARTZ VEINLETS.  
 LOWER CONTACT MARKED BY START OF QUARTZ VEIN ZONE.

56.8 M - 68.8 M CRYSTAL TUFF  
 \*\*\*\*\*

RECOVERY= 99% QUARTZ= 35% CARBONATE= 10% SERICITE= % FELDSPAR= 45% FUCHSITE= % CHLORITE= 15%  
 COLOURS: n. dark grey GRAIN SIZE = medium strained  
 ALTERATION: moderate CAL: weak DOL: fresh CHL: weak  
 SER: fresh FUC: fresh SIL: strong HEM: fresh  
 TEXTURES: mod. competent porphyritic microveined  
 FRACTURING: very lightly fr DIP=  
 STRUCTURE: quartz veinings DIP= ?? FROM 56.8M TO 57.2M MASSIVE  
 57.2-58.2M SILICIFIED FELSIC DIKE, VERY LIGHT GREY, MASSIVE, CONTAINS  
 SMALL ROCK FRAGMENTS.  
 STRUCTURE: quartz veinings DIP= ?? FROM 59.5M TO 59.7M DARK GREY, MINOR PYRITE  
 62.8-63.7M OXIDE FACIES IRON FORMATION, BANDED FROM 63.0-63.1M, REMAINDER  
 CONSISTS OF CHLORITIC BANDS WITH MASSIVE SECTIONS OF PYRRHOTITE AND  
 MINOR CHALCOPYRITE; ZONE CONTAINS 20% DARK GREY QUARTZ.  
 MASSIVE PO OVER 6CM.  
 FOLIATION AT: 64M DIP = 65 des relative to core axis  
 FOLIATION AT: 66M DIP = 55 des relative to core axis  
 64.15M CHALCOPYRITE FILLED FRACTURE  
 64.5-64.7M PY AND CPY FILLED FRACTURES, 5% SULPHIDES.  
 67.1M 2CM QUARTZ VEIN, MASSIVE.  
 67.7M 2CM QUARTZ VEIN.  
 67.9-68.1M CHLORITE FILLED FRACTURE, PARALLEL TO C.A.  
 68.6-68.8M TUFF BECOMES LIGHT GREY NEAR LOWER CONTACT.

68.8 M - 112.2 M MAFIC VOLCANIC FLOW  
 \*\*\*\*\*

RECOVERY= 99% QUARTZ= 15% CARBONATE= 10% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 35%  
 COLOURS: n. dark green GRAIN SIZE = fine to medium  
 OTHER MINERALS: <1% pyrite  
 ALTERATION: moderate CAL: weak DOL: fresh CHL: strong  
 SER: fresh FUC: fresh SIL: weak HEM: fresh  
 TEXTURES: weakly foliated massive microveined competent  
 FRACTURING: slightly fractured DIP= \*\*  
 MASSIVE TO WEAKLY FOLIATED, COARSER GRAINED THAN PREVIOUS SECTIONS.  
 WEAK GABBROIC TEXTURE IN PLACES.  
 POORLY MINERALIZED, TRACE PYRITE LOCALLY.  
 QUARTZ VEINLETS ARE NARROW AND NOT ABUNDANT.  
 75.0-80.5M GABBROIC TEXTURE PREDOMINATES, FELDSPARS CLEARLY VISIBLE.

LOCAL CHALCOPYRITE FLECKS.

STRUCTURE: calcite veinings DIP= ?? FROM 79.5M TO 79.8M SUBPARALLEL TO C.A.  
 80.5-81.2M SILICIFIED FELDSPAR PORPHYRY DIKE (SIMILAR TO CRYSTAL TUFF).  
 TRACE PYRITE IN DIKE.

STRUCTURE: calcite veinings DIP= 10 FROM 81.9M TO 82.3M 5MM THICK  
 FOLIATION AT: 85M DIP = 60 des relative to core axis  
 STRUCTURE: calcite veinings DIP= 40 FROM 85.8M TO 85.9M PARALLEL VEINLETS  
 84.75M CHALCOPYRITE FILLED FRACTURE.

