DETAILED LOG

Hole Number: ES08-108 Units: METRIC

Project Name:	Norway - Espedalen	Primary Coordinates	Grid: UTM84-32N	Destination Coordinates	Grid: UTM:	Collar Dip:	-90.00
Project Number:	201	North:	6804681.00	North:	61.37	Collar Az:	230.00
Location:	Surface	East:	534418.00	East:	9.64	Length:	200.01 (m)
		Elev:	727.00	Elev:	727.00	Start Depth:	0.00 (m)
Date Started:	Feb 16, 2008	Collar Survey:	N	Plugged:	N	Contractor:	Arctic Drilling A/S	Final Depth:	200.01 (m)
Date Completed:	Feb 19, 2008	Multishot Survey:	N	Hole Size:	BQ	Core Storage:	tyristrand		
Logged By:	awnor	Pulse EM Survey:	N	Casing:	Pulled				

Comments: Hole drilled to test geophysical plate p_167

Result:
Geophysical plate p_167 is explained by ultramafic intrusion from 35.15-53.85 that contained 5-15% fg disseminated Po/Cpy and probably vfg Pn.

Sample Averages

Average Type	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
WEIGHTED	35.15	53.85	18.70	0.3253	0.1225	0.0265
WEIGHTED	46.00	51.10	5.10	0.4581	0.1649	0.0365

Detailed Lithology

From (m)	To (m)	Lithology	Assay Data: Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	11.70	O/B, Overburden							
11.70	22.15	ANOR, Anorthosite White-grey-green. Fg to mg. Very heterogenous with localy homogenous sections. Strongly deformed and sheared 55-65 dtca. Minor epidote and chlorite alteration as well as very local v thin fuchsite bands. Crosscut by thin mafic dykes. The contacts to the mafic dykes are highly convoluted but not faulted within the anorthosite. Sporadic dm wide grey silicified sections. Not mineralized or magnetic. MINOR INTERVALS: Minor Interval: 12.9 - 13.79 MD, Mafic Dike Green., fg, massive, homogenous. Sharp upper and lowe contact 75 dtca. Not mineralized.								
22.15	27.01	MD, Mafic Dike Typical thin mafic dyke. Green, fg, homoegenous and weakly foliated 65-70 dtca. Almost medium grained in centre. Not mineralized or magnetic. Sharp upper and lower contacts roughly 75 dtca.							

