

DETAILED LOG

Hole Number: ES2005-21

Units: METRIC

Project Name:	Norway - Espedalen	Primary Coordinates	Grid: UTM84-32N	Destination Coordinates	Grid: UTM:	Collar Dip:	-46.00
Project Number:	201	North:	6801243.30	North:	61.34	Collar Az:	230.00
Location:	Surface	East:	535221.30	East:	9.66	Length:	98.00 (m)
		Elev:	969.48	Elev:	969.48	Start Depth:	0.00 (m)
Date Started:	Mar 12, 2005	Collar Survey:	Y	Plugged:	N	Contractor:	Arctic Drilling A/S
Date Completed:	Mar 14, 2005	Multishot Survey:	N	Hole Size:	TT46	Core Storage:	Strand Fjellstue
Logged By:	Trevor Blair	Pulse EM Survey:	N	Casing:	Left in Hole, capped	Final Depth:	98.00 (m)

Comments: Purpose: Test 25m up-dip toe on mineralization intersected in hole ES2005-20 (2.81%Ni, 1.11%Cu, 0.08%Co / 10.17m (65.43-75.06m)).

Result: Intersected 10% sulphides (po-pn-cpy) within an altered ultramafic from 57.60-63.45m (5.85m). Sulphides occur as cm to dm scale remobilized stringers, semi-massive veinlets and patchy sulphides.

Assays: 1.09%Ni, 0.63%Cu, 0.04%Co / 5.85m (57.60-63.45m)

Borehole UTEM: No survey -> hole blocked.

Sample Averages

Average Type	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
WEIGHTED	51.65	63.45	11.80	0.6729	0.3857	0.0308
WEIGHTED	57.60	63.45	5.85	1.0919	0.6340	0.0447

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	3.60	C, Casing							

Hole Number: ES2005-21

Units: METRIC

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
3.60	12.30	<p>4s, Sausseritized/Tectonized Anorthosite</p> <p>Medium grained, well foliated, grey-white-green, heterogenous, non-magnetic, sausseritized anorthosite composed of varying amounts of plagioclase, chlorite, sericite, epidote, fuchsite, hematite. This unit is intermixed with dm to m scale mafic intrusives which appear as fine grained, green-grey, non-magnetic, well foliated, unmineralized intrusions (dykes/sills).</p> <p>This unit is unmineralized.</p> <p>The lower contact of this unit is sharp at 75 along a chilled margin (downhole mafic intrusive).</p> <p>Structure</p> <p>8.60 - 8.61 : S1 First Foliation, 45 Deg to CA</p> <p>RQD</p> <p>3.60 - 6.00 : 86.00 % RQD 100.00 % Core</p> <p>6.00 - 9.00 : 90.00 % RQD 100.00 % Core</p> <p>9.00 - 12.00 : 85.00 % RQD 100.00 % Core</p> <p>12.00 - 15.00 : 95.00 % RQD 100.00 % Core</p> <p>MINOR INTERVALS:</p> <p>Minor Interval:</p> <p>4.65 - 5.15 MD, Mafic Dike</p> <p>The upper and lower contacts of this unit are sharp at 85 and 60 degrees to the ca, respectively.</p> <p>Minor Interval:</p> <p>9.6 - 10.2 MD, Mafic Dike</p> <p>The upper and lower contacts of this unit are sharp at 40 and 80 degrees to the ca, respectively.</p>							

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Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
12.30	27.25	<p>MD, Mafic Dike</p> <p>Fine grained, well foliated, dark green, homogenous, non-magnetic mafic intrusive composed of pyroxene, biotite and chlorite. This unit contains <5% mm scale quartz +- carbonate microveinlets parallelling foliation planes (~65 degrees to the ca).</p> <p>This unit contains trace disseminated, fine grained pyrrhotite.</p> <p>The lower contact of this unit is sharp at 50 degrees to the ca.</p> <p>Structure</p> <p>15.30 - 15.31 : S1 First Foliation, 65 Deg to CA</p> <p>RQD</p> <p>15.00 - 18.00 : 90.00 % RQD 100.00 % Core</p> <p>18.00 - 21.00 : 95.00 % RQD 100.00 % Core</p> <p>21.00 - 24.00 : 87.00 % RQD 100.00 % Core</p> <p>24.00 - 27.00 : 100.00 % RQD 100.00 % Core</p> <p>27.00 - 30.00 : 100.00 % RQD 100.00 % Core</p> <p>MINOR INTERVALS:</p> <p>Minor Interval:</p> <p>23.25 - 25.15 4s, Sausseritized/Tectonized Anorthosite</p> <p>The upper and lower contacts of this unit are sharp at 65 and 60 degrees to the ca, respectively.</p>							

