DETAILED LOG

Hole Number: ES2005-46

Units: METRIC

Project Name:	Norway - Espedalen	Primary Coordinates	Grid: UTM84-32N	Destination Coordinates	Grid: UTM:	Collar Dip:	-70.00
Project Number:	201	North:	6802224.28	North:	61.35	Collar Az:	50.50
Location:	Surface	East:	533418.83	East:	9.62	Length:	294.75 (m)
		Elev:	1086.23	Elev:	1086.23	Start Depth:	0.00 (m)
Date Started:	Aug 26, 2005	Collar Survey:	Y	Plugged:	N	Contractor:	Arctic Drilling A/S	Final Depth:	294.75 (m)
Date Completed:	Aug 31, 2005	Multishot Survey:	N	Hole Size:	TT46	Core Storage:	Strand Fjellstue		
Logged By:	blairt	Pulse EM Survey:	N	Casing:	Left in Hole, capped				

Comments: Purpose: Hole proposed to test the interpreted extension of the Stormyra zone, below a vertical depth of 150m, with a coincident magnetic body. This hole will also be used as a geophysical platform (BHEM) to search for conductors at depth along the interpreted Stormyra trend proximal to the limits of surface geophysics.

Result: The hole intersected a thick anorthosite body which was locally crosscut by dolerite dykes. A weakly mineralized (3% disseminated pyrrhotite) peridotite was intersected from 63.25m and 67.05m (3.80m inhole thickness). The magnetic anomaly was attributed to magnetite-bearing anorthosites downhole of 185m

Assays: No significant results were reported.

Borehole UTEM: Survey to be conducted in November 2005.

Lithological interpretation: Anorthositic terrain (Heim's rock suite 2a) intruded by narrow, locally mineralized, mafic to ultramafic bodies (Heim's rock suite 2b).

Sample Averages

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	1.60	C, Casing							

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Detailed Lithology

From (m)	To (m)	Lithology
1.60	63.25	4, Anorthosite / Anorthosite Gabbro Fine grained, light green-grey, well foliated and lineated, heterogenous, non-magnetic anorthositic gabbro composed of 35-65% altered light green pyroxenes? (altered to chlorite?) and 35-65% plagioclase, with minor amounts of dark brown to black minerals(<5% biotite). More mafic and felsic horizons fluctuate on a dm scale, with more mafic hoizons appearing as a darker grey-green in colour and primarily composed of pyroxenes. These units at first glance appear as late pyroxenites, but are more likely a more pyroxenitic phase of the anorthositic complex. The unit contains trace local disseminated pyrrhotite and pyrite. Alteration 6.00 - 15.50 :HM Hematite, P Pervasive, M Moderate Structure 7.00 - 7.01 : S1 First Foliation, 50 Deg to CA 17.90 - 17.91 : S1 First Foliation, 35 Deg to CA 31.20 - 31.21 : S1 First Foliation, 55 Deg to CA 45.85 - 45.86 : S1 First Foliation, 60 Deg to CA 53.30 - 53.31 : S1 First Foliation, 55 Deg to CA RQD 1.60 - 4.00 : 28.00 % RQD 100.00 % Core 4.00 - 7.00 : 39.00 % RQD 100.00 % Core 7.00 - 10.00 : 46.00 % RQD 100.00 % Core 10.00 - 13.00 : 75.00 % RQD 100.00 % Core 13.00 - 16.00 : 83.00 % RQD 100.00 % Core 16.00 - 19.00 : 94.00 % RQD 100.00 % Core 19.00 - 22.00 : 74.00 % RQD 100.00 % Core 22.00 - 25.00 : 90.00 % RQD 100.00 % Core 25.00 - 28.00 : 80.00 % RQD 100.00 % Core 28.00 - 31.00 : 88.00 % RQD 100.00 % Core 31.00 - 34.00 : 80.00 % RQD 100.00 % Core 34.00 - 37.00 : 82.00 % RQD 100.00 % Core 37.00 - 40.00 : 54.00 % RQD 100.00 % Core 40.00 - 43.00 : 53.00 % RQD 100.00 % Core 43.00 - 46.00 : 93.00 % RQD 100.00 % Core 46.00 - 49.00 : 96.00 % RQD 100.00 % Core 49.00 - 52.00 : 98.00 % RQD 100.00 % Core 52.00 - 55.00 : 73.00 % RQD 100.00 % Core 55.00 - 58.00 : 79.00 % RQD 100.00 % Core 58.00 - 61.00 : 90.00 % RQD 100.00 % Core 61.00 - 64.00 : 82.00 % RQD 100.00 % Core

