

Hole Number: ES08-134

Units: METRIC

Project Name: Norway - Espedalen	Primary Coordinates Grid: UTM84-32N	Destination Coordinates Grid: UTM:	Collar Dip: -80.00
Project Number: 201	North: 6800925.00	North: 61.34	Collar Az: 230.00
Location: Surface	East: 536094.00	East: 9.67	Length: 332.01 (m)
	Elev: 943.00	Elev: 943.00	Start Depth: 0.00 (m)
Date Started: Feb 04, 2008	Collar Survey: N	Plugged: N	Contractor: Arctic Drilling A/S
Date Completed: Feb 11, 2008	Multishot Survey: N	Hole Size: BQ	Core Storage: Tyrstrand
Logged By: awnor	Pulse EM Survey: N	Casing: Left in Hole	Final Depth: 332.01 (m)

Comments: To test the southeast extension of Stormyram downdip of ES2005-30 or ES2006-55

Results:

Only significant mineralization was encountered in a thin ultramafic dyke. Mineralized consisted of approximately 10% vfg disseminated Po and Pn from 74.54-75.25m hosted within the VFG ultramafic dyke. The dyke intruded and less mafic and deformed intrusive unit.

Sample Averages

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	8.60	CAS, Casing							
8.60	23.95	ANOR, Anorthosite Fine to medium grained, well foliated, grey-white-green, heterogenous, non-magnetic, sausseritized anorthosite composed of varying amounts of plagioclase, chlorite, sericite, epidote, fuchsite. Some local alteration sections have talc-rich veinlets. Sections of anorthosite closer to mafic dykes have an abundance of chlorite. Well foliated @70-75 dtca.							
23.95	28.51	MD, Mafic Dike Green, fg, homogenous and weakly foliated. Sharp contacts @70 dtca. Not mineralized homogenous unit. Small inclusion of heterogenous anorthosite from 44.85-45.53m. Anorthositic raft from 27.82-28.02m.							
28.51	41.42	ANOR, Anorthosite Fine to medium grained, well foliated, grey-white and minor green, heterogenous, non-magnetic, sausseritized anorthosite composed of varying amounts of plagioclase, sericite, epidote, fuchsite. Different from overlying anorthosite with less amounts of chlorite. Sections of anorthosite closer to mafic dykes have an abundance of chlorite. Well foliated @70-75 dtca.							
41.42	51.02	MD, Mafic Dike Green, fg, homogenous, weakly foliated @75-80dtca. Not mineralized. Sharp upper and lower contacts ~75 dtca.							
51.02	60.83	ANOR, Anorthosite Fine to medium grained, well foliated, grey-white and minor green, heterogenous, non-magnetic, sausseritized anorthosite composed of varying amounts of plagioclase, sericite, epidote, fuchsite. Different from overlying anorthosite with less amounts of chlorite. Sections of anorthosite closer to mafic dykes have an abundance of chlorite. Well foliated @70-75 dtca. MINOR INTERVALS: Minor Interval: 55.65 - 58.69 MD, Mafic Dike	PG05773	59.33	59.95	0.62	0.0005	0.0025	0.0005
			PG05774	59.95	60.83	0.88	0.0005	0.0025	0.0005