FOLIATION AT: 89M DIP = 55 des relative to core axis  
 STRUCTURE: quartz veinings DIP= 30 AT 89.6M MINOR PO, CPY  
 STRUCTURE: quartz veinings DIP= 80 AT 91.7M

94.9-96.0M NARROW CALCITE VEINLETS SUBPARALLEL TO C.A.  
 MVOL LOCALLY COARSE GRAINED (CENTRE OF FLOW?).  
 103.9M MVOL HAS BEEN BRECCIATED, FRAGMENTS TO 3CM.  
 HAIRLINE TO NARROW QUARTZ CARBONATE VEINLETS COMMON THROUGHOUT.  
 104-110M FINE GRAINED, ABUNDANT HAIRLINE QUARTZ FILLED FRACTURES.  
 SHARP LOWER CONTACT MARKED BY CHANGE TO TUFFACEOUS UNIT WITH  
 LOW CHLORITE CONTENT.

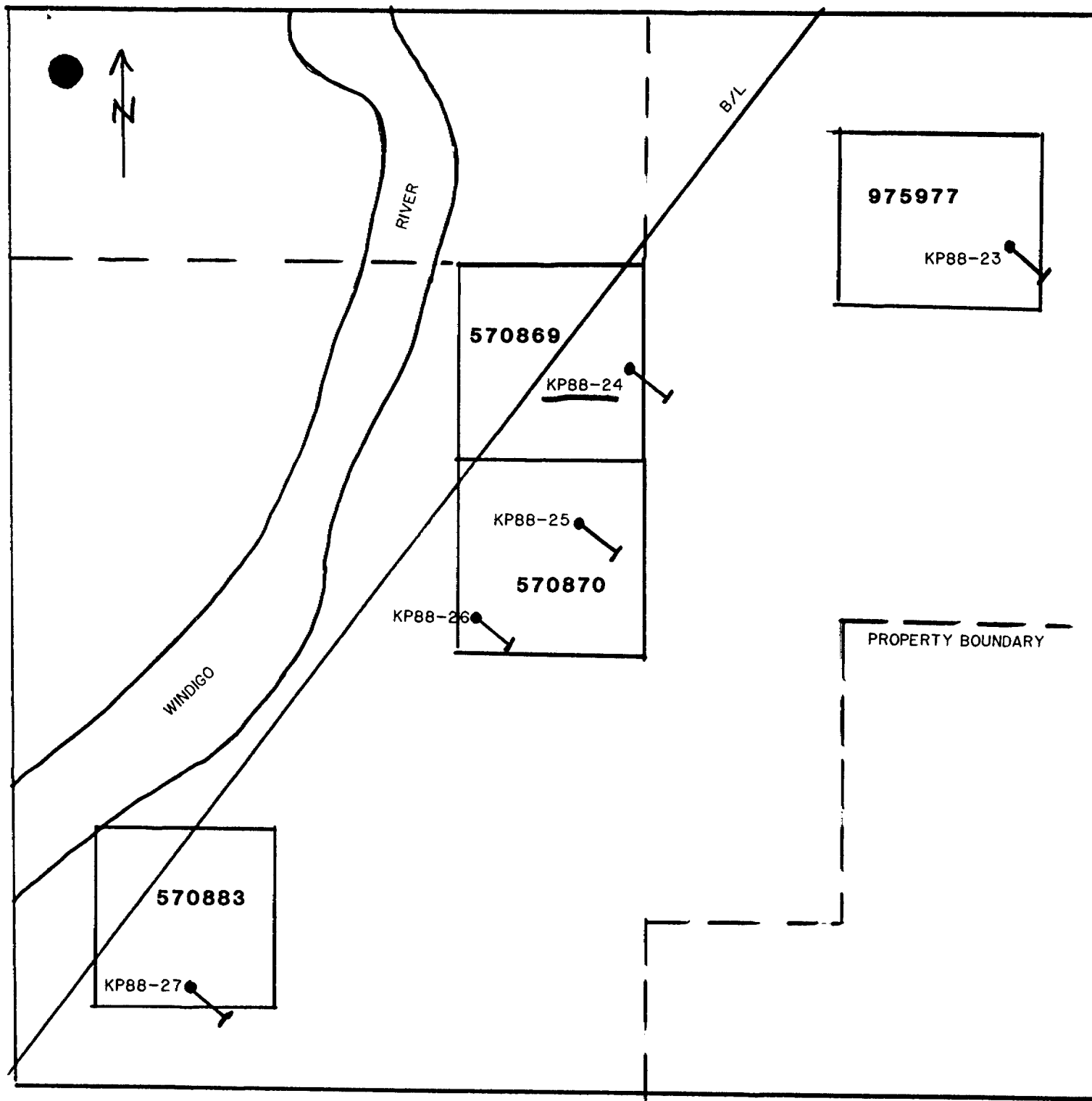
112.2 M - 121.0 M CRYSTAL TUFF

\*\*\*\*\*

RECOVERY= 99% QUARTZ= 35% CARBONATE= 10% SERICITE= % FELDSPAR= 45% FUCHSITE= % CHLORITE= 10%  
 COLOURS: m. dark grey GRAIN SIZE = fine to medium  
 ALTERATION: moderate CAL: fresh DOL: fresh CHI: weak  
 SER: fresh FUC: fresh SIL: strong HEM: fresh  
 TEXTURES: porphyritic competent weakly foliated microveined

FRACTURING: slightly fractured DIP=  
 MVOL INTERVALS AT: 115.8-117.2, 117.9-120.7M.  
 118.15-118.6M OXIDE FACIES IRON FORMATION, INTERLAYERED MAGNETITE  
 CHLORITE, MINOR QUARTZ VEINING.

STRUCTURE: quartz veinings DIP= ?? FROM 113.7M TO 113.8M  
 FOLIATION AT: 118M DIP = 60 des relative to core axis  
 FOLIATION AT: 120M DIP = 65 des relative to core axis  
 MINOR CPY, PY IN IRON FORMATION.  
 NO MINERALIZATION IN BOTTOM 1M OF HOLE.  
 121.0M END OF HOLE.  
 CASING FILLED.  
 20 CORE BOXES USED.  
 DIP AT 61M: 47 DEG  
 DIP AT 121M: 44 DEG