Assay Data

Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
PG00401	55.50	56.06	0.56	0.0250	0.0250	0.0100
PG00402	56.06	56.60	0.54	0.0250	0.0250	0.0200
PG00403	56.60	57.05	0.45	0.0250	0.0250	0.0100
PG00404	57.05	57.40	0.35	0.1000	0.0600	0.0100
PG00405	57.40	58.55	1.15	0.0250	0.0250	0.0100
PG00406	62.50	63.25	0.75	0.0250	0.0250	0.0100

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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: 50.25 - 51.09 PYXT, Pyroxenite Fine grained, pale green to grey-green, heterogenous, non-magnetic pyroxenite (altered to chlorite) dyklet containing cm to dm scale partially digested xenoliths of anorthositic gabbro. The unit conatins trace disseminated pyrrhotite-pyrite. The upper contact of this unit is irregular with uphole anorhositic gabbro (altered) and the lower contact is sharp at 80 degrees to the ca. Mineralization 50.25 - 51.09 : Po Pyrrhotite, FG Fine Grained, 0.5% Minor Interval: 56.06 - 57.4 PYXT, Pyroxenite As described from 50.25-51.09m. The unit contains trace to 2% cubic pyrite with pyrrhotite. The upper contact is sharp at 80 degrees to the ca and the lower contact is irregular. Mineralization 56.06 - 57.40 : Py Pyrite, FG Fine Grained, 1%								

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Units: METRIC

Detailed Lithology

From (m)	To (m)	Lithology
63.25	67.05	PRDT, Peridotite Fine grained, massive to moderately foliated, green-grey to blue-black peridotite composed of serpentine and pyroxenes. The upper and lower contacts of this unit are altered to a grey-green, well foliated (semi-parallel to 30 degrees to the ca), chlorite-rich ultramafic? Likely a reaction halo with the surrounding country rocks, drilled parallel, thus appearing larger and more extenive than the actual true thickness. Foliation planes are defined by dark green serpentine veinlets. This unit contains trace to 3% fine grained disseminated pyrrhotite, with localized mm to cm scale remobilized pyrrhotite-pyrite-chalcopyrite veinlets. The upper contact of this unit is sharp with partially digested anorthosite, but lost in broken core. The lower contact is also sharp but lost within sheared broken core (~40 degrees). Mineralization 63.25 - 67.05 : Cpy Chalcopyrite, D Disseminated, 0.5% 63.25 - 67.05 : Po Pyrrhotite, D Disseminated, 3% Locally remobilized in mm scale veinlets. 63.25 - 67.05 : Py Pyrite, FG Fine Grained, 1% RQD 64.00 - 67.00 : 78.00 % RQD 100.00 % Core 67.00 - 70.00 : 100.00 % RQD 100.00 % Core
67.05	75.20	4, Anorthosite / Anorthosite Gabbro Structure 69.50 - 69.51 : S1 First Foliation, 70 Deg to CA RQD 70.00 - 73.00 : 100.00 % RQD 100.00 % Core 73.00 - 76.00 : 88.00 % RQD 100.00 % Core MINOR INTERVALS: Minor Interval: 73.4 - 75.2 PYXT, Pyroxenite As described from 50.25m - 51.09m. This unit contains ~50% medium grained pyroxenite with 50% anorthositic gabbro. The lower contact contains trace to 1% finely disseminated pyrite and pyrrhotite, at approximately 50 degrees to the ca.

Assay Data

Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
PG00407	63.25	64.25	1.00	0.1800	0.1500	0.0300
PG00408	64.25	65.60	1.35	0.0600	0.0600	0.0100
PG00409	65.60	67.05	1.45	0.0500	0.0250	0.0100
PG00410	67.05	68.00	0.95	0.0250	0.0250	0.0100

