Bergvesenet

Postboks 3021, 7002 Trondheim

Rapportarkivet

Bergvesenet rapport nr	Intern Journal nr	Internt arkiv nr	Rapport lokalisering	Gradering
BV 3844	275/93		Trondheim	**Fortrolig**
Kommer fra ..arkiv	**Ekstern rapport nr**	**Oversendt fra**	**Fortrolig pga**	**Fortrolig fra dato:**
		Sulfidmalm a.s.	Muting	

Tittel

Exploration 1992, along the Skogfoss arch in Pasvik, Finnmark.
Oksfjell, Svartfjell, Finntjørn areas.
Apendix B. Drill log and sections

Forfatter	Dato	Bedrift
Hudson- Edwards, Karen Hodges, Daryl	Nov 1992	Sulfidmalm A/S

Kommune	Fylke	Bergdistrikt	1: 50 000 kartblad	1: 250 000 kartblad
Sør-Varanger	Finnmark	Troms og Finnmark	24334 23331	Kirkenes

Fagområde	Dokument type	Forekomster
Geologi Geofysikk Geokjemi Boring	Rapport	Oksfjell Svartfjell Finntjørn
Råstofftype	**Emneord**	
Malm/metall	Ni Cu Co S	

Sammendrag

Dette er tekstdelen til en stor samlerapport fra arbeidene innen mutingsområdene i Skogfoss - Oksfjellområdet i Pasvik.
BV 3842 Tekstdel med figurer og tabeller.
BV 3843 Apendix A. Summary of Oksfjell 1992 Drilling
BV 3844 Apendix B. Drill log and sections
BV 3845 Apendix C. A report on a combined helicopter-borne Mag, EM and VLF-EM survey in Pasvik.
BV 3846 Apendix D. Tecnical report for ground geophysical surves in Skogfoss, Pasvik

APPENDIX B
DRILL LOGS AND SECTIONS

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-42 Zone # : Contractor : TERRA BOR Date started : 07/01/1992
Township: FINNMARK Date completed: 07/04/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7701275.00 N Azimuth: 0° 0' 0"
Station: 0+ 0 Departure: 596850.00 E Dip : -55° 0' 0"
Reference frame : Elevation: 128.00 Length : 163.50

Surveyed by: TERRA-BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-54° 0' 0"	° ' "
60.00 M	-55° 6' 0"	° ' "
120.00 M	-57°12' 0"	° ' "
160.00 M	-58°24' 0"	° ' "

Remarks :

Water flow : NO
Cemented :

Logged by : K. HUDSON-EDWARDS Date logged: 07/03/1992 Hole # : PS-92-42

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
0.00	5.78	OVERBURDEN									
5.78	66.07	PIL'GUYARVI VOLCANICS Overall unit is light to medium green, massive, very fine- to fine-grained, with minor smoky quartz-yellow to white carbonate veinlets; Tr Po in white carbonate veinlets									
		5.78- 15.43 Mafic Flow Medium green, very fine-grained, quite a lot of black core barrel marks; white calcite veining (1-3 mm) overall ~1-2%, generally at 90 degrees to CA but less so parallel to CA; non-sulphidic		7.00 9.00 11.00 13.00 15.00	7.01 9.01 11.01 13.01 15.01	0.01 0.01 0.01 0.01 0.01					.59 .37 .48 .45 .50
		15.43- 18.63 Mafic Tuff Light to medium green, uphole contact marked by incursion of black shale wisps, fine-grained, more foliated than flow, minor wispy black shale (1-2 mm) <1% overall; grainy texture, weakly epidotized		17.00	17.01	0.01					.50
		18.63- 26.28 Mafic Flow Medium green, very fine-grained; uphole contact marked by sharp 5 mm black shale band, minor <1% calcite veining and rare black shale laminae, no sulphides @ 20.01:		19.00	19.01	0.01					.60
		20.01- 20.01 One cm band of wispy white carbonate and magnetic Po									
		20.25- 20.30 Quartz-carbonate-magnetic Po vein		21.00 23.00 25.00	21.01 23.01 25.01	0.01 0.01 0.01					.50 .54 .53

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		26.28- 26.32 Mafic Tuff Contains black shale laminae 1-3 mm thick, offset by minor parallel to CA carbonate veinlets									
		26.32- 29.40 Mafic Flow As above, uphole contact gradational, very fine-grained unit; irregular quartz-carbonate patch @ 28.05-28.17; minor 1 mm to 1 cm quartz-carbonate veining, Tr Po associated with veins		27.00 29.00	27.01 29.01	0.01 0.01					.39 .71
		29.40- 29.44 Mafic Tuff Thinly laminated zone (quartz, black shale, mafic-rich laminations); minor Po associated with black shale									
		29.44- 48.90 Mainly Mafic Flow Unit varies from light grey to medium green in colour, overall is very fine-grained, virtually unfoliated, minor 1 mm to 1.5 cm white carbonate and some smoky grey quartz veins with up to 5 mm bleaching on each side of veinlet		31.00	31.01	0.01					.42
		31.25- 31.25 1 cm quartz-carbonate vein with 1% specks of Cpy and stringer of magnetic Po		33.00	33.01	0.01					.49
		33.32- 33.32 Same as above, vein is mainly white carbonate, several 1-2 mm specks of Cpy		35.00 37.00 39.00	35.01 37.01 39.01	0.01 0.01 0.01					.54 .52 .61

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		39.24- 39.35 Two rounded patches of clear quartz-yellow carbonate									
		40.62- 41.38 Breccia zone: fragments of banded black shale-mafic material in white carbonate matrix, re-brecciated and floating in mafic volcanic groundmass; blotchy, up to 5 mm magnetic Po patches, stringers of black shale in soupy mafic volcanic matrix		41.00	41.01	0.01					.35
				43.00	43.01	0.01					.43
		43.21- 43.50 White to grey quartz-carbonate vein, no sulphide									
		44.70- 44.73 Band of black shale (dark black, graphitic) with ~2% wisps of Po lining foliation planes		45.00	45.01	0.01					.83
		46.30- 46.42 Quartz-carbonate vein with 1-2% specks and wisps of Po		47.00	47.01	0.01					.52
		48.90- 50.00 Mafic Tuff Uphole contact marked by 4 cm black shale band with Po concentrated uphole with white carbonate; unit is pale green, weakly foliated put poorly bedded, non-sulphidic; chloritic and epidotized		49.00	49.01	0.01					.82
		50.00- 58.00 Mafic Flow Unit is light to medium green, very fine-grained; uphole contact gradational; occasional ~5 mm black shale bandsd and also white to smoky grey quartz veins a		51.00 53.00 55.00 57.00	51.01 53.01 55.01 57.01	0.01 0.01 0.01 0.01					.61 .34 .35 .49

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		90 degrees to CA									
		58.00- 61.10 Mafic Tuff Weakly foliated, light yellow-green, gradational uphole contact, only minor black shale wisps and laminae		59.00 61.00	59.01 61.01	0.01 0.01					.46 1.35
		61.10- 61.60 Mafic Flow Fine-grained, dark green, two grey quartz-carbonate bands									
		61.60- 62.14 Mafic Tuff Very biotite-rich and well foliated, fine-grained, uphole contact sharp and irregular; white carbonate-rich as rounded pathces									
		62.14- 63.05 Mafic Flow Uphole contact sharp and irregular; unit is fine-grained, medium green, non-sulphidic		63.00	63.01	0.01					.43
		63.05- 63.65 Mafic Tuff Finely banded, high carbonate (white) content									
		63.65- 65.53 Mafic Flow Medium green, Tr specks of white carbonate, very fine-grained and non-sulphidic		65.00	65.01	0.01					.40
		65.53- 66.07 Mafic Tuff Increasingly biotite- and carbonate (to 20%)-rich near downhole contact with white quartz zone; mottled zone at contact with white quartz									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
66.07	66.49	MILKY QUARTZ VEIN devoid of sulphide									
66.49	66.91	PIL'GUYARVI VOLCANIC FORMATION 66.49- 66.91 Mafic Tuff Brownish to medium green, strongly foliated, very fine-grained, biotite-rich (20-25%), white carbonate as wisps and flattened blebs (possibly relict amygdules) (20-25%) lining foliation planes, especially in centre of unit; non-sulphidic									
66.91	67.14	MILKY WHITE QUARTZ VEIN Appear to be two episodes of brecciation as there are fragments of yellowish quartz-carbonate within the milky quartz		67.00 67.01	67.01 67.02	0.01 0.01					0.00
67.14	79.31	UPPER PRODUCTIVE FORMATION (?) Unit is brownish to greenish grey, fine-grained, highly sheared (foliated) mafic and ?ultramafic tuff 67.14- 69.60 Mafic tuff Highly sheared, mottled, biotite and white-carbonate bearing (as belbs and veinlets) 67.14- 67.86 Sulphide-rich section: mainly magnetic Po 3-5% & Tr Py as irregular stringers; one 2 cm webbed vein of Po with flecks of Cpy @ 67.50 68.73- 68.81 Breccia zone: milky fragments of quartz in white carbonate matrix, minor Py along downhole contact	NW00201	67.41 69.00	67.86 69.01	0.45 0.01	NS	NS	259	234	.73

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
		69.57- 69.60 ~70% Po w/ minor flecks of cpy and veins of white carbonate at contacts										
		69.60- 78.35 Mixed basaltic/ultramafic(?) tuff very finely laminated, with black shale interlaminae, grey-green, strongly foliated										
		69.60- 70.00 ~10% magnetic Po and wisps of Cpy (up to 1%) in finely laminated, weakly contorted zone; up to 5% black shale 1-4 mm laminae	NW00202	69.60	70.00	0.40	NS		NS	263	260	
			NW00203	70.74	70.86	0.12	NS		NS	650	214	
		70.75- 70.88 Incursion of more black shale laminae (to ~25%) and 15% stringer Py and Tr wisps of Cpy		71.00	71.01	0.01						2.46
				73.00	73.01	0.01						1.04
				75.00	75.01	0.01						2.66
		75.52- 75.52 2 cm band of euhedral calcite crystals		77.00	77.01	0.01						1.05
		77.25- 77.31 Milky quartz vein, brecciated and recemented by white carbonate										
		78.35- 78.75 Graphitic black shale, finely laminated, uphole contact gradational and marked by increased (to 35%) white carbonate banding, 3-5% Po and Tr Cpy as ragged, irregular veins cross-cutting laminations										
		78.75- 79.31 Very finely laminated (ultra)mafic		79.00	79.01	0.01						.85

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		tuff w/ 3-5% Po as very fine threads parallel to lamination/foliation									
79.31	88.10	MIDDLE PRODUCTIVE FORMATION									
		79.31- 81.00 Black Shale Uphole contact sheared and marked by a 0.5 cm quartz-carbonate band and a lot of carbonate in overlying unit; shales are very black, graphitic, finely laminated, as @ 78.35-78.75									
		81.00- 82.52 (Ultra)mafic Tuff Carbonate-rich (40%), contorted, w/ occasional bands of black shale, 3-5% Po as ragged stringers/patches; bull's eye @ 82.32	NW00204	81.00 82.40	81.01 83.82	0.01 1.42	NS	NS	311	678	.85
		82.52- 83.64 Po Breccia Uphole contact marked by 70 mm band of mainly Po; Po to 50-60% with rounded and elliptical black shale and grey carbonate fragments floating in Po matrix; many shale fragments have internal syn-sedimentary and kink-folded laminae texture									
		82.52- 82.52 1 cm clot of Cpy		83.00	83.01	0.01					1.90
		83.64- 84.60 (Ultra)mafic Tuff Uphole contact gradational and marked by end of sulphide; unit is finely laminated, uncontorted, w/ bands/laminae of grey-white carbonate, 3-5% threads & wisps of Po									
		84.60- 87.10 Black Shale	NW00205	84.63 85.00	85.73 85.01	1.10 0.01	NS	NS	198	242	.50

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
		Uphole contact marked by 1 cm band of Po; unit is very black and graphitic, contorted, w/ 5-50% Po as irregular veins and patchy zones and Po Bx zone from 82.52-83.64	NW00206	85.73 87.00	86.95 87.01	1.22 0.01	NS		NS	278	233	.75
		87.10- 87.29 Quartz Vein Milky white, fractured and infilled w/ 1-2% coarse Py										
		87.29- 88.10 Black Shale As above (84.60-87.10), but up to 15% Po, uphole contact marked by quartz vein; gradation from mafic-rich to black shale-rich (volcano-sedimentary cycle)										
88.10	92.45	ULTRAMAFIC Non-magnetic, uphole contact in broken core										
		88.10- 89.25 Very fine-grained and laminated (<1 mm scale) w/ interlaminae white carbonate bands, completely gradational into coarser porphyroblastic UM below		89.00 89.00	89.01 90.00	0.01 1.00	NS		NS	125	100	.51
		89.25- 92.46 Talcose, pale greyish green, carbonate porphyroblastic (1-2 mm flattened porphyroblasts), strongly foliated, Tr to 4% very finely disseminated Po	NW00210	90.00	90.50	0.50	NS		NS	208	116	
		90.20- 90.20 Tr specks of Cpy										
			NW00211	90.50	91.50	1.00	NS		NS	767	137	
				91.00	91.01	0.01						.29
			NW00212	91.50	92.50	1.00	NS		NS	999	201	
92.46	100.45	MIDDLE PRODUCTIVE FORMATION Uphole contact with Ultramafic is a milky white quartz vein @ 20 degrees to the CA which contains bleached UM fragments										

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		92.46- 92.62 Milky Quartz vein with fragments of bleached ultramafic									
		92.62- 95.94 Black Shale As above (87.29-88.10), very graphitic, mottled and contorted, 10-15% Po veins		93.00	93.01	0.01					.89
		94.28- 94.35 Diagenetic grey carbonate band									
		94.66- 94.80 Diagenetic grey carbonate band									
				95.00	95.01	0.01					6.18
		95.94- 97.61 (Ultra)mafic Tuff Uphole contact in broken core; finely laminated with black shale laminae and fine black Mt? Ilm? specks and threads, moderately foliated		97.00	97.01	0.01					.45
		97.61- 99.50 Black Shale-Mafic Tuff Finely laminated, contorted, syn-sedimentary folding @ 99.00-99.15; Tr to 2% Po as foliation threads and in white carbonate veinlets; contact up and downhole is gradational, especially downhole where it is marked by appearnce of increased amounts of black shale		99.00	99.01	0.01					1.17
		99.50- 100.45 Black Shale Finely laminated and uncontorted, Po ~3-5% as 1-3 mm parallel to foliation veinlets, also ~3% fine white carbonate veinlets									
100.45	109.22	ULTRA(?)MAFIC BODY Uphole contact gradational but marked by 1.5 cm white carbonate-Po veinlet; unit is very fine-grained, greyish white, very finely		101.00	101.01	0.01					.58

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
		laminated with accoasional black shale laminae, very carbonate-rich (~30-35%) as very fine white carbonate veinlets, blebby veinlets and matrix material; 1-3% very finely disseminated Po; sharp foliation change 107.28-40 deg, 107.50-20 deg, 107.80-0 deg, 108.10-47 deg to CA										
		102.32- 102.50 Crumbly fault gouge and broken core		103.00	103.01	0.01						.60
				105.00	105.01	0.01						.72
				107.00	107.01	0.01						.42
		107.55- 108.00 3-4% 2-3 mm patches of Po and one patch of Cpy	NW00207	107.65	108.00	0.35	NS		NS	344	545	
				109.00	109.01	0.01						2.85
109.22	121.05	MIDDLE PRODUCTIVE FORMATION										
		109.22- 115.20 Black Shale Uphole contact gradational and interlaminated, highly mottled and contorted, 20-25% Po to 110.75 as irregular, patchy veins,										
		110.34- 110.40 Po breccia zone, black shale fragments have wispy edges										
		110.75- 110.90 Broken, rubbly core		111.00	111.01	0.01						.92
				113.00	113.01	0.01						6.33
		113.51- 113.51 Diagenetic grey carbonate bands										
		113.64- 113.75 Diagenetic grey carbonate bands										
		114.20- 114.80 Broken core - broken, rubbly core										

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
				115.00	115.01	0.01						3.07
		115.20- 120.10 Talc-Carbonate Rock Very fine-grained, grey-white, very well foliated, weakly magnetic, Tr to 2% finely disseminated Po		117.00 119.00	117.01 119.01	0.01 0.01						.66 .46
120.10	121.05											
		120.10- 121.05 Black Shale Up and downhole contact gradational, black, moderately graphitic, 1-5% Po as interfoliation veinlets; ~3% white milky quartz and carbonate veining, weakly contorted	NW00215	120.50	121.00	0.50	NS		NS	136	847	
		120.52- 120.70 10% Po with 2 mm veinlet of Cpy @ 120.52										
				121.00	121.01	0.01						1.07
121.05	153.14	GABBRO-DIABASE Uphole contact is marked by 70-80% white carbonate veining; green to medium green, melanocratic, fine to medium-grained, generally homogeneous texture, porphyritic, non-foliated, non-sulphidic										
		121.05- 123.70 Fine-grained, moderately foliated (chilled?) margin		123.00	123.01	0.01						.70
				125.00	125.01	0.01						2.43
				127.00	127.01	0.01						.56
				129.00	129.01	0.01						.54
				131.00	131.01	0.01						.42
				133.00	133.01	0.01						.49
				135.00	135.01	0.01						.49
				137.00	137.01	0.01						.80
				139.00	139.01	0.01						.58
				141.00	141.01	0.01						.86
				143.00	143.01	0.01						.43
				145.00	145.01	0.01						.43

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
				147.00	147.01	0.01					.55
				149.00	149.01	0.01					1.48
				151.00	151.01	0.01					.56
				153.00	153.01	0.01					.22
153.14	154.80	MIDDLE PRODUCTIVE FORMATION 153.14- 154.80 Black Shale Uphole contact marked by 50% white carbonate veining; unit is moerately black and graphitic, weakly foliated, 3-5% disseminated Po 154.00- 154.15 Py in clots up to 2 cm in diameter 154.52- 154.67 Po breccia zone with 80% Po and 0.5 cm rounded black shale and grey carbonate fragments									
154.80	161.82	GABBRO-DIABASE As above, except quite carbonaceous, leucocratic and coarse-grained from 154.80-155.80, overall generally finer-grained than above (from 121.05-153.14)		155.00	155.01	0.01					.67
				157.00	157.01	0.01					1.37
				159.00	159.01	0.01					.47
				161.00	161.01	0.01					.67
161.82	163.50	MIDDLE PRODUCTIVE FORMATION 161.82- 163.50 Black Shale Graphitic, black, very finely laminated, ~3% Po in irregular ragged veinlets generally parallel to laminae, two 1-cm diagenetic grey carbonate bands @ 162.50; generally uncontorted laminae, weakly carbonaceous		163.00	163.01	0.01					2.60
163.50	163.50	END OF HOLE									

HOLE NUMBER: PS-92-42

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NW00151	70.00	75.00	5.00	42.0	9.40	7.54	12.0	.05	.24	17.6	.20	2.47	.18	.14	5.80	97.6	15	73	<2	141	15	227
NW00152	89.00	91.00	2.00	44.1	6.31	5.82	12.6	<.01	.22	14.8	.20	2.12	.21	.11	9.55	96.0	15	116	<2	131	18	131
NW00153	102.30	107.30	5.00	44.1	13.6	7.84	7.31	2.48	.05	12.9	.18	1.42	.10	.02	9.15	99.1	7	124	<2	73	6	134
NW00154	116.20	119.20	3.00	48.3	12.8	7.98	6.09	2.68	.04	12.2	.17	1.47	.11	<.01	8.50	100.3	7	115	<2	75	6	114

HOLE NUMBER: PS-92-42

RESULTATS DE GEOCHIMIE

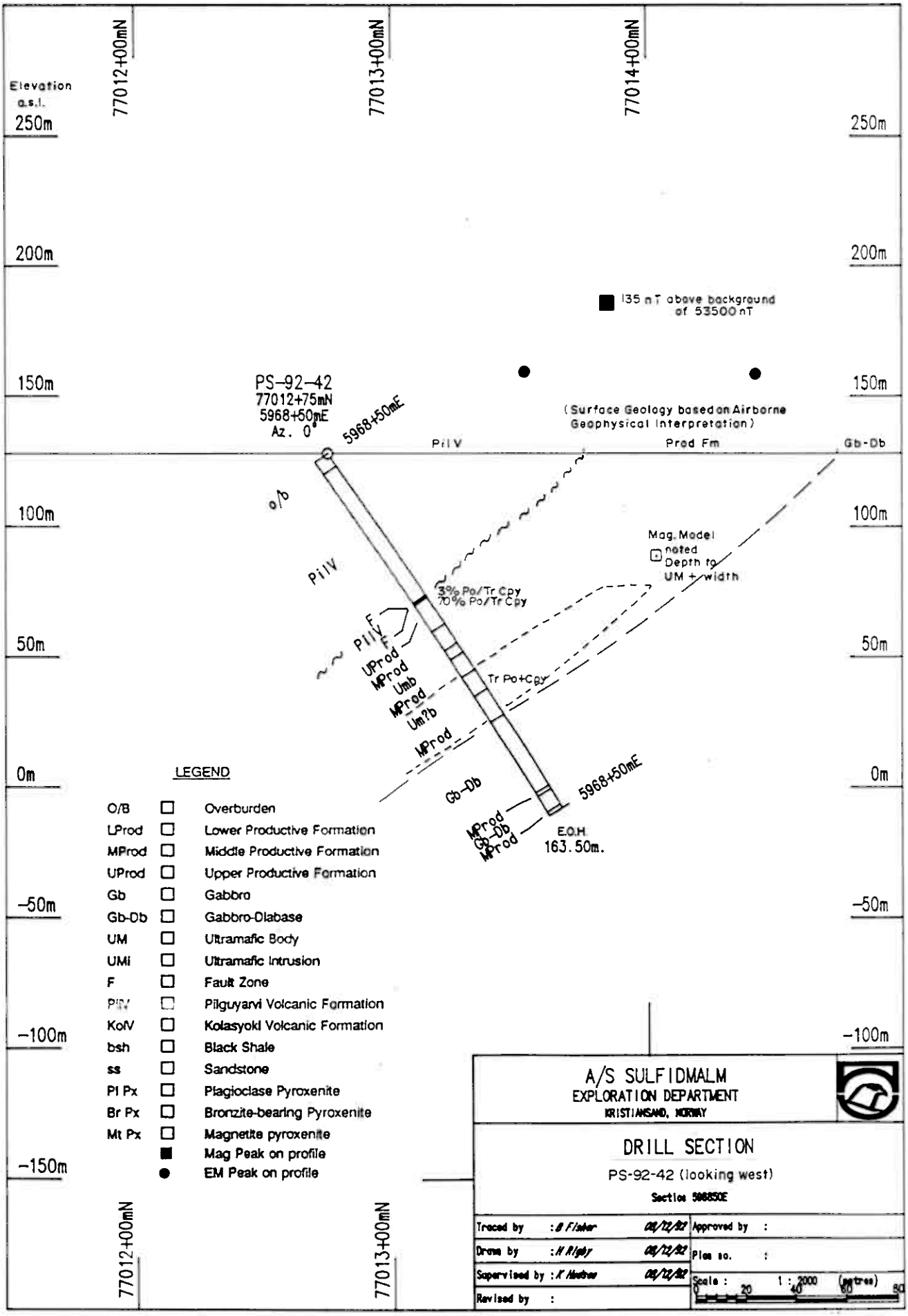
HOLE NUMBER: PS-92-42

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00151	70.00	75.00	5.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00152	89.00	91.00	2.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00153	102.30	107.30	5.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00154	116.20	119.20	3.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

HOLE NUMBER: PS-92-42

RESULTATS DE GEOCHIMIE


77012+00mN
77013+00mN
77014+00mN
Elevation a.s.l.
250m
200m
150m
100m
50m
0m
-50m
-100m
-150m
135 nT above background of 53500 nT
PS-92-42
77012+75mN
5968+50mE
Az. 0°
5968+50mE
(Surface Geology based on Airborne Geophysical Interpretation)
PilV
Prod Fm
Gb-Db
O/b
PilV
3% Po/Tr Cpy
70% Po/Tr Cpy
Mag. Model
noted
Depth to
UM + width
F
UProd
MProd
UmD
Um?b
Tr Po+Cpy
Gb-Db
5968+50mE
E.O.H
163.50m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMi Ultramafic Intrusion
F Fault Zone
PilV Pilguyarvi Volcanic Formation
KolV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY
DRILL SECTION
PS-92-42 (looking west)
Section 5968SOE
Traced by : B Fisher 08/12/92
Drawn by : N Rigby 08/12/92
Supervised by : K Mosher 08/12/92
Revised by :
Approved by :
Plan no. :
Scale : 1 : 2000 (metres)
0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-43 Zone # : Contractor : TERRA BOR Date started : 07/04/1992
Township: FINNMARK Date completed: 07/07/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7701740.00 N Azimuth: 0° 0' 0"
Station: 0+ 0 Departure: 596710.00 E Dip : -55° 0' 0"
Reference frame : Elevation: 141.00 Length : 183.23

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-54°48' 0"	° ' "
20.00 M	-55°18' 0"	° ' "
60.00 M	-55°42' 0"	° ' "
120.00 M	-55°48' 0"	° ' "
160.00 M	-56° 0' 0"	° ' "
178.00 M	-56° 0' 0"	° ' "

Remarks :

Water flow : NO
Cemented : NO

Logged by : K. HUDSON-EDWARDS Date logged: 07/08/1992 Hole # : PS-92-43

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
0.00	5.00	OVERBURDEN									
5.00	20.00	MIDDLE PRODUCTIVE FORMATION									
		5.00- 20.00 Black Shale Green to black, finely to very finely laminated (<1-3mm), weakly to moderately contorted, some interbanded mafic material (10-20%), Po 3-5% & Tr Cpy (@10.34, 19.37) as ragged stringers parallel to lamination, good sharp bedding contacts; ~3% milky quartz veins 0.5-1cm thick		5.00	5.01	0.01					4.69
				7.00	7.01	0.01					3.35
				9.00	9.01	0.01					0.58
				11.00	11.01	0.01					1.75
		11.46- 11.49 Po breccia zone with rounded fragments of black shale									
				13.00	13.01	0.01					5.29
				15.00	15.01	0.01					6.51
				17.00	17.01	0.01					1.30
				19.00	19.01	0.01					3.03
20.00	37.90	LOWER PRODUCTIVE FORMATION									
		20.00- 26.11 Mafic Tuff Uphole contact quite sharp, within 1 cm of contact is 3 cm milky quartz vein; unit is pale green, very carbonaceous, fine-grained, moderately foliated, sulphides described below:		21.00	21.01	0.01					0.47
				23.00	23.01	0.01					0.94
				25.00	25.01	0.01					1.31
		25.02- 25.50 Irregular 5 mm bands of massive Po (~2% Po over whole unit), 1cm X 2mmclots of Cpy in Po veins @ 25.43 and 25.49									
		26.05- 26.05 2 mm Po band									
		26.10- 26.10 1 mm band of black shale									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		26.11- 26.26 Black Shale Uphole contact marked by 6 mm Po/white carbonate veinlets; unit is black, weakly graphitic, finely laminated, weakly foliated, ~1% Po as fine interlaminae threads									
		26.26- 26.91 Mafic Tuff Uphole contact sharp; unit is light green, carbonaceous, weakly foliated, Tr Po as 1 mm stringers parallel to foliation									
		26.91- 27.17 Black Shale Very finely laminated, 2% 1-3mm Po stringers, 3% 2mm white carbonate veinlets; kink/chevron folding @ 27.10		27.00	27.01	0.01					0.82
		27.17- 27.92 Mafic Tuff Uphole contact gradational, 1-2% Po stringers near uphole contact, otherwise as @ 26.26-26.91									
		27.92- 28.85 Black Shale Uphole contact sharp/bedded, strongly graphitic, quiarte contorted and erratically folded, finely laminated (mm-scale), Po 2-3% as ragged, parallel to lamination threads and veinlets up to 3 mm thick, little (1%) carbonate veining									
		28.85- 33.20 Mafic Tuff Uphole contact sharp, except for 1 cm band of black shale; unit is contorted, strongly carbonaceous, up to ~5% black shale wisps/laminae; Tr Po disseminated and in 3 mm veinlets									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
		28.87- 28.87 Po-white carbonate veinlet		29.00	29.01	0.01						0.99
				31.00	31.01	0.01						0.57
				33.00	33.01	0.01						2.36
		33.20- 35.21 Black Shale Uphole contact gradational, marked by increasing black shale to 90-95% in unit overall; unit is black, quite graphitic, poorly laminated, 2% Po overall as ragged patches and veinlets parallel to foliation, weakly foliated, little gangue veining		35.00	35.01	0.01						3.91
		35.21- 37.42 Mafic Tuff Uphole contact sharp and bedded; unit is light to medium green, moderately carbonaceous especially near upper part of unit; w/ inhomogeneous grain size (coarser sections @ 36.40-36.56 & 36.68-36.95); well foliated, non-sulphidic		37.00	37.01	0.01						0.57
		37.42- 37.90 Black Shale Well bedded, beds 2-6cm thick, weakly foliated, Po concentrated from 37.61-37.76 as 2-3% ragged parallel to lamination stringers, otherwise Tr disseminated foliation wisps										
37.90	43.95	GABBRO-DIABASE Uphole contact sharp and fine-grained (no hornfelsing noted) over 10 cm; unit is medium-grained, homogeneous, non-sulphidic, moderately foliated, becoming more carbonaceous (to 5%-4mm white carbonate veinlets) near downhole contact		39.00	39.01	0.01						1.18
				41.00	41.01	0.01						0.65
				43.00	43.01	0.01						0.40
43.95	47.91	LOWER PRODUCTIVE FORMATION										

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		43.95- 46.60 Black Shale/Mudstone Uphole contact fairly sharp and marked by 1 cm zone of 80% white carbonate; unit varies from black to greenish-grey, mainly black shale in upper part, grading downwards into more mudstone (~75-80%) with black shale laminae; mudstone is finely laminated, well bedded and uncontorted with Tr Po									
		44.10- 44.80 2% Po as ragged 1-4mm stringers and foliation wisps		45.00	45.01	0.01					2.18
		46.60- 47.91 Mafic Tuff Uphole contact sharp, zone is mottle, quartz and white to grey carbonate vein rich (10-15% veining); yellow-green, non-sulphidic		47.00	47.01	0.01					0.38
47.91	56.95	GABBRO-DIABASE Uphole contact gradational and sheared; unit is moderately to highly foliated; homogeneous, medium-grained (2-3mm green amphibole grained in plagioclase matrix), melanocratic, non-sulphidic									
		47.91- 48.30 Carbonaceous, ~2% grey-white carbonate veinlets, patchy up to 2cm especially @ 52.47-52.51 & 52.89-52.92		49.00	49.01	0.01					0.36
				51.00	51.01	0.01					0.36
				53.00	53.01	0.01					0.56
				55.00	55.01	0.01					0.79
		56.42- 56.95 Fine-grained (chilled?) zone									
56.95	58.62	LOWER PRODUCTIVE FORMATION									

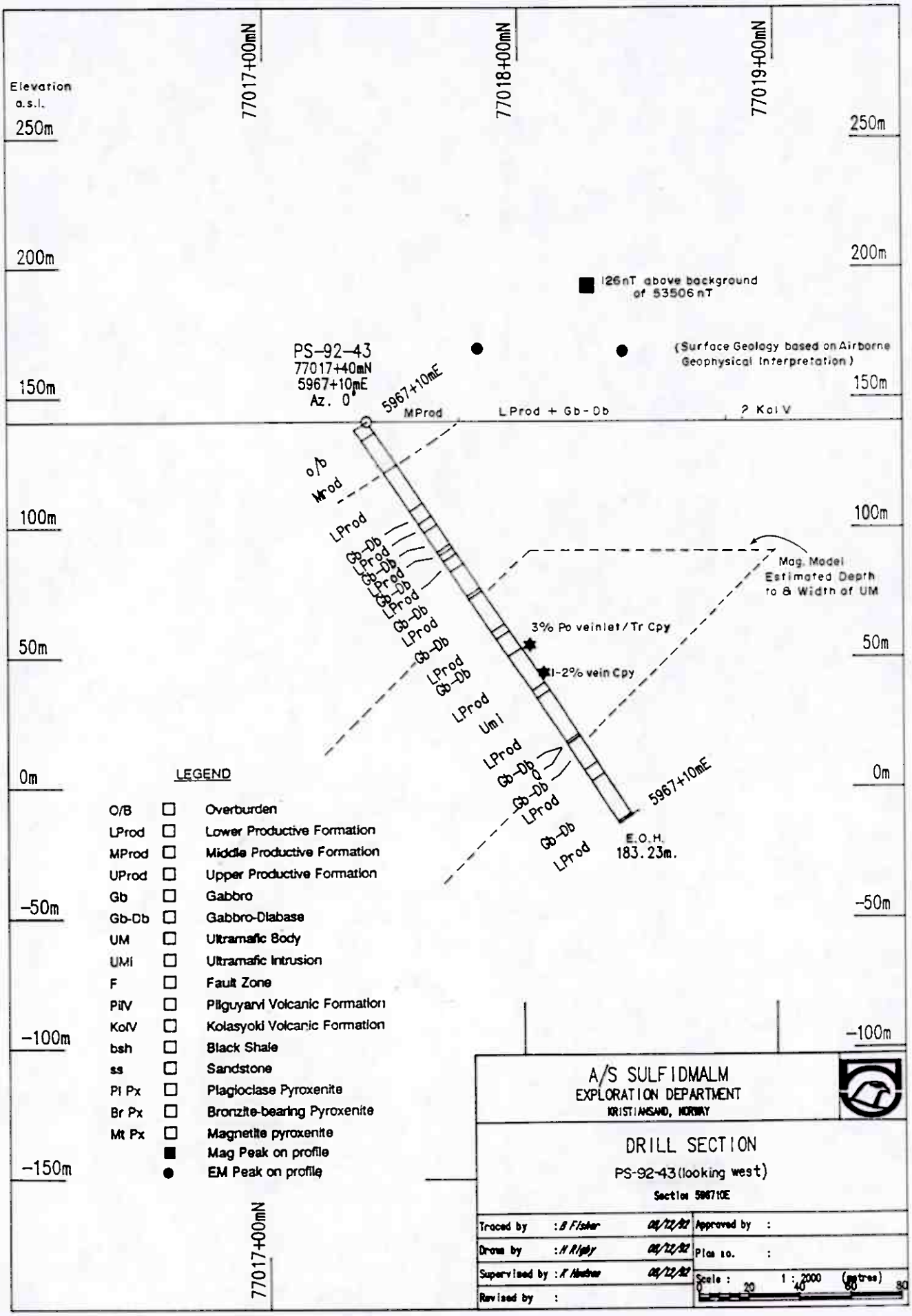
FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		56.95- 57.25 Black Shale Uphole contact quite sharp and marked by 1 cm white carbonate veinlet; unit is black, finely laminated, 1% Po as fine, 1mm foliation veinlets, minor ~5-7% white carbonate veining 57.18- 57.20 Fault gouge, highly sheared 57.20- 57.21 Milky quartz vein 57.25- 57.39 Mafic Tuff Green to yellow-green, fine-grained, one blebby quartz vein @ 57.27 57.39- 57.42 Black Shale Very black and graphitic, one 3mm bleb of dark grey carbonate, Tr wispy Po 57.42- 57.62 Mafic Tuff Breccia Zone ~50% milky quartz and fine-grained mafic tuff as @ 57.25-57.39 57.62- 57.90 Black Shale Uphole contact in fault gouge; very black @ top, grading downwards into ~50% black shale, 50% mafic tuff; Po 1% as 2 parallel to foliation veinlets (2mm) @ 57.67 and as disseminate Po wisps, Tr speck of Cpy @ 57.75, ~5% quartz-carbonate veining 57.90- 58.51 Mafic Tuff Uphole contact gradational, marked by diappearance of black shale; unit is yellow-green, w/ 10% wispy white		57.00	57.01	0.01					0.42