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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
60.83	62.85	MD, Mafic Dike As above. Sharp contacts @50 dtca. Upper contact mineralized with ~3% fg Po to 60.95m. Otherwise void of sulphides	PG05775	60.83	61.20	0.37	0.0020	0.0080	0.0040
			PG05776	61.20	61.95	0.75	0.0005	0.0080	0.0020
			PG05777	61.95	62.85	0.90	0.0010	0.0100	0.0030
62.85	63.85	UM, Ultramafic Sheared UM or pyroxenite. Grey green. fg. homogenous mineral. Weakly magnetic and strongly foliated rock unit @75 dtca. Unit contains up tp 25% 2-20mm sized blebs of phlogopite or biotite. Abundant epidote and chlorite and Cpx? Mineralized with up tp 2% sub-mm ssulphide stringers veinlets of predominantly Po/Py and trace amounts of fg Cpy and even lesser Pn locally associated with Po. Stringer and diss mineralization up to 5% at lower contact to mineralized UMAF unit.	PG05778	62.85	63.36	0.51	0.0410	0.0340	0.0050
			PG05779	63.36	63.85	0.49	0.1150	0.0630	0.0110
63.85	73.78	GAB, Gabbro Sheared gabbro/um: Dark beige to grey/dull grey. Mg, homogenous, however varyinf abundance of plagioclase imparts a colour variation that makes it look almost homogeous. Similar to overlying UMAF. Mostly plagioclase, px, epidote, and amphibole.. Minor chlorite alteration. Mineralized with <1% vfg diss sulphides (Po+Py) in sub-mm scale strigner veinlets. Mineralization 63.85 - 65.85 : PO Pyrrhotite, DIS Disseminated, 1% <0.5% Po and Py vfg 65.85 - 68.71 : POPN Pyrrhotit/Pentlandite, DIS Disseminated, 2% Mineralization associated with higher mafic conent and Px 68.71 - 73.38 : Cpy Chalcopyrite, TR Trace, 0.1% 68.71 - 73.38 : PN Pentlandite, DIS Disseminated, 0.5% 68.71 - 73.38 : PO Pyrrhotite, DIS Disseminated, 0.5%	PG05781	63.85	64.52	0.67	0.0040	0.0025	0.0040
			PG05782	64.52	65.32	0.80	0.0040	0.0025	0.0040
			PG05783	65.32	65.85	0.53	0.0040	0.0025	0.0050
			PG05784	65.85	66.37	0.52	0.0070	0.0070	0.0070
			PG05785	66.37	67.00	0.63	0.0070	0.0025	0.0070
			PG05786	67.00	67.51	0.51	0.0060	0.0025	0.0050
			PG05787	67.51	68.05	0.54	0.0060	0.0050	0.0060
			PG05788	68.05	68.71	0.66	0.0070	0.0025	0.0070
			PG05789	68.71	69.53	0.82	0.0050	0.0025	0.0040
			PG05790	69.53	70.50	0.97	0.0040	0.0025	0.0040
			PG05791	70.50	71.28	0.78	0.0050	0.0025	0.0050
			PG05792	71.28	72.10	0.82	0.0070	0.0025	0.0060
			PG05793	72.10	73.06	0.96	0.0060	0.0025	0.0050
			PG05794	73.06	73.78	0.72	0.0100	0.0025	0.0060
73.78	74.54	UM, Ultramafic Same as above. Grey green. fg. homogenous mineral. Weakly magnetic and strongly foliated rock unit @75 dtca. Unit contains up tp 25% 2-20mm sized blebs of phlogopite or biotite. Abundant epidote and chlorite and Cpx? Mineralized only locally with tr vfg grain of Cpy. No po.	PG05795	73.78	74.54	0.76	0.0320	0.0180	0.0050
74.54	75.25	UM, Ultramafic *MINERALIZED ULTRAMAFIC DYKE* Black, vfg, homogenous, massive. Moderately magnetic. 3-5% fg, equigranular white crystals. 5-7% mm sized crosscutting, white talc veinlets. Mineralized with 5-10% vfg disseminated Po and lesser Pn? Some mineralization occurs as cm-sized blebs of VFG Po and lesser Pn. Mineralization, even though vfg, occurs very locally up to 20%. Trace amounts of Cpy predominantly associated with larger blebs of mineralization. Mineralization 74.54 - 75.25 : Cpy Chalcopyrite, TR Trace, 0.5% 74.54 - 75.25 : POPN Pyrrhotit/Pentlandite, DIS Disseminated, 7% Disseminated with local cm-scaled blebs.	PG05796	74.54	75.25	0.71	0.1120	0.0220	0.0140