**KIPPEY DRILL HOLE LOCATION SKETCH**

\*\*\*\*\*  
 \* PROJECT NO.: 653 CORE SIZE: BQ HOLE AZ: 130 \*  
 \* DRILL HOLE: KP-88-023 DRILL FIRM: Longyear HOLE DIP: -50 \*  
 \* DRILLED: 9/ 5/88 TO 9/ 7/88 HOLE COORD: 35+00N \*  
 \* GEOLOGGED: 9/ 6/88 : 5+70E \*  
 \* GEOLOGGED BY: Doug Panayakko HOLE LENGTH: 121.9 Metres \*  
 \* ASSISTED BY: TH COLLAR ELEVATION: \*  
 \* COORDINATE SYSTEM: GRID GRID AZM: 40 DEGREES \*  
 \*\*\*\*\*

*Douglas A. Panayakko*

0.0 M - 9.8 M OVERBURDEN

\*\*\*\*\*  
 OVERBURDEN IS VERY BOULDERY; DRILLER BROKE OFF CASING SHOE ON FIRST ATTEMPT.

9.8 M - 94.4 M MAFIC VOLCANIC FLOW

\*\*\*\*\*

RECOVERY= 99% QUARTZ= 15% CARBONATE= 15% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 30%  
 COLOURS: dark green GRAIN SIZE = fine to medium  
 OTHER MINERALS: 01% Pyrrhotite  
 ALTERATION: weak CAL: weak DOL: fresh CHL: strong  
 SER: fresh FUC: fresh SIL: moderate HEM: fresh  
 TEXTURES: foliated competent microveined  
 FRACTURING: slightly fractured DIP= \*\*

MASSIVE TO WEAKLY FOLIATED MAFIC VOLCANIC FLOW, UNIFORM MINERALOGY THROUGHOUT, MOSTLY FINE GRAINED.

FOLIATION AT: 14M DIP = 55 deg relative to core axis

FOLIATION AT: 17M DIP = 60 deg relative to core axis

11.9M NARROW QUARTZ VEIN WITH MINOR CHALCOPYRITE.

QUARTZ VEINLETS ARE NARROW AND AT RANDOM ANGLES TO CORE AXIS.

ROCK HAS BEEN MODERATELY SILICIFIED.

FOLIATION AT: 32M DIP = 55 deg relative to core axis

FOLIATION AT: 36M DIP = 55 deg relative to core axis

31.7M MINOR PYRRHOTITE IN QUARTZ VEINLET.

32.5M PYRITE FILLED FRACTURE.