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		carbonate veining, moderately to weakly foliated, Tr to 1% wisps of black shale									
58.62	61.38	GABBRO-DIABASE Uphole contact marked by 3-4cm zone of white carbonate veining and by fine-grained (chilled?) zone from 58.51-58.62; unit is moderately foliated, fine-grained and homogeneous, melanocratic, non-sulphidic		59.00	59.01	0.01					0.59
		61.00- 61.38 Fine-grained, yellow-green, carbonaceous zone		61.00	61.01	0.01					0.37
61.38	66.17	LOWER PRODUCTIVE FORMATION									
		61.38- 61.63 Black Shale Uphole contact sharp and marked by appearance of black shale; unit is finely laminated and weakly foliated, Po 2% as 1 mm foliation veinlets, ~10-20% green sandy material									
		61.63- 63.43 Mafic Tuff Uphole contact sharp; unit is fine to medium-grained (coarser in middle part of unit), quartz-carbonate veining 1%, concentrated in 4 c-2cm blobby veinlets		63.00	63.01	0.01					0.51
		63.43- 64.64 Mainly Black Shale/Mudstone Uphole contact sharp and marked by 1 cm quartz-carbonate-Po ragged veinlet; Po 1% as 1-2 mm foliation threads and wisps									
		64.21- 64.29 Quartz+/-carbonate veinlet									
		64.64- 66.17 Sandstone Uphole contact gradational and marked by end of black shale, from 64.64-64.95,		65.00	65.01	0.01					2.82

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		dominantly green sandstone, then incursion of more black shale to form graded beds (possible cross-bedding @ 65.65) w/ sandy, green bases and black shale-rich tops (average thickness 5 cm), grading suggests tops uphole									
66.17	77.48	GABBRO-DIABASE Uphole contact marked by 6cm zone of white carbonate; unit is fine-grained and foliated from 66.28-67.00, then medium-grained, generally homogeneous, moderately foliated, non-sulphidic		67.00 69.00	67.01 69.01	0.01 0.01					0.55 0.85
		70.51- 70.55 Biotite-rich (to 30%) zone		71.00	71.01	0.01					0.73
		71.08- 71.60 As @ 70.51-70.55		73.00 75.00 77.00	73.01 75.01 77.01	0.01 0.01 0.01					0.33 0.39 0.40
		77.30- 77.48 Fine-grained (chilled?) zone									
77.48	78.93	LOWER PRODUCTIVE FORMATION									
		77.48- 78.93 Sandstone Uphole contact gradational and marked by appearance of black shale bands; unit is fine-grained, well and finely laminated, well bedded (uncorted) sandstone with black shale laminae, minor graded bedding and Tr Po specks									
		77.65- 77.85 Bull's eye and change in bedding attitude									
78.93	94.22	GABBRO-DIABASE Uphole contact sharp and marked by disappearance of black shale laminae; fine-grained from		79.00 81.00 83.00	79.01 81.01 83.01	0.01 0.01 0.01					0.44 0.64 0.61

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		78.93-79.45, then medium to coarse-grained (up to 5 mm crystals), more leucocratic than previously seen, poorly foliated		85.00	85.01	0.01					0.36
		86.15- 86.15 Light green sheared zone with 1 cm quartz-carbonate vein @ 30 degrees to CA									
				87.00	87.01	0.01					0.82
				89.00	89.01	0.01					1.18
				91.00	91.01	0.01					0.35
				93.00	93.01	0.01					0.94
94.22	97.60	LOWER PRODUCTIVE FORMATION									
		94.22- 94.37 Milky to smokey grey quartz vein									
		94.37- 94.54 Mafic Tuff Uphole contact sharp, quite carbonaceous unit, sheared, green to brownish green and non-sulphidic									
		94.54- 95.60 Sandstone and Black Shale Well laminated, sandstone with 20-40% black shale and Tr Po as fine interlaminae threads		95.00	95.01	0.01					0.85
		95.60- 97.60 Mafic Tuff Uphole contact gradational; unit is highly sheared, very carbonate-rich (~40-50% overall as veins 1mm to 8cm)		97.00	97.01	0.01					0.31
97.60	105.61	GABBRO-DIABASE Uphole contact marked by 8 cm white carbonate band in mafic tuff; unit is very similar to that from 78.93-94.22, with fine-grained zones from 97.60-98.23 & 103.00-105.61 (latter is well-foliated and banded)		99.00	99.01	0.01					0.44
				101.00	101.01	0.01					0.51
				103.00	103.01	0.01					0.40
				105.00	105.01	0.01					2.40

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
		105.30- 105.30 3 mm vein of Po										
105.61	121.54	LOWER PRODUCTIVE FORMATION										
		105.61- 106.28 Sandstone with Black Shale Uphole contact gradational; unit is as @ 94.54-95.60, except it has 2% Po as ragged 1-2mm veinlets generally parallel to foliation										
		105.98- 106.10 Contorted zone w/ ~10% white carbonate and Po; 1-5mm thick laminae of black shale (~25)										
		106.28- 106.53 Mafic Tuff Uphole contact sharp and bedded, unit is moderately sheared, medium green, carbonaceous, non-sulphidic except below:										
		106.30- 106.30 7mm quartz-carbonate veinlet with 3mm clot of Po										
		106.53- 107.82 Quartz vein-mafic tuff breccia/fault zone Quartz overall ~80%, greyish, fractured and recemented with white carbonate, broken mafic tuff section from 107.18-107.38, also minor mafic tuff fragments in quartz veins; no sulphide		107.00	107.01	0.01						0.03
		107.82- 108.78 Mafic Tuff Uphole contact sharp with quartz vein; unit is medium green, well foliated, carbonaceous, non-sulphidic										
		108.78- 110.82 Black Shale and Sandstone Uphole contact gradational and marked by	NW00213	109.00 109.35	109.01 109.85	0.01 0.50	NS		NS	108	321	3.33


77017+00mN
77018+00mN
77019+00mN
Elevation a.s.l.
250m
200m
150m
100m
50m
0m
-50m
-100m
-150m
126nT above background of 53506 nT
(Surface Geology based on Airborne Geophysical Interpretation)
PS-92-43
77017+40mN
5967+10mE
Az. 0°
5967+10mE
MProd
LProd + Gb-Db
? KolV
O/B
MProd
LProd
Gb-Db
Mag. Model Estimated Depth to & Width of UM
3% Po veinlet / Tr Cpy
1-2% vein Cpy
LProd
Umi
LProd
Gb-Db
LProd
Gb-Db
LProd
5967+10mE
E.O.H.
183.23m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMi Ultramafic Intrusion
F Fault Zone
PilV Pilguyarvi Volcanic Formation
KolV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
77017+00mN
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY
DRILL SECTION
PS-92-43 (looking west)
Section 5967.0E
Traced by : B Fisher 08/12/92
Drawn by : N Rigby 08/12/92
Supervised by : K Hoshaw 08/12/92
Revised by :
Approved by :
Plan no. :
Scale : 1 : 2000 (metres)
0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-44 Zone # : Contractor : TERRA BOR Date started : 07/07/1992
Township: FINNMARK Date completed: 07/10/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7701765.00 N Azimuth: 0° 0' 0"
Station: 0+ 0 Departure: 596298.00 E Dip : -55° 0' 0"
Reference frame : Elevation: 141.00 Length : 189.90

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-55°12' 0"	° ' "
20.00 M	-55°12' 0"	° ' "

Remarks :

Water flow : NO
Cemented : NO

Logged by : K. HUDSON-EDWARDS Date logged: 07/13/1992 Hole # : PS-92-44

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
0.00	6.00	OVERBURDEN									
6.00	14.24	LOWER PRODUCTIVE FORMATION									
		6.00- 6.02 Mafic Tuff Light green, very fine-grained, carbonaceous									
		6.02- 6.10 Black Shale Very black, graphitic with white carbonate 1-2 mm stringers, Tr flecks of Po									
		6.10- 6.59 Mafic Tuff As above, white carbonate veinlets ~5%, no sulphides									
		6.59- 6.72 Black Shale As above, ~5% mafic tuff material and 2% very fine <1 mm Po veinlets parallel to foliation									
		6.72- 7.30 Mafic Tuff As @ 6.10-6.59, one 2 cm vein of white milky quartz @ 6.85-6.87		7.00	7.01	0.01					0.35
		7.30- 7.42 Mainly Black Shale As above, Po veinlets ~2-3% in center of unit									
		7.42- 9.49 Mafic Tuff As @ 6.10-6.59, highly carbonaceous, bull's eye in carbonate veinlet @ 7.62		9.00	9.01	0.01					0.39
		9.49- 9.62 Mixed Black Shale/Mafic Tuff increasing black shale downhole, Tr									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		specks of Po 9.62- 10.12 Mafic Tuff As @ 6.10-6.59 10.12- 10.23 Black Shale Weakly graphitic, Tr specks of Po, one diagenetic grey carbonate band @ 10.18 10.23- 10.68 Mafic Tuff As @ 6.10-6.59, weakly carbonaceous (~5%) and moderately to weakly foliated 10.68- 10.75 Black Shale Carbonaceous (10%) as irregular white carbonate veinlets; Tr Po 10.75- 10.90 Mafic Tuff As @ 6.10-6.59 10.90- 11.10 Black Shale Black and graphitic, Po ~1-2% as very fine, <1 mm foliation threads, one rounded quartz-carbonate blob @ 11.05 11.10- 11.32 Mafic Tuff As @ 6.10-6.59, one 2 cm quartz (cemented by white carbonate) vein @ 11.13-11.15 11.32- 11.75 Mainly Black Shale Mafic Tuff component 10-15%, Po 2-3% as 1-3 mm, parallel to weak lamination veinlets, one 1 cm quartz-carbonate veinlet in center		11.00	11.01	0.01					1.66

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		11.75- 14.24 Mafic Tuff Very fine-grained, sulphide-rich from 12.00-12.50 (~2-3% Py stringers with white carbonate, esp. 12.48), further downhole increasingly white carbonate-veinlet-rich (to ~70% near Gb-Db contact from 14.15-14.24) 12.50- 12.80 Zone of kink folding		13.00	13.01	0.01					0.90
14.24	20.99	GABBRO-DIABASE Light green, generally medium-grained, inhomogeneous with white carbonate veining ~2%, weakly to well foliated, non-sulphidic, upper contact marked by 9 cm zone of white carbonate, lower contact fine-grained (chilled?) over 37cm 18.45- 18.73 Fine-grained zone, pale green, could represent mafic tuff xenolith		15.00 17.00 19.00	15.01 17.01 19.01	0.01 0.01 0.01					0.50 0.56 0.66
20.99	22.92	LOWER PRODUCTIVE FORMATION 20.99- 22.92 Black Shale Uphole contact gradational; unit is brown-black, weakly bedded and foliated, Po+Py 3-5% in irregular veinlets up to 4 mm thick (generally 1 mm), white carbonate veinlets <1%		21.00	21.01	0.01					1.75
22.92	26.32	GABBRO-DIABASE Medium to light green, fine- to medium-grained, moderately foliated 22.92- 23.85 Fine-grained (chilled?) with 3 cm smoky quartz vein @ 23.58-23.61, with bands of coarser gabbro-diabase		23.00	23.01	0.01					1.58

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		23.85- 26.20 Medium-grained and homogeneous w/ 3% 1-4 cm quartz veins		25.00	25.01	0.01					0.45
		26.20- 26.32 Fine-grained (chilled?)									
26.32	57.20	LOWER PRODUCTIVE FORMATION									
		26.32- 26.59 Mafic Tuff Very fine-grained, light green, ~7% carbonate as white veinlets, non-sulphidic, bull's eye in white carbonate @ 26.48									
		26.59- 28.28 Mafic Tuff with Black Shale Bands Mafic tuff as above, less white carbonate (3%), with black shale @ 26.59-26.95 in bands 1 cm to 15 cm, and @ 27.05-27.20 (very finely interlaminated with mafic tuff near 27.20), @ 27.30-27.40 (~50% fine black shale laminae)		27.00	27.01	0.01					5.70
		28.28- 29.68 Mainly Black Shale ~5% biotite-rich 5 cm bands, otherwise mainly black shale with minor mafic tuff material (<10%) and 2% Po in wispy, parallel to lamination veinlets		29.00	29.01	0.01					2.45
		29.68- 31.45 Mafic Tuff Contact gradational from above, unit is fine-grained, pale green, well foliated, ~5-7% fine 1-4 mm white carbonate veinlets parallel to foliation									
		30.35- 30.38 3 cm white carbonate vein w/ 5 mm band of Po and Tr Cpy at base		31.00	31.01	0.01					0.47

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		31.45- 31.51 Milky to smoky quartz vein, brecciated and recemented by white carbonate									
		31.51- 31.80 Mafic Tuff Broken, sheared, biotite-rich (~15%)									
		31.80- 32.47 Black Shale Very weakly foliated, jet black, well bedded (graded beds suggest tops uphole), ~3 mm veins of white carbonate/Po and 1-2% 1-2 mm veinlets of white carbonate									
		32.47- 33.98 Mafic Tuff Pale white-green, carbonate-rich (~10%), well foliated, 15% biotite near uphole contact for 11 cm, quartz-carbonate veins @ 32.62-32.71 & 33.69-33.71		33.00	33.01	0.01					0.54
		33.98- 38.94 Mainly Black Shale Jet black, graphitic, contorted, Po ~3% in fine 1-3 mm irregular veinlets, ~2% quartz and white carbonate veining; asymmetrically folded from 38.28-38.72		35.00 37.00	35.01 37.01	0.01 0.01					1.20 0.94
		38.94- 40.15 Mainly Mafic Tuff 10-15% Biotite near uphole contact, unit is pale brownish-green, carbonate ~7-10% as blebs and veinlets, black shale band from 39.20-39.31		39.00	39.01	0.01					0.75
		40.15- 41.38 Mainly Black Shale Uphole contact gradational, unit is brownish black, finely laminated, very fine-grained, Po 1% as very fine 1-3 mm foliation threads and irregular veinlets, biotite-rich (to 15-20%) zones especially @ 41.40-41.46, some 5 mm-2 cm white		41.00	41.01	0.01					0.18

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		carbonate veinlets									
		41.38- 47.82		43.00	43.01	0.01					0.02
		Mafic Tuff with 30-35% Black Shale bands and fine to medium laminations		45.00	45.01	0.01					0.09
		Black Shale occurs irregularly in well laminated zones (well-developed laminae @ 42.37-42.40); quartz and carbonate veining overall 5-10% from 1 mm up to 10 cm, increasingly biotite-rich from 47.59-47.80 and incursion of 3 mm thick Py veinlets		47.00	47.01	0.01					0.53
		47.30- 47.30 Gabbroic Dyke									
		47.39- 47.41 Gabbroic Dyke									
		47.80- 47.82 2 cm Milky Quartz Vein									
		47.82- 52.12		49.00	49.01	0.01					0.56
		Mafic Flow		51.00	51.01	0.01					0.65
		Dark green, very fine-grained, uphole contact marked by quartz vein and is very fine-grained (chilled?) to 48.20, well foliated (fol'n marked by aligned white wisps), ~1% white carbonate veining									
		52.12- 54.44		53.00	53.01	0.01					0.36
		Gabbro-Diabase									
		Contact from above fairly sharp with increase in grain size, fine- to medium-grained, moderately foliated, non-sulphidic, (may be continuation of mafic flow above but contact is fairly sharp and rock has overall different appearance)									
		54.10- 54.44 Fine-grained (chilled?) margin									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		54.44- 57.20 Black Shale Very black, graphitic, well bedded to contorted, finely laminated, some white sandy beds and some graded beds (tops uphole); white carbonate ~3%; Po ~2% as ragged, irregular wisps and veinlets		55.00 57.00	55.01 57.01	0.01 0.01					0.25 1.80
57.20	70.82	GABBRO-DIABASE Fine-grained from uphole contact to 57.70, then porphyroblastic (ragged white carbonate patches) to 58.05, then leucocratic (spotty, quartish amphibole in epidotized plag to 62.30; unit is yellow-green to white green, very weakly foliated, non-sulphidic		59.00 61.00 63.00	59.01 61.01 63.01	0.01 0.01 0.01					1.35 0.35 0.50
		63.46- 64.47 Xenolith(?) of black shale, grading into mafic tuff, then grading into gabbro-diabase									
				65.00 67.00 69.00	65.01 67.01 69.01	0.01 0.01 0.01					1.03 0.55 0.72
70.82	74.75	LOWER PRODUCTIVE FORMATION/KOLASYOKI VOLCANIC FORMATION?									
		70.82- 73.35 Mafic Flow Uphole contact foliated and marked by ~30% white carbonate, unit is fine-grained, pale yellow-green, weakly foliated		71.00	71.01	0.01					2.55
		71.21- 71.26 Amygdaloidal, with 2-3 mm ragged, spotty white carbonate									
				73.00	73.01	0.01					0.80
		73.35- 74.68 Mafic Tuff Well foliated, biotite 10% as parallel to foliation bands and threads									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		74.68- 74.75 Vein of white quartz and minor carbonate with 1% blotchy Py									
74.75	89.33	GABBRO-DIABASE Uphole contact marked by carbonate vein									
		74.75- 75.40 Fine-grained, epidotized and sheared		75.00	75.01	0.01					0.37
		75.40- 88.21 Homogeneous, melanocratic, ~3% white quartz and carbonate veininet, medium- to fine-grained		77.00 79.00 81.00 83.00 85.00 87.00	77.01 79.01 81.01 83.01 85.01 87.01	0.01 0.01 0.01 0.01 0.01 0.01					1.15 0.34 0.38 0.63 0.37 0.40
		88.21- 88.36 Breccia zone in very fine-grained zone with white carbonate +/- quartz cement									
		88.36- 89.33 Very fine-grained gabbro-diabase (looks like mafic flow)	NW00380	89.00 89.32	89.01 90.00	0.01 0.68	NS	NS	20	168	0.49
89.33	92.95	GABBRO Overall unit is white-grey to medium-green, roughly zoned, inhomogeneous									
		89.33- 89.52 Farily highly sheared, uphole contact sheared and marked by 2 mm white carbonate veinlet; ~1% Cpy									
		89.33- 90.60 Coarse-grained and quite (~60-70% plagioclase) leucocratic (anorthositic), plagioclase-amphibole-biotite, ophitic textured gabbro	NW00381	90.00	91.00	1.00	NS	NS	21	113	
		90.60- 91.05 Melanocratic, medium grained gabbro	NW00382	91.00 91.00	91.01 92.00	0.01 1.00	NS	NS	42	174	0.55

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		91.05- 92.95 Mainly leucocratic gabbro (~50% plagioclase), subophitic texture, coarse-grained, blocky crystals, becoming more patchy towards 93.55	NW00383	92.00	93.00	1.00	NS	NS	78	332	
92.95	94.30	PLAGIOCLASE PYROXENITE Very melanocratic unit, plagioclase ~10-20%, green amphibole (after pyroxene) 85-90%, 1-2% Po and Tr Cpy disseminated, ~2-3% white carbonate and quartz veining, plagioclase interstitial to amphibolitized pyroxene grains		93.00	93.01	0.01					0.45
			NW00384	93.00	94.00	1.00	NS	NS	110	448	
94.30	98.40	BRONZITE-BEARING PYROXENITE Coarse-grained, dark green, plagioclase 5%, dark green amphibole 80-85%, interstitial bronzite (pyroxene? / biotite?) 10-15%		95.00	95.01	0.01					0.78
				97.00	97.01	0.01					0.64
			NW00444	97.00	98.00	1.00	NS	NS	241	347	
98.40	108.57	PLAGIOCLASE PYROXENITE Dark green to bronze green, fine to medium-grained, moderately sheared, plagioclase 5%, dark green amphibole 85-90%, bronze amphibole/biotite 5-10%		99.00	99.01	0.01					0.35
				101.00	101.01	0.01					0.35
			NW00445	102.00	103.00	1.00	NS	NS	315	205	
				103.00	103.01	0.01					0.35
				105.00	105.01	0.01					0.30
				107.00	107.01	0.01					0.33
			NW00446	107.00	108.00	1.00	NS	NS	416	72	
			NW00216	108.30	108.80	0.50	NS	NS	538	310	
		108.40- 108.40 Tr to 1% disseminated specks of Cpy and Bornite in a patch over 1 cm									
108.57	150.05	ULTRAMAFIC Uphole contact with gabbro is gradual and is marked by appearance of magnetite and sharp change in magnetic susceptibility; most of unit is bluish grey, strongly magnetic, fine- to coarse-grained, serpentinized with carbonate porphyroblasts in several zones, weak sulphide (~1% disseminated Po) unless noted below; moderately foliated overall									
		108.57- 108.95 Greyish green with black magnetite specks									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		108.95- 112.33 Generally fine-grained, moderately foliated, w/ specks of magnetite		109.00 111.00	109.01 111.01	0.01 0.01					81.7 79.0
		112.33- 118.20 Coarser-grained (~4-5 mm), porphyritic (~20% relict Pyroxene crystals pseudomorphed and replaced by chlorite) floating in serpentinite matrix		113.00 115.00 117.00	113.01 115.01 117.01	0.01 0.01 0.01					100.00 106.00 110.00
		118.20- 130.10 Finer-grained w/ 1-2 mm carbonate porphyroblasts (15-20%), Tr specks of Po, generally homogeneous, core quite banded from core barrel									
		118.20- 118.29 Vein of white carbonate @ 15 degrees to CA		119.00 121.00 123.00 125.00 127.00 129.00	119.01 121.01 123.01 125.01 127.01 129.01	0.01 0.01 0.01 0.01 0.01 0.01					110.00 113.00 95.50 102.00 102.00 100.00
		130.10- 131.20 Coarser-grained, as @ 112.33-118.20		131.00	131.01	0.01					96.00
		131.20- 135.48 Sheared, some broken core, weakly carbonate porphyroblastic (~3%)		133.00 135.00	133.01 135.01	0.01 0.01					102.00 79.00
		135.48- 135.86 Zone of bleached carbonate breccia with 1% elongate (5-7 mm long) black, metallic ilmeno-magnetite crystals floating in carbonate and up to 3 mm blebby patches of Cpy (1%) in cracks	NW00217	135.49	135.84	0.35	NS	NS	570	572	
		135.86- 140.80 Medium-grained, carbonate-porphyroblastic (~15-25%) w/ Tr specks of Po	NW00218	137.00 139.00 140.00	137.01 139.01 140.50	0.01 0.01 0.50	NS	NS	1750	86	80.2 100.00

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
			NW00219	140.50	141.00	0.50	NS	NS	1190	42	
				141.00	141.01	0.01					15.0
		140.80- 142.00 Carbonate breccia zone as @ 135.49-135.86, appear to be 2 brecciation events: (1) white carbonate, with Ti-magnetite and patchy 1-2% Cpy and 1-2% Po in cracks, (2) brecciation of (1), cemented by greyish serpentine matrix	NW00220	141.00	142.00	1.00	NS	NS	900	359	
		142.00- 147.00 Carbonate porphyroblastic ultramafic as @ 135.86-140.80, weakly foliated	NW00221	142.00	143.00	1.00	NS	NS	1660	97	
				143.00	143.01	0.01					87.0
			NW00222	143.00	144.00	1.00	NS	NS	1730	117	
			NW00223	144.00	145.00	1.00	NS	NS	1680	165	
				145.00	145.01	0.01					71.00
			NW00224	145.00	146.00	1.00	NS	NS	1710	121	
			NW00225	146.00	147.00	1.00	NS	NS	1740	111	
				147.00	147.01	0.01					83.5
		147.00- 147.15 Zone of carbonate/Ti-magnetite breccia, w/ 1% blebby Cpy (as @ 140.80-142.00)	NW00226	147.00	148.00	1.00	NS	NS	1660	109	
		147.15- 150.05 Bleached, weakly brecciated, very fine-grained, weakly foliated, broken core	NW00227	148.00	149.00	1.00	NS	NS	1600	89	
				149.00	149.01	0.01					40.0
			NW00229	149.00	150.05	1.05	NS	NS	1580	96	
150.05	189.90	KOLASYOKI VOLCANIC FORMATION									
		150.05- 152.32 Mafic Tuff Fine-grained, green, wispy white carbonate and milky quartz veinlets (~10%), minor dispersed biotite (<5%)									
		150.30- 150.46 Zone w/ ~5% elongate, disseminated biotite crystals (hornfelsing?)									
				151.00	151.01	0.01					0.61
		152.32- 153.93 Mafic Flow Very fine-grained, <1% white carbonate veinlets, uphole contact marked by quartz		153.00	153.01	0.01					0.50

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		vein									
		153.93- 157.13 Mafic Tuff Well foliated, carbonate 10-15% as blebs and veinlets (1-3 mm), 1-2% <1 mm disseminated magnetite specks, well foliated		155.00 157.00	155.01 157.01	0.01 0.01					0.73 0.82
		157.13- 157.24 Milky Quartz Vein									
		157.24- 160.62 Mafic Flow Well foliated, carbonaceous (5-10%)		159.00	159.01	0.01					0.80
		160.62- 160.96 Mainly white, milky quartz with 5-10% mafic material									
		160.96- 171.87 Mainly Mafic Tuff Very fine-grained, green to brownish green, well banded, generally 5% quartz and carbonate veining		161.00 163.00 165.00 167.00 169.00 171.00	161.01 163.01 165.01 167.01 169.01 171.01	0.01 0.01 0.01 0.01 0.01 0.01					0.63 0.87 0.10 0.41 0.68 0.03
		171.87- 189.90 Mainly Mafic Flow Generally fine-grained, medium green, well to moderately foliated, white carbonate overall 5-7%		173.00 175.00 177.00	173.01 175.01 177.01	0.01 0.01 0.01					0.51 0.57 0.40
		177.30- 177.62 Zone with smeared out diabasic texture, well-foliated		179.00 181.00 183.00 185.00 187.00	179.01 181.01 183.01 185.01 187.01	0.01 0.01 0.01 0.01 0.01					0.60 0.62 0.43 0.43 0.39
		188.00- 188.50 Milky quartz vein									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		188.60- 188.72 Milky quartz vein									
		189.00- 189.70 As @ 177.30-177.62		189.00	189.01	0.01					0.42
189.90	189.90	END OF HOLE									

HOLE NUMBER: PS-92-44

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NW00176	89.32	89.72	0.40	49.8	12.6	6.34	3.57	4.41	.96	15.6	.20	3.86	.44	<.01	1.20	99.0	27	456	23	372	42	719
NW00156	94.00	94.30	0.30	40.6	6.91	11.0	7.36	.81	.91	21.4	.21	8.67	.23	<.01	.25	98.3	26	191	7	202	29	573
NW00447	98.00	98.40	0.40	40.6	7.38	11.4	7.54	.85	1.24	21.2	.20	5.73	.22	<.01	1.95	98.3	39	360	3	154	19	615
NW00157	104.00	104.30	0.30	45.3	5.23	14.9	11.3	.80	1.28	13.1	.17	2.35	.19	.13	5.60	100.3	48	511	4	135	16	452
NW00158	114.00	114.30	0.30	38.8	3.83	4.26	22.0	<.01	.08	19.5	.23	1.92	.18	.27	9.30	100.4	5	174	<2	116	16	155
NW00448	119.00	119.40	0.40	36.7	4.00	4.48	22.1	<.01	<.01	19.5	.24	1.95	.19	.23	9.70	99.1	4	161	<2	117	19	166
NW00159	124.00	124.30	0.30	39.0	3.87	3.91	23.1	<.01	<.01	19.2	.22	1.86	.18	.23	8.60	100.2	4	112	<2	113	17	161
NW00449	129.00	129.40	0.40	36.9	3.49	4.06	22.8	<.01	<.01	18.5	.22	1.79	.17	.23	10.6	98.8	3	162	<2	109	13	157
NW00160	134.00	134.30	0.30	37.7	3.51	4.47	23.0	<.01	<.01	18.5	.21	1.82	.16	.22	10.6	100.2	3	196	<2	113	15	144
NW00450	139.00	139.40	0.40	37.1	3.94	3.90	22.4	<.01	<.01	19.3	.22	2.08	.18	.22	10.1	99.4	6	165	<2	123	17	161
NW00161	144.00	144.30	0.30	39.0	4.02	3.91	22.7	<.01	<.01	18.4	.19	1.95	.17	.23	9.90	100.5	4	176	<2	116	17	152

HOLE NUMBER: PS-92-44

RESULTATS DE GEOCHIMIE

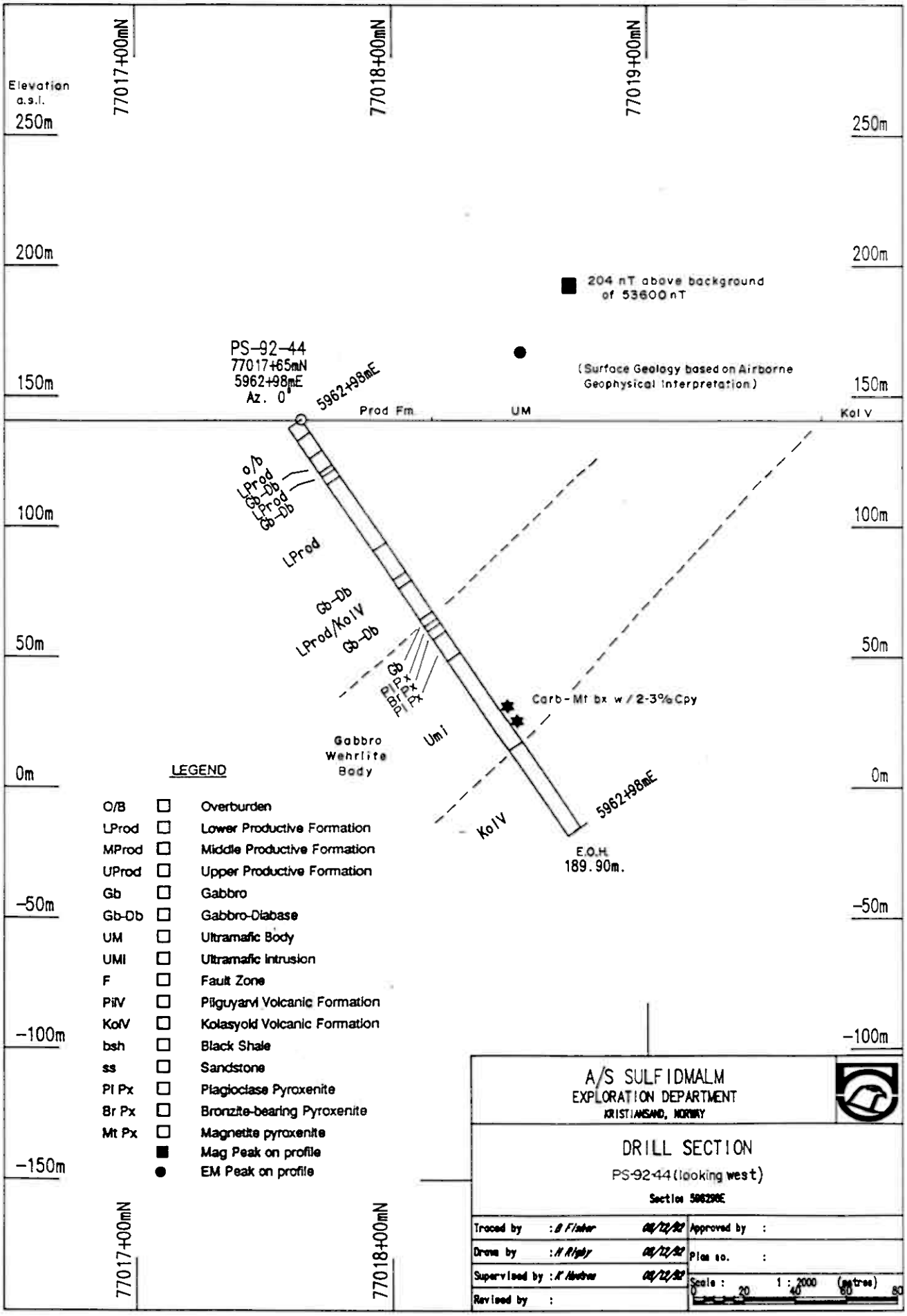
HOLE NUMBER: PS-92-44

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00176	89.32	89.72	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00156	94.00	94.30	0.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00447	98.00	98.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00157	104.00	104.30	0.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00158	114.00	114.30	0.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00448	119.00	119.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00159	124.00	124.30	0.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00449	129.00	129.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00160	134.00	134.30	0.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00450	139.00	139.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00161	144.00	144.30	0.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