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
75.25	75.80	UM, Ultramafic Same as above. Grey green. fg. homogenous mineral abundance. Weakly magnetic and strongly foliated rock unit @75 dtca. Unit contains up to 25% 2-20mm sized blebs of phlogopite or biotite. Abundant epidote and chlorite and Cpx? Mineralized with 2% disseminated and sub-mm stringers of Po. (Tr Pn?) and trace vfg Cpy associated with stringer sulphides only. Sharp upper and lower contacts that are talc rich.	PG05797	75.25	75.80	0.55	0.1680	0.0780	0.0100
75.80	106.90	ANOR, Anorthosite Fine to medium grained, well foliated, grey-white and minor green, heterogenous, non-magnetic, sausseritized anorthosite composed of varying amounts of plagioclase, sericite, epidote, fuchsite. Different from overlying anorthosite with less amounts of chlorite. Sections of anorthosite closer to mafic dykes have an abundance of chlorite. Well foliated @70-75 dtca. Weak mineralization noted in tab. Mineralization 85.30 - 85.45 : Cpy Chalcopyrite, TR Trace, 0.5% 85.30 - 85.45 : PY Pyrite, DIS Disseminated, 2% MINOR INTERVALS: Minor Interval: 84.65 - 85 MD, Mafic Dike Green, fg, strongly foliated @75-80 dtca, homogenous. Not magnetic. Not mineralized Minor Interval: 94.85 - 95.47 MD, Mafic Dike Green, fg, strongly foliated @75-80 dtca, homogenous. Not magnetic. Not mineralized. Inclusion of anorthosite from 95.02-95.14m.	PG05798	75.80	76.45	0.65	0.0020	0.0025	0.0005
			PG05799	76.45	77.57	1.12	0.0070	0.0025	0.0005
			PG05801	84.80	85.30	0.50	0.0220	0.0650	0.0030
			PG05802	85.30	85.55	0.25	0.0050	0.0130	0.0005
			PG05803	85.55	86.05	0.50	0.0020	0.0025	0.0005
106.90	108.03	MD, Mafic Dike Green, fg, strongly foliated @75-80 dtca, homogenous. Not magnetic. Not mineralized. Gradation lower and upper contact over 10cm.							

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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
108.03	129.00	<p>ANOR, Anorthosite</p> <p>Grey-Beige-Green. fg to mg. Very heterogenous when compared to overlying anorthosite and highly mixed/hybrid unit. Anorthosite is mixed with thin horizons of mafic volcanics/volcaniclastics. Abundant plagioclase, epidote and chlorite. Strongly deformed approximately 75 dtca. 2% Minor fuchsite wisps. Numerous dm wide, grey, quartz-rich silicified and brecciated sections.</p> <p>Alteration 117.03 - 118.55 :Sil Silica, P Pervasive, M Moderate</p> <p>Structure 120.70 - 120.95 moderate brecciation with fragmental anorthositic clasts and qtz flooding</p> <p>MINOR INTERVALS: Minor Interval: 114.65 - 115.61 MD, Mafic Dike Green, fg, strongly foliated @75-80 dtca, homogenous. Not magnetic. Not mineralized Minor Interval: 122.6 - 127.32 MD, Mafic Dike Green, fg, strongly foliated @75-80 dtca, homogenous. Not magnetic. Not mineralized. Sharp contacts ~75 dtca. Anorthositic inclusion from 124.7-124.90m.</p>							

DETAILED LOG

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Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		MINOR INTERVALS: Minor Interval: 160.09 - 160.78 MD, Mafic Dike Green-dark green, fg, homogenous. well foliated @75 dtca and sharp upper and lower contacts. Very strong epidote and chlorite alteration with moderate hematite whisps. Minor Interval: 164.2 - 168.8 MD, Mafic Dike Green, fg-mg, homogenous, weakly foliated ~80 dtca. Sharp upper and lower contact @75-80 dtca. Not mineralized.							
171.83	178.85	MD, Mafic Dike Green-dark green, fg, homogenous. well foliated @75 dtca and sharp upper and lower contacts @80dtca. Not mineralized. Anorthositic inclusions from 174.66-174.97 and 177.46-177.88.							