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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%
75.20	92.35	DIA, Diabase Fine to medium grained, non-magnetic, white and dark green, homogenous, massive to locally foliated dolerite exhibiting a well developed ophitic texture towards the lower contact. This unit is composed of ~35-50% pyroxenes (green alteration rimming pyroxene cyrstals) and 50-65% plagioclase. The grain size decreases towards the lower contact, finishing with a 4 cm wide chilled margin. The upper contact is difficult to ascertain a chilled contact as the ultramafic dyklets are intermixed along shear planes. This unit is unmineralized. The lower contact of this unit is sharp at 50 degrees to the ca, along the chilled margin. Structure 75.50 - 75.51 : S1 First Foliation, 70 Deg to CA 84.15 - 84.16 : S1 First Foliation, 50 Deg to CA RQD 76.00 - 79.00 : 98.00 % RQD 100.00 % Core 79.00 - 82.00 : 98.00 % RQD 100.00 % Core 82.00 - 85.00 : 95.00 % RQD 100.00 % Core 85.00 - 88.00 : 97.00 % RQD 100.00 % Core 88.00 - 91.00 : 92.00 % RQD 100.00 % Core 91.00 - 94.00 : 93.00 % RQD 100.00 % Core							

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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%
92.35	141.75	4, Anorthosite / Anorthosite Gabbro Medium grained, non-magnetic, massive to locally foliated, white and green anorthositic gabbro composed of 40-60% plagioclase and 40-60% pyroxenes. Downhole of 122.68m, the country rock contains more mafic materials (anothositic gabbro), whereas uphole of 122.68m, there is more plagioclase within the rock (anorthositic affinity). This unit contains approximately 5% cm to dm scale horizons which appear as medium grained, massive, equigranular, dark grey horizons composed primarily of pyroxenes. These horizons may be pyroxenitic dyklets (6d) or recrystallized mafic-rich units (compositional banding)? Contact relationships for these intervals are quite irregular with the country rocks (digested), and generally undulating, which likely favours compositional banding. These units are from: 94.55-94.90m (irregular upper contact, irregular lower contact); 100.50-101.05m (35 degrees, irregular); 112.40-113.15m (irregular, irregular); 115.40-115.70m (25 degrees, irregular); 122.46-122.68m (70 degrees, approximately 50 degrees). This unit is crosscut by dolerite dyklets which appear as fine grained, black and white, homogenous, non-magnetic units composed of plagioclase and pyroxenes. Chill margins are mm scale, and contacts are razor sharp. These dyklets appear from 115.90-116.30m (30 degrees, 70 degrees); 119.60-120.50m (50 degrees, 30 degrees) and 137.00-137.78m (40 degrees, 45 degrees). The unit is unmineralized. More pyroxenitic units contain local disseminations of pyrrhotite, pyrite and chalcopyrite, generally trace to 2% sulphides). The lower contact of this unit was defined by the presence of well defined cm scale porphyroblasts of pyroxenes (opx) and is transitional over 10cm. RQD 94.00 - 97.00 : 89.00 % RQD 100.00 % Core 97.00 - 100.00 : 89.00 % RQD 100.00 % Core 100.00 - 103.00 : 93.00 % RQD 100.00 % Core 103.00 - 106.00 : 96.00 % RQD 100.00 % Core 106.00 - 109.00 : 96.00 % RQD 100.00 % Core 109.00 - 112.00 : 97.00 % RQD 100.00 % Core 112.00 - 115.00 : 96.00 % RQD 100.00 % Core 115.00 - 118.00 : 94.00 % RQD 100.00 % Core 118.00 - 121.00 : 86.00 % RQD 100.00 % Core 121.00 - 124.00 : 96.00 % RQD 100.00 % Core 124.00 - 127.00 : 89.00 % RQD 100.00 % Core 127.00 - 130.00 : 86.00 % RQD 100.00 % Core 130.00 - 133.00 : 93.00 % RQD 100.00 % Core 133.00 - 136.00 : 95.00 % RQD 100.00 % Core 136.00 - 139.00 : 94.00 % RQD 100.00 % Core								

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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%
		RQD 139.00 - 142.00 : 98.00 % RQD 100.00 % Core							