HOLE NUMBER: PS-92-44

RESULTATS DE GEOCHIMIE



A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY

DRILL SECTION

PS-92-44 (looking west)

Section 5962.98E

Traced by	: B Fisher	08/12/92	Approved by :
Drawn by	: H Rigby	08/12/92	Plan no. :
Supervised by	: K Hawkins	08/12/92	Scale : 1 : 2000 (metres)
Revised by	:		0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-45 Zone # : Contractor : TERRA BOR Date started : 07/10/1992
Township: FINNMARK Date completed: 07/13/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7701230.00 N Azimuth: 90° 0' 0"
Station: 0+ 0 Departure: 596350.00 E Dip : -50° 0' 0"
Reference frame : Elevation: 130.00 Length : 167.40

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
M	° ' "	° ' "

Remarks :

Water flow : NO
Cemented : NO

Logged by : K. HUDSON-EDWARDS Date logged: 07/14/1992 Hole # : PS-92-45

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
0.00	8.00	OVERBURDEN									
8.00	167.40	MIDDLE PRODUCTIVE FORMATION									
		8.00- 11.00 Mainly Grey Shale Interbedded with mafic tuff (~30%), very fine-grained, contacts @ 0-10 degrees to CA, bull's eye @ 8.12, 8.40, 8.50, 9.12, 9.30; very finely laminated, greenish grey, minor white carbonate veining (~1%), non-sulphidic nor graphitic		9.00	9.01	0.01					1.18
		11.00- 30.32 Interbedded mafic tuff/sandstone and black shale Very fine-grained, well laminated and foliated, foliation CA angles vary from 0 to 45, beds average 1 cm thick (up to 3 cm), minor ~3% quartz-carbonate veins, Tr Po in veins		11.00	11.01	0.01					1.42
				13.00	13.01	0.01					1.10
				15.00	15.01	0.01					1.66
				17.00	17.01	0.01					.58
				19.00	19.01	0.01					0.80
		20.20- 20.25 White carbonate breccia zone									
				21.00	21.01	0.01					0.64
				23.00	23.01	0.01					1.21
				25.00	25.01	0.01					1.85
				27.00	27.01	0.01					0.88
		28.48- 28.85 Po stringers ~3%, wispy and ragged									
		28.85- 29.20 Po-rich (50-55%) breccia with subangular shale fragments		29.00	29.01	0.01					11.3
		30.20- 30.32 Rubbly, broken fault gouge, ~25% Py									
		30.32- 36.42 Mafic Flow Pale green, very fine-grained, massive, white carbonate-rich (~10%), especially towards downhole contact, uphole contact		31.00	31.01	0.01					0.40
				33.00	33.01	0.01					0.71
				35.00	35.01	0.01					0.34

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		is fault gouge 35.26- 35.40 In-situ breccia with white carbonate cement 36.42- 36.83 Dominantly Black Shale Uphole contact sheared and gradational, incursion of more (to 100%) graphitic black shale material downhole, finely laminated and fine-grained 36.63- 36.63 Contorted, brecciated zone, lens-like bleb of white carbonate and 3% Po									
		36.83- 38.37 Sandstone dominated by mafic volcanoclastic material, uphole contact is 2 cm white carbonate brecciated vein, very fine-grained, pale whitish green, well foliated, <1% 2 mm white carbonate veinlets		37.00	37.01	0.01					1.12
		38.37- 38.51 Black Shale Uphole contact sharp and bedded; very graphitic, very fine-grained, well foliated, Tr Po as foliation wisps 38.51- 38.75 Mafic Volcanoclastic-rich Sandstone As @ 36.83-38.37 38.75- 38.90 Black Shale As @ 38.37-38.51									
		38.90- 41.92 Mafic volcanoclastic-rich Sandstone Uphole contact is sharp/bedded, unit is soft, especially from 39.50-40.00, grainy, with Tr black grains flattened		39.00 41.00	39.01 41.01	0.01 0.01					1.65 0.76

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		and rotated into foliation, well foliated, pale green to yellow green, Tr Po disseminated 41.92- 42.92 Po-rich Black Shale/Po Breccia Uphole contact sharp and marked by appearance of black shale, banded over 1st 7 cm, then Po-rich (50-60%), with ragged, angular black shale fragments, grey silica ~10-20% in matrix 42.92- 42.99 Mafic-rich Sandstone As @ 38.90-41.92, uphole contact very sharp 42.99- 43.31 Black Shale Finely banded, very black and graphitic, 2 green-grey diagenetic carbonate bands @ 43.05 and 43.11 (up to 1 cm), Po stringers 2-3% irregular and crosscutting banding 43.31- 43.51 Mafic-rich Sandstone Po 3-5% disseminated and in up to 7 mm long wispy stringers 43.51- 43.74 Black Shale/Mafic Tuff Interbanded zone, with black shale bands up to 1 cm, w/ 3% Po/white carbonate stringers 43.74- 44.00 Mafic-Rich Sandstone As @ 43.31-43.51 44.00- 44.27 Black Shale/Po Breccia Zone Grey-black, graphitic, shale fragments ~2 mm up to several cm, float in Po		43.00	43.01	0.01					3.68

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		matrix, some mafic tuff material as @ 43.74-44.00									
		44.27- 45.30 Mafic-rich Sandstone As @ 43.31-43.51, 3-4 black shale bands (5mm) @ 44.52-44.65 & 44.85-44.91, Po stringers 2-3%									
		44.81- 44.84 Drusy quartz-carbonate vein		45.00	45.01	0.01					2.38
		45.30- 46.47 Po-rich Black Shale Contorted, bull's eye @ 45.80, very sharp contact uphole, gradational downhole, Po 20-25% as up to 1 cm thick very irregular, wispy veins and veinlets, some shale fragments in Po									
		46.47- 48.83 Mafic-rich Sandstone Well foliated, Po ~1% disseminated, grainy texture (needle-like crystals), yellow-green, one white carbonate 5mm vein @ 48.48		47.00	47.01	0.01					2.45
		48.83- 49.80 Po-rich Black Shale As @ 45.30-46.47, brecciated, contorted appearance, with many elliptical shale fragments, Po 15-20%		49.00	49.01	0.01					4.99
		49.80- 54.43 Mainly Black Shale Starts as mafic-rich sandstone to 50.75, grading downwards into dominantly highly contorted black shale, Po in massive 1-1.5 cm blobby irregular veinlets, ~15% overall, unit ends with 24 cm black shale bands @ 54.28-54.40		51.00	51.01	0.01					2.04

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		52.28- 52.38 Milky quartz vein, cracked and recemented by Po		53.00	53.01	0.01					4.36
		54.10- 54.25 White carbonate and Po-cemented black shale breccia zone, very angular black shale fragments									
		54.43- 55.06 Mafic-rich Sandstone As @ 46.57-48.83; ~2-3% parallel to foliation Po threads		55.00	55.01	0.01					5.38
		55.06- 55.72 Black Shale Breccia Po 15-20% , uphole contact very sharp, highly contorted unit									
		55.72- 56.90 Mafic-rich Sandstone Coarser-grained, 2-3 mm rounded grains, grainy and siliceous, as @ 54.43-55.06, but here 3-4% Po disseminated except at 56.23-56.24, 1 cm vein of solid Po									
		56.90- 57.43 Black Shale Highly contorted, uphole contact marked by 2 cm zone of ~70% white carbonate, brecciated, Po-rich patches w/ black shale fragments		57.00	57.01	0.01					5.30
		57.43- 58.10 Mafic-Rich Sandstone Yellow-green, siliceous, fine-grained, 2-3% disseminated Po, quartz-carbonate vein @ 58.00									
		58.10- 59.20 Black Shale Highly contorted, several bull's eyes @ 58.43, 58.47, 58.66, unit is wavy and		59.00	59.01	0.01					3.25

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		contorted, very graphitic, Po as ragged stringers with white carbonate ~10%									
		59.20- 59.42 Mafic-Rich Sandstone As @ 57.43-58.10; one quartz-carbonate 3cm vein @ 59.30-59.33									
		59.42- 60.18 Highly Contorted Black Shale As @ 58.10 59.20									
		60.18- 62.93 Mafic-rich Sandstone Yellow-green, only Tr Po		61.00	61.01	0.01					0.82
		62.93- 63.51 Black Shale Banded but not very contorted, white carbonate ~30% as 1 mm veinlets parallel to foliation, well foliated, Po ~3% as irregular, but generally parallel to foliation stringers, Po stringers concentrated from 63.42 to 63.49		63.00	63.01	0.01					3.84
		63.51- 63.76 Sandstone As above, yellow-green to pale green, graded bed at uphole contact suggests tops downhole, well foliated, 2-3% disseminated Po									
		63.76- 64.23 Black Shale Brecciated zone, with 40% elongate black shale fragments floating in a Po (~25%)-white carbonate and siliceous matrix, well-foliated									
		64.23- 68.61 Black Shale/Sandstone Interbanded zone, very well foliated and bedded (beds generally 2 mm-1 cm thick), grainy texture, 2-3% disseminated patchy		65.00 67.00	65.01 67.01	0.01 0.01					1.65 2.20

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		Po									
		68.61- 72.00		69.00	69.01	0.01					0.55
		Mainly Mafic-rich Sandstone		71.00	71.01	0.01					0.44
		White- to greenish white, well foliated, minor fine <1 mm white carbonate veinlets (~3%) parallel to foliated, fine-grained, gritty texture, uphole contact sharp and bedded; Po generally absent except for 171.65-172.00: 2% very fine <1 mm stringers									
		72.00- 72.54									
		Black Shale									
		Highly brecciated, very graphitic (as @ 63.76-64.23) and cemented by 15% Po and 10-20% white carbonate									
		72.54- 74.13		73.00	73.01	0.01					2.92
		Sandstone as @ 68.61-72.00, slightly more gradational uphole contact									
		74.13- 81.23		75.00	75.01	0.01					1.85
		Black Shale		77.00	77.01	0.01					1.76
		Uphole contact very sharp, unit is very graphitic, black, mottled, brecciated and contorted, sulphides mainly Po (~15-20% overall) and Tr Cpy, occasional Py within Po as veins and breccia matrix, much contortion and soft sediment deformation-folded laminae, broken and brecciated		79.00	79.01	0.01					3.25
				81.00	81.01	0.01					1.68
		81.23- 87.45		83.00	83.01	0.01					0.30
		Sandstone		85.00	85.01	0.01					0.40
		As @ 68.61-72.00, quite grainy, uphole contact is 1 cm fine grey band, Po ~1%, well foliated		87.00	87.01	0.01					0.63
			NW00230	87.40	88.00	0.60	NS	NS	223	251	
		87.45- 92.22	NW00231	88.00	89.00	1.00	NS	NS	251	291	
		Mainly Black Shale		89.00	89.01	0.01					3.97
		As @ 74.13 to 81.23	NW00232	89.00	90.00	1.00	NS	NS	218	271	
			NW00233	90.00	91.00	1.00	NS	NS	240	246	

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		91.00- 91.22 Brecciated zone w/ 30-40% white carboante		91.00	91.01	0.01					4.80
		91.22- 92.22 Mixed zone-contorted and folded with mixed UM? and shaley material									
		92.22- 95.50 Ultramafic Uphole contact gradational, unit is grey to greenish grey, quite broken, highly foliated, serpentinized, non-magnetic; @ 92.22-93.00 5% up to 3mm white carbonate porphyroblasts, remainder of unit is finer-grained and has Tr-1% disseminated Po; @ 94.60-95.50 brecciated quartz-yellow carbonate zone	NW00234	92.22 93.00	93.50 93.01	1.28 0.01	NS	NS	655	79	0.42
			NW00235 NW00236	93.50 94.60	94.60 95.50	1.10 0.90	NS NS	NS NS	876 1350	153 207	
				95.00	95.01	0.01					0.84
		95.50- 95.68 Sandstone Gritty, brown-green sandstone with round patch of Po breccia @ 95.68									
		95.68- 96.40 Ultramafic Well foliated, carbonate-porphyroblast bearing (~15%), Tr Po specks, uphole contact gradational, @ 95.93-1cm coarse yellow carbonate vein									
		96.40- 103.50 Black Shale/Mafic Tuff Greenish black unit, poorly graphitic but contorted and well foliated, Po patchy irregular veinlets ~10-15% generally parallel to foliation, Tr Cpy		97.00 99.00	97.01 99.01	0.01 0.01					2.72 2.72
		100.14- 100.26 Brown, sandy bed		101.00	101.01	0.01					2.96
		102.84- 102.92 Milky to smokey quartz vein									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
				103.00	103.01	0.01					2.49
		103.25- 103.50 Very graphitic black shale breccia, cemented by 10% Po									
		103.50- 104.95 Sandstone Very gritty, very sharp irregular (down-cutting?) uphole contact, unit is brown to brownish white, gritty/grainy, with 3-5% disseminated/patchy Po									
		104.95- 106.31 Black Shale Highly contorted and irregular, very graphitic, sharp (bedded?) uphole contact, Po ~5-7%, Tr Cpy especially in Po veins as thin slivers, also <1% cubes of Py associated with Po, laminated but broken and soft-sediment deformation		105.00	105.01	0.01					2.61
		106.31- 109.93 Mafic-rich Sandstone Fine-grained but overall grainy texture (minor quartz rounded <1 mm fragments), uphole contact gradational with some incursion of black shale fragments, Po heavily disseminated in specks and 3-5 mm patches ~3-5%		107.00 109.00	107.01 109.01	0.01 0.01					0.44 1.41
		109.93- 110.48 Black Shale banded/bedded and finely laminated to 110.17 (laminae generally <1 mm), then brecciated bed (very sharp contacts) and contrast from black shale laminated to black shale, contorted, very graphitic and brecciated, Po mainly in brecciated section, ~2-3% irregular veinlets									
		110.48- 111.20 Sandstone As @ 106.31-109.93		111.00	111.01	0.01					2.21

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		111.20- 120.21 Black Shale Highly contorted, mixed zone with lots of soft sediment deformation, brecciation of shale and recementation by magnetic Po (3-40%; 40% is Po bx with shale fragments)		113.00 115.00	113.01 115.01	0.01 0.01					2.14 2.29
		115.82- 116.26 Sandstone bed with rip-up clasts at base		117.00	117.01	0.01					1.52
		119.00- 119.25 Milky quartz-rich (15-20%) breccia matrix		119.00	119.01	0.01					4.23
		120.21- 123.05 Mixed Black Shale/Sandstone Grading near uphole contact suggests tops downhole, unit is banded, less contorted, laminated (1 mm to 0.5 cm), black shale overall 40-45%, Po-bsh bx zones @ 122.10-122.27 and less well developed @ 122.41-122.52 where Po is 7-20%, milky quartz zones @ 121.65-121.79 and milky quartz boudinaged vein @ 123.14-123.22, average 2 cm width		121.00 123.00	121.01 123.01	0.01 0.01					0.61 1.93
		123.05- 124.11 Sandstone Green, with wispy, 0.5 cm black shale lenses, medium-grained, Po ~2-3%, sharp uphole and downhole contacts									
		124.11- 126.25 Black Shale Breccia with Po cement Highly brecciated zone, shale fragments up to 1 cm diameter and weakly graphitic, matrix is Po (25-30%) and smokey to milky quartz (~20%) with some mafic material		125.00	125.01	0.01					2.44
		126.25- 126.72 Sandstone									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		Green, sharp uphole contact, @ 126.40-1 cm black shale band with 3-5% Po in irregular veinlets									
		126.72- 129.81 Ultramafic Body (Flow?/Tuff?) Uphole contact gradational and well foliated, unit is greyish green, medium-grained, very well foliated, soft with carbonate porphyroblasts 1-2 mm diameter, flattened and smeared along foliation planes, overall 1-2% Po disseminated and flattened along foliation planes, and Tr Cpy in specks, patches up to 2 mm and in carbonate veins and brecciated areas (as @ 127.70-127.80, 128.10-128.15 and 129.32-129.45)	NW00237 NW00238 NW00239	126.75 127.00 128.00 129.00 129.00	128.00 127.01 129.00 129.01 130.00	1.25 0.01 1.00 0.01 1.00	NS NS NS	NS NS NS	1790 1570 1850	451 388 545	 0.37 0.34
		129.81- 134.47 Mixed Sandstone/Black Shale Finely banded, well foliated, dark green to black, sulphides Po overall 5-10% in patchy, up to 1 cm veins mainly in black shale sections									
		129.81- 130.47 Very soft dark green rock, gradual change from overlying UM (may be part of UM - chilled zone), then quite sharp contact with black shale underneath									
		130.20- 130.20 5 cm milky quartz vein, cracked and sealed with green chlorite and Py		131.00 133.00	131.01 133.01	0.01 0.01					1.03 2.36
		134.30- 134.47 Po breccia with dark black graphitic black shale fragments									
		134.47- 138.81 Ultramafic Body (Intrusion?/Tuff?)	NW00240	134.58 135.00	135.00 135.01	0.42 0.01	NS	NS	1950	848	 0.41

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		As @ 126.72-129.81 in terms of texture and appearance, very well foliated and banded (alternating serpentine and carbonate-rich banding), esp. @ 138.48-138.81, Po heavily disseminated 3-4% mainly flattened along foliation planes and Tr Cpy specks but always seem to be associated with carboante (veins or breccia matrix), up and downhole contacts gradational/laminated and sheared	NW00241	135.00	136.00	1.00	NS	NS	1200	435	
		135.66- 135.82 Very fine-grained section, medium to dark green, no sulphides, sharp contacts (mafic xenolith? small flow? finer grained portion?)	NW00242	136.00	137.00	1.00	NS	NS	1810	531	
				137.00	137.01	0.01					0.32
			NW00243	137.00	138.00	1.00	NS	NS	1210	120	
		138.81- 142.67 Mainly Black Shale Very graphitic, brecciated to 141.62, then more finely laminated and less contorted, Po ~5 to 20% especially in shale breccia zones									
		138.81- 139.13 Sandy section, Po stringers and disseminated ~5%		139.00	139.01	0.01					0.82
				141.00	141.01	0.01					6.72
		142.67- 144.35 Mafic Tuff Fine-grained, well foliated, Po disseminated ~1-2%, sharp up and downhole contacts		143.00	143.01	0.01					0.27
		144.35- 154.18 Mainly Black Shale Very graphitic, highly foliated and moderately contorted, finely laminated (but laminae are sheared and wispy), Po ~3-5% along foliation planes 1-2 mm in		145.00	145.01	0.01					0.68
				147.00	147.01	0.01					2.17

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		patchy, 4-5 mm veins									
		148.20- 148.60 Sandy bed as @ 138.81-139.13 and 151.20-151.27									
				149.00	149.01	0.01					2.30
				151.00	151.01	0.01					1.77
				153.00	153.01	0.01					3.82
		153.78- 154.18 Po breccia zone with 40-55% Po and fine, up to 8 mm long elliptical black shale fragments									
		154.18- 162.25 Mafic Tuff Uphole contact marked by Po breccia, incursion of 3 thin, up to 5 mm thick black shale lensy beds to 154.73, then very fine-grained, whitish green mafic tuff, nil to Tr Po, minor (~3% overall) white carbonate veining, homogeneous unit		155.00	155.01	0.01					0.37
				157.00	157.01	0.01					0.34
				159.00	159.01	0.01					0.21
				161.00	161.01	0.01					0.25
		162.25- 167.40 Black Shale As @ 144.35-154.28, very mottled appearance but fine laminae are preserved, ripped apart, folded, Po 5-50% especially 167.00-167.14 (Po bx), ~10% white carbonate in matrix and as veinlets		163.00	163.01	0.01					1.00
				165.00	165.01	0.01					0.85
		165.61- 165.75 Sandy bed, ~Tr to 1% disseminated Po									
				167.00	167.01	0.01					4.51
167.40	167.40	END OF HOLE									

HOLE NUMBER: PS-92-45

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NW00162	92.22	94.80	2.58	38.2	6.53	7.23	16.0	<.01	<.01	15.3	.21	1.60	.13	.13	11.0	96.3	5	104	<2	95	12	113
NW00163	97.00	100.00	3.00	46.6	13.6	2.79	3.43	2.86	1.98	19.6	.06	1.64	.08	.03	5.70	98.4	55	113	<2	148	16	521
NW00164	126.73	129.83	3.10	38.6	4.88	5.24	19.5	<.01	.04	15.8	.15	1.46	.14	.24	8.10	94.2	5	59	<2	90	15	111
NW00165	134.58	138.58	4.00	42.1	3.95	6.01	18.2	<.01	<.01	13.4	.17	1.17	.12	.22	9.50	94.8	4	81	<2	78	10	110
NW00166	157.00	160.00	3.00	43.8	13.3	8.53	7.23	1.37	.40	13.1	.18	1.37	.10	.02	9.80	99.2	12	134	<2	70	6	192
NW00167	160.00	163.00	3.00	41.1	3.12	4.51	22.2	.02	.02	14.3	.17	.970	.10	.28	8.90	95.7	3	60	<2	64	12	94

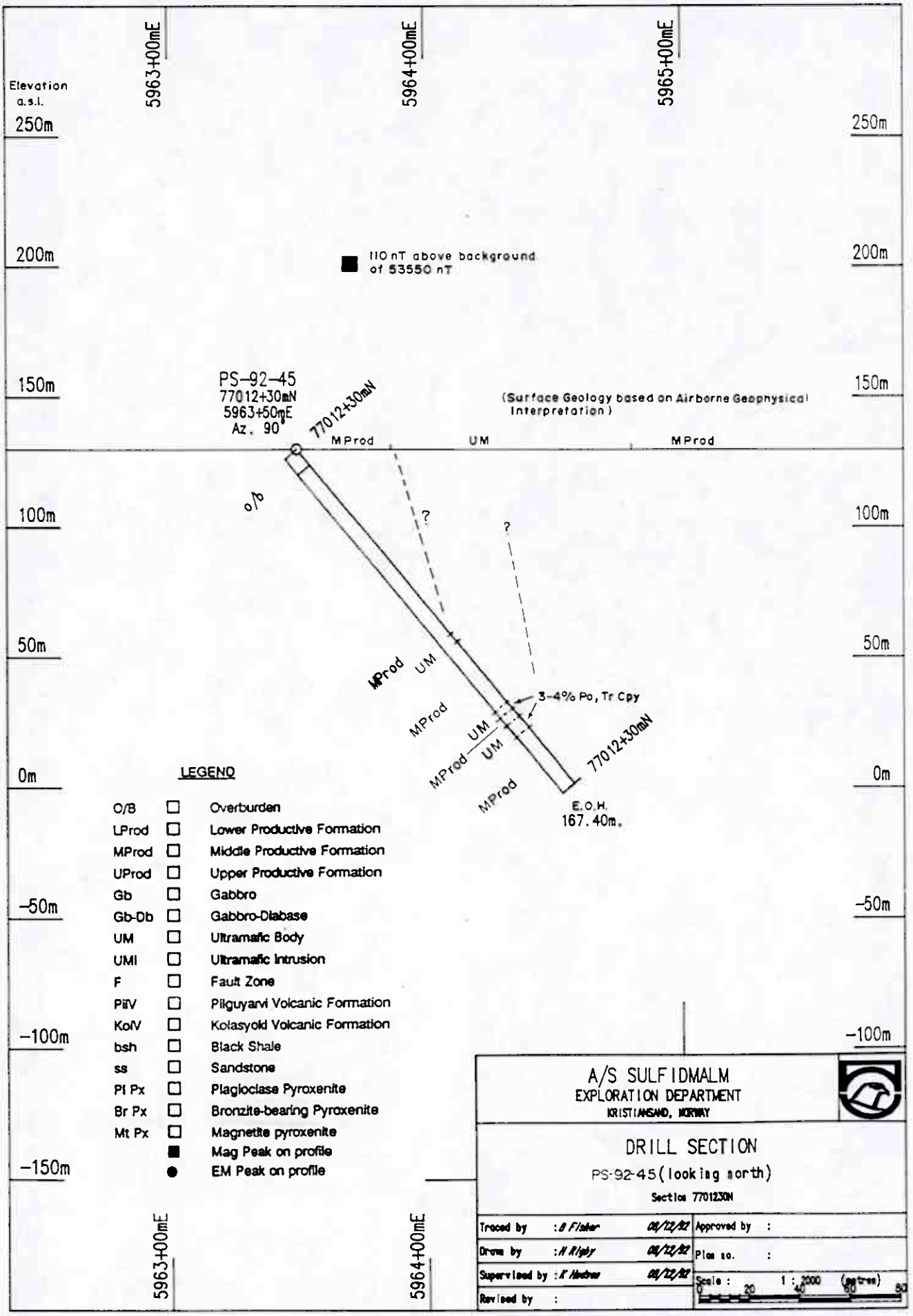
HOLE NUMBER: PS-92-45

RESULTATS DE GEOCHIMIE

HOLE NUMBER: PS-92-45 RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00162	92.22	94.80	2.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00163	97.00	100.00	3.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00164	126.73	129.83	3.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00165	134.58	138.58	4.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00166	157.00	160.00	3.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00167	160.00	163.00	3.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

HOLE NUMBER: PS-92-45 RESULTATS DE GEOCHIMIE


Elevation a.s.l.
5963+00mE
5964+00mE
5965+00mE
250m
200m
150m
100m
50m
0m
-50m
-100m
-150m
110 nT above background of 53550 nT
PS-92-45
77012+30mN
5963+50mE
Az. 90°
77012+30mN
(Surface Geology based on Airborne Geophysical Interpretation)
MProd
UM
MProd
O/B
?
?
MProd
UM
MProd
UM
MProd
UM
MProd
3-4% Po, Tr Cpy
77012+30mN
E.O.H.
167.40m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMI Ultramafic Intrusion
F Fault Zone
PilV Pilguyarvi Volcanic Formation
KolV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY
DRILL SECTION
PS-92-45 (looking north)
Section 77012.30N
Traced by : S Fisher 08/12/92
Drawn by : K Ripley 08/12/92
Supervised by : K Hudson 08/12/92
Revised by :
Approved by :
Plan no. :
Scale : 1 : 2000 (metres)
0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-46 Zone # : Contractor : TERRA BOR Date started : 07/13/1992
Township: FINNMARK Date completed: 07/16/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7701282.50 N Azimuth: 90° 0' 0"
Station: 0+ 0 Departure: 596100.00 E Dip : -80° 0' 0"
Reference frame : Elevation: 141.00 Length : 175.45

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
M	° ' "	° ' "

Remarks :

Water flow : NO
Cemented : NO

Logged by : K. HUDSON-EDWARDS Date logged: 07/17/1992 Hole # : PS-92-46

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
0.00	5.00	OVERBURDEN										
5.00	47.57	MIDDLE PRODUCTIVE FORMATION										
		5.00- 9.22 Sandstone Medium-grey, fine-grained, gritty texture, minor milky quartz veining from 2 mm to 10 cm (~5%), weakly carbonaceous, Tr Po associated with quartz veins		5.00 7.00 9.00	5.01 7.01 9.01	0.01 0.01 0.01						0.77 0.56 0.43
		9.22- 10.92 Black Shale/Mafic Tuff Uphole contact diffuse and weakly defined, unit is poorly graphitic, finely laminated, weakly banded and weakly foliated, Po as fine <1 mm veinlets ~1%, fine-grained, medium green to blackish green, Tr <1% fine <1 mm white carbonate veining, bull's eye @ 10.05										
		10.92- 14.99 Sandstone/Fault Zone Uphole contact is 5 cm irregular milky quartz vein, sandstone part of unit is light green to brown-green, biotite-bearing (~5%), moderately foliated, fine-grained but grainy texture, cut @ irregular angles by milky quartz veins which themselves are fractured and infilled with coarse, average 1 cm diameter blobs of Po and Tr Cpy		11.00 13.00	11.01 13.01	0.01 0.01						0.54 0.06
		14.99- 22.00 Sandstone (dominated by mafic volcaniclastic material) Uphole contact in quartz/fault zone, unit is fine- to medium-grained, light to blackish green, well foliated, nil to Tr disseminated Po except as below:										
		14.99- 16.30 Black, with shale material ~30-40%		15.00	15.01	0.01						0.45

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		and 1-2% irregular 1-2 mm stringers of Po		17.00	17.01	0.01					0.74
		18.48- 18.52 Zone of 1-2% grains of pink mineral (K-spar?) enveloped in very black, sub to euhedral crystals (magnetite?), quartz and quartz-carbonate veining ~1-2% in up to 1 cm veins		19.00 21.00	19.01 21.01	0.01 0.01					0.32 0.46
		22.00- 23.50 Sandstone/Fault zone As @ 10.92-14.99, but quartz concentrated from 22.00-22.15 & 22.70-23.50; sandstone is well foliated, brownish green, grainy with much mafic volcanoclastic material; large quartz vein is lined with 2 mm greyish drusy carbonate, Tr Po specks/blebs in quartz vein		23.00	23.01	0.01					0.01
		23.50- 32.76 Black Shale Unit is very black, graphitic, Po-rich (5-7%) and up to 1% Py as ragged, wispy 1-3 mm veinlets generally roughly parallel to foliation; moderately foliated, bedding not obvious; grey diagenetic carbonate veins up to 1 cm @ 27.30, 28.30, 29.28, 29.35, 29.52, 29.57		25.00 27.00 29.00	25.01 27.01 29.01	0.01 0.01 0.01					1.17 5.30 5.27
		29.64- 29.68 Large Po vein, rusty									
		30.85- 31.26 Zone of ~50-60% milky quartz and black shale, white carbonate wispy veins (generally associated with Po veinlets) ~3%		31.00	31.01	0.01					1.30

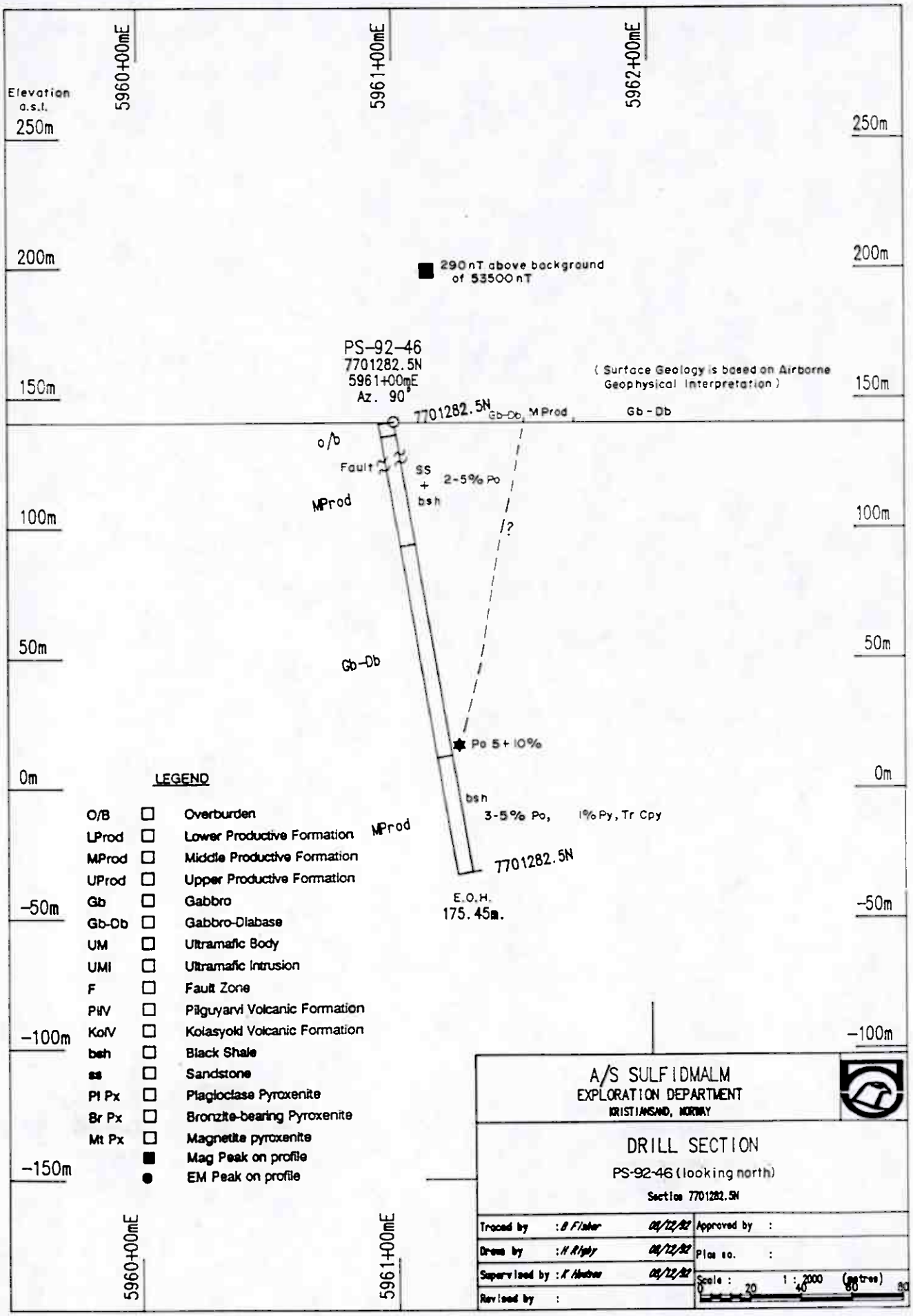
FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		32.76- 36.92 Sandstone dominated by mafic volcanoclastic material Uphole contact marked by disappearance of black shale, unit is weakly foliated, minor ~1% quartz-carbonate veininet, ~2-3% disseminated Po in fine-grained, slightly gritty matrix		33.00 35.00	33.01 35.01	0.01 0.01					1.00 0.92
		36.92- 40.38 Black Shale Uphole contact fairly sharp with appearance of black shale, unit is moderately graphitic, contorted and brecciated, <1% white carbonate veining, 3-5% Po as ragged and webbed veinlets up to 1cm thick		37.00	37.01	0.01					2.58
		38.55- 38.68 Pale green, <1mm sandstone bed, with diffuse contacts and clot of web-like Po @ 38.60									
				39.00	39.01	0.01					1.24
		40.38- 42.25 Smoky Quartz Uphole contact irregular and marked by folded shale, most of vein is cracked and resealed by Po and Py, 4cm Po+Py vein @ 41.72-41.76		41.00	41.01	0.01					0.23
		42.25- 47.57 Black Shale Unit is black to grey-black, fine-grained, well foliated (laminae distorted but not overly convoluted except @ 42.25-42.80: convoluted and Po up to 7% as ragged veinlets; incursion of more mafic-rich tuff downhole (to 80% @ 47.30-47.51), diagenetic carbonate bands @ 43.60-43.80, near downhole contact shaley wisps are very irregular and float in mafic tuff									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		42.80- 42.86 Milky quartz vein w/ Tr Po in cracks									
				43.00	43.01	0.01					0.62
				45.00	45.01	0.01					2.74
				47.00	47.01	0.01					1.71
47.57	129.90	GABBRO-DIABASE									
		47.57- 49.50 Highly foliated, fine-grained, pale grey-green, highly carbonaceous (~30%) especially @ uphole contact which is diffuse and farily gradational (marked by appearance of foliated carbonate)		49.00	49.01	0.01					0.27
		49.50- 59.30 Gradual change to less foliated, but still generally fine-grained, melanocratic gabbro, patches up to 20 cm long of more pegmatitic and leucocratic gabbro e.g. @ 58.40		51.00	51.01	0.01					0.17
				53.00	53.01	0.01					0.35
				55.00	55.01	0.01					0.51
				57.00	57.01	0.01					0.45
				59.00	59.01	0.01					0.33
		59.30- 70.25 Spotted, granular, medium to coarse grained gabbro with equant, stubby dark green amphibole crystals, 2-3 mm diameter, enveloped by yellow-white plagioclase, @ 68.12-68.23, 68.30-68.43, 69.31-69.33, 69.42-69.45 pinkish white carbonate veins, brecciated		61.00	61.01	0.01					0.50
				63.00	63.01	0.01					0.47
				65.00	65.01	0.01					0.35
				67.00	67.01	0.01					0.37
				69.00	69.01	0.01					0.85
		70.25- 76.06 Finer-grained, melanocratic; @ 70.45-70.77 spotty 1-2 mm carbonate specks; @ 74.40-74.44 zone of black, wispy veining (non-magnetic)		71.00	71.01	0.01					0.42
				73.00	73.01	0.01					0.37
				75.00	75.01	0.01					0.38
		76.06- 116.12 Coarser grained as @ 59.30-70.25, several white carbonate veins 1-15 cm		77.00	77.01	0.01					0.37
				79.00	79.01	0.01					0.34
				81.00	81.01	0.01					0.44