ROCK IS NON-MAGNETIC EXCEPT FOR WHERE PYRRHOTITE IS DISSEMINATED.

FOLIATION AT: 43M DIP = 65 deg relative to core axis

FOLIATION AT: 46M DIP = 60 deg relative to core axis

PYRITE IS COMMON AS FRACTURE COATINGS.

48.4M TRACE CHALCOPYRITE AND PYRRHOTITE DISSEMINATED IN CALCITE VEIN.

FOLIATION AT: 53M DIP = 50 deg relative to core axis

FOLIATION AT: 56M DIP = 55 deg relative to core axis

FOLIATION AT: 60M DIP = 55 deg relative to core axis

NUMEROUS HAIRLINE TO 5MM WIDE CALCITE VEINLETS, AT RANDOM ANGLES TO CORE.

54.4M 1CM WIDE QUARTZ VEIN, MINOR CHALCOPYRITE.

58.0M MINOR PYRRHOTITE IN CALCITE VEINLET.

60.4M 5CM THICK INTERBED OF MASSIVE PYRITE, MINOR PYRRHOTITE.

63.7-64.8M SILICIFIED FELDSPAR PORPHYRY DIKE; MEDIUM GREY COLOUR,

ABUNDANT WHITE FELDSPAR PHENOCRYSTS TO 5MM.

63.6-63.7M MAFIC VOLCANIC IS SILICIFIED; 5% CHALCOPYRITE AND PYRRHOTITE.

DIKE CONTAINS 10% BIOTITE, DISSEMINATED PYRRHOTITE.

64.8-65.0M SILICIFIED MAFIC VOLCANIC BELOW DIKE, WELL MINERALIZED WITH PYRRHOTITE (15%) AND CHALCOPYRITE (2%).

FOLIATION AT: 65M DIP = 60 deg relative to core axis

BELOW DIKE, VOLCANIC IS WELL FOLIATED WITH NARROW STRINGERS OF PYRRHOTITE TO 66M.

FOLIATION AT: 71M DIP = 55 deg relative to core axis

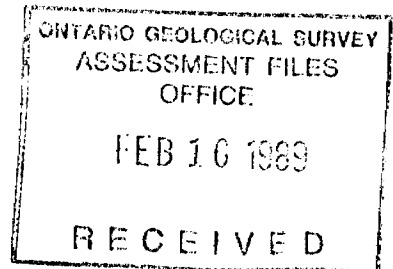
69.7M PY AND CPY FILLED FRACTURES OVER 5CM.

74.4-74.8M FELDSPAR PORPHYRY DIKE, SHARP CONTACTS, MINOR SULPHIDES.

STRUCTURE: quartz veining DIP= 45 AT 72.5M 5CM THICK

FOLIATION AT: 74M DIP = 60 deg relative to core axis

74M SEVERAL BIOTITE RICH ZONES CUT CORE EVERY 15CM, MAY BE PILLOW SELVAGES.