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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%
141.75	220.05	4, Anorthosite / Anorthosite Gabbro Coarse grained, white-grey-black, massive, homogenous, non-magnetic to strongly magnetic anorthositic gabbro composed of 20-25% mm to cm scale, brown-black pyroxenes (opx), 30-40% dull grey-blue pyroxenes (finer grained, proximal to coarser grained metamorphic? pyroxenes) and 35-50% plagioclase. This unit contains rare trace pyrite, pyrrhotite. Downhole of 185m, magnetite occurs as dull grey-pink mm scale grains, commonly in clots, which significantly increases the magnetic susceptibility of the rock. The lower contact of this unit is sharp at 75 degrees to the ca, along a dolerite chill contact. Texture 141.75 - 220.05 : Cg Coarse Grained Mineralization 214.36 - 214.37 : Mt Magnetite, M Massive, 100% Magnetite vein RQD 142.00 - 145.00 : 97.00 % RQD 100.00 % Core 145.00 - 148.00 : 93.00 % RQD 100.00 % Core 148.00 - 151.00 : 97.00 % RQD 100.00 % Core 151.00 - 154.00 : 92.00 % RQD 100.00 % Core 154.00 - 157.00 : 100.00 % RQD 100.00 % Core 157.00 - 160.00 : 95.00 % RQD 100.00 % Core 160.00 - 163.00 : 74.00 % RQD 100.00 % Core 163.00 - 166.00 : 83.00 % RQD 100.00 % Core 166.00 - 169.00 : 86.00 % RQD 100.00 % Core 169.00 - 172.00 : 89.00 % RQD 100.00 % Core 172.00 - 175.00 : 87.00 % RQD 100.00 % Core 175.00 - 178.00 : 94.00 % RQD 100.00 % Core 178.00 - 181.00 : 73.00 % RQD 100.00 % Core 181.00 - 184.00 : 94.00 % RQD 100.00 % Core 184.00 - 187.00 : 95.00 % RQD 100.00 % Core 187.00 - 190.00 : 96.00 % RQD 100.00 % Core 190.00 - 193.00 : 91.00 % RQD 100.00 % Core 193.00 - 196.00 : 95.00 % RQD 100.00 % Core 196.00 - 199.00 : 94.00 % RQD 100.00 % Core 199.00 - 202.00 : 100.00 % RQD 100.00 % Core 202.00 - 205.00 : 100.00 % RQD 100.00 % Core						

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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%
		RQD 205.00 - 208.00 : 100.00 % RQD 100.00 % Core 208.00 - 211.00 : 100.00 % RQD 100.00 % Core 211.00 - 214.00 : 90.00 % RQD 100.00 % Core 214.00 - 217.00 : 99.00 % RQD 100.00 % Core 217.00 - 220.00 : 93.00 % RQD 100.00 % Core 220.00 - 223.00 : 98.00 % RQD 100.00 % Core MINOR INTERVALS: Minor Interval: 167.2 - 168.5 5, Undivided Metasediments Fine grained, dull green-grey, non-magnetic, homogenous unit which is moderately to strongly silicified. The unit appears brecciated (on a cm scale), with more intact fragments exhibiting a preferred foliation within the rock (remenant foliation?). Infilling aroiund fragments is predominantly chlorite (soft dark green). This unit contains rare trace pyrite. The upper and lower contacts of this unit are sharp at 50 and 15 degrees to the ca, respectively. Interpretation: Raft of basement sediments (hybrid rocks) or an older anorthosite raft within a coarser grained anorthosite. Minor Interval: 217.22 - 218.15 DIA, Diabase Fine grained, grey-green, weakly magnetic, homogenous, massive dolerite composed of 30-35% plagioclase with 65-70% black to grey pyroxenes. This unit is finer grained proximal to contacts (not well developed chill contact) with coarser grained central portion. Ophitic texture is apparent within coarser grained horizons. This unit contains rare trace fracture controlled pyrite. The upper and lower contacts of this unit are sharp at 55 and 75 degrees to the ca, respectively. Minor Interval: 218.5 - 218.67 DIA, Diabase As described from 217.22-218.15m. The upper and lower contacts are sharp at 40 and 35 degrees to the ca, respectively.								