Hole Number: ES2005-21

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
27.25	57.60	4s, Sausseritized/Tectonized Anorthosite	PG03781	50.65	51.65	1.00	0.1100	0.0250	0.0100
		Medium grained, well foliated, grey-white-green, heterogenous, non-magnetic, sausseritized anorthosite composed of varying amounts of plagioclase, chlorite, sericite, epidote, fuchsite, hematite. This unit is intermixed with dm to m scale mafic intrusives which appear as fine grained, green-grey, non-magnetic, well foliated, unmineralized intrusions (dykes/sills). This unit contains several cm scale massive sulphide veinlets proximal to the lower contact. See mineralization tab for intervals. The lower contact of this unit is sharp but irregular along remobilized sulphide veinlets. Mineralization 51.75 - 51.90 : Po Pyrrhotite, VN Veins, 30% 53.85 - 54.00 : Po Pyrrhotite, VN Veins, 100% Po-pn-cpy. Upper and lower contacts sharp at 60 and 65 degrees tca, respectively. Structure 29.70 - 29.71 : S1 First Foliation, 60 Deg to CA 46.30 - 46.31 : S1 First Foliation, 80 Deg to CA RQD 30.00 - 33.00 : 97.00 % RQD 100.00 % Core 33.00 - 36.00 : 100.00 % RQD 100.00 % Core 36.00 - 39.00 : 58.00 % RQD 100.00 % Core 39.00 - 42.00 : 74.00 % RQD 100.00 % Core 42.00 - 45.00 : 67.00 % RQD 100.00 % Core 45.00 - 48.00 : 87.00 % RQD 100.00 % Core 48.00 - 51.00 : 94.00 % RQD 100.00 % Core 51.00 - 54.00 : 65.00 % RQD 100.00 % Core 54.00 - 57.00 : 72.00 % RQD 100.00 % Core 57.00 - 60.00 : 88.00 % RQD 100.00 % Core	PG03782	51.65	51.95	0.30	1.6000	0.9900	0.0800
			PG03783	51.95	52.80	0.85	0.0250	0.0250	0.0100
			PG03784	52.80	53.80	1.00	0.0250	0.0250	0.0100
			PG03785	53.80	54.10	0.30	2.4700	0.9400	0.0800
			PG03786	54.10	55.60	1.50	0.0800	0.0250	0.0100
			PG03787	55.60	56.60	1.00	0.0250	0.0700	0.0100
			PG03788	56.60	57.60	1.00	0.1400	0.1100	0.0100