82  
 83  
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 90



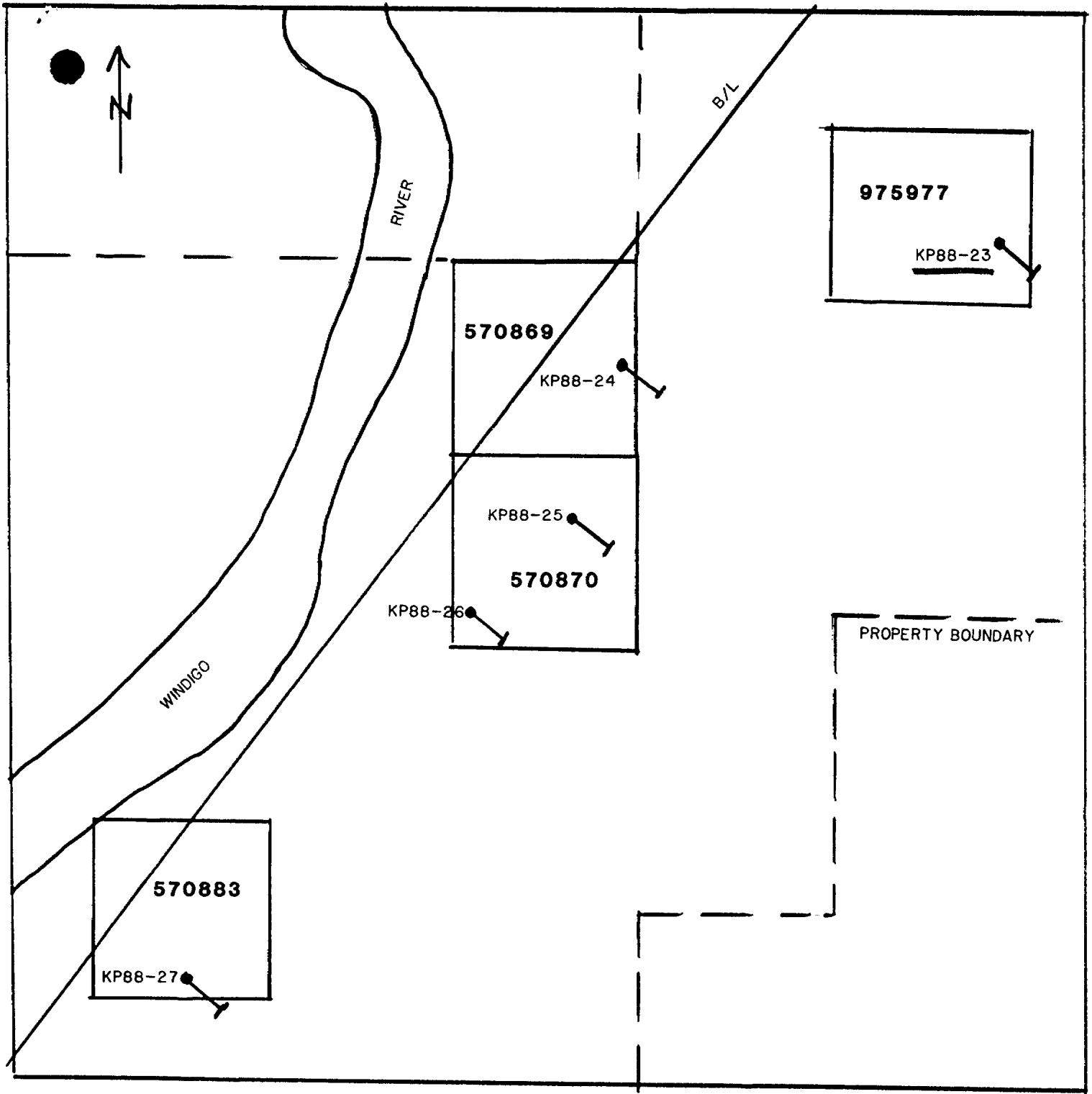
71.5-74.9M SILICIFIED FELDSPAR PORPHYRY DIKE; DARK GREY,  
 0.6M QUARTZ VEIN WITH MINOR PO AND CPY.  
 FOLIATION AT: 83M DIP = 50 deg relative to core axis  
 STRUCTURE: quartz veinings DIP= 10 FROM 81.9M TO 92.1M MINOR PO  
 STRUCTURE: fracture set DIP= 15 FROM 83.1M TO 83.4M  
 SEVERAL NARROW FRACTURES, MINOR PO, CPY  
 83.9-84.3M QUARTZ VEINING WITH PO, CPY.  
 88.5M QUARTZ VEINLET WITH MINOR PO.  
 FOLIATION AT: 93M DIP = 60 deg relative to core axis  
 LOWER CONTACT MARKED BY RAPID CHANGE FROM CHLORITE RICH VOLCANIC TO  
 QTZ-FSP RICH TUFF.