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Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
27.01	35.15	ANOR, Anorthosite As above cut by thick mafic dyke. White-grey-green. Fg to mg. Very heterogenous with localy homogenous sections. Strongly deformed and sheared 55-65 dtca. Minor epidote and chlorite alteration as well as very local v thin fuchsite bands. Crosscut by thin mafic dykes. The contacts to the mafic dykes are highly convoluted but not faulted within the anorthosite. Sporadic dm wide grey silicified sections. Not mineralized or magnetic. MINOR INTERVALS: Minor Interval: 34.64 - 35.15 MD, Mafic Dike Green. fg. homogenous. weakly foliated @65 dtca. Not mineralized. Typical md. Not magnetic. Just above ultramafic intrusion. Strongly defomred and convoluted anorthosite at upper contact and lower contact to UM is lost in faulted core.	PG05863	33.00	34.00	1.00	0.0090	0.0090	0.0030
			PG05864	34.00	34.64	0.64	0.0020	0.0025	0.0005
			PG05865	34.64	35.15	0.51	0.0120	0.0150	0.0040
35.15	53.83	UM, Ultramafic Ultramfic/pyroxenite black, mg with cg oikocrysts, homogenous. Almost massive. 5% talc veinlets. Strongly magnetic with vfg magnetite commonly associated with diss sulphides. Unit is strongly brecciated and faulted from 35.2-39.3 m with 0.60m of lost core. Strongly talcose and serpentinized and diss sulphides have been partly remobilized to adjoining fractures and faults. Unit is mineralized with 7% (+/-2% and at most very locally 15%) vfg disseminated Po and lesser amounts of Cpy. No Pn visible. Locally when sulphides exceed 10-12% sulphides are almost net-textured. Contains ~3-5% v thin veinlets with remobilized Po and Cpy in equalr parts. Structure 35.20 - 39.43 strongly faulted/brecciated/broken core	PG05866	35.15	36.00	0.85	0.2830	0.0760	0.0220
			PG05867	36.00	37.30	1.30	0.1780	0.0650	0.0150
			PG05868	37.30	38.00	0.70	0.2180	0.1450	0.0180
			PG05869	38.00	39.30	1.30	0.2500	0.0590	0.0190
			PG05870	39.30	40.00	0.70	0.3180	0.1060	0.0250
			PG05871	40.00	41.00	1.00	0.2720	0.0950	0.0230
			PG05872	41.00	42.00	1.00	0.2510	0.0820	0.0210
			PG05873	42.00	43.00	1.00	0.2490	0.1140	0.0210
			PG05874	43.00	44.00	1.00	0.3320	0.1370	0.0290
			PG05875	44.00	45.00	1.00	0.3980	0.1280	0.0330
			PG05876	45.00	46.00	1.00	0.3960	0.1050	0.0310
			PG05878	46.00	47.00	1.00	0.4990	0.2470	0.0410
			PG05879	47.00	48.00	1.00	0.4130	0.1110	0.0340
			PG05881	48.00	49.10	1.10	0.4760	0.1360	0.0370
			PG05882	49.10	49.75	0.65	0.4180	0.2400	0.0330
			PG05883	49.75	50.40	0.65	0.4980	0.1390	0.0390
			PG05884	50.40	51.10	0.70	0.4360	0.1240	0.0340
			PG05885	51.10	52.10	1.00	0.3080	0.1720	0.0250
			PG05886	52.10	53.00	0.90	0.1210	0.1070	0.0120
			PG05887	53.00	53.85	0.85	0.3060	0.1400	0.0270
53.83	72.84	MD, Mafic Dike Typical thin mafic dyke. Green, fg and mg within centre. homoegenous and weakly foliated 65-70 dtca. Not mineralized and very weaky magnetism locally (vfg Po or tr. magnetite). Sharp upper contact with mineralized UM above and gradational intercalated lower contact over 0.75m to anor below. 5% v thin crosscutting white veinlets.	PG05888	53.85	54.50	0.65	0.0080	0.0120	0.0030
			PG05889	54.50	55.00	0.50	0.0030	0.0090	0.0030
			PG05890	55.00	55.75	0.75	0.0020	0.0100	0.0030

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Units: METRIC

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
72.84	106.95	ANOR, Anorthosite White-Grey-green. Fg to mg. Very heterogenous with localy homogenous sections. Weakly deformed @65 dtca to locally massive. Weak to moderate epidote and chlorite alteration throughout. Almost pervasive grey silicification throughout. Tr fg interstitial Py locally. Not magnetic. Crosscut by several thin mafic dykes (see sub-litho) MINOR INTERVALS: Minor Interval: 96.02 - 98.52 MD, Mafic Dike Minor Interval: 98.52 - 101.02 MD, Mafic Dike Mafic to ultramafic. Dark green to black. Fg. Homogenous. Moderately magnetic. Mineralized with 0.5% v thin pyritic veinlets. Weak to moderate chlorite alteration. Very sharp, irregular upper and lower contact. Numerous breaks with talcose and chloritized coatings.							
106.95	145.42	DIOR, Diorite Diorite to quartz diorite. Grey to dark grey. Cg. Massive. Equigranular. Homogenous intrusion. Contains ~45-50% cg to vcg black grains of amphibole which also occur in 5-10cm wide clots, 40-45% cg plagioclase. ~3-5% chlorite and epidote (amphibole alt), and 3-5% fg to mg grains of interstitial quartz. Not magnetic. Mineralized with 1-2% fg diss Py and Po locally. ~3% 1-3cm wide quartz veins. Upper contact is cery sharp and lower contact is sharp but shows displays a substantial grain size change to vfg to fg over the last 0.75m.							
145.42	156.42	MD, Mafic Dike Green. Fg. Homogenous. Massive. Not mineralized and magnetic.. Sharp upper contact ~55 dtca and lower contact ~50-55dtca. Sporadic 5-10 cm rafts of white, vcg anorthosite. One large inclusion from 153.83-154.5m. 2% v thin crosscutting veinlets.							