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
				83.00	83.01	0.01						0.38
				85.00	85.01	0.01						0.33
				87.00	87.01	0.01						0.34
				89.00	89.01	0.01						0.35
				91.00	91.01	0.01						0.47
				93.00	93.01	0.01						0.39
				95.00	95.01	0.01						0.52
				97.00	97.01	0.01						0.35
				99.00	99.01	0.01						0.29
				101.00	101.01	0.01						0.48
				103.00	103.01	0.01						0.47
				105.00	105.01	0.01						0.90
				107.00	107.01	0.01						0.21
				109.00	109.01	0.01						0.73
				111.00	111.01	0.01						0.46
				113.00	113.01	0.01						0.52
				115.00	115.01	0.01						0.75
		116.12- 127.23 Highly foliated, varying from medium to coarse-grained to, starting @ ~119.45, finer-grained, Tr specks of Po, becoming more yellow-green downhole		117.00	117.01	0.01						0.54
				119.00	119.01	0.01						0.41
				121.00	121.01	0.01						0.35
				123.00	123.01	0.01						0.31
				125.00	125.01	0.01						0.38
				127.00	127.01	0.01						0.44
		127.23- 127.33 Milky quartz vein, cracked and infilled with white carbonate and fine <<1 mm Py cubes										
		127.33- 129.10 Epidotized, extremely fine-grained, well foliated, with wispy quartz veinlets and Tr to 1% wispy Po	NW00244	129.00 129.00	129.01 129.90	0.01 0.90	NS		NS	763	903	1.44
		129.10- 129.72 As @ 127.33-129.10, more ragged/wispy Po veinlets ranging from 2% near 129.10 to about 10% @ 129.72, also Tr Cpy										
		129.72- 129.90 Smoky quartz zone, cracked with 1% Po and medium green chlorite infilling cracks										

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
129.90	175.45	MIDDLE PRODUCTIVE FORMATION									
		129.90- 131.50	NW00245	130.00	131.00	1.00	NS	NS	553	695	
		Mainly Black Shale, Some Sandstone		131.00	131.01	0.01					3.68
		Uphole contact @ quartz zone/vein is marked by ~7 cm of ~60% Po, very carbonate-rich (especially black shale portions) to 20-30%, black shale beds tend to be irregular and @ 130.40 are broken and faulted, Po 3-5% (concentrated near Gb-Db contact), Tr veins of Cpy	NW00246	131.00	131.50	0.50	NS	NS	531	1700	
		131.50- 132.68	NW00247	131.50	132.68	1.18	NS	NS	217	122	
		Mafic Tuff									
		Uphole contact in Po-white carbonate breccia zone, unit is highly foliated and carbonaceous, Po heavily disseminated 3-4%									
		132.68- 134.36	NW00249	132.68	133.68	1.00	NS	NS	276	978	
		Black Shale		133.00	133.01	0.01					4.59
		3% Po, Tr Cpy in fine 2-3 mm veinlets, unit is quite black and graphitic, fine-grained, poorly laminated except @ 133.20-minor kink folds parallel to CA, one grey diagenetic carbonate band (50 mm)									
		134.36- 134.57									
		Mafic Tuff									
		As @ 131.50-132.68									
		134.57- 175.45		135.00	135.01	0.01					1.05
		Mainly Black Shale		137.00	137.01	0.01					2.14
		Overall unit is black to grey-white, well laminated and bedded but laminations are		139.00	139.01	0.01					0.50
				141.00	141.01	0.01					0.29
		wavy, moderately to weakly graphitic,	NW00250	142.00	143.00	1.00	NS	NS	104	104	
		minor white carbonate veinlet and some		143.00	143.01	0.01					1.16
		milky quartz veining e.g. from		145.00	145.01	0.01					1.85
		159.15-159.75, sandy graded beds e.g.		147.00	147.01	0.01					0.81
		156.20-156.32 indicate tops uphole, ~5%		149.00	149.01	0.01					1.66
		Po overall (5% to 160.00, then 1-2% to		151.00	151.01	0.01					2.72
		EOH), also coarse euhedral to subhedral		153.00	153.01	0.01					0.90
		Py in some zones (e.g. 140.50-142.50,		155.00	155.01	0.01					0.45

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		152.73-153.73)		157.00	157.01	0.01					0.59
				159.00	159.01	0.01					0.29
				161.00	161.01	0.01					0.27
				163.00	163.01	0.01					0.53
				165.00	165.01	0.01					0.24
				167.00	167.01	0.01					0.25
				169.00	169.01	0.01					0.32
				171.00	171.01	0.01					0.29
				173.00	173.01	0.01					0.31
				175.00	175.01	0.01					0.28
175.45	175.45	END OF HOLE									


5960+00mE
5961+00mE
5962+00mE
Elevation a.s.l.
250m
200m
150m
100m
50m
0m
-50m
-100m
-150m
290 nT above background of 53500 nT
PS-92-46
7701282.5N
5961+00mE
Az. 90°
(Surface Geology is based on Airborne Geophysical Interpretation)
7701282.5N
Gb-Db
MProd
Gb - Db
o/b
Fault
SS + bsh
2-5% Po
MProd
?
Gb-Db
Po 5 + 10%
bsh
3-5% Po, 1% Py, Tr Cpy
MProd
7701282.5N
E.O.H.
175.45m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMI Ultramafic Intrusion
F Fault Zone
PilV Pilguyarvi Volcanic Formation
KolV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY
DRILL SECTION
PS-92-46 (looking north)
Section 7701282.5N
Traced by : S Fisher 08/12/92
Drawn by : N Rigby 08/12/92
Supervised by : K Mathew 08/12/92
Revised by :
Approved by :
Plan no. :
Scale : 1 : 2000 (metres)
0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-47 Zone # : Contractor : TERRA BOR Date started : 07/16/1992
Township: FINNMARK Date completed: 07/19/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7701320.00 N Azimuth: 0° 0' 0"
Station: 0+ 0 Departure: 595625.00 E Dip : -55° 0' 0"
Reference frame : Elevation: 148.00 Length : 171.18

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-54° 0' 0"	° ' "
20.00 M	-52°54' 0"	° ' "
60.00 M	-52°12' 0"	° ' "
120.00 M	-48°54' 0"	° ' "
160.00 M	-48°48' 0"	° ' "

Remarks :

Water flow : NO
Cemented : NO

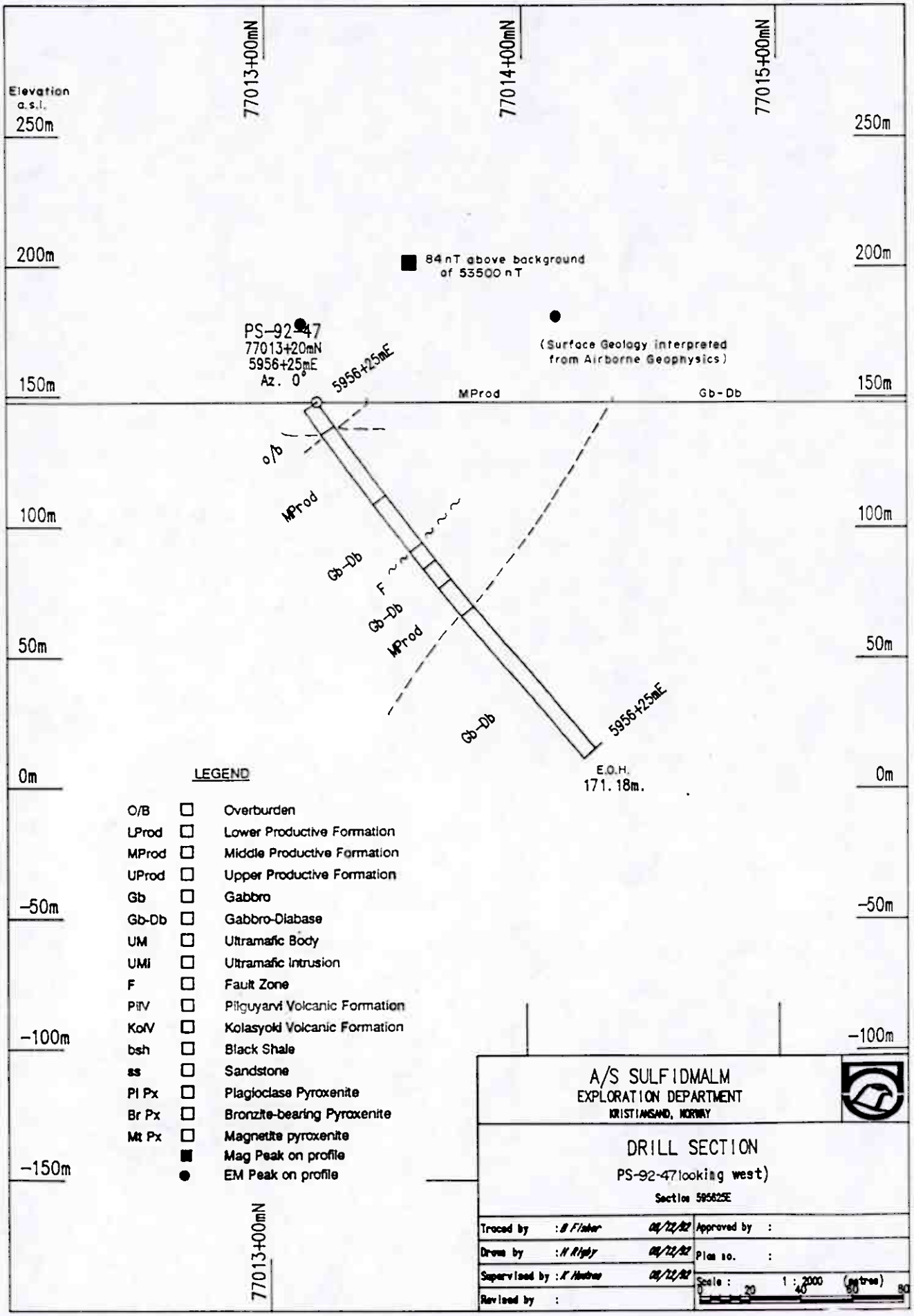
Logged by : D. HODGES Date logged: 07/25/1992 Hole # : PS-92-47

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
0.00	11.23	OVERBURDEN									
11.23	44.27	MIDDLE PRODUCTIVE FORMATION Dominated by tuffaceous volcanics including som possible intermediate volcanics. Only 25% real FeS argillaceous (mafic wacke to carbonaceous) sediments									
		11.23- 12.15 Fault gouge 11.25-11.65 followed by contorted laminated argillite with lozenge and laminae of calcite									
		12.15- 14.58 Mafic Tuff or immature sediment with 15% plagioclase? fragments, 15% carbonate patches and quartz-carbonate veinlets		13.00	13.01	0.01					0.35
		14.58- 23.47 Mafic Argillite (contorted turbidity current?) Highly strained with distinct anastomosing S and C-fabrics, probable sheath folds and micro-fault movement along slips @ 75-80° to CA, unit starts dominantly banded pale green chlorite-argillite, gradually becomes more argillaceous, contorted, increase in sulphide is comcomitant with change to more argillaceous rock ranges from <5% to max of 25%, faults @ 23.25-23.47		15.00 17.00 19.00 21.00	15.01 17.01 19.01 21.01	0.01 0.01 0.01 0.01					0.57 1.67 0.33 0.60
		21.45- 21.65 90% Po, 10% Py		23.00	23.01	0.01					2.66
		23.47- 27.48 Sedimentary rocks with an intermediate (volcanic) component, mixed with mafic and FeS argillite beds, 10% Po stringers		25.00 27.00	25.01 27.01	0.01 0.01					3.50 2.70
		27.48- 28.00 Calcitic argillite with slots of	NW00351	27.49	28.00	0.51	NS	NS	280	294	

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		fine-grained Py ~30%									
		28.00- 32.08 As @ 23.47 except more intermediate component		29.00	29.01	0.01					0.27
		29.70- 29.70 Rolling foliation 0° to CA @ 29.8-29.9 then back to ~65° as before									
		29.95- 32.78 Graded beds, weak grading indicates tops uphole		31.00	31.01	0.01					0.47
		32.08- 32.78 Graphitic argillite (black Shale) 15% Po, 15% calcite, sharp contacts: upper 65° to CA, lower 55°, wavy									
		32.78- 40.10 Sandstone Massive to well bedded sediments of apparent intermediate composition, 5-10% Po, local variations include 35.40-35.90: 25% Po remobilized in more chloritic shale, bedding is compositional variation, grading not well developed		33.00 35.00 37.00 39.00	33.01 35.01 37.01 39.01	0.01 0.01 0.01 0.01					0.56 0.57 2.33 0.31
		40.10- 44.27 Sandy turbitidic sediment Bedded but not graded, gradational downhole contact		41.00 43.00	41.01 43.01	0.01 0.01					0.58 0.60
44.27	67.27	GABBRO-DIABASE Uphole part of unit is fine-grained, schistose and streaked with calcite, 10% calcite-quartz veins to 50.0		45.00 47.00 49.00 51.00	45.01 47.01 49.01 51.01	0.01 0.01 0.01 0.01					0.30 0.84 0.51 0.46

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
				53.00	53.01	0.01					0.68
				55.00	55.01	0.01					0.47
				57.00	57.01	0.01					0.70
				59.00	59.01	0.01					0.61
				61.00	61.01	0.01					0.66
				63.00	63.01	0.01					0.35
				65.00	65.01	0.01					0.54
				67.00	67.01	0.01					0.68
67.27	75.67	QUARTZ/FAULT ZONE Contains 15% mafic fragments		69.00	69.01	0.01					1.20
				71.00	71.01	0.01					0.22
				73.00	73.01	0.01					1.00
				75.00	75.01	0.01					0.06
75.67	85.15	GABBRO-DIABASE Becomes foliated, streaked with calcite; downhole from 84.05-85.15: graded gabbro-diabase sediments grades into turbidite		77.00	77.01	0.01					0.66
				79.00	79.01	0.01					0.41
				81.00	81.01	0.01					0.41
				83.00	83.01	0.01					0.38
				85.00	85.01	0.01					0.60
85.15	98.90	MIDDLE PRODUCTIVE FORMATION 85.15- 98.90 Mainly black Shale Black, laminated turbitidic sediment with 15% gritty beds up to 50 cm, average 15 cm, 5-10% Po mobilized		87.00	87.01	0.01					1.20
				89.00	89.01	0.01					2.37
				91.00	91.01	0.01					1.91
				93.00	93.01	0.01					3.49
				95.00	95.01	0.01					1.55
				97.00	97.01	0.01					0.16
98.90	171.18	GABBRO-DIABASE Uphole contact is gradational, from argillite (shale) to wacke to mafic to gabbro-diabase (ie., no chilled contact or hornfelsed zone, suggesting the Gb-Db may be a flow), unit is typical as seen above, with local pseudomorphs of distinct pyroxene up to 3-4 mm in fine-grained chlorite-plagioclase matrix 113.73- 113.98 Bull quartz vein		99.00	99.01	0.01					0.43
				101.00	101.01	0.01					0.41
				103.00	103.01	0.01					0.49
				105.00	105.01	0.01					0.61
				107.00	107.01	0.01					0.37
				109.00	109.01	0.01					0.40
				111.00	111.01	0.01					0.34
				113.00	113.01	0.01					0.49
				115.00	115.01	0.01					0.41
				117.00	117.01	0.01					0.35
				119.00	119.01	0.01					0.40
				121.00	121.01	0.01					0.39

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
				123.00	123.01	0.01					0.38
				125.00	125.01	0.01					0.41
				127.00	127.01	0.01					0.36
				129.00	129.01	0.01					0.55
				131.00	131.01	0.01					0.68
				133.00	133.01	0.01					0.39
				135.00	135.01	0.01					0.38
				137.00	137.01	0.01					0.47
				139.00	139.01	0.01					0.28
				141.00	141.01	0.01					0.37
				143.00	143.01	0.01					0.39
				145.00	145.01	0.01					0.38
		145.84- 146.00 Missing Core									
				147.00	147.01	0.01					0.43
				149.00	149.01	0.01					0.54
				151.00	151.01	0.01					0.45
				153.00	153.01	0.01					0.48
				155.00	155.01	0.01					0.48
				157.00	157.01	0.01					0.37
				159.00	159.01	0.01					0.50
				161.00	161.01	0.01					0.41
				163.00	163.01	0.01					0.37
				165.00	165.01	0.01					0.40
				167.00	167.01	0.01					0.44
				169.00	169.01	0.01					0.63
				171.00	171.01	0.01					0.24
171.18	171.18	END OF HOLE									


77013+00mN
77014+00mN
77015+00mN
Elevation a.s.l.
250m
200m
150m
100m
50m
0m
-50m
-100m
-150m
84 nT above background of 53500 nT
PS-92-47
77013+20mN
5956+25mE
Az. 0°
5956+25mE
(Surface Geology interpreted from Airborne Geophysics)
MProd
Gb-Db
O/B
MProd
Gb-Db
F
Gb-Db
MProd
Gb-Db
5956+25mE
E.O.H.
171.18m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMi Ultramafic Intrusion
F Fault Zone
PitV Pitguyarvi Volcanic Formation
KolV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY
DRILL SECTION
PS-92-47looking west)
Section 595625E
Traced by : B Fisher 08/12/92
Drawn by : N Rigby 08/12/92
Supervised by : K Hoshaw 08/12/92
Revised by :
Approved by :
Plan no. :
Scale : 1 : 2000 (metres)
0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-48 Zone # : Contractor : TERRA BOR Date started : 07/20/1992
Township: FINNMARK Date completed: 07/23/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7700850.00 N Azimuth: 0° 0' 0"
Station: 0+ 0 Departure: 595325.00 E Dip : -55° 0' 0"
Reference frame : Elevation: 130.00 Length : 180.80

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-55°30' 0"	° ' "
60.00 M	-55°36' 0"	° ' "
120.00 M	-55°42' 0"	° ' "
160.00 M	-56° 6' 0"	° ' "

Remarks :

Water flow : no
Cemented : no

Logged by : K. HUDSON-EDWARDS Date logged: 07/31/1992 Hole # : PS-92-48

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
0.00	6.80	OVERBURDEN									
6.80	14.65	GABBRO-DIABASE Unit is light to medium green, medium grained, weakly foliated w/ ~1% fine 1-3 mm white carbonate veinlets		7.00 9.00 11.00 13.00	7.01 9.01 11.01 13.01	0.01 0.01 0.01 0.01					.40 0.41 0.39 1.12
		13.20- 14.65 Much finer grained (aphanitic) chilled(?) margin									
		13.55- 13.61 White carbonate vein									
14.65	23.50	PIL'GUYARVI VOLCANIC FORMATION Unit overall is medium green, fine-grained, weakly foliated, with minor white carbonate veining (1-3% in up to 5 mm veinlets), non-sulphidic									
		14.65- 17.52 Mafic Tuff Weakly banded, biotite ~5% overall, carbonate as veinlets and blebs (to 5-10%), overall bedded appearance		15.00 17.00	15.01 17.01	0.01 0.01					1.24 0.34
		17.52- 23.50 Mafic Flow Very fine-grained, homogeneous, weakly (1-3%) amygdaloidal		19.00 21.00 23.00	19.01 21.01 23.01	0.01 0.01 0.01					0.40 0.46 0.40
23.50	27.60	MIDDLE PRODUCTIVE FORMATION									
		23.50- 27.60 Mafic Tuff with Minor Black Shale Beds Well foliated, light green to brownish (in biotite-rich parts especially from 26.45-27.30), very fine-grained, up to 40% carbonate as blebby patches aligned along foliation, black shale beds @ 25.17-25.50, 25.31-25.45, 25.80-26.00 with 1-3% fine stringer Po		25.00 27.00	25.01 27.01	0.01 0.01					0.71 0.58

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
27.60	31.30	ULTRAMAFIC BODY Uphole contact very gradational and marked by onset (uphole) of biotite, unit is grey to steely grey, fine to coarse-grained, moderately foliated w/ 2-3% Po disseminated in wisps in matrix and in 2-3 mm veinlets, hornfelsing of uphole tuff (only) suggests tops downhole, fine gr 27.60-30.00, coarse 30.00-30.15, fine 30.15-30.70, coarse w/ blobby carbonate porphyroblasts in talcose matrix 30.70-31.30	NW00364 NW00365	27.60 28.00	28.00 28.82	0.40 0.82	NS NS	NS NS	107 345	36 170	
		28.82- 29.04 Black Shale bed w/ ~5% Po		29.00	29.01	0.01					0.55
		29.04- 29.21 Quartz +/-carbonate vein	NW00366	29.20	30.00	0.80	NS	NS	1200	173	
			NW00367	30.00 31.00	31.30 31.01	1.30 0.01	NS	NS	1020	180	0.95
31.30	37.45	MIDDLE PRODUCTIVE FORMATION									
		31.30- 32.50 Black Shale Breccia Very black and graphitic, contorted, Po ~10-15% forming matrix to black shale fragments along with 5-10% grey diagenetic carbonate									
		32.50- 35.86 Black Shale Fairly undisturbed, well bedded shales, up to 1.5 cm bands of diagenetic grey carbonate		33.00 35.00	33.01 35.01	0.01 0.01					1.88 2.50
		35.66- 35.86 Broken, rubbly core									
		35.86- 37.45 Black Shale Po Breccia As @ 31.30-32.50, not as contorted	NW00369	36.45 37.00	37.50 37.01	1.05 0.01	NS	NS	237	191	3.00
		37.30- 37.45 Very biotite-rich (~40%) hornfelsed zone									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
37.45	39.60	ULTRAMAFIC FLOW Uphole contact weakly brecciated and irregular, marked by hornfelsed zone, unit is greenish grey, fine to very fine-grained, weakly foliated, generally Tr Po except that described below:	NW00370	37.50	38.05	0.55	NS	NS	1460	743	
		38.05- 38.60 3-4% Po in veinlets and 5-7 mm clots with Tr-1% Cpy, also disseminated with Tr Cpy	NW00371	38.05	38.60	0.55	NS	NS	1820	920	
			NW00372	38.60	39.60	1.00	NS	NS	749	386	
				39.00	39.01	0.01					0.35
39.60	50.10	MIDDLE PRODUCTIVE FORMATION									
		39.60- 41.10 Mafic Flow Green, very fine-grained, carbonaceous (up to 5% carbonate blebs/amygdules), possible amygdaloidal flow top @ 40.72; non-sulphidic	NW00373	39.60	40.60	1.00	NS	NS	231	87	
				41.00	41.01	0.01					3.64
		41.10- 41.19 Fault gouge									
		41.19- 49.05 Black Shale Moderately graphitic and contorted (except for well-bedded section @ 48.41-48.55), Po heavily mineralized in irregular patchy veins and also as breccia matrix (10-15%), also 1-2% bands of grey diagenetic carbonate and white carbonate veinlets		43.00	43.01	0.01					1.70
				45.00	45.01	0.01					2.10
				47.00	47.01	0.01					3.11
				49.00	49.01	0.01					3.39
		49.05- 50.10 Sandstone Brownish white unit, uphole contact fairly sharp and marked by end of black shale, unit is weakly banded and foliated, with ~2-4% 1-3 mm stringers of Po									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
50.10	53.65	ULTRAMAFIC BODY Unit is pale green, very weakly foliated, uphole contact gradational									
		50.10- 50.30 Very fine-grained, aphantitic (chilled margin?)	NW00374	50.10	51.00	0.90	NS	NS	727	145	
		50.30- 53.65 Coarser, porphyritic texture with large, up to 5 mm diameter crystals (relict pyroxenes?) floating in an apple to dark green serpentine matrix, 1-2% clots of 3-4 mm Po, also smaller veinlets		51.00	51.01	0.01					0.76
			NW00375	51.00	52.00	1.00	NS	NS	1020	198	
			NW00376	52.00	53.00	1.00	NS	NS	1390	150	
				53.00	53.01	0.01					0.71
			NW00377	53.00	53.60	0.60	NS	NS	1270	99	
53.65	56.20	MIDDLE PRODUCTIVE FORMATION									
		53.65- 56.20 Mafic Flow Very fine-grained, pale to medium green, with some amygdaloidal patches (flow tops) especially @ 54.10-54.30 and 54.56-54.80, biotite-rich (~10-15%) from 54.80-55.85, and much more mottled appearance, them very fine-grained again 55.85-56.20		55.00	55.01	0.01					3.00
56.20	66.30	ULTRAMAFIC INTRUSION Uphole contact marked by colour and grain size change, unit is bluish grey, fine to medium grained, moderately foliated, carbonate porphyroblastic (to ~10% especially from 58.60-62.25), fine-grained 62.25-65.05 and 56.20-58.60 and grainy, diabasic texture from 65.25-66.30, overall nil to Tr Po	NW00352	56.20	57.00	0.80	NS	NS	1520	161	
				57.00	57.01	0.01					4.24
			NW00353	57.00	58.00	1.00	NS	NS	1510	188	
			NW00354	58.00	59.00	1.00	NS	NS	1620	140	
				59.00	59.01	0.01					37.50
			NW00355	59.00	60.00	1.00	NS	NS	1610	116	
			NW00356	60.00	61.00	1.00	NS	NS	1700	139	
				61.00	61.01	0.01					37.10
			NW00357	61.00	62.00	1.00	NS	NS	1550	104	
			NW00358	62.00	63.00	1.00	NS	NS	1450	160	
				63.00	63.01	0.01					10.80
			NW00359	63.00	64.00	1.00	NS	NS	1530	160	
			NW00360	64.00	65.00	1.00	NS	NS	1680	270	
				65.00	65.01	0.01					1.56
			NW00361	65.00	66.30	1.30	NS	NS	1840	715	

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
66.30	107.27	MIDDLE PRODUCTIVE FORMATION									
		66.30- 66.91 Mafic Tuff Grading downhole to grey-white sandstone, well-foliated, 1-3% vein Po	NW00362 NW00363	66.30 66.90	66.90 67.90	0.60 1.00	NS NS	NS NS	313 204	444 192	
		66.91- 67.90 Black Shale Poorly graphitic, moderately foliated, Po overall <1% except from 67.00-67.04 and 67.28-67.42- Po breccia zones (~80% Po) with very small <1 cm diameter black shale fragments		67.00	67.01	0.01					0.81
		67.90- 71.95 Mafic Tuff Well-foliated, very fine-grained, olive green tuff with ~2% fine 1-2 mm white carbonate veinlets parallel to foliation, nil sulphide		69.00 71.00	69.01 71.01	0.01 0.01					0.65 0.78
		71.95- 72.31 Black Shale Grading downhole into Po-rich (~75%) black shale breccia									
		72.31- 75.17 Mafic Tuff As @ 67.90-71.95, sandstone base to unit @ 74.93-75.17		73.00 75.00	73.01 75.01	0.01 0.01					0.49 0.24
		75.17- 75.66 Black Shale Contorted, weakly graphitic, Po 10-15% except in large clot from 75.25-75.28									
		75.66- 79.43 Mafic Tuff with Black Shale Laminations (~15%) and Sandstone base		77.00 79.00	77.01 79.01	0.01 0.01					0.44 0.52
		79.15- 79.44 Bedding indicates tops uphole									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		79.43- 84.11 Black Shale and Sandstone Weakly graphitic, uphole contact sharp and marked by appearance of black shale, black shale ~60%, white sandstone ~40%, Po mainly in black shale zones where it is ~10%, well foliated		81.00 83.00	81.01 83.01	0.01 0.01					0.18 0.29
		84.11- 88.90 Mainly Mafic Tuff Brownish green unit, well foliated, white carbonate veinlets up to 5%, more biotite-rich (to 10%) from 86.40 downhole		85.00	85.01	0.01					0.54
		85.17- 85.28 Black Shale bed, ~5% disseminated/patchy Po		87.00	87.01	0.01					0.54
		88.90- 90.00 Mainly Black Shale Highly contorted, uphole contact sharp, well foliated, Po ~10% in ragged veinlets		89.00	89.01	0.01					3.98
		90.00- 92.23 Mafic Tuff As @ 84.11-88.90; black shale bands @ 92.18-92.20 and 92.27-92.31		91.00	91.01	0.01					0.37
		92.23- 94.23 Black Shale As @ 88.90-90.00		93.00	93.01	0.01					0.31
		94.23- 95.41 Mafic Tuff-rich Sandstone Fine-grained, poorly foliated, black shale laminae to 94.62, then sandy material, Po ~3% to 94.62, then Tr Po		95.00	95.01	0.01					0.42
		95.41- 107.27 Mainly Black Shale Moderately graphitic, Po 5-15% in irregular patchy stringers, more sandy beds from 100.18 downhole (~40% ss, 60%		97.00 99.00 101.00 103.00 105.00	97.01 99.01 101.01 103.01 105.01	0.01 0.01 0.01 0.01 0.01					1.65 0.54 1.42 2.10 2.23

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		bsh), sandy, mafic-rich beds up to 50 cm thick (e.g. 104.78-105.30), downhole contact marked by gradual disappearance of black shale		107.00	107.01	0.01					0.73
107.27	136.78	GABBRO-DIABASE Uphole contact gradational, unit is whitish green, weakly foliated, non-sulphidic									
		107.27- 108.90 Very fine-grained, mafic flow appearance, weakly foliated (chilled? but no hornfelsing seen in overlying mafic tuff and black shale)									
		108.90- 120.00 Medium- to coarse-grained, spotty "diabasic" texture, homogeneous		109.00 111.00 113.00 115.00 117.00 119.00	109.01 111.01 113.01 115.01 117.01 119.01	0.01 0.01 0.01 0.01 0.01 0.01					0.33 0.42 0.48 0.43 0.44 0.41
		120.00- 126.60 Finer-grained, diabasic texture		121.00 123.00 125.00	121.01 123.01 125.01	0.01 0.01 0.01					0.38 0.34 0.42
		126.60- 134.00 Porphyritic, with ~3-4 mm amphibole crystals (~5-10%) floating in epidotized green plagioclase matrix		127.00 129.00 131.00 133.00	127.01 129.01 131.01 133.01	0.01 0.01 0.01 0.01					0.62 0.35 0.42 0.40
		134.00- 136.78 Finer-grained, well foliated, pale green, with ~5% carbonate and quartz-carbonate veining		135.00	135.01	0.01					0.51
136.78	166.95	MIDDLE PRODUCTIVE FORMATION									
		136.78- 137.28 Black Shale Moderately graphitic, uphole contact fairly sharp, contorted, faulted, 3% stringer Po		137.00	137.01	0.01					3.70

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		137.28- 140.50 Mafic Tuff Well foliated, wispy, uphole contact sharp, white carbonate and milky quartz veinlets 5%, 1 mm-2 cm		139.00	139.01	0.01					0.28
		140.50- 146.81 Black Shale Uphole contact gradational, moderately graphitic, moderately to highly contorted (wavy, folded laminations), Po ~5% in irregular veins and patches		141.00 143.00 145.00	141.01 143.01 145.01	0.01 0.01 0.01					1.98 1.48 0.89
		146.12- 146.35 White sandstone bed, 3-5% stringer Po									
		146.81- 149.71 Mainly white Sandstone ~3-5% veinlet Po (3-5 mm veins), poorly foliated, fine-grained; mafic tuff bed @ 148.35-148.81		147.00 149.00	147.01 149.01	0.01 0.01					1.19 0.53
		149.71- 151.30 Black Shale As @ 140.50-146.81		151.00	151.01	0.01					2.55
		151.30- 155.78 Black Shale/Mafic Tuff Interbanded zone, moderately foliated, well laminated, ~1% veinlet Po		153.00 155.00	153.01 155.01	0.01 0.01					1.33 0.35
		155.78- 159.40 Black Shale As @ 140.50-146.81, highly sheared laminae		157.00 159.00	157.01 159.01	0.01 0.01					0.35 1.05
		159.40- 159.77 Milky quartz vein with patchy Po at both contacts and mafic fragments @ 159.64									
		159.77- 166.95 Mainly Mafic Tuff Very fine-grained, medium green, some black shale beds/laminae, especially @		161.00 163.00 165.00	161.01 163.01 165.01	0.01 0.01 0.01					1.43 0.34 0.79