94.4 M - 102.5 M CRYSTAL TUFF  
 \*\*\*\*\*

RECOVERY= 99% QUARTZ= 25% CARBONATE= 15% SERICITE= 08% FELDSPAR= 40% FUCHSITE= % CHLORITE= 10%  
 COLOURS: medium grey black GRAIN SIZE = fine to medium  
 OTHER MINERALS: 02% pyrrhotite  
 ALTERATION: weak CAL: weak DOL: fresh CHL: weak  
 SER: weak FUC: fresh SIL: moderate HEM: fresh  
 TEXTURES: tuffaceous laminated competent folded slightly  
 FRACTURING: slightly fractured DIP= \*\*  
 WELL BEDDED, SILICEOUS TUFF, CONSISTS OF VERY FINE GRAINED BLACK LAYERS  
 AND MEDIUM GRAINED QUARTZ RICH GREY LAYERS.  
 DISSEMINATED PO OCCURS AS FRACTURE FILLINGS AND LOCAL MASSIVE SECTIONS.  
 CPY OCCURS LOCALLY AS FRACTURE FILLINGS.  
 BEDDING AT: 95M DIP = 55 deg relative to core axis  
 BEDDING AT: 99M DIP = 60 deg relative to core axis  
 PO MOST ABUNDANT AT: 94.6-94.8, 95.9-96.2, 98.2-98.3, 99.6-99.8M.  
 99.65M MINOR CPY IN QUARTZ VEIN WITH PO.  
 QUARTZ VEINS ARE VERY MINOR IN THIS UNIT.  
 LOWER CONTACT SHARP MARKED BY INCREASE IN CHLORITE CONTENT.

102.5 M - 121.9 M MAFIC VOLCANIC FLOW  
 \*\*\*\*\*

RECOVERY= 99% QUARTZ= 15% CARBONATE= 15% SERICITE= % FELDSPAR= 40% FUCHSITE= % CHLORITE= 30%  
 COLOURS: dark green GRAIN SIZE = fine grained  
 OTHER MINERALS: <1% pyrite  
 ALTERATION: weak CAL: weak DOL: fresh CHL: strong  
 SER: fresh FUC: fresh SIL: weak HEM: fresh  
 TEXTURES: foliated mod. competent microveined  
 FRACTURING: very lightly fr DIP= \*\*  
 TYPICAL FINE GRAINED METABASALT AS IN SECTION AT TOP OF HOLE.  
 FOLIATION AT: 105M DIP = 55 deg relative to core axis  
 FOLIATION AT: 112M DIP = 60 deg relative to core axis  
 QUARTZ VEINS ARE NARROW AND FOLIATION PARALLEL.  
 STRUCTURE: calcite veinings DIP= 45 AT 108.8M 5 CM  
 STRUCTURE: quartz veinings DIP= 45 AT 111.6M 5 CM  
 BELOW 116M CORE IS HIGHLY FRACTURED AND BROKEN UP.  
 117.6-118.0M NARROW QUARTZ VEIN WITH SULPHIDE (PO) FRAGMENTS IN VEIN.  
 118.0-119.0M FAULT ZONE, GOUGE AND ABUNDANT ROCK FRAGMENTS.  
 119.9-120.3M ABUNDANT QUARTZ WITH DISSEMINATED PY, PO AND CPY.  
 120.5-120.6M NARROW QUARTZ VEIN WITH PO, CPY.  
 STRUCTURE: quartz veinings DIP= ?? FROM 121.0M TO 121.2M MINOR PO  
 121.5M HAIRLINE QUARTZ VEINLETS WITH PO, CPY IN TRACE AMOUNTS.  
 121.9 METRES END OF HOLE.  
 CASING PULLED.  
 20 CORE BOXES USED.  
 DIP AT 61M: 44 DEG  
 DIP AT 121M: 41 DEG



*Douglas A. Panegypho.*

**KIPPEY DRILL HOLE LOCATION SKETCH**

LIST OF MINING C



53G055W0002 27 KIPPEN LAKE

MURK DAVIS CR.

900

CLAIM NO.

|            |      |
|------------|------|
| KRL 975998 | 20   |
| KRL 975999 | 20   |
| KRL 976000 | 20   |
| KRL 976001 | 24.6 |
| KRL 976002 | 20   |
| KRL 976003 | 40   |
| KRL 976004 | 40   |
| KRL 976005 | 20   |
| KRL 976006 | 20   |
| KRL 976007 | 20   |
| KRL 976008 | 20   |
| KRL 976009 | 20   |
| KRL 976010 | 40   |
| KRL 976011 | 40   |
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| KRL 976034 | 40   |
| KRL 976035 | 40   |
| KRL 976036 | 40   |
| KRL 976037 | 40   |
| KRL 976038 | 20   |

DOCUMENT No.  
W8902-004

|                                |   |     |                                     |
|--------------------------------|---|-----|-------------------------------------|
| Diamond or other core drilling | Signed core log showing, footage, diameter of core, number and angles of holes. |     | WORK SKETCH (as above) in duplicate |
| Land Survey                    | Name and address of Ontario land surveyor.                                      | Nil | Nil                                 |



|  |   |
|--|---|
| Name and Postal Address of Recorded Holder<br><b>CAMECO - A Canadian Mining &amp; Energy Corporation</b> | Prospector's Licence No.<br><b>T 5242</b> |
| 122 - 3rd Avenue North, Saskatoon, Saskatchewan S7K 2H6  |   |