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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
178.85	263.55	ANOR, Anorthosite White-grey-green. Fg. Predominantly homogenous with very local mixed sections. Strongly deformed @80 dtca. Epidote and chlorite and minor fuchsite bands. Not mineralized. Crosscut by mafic dykes. Sporadic 5cm wide silicified sections. Structure 228.20 - 228.45 230.65 - 230.75 thin gaugy fault zone MINOR INTERVALS: Minor Interval: 193.5 - 194 MD, Mafic Dike . Green, fg, homogenous. Foliated @75 dtca. Mineralization 193.50 - 193.60 : PY Pyrite, STR Stringers, 5% 5% fg pyrite mineralization at upper contact of mafic dyke to anorthosite. Minor Interval: 200.5 - 201.71 MD, Mafic Dike Gree, fg, homogenous. strongly foliated @75 dtca. Sharp upper and lower contacts parallel to foliation. Not mineralized. Minor Interval: 227.81 - 228.52 MD, Mafic Dike Green. fg. homogenous. mdoerately foliated @75-80 dtca. Not mineralized. Sharp upper and lower contacts @45dtca. Minor Interval: 230.09 - 230.9 MD, Mafic Dike Gree, fg, homogenous. strongly foliated @75 dtca. Not mineralized. strongly chloritized. Minor Interval: 232 - 250.95 MD, Mafic Dike Dyke zone close to underlying basement volcanics. Anorthosite cut by 30%, 10-30cm wide green and dark green mafic dykes. Not mineralized. Mafic dykes are not magnetic and mineralized. All have sharp contacts at moderate to high angles tca.	PG05804	192.89	193.39	0.50	0.0030	0.0025	0.0005
			PG05805	193.39	193.69	0.30	0.0260	0.0090	0.0060
			PG05806	193.69	194.19	0.50	0.0240	0.0025	0.0050
263.55	332.00	MV, Mafic Volcanic Basement Volcanics/volcaniclastics outside the Espedalen complex. Green, overall fine to medium grained, well-foliated. Very heterogenous and banded on the cm to dm square indicating various horizons. Has an altered, predominantly chlorite, epidote, sericite, biotite. ~5-10% locally, cm-sized quartz veinlets parallel to foliation.							
332.00	332.01	EOH, End of Hole							

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Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG05773	59.33	59.95	0.0005	0.0025	0.0005
PG05774	59.95	60.83	0.0005	0.0025	0.0005
PG05775	60.83	61.20	0.0020	0.0080	0.0040
PG05776	61.20	61.95	0.0005	0.0080	0.0020
PG05777	61.95	62.85	0.0010	0.0100	0.0030
PG05778	62.85	63.36	0.0410	0.0340	0.0050
PG05779	63.36	63.85	0.1150	0.0630	0.0110
PG05781	63.85	64.52	0.0040	0.0025	0.0040
PG05782	64.52	65.32	0.0040	0.0025	0.0040
PG05783	65.32	65.85	0.0040	0.0025	0.0050
PG05784	65.85	66.37	0.0070	0.0070	0.0070
PG05785	66.37	67.00	0.0070	0.0025	0.0070
PG05786	67.00	67.51	0.0060	0.0025	0.0050
PG05787	67.51	68.05	0.0060	0.0050	0.0060
PG05788	68.05	68.71	0.0070	0.0025	0.0070
PG05789	68.71	69.53	0.0050	0.0025	0.0040
PG05790	69.53	70.50	0.0040	0.0025	0.0040
PG05791	70.50	71.28	0.0050	0.0025	0.0050
PG05792	71.28	72.10	0.0070	0.0025	0.0060
PG05793	72.10	73.06	0.0060	0.0025	0.0050
PG05794	73.06	73.78	0.0100	0.0025	0.0060
PG05795	73.78	74.54	0.0320	0.0180	0.0050
PG05796	74.54	75.25	0.1120	0.0220	0.0140
PG05797	75.25	75.80	0.1680	0.0780	0.0100
PG05798	75.80	76.45	0.0020	0.0025	0.0005
PG05799	76.45	77.57	0.0070	0.0025	0.0005
PG05801	84.80	85.30	0.0220	0.0650	0.0030
PG05802	85.30	85.55	0.0050	0.0130	0.0005
PG05803	85.55	86.05	0.0020	0.0025	0.0005
PG05804	192.89	193.39	0.0030	0.0025	0.0005
PG05805	193.39	193.69	0.0260	0.0090	0.0060
PG05806	193.69	194.19	0.0240	0.0025	0.0050