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		160.21-160.40 & 165.98-166.21 & 166.45-166.51, moderately to weakly foliated, 1-2% Po in 1-2 mm stringers									
166.95	180.80	GABBRO-DIABASE Pale to medium green, homogeneous, medium grained, green chloritized amphibole floating in plagioclase, to EOH except at top of unit (166.95-168.10) where it is fine-grained, well foliated, ~10% white carbonate bands up to 5 mm, epidote veinlets up to 5 mm thick from 170.00 downhole		167.00 169.00 171.00 173.00 175.00 177.00 179.00	167.01 169.01 171.01 173.01 175.01 177.01 179.01	0.01 0.01 0.01 0.01 0.01 0.01 0.01					1.40 0.41 0.52 0.37 0.46 0.73 0.37
180.80	180.80	END OF HOLE									

HOLE NUMBER: PS-92-48

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NW00171	27.62	28.81	1.19	36.3	5.67	9.53	13.4	<.01	.06	13.1	.22	2.08	.17	.17	14.3	95.0	8	98	<2	105	16	173
NW00172	29.20	31.30	2.10	43.0	4.19	4.39	19.8	<.01	<.01	14.7	.18	1.36	.13	.29	8.05	96.1	6	42	<2	77	12	116
NW00173	37.60	39.60	2.00	35.4	5.88	10.1	16.6	<.01	.04	15.8	.23	1.91	.21	.15	11.6	97.9	5	106	<2	118	16	138
NW00174	50.10	53.61	3.51	45.9	4.26	10.2	17.9	<.01	<.01	15.3	.17	1.19	.14	.19	3.65	98.9	2	35	<2	87	13	130
NW00167	57.00	57.50	0.50																			
NW00168	57.50	58.00	0.50	35.1	1.33	.28	35.3	<.01	.05	11.8	.21	.191	.02	NS	11.8	97.8	4	37	<2	66	12	107
NW00169	60.00	60.50	0.50	34.3	3.06	2.16	25.0	<.01	<.01	16.4	.23	1.07	.10	.34	14.1	96.8	4	5	<2	20	6	88
NW00170	63.00	63.50	0.50	36.8	3.00	6.44	21.9	<.01	<.01	14.5	.20	1.05	.10	.28	11.6	95.9	2	79	<2	65	11	118

HOLE NUMBER: PS-92-48

RESULTATS DE GEOCHIMIE

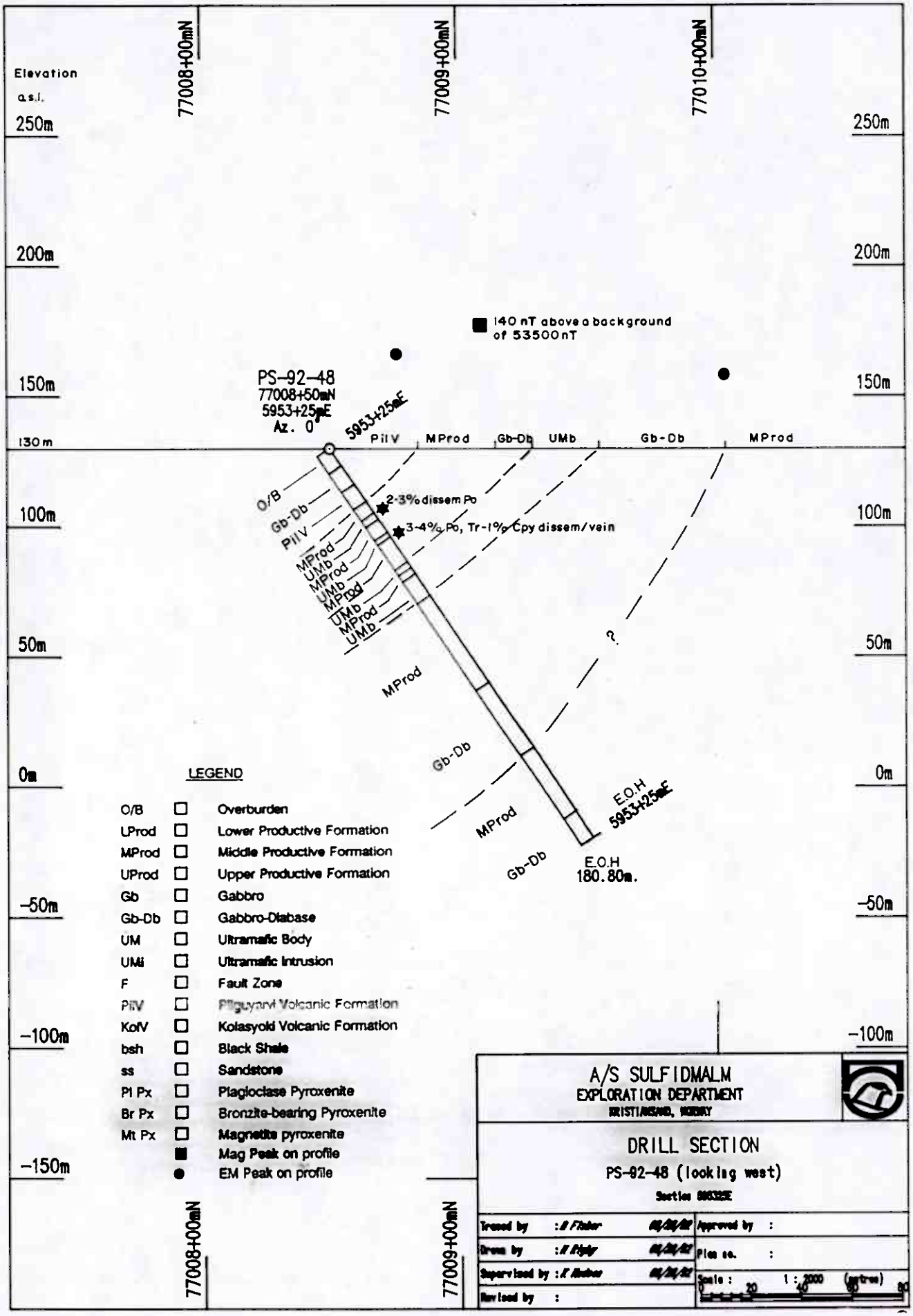
HOLE NUMBER: PS-92-48

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00171	27.62	28.81	1.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00172	29.20	31.30	2.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00173	37.60	39.60	2.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00174	50.10	53.61	3.51	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00167	57.00	57.50	0.50											
NW00168	57.50	58.00	0.50	NS	11900	NS	NS	NS	NS	NS	NS	NS	NS	
NW00169	60.00	60.50	0.50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00170	63.00	63.50	0.50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

HOLE NUMBER: PS-92-48

RESULTATS DE GEOCHIMIE


77008+00mN
77009+00mN
77010+00mN
Elevation
a.s.l.
250m
200m
150m
130m
100m
50m
0m
-50m
-100m
-150m
140 nT above a background of 53500nT
PS-92-48
77008+50mN
5953+25mE
Az. 0
5953+25mE
PilV
MProd
Gb-Db
UMb
Gb-Db
MProd
O/B
Gb-Db
PilV
MProd
UMb
MProd
UMb
MProd
UMb
MProd
UMb
2-3% dissem Po
3-4% Po, Tr-1% Cpy dissem/vein
?
MProd
Gb-Db
MProd
Gb-Db
E.O.H
5953+25mE
E.O.H
180.80m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMi Ultramafic Intrusion
F Fault Zone
PilV Pilguyarvi Volcanic Formation
KofV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY
DRILL SECTION
PS-92-48 (looking west)
Section 88532E
Traced by
Drawn by
Supervised by
Revised by
Approved by
Plan no.
Scale : 1 : 2000 (metres)
0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-49 Zone # : Contractor : TERRA BOR Date started : 07/27/1992
Township: FINNMARK Date completed: 07/31/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7701400.00 N Azimuth: 0° 0' 0"
Station: 0+ 0 Departure: 594600.00 E Dip : -80° 0' 0"
Reference frame : Elevation: 221.00 Length : 275.30

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-79°18' 0"	° ' "
60.00 M	-79°48' 0"	° ' "
120.00 M	-80°42' 0"	° ' "
160.00 M	-80°18' 0"	° ' "
250.00 M	-80°30' 0"	° ' "

Remarks :

Water flow :
Cemented :

Logged by : K. HUDSON-EDWARDS Date logged: 08/04/1992 Hole # : PS-92-49

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
0.00	1.50	OVERBURDEN										
1.50	9.14	LOWER PRODUCTIVE FORMATION										
		1.50- 4.36 Sandstone Pale green, weathered (rusty core), poorly foliated but becoming more foliated downhole, 1-2% flecks/wisps of Po		3.00	3.01	0.01						0.26
		4.36- 5.42 Quartz-rich (~80% milky quartz) zone with chloritized sandstone fragments		5.00	5.01	0.01						0.02
		5.42- 9.00 Mafic Tuff, grading into black shale Poorly graphitic, quite broken/weathered core, moderately foliated, Tr flecks Po		7.00	7.01	0.01						0.93
		9.00- 9.14 Bull to Smokey Quartz Vein with black shale fragments and Tr-1% flecks Po		9.00	9.01	0.01						0.02
9.14	14.42	ULTRAMAFIC BODY Uphole contact sharp and marked by quartz vein, unit is light green at top, grading downwards into medium green serpentinite, unit is very fine-grained, well foliated, non-crystalline except for a few (2-3%), <1 mm carbonate porphyroblasts @ 12.10-12.30; non-sulphidic except 13.60-14.42 ~2-3% wispy (flattened along foliation) Po										
		10.57- 11.00 Broken, rusty, rubbly core										
				11.00	11.01	0.01						0.02
			NW00378	12.45	13.45	1.00	NS		NS	732	5	
				13.00	13.01	0.01						0.26
			NW00379	13.45	14.42	0.97	NS		NS	396	39	
		13.56- 13.58 White carbonate vein rimmed by Po										

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
		13.82- 13.90 Milky quartz vein with one 3 mm Po vein										
14.42	98.76	LOWER PRODUCTIVE FORMATION										
		14.42- 23.79 Black Shale Uphole contact gradational and marked by appearance of black shale; unit is dark grey with white specks (carbonate), fine-grained										
		14.42- 20.40 Extremely contorted, kink folded, "messy" looking with up to 40% white carbonate, Po ~3% in ragged, irregular wisps (contorted from overlying UM?)		15.00 17.00 19.00	15.01 17.01 19.01	0.01 0.01 0.01						0.63 0.85 1.10
		20.40- 23.79 Much less contorted, but asymmetrical fold from 22.40-22.65, and less white carbonate (only 5-10%), Po ~1-2% as foliation wisps		21.00 23.00	21.01 23.01	0.01 0.01						6.10 5.20
		23.79- 32.80 Sandstone Uphole contact quite sharp but very irregular and marked by disappearance of black shale, unit is fine-grained, grainy, moderately foliated, poorly to moderately bedded (well bedded section from 29.00-29.60), Po as fine <1 mm threads, minor (to 1%) biotite threads, up to 5 cm white carbonate-Po veinlets (~3% overall) especially from 31.26-31.55 and 32.27 to 32.58 (w/ quartz), from 32.58-32.80 gradual incursion of greyish shaley material		25.00 27.00 29.00 31.00	25.01 27.01 29.01 31.01	0.01 0.01 0.01 0.01						0.54 0.30 0.72 0.55
		32.80- 66.57 Sandy Black Shale with minor Sandstone beds		33.00 35.00 37.00	33.01 35.01 37.01	0.01 0.01 0.01						1.10 0.31 1.82

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		Unit is light to dark grey, moderately bedded, moderately foliated, black shale ~75%, green sandy material 25%, fair amount of aymmetrical folding and contortion, Po overall 1-5% as irregular veins up to 3 mm thick		39.00	39.01	0.01					1.13
				41.00	41.01	0.01					0.80
				43.00	43.01	0.01					1.92
				45.00	45.01	0.01					0.58
		46.00- 46.65 Po-rich section (~5%) with up to 3mm Py enveloped in Po									
				47.00	47.01	0.01					0.69
				49.00	49.01	0.01					0.55
				51.00	51.01	0.01					0.40
				53.00	53.01	0.01					0.35
				55.00	55.01	0.01					0.30
				57.00	57.01	0.01					0.40
				59.00	59.01	0.01					0.20
				61.00	61.01	0.01					0.25
				63.00	63.01	0.01					0.26
				65.00	65.01	0.01					1.02
		66.57- 68.34 Mafic Tuff Uphole contact sharp and bedded, unit is light green, white carbonate-rich (to 35%), 3-4% disseminated Po especially in carbonate-rich sections		67.00	67.01	0.01					0.50
		68.34- 71.05 Black Shale/Sandstone Uphole contact very gradational; unit as @ 32.80-66.57 but more sandstone (up to 40-50%), rest black shale, Po overall ~5% wispy veins		69.00	69.01	0.01					0.73
		70.00- 70.60 Well asymmetrically folded section									
				71.00	71.01	0.01					0.75
		71.05- 71.25 Sandstone Pale greenish white, non-bedded, Po ~3% in wisps up to few mm long, several up to 2 cm thick smokey grey quartz fragments									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		(veins?) in lower part of unit									
		71.25- 78.08 Sandy Black Shale As @ 32.80-66.57, black shale 75-80%, sandstone 25-30%, quite contorted, Po ~3-5% in blotchy, clotty, irregular veins and patches up to 1 cm thick, smokey quartz-rich (60-80%) zones @ 75.36-75.64 & 77.02-77.90		73.00 75.00 77.00	73.01 75.01 77.01	0.01 0.01 0.01					0.55 0.30 0.47
		77.97- 77.97 1 cm Po-Py vein									
		78.08- 78.32 Sandstone As @ 71.05-71.25 but with no smoky quartz									
		78.32- 83.73 Sandy Black Shale As @ 71.25-78.08, well bedded and moderately foliated, not overly contorted		79.00 81.00 83.00	79.01 81.01 83.01	0.01 0.01 0.01					0.35 3.55 0.57
		83.73- 84.11 Sandstone Fine-grained, medium green, uphole contact sharp, incursion of more white carbonate downhole, 2-3 cm smokey quartz section, Po Tr-1% disseminated downhole									
		84.11- 90.65 Mainly Sandy Black Shale As @ 71.25-78.08, overall black shale 60-65%, Po overall 5% as webbed veins and minor Tr Py associated with Po, sandstone beds @ 84.52-84.61, 86.32-86.80, 89.84-90.00		85.00 87.00 89.00	85.01 87.01 89.01	0.01 0.01 0.01					0.65 2.81 0.85
		90.65- 91.41 Fine-grained Sandstone Very fine-grained, pale to medium green, moderately foliated especially near downhole contact, Tr Po		91.00	91.01	0.01					0.45

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		91.41- 91.75 Sandy Black Shale Sandy material ~50-60%, unit is pale grey with sheared laminae of darker black shale, ~3% Po in wisps and veins up to 5 mm, up and downhole contacts sharp									
		91.75- 93.20 Fine-grained Mafic-Rich Sandstone As @ 90.65-91.41		93.00	93.01	0.01					0.26
		93.20- 95.70 Black Shale Up and downhole contacts more gradational, marked by appearance and disappearance of black shale laminae, unit is medium to dark grey, contorted and sheared (laminae sheared over each other), Po ~5-7% in blotchy veins		95.00	95.01	0.01					0.36
		95.36- 95.51 Smokey Quartz									
		95.70- 98.76 Mixed sandstone/black Shale Cyclical units with bands of black shale (30%) (@ 96.56-96.71 & 96.90-97.38) and green mafic-rich sandstone (70%), unit is fine-grained, Po overall 1-2% as fine parallel to foliation threads, white carbonate wisps, veins and blobs ~5%		97.00	97.01	0.01					0.10
98.76	107.99	GABBRO-DIABASE Fine-grained and well-foliated in upper 1cm and from 106.80-107.90, remainder is medium green, poorly foliated, medium-grained, melanocratic, w/ plagioclase interstitial to green amphibole (sub-ophitic to ophitic)		99.00 101.00 103.00 105.00 107.00	99.01 101.01 103.01 105.01 107.01	0.01 0.01 0.01 0.01 0.01					0.26 0.35 0.42 0.38 0.36
107.99	110.29	LOWER PRODUCTIVE FORMATION									
		107.99- 110.29 Banded Black Shale/Sandstone Unit is black to pale green, interbanded		109.00	109.01	0.01					0.45

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		50% black shale (w/ 1-2% fine veins of Po) and 50% sandstone, minor ~5% biotite from 108.10-109.80 (hornfelsing from above Gb-Db?)									
110.29	275.30	KOLASYOKI VOLCANIC FORMATION Uphole contact sharp and marked by end of black shale, unit is medium green, fine to medium grained (in Gabbro-Diabase textured zones), minor quartz, quartz-carbonate and carbonate veining (~3-5% overall) ranging from 1 mm up to 20 cm, NB in the whole unit it is quite difficult to draw the line between Gabbro-Diabase and mafic flow, ie., the gabbro-diabase may be (as previously suspected) only the coarse inner part of the flows; unit is mainly undivided flow/Gb-Db and minor tuff at 132.22-133.30 & 178.38-180.70		111.00	111.01	0.01					0.38
				113.00	113.01	0.01					0.31
				115.00	115.01	0.01					0.36
				117.00	117.01	0.01					0.36
				119.00	119.01	0.01					0.50
				121.00	121.01	0.01					0.46
				123.00	123.01	0.01					0.42
				125.00	125.01	0.01					0.35
		126.00- 129.10 Biotite-bearing Gabbro-Diabase (3-15% biotite)		127.00	127.01	0.01					0.75
				129.00	129.01	0.01					0.40
				131.00	131.01	0.01					0.44
				133.00	133.01	0.01					0.70
				135.00	135.01	0.01					0.43
				137.00	137.01	0.01					0.41
				139.00	139.01	0.01					0.44
				141.00	141.01	0.01					0.45
				143.00	143.01	0.01					0.40
				145.00	145.01	0.01					0.48
				147.00	147.01	0.01					0.55
				149.00	149.01	0.01					0.30
				151.00	151.01	0.01					0.50
				153.00	153.01	0.01					0.52
				155.00	155.01	0.01					0.43
				157.00	157.01	0.01					0.53
				159.00	159.01	0.01					0.43
				161.00	161.01	0.01					0.30
				163.00	163.01	0.01					0.62
				165.00	165.01	0.01					0.60
				167.00	167.01	0.01					0.42
				169.00	169.01	0.01					0.43
				171.00	171.01	0.01					0.43
				173.00	173.01	0.01					0.60
				175.00	175.01	0.01					0.40

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
				177.00	177.01	0.01					0.40
				179.00	179.01	0.01					0.47
				181.00	181.01	0.01					0.58
				183.00	183.01	0.01					0.45
				185.00	185.01	0.01					0.75
				187.00	187.01	0.01					0.59
				189.00	189.01	0.01					0.35
				191.00	191.01	0.01					0.42
				193.00	193.01	0.01					0.47
				195.00	195.01	0.01					0.61
				197.00	197.01	0.01					0.46
				199.00	199.01	0.01					0.45
				201.00	201.01	0.01					0.57
				203.00	203.01	0.01					0.44
				205.00	205.01	0.01					0.61
				207.00	207.01	0.01					0.51
				209.00	209.01	0.01					0.75
				211.00	211.01	0.01					0.53
				213.00	213.01	0.01					1.10
				215.00	215.01	0.01					0.57
				217.00	217.01	0.01					0.42
				219.00	219.01	0.01					0.55
				221.00	221.01	0.01					0.46
				223.00	223.01	0.01					0.59
				225.00	225.01	0.01					0.36
				227.00	227.01	0.01					0.36
				229.00	229.01	0.01					0.53
				231.00	231.01	0.01					0.46
				233.00	233.01	0.01					0.48
				235.00	235.01	0.01					0.35
				237.00	237.01	0.01					0.42
				239.00	239.01	0.01					0.45
				241.00	241.01	0.01					1.00
				243.00	243.01	0.01					0.43
				245.00	245.01	0.01					0.56
				247.00	247.01	0.01					0.41
				249.00	249.01	0.01					0.46
				251.00	251.01	0.01					0.55
				253.00	253.01	0.01					0.54
				255.00	255.01	0.01					0.75
				257.00	257.01	0.01					0.47
				259.00	259.01	0.01					0.42
				261.00	261.01	0.01					0.55
				263.00	263.01	0.01					0.45

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
				265.00	265.01	0.01					0.45
				267.00	267.01	0.01					1.00
				269.00	269.01	0.01					0.55
				271.00	271.01	0.01					0.40
				273.00	273.01	0.01					0.47
				275.00	275.01	0.01					0.50
275.30	275.30	END OF HOLE									

HOLE NUMBER: PS-92-49

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NW00175	9.14	14.42	5.28	39.8	11.7	3.62	20.9	<.01	<.01	12.4	.21	.237	.04	.62	10.8	100.3	6	14	<2	28	6	88

HOLE NUMBER: PS-92-49

RESULTATS DE GEOCHIMIE

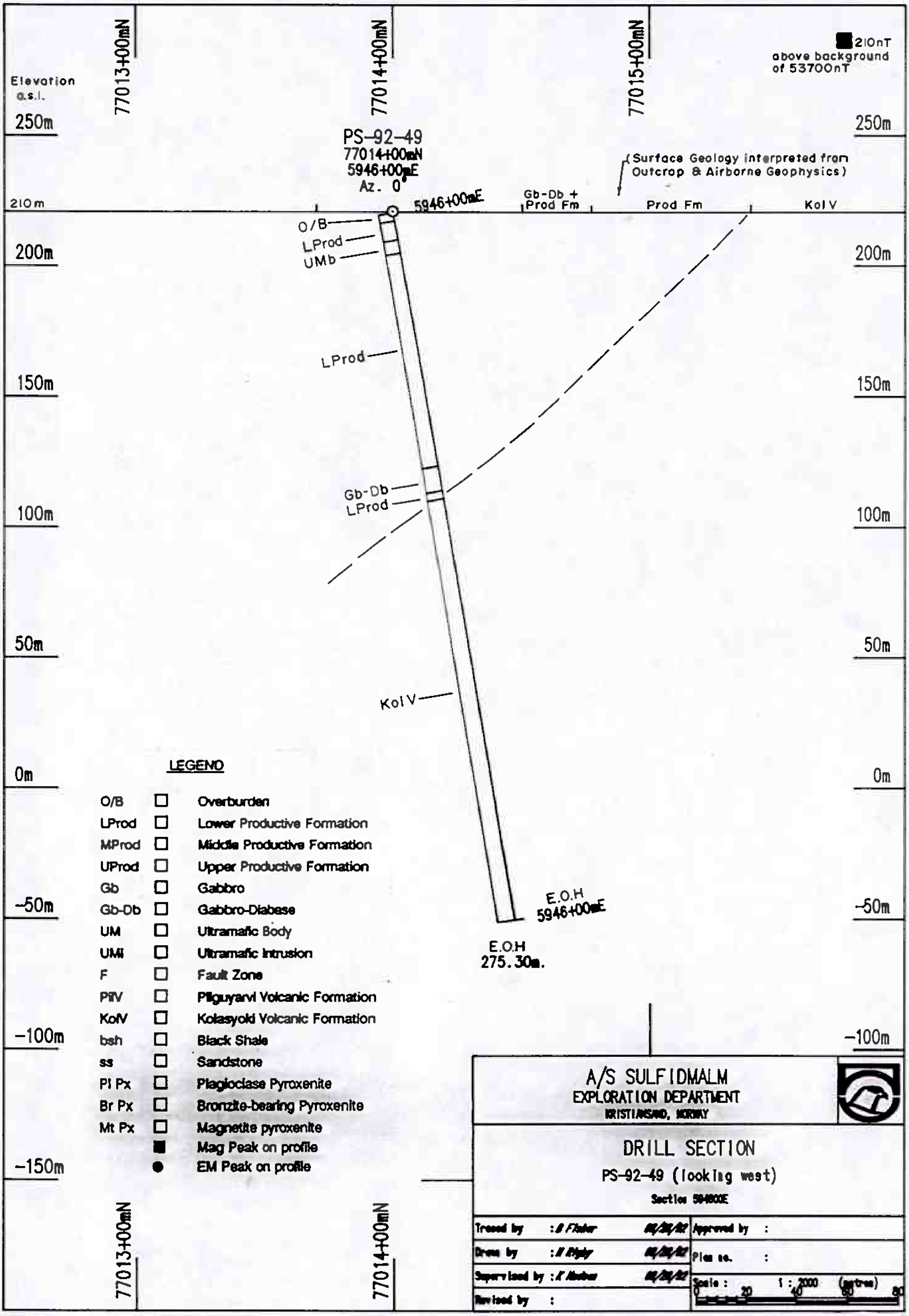
HOLE NUMBER: PS-92-49

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00175	9.14	14.42	5.28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

HOLE NUMBER: PS-92-49

RESULTATS DE GEOCHIMIE



77013+00mN
77014+00mN
77015+00mN
210nT above background of 53700nT
Elevation a.s.l.
250m
200m
150m
100m
50m
0m
-50m
-100m
-150m
210m
PS-92-49
77014+00mN
5946+00mE
Az. 0°
5946+00mE
Gb-Db + Prod Fm
Prod Fm
Kol V
(Surface Geology interpreted from Outcrop & Airborne Geophysics)
O/B
LProd
UMb
LProd
Gb-Db
LProd
Kol V
E.O.H
5946+00mE
E.O.H
275.30m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMI Ultramafic Intrusion
F Fault Zone
PilV Pilguyarvi Volcanic Formation
KolV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY
DRILL SECTION
PS-92-49 (looking west)
Traced by
Drawn by
Supervised by
Revised by
Approved by
Plan no.
Scale : 1 : 2000 (metres)
0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-50 Zone # : Contractor : TERRA BOR Date started : 08/06/1992
Township: FINNMARK Date completed: 08/09/1992
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7702031.50 N Azimuth: 0° 0' 0"
Station: 0+ 0 Departure: 596953.80 E Dip : -80° 0' 0"
Reference frame : Elevation: 130.00 Length : 159.80

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-80°36' 0"	° ' "
60.00 M	-80°42' 0"	° ' "
120.00 M	-81°24' 0"	° ' "
150.00 M	-81°30' 0"	° ' "

Remarks :

Water flow : no
Cemented : no

Logged by : K. HUDSON-EDWARDS Date logged: 08/20/1992 Hole # : PS-92-50

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
0.00	7.00	OVERBURDEN										
7.00	37.12	GABBRO		7.00	7.01	0.01						0.52
		Unit is medium dark green with white specks to	NW00425	7.00	8.00	1.00	NS		NS	66	355	
		coarse-grained, fairly homogeneous, generally		9.00	9.01	0.01						0.43
		subophitic to intergranular (some plag-rich		11.00	11.01	0.01						0.49
		patches and bands - 70-80% plag, e.g. @ 7.50),	NW00426	12.00	13.00	1.00	NS		NS	80	330	
		mineralogy: plagioclase 45-55%, dark green		13.00	13.01	0.01						0.37
		rectangular amphibole 45-55%, ilmenite with		15.00	15.01	0.01						0.47
		leucoxene rims 1-2%, grain size of amphibole		17.00	17.01	0.01						0.41
		crystals - up to 3-4 mm long, 7.00-26.50 Tr	NW00427	17.00	18.00	1.00	NS		NS	66	346	
		specks Cpy and Po, @ 26.50-37.12 Nil Cpy		19.00	19.01	0.01						0.48
			NW00390	20.00	21.00	1.00	NS		NS	65	325	
				21.00	21.01	0.01						0.50
			NW00429	22.00	23.00	1.00	NS		NS	67	328	
				23.00	23.01	0.01						0.50
				25.00	25.01	0.01						0.46
			NW00385	25.00	26.00	1.00	NS		NS	62	247	
				27.00	27.01	0.01						0.42
			NW00386	27.00	28.00	1.00	NS		NS	67	273	
			NW00387	28.00	29.00	1.00	NS		NS	64	273	
				29.00	29.01	0.01						0.43
				31.00	31.01	0.01						0.50
			NW00389	31.00	32.00	1.00	NS		NS	99	387	
			NW00430	32.00	33.00	1.00	NS		NS	13400	589	
				33.00	33.01	0.01						0.49
				35.00	35.01	0.01						0.37
				37.00	37.01	0.01						0.49
			NW00431	37.00	38.00	1.00	NS		NS	189	845	
37.12	50.20	PYROXENITE		39.00	39.01	0.01						0.67
		Finer grained than above gabbro (most of unit		41.00	41.01	0.01						0.73
		fine-medium grained, dark green, homogeneous,										
		mineralogy: dark green amphibole (after pyroxene)										
		87-90%, plagioclase 3%, dark grey to steely black										
		rounded to needle-like mineral (ilmenite?) 7-10%;										
		sulphides generally Tr to 1% disseminated										
		speckled Cpy										
		41.29- 41.36										
		White carbonate veins with steely brown										
		elongate minerals (probably ilmenite)										
			NW00432	42.00	43.00	1.00	NS		NS	279	179	
				43.00	43.01	0.01						0.80

Standard

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
				45.00	45.01	0.01						0.80
				47.00	47.01	0.01						0.90
			NW00433	47.00	48.00	1.00	NS		NS	366	141	
		47.95- 48.09 White carbonate vein with steely brown elongate mineral (probably ilmenite)										
				49.00	49.01	0.01						0.65
50.20	66.61	PLAGIOCLASE PYROXENITE		51.00	51.01	0.01						0.40
		Unit is dark green, medium grained, homogeneous,	NW00434	52.00	53.00	1.00	NS		NS	246	118	
		mainly amphibole (after pyroxene), minor ~1%		53.00	53.01	0.01						0.42
		overall white carbonate veining (e.g. @ 62.20 &		55.00	55.01	0.01						0.40
		62.65), mineralogy plagioclase ~5%, dark green		57.00	57.01	0.01						0.22
		amphibole 95%, leucoxene/ilmenite <1% fine 1-2 mm	NW00435	57.00	58.00	1.00	NS		NS	327	301	
		crystals, 1% disseminated Cpy @ 60.8-61.2,	NW00391	58.00	59.00	1.00	NS		NS	301	266	
		65.00-66.00		59.00	59.01	0.01						0.34
			NW00392	60.50	61.50	1.00	NS		NS	384	722	
				61.00	61.01	0.01						0.33
			NW00436	62.00	63.00	1.00	NS		NS	342	181	
				63.00	63.01	0.01						0.37
				65.00	65.01	0.01						0.40
			NW00393	65.00	66.00	1.00	NS		NS	419	483	
66.61	69.00	BRONZITE-BEARING PYROXENITE		67.00	67.01	0.01						0.36
		Unit is brownish green, medium grained,	NW00437	67.00	68.00	1.00	NS		NS	474	456	
		homogeneous, except @ 67.33 to 67.38 where there										
		is a shear zone, uphole contact gradational from										
		plagioclase pyroxenite and marked by onset of										
		'bronzite', mineralogy plagioclase up to 10%,										
		bronze brown pyroxene (?) 10-15%, dark green										
		amphibole (after pyroxene) 80%										
69.00	71.64	ULTRAMAFIC/PERIDOTITE		69.00	69.01	0.01						4.52
		Unit is dark green to bluish green, fine to	NW00394	69.00	70.00	1.00	NS		NS	1080	261	
		medium grained, highly serpentinized with 3-4% Mt	NW00395	70.00	70.80	0.80	NS		NS	1330	139	
		specks (black, rounded) in serpentinite matrix,	NW00396	70.80	71.80	1.00	NS		NS	1220	117	
		Po overall Tr-1%		71.00	71.01	0.01						1.05
71.64	81.15	LOWER PRODUCTIVE FORMATION										
		71.64- 73.60	NW00397	71.80	72.80	1.00	NS		NS	87	128	
		Black Shale	NW00398	72.80	73.80	1.00	NS		NS	78	146	
		Near serpentinite unit is bleached and		73.00	73.01	0.01						2.90

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		brownish over 20 cm, then is black, graphitic, finely laminated, well foliated with 1% Po in very fine sub-parallel foliation threads and Tr Cpy occurring w/ Po									
		73.60- 77.03 Mafic Tuff Unit is light green, well foliated, with ~2% quartz-carbonate veins (generally <1 mm to 5 mm), banded (some plagioclase-rich bands e.g. @ 76.70), nil sulphide		75.00 77.00	75.01 77.01	0.01 0.01					0.75 2.75
		77.03- 81.15 Black Shale Mixed turbiditic sediments, bsh ~75%, white sandstone ~10%, biotite-bearing siltstone ~15%, bedded, finely laminated especially in black shale-rich sections, moderately to weakly foliated Po 1% mainly as fine foliation threads and one 3 mm veinlet @ 77.71		79.00 81.00	79.01 81.01	0.01 0.01					5.40 1.70
81.15	116.15	GABBRO-DIABASE Unit is light green, leucocratic, fine to medium grained, moderately foliated, w/ minor milky quartz veining, near uphole contact unit is very fine-grained over 85 cm, then fine-grained to 83.62, then onset of true medium-grained gabbro-diabase texture, nil sulphide overall		83.00 85.00 87.00 89.00 91.00 93.00 95.00 97.00 99.00 101.00 103.00 105.00 107.00 109.00 111.00 113.00 115.00	83.01 85.01 87.01 89.01 91.01 93.01 95.01 97.01 99.01 101.01 103.01 105.01 107.01 109.01 111.01 113.01 115.01	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01					1.15 0.40 0.20 0.42 0.50 0.52 0.38 0.34 0.47 0.26 0.42 0.37 0.32 0.55 0.89 0.40 0.36
		115.95- 115.95 Rounded 2.5 cm diameter black shale									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		xenolith									
116.15	116.71	LOWER PRODUCTIVE FORMATION									
		116.15- 116.71 Black Shale Contorted/faulted black shale with interbanded mafic tuff material, unit is fine-grained, black to green-black, near uphole contact bedding is parallel to CA, @ downhole contact, is @ ~65 degrees to CA, fault zone @ 116.45 where downhole sediments are faulted over uphole seds and laminae are @ different angles to each other, minor ~1% Py in vein along fault zone									
116.71	158.80	KOLASYOKI VOLCANIC FORMATION Unit is composed of mafic flow and tuff, generally fine-grained, medium green, moderately foliated									
		116.71- 122.33 Mafic Tuff Unit is pale whitish green, very white-carbonate-rich (up to 30%), highly sheared, banded, w/ nil sulphide and 2-3% smokey grey-white quartz veins		117.00 119.00 121.00	117.01 119.01 121.01	0.01 0.01 0.01					1.40 0.30 0.85
		122.33- 125.21 Mafic Flow		123.00 125.00	123.01 125.01	0.01 0.01					0.44 0.28
		125.21- 125.84 Mafic Tuff									
		125.84- 128.10 Mafic Flow		127.00	127.01	0.01					0.85
		128.10- 130.86 Mafic Tuff Well banded		129.00	129.01	0.01					1.20
		130.86- 143.82 Mafic Flow		131.00 133.00	131.01 133.01	0.01 0.01					0.54 0.68