Hole Number: ES2005-21

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
57.60	63.45	6, Undivided Ultramafic Intrusive	PG03789	57.60	58.00	0.40	3.7900	0.6000	0.1700
		Fine grained, dark grey to green, non- to weakly magnetic, heterogenous ultramafic unit intercalated with dm scale horizons of mafic intrusives both of which are intermixed with cm to dm scale partially digested anorthosite xenoliths. Dog's breakfast!	PG03790	58.00	59.20	1.20	0.7300	0.3500	0.0300
		This unit contains varying degrees of mineralization from fine grained disseminations to cm scale semi-massive stringers, which contain rounded to semi-rounded ultramafic clasts. Sulphides generally are localized within dm scale horizons parallel to foliation planes. Patchy, remobilized sulphides occur proximal to anorthosite xenoliths. The lower contact of this unit is sharp along a broken rusty massive sulphide veinlet (groundwater infiltration?). Mineralization 62.90 - 63.45 : Po Pyrrhotite, STR Stringers, 45% semi-massive, stringers, patchy 57.60 - 58.00 : Po Pyrrhotite, SM Semi-Massive, 65% Brecciated (auto-) semi-massive sulphides 58.55 - 58.70 : Po Pyrrhotite, STR Stringers, 30% Foliation parallel stringers 59.25 - 59.45 : Po Pyrrhotite, MG Medium Grained, 25% Patchy, medium grained sulphides 60.60 - 60.70 : Po Pyrrhotite, CG Coarse Grained, 25% Foliation parallel wispy to coarse grained sulphides 62.10 - 62.40 : Po Pyrrhotite, STR Stringers, 20% remobilized stringers (irregular angles to the ca) RQD 60.00 - 63.00 : 83.00 % RQD 100.00 % Core 63.00 - 66.00 : 87.00 % RQD 100.00 % Core	PG03791	59.20	60.15	0.95	1.3600	0.6300	0.0600
			PG03792	60.15	61.00	0.85	0.7600	0.6000	0.0100
			PG03793	61.00	62.10	1.10	0.1400	0.2300	0.0100
			PG03794	62.10	63.45	1.35	1.4100	1.2500	0.0600

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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
63.45	98.00	4s, Sausseritized/Tectonized Anorthosite Medium grained, well foliated, grey-white-green, heterogenous, non-magnetic, sausseritized anorthosite composed of varying amounts of plagioclase, chlorite, sericite, epidote, fuchsite, hematite. This unit is intermixed with dm to m scale mafic intrusives which appear as fine grained, green-grey, non-magnetic, well foliated, unmineralized intrusions (dykes/sills). This unit is unmineralized. The lower contact of this unit is unknown as the hole was shutdown. Structure 66.30 - 66.31 : S1 First Foliation, 60 Deg to CA 88.10 - 88.11 : S1 First Foliation, 70 Deg to CA RQD 66.00 - 69.00 : 81.00 % RQD 100.00 % Core 69.00 - 72.00 : 100.00 % RQD 100.00 % Core 72.00 - 75.00 : 51.00 % RQD 100.00 % Core 75.00 - 78.00 : 89.00 % RQD 100.00 % Core 78.00 - 81.00 : 88.00 % RQD 100.00 % Core 81.00 - 84.00 : 92.00 % RQD 100.00 % Core 84.00 - 87.00 : 100.00 % RQD 100.00 % Core 87.00 - 90.00 : 97.00 % RQD 100.00 % Core 90.00 - 93.00 : 91.00 % RQD 100.00 % Core 93.00 - 96.00 : 82.00 % RQD 100.00 % Core 96.00 - 98.00 : 100.00 % RQD 100.00 % Core MINOR INTERVALS: Minor Interval: 82.7 - 84.3 MD, Mafic Dike The upper and lower contacts of this unit are sharp at 70 and 40 degrees to the ca, respectively. Minor Interval: 88.4 - 93.8 MD, Mafic Dike The upper contact of this unit is irregular at 25 degrees. The lower contact of this unit is located within broken core although core axis angles proximal to contact are at 60 degrees to the ca.	PG03795	63.45	64.50	1.05	0.0250	0.0250	0.0100

Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG03781	50.65	51.65	0.1100	0.0250	0.0100
PG03782	51.65	51.95	1.6000	0.9900	0.0800
PG03783	51.95	52.80	0.0250	0.0250	0.0100

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Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG03784	52.80	53.80	0.0250	0.0250	0.0100
PG03785	53.80	54.10	2.4700	0.9400	0.0800
PG03786	54.10	55.60	0.0800	0.0250	0.0100
PG03787	55.60	56.60	0.0250	0.0700	0.0100
PG03788	56.60	57.60	0.1400	0.1100	0.0100
PG03789	57.60	58.00	3.7900	0.6000	0.1700
PG03790	58.00	59.20	0.7300	0.3500	0.0300
PG03791	59.20	60.15	1.3600	0.6300	0.0600
PG03792	60.15	61.00	0.7600	0.6000	0.0100
PG03793	61.00	62.10	0.1400	0.2300	0.0100
PG03794	62.10	63.45	1.4100	1.2500	0.0600
PG03795	63.45	64.50	0.0250	0.0250	0.0100