Summary of Work Performance and Distribution of Credits

| Total Work Days Cr. claimed<br><b>1920.6</b>  | Mining Claim |        |               | Work Days Cr. | Mining Claim |        |               | Work Days Cr. |    |
|---|--------------|--------|---------------|---------------|--------------|--------|---------------|---------------|----|
|   | Prefix       | Number | Work Days Cr. |               | Prefix       | Number | Work Days Cr. |               |    |
| for Performance of the following work. (Check one only)<br><input type="checkbox"/> Manual Work<br><input type="checkbox"/> Shaft Sinking Drifting or other Lateral Work.<br><input type="checkbox"/> Compressed Air, other Power driven or mechanical equip.<br><input type="checkbox"/> Power Stripping<br><input checked="" type="checkbox"/> Diamond or other Core drilling<br><input type="checkbox"/> Land Survey | KRL          | 975974 | 20            | KRL           | 975982       | 20     | KRL           | 975990        | 40 |
|   |              | 975975 | 20            |               | 975983       | 20     |               | 975991        | 34 |
|   |              | 975976 | 20            |               | 975984       | 20     |               | 975992        | 14 |
|   |              | 975977 | 20            |               | 975985       | 14     |               | 975993        | 40 |
|   |              | 975978 | 20            |               | 975986       | 40     |               | 975994        | 40 |
|   |              | 975979 | 20            |               | 975987       | 40     |               | 975995        | 34 |
|   |              | 975980 | 20            |               | 975988       | 40     |               | 975996        | 40 |
|   |              | 975981 | 20            |               | 975989       | 40     |               | 975997        | 40 |

All the work was performed on Mining Claim(s): KRL 570869, 570870, 975977, 570883

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

|   |  |
|---|--|
| <p>Drilling Contractor: Longyear Canada Inc.<br/>1111 Main Street West<br/>P.O. Box 330<br/>North Bay, Ontario<br/>P1B 8H6</p> <p>Dates of Drilling : September 1 - September 18, 1988<br/>Number of Holes : 5<br/>Total Footage : 1920.6 ft. (585.5m)<br/>Core Size : BQ</p> | <div style="border: 2px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>ONTARIO GEOLOGICAL SURVEY<br/>ASSESSMENT FILES<br/>OFFICE<br/><br/>FEB 10 1989<br/><br/>RECEIVED</p> </div> <p style="text-align: right; margin-top: 20px;"><i>Approved Jan 20/89</i> →</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto; transform: rotate(-90deg);"> <p>RECEIVED<br/>JAN 20 1989<br/>GEOLOGICAL SURVEY<br/>ONTARIO</p> </div> |
| <p>Date of Report<br/><b>December 1, 1988</b></p>   | <p>Recorded Holder or Agent (Signature)<br/><i>Emilax</i></p>  |

**Certification Verifying Report of Work**

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying  
**Douglas A. Panagarko, 700 - 360 Albert Street, Ottawa, Ontario K1R 7X7**

|   |   |
|---|---|
| Date Certified<br><b>December 1, 1988</b> | Certified by (Signature)<br><i>Douglas A. Panagarko</i> |
|---|---|

Table of Information/Attachments Required by the Mining Recorder

| Type of Work  | Specific information per type  | Other information (Common to 2 or more types)   | Attachments  |
|---|--|---|--|
| Manual Work   | Nil  | Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment. | Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post. |
| Shaft Sinking, Drifting or other Lateral Work           |  |   |  |
| Compressed air, other power driven or mechanical equip. |  |   |  |
| Power Stripping   | Type of equipment and amount expended.<br><b>Note:</b> Proof of actual cost must be submitted within 30 days of recording. | Names and addresses of owner or operator together with dates when drilling/stripping done.                            | Work Sketch (as above) in duplicate  |
| Diamond or other core drilling                          | Signed core log showing; footage, diameter of core, number and angles of holes.  |   |  |
| Land Survey   | Name and address of Ontario land surveyer.   | Nil   | Nil  |