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		Very fine-grained		135.00	135.01	0.01					0.65
				137.00	137.01	0.01					0.44
				139.00	139.01	0.01					0.80
				141.00	141.01	0.01					0.55
				143.00	143.01	0.01					0.44
		143.82- 146.10		145.00	145.01	0.01					0.62
		Mafic Tuff									
		146.10- 148.90		147.00	147.01	0.01					0.65
		Mafic Flow									
		148.90- 150.70		149.00	149.01	0.01					0.15
		Milky quartz-rich zone, ~70% quartz, 30% chloritized mafic flow fragments									
		150.70- 159.80		151.00	151.01	0.01					0.32
		Mafic Flow		153.00	153.01	0.01					0.61
				155.00	155.01	0.01					0.40
				157.00	157.01	0.01					0.49
				159.00	159.01	0.01					0.45
159.80	159.80	END OF HOLE									

HOLE NUMBER: PS-92-50

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NW00177	8.00	8.40	0.40	43.4	11.2	10.2	5.39	2.64	.48	16.8	.18	5.83	.21	<.01	1.75	98.1	16	660	4	186	23	629
NW00178	18.00	18.40	0.40	44.0	11.2	10.1	5.68	2.56	.35	16.7	.18	6.41	.22	<.01	1.00	98.4	7	554	<2	179	26	471
NW00179	29.00	29.40	0.40	44.1	12.2	10.5	5.19	2.91	.33	15.5	.17	6.59	.20	<.01	1.10	98.8	6	679	<2	169	26	490
NW00180	38.00	38.25	0.25	37.5	5.61	11.1	7.59	1.22	.20	22.1	.22	9.99	.19	<.01	2.65	98.4	10	292	<2	164	24	538
NW00181	48.15	48.55	0.40	41.4	5.77	11.9	9.03	.88	.44	22.8	.20	5.09	.19	.03	2.25	100.0	17	210	<2	140	16	409
NW00182	59.00	59.40	0.40	47.2	5.30	14.1	11.7	1.12	.19	14.0	.18	2.43	.19	.09	3.10	99.6	5	284	6	142	18	176
NW00183	68.00	68.40	0.40	43.7	4.95	14.0	12.9	.22	1.92	13.6	.17	2.35	.18	.24	4.35	98.6	53	285	3	138	17	520
NW00184	70.00	70.50	0.50	41.5	3.86	5.84	19.8	<.01	.01	17.8	.22	1.95	.18	.22	7.05	98.4	6	237	<2	118	18	152

HOLE NUMBER: PS-92-50

RESULTATS DE GEOCHIMIE

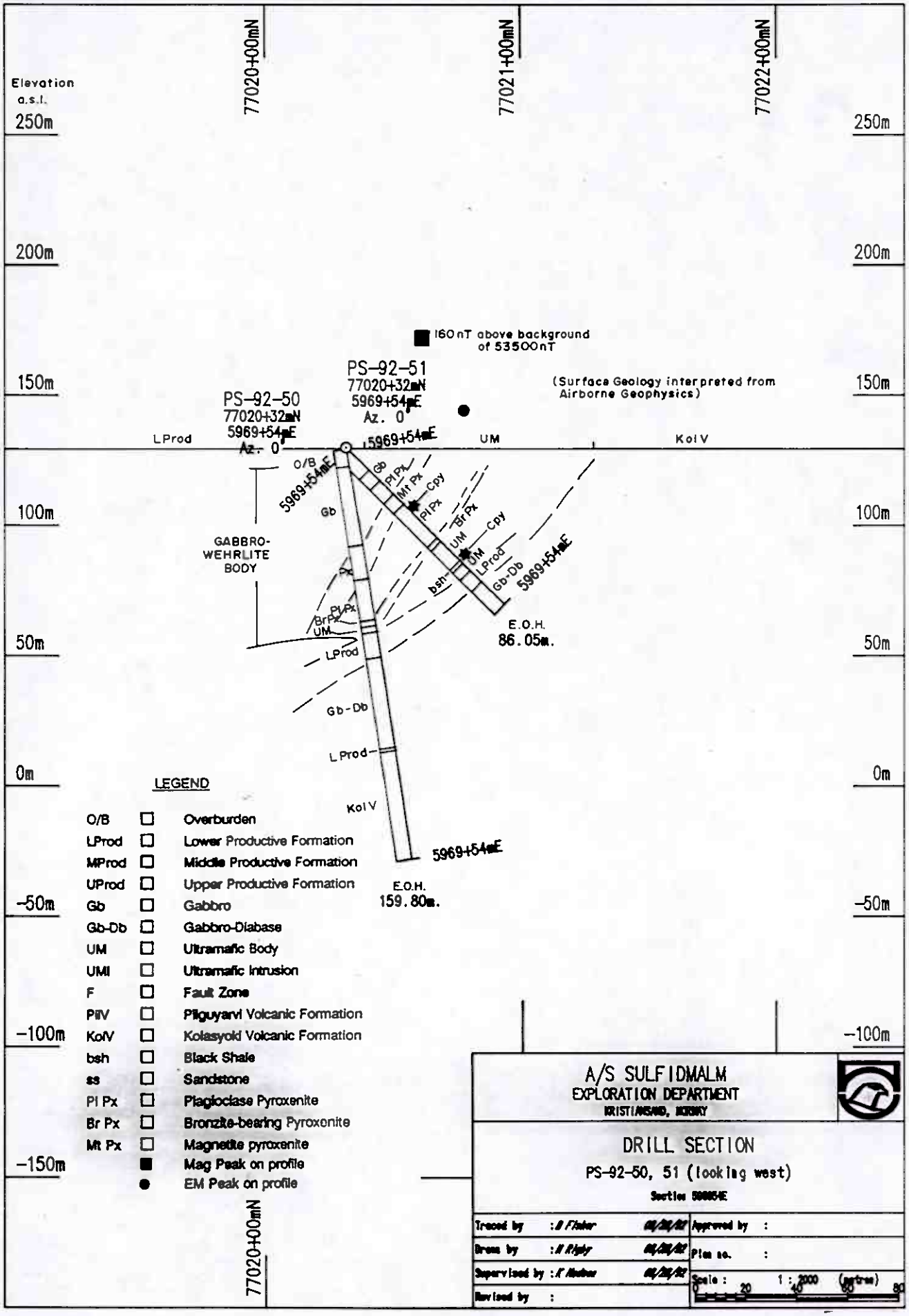
HOLE NUMBER: PS-92-50

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00177	8.00	8.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00178	18.00	18.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00179	29.00	29.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00180	38.00	38.25	0.25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00181	48.15	48.55	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00182	59.00	59.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00183	68.00	68.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00184	70.00	70.50	0.50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

HOLE NUMBER: PS-92-50

RESULTATS DE GEOCHIMIE


77020+00mN
77021+00mN
77022+00mN
Elevation a.s.l.
250m
200m
150m
100m
50m
0m
-50m
-100m
-150m
160nT above background of 53500nT
(Surface Geology interpreted from Airborne Geophysics)
PS-92-50
77020+32mN
5969+54mE
Az. 0
PS-92-51
77020+32mN
5969+54mE
Az. 0
LProd
UM
KolV
O/B
Gb
Pl Px
Mt Px
Cpy
Br Px
UM
LProd
Gb-Db
bsh
Px
GABBRO-WEHRLITE BODY
E.O.H.
86.05m.
E.O.H.
159.80m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMI Ultramafic Intrusion
F Fault Zone
PilV Pilguyarvi Volcanic Formation
KolV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY
DRILL SECTION
PS-92-50, 51 (looking west)
Traced by
Drawn by
Supervised by
Revised by
Approved by
Plan no.
Scale : 1 : 2000 (metres)

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-51 Zone # : Contractor : TERRA BOR
Date started : 08/09/1992
Date completed: 08/11/1992

Township: FINNMARK
Lot : Concession: Claim # :OKSFJELL

Level : Section: Location :

Collar coordinate : Line : 0+ 0 Latitude: 7702031.50 N Azimuth: 0° 0' 0"
Station: 0+ 0 Departure: 596953.80 E Dip : -45° 0' 0"
Elevation: 130.00 Length : 86.05

Reference frame :

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-44° 6' 0"	° ' "
30.00 M	-44°18' 0"	° ' "

Remarks :

Water flow : no
Cemented : no

Logged by : K. HUDSON-EDWARDS Date logged: 08/15/1992 Hole # : PS-92-51

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
0.00	11.80	OVERBURDEN									
11.80	16.86	GABBRO	NW00438	12.00	13.00	1.00	NS	NS	70	332	
		Medium-grained, plagioclase-amphibole (after pyroxene) gabbro, inhomogeneous with some plagioclase-rich (to 70-80% plag) zones (e.g. @ 14.30 & 14.60-14.70), composed of ~60% green to dark green amphibole, ~38% white plagioclase (amphibole tends to float in plag), ~2% needles up to 1-1.5 mm long of ilmenite, rimmed by greyish leucoxene, Tr specks of Cpy		13.00	13.01	0.01					0.43
			NW00399	13.00	14.00	1.00	NS	NS	66	350	
		13.50- 13.50 3 mm X 3 mm blob of Cpy in quartz vein									
		14.60- 14.60 0.5 cm pegmatitic plagioclase-amphibole vein									
				15.00	15.01	0.01					0.38
16.86	24.45	PLAGIOCLASE-BEARING PYROXENITE		17.00	17.01	0.01					0.45
		Unit is medium to dark green, becoming darker green downhole, weakly foliated, medium to medium-fine grained, homogeneous, composed of amphibole (after pyroxene), 3 types consisting of 25% grey, 10% dark green and 55% fine-grained groundmass (no crystals obvious), also 8% plagioclase and 2% ilmenite/leucoxene	NW00439	17.00	18.00	1.00	NS	NS	87	341	
				19.00	19.01	0.01					0.45
				21.00	21.01	0.01					0.60
			NW00440	22.00	23.00	1.00	NS	NS	205	678	
				23.00	23.01	0.01					0.68
24.45	30.00	MAGNETIC PYROXENITE		25.00	25.01	0.01					3.20
		Downhole contact based on change in magnetic susceptibility, uphole contact is a gradational change, unit is dark green, homogeneous, very weakly foliated, medium to coarse grained (2-4 mm crystals), composed of 90% dark green amphibole (after pyroxene), 1% plagioclase and 9% rounded steely grey-black magnetite (after chromite?)		27.00	27.01	0.01					61.0
			NW00400	27.00	28.00	1.00	NS	NS	349	149	
				29.00	29.01	0.01					29.00
30.00	49.73	PLAGIOCLASE-BEARING PYROXENITE		31.00	31.01	0.01					0.34
		Unit is medium to dark green, homogeneous, fine to medium grained, weakly to non-foliated, quite similar to that at 16.86-24.45, composed of 90-95% dark green amphibole, 5% plagioclase and	NW00441	32.00	33.00	1.00	NS	NS	247	173	
				33.00	33.01	0.01					0.35
				35.00	35.01	0.01					0.34
				37.00	37.01	0.01					0.45

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
		1-2% ilmenite + leucoxene; Tr very fine specks of Cpy @ 36.00-44.00	NW00401	38.00	39.00	1.00	NS		NS	291	197	
		38.80- 38.80 2-1 mm Cpy specks in quartz vein		39.00	39.01	0.01						0.35
			NW00402	39.00	40.00	1.00	NS		NS	337	391	
				41.00	41.01	0.01						0.40
			NW00403	41.00	42.00	1.00	NS		NS	353	406	
			NW00442	42.00	43.00	1.00	NS		NS	387	720	
				43.00	43.01	0.01						0.38
				45.00	45.01	0.01						0.38
			NW00404	46.50	47.00	0.50	NS		NS	482	1140	
		46.85- 46.90 5 mm X 1 mm Cpy bleb in quartz vein and 1% Cpy overall in veins over whole interval		47.00	47.01	0.01						0.35
			NW00443	47.00	48.00	1.00	NS		NS	407	345	
				49.00	49.01	0.01						0.35
49.73	51.00	BRONZITE-BEARING PYROXENITE Unit is brownish, medium green, medium-grained, homogeneous with increasing brownish colour (more bronzite) toward gradational downhole contact with ultramafic, composed of 70% bronzite, 23-25% green amphibole (after pyroxene) and 5-7% plagioclase										
51.00	67.65	ULTRAMAFIC										
		51.00- 61.46 Ultramafic Unit is bluish grey, highly serpentinized, fine to medium-grained, with minor (1%) white serpentine/carbonate veining (up to 1 cm), 1-2% up to 1mm diameter magnetite (after chromite) specks, up and downhole contacts gradational, pale grey and fine-grained, Tr Po @ 60.00-61.52		51.00	51.01	0.01						1.95
				53.00	53.01	0.01						93.8
				55.00	55.01	0.01						94.0
				57.00	57.01	0.01						87.3
			NW00405	58.50	59.50	1.00	NS		NS	1550	147	
				59.00	59.01	0.01						80.0
			NW00406	59.50	60.50	1.00	NS		NS	1560	162	
			NW00407	60.50	61.50	1.00	NS		NS	1400	186	
				61.00	61.01	0.01						45.0

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		61.46- 62.70 Sandy Black Shale Probably xenolith, unit is brown to pale grey, well foliated, fine-grained, banded, w/ 10-15% biotite except at contacts (especially uphole) where there is a 3 cm (uphole) and 2 cm (downhole) zone of 50% biotite	NW00409	61.50	62.33	0.83	NS	NS	241	159	
		62.33- 62.55 1% vein Cpy	NW00410	62.33	62.65	0.32	NS	NS	308	1720	
		62.55- 62.55 5 mm Cpy band									
			NW00411	62.65	63.65	1.00	NS	NS	1380	142	
		62.70- 67.65		63.00	63.01	0.01					0.42
		Ultramafic Medium green and fine-grained from 62.70-62.80, then pale whitish grey to 64.35, then medium dark grey to 67.20 and fine-grained, pale whitish grey to 67.65, overall unit is very fine-grained, with 1% fine magnetite (after chromite), Tr Po @ 62.67-65.67, 1% disseminated flecks of Po along foliation planes @ 65.67-66.72, 2.5% disseminated Po, strongly foliated @ 66.72-67.22, Nil Po @ 67.22-67.65	NW00412	63.65	64.70	1.05	NS	NS	1550	132	
			NW00413	64.70	65.70	1.00	NS	NS	1460	134	
		64.90- 65.65 Broken, rubbly core		65.00	65.01	0.01					19.8
			NW00414	65.70	66.70	1.00	NS	NS	1440	119	
			NW00415	66.70	67.60	0.90	NS	NS	1400	154	
				67.00	67.01	0.01					2.00
67.65	73.58	LOWER PRODUCTIVE FORMATION									
		67.65- 68.75 Mafic Flow Hornfelsed biotite-rich (~95%) zone @ 67.65-67.69, then unit is very fine-grained, aphanitic, poorly to non-foliated, medium to light green with minor carbonate veining (~1%)									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		67.95- 68.15 Broken, rubbly core									
		68.75- 69.16 Black Shale Pale black, poorly graphitic black shale, finely laminated, white carbonate veining up to 5%, fine 1-2 mm Po veinlets 1% especially in upper half of unit	NW00416	68.75 69.00	69.15 69.01	0.40 0.01	NS	NS	100	107	0.20
		69.16- 71.31 Mafic Tuff Uphole contact sharp and marked by grey quartz vein, unit is moderately foliated, medium green, fine-grained with incursion of <5% biotite in layers (beds?) up to 2 cm thick		71.00	71.01	0.01					0.50
		71.18- 71.20 Black Shale band with 6 mm blotch of Py in carbonate vein @ uphole contact									
		71.31- 71.75 Black Shale Uphole contact is sharp but slightly irregular, unit is grey-black, finely laminated but poorly bedded, <1% Po as fine foliation threads, poorly graphitic									
		71.75- 72.31 Mafic Tuff Uphole contact sharp/bedded, unit is pale green, with incursion of fine black shale laminae near uphole contact over 4 cm and minor biotite-rich laminae, especially @ 72.16, white carbonate ~10% as matrix material and fine 1-3 mm veinlets									
		72.31- 72.88 Black Shale As @ 71.31-71.75, with one mafic tuff bed @ 72.56-72.63 and grey diagenetic carbonate boudinaged vein @ 72.55									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		72.88- 73.58 Mafic Flow Unit is dark green, weakly foliated, very fine-grained, uphole contact quite sharp, minor <1 mm epidote and white carbonate veinlets		73.00	73.01	0.01					0.55
73.58	86.05	GABBRO-DIABASE Unit is medium to light green, inhomogeneous, very fine to medium grained, weakly foliated, non-sulphidic		75.00 77.00 79.00 81.00 83.00 85.00	75.01 77.01 79.01 81.01 83.01 85.01	0.01 0.01 0.01 0.01 0.01 0.01					0.40 0.40 0.38 0.65 0.47 0.35
86.05	86.05	END OF HOLE									

HOLE NUMBER: PS-92-51

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NW00185	18.00	18.40	0.40	44.2	11.6	10.9	5.84	2.66	.34	16.7	.17	6.41	.20	<.01	1.15	100.2	8	704	4	163	22	464
NW00186	28.00	28.40	0.40	40.2	6.20	11.7	8.21	.68	.74	24.0	.21	5.81	.18	<.01	.85	98.8	39	262	<2	177	19	510
NW00187	37.00	37.40	0.40	48.0	5.62	14.1	11.6	1.11	.44	14.9	.19	2.67	.20	.05	.90	99.8	18	253	<2	153	18	330
NW00189	48.00	48.40	0.40	48.1	5.23	13.8	12.5	.78	1.24	13.4	.17	2.33	.18	.22	1.50	99.4	39	233	<2	173	18	425
NW00190	58.00	58.40	0.40	39.4	4.24	4.66	22.3	<.01	.01	18.6	.22	2.06	.20	.21	7.95	99.8	3	220	<2	128	17	163
NW00191	66.00	66.40	0.40	43.8	4.31	6.26	19.8	<.01	.01	17.1	.21	2.29	.23	.13	4.30	98.4	7	95	<2	151	18	172

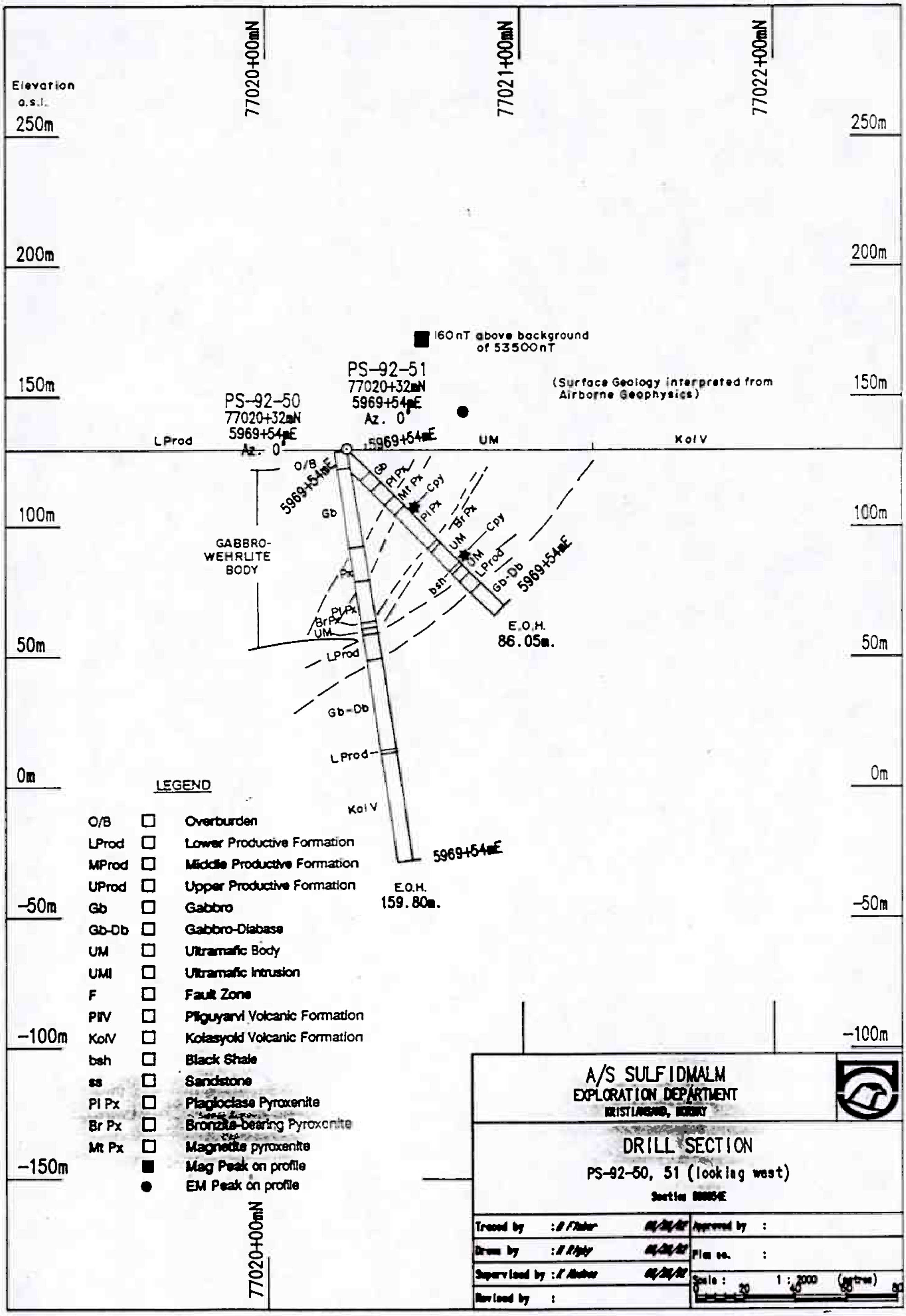
HOLE NUMBER: PS-92-51

RESULTATS DE GEOCHIMIE

HOLE NUMBER: PS-92-51 RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00185	18.00	18.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00186	28.00	28.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00187	37.00	37.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00189	48.00	48.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00190	58.00	58.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00191	66.00	66.40	0.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

HOLE NUMBER: PS-92-51 RESULTATS DE GEOCHIMIE


Elevation a.s.l.
250m
200m
150m
100m
50m
0m
-50m
-100m
-150m
77020+00mN
77021+00mN
77022+00mN
160nT above background of 53500nT
PS-92-51
77020+32mN
5969+54mE
Az. 0°
PS-92-50
77020+32mN
5969+54mE
Az. 0°
(Surface Geology interpreted from Airborne Geophysics)
LProd
UM
KolV
O/B
Gb
GABBRO-WEHRLITE BODY
Pl Px
Mt Px
Cpy
Br Px
bsh
Gb-Db
E.O.H.
86.05m.
E.O.H.
159.80m.
LEGEND
O/B Overburden
LProd Lower Productive Formation
MProd Middle Productive Formation
UProd Upper Productive Formation
Gb Gabbro
Gb-Db Gabbro-Diabase
UM Ultramafic Body
UMI Ultramafic Intrusion
F Fault Zone
PlV Pilguyarvi Volcanic Formation
KolV Kolasyoki Volcanic Formation
bsh Black Shale
ss Sandstone
Pl Px Plagioclase Pyroxenite
Br Px Bronzite-bearing Pyroxenite
Mt Px Magnetite pyroxenite
Mag Peak on profile
EM Peak on profile
A/S SULFIDMALM
EXPLORATION DEPARTMENT
DRILL SECTION
PS-92-50, 51 (looking west)
Traced by
Drawn by
Supervised by
Revised by
Approved by :
File no. :
Scale : 1 : 2000 (metres)
0 20 40 60 80

Falconbridge

DIAMOND DRILL LOG

Property : PASVIK

Hole # : PS-92-52 Zone # : Contractor : TERRA BOR
Township: FINNMARK
Lot : Concession: Claim # :OKSFJELL

Date started : 08/11/1992
Date completed: 08/14/1992

Level : Section: Location :

Collar coordinate : Line : 0+ 0
Station: 0+ 0

Latitude: 7701820.00 N
Departure: 596770.00 E
Elevation: 141.00

Azimuth: 0° 0' 0"
Dip : -80° 0' 0"
Length : 165.56

Reference frame :

Surveyed by: TERRA BOR

Deviation tests :

Depth	Dip	Azimuth
3.00 M	-79°24' 0"	° ' "
60.00 M	-80°12' 0"	° ' "
120.00 M	-81° 0' 0"	° ' "
160.00 M	-81°30' 0"	° ' "

Remarks :

Water flow : no
Cemented : no

Logged by : K. HUDSON-EDWARDS

Date logged: 08/17/1992

Hole # : PS-92-52

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
0.00	5.88	OVERBURDEN										
5.88	15.91	GABBRO-DIABASE Unit is medium green, fine to medium grained, moderately foliated, melanocratic (plagioclase ~25%), with minor speckled/disseminated Po, fines towards downhole contact 7.18- 7.45 Sheared, quartz-rich zone w/ ~50% smokey quartz w/ Tr Po and minor ~5% brecciated white carbonate lenses		7.00	7.01	0.01						0.20
				9.00	9.01	0.01						0.34
				11.00	11.01	0.01						0.51
				13.00	13.01	0.01						0.37
				15.00	15.01	0.01						0.47
15.91	16.36	LOWER PRODUCTIVE FORMATION 15.91- 16.36 Black Shale Up and downhole contacts sharp, unit is jet black, very fine-grained, apparently laminated w/ 2-3% stringer Po generally parallel to lamination, minor perpendicular to foliation milky quartz veinlets (~1%) up to 3-4 mm thick										
16.36	25.61	GABBRO-DIABASE Up and downhole contacts sharp and fine-grained over 40 cm (uphole) and 30 cm (downhole), unit is very similar to that @ 5.88-15.91 except for a pegamtitic, melanocratic patch @ 19.00-19.15 formed by yellowish plagioclase and lesser smokey quartz, also coarser grained (to 3 mm crystals) and epidotized zones @ 20.16-20.20 & 22.44-22.50		17.00	17.01	0.01						0.55
				19.00	19.01	0.01						0.18
				21.00	21.01	0.01						0.36
				23.00	23.01	0.01						0.71
				25.00	25.01	0.01						0.86
25.61	26.75	LOWER PRODUCTIVE FORMATION 25.61- 25.80 Black Shale Uphole contact is 1.5 cm zone of grey carbonate, rest of unit is jet black, fine-grained, weakly foliated with no										

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		obvious laminae, one 5 mm Py-Po band @ 25.66, remainder 2% fine <1 mm veinlet Po 25.80- 26.27 Mafic Tuff Fine-grained, uphole contact sharp but irregular, weakly to moderately foliated, melanocratic, no sulphide 26.27- 26.75 Black Shale As @ 25.61-25.80 but proportion of black shale = 70%, mafic material = 30%, finely laminated (1-7 mm laminae), Po wisps ~1%, some slip faulting of laminae									
26.75	32.62	GABBRO-DIABASE Unit is more melanocratic (only 40-50% plagioclase) than previous, generally medium-grained and moderately foliated, fine-grained up (30 cm) and downhole (25 cm) contacts, ~5% white carbonate veinlets, spotty, granular texture @ 28.00-29.40		27.00 29.00 31.00	27.01 29.01 31.01	0.01 0.01 0.01					0.60 0.65 0.46
32.62	33.90	LOWER PRODUCTIVE FORMATION 32.62- 33.90 Black Shale Uphole contact sharp, downhole more gradational (underlying Gb-Db is sheared and brownish), unit is jet black, brecciated and cemented by 20% grey-white glassy quartz, laminae are sheared over each other, Po occurs as fine <1 mm veinlets		33.00	33.01	0.01					2.22
33.90	48.51	GABBRO-DIABASE Unit is medium-grained, leucocratic (~equal parts plagioclase-amphibole), moderately foliated, with minor quartz and white carbonate veining (~2%), nil sulphide		35.00 37.00 39.00 41.00 43.00 45.00 47.00	35.01 37.01 39.01 41.01 43.01 45.01 47.01	0.01 0.01 0.01 0.01 0.01 0.01 0.01					2.57 0.77 0.40 0.35 0.44 0.57 0.34

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
48.51	51.14	LOWER PRODUCTIVE FORMATION										
		48.51- 51.14		49.00	49.01	0.01						1.26
		Mainly Black Shale		51.00	51.01	0.01						4.15
		Gradual incursion of black shale laminae from 48.51-49.27, then overall 50% black shale-50% dark green mafic material, also 2-3 cm glassy grey-white quartz veins in upper part of unit, Po overall 1-2% especially in central part of unit										
51.14	61.60	GABBRO-DIABASE		53.00	53.01	0.01						0.54
		Unit overall is light green, fine-grained (especially @ uphole contact over 10 cm and downhole over 15 cm), weakly sheared, minor white carbonate veining (~1%), Po band @ 52.33		55.00	55.01	0.01						0.41
				57.00	57.01	0.01						0.76
				59.00	59.01	0.01						0.35
				61.00	61.01	0.01						0.43
61.60	65.10	LOWER PRODUCTIVE FORMATION										
		61.60- 65.10		63.00	63.01	0.01						0.47
		Mainly Mafic Tuff		65.00	65.01	0.01						0.38
		with some black shale laminae (to 63.60), finely laminated, sheared, white carbonate veining 5-7%, light green to grey-green, minor Po as <1 mm veinlets 1% overall	NW00424	65.00	65.50	0.50	NS		NS	528	162	
65.10	66.88	ULTRAMAFIC FLOW										
		Highly sheared, contorted, with up to 10% white carbonate veining, generally apple green serpentine matrix with ~1% fine <<1 mm black specks (magnetite?), @ uphole contact ~1-1.5 cm zone of biotite-rich mafic tuff (30-40% biotite); @ 65.10-65.50, Tr-1% finely disseminated Po										
66.88	72.81	LOWER PRODUCTIVE FORMATION										
		66.88- 72.81										
		Biotite-bearing Mafic Tuff										
		Unit is contorted, highly sheared, white-carbonate veined (~10-15% 1 cm veins), brown to brown-green, gradual incursion of biotite from 71.90 to contact at 72.81 (to 40% biotite), highly										

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% %	%	CU% %	NI PPM	CU PPM	MAG
		contorted near contact										
		67.00- 67.50 Smokey quartz-bearing zone with 1-2% up to 1 mm blotches of Cpy disseminated and Tr Po		67.00	67.01	0.01						0.23
			NW00417	67.00	67.50	0.50	NS		NS	47	604	
				69.00	69.01	0.01						0.49
		70.42- 70.42 1 cm zone of brown rectangular to wedge-shaped crystals (sphene?) in white carbonate vein										
				71.00	71.01	0.01						0.48
72.81	101.65	ULTRAMAFIC INTRUSION Overall unit is light greenish grey to bluish grey, fine to medium grained, carbonate-porphyroblastic (generally <10%) (smeared out along foliation planes), well foliated, w/ 1% up to 1 mm fine magnetite specks (after chromite?)		73.00	73.01	0.01						0.42
				75.00	75.01	0.01						0.57
				77.00	77.01	0.01						0.37
		77.60- 78.60 Biotized Mafic Tuff (~30% biotite) xenolith (serpentine on either side is fine-grained, bleached, non-carbonate porphyroblast-bearing), very well foliated, w/ minor (5-10%) blebby white carbonate <1 mm										
				79.00	79.01	0.01						0.62
			NW00418	79.50	80.00	0.50	NS		NS	1290	209	
		80.50- 81.25 Tr to 1% disseminated Po	NW00419	80.50	81.25	0.75	NS		NS	1520	113	
				81.00	81.01	0.01						48.5
				83.00	83.01	0.01						65.7
				85.00	85.01	0.01						54.5
				87.00	87.01	0.01						60.7
				89.00	89.01	0.01						53.3
				91.00	91.01	0.01						67.3
				93.00	93.01	0.01						54.8
				95.00	95.01	0.01						71.7
				97.00	97.01	0.01						69.5
			NW00420	97.50	98.50	1.00	NS		NS	1560	325	
			NW00421	98.50	99.50	1.00	NS		NS	1590	234	