DETAILED LOG

Hole Number: ES08-108

Units: METRIC

Detailed Lithology

From (m)	To (m)	Lithology
156.42	200.00	ANOR, Anorthosite Very similar to abive anor. Grey-green. Fg to mg. Very heterogenous with localy homogenous sections. Weakly deformed @65 dtca to locally massive. Some dm to m wide intervals have weak brecciation texturess. Moderate epidote and chlorite alteration throughout. Almost pervasive grey silicification throughout. Tr fg interstitial Py locally. Not magnetic.. Mineralization 169.87 - 170.13 : CP Chalcopyrite, STR Stringers, 1% fg Cpy associated with Po as well as bleeby accumulations of magnetite 169.87 - 170.13 : PO Pyrrhotite, STR Stringers, 3% fg Po within thin mafic dyke? Alteration 160.00 - 161.55 :CHL Chlorite, P Pervasive, S Strong 160.00 - 161.55 :EP Epidote, P Pervasive, S Strong semi-pervasive chlorite and epidote alteration. May be associated with thin dyke MINOR INTERVALS: Minor Interval: 187.33 - 193.1 MD, Mafic Dike Green/dark green. fg that increases to mg in centre. masssive, homogenous. Mainly plagioclase, epidote, and chlorite. Not magnetic or mineralized. Sharp upper and lower cts 50 dtca. Inclusions of anorthosite from 191.6-191.72 and 192.00-192.00m
200.00	200.01	EOH, End of Hole

Assay Data

Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
PG05891	169.37	169.87	0.50	0.0020	0.0025	0.0005
PG05892	169.87	170.17	0.30	0.0120	0.0220	0.0070
PG05893	170.17	170.66	0.49	0.0070	0.0070	0.0010

Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type ASSAY					
PG05863	33.00	34.00	0.0090	0.0090	0.0030
PG05864	34.00	34.64	0.0020	0.0025	0.0005
PG05865	34.64	35.15	0.0120	0.0150	0.0040
PG05866	35.15	36.00	0.2830	0.0760	0.0220
PG05867	36.00	37.30	0.1780	0.0650	0.0150
PG05868	37.30	38.00	0.2180	0.1450	0.0180
PG05869	38.00	39.30	0.2500	0.0590	0.0190
PG05870	39.30	40.00	0.3180	0.1060	0.0250
PG05871	40.00	41.00	0.2720	0.0950	0.0230
PG05872	41.00	42.00	0.2510	0.0820	0.0210
PG05873	42.00	43.00	0.2490	0.1140	0.0210
PG05874	43.00	44.00	0.3320	0.1370	0.0290

Hole Number: ES08-108

Units: METRIC

Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type ASSAY					
PG05875	44.00	45.00	0.3980	0.1280	0.0330
PG05876	45.00	46.00	0.3960	0.1050	0.0310
PG05878	46.00	47.00	0.4990	0.2470	0.0410
PG05879	47.00	48.00	0.4130	0.1110	0.0340
PG05881	48.00	49.10	0.4760	0.1360	0.0370
PG05882	49.10	49.75	0.4180	0.2400	0.0330
PG05883	49.75	50.40	0.4980	0.1390	0.0390
PG05884	50.40	51.10	0.4360	0.1240	0.0340
PG05885	51.10	52.10	0.3080	0.1720	0.0250
PG05886	52.10	53.00	0.1210	0.1070	0.0120
PG05887	53.00	53.85	0.3060	0.1400	0.0270
PG05888	53.85	54.50	0.0080	0.0120	0.0030
PG05889	54.50	55.00	0.0030	0.0090	0.0030
PG05890	55.00	55.75	0.0020	0.0100	0.0030
PG05891	169.37	169.87	0.0020	0.0025	0.0005
PG05892	169.87	170.17	0.0120	0.0220	0.0070
PG05893	170.17	170.66	0.0070	0.0070	0.0010