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
				99.00	99.01	0.01					46
			NW00422	99.50	100.60	1.10	NS	NS	1280	242	
			NW00423	100.60	101.71	1.11	NS	NS	208	213	
				101.00	101.01	0.01					0.36
101.65	113.67	LOWER PRODUCTIVE FORMATION									
		101.65- 110.55		103.00	103.01	0.01					0.57
		Mafic Flow		105.00	105.01	0.01					0.51
		Unit is homogeneous, dark green,		107.00	107.01	0.01					0.29
		aphanitic, except @ 108.50-109.00, where		109.00	109.01	0.01					0.80
		it is more leucocratic w/ 50% plagioclase									
		110.55- 113.67		111.00	111.01	0.01					2.39
		Black Shale		113.00	113.01	0.01					0.83
		Grading down into mafic tuff, unit is									
		very fine-grained, weakly foliated, well									
		bedded and laminated (especially @									
		103.25-103.35-interlaminated black									
		shale/mafic tuff), Po zones @									
		101.08-101.19 (5% Po) and 101.55-101.72									
		(1-2% Po), otherwise Tr to Nil Po									
113.67	115.29	QUARTZ/FAULT ZONE		115.00	115.01	0.01					0.00
		Smokey grey, glassy quartz with one mafic tuff									
		fragment @ 104.91-104.98									
115.29	119.51	GABBRO-DIABASE									
		Unit is medium green, moderately foliated,									
		melanocratic (10-20% plagiocalse)									
		115.71- 115.76									
		Quartz vein (as in quartz/fault zone									
		above), w/ 1-2 mm Po veinlet near									
		105.71									
		115.81- 115.90									
		1-2% fine 1-3 mm veinlet Po									
				117.00	117.01	0.01					0.34
				119.00	119.01	0.01					0.33
119.51	120.23	LOWER PRODUCTIVE FORMATION									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		119.51- 120.23 Black Shale/Mafic Tuff Uphole contact diffuse, unit is jet black grading to dark green downhole, interlaminated black shale and mafic tuff, minor biotite laminae up to 5 mm, 1% fine parallel to foliation Po wisps									
120.23	128.55	GABBRO-DIABASE Uphole contact fine-grained over 40 cm, then unit is medium grained, weakly foliated, with equal parts plagioclase-pyroxene		121.00 123.00 125.00 127.00	121.01 123.01 125.01 127.01	0.01 0.01 0.01 0.01					0.45 0.43 0.48 0.40
128.55	141.00	LOWER PRODUCTIVE FORMATION									
		128.55- 128.82 Milky quartz-rich Breccia Zone 70% quartz, 30% chlorite veining and mafic flow/tuff fragments, minor late cementing white carbonate									
		128.82- 133.13 Mafic Tuff Unit is medium green, moderately to well foliated, fine-grained, w/ 2-3% up to 1 cm milky quartz and fine white carbonate veining, minor biotite @ 132.50		129.00 131.00 133.00	129.01 131.01 133.01	0.01 0.01 0.01					0.25 0.34 1.49
		133.13- 140.56 Mainly Black Shale/Siltstone Bedded (beds 1-5 cm) and finely laminated, sheared but non-contorted (except from 137.00-139.00 where there is ~10% Po and unit is more highly contorted), generally 1% white carbonated and 1% veinlet Po		135.00 137.00 139.00	135.01 137.01 139.01	0.01 0.01 0.01					0.94 3.68 1.57
		139.48- 140.56 Mainly mafic tuff w/ 10-20% biotite and 5-7% white carbonate veinlets									
		140.56- 141.00 Quartz Zone Smokey grey to white quartz with minor									

FROM (M)	TO (M	DESCRIPTION	Sampl.	FROM (M)	TO M	L (M)	NI% % %	CU% %	NI PPM	CU PPM	MAG
		chlorite veining and fragments (<5%)									
141.00	165.56	KOLASYOKI VOLCANIC FORMATION Mainly mafic flow, fine- to medium-grained, quite homogeneous except for more sheared zone and white carbonate veinlet (5-10%)-rich @ 160.35-162.52 (possible tuff), nil sulphide		141.00	141.01	0.01					1.91
				143.00	143.01	0.01					0.23
				145.00	145.01	0.01					0.17
				147.00	147.01	0.01					0.54
				149.00	149.01	0.01					0.44
				151.00	151.01	0.01					0.45
				153.00	153.01	0.01					0.45
				155.00	155.01	0.01					0.58
				157.00	157.01	0.01					0.64
				159.00	159.01	0.01					0.71
				161.00	161.01	0.01					0.45
				163.00	163.01	0.01					0.52
				165.00	165.01	0.01					0.58
165.56	165.56	END OF HOLE									

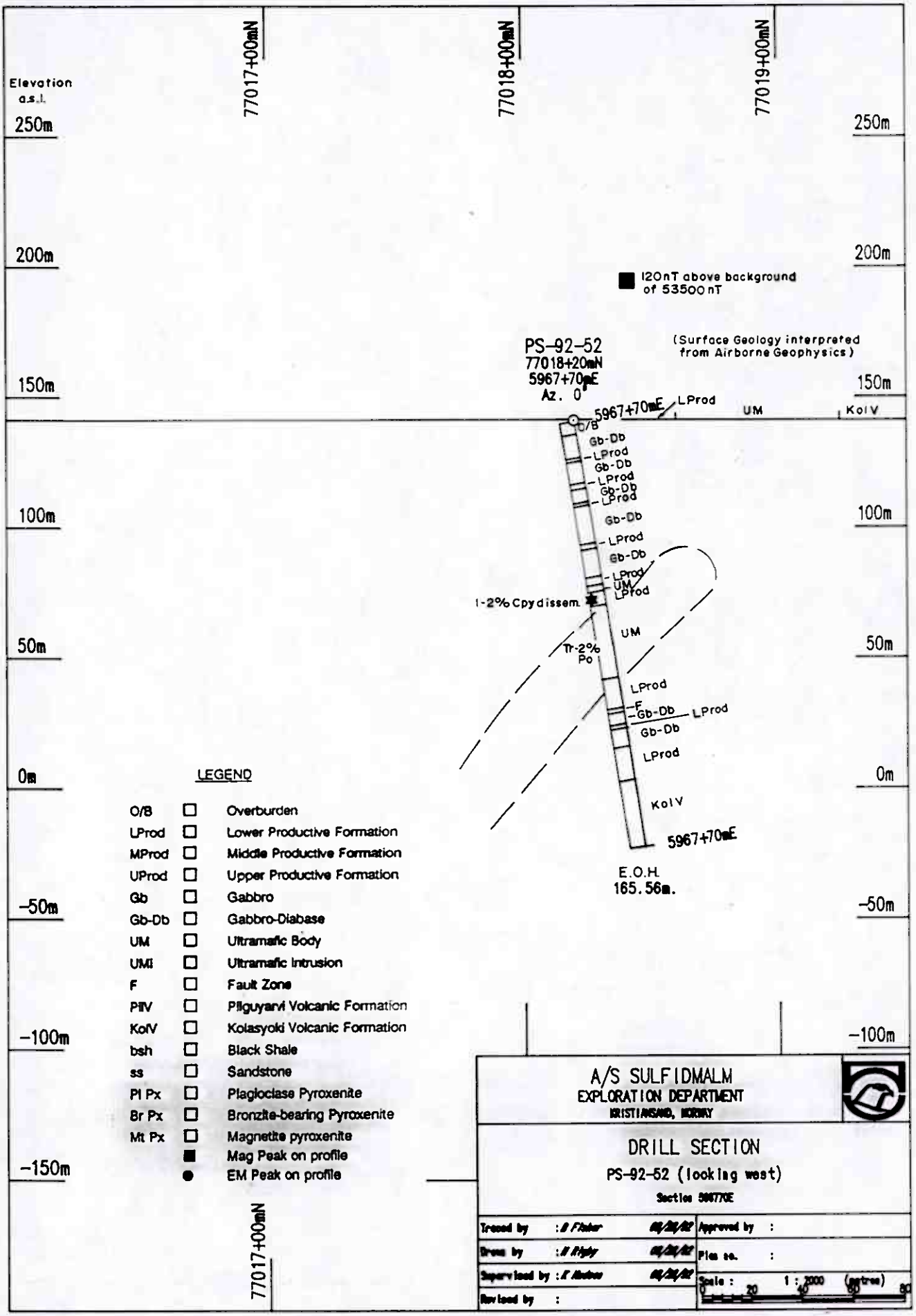
HOLE NUMBER: PS-92-52

RESULTATS DE GEOCHIMIE

Sample	From (M)	To (M)	Len. (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM
NW00195	65.50	65.90	0.40	42.0	4.87	7.33	15.8	<.01	.23	16.1	.19	2.34	.22	.14	9.30	98.5	11	110	<2	146	18	173
NW00192	75.00	75.40	0.40	42.1	4.63	5.35	19.4	<.01	<.01	17.3	.21	2.29	.22	.17	7.65	99.3	5	193	<2	141	18	163
NW00193	85.00	85.40	0.40	36.9	4.20	4.58	20.9	<.01	<.01	18.0	.22	2.24	.18	.21	10.9	98.3	<2	204	<2	128	21	168
NW00194	95.00	95.40	0.40	38.5	4.29	4.79	21.3	<.01	<.01	18.4	.22	2.22	.20	.19	9.00	99.1	5	168	<2	131	17	159

HOLE NUMBER: PS-92-52

RESULTATS DE GEOCHIMIE



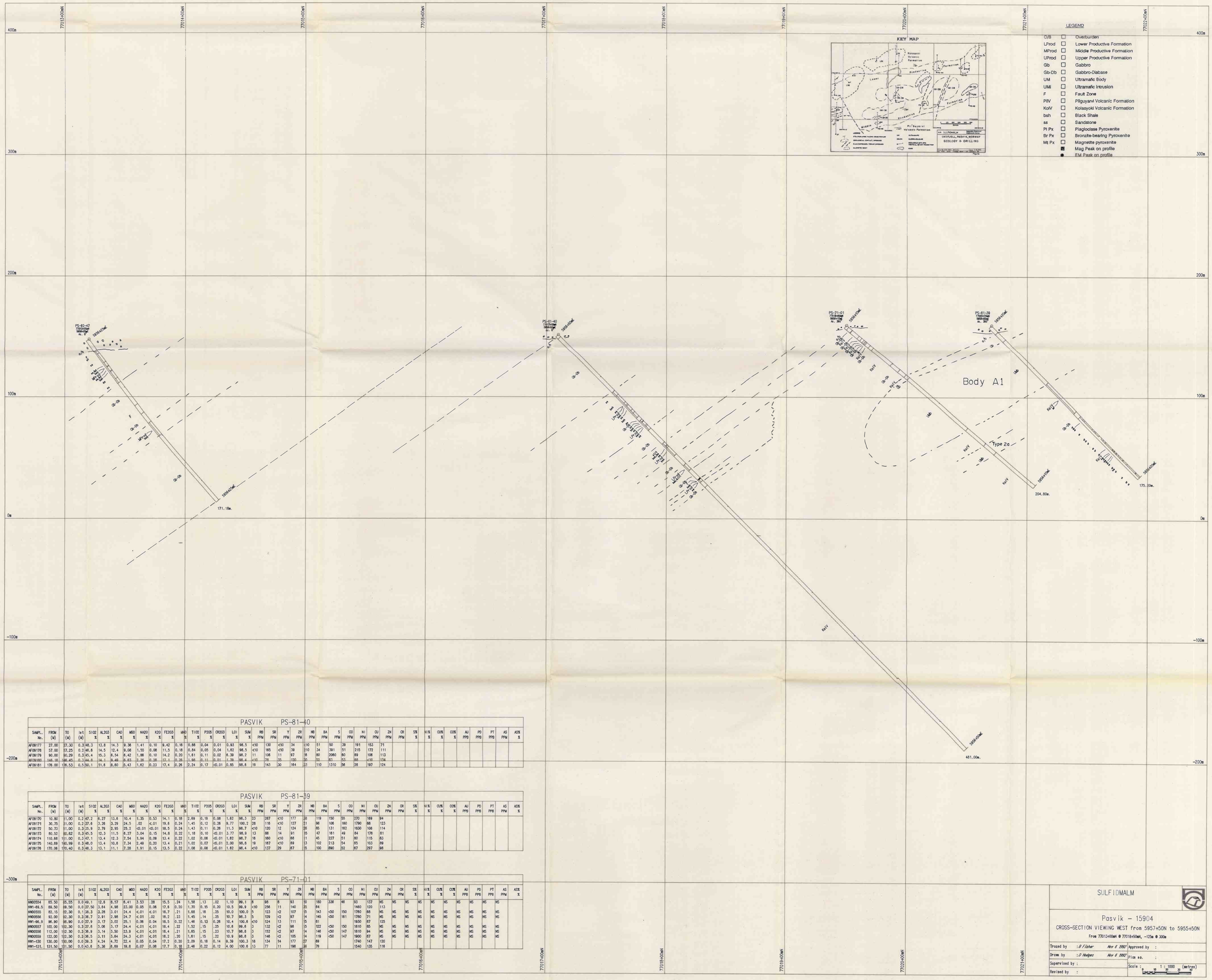
A/S SULFIDMALM
EXPLORATION DEPARTMENT
KRISTIANSAND, NORWAY

DRILL SECTION

PS-92-52 (looking west)

Section 59670E

Traced by	: S Fisher	02/20/92	Approved by :
Drawn by	: S Rigby	02/20/92	Plan no. :
Supervised by	: K Skelton	02/20/92	Scale : 1 : 2000 (metres)
Revised by	:		0 20 40 60 80



PASVIK PS-81-40

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	WT% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09177	27.00	27.30	0.3	48.3	13.8	14.3	9.36	1.41	0.10	9.42	0.16	0.86	0.04	0.01	0.83	98.5	<10	130	<10	34	<10	51	50	39	191	153	71									
AF09178	57.00	57.25	0.3	48.6	14.5	12.4	9.08	1.55	0.08	11.5	0.18	0.84	0.05	0.04	1.82	98.5	<10	165	<10	39	310	34	391	51	215	172	111									
AF09179	90.00	90.29	0.3	45.4	15.3	8.54	6.42	1.88	0.10	14.2	0.20	1.61	0.11	0.02	8.39	98.2	11	106	11	97	8	80	2060	80	89	108	153									
AF09180	146.38	146.45	0.1	44.5	14.1	9.48	6.63	1.36	0.08	17.1	0.26	1.98	0.11	0.01	1.38	98.4	<10	78	35	120	30	53	83	60	88	<10	134									
AF09181	178.00	178.53	0.5	50.1	11.8	8.60	5.43	1.62	0.23	17.4	0.26	2.24	0.17	<0.01	0.85	98.8	19	143	30	164	23	110	1310	56	28	197	124									

PASVIK PS-81-39

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	WT% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09170	10.80	11.00	0.2	47.2	6.27	13.6	10.4	1.35	0.53	14.1	0.18	2.69	0.19	0.08	1.62	98.3	23	187	<10	177	22	119	150	55	270	169	94									
AF09171	30.75	31.00	0.2	37.6	3.26	3.29	24.5	.02	<.01	19.6	0.24	1.45	0.12	0.26	9.77	100.2	28	118	<10	127	21	98	106	160	1790	88	123									
AF09172	50.73	51.00	0.3	35.9	2.79	2.95	25.2	<0.01	<0.01	18.5	0.24	1.43	0.11	0.26	11.3	98.7	<10	120	12	124	26	85	131	182	1830	108	114									
AF09173	80.52	80.82	0.3	45.5	12.3	11.5	8.27	3.04	0.15	14.8	0.22	1.19	0.10	<0.01	3.77	98.8	13	88	14	91	15	47	181	49	84	178	81									
AF09174	110.88	111.00	0.3	47.1	13.4	12.3	7.54	1.94	0.09	13.4	0.22	1.02	0.06	<0.01	1.82	98.7	16	160	<10	68	11	45	227	51	80	115	83									
AF09175	140.89	140.99	0.3	48.0	13.4	10.8	7.34	2.49	0.20	13.4	0.21	1.02	0.07	<0.01	2.00	98.8	19	167	<10	89	13	102	213	54	85	103	89									
AF09176	170.08	170.40	0.3	48.3	13.1	11.1	7.28	1.91	0.15	13.5	0.22	1.08	0.08	<0.01	1.82	98.4	<10	137	29	87	15	100	890	52	87	297	98									

PASVIK PS-71-01

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	WT% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
WM00554	85.50	85.55	0.0	49.1	12.8	8.57	8.41	3.53	.28	15.5	.24	1.58	.13	.02	1.10	99.1	8	98	8	93	10	180	338	46	93	137	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
WM1-69.5	89.50	89.50	0.0	37.50	3.84	4.98	23.00	0.05	0.06	17.8	0.20	1.70	0.15	0.20	10.5	99.9	<10	256	11	140	35	84			1460	120	113										
WM00555	92.15	92.30	0.1	38.3	3.28	3.01	24.4	<.01	<.01	18.7	.21	1.68	.16	.25	10.0	100.0	5	123	<2	107	14	143	<50	150	1780	88	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
WM00556	92.00	92.30	0.3	36.7	2.91	2.98	24.7	<.01	.02	18.2	.23	1.45	.14	.25	10.7	98.3	5	129	<2	97	14	145	<50	161	1780	71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
WM1-86.9	90.90	90.90	0.0	37.9	3.17	3.02	25.1	0.06	0.04	18.5	0.22	1.46	0.13	0.26	10.4	100.8	<10	124	13	111	15	81			1830	87	125										
WM00557	102.00	102.30	0.3	37.0	3.08	3.17	24.4	<.01	<.01	18.4	.22	1.52	.15	.23	10.6	99.8	3	132	<2	98	15	122	<50	150	1810	85	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
WM00558	112.00	112.30	0.3	38.9	3.14	3.50	23.9	<.01	<.01	18.4	.21	1.85	.15	.23	10.7	98.8	3	152	<2	97	14	148	<50	147	1810	84	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
WM00559	122.00	122.30	0.3	36.5	3.11	3.64	24.3	<.01	<.01	18.2	.20	1.61	.15	.22	10.9	98.8	3	148	<2	105	14	119	<50	147	1900	87	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
WM1-130	130.00	130.00	0.0	39.5	4.24	4.72	22.4	0.05	0.04	17.2	0.20	2.09	0.18	0.14	9.39	100.3	18	134	14	177	27	89			1740	147	120										
WM1-131.	131.50	131.50	0.0	43.6	5.38	8.69	19.8	0.07	0.08	17.7	0.22	2.46	0.22	0.12	4.00	100.6	13	77	11	198	26	79			1540	135	118										

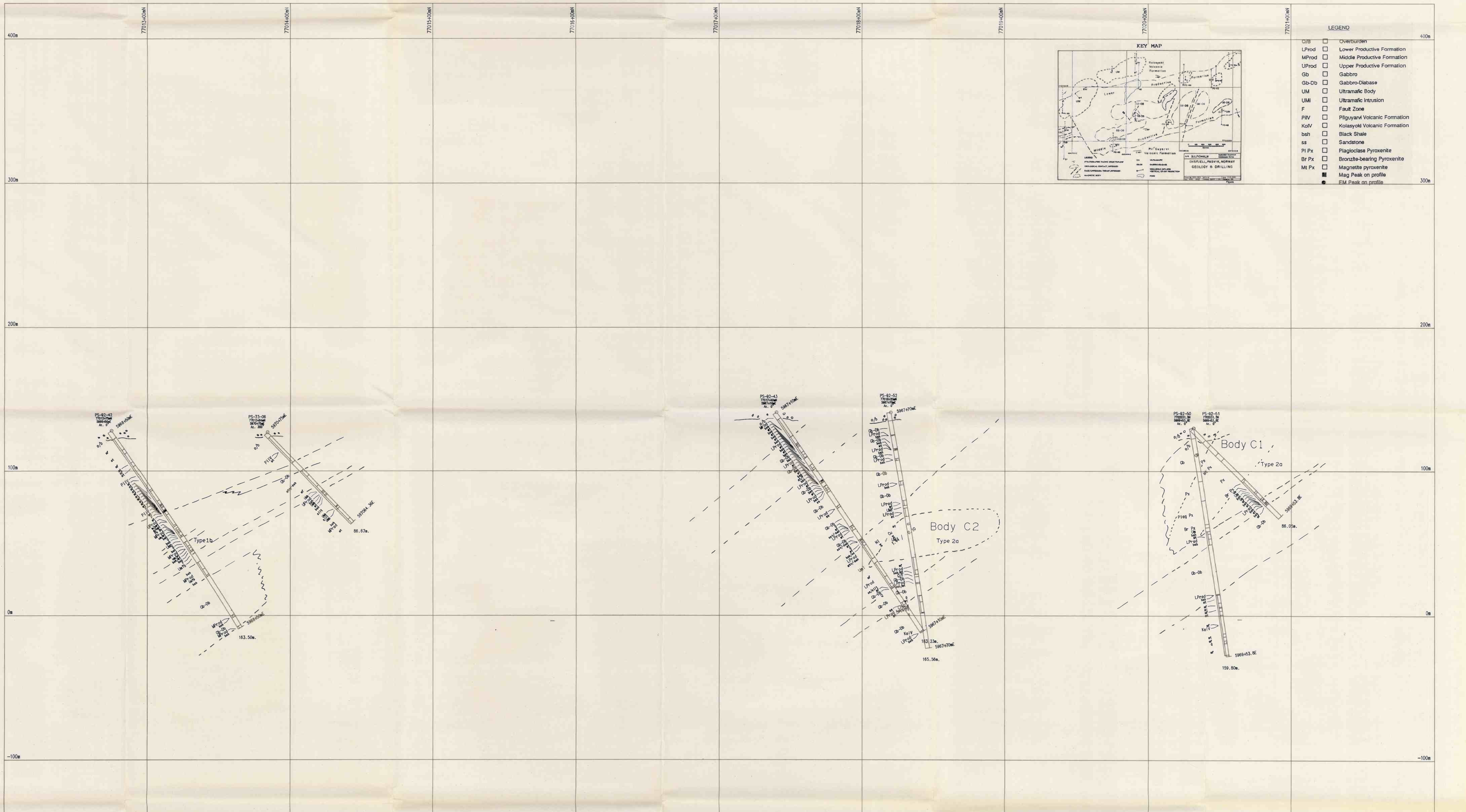
SULFIDMALM

Pasvik – 15904

CROSS-SECTION VIEWING WEST from 5957+50N to 5955+50N

From 7701340mN @ 7701840mN, -125m @ 300m

Traced by	: B Fisher Nov 6 1992	Approved by	:
Drawn by	: D Hodges Nov 6 1992	Plan no.	:
Supervised by	:	Scale	: 1 : 1000 (metres)
Revised by	:		



PASVIK PS-92-50

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00177	8.00	8.40	0.4	43.4	11.2	10.2	5.39	2.64	.48	16.8	.18	5.83	.21	<.01	1.75	98.1	16	660	4	186	23	629	243	55	62	318	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00178	18.00	18.40	0.4	44.0	11.2	10.1	5.68	2.56	.35	16.7	.18	6.41	.22	<.01	1.00	98.4	7	554	<2	179	26	471	310	61	74	371	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00179	29.00	29.40	0.4	44.1	12.2	10.5	5.19	2.91	.33	15.5	.17	6.59	.20	<.01	1.10	98.8	6	679	<2	169	26	490	353	58	74	313	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00180	38.00	38.25	0.2	37.5	5.61	11.1	7.59	1.22	.20	22.1	.22	9.99	.19	<.01	2.65	98.4	10	292	<2	164	24	538	1500	95	208	820	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00181	48.15	48.55	0.4	41.4	5.77	11.9	9.03	.88	.44	22.8	.20	5.09	.19	.03	2.25	100.0	17	210	<2	140	16	409	407	94	364	130	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00182	59.00	59.40	0.4	47.2	5.30	14.1	11.7	1.12	.19	14.0	.18	2.43	.19	.09	3.10	99.6	5	284	6	142	18	176	567	62	379	593	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00183	68.00	68.40	0.4	43.7	4.95	14.0	12.9	.22	1.92	13.6	.17	2.35	.18	.24	4.35	98.6	53	285	3	138	17	520	<50	60	445	313	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00184	70.00	70.50	0.5	41.5	3.86	5.84	19.6	<.01	.01	17.8	.22	1.95	.18	.22	7.05	98.4	6	237	<2	118	18	152	3010	118	1340	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

PASVIK PS-92-43

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00155	121.55	124.00	2.5	40.1	4.15	5.69	19.5	<.01	<.01	16.0	.18	1.76	.16	.20	8.75	96.5	4	112	<2	113	15	150	779	128	1320	88	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

PASVIK PS-92-42

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00151	70.00	75.00	5.0	42.0	9.40	7.54	12.0	.05	.24	17.6	.20	2.47	.18	.14	5.80	97.6	15	73	<2	141	15	227	8210	72	439	128	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00152	89.00	91.00	2.0	44.1	6.31	5.82	12.6	<.01	.22	14.8	.20	2.12	.21	.11	9.55	96.0	15	116	<2	131	18	131	5600	77	415	153	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00153	102.30	107.30	5.0	44.1	13.6	7.84	7.31	2.48	.05	12.9	.18	1.42	.10	.02	9.15	99.1	7	124	<2	73	6	134	3320	44	167	185	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00154	116.20	119.20	3.0	48.3	12.8	7.98	6.09	2.68	.04	12.2	.17	1.47	.11	<.01	8.50	100.3	7	115	<2	75	6	114	2070	33	87	107	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

PASVIK PS-73-06

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09103	9.63	9.85	0.2	47.2	13.2	10.3	6.75	2.39	.14	15.3	.21	1.38	.11	.01	1.62	98.7	17	89	14	93	22	93	3070	59	94	110	121										
AF09104	28.68	28.75	0.1	48.5	13.4	10.8	7.03	2.40	.14	14.3	.213	1.19	.09	.01	1.47	99.6	10.6	142	<10	680	27	111	786	54	74	120	103										
AF09105	53.13	53.80	0.7	51.7	2.97	.75	23.6	.03	<.01	14.5	.11	.97	.09	.34	3.23	98.3	12	<10	<10	71	16	84	3790	102	1380	136	120										
AF09106	58.47	58.77	0.3	39.5	4.91	17.9	11.0	.06	.39	12.3	.23	1.61	.14	.08	11.4	99.6	29	189	23	93	30	38	669	48	143	71	87										
AF09107	72.00	72.27	0.3	47.4	5.26	.58	24.6	.02	.02	14.2	.07	1.28	.09	.38	4.7	98.6	16	<10	16	89	23	93	12700	73	573	71	217										

PASVIK PS-92-52

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00195	65.50	65.90	0.4	42.0	4.87	7.33	15.8	<.01	.23	16.1	.19	2.34	.22	.14	9.30	98.5	11	110	<2	146	18	173	<50	100	1140	<2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00192	75.00	75.40	0.4	42.1	4.63	5.35	19.4	<.01	<.01	17.3	.21	2.29	.22	.17	7.65	99.3	5	193	<2	141	18	163	<50	122	1310	138	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00193	85.00	85.40	0.4	36.9	4.20	4.58	20.9	<.01	<.01	18.0	.22	2.24	.18	.21	10.9	98.3	<2	204	<2	128	21	168	<50	132	1620	72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00194	95.00	95.40	0.4	38.5	4.29	4.79	21.3	<.01	<.01	18.4	.22	2.22	.20	.19	9.00	99.1	5	168	<2	131	17	159	<50	134	1670	134	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

PASVIK PS-92-51

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00185	18.00	18.40	0.4	44.2	11.6	10.9	5.84	2.66	.34	16.7	.17	6.41	.20	<.01	1.15	100.2	8	704	4	163	22	464	223	57	98	316	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00186	28.00	28.40	0.4	40.2	6.20	11.7	8.21	.68	.74	24.0	.21	5.81	.18	<.01	.65	98.8	39	262	<2	177	19	510	<50	97	356	153	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00187	37.00	37.40	0.4	48.0	5.62	14.1	11.6	1.11	.44	14.9	.19	2.67	.20	.05	.90	99.8	18	253	<2	153	18	330	447	64	292	301	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00189	48.00	48.40	0.4	46.1	5.23	13.8	12.5	.78	1.24	13.4	.17	2.33	.18	.22	1.50	99.4	39	233	<2	173	18	425	<50	59	393	245	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00190	58.00	58.40	0.4	39.4	4.24	4.66	22.3	<.01	.01	18.6	.22	2.06	.20	.21	7.95	99.8	3	220	<2	128	17	163	121	135	1560	141	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00191	66.00	66.40	0.4	43.8	4.31	6.26	19.8	<.01	.01	17.1	.21	2.29	.23	.13	4.30	98.4	7	95	<2	151	18	172	1540	116	1390	108	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

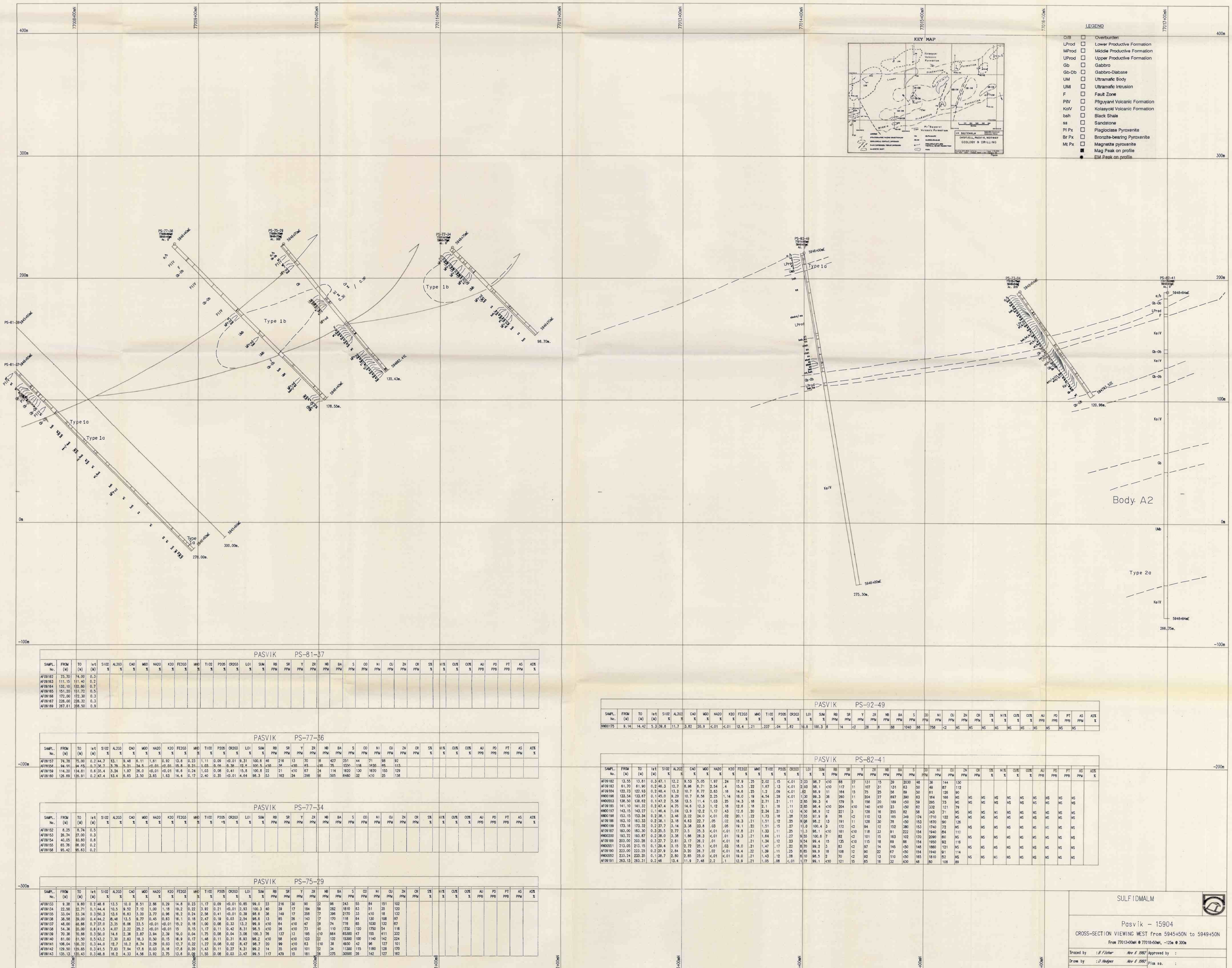
SULFIDMALM

Pasvik - 15904

CROSS-SECTION VIEWING WEST from 5966+50N to 5972+00N

From 77013+00mN @ 77018+50mN, -125m @ 300m

Traced by	: B Fisher	Nov 6 1992	Approved by :
Drawn by	: D Hodges	Nov 6 1992	Plan no. :
Supervised by :			Scale : 1 : 1000 (metres)



PASVIK PS-81-37

SAMPL. No.	FROM (M)	TO (M)	int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %
AF09182	73.70	74.00	0.3																										
AF09183	111.15	111.40	0.2																										
AF09184	132.10	132.80	0.7																										
AF09185	151.20	151.72	0.5																										
AF09186	172.00	172.30	0.3																										
AF09187	228.00	228.32	0.3																										
AF09189	287.81	288.50	0.9																										

PASVIK PS-77-36

SAMPL. No.	FROM (M)	TO (M)	int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %
AF09157	74.78	75.00	0.2	44.7	13.1	9.48	8.11	1.61	0.92	13.8	0.23	1.11	0.09	<0.01	9.31	100.6	46	218	13	70	18	427	251	44	71	98	92		
AF09158	94.09	94.95	0.3	36.2	3.79	5.21	34.5	<0.01	<0.01	15.8	0.23	1.03	0.09	0.38	12.6	100.5	<50	58	<50	65	<50	75	1330	138	1430	85	113		
AF09159	114.20	114.81	0.6	35.4	3.24	1.97	26.0	<0.01	<0.01	16.6	0.24	1.03	0.08	0.41	15.8	100.8	22	21	<10	67	24	114	1820	130	1670	155	129		
AF09160	128.89	129.91	0.2	47.4	13.4	8.65	3.50	3.85	1.63	14.4	0.17	2.40	0.35	<0.01	4.64	98.3	53	162	24	298	56	505	8480	32	<10	25	138		

PASVIK PS-77-34

SAMPL. No.	FROM (M)	TO (M)	int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %
AF09152	6.25	6.74	0.5																										
AF09153	26.74	27.00	0.3																										
AF09154	40.05	40.80	0.8																										
AF09155	85.76	86.00	0.2																										
AF09158	95.42	95.83	0.2																										

PASVIK PS-75-29

SAMPL. No.	FROM (M)	TO (M)	int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %
AF09133	9.38	9.80	0.2	48.8	13.5	10.0	6.51	2.86	0.29	14.8	0.23	1.17	0.09	<0.01	0.85	99.0	23	216	30	90	22	96	243	55	84	151	102		
AF09134	22.58	22.71	0.1	44.4	10.5	9.52	7.12	1.00	1.18	19.2	0.22	1.30	0.21	<0.01	2.93	100.3	40	39	17	184	59	282	1810	83	51	35	120		
AF09135	33.04	33.34	0.3	50.3	13.6	8.83	3.20	3.77	0.96	16.2	0.24	2.56	0.41	<0.01	0.39	98.8	36	149	17	358	17	396	2170	33	<10	18	132		
AF09138	38.58	39.00	0.4	44.2	8.48	13.5	9.77	0.45	0.63	18.1	0.18	2.47	0.19	0.03	2.54	98.8	13	85	26	143	17	170	118	64	130	108	97		
AF09137	46.00	46.88	0.7	37.0	0.35	8.08	23.5	<0.01	<0.01	15.2	0.18	1.00	0.08	0.33	13.2	99.9	<10	64	<10	47	29	74	778	85	1030	132	87		
AF09136	54.36	55.00	0.6	41.5	4.07	2.22	25.2	<0.01	<0.01	15	0.15	1.17	0.11	0.42	8.31	98.5	<10	26	<10	73	10	110	1730	120	1750	54	116		
AF09139	70.36	70.88	0.5	50.0	14.8	7.36	2.87	3.84	2.38	16.0	0.04	1.75	0.08	0.04	3.08	100.3	78	137	13	195	<10	864	45300	47	155	411	332		
AF09140	81.00	81.50	0.5	43.2	7.30	2.83	18.3	0.50	0.15	18.9	0.17	1.48	0.11	0.31	8.93	98.2	<10	58	<10	123	22	132	15300	100	1140	142	224		
AF09141	106.04	106.32	0.3	44.0	12.7	10.2	8.74	2.29	0.53	12.7	0.22	1.27	0.08	0.02	8.47	98.7	20	99	<10	63	<10	38	4930	42	96	127	101		
AF09142	129.50	129.85	0.3	41.5	7.83	7.94	17.8	0.03	0.18	17.8	0.20	1.43	0.11	0.27	4.31	99.2	14	55	<10	101	22	34	11300	115	1180	128	170		
AF09143	135.13	135.43	0.3	48.8	16.2	4.33	4.56	3.92	2.75	13.8	0.08	1.55	0.08	0.03	3.47	99.5	117	479	15	181	26	275	30500	26	142	127	182		

PASVIK PS-92-49

SAMPL. No.	FROM (M)	TO (M)	int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	ZO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
WN00175	9.14	14.42	5.3	39.8	11.7	3.82	20.9	<.01	<.01	12.4	.21	.237	.04	.62	16.8	100.3	8	14	<2	28	8	88	1040	88	758	<2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

PASVIK PS-82-41

SAMPL. No.	FROM (M)	TO (M)	int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	ZO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09182	13.55	13.81	0.3	47.1	12.2	9.53	5.05	1.97	.24	17.9	.25	2.02	.15	<.01	2.23	98.7	<10	88	27	131	15	39	2030	48	38	144	130										
AF09183	61.70	61.90	0.2	46.3	12.7	8.96	6.71	2.54	.4	15.5	.22	1.67	.13	<.01	2.63	98.1	<10	117	11	107	31	131	63	50	49	87	112										
AF09184	122.73	122.93	0.2	46.4	13.2	10.7	6.77	2.63	.16	14.6	.25	1.2	.09	<.01	1.82	98.9	11	164	15	75	25	56	89	50	81	126	90										
WN00196	130.54	130.87	0.3	45.0	9.29	10.7	8.56	2.25	1.14	18.0	.18	4.54	.28	<.01	1.30	99.3	36	260	11	204	27	697	390	83	194	166	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
WN00553	136.50	136.82	0.3	47.2	5.56	13.5	11.4	1.03	.25	14.3	.18	2.71	.21	.11	2.85	99.3	4	179	5	156	20	189	<50	59	295	73	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09185	141.10	141.32	0.3	47.4	14.75	14.6	12.3	1.12	.18	12.6	.18	2.1	.18	.11	2.85	98.4	<10	204	<10	140	<50	23	<50	82	332	121	79										
WN00197	143.15	143.27	0.1	46.4	5.04	13.9	12.2	1.17	.43	12.8	.20	2.34	.20	.13	4.30	98.9	12	221	3	128	16	255	82	58	343	71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
WN00198	153.15	153.34	0.2	38.1	3.46	2.22	24.0	<.01	.02	20.1	.22	1.73	.18	.28	7.55	97.9	6	78	<2	110	13	165	349	174	1710	122	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09186	163.10	163.33	0.2	36.1	3.18	4.63	22.7	.05	.02	18.3	.21	1.51	.12	.25	9.08	99.2	13	191	11	128	30	78	<50	153	1870	90	126										
WN00199	173.16	173.32	0.2	37.7	3.14	3.38	23.8	.03	.05	19.1	.22	1.51	.15	.27	11.0	100.4	3	172	<2	94	12	152	380	153	1740	72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09187	183.00	183.30	0.3	35.5	2.77	3.5	25.3	<.01	<.01	17.8	.21	1.33	.11	.25	11.3	98.1	<10	181	<10	118	33	91	222	154	1940	84	110										
WN00200	193.72	193.87	0.2	38.0	3.38	1.86	28.3	<.01	.01	19.3	.21	1.64	.11	.27	9.35	100.6	7	82	<2	101	15	183	102	170	2090	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09189	203.00	203.28	0.3	37.7	2.81	3.17	26.2	.01	<.01	18	.21	1.34	.12	.23	9.54	99.4	15	135	<10	115	18	89	88	154	1950	92	116										
WN00551	213.05	213.15	0.1	39.4	3.15	2.72	25.1	<.01	.03	18.0	.21	1.47	.17	.22	8.70	99.2	3	83	<2	97	14	145	<50	145	1860	121	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09190	223.00	223.25	0.2	37.9	2.84	3.20	26.7	.02	<.01	18.4	.22	1.39	.11	.25	8.85	99.9	18	108	12	90	22	87	<50	154	1940	91	114										
WN00552	233.24	233.35	0.1	38.7	2.80	2.85	25.0	<.01	<.01	19.0	.21	1.43	.12	.28	8.10	98.5	2	70	<2	92	13	110	<50	165	1810	52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09191	263.13	263.31	0.2	48	13.4	11.8	7.48	2.2	.1	12.9	.21	1.09	.08	<.01	1.77	99.1	<10	121	15	85	18	32	430	68	80	108	89										

SULFIDMALM

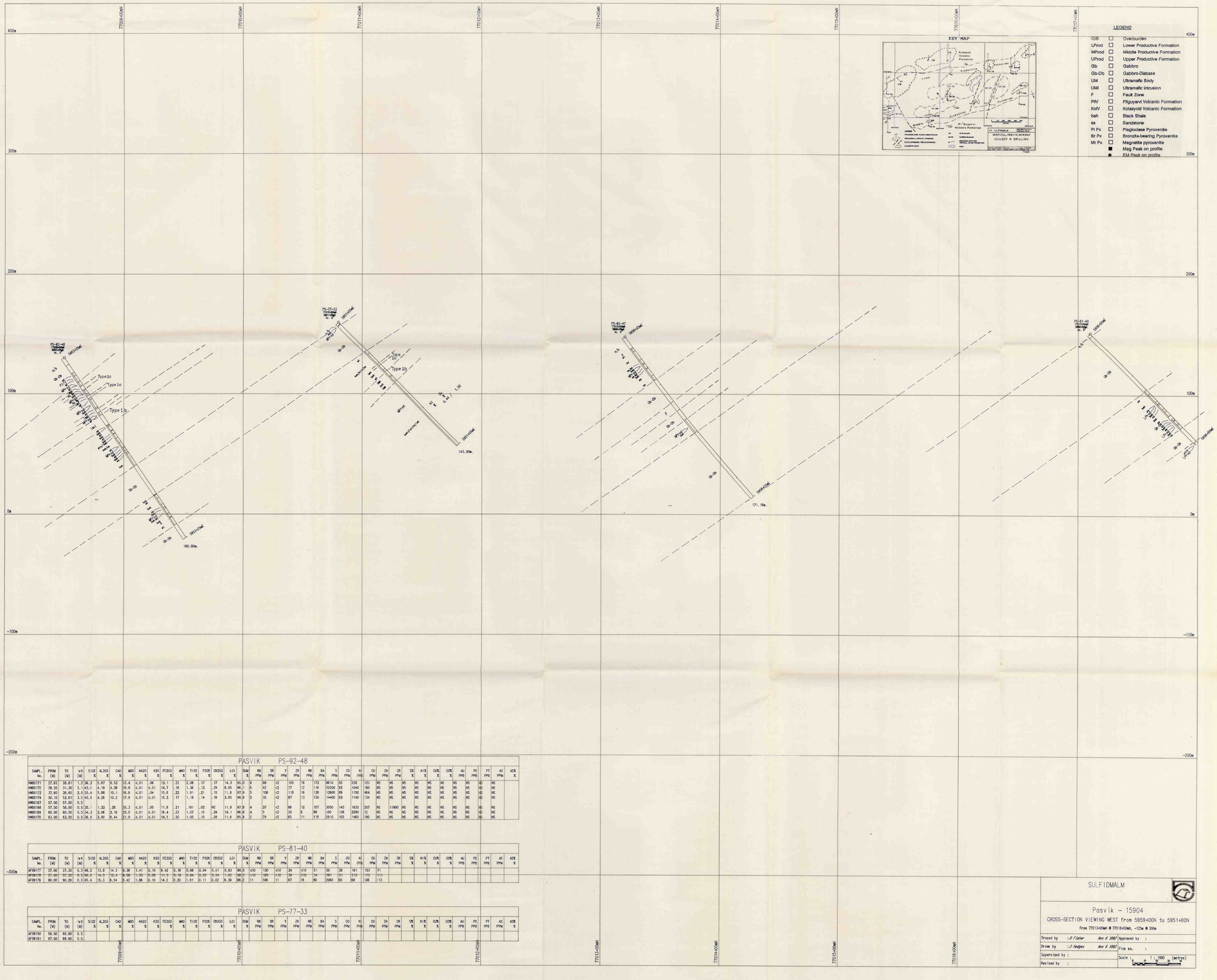
Pasvik – 15904

CROSS-SECTION VIEWING WEST from 5945+50N to 5949+50N

From 7703+00mN @ 7710+50mN, -125m @ 300m

Traced by	: B Fisher	Nov 8 1989	Approved by :
Drawn by	: D Hodges	Nov 8 1989	Plan no. :
Supervised by :			
Revised by :			

Scale 1 : 1000 (metres)



PASVIK PS-92-48

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NM00171	27.62	28.81	1.2	36.3	5.87	9.53	13.4	<.01	.06	13.1	.22	2.08	.17	.17	14.3	95.0	8	98	<2	105	15	173	8610	55	228	120	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NM00172	29.20	31.30	2.1	43.0	4.19	4.39	19.8	<.01	<.01	14.7	.18	1.36	.13	.29	8.05	96.1	6	42	<2	77	12	118	20200	92	1040	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NM00173	37.60	39.60	2.0	35.4	5.88	10.1	16.6	<.01	.04	15.8	.23	1.91	.21	.15	11.6	97.9	5	106	<2	118	16	136	12600	89	1150	464	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NM00174	50.10	53.61	3.5	45.9	4.28	10.2	17.9	<.01	<.01	15.3	.17	1.19	.14	.19	3.85	98.9	2	35	<2	87	13	130	14400	93	1140	134	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NM00187	57.00	57.50	0.5																																		
NM00188	57.50	58.00	0.5	35.1	1.33	.28	35.3	<.01	.05	11.8	.21	.191	.02	NS	11.8	97.8	4	37	<2	66	12	107	3050	143	1930	207	NS	11900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NM00189	60.00	60.50	0.5	34.3	3.06	2.16	25.0	<.01	<.01	16.4	.23	1.07	.10	.34	14.1	96.8	4	5	<2	20	6	68	<50	138	3290	12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NM00170	63.00	63.50	0.5	36.8	3.00	8.44	21.9	<.01	<.01	14.5	.20	1.05	.10	.28	11.6	95.9	2	79	<2	65	11	118	5910	105	1460	190	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

PASVIK PS-81-40

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09177	27.00	27.30	0.3	48.3	13.8	14.3	9.36	1.41	0.10	9.42	0.18	0.66	0.04	0.01	0.83	98.5	<10	130	<10	34	<10	51	50	39	191	153	71										
AF09178	27.00	27.25	0.25	48.6	14.9	12.6	8.08	1.55	0.08	11.2	0.18	0.84	0.05	0.04	1.82	98.5	<10	165	<10	39	<10	24	781	51	215	172	111										
AF09179	90.00	90.29	0.3	45.4	15.3	6.54	8.42	1.86	0.10	14.2	0.20	1.61	0.11	0.02	8.39	98.2	11	106	11	97	16	80	2060	60	69	106	113										

PASVIK PS-77-33

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09150	59.50	60.00	0.5																																		
AF09151	67.50	68.00	0.5																																		

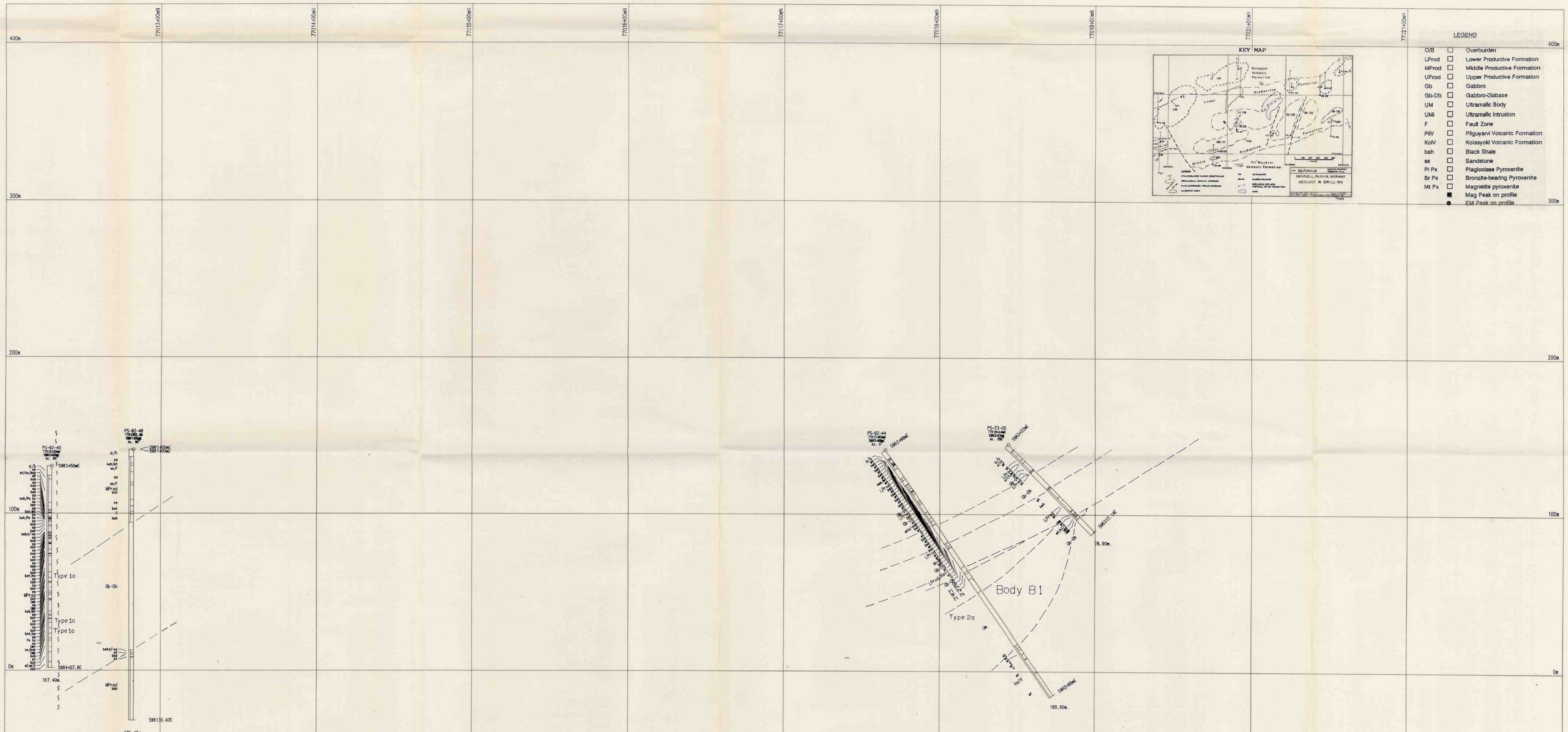
SULFIDMALM

Pasvik – 15904

CROSS-SECTION VIEWING WEST from 5959+00N to 5951+00N

From 7701314+00mN @ 7701816+50mN, -125m @ 300m

Traced by	: D Fisher	Nov 8 1997	Approved by :
Drawn by	: D Hedges	Nov 8 1997	Plan no. :
Supervised by	:		
Revised by	:		Scale : 1 : 1000 (metres)



PASVIK PS-92-45

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00162	92.22	94.80	2.6	38.2	6.53	7.23	16.0	<.01	<.01	15.3	.21	1.60	.13	.13	11.0	96.3	5	104	<2	95	12	113	10900	71	722	83	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00163	97.00	100.00	3.0	46.6	13.6	2.79	3.43	2.86	1.98	19.6	.06	1.64	.08	.03	5.70	98.4	55	113	<2	148	16	521	53500	30	213	112	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00164	126.73	129.83	3.1	38.6	4.88	5.24	19.5	<.01	.04	15.8	.15	1.46	.14	.24	8.10	94.2	5	59	<2	90	15	111	8170	119	2060	647	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00165	134.58	138.58	4.0	42.1	3.95	6.01	18.2	<.01	<.01	13.4	.17	1.17	.12	.22	9.50	94.8	4	81	<2	78	10	110	4910	84	1240	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00166	157.00	160.00	3.0	43.8	13.3	8.53	7.23	1.37	.40	13.1	.18	1.37	.10	.02	9.80	99.2	12	134	<2	70	6	192	2780	41	146	130	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00167	160.00	163.00	3.0	41.1	3.12	4.51	22.2	.02	.02	14.3	.17	.970	.10	.28	8.90	95.7	3	60	<2	64	12	94	6260	107	1370	167	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

PASVIK PS-92-44

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
NW00176	89.32	89.72	0.4	49.8	12.6	8.34	3.57	4.41	.96	15.6	.20	3.86	.44	<.01	1.20	99.0	27	456	23	372	42	719	750	46	44	242	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00156	94.00	94.30	0.3	40.6	6.91	11.0	7.36	.81	.91	21.4	.21	8.67	.23	<.01	.25	98.3	26	191	7	202	29	573	705	78	170	601	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00447	98.00	98.40	0.4	40.6	7.38	11.4	7.54	.85	1.24	21.2	.20	5.73	.22	<.01	1.95	98.3	39	380	3	154	19	615	156	94	261	238	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00157	104.00	104.30	0.3	45.3	5.23	14.9	11.3	.80	1.28	13.1	.17	2.35	.19	.13	5.60	100.3	48	511	4	135	16	452	<50	58	330	389	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00158	114.00	114.30	0.3	38.8	3.83	4.26	22.0	<.01	.08	19.5	.23	1.92	.18	.27	9.30	100.4	5	174	<2	116	16	155	<50	143	1600	105	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00448	119.00	119.40	0.4	36.7	4.00	4.48	22.1	<.01	<.01	19.5	.24	1.95	.19	.23	9.70	99.1	4	161	<2	117	19	186	<50	151	1670	116	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00159	124.00	124.30	0.3	39.0	3.87	3.91	23.1	<.01	<.01	19.2	.22	1.86	.18	.23	8.60	100.2	4	112	<2	113	17	161	<50	139	1690	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00449	129.00	129.40	0.4	36.9	3.49	4.06	22.8	<.01	<.01	18.5	.22	1.79	.17	.23	10.6	98.8	3	162	<2	109	13	157	<50	144	1790	107	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00160	134.00	134.30	0.3	37.7	3.51	4.47	23.0	<.01	<.01	18.5	.21	1.82	.16	.22	10.6	100.2	3	196	<2	113	15	144	<50	143	1750	105	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00450	139.00	139.40	0.4	37.1	3.34	3.90	22.4	<.01	<.01	19.3	.22	2.08	.18	.22	10.1	99.4	8	165	<2	123	17	161	<50	146	1750	81	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
NW00161	144.00	144.30	0.3	39.0	4.02	3.91	22.7	<.01	<.01	18.4	.19	1.95	.17	.23	9.90	100.5	4	176	<2	116	17	152	105	138	1900	72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

PASVIK PS-73-05

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SIO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TIO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09101	60.50	61.00	0.5	39.2	4.47	5.63	20.1	.02	.68	17.2	.21	2.13	.18	.18	7.93	98	30	235	17	173	31	135	<50	141	1550	123	119										
AF09102	61.50	61.73	0.2	42.3	5.27	7.94	17.4	.07	.71	18.9	.21	2.41	.18	.15	4.39	100.	31	154	<10	173	21	154	106	118	1140	163	125										

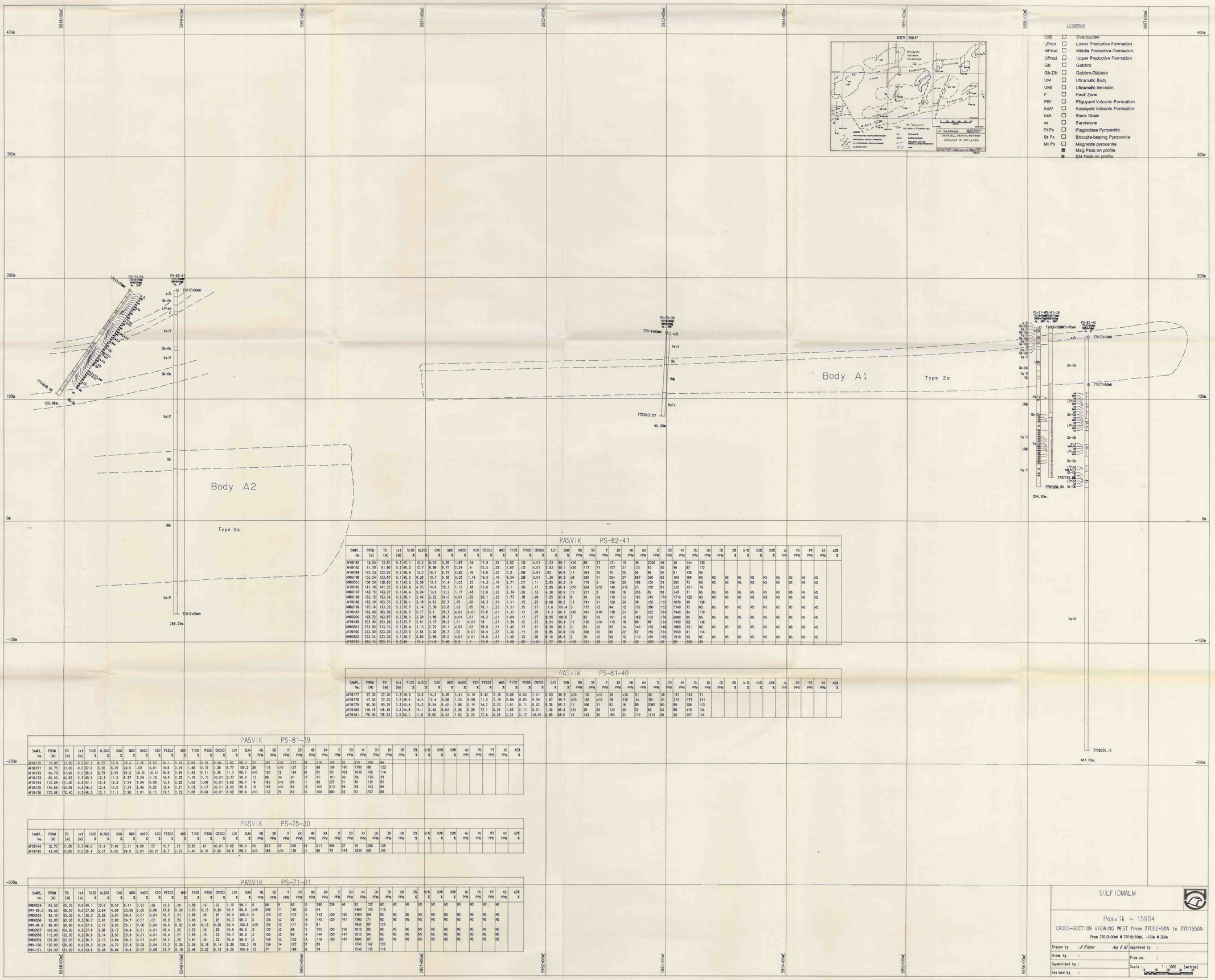
SULFIDMALM

Pasvik – 15904

CROSS-SECTION VIEWING WEST from 5965+00N to 5962+50N

From 77013+00mN @ 77018+50mN, -125m @ 300m

Traced by	: B Fisher	Nov 6 1992	Approved by :
Drawn by	: D Hodges	Nov 6 1992	Plan no. :
Supervised by :			Scale : 1 : 1000 (metres)
Revised by :			



PASVIK PS-82-41

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09182	13.55	13.81	0.3	47.1	12.2	9.53	5.05	1.97	.24	17.9	.25	2.02	.15	<.01	.23	98.7	<10	68	27	131	15	39	2030	48	38	144	130										
AF09183	61.70	61.90	0.2	48.3	12.7	8.96	6.71	2.54	.4	15.5	.22	1.87	.13	<.01	.03	98.1	<10	117	13	107	31	131	63	50	69	87	112										
AF09184	122.73	122.93	0.2	48.4	13.2	10.7	6.77	2.83	.16	14.6	.25	1.2	.098	<.01	.62	96.9	11	164	15	75	25	56	89	50	81	126	90										
XN00186	133.54	133.67	0.1	45.0	9.29	10.7	6.56	2.25	1.14	16.0	.19	4.54	.228	<.01	1.30	99.3	36	260	11	204	27	697	390	83	164	166	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
XN00553	138.50	138.62	0.1	47.2	5.56	13.5	11.4	1.03	.25	14.3	.18	2.71	.21	.11	1.85	99.3	4	179	5	156	20	189	<50	59	295	73	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09185	141.10	141.32	0.2	47.4	4.75	14.8	12.3	1.12	.18	12.6	.18	2.1	.18	.11	2.85	98.4	<10	204	<10	140	23	<50	82	332	121	79											
XN00197	143.15	143.27	0.1	48.4	5.04	13.9	12.2	1.17	.43	12.6	.20	2.34	.20	.13	4.30	98.9	12	221	3	128	18	255	82	58	343	71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
XN00198	153.15	153.34	0.2	38.1	3.46	2.22	24.0	<.01	.02	20.1	.22	1.73	.18	.28	7.55	97.9	6	78	<2	110	13	185	349	174	1710	122	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09186	163.10	163.33	0.2	38.1	3.18	4.63	22.7	.05	.02	18.3	.21	1.51	.12	.25	9.08	98.2	13	191	11	128	30	78	<50	153	1870	90	128										
XN00199	173.18	173.32	0.2	37.7	3.14	3.38	23.8	.03	.05	19.1	.22	1.51	.15	.27	11.0	100.4	3	172	<2	94	12	152	380	153	1740	72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09187	183.00	183.30	0.3	35.5	2.77	3.5	25.3	<.01	<.01	17.8	.21	1.33	.11	.25	11.3	98.1	<10	181	<10	118	33	91	222	154	1940	84	110										
XN00200	193.72	193.87	0.2	38.0	3.36	1.88	26.3	<.01	.01	19.3	.21	1.64	.11	.27	8.55	100.8	7	82	<2	101	15	163	102	170	2090	80	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09189	203.00	203.28	0.3	37.7	2.81	2.17	26.2	.01	<.01	18	.21	1.34	.12	.23	8.54	99.4	15	135	<10	115	18	89	68	154	1950	92	118										
XN00551	213.05	213.15	0.1	39.4	3.15	2.72	25.1	<.01	.03	18.0	.21	1.47	.17	.22	8.70	99.2	3	83	<2	97	14	145	<50	146	1860	121	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09190	223.00	223.15	0.2	37.9	2.84	3.20	26.7	.02	<.01	18.4	.22	1.39	.11	.25	8.85	99.8	16	108	12	90	22	87	<50	154	1940	91	114										
XN00552	233.24	233.35	0.1	38.7	2.80	2.85	25.0	<.01	<.01	19.0	.21	1.43	.12	.28	8.10	98.5	2	70	<2	92	13	110	<50	165	1810	52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AF09191	263.13	263.51	0.4	40	13.4	11.9	9.46	2.2	1.1	10.9	.21	1.05	.08	<.01	.77	99.1	<10	121	15	65	16	32	430	48	80	108	89										

PASVIK PS-81-40

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09177	27.00	27.30	0.3	48.3	13.8	14.3	9.36	1.41	0.10	9.42	0.16	0.66	0.04	0.01	0.93	98.5	<10	130	<10	34	<10	51	50	39	191	153	71										
AF09178	57.00	57.25	0.2	48.6	14.5	12.4	9.08	1.55	0.08	11.5	0.18	0.84	0.05	0.04	0.62	98.5	<10	165	<10	39	210	34	391	51	215	172	111										
AF09179	90.00	90.29	0.3	43.4	15.3	8.54	8.42	1.86	0.10	14.2	0.20	1.61	0.11	0.02	0.39	98.2	11	106	11	97	18	80	2080	80	89	106	113										
AF09180	146.18	146.45	0.3	44.8	14.1	9.49	8.63	2.28	0.28	17.1	0.26	1.98	0.11	0.01	1.39	98.4	<10	78	35	120	30	52	83	53	88	<10	134										
AF09181	176.00	176.53	0.5	50.1	11.6	8.60	5.43	1.82	0.23	17.4	0.26	2.24	0.17	<0.01	0.85	98.6	19	143	30	184	33	110	1310	58	28	197	124										

PASVIK PS-81-39

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09170	30.80	31.00	0.2	47.2	8.27	13.6	10.4	1.35	0.53	14.1	0.18	2.89	0.19	0.08	1.83	98.1	23	287	<10	177	38	118	100	55	270	189	94										
AF09171	30.75	31.00	0.2	37.6	3.26	3.29	24.5	.02	<.01	19.6	0.24	1.45	0.12	0.26	9.77	100.2	28	116	<10	127	21	69	106	160	1790	86	123										
AF09172	50.73	51.00	0.3	35.9	2.79	2.95	25.2	<0.01	<0.01	18.5	0.24	1.43	0.11	0.26	11.3	98.7	<10	120	12	124	26	85	131	162	1830	108	114										
AF09173	80.52	80.82	0.3	45.5	12.3	11.5	6.27	3.04	0.15	14.8	0.22	1.16	0.10	<0.01	3.77	98.9	13	86	14	91	15	47	161	49	84	176	81										
AF09174	110.68	111.00	0.3	47.1	13	12.3	7.54	1.94	0.09	13.4	0.22	1.02	0.08	<0.01	1.62	98.7	16	160	<10	88	11	45	227	51	80	115	83										
AF09175	140.89	140.99	0.3	48.0	13.4	10.6	7.34	2.49	0.20	13.4	0.21	1.02	0.07	<0.01	2.00	98.8	19	167	<10	69	13	102	213	54	65	103	89										
AF09176	170.06	170.40	0.3	48.3	13.1	11.1	7.28	1.91	0.15	13.5	0.22	1.08	0.08	<0.01	1.62	98.4	<10	137	29	87	15	100	890	52	87	297	98										

PASVIK PS-75-30

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
AF09144	30.73	31.00	0.3	49.0	12.4	7.48	3.31	4.80	.57	15.7	.21	3.28	.67	<0.01	0.62	98.0	25	823	23	406	54	511	956	37	16	208	138										
AF09145	43.08	43.60	0.5	38.4	3.31	4.05	24.9	0.01	<0.01	16.7	0.23	1.40	0.16	0.20	10.8	98.2	<10	168	<10	136	21	96	73	143	1830	68	105										

PASVIK PS-71-01

SAMPL. No.	FROM (M)	TO (M)	Int (M)	SiO2 %	AL2O3 %	CAO %	MGO %	NA2O %	K2O %	FE2O3 %	MNO %	TiO2 %	P2O5 %	CR2O3 %	LOI %	SUM %	RB PPM	SR PPM	Y PPM	ZR PPM	NB PPM	BA PPM	S PPM	CO PPM	NI PPM	CU PPM	ZN PPM	CR PPM	S% %	NI% %	CU% %	CO% %	AU PPB	PD PPB	PT PPB	AS PPM	AS% %
XN00554	65.50	65.55	0.0	49.1	12.6	8.57	6.41	3.53	.28	15.5	.24	1.56	.13	.02	.10	99.1	6	88	8	63	10	180	336	46	93	137	NS	NS	NS	NS	NS						
XN9-49.5	89.50	89.50	0.0	37.50	3.64	4.98	23.00	0.05	0.06	17.6	0.20	1.20	0.15	0.20	10.5	99.9	<10	256	11	140	35	64			1460	120	113										
XN00555	92.15	92.30	0.1	38.3	3.28	3.01	24.4	<.01	<.01	18.7	.21	1.68	.16	.25	10.0	100.0	5	123	<2	107	5	143	<50	150	1780	68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
XN00556	92.00	92.30	0.3	36.7	2.91	2.98	24.7	<.01	.02	18.2	.23	1.45	.14	.25	10.7	98.3	5	129	<2	97	4	145	<50	161	1780	71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
XN9-86.9	96.90	96.90	0.0	37.9	3.17	3.02	25.1	0.06	0.04	18.5	0.22	1.46	0.13	0.26	10.4	100.6	<10	154	13	111	15	81			1830	87	125										
XN00557	102.00	102.30	0.3	37.8	3.06	3.17	24.4	<.01	<.01	18.4	.22	1.52	.15	.25	10.6	99.6	3	132	<2	98	5	122	<50	150	1810	65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
XN00558	112.00	112.30	0.3	38.9	3.14	3.50	23.9	<.01	<.01	18.4	.21	1.63	.15	.23	10.7	98.8	3	152	<2	97	4	148	<50	147	1810	84	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
XN00559	122.00	122.30	0.3	36.5	3.11	3.64	24.3	<.01	<.01	18.2	.20	1.61	.15	.22	10.9	98.8	3	146	<2	105	4	119	<50	147	1900	87	NS	NS	NS	NS	NS						
XN9-130	130.00	130.00	0.0	39.3	4.24	4.72	22.6	0.05	0.04	17.2	0.20	2.09	0.18	0.14	9.39	100.3	18	134	14	177	27	89			1740	147	120										
XN9-131.	131.50	131.50	0.0	43.6	5.38	8.69	19.8	0.07	0.08	17.7	0.18	2.46	0.22	0.12	4.00	100.8	13	77	11	198	36	79			1540	135	116										

SULFIDMALM

Pasvik – 15904

CROSS-SECTION VIEWING WEST from 7702+50N to 7701550N

From 7701340mN @ 7701815mN, -125m @ 300m

Traced by	: B Fisher Aug 5 82	Approved by	:
Drawn by	:	Plate no.	:
Supervised by	:	Scale	: 1 : 1000 (metres)
Revised by	:		