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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%
220.05	236.03	DIA, Diabase Fine to medium grained, non- to weakly magnetic, homogenous, massive, grey-green dolerite composed of 30% plagioclase and 70% pyroxenes. The central portions of this unit are medium grained and exhibit an ophitic texture. Proximal to contacts, the unit is finer grained and contains mm scale fractures, infilled with quartzofeldspathic material. Thicker veinlets contain epidote rims (ie 232.40m). This unit is unmineralized. The upper and lower contacts of this unit are sharp at 75 and 30 degrees to the ca, respectively. RQD 223.00 - 226.00 : 100.00 % RQD 100.00 % Core 226.00 - 229.00 : 91.00 % RQD 100.00 % Core 229.00 - 232.00 : 93.00 % RQD 100.00 % Core 232.00 - 235.00 : 98.00 % RQD 100.00 % Core 235.00 - 238.00 : 95.00 % RQD 100.00 % Core								

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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%
236.03	249.60	4, Anorthosite / Anorthosite Gabbro As described from 141.75-220.05m. Coarse grained, massive, homogenous, magnetic, white-dark green anorthositic gabbro composed of 65-70% pyroxenes (dark brown to black, cm scale and a finer grained, light grey to grey-pink pyroxene) and 30-35% plagioclase. This unit is unmineralized. The lower contact of this unit is sharp along a downhole chilled contact, at 40 degrees to the ca. Texture 236.03 - 249.60 : Cg Coarse Grained RQD 238.00 - 241.00 : 95.00 % RQD 100.00 % Core 241.00 - 244.00 : 95.00 % RQD 100.00 % Core 244.00 - 247.00 : 89.00 % RQD 100.00 % Core 247.00 - 250.00 : 94.00 % RQD 100.00 % Core MINOR INTERVALS: Minor Interval: 237.07 - 237.2 DIA, Diabase Fine grained to aphanitic (contacts), dark grey, homogenous, weakly foliated dolerite composed of 85% pyroxenes and 15% plagioclase. The upper and lower contacts of this unit are chilled (mm scale), exhibiting an aphanitic groundmass with preferentially aligned plagioclase phenocrysts at approximately (50-55 degrees to the ca). The upper and lower contacts of this unit are sharp at 50 and 55 degrees to the ca, respectively.								
249.60	256.55	DIA, Diabase As described from 220.05-236.03m. Unit contains approximately 1-3% mm scale plagioclase phenocrysts thoughout. The upper contact is chilled (1cm wide) dark grey, aphanitic with plagioclase phenocrysts (textbook chill contact) at 40 degrees to the ca. The lower contact is sharp (weakly chilled) at 60 degrees to the ca. RQD 250.00 - 253.00 : 93.00 % RQD 100.00 % Core 253.00 - 256.00 : 92.00 % RQD 100.00 % Core 256.00 - 259.00 : 88.00 % RQD 100.00 % Core								

Hole Number: ES2005-46

Units: METRIC

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
256.55	276.06	4, Anorthosite / Anorthosite Gabbro Fine to coarse grained, non-magnetic to strongly magnetic, heterogenous, massive anorthositic gabbro. This unit is quite variable in appearance and physical properties, but compositionally shows little variation. Finer grained anorthositic gabbro appears white and black (sugary texture) with metamorphic? cm scale pyroxenes within a plagioclase-rich groundmass. This finer grained horizoins are non-magnetic. Coarser grained horizons are as described from 141.75-220.05m and 236.03-249.60m, and generally quite magnetic. 262.7-265.20m: Pyroxene-rich horizon, medium grained, massive, homogenous, dark grey composed of 90% pyroxenes. Trace pyrite occurs throughout. Likely a mafic-rich horizon within precursor gabbroic anorthosite. The lower contact of this unit is sharp at 65 degrees to the ca. The lower 1.50m of this unit is mafic-rich and shows a moderate foliation (shearing). Texture 265.20 - 273.85 : Fg Fine Grained 256.55 - 262.70 : Cg Coarse Grained Structure 274.75 - 274.76 : S1 First Foliation, 60 Deg to CA RQD 259.00 - 262.00 : 93.00 % RQD 100.00 % Core 262.00 - 265.00 : 86.00 % RQD 100.00 % Core 265.00 - 268.00 : 97.00 % RQD 100.00 % Core 268.00 - 271.00 : 94.00 % RQD 100.00 % Core 271.00 - 274.00 : 95.00 % RQD 100.00 % Core 274.00 - 277.00 : 92.00 % RQD 100.00 % Core						

Hole Number: ES2005-46

Units: METRIC

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
276.06	294.75	DIA, Diabase Fine to medium grained, massive, homogenous, white-grey-green, magnetic, unmineralized dolerite composed of 50% pyroxenes, 45% plagioclase and 5% fine grained magnetite. This unit exhibits an ophitic texture. The upper contact of this unit is sharp at 65 degrees to the ca, with the uppermost 40cm being a finer grained rock. The lower contact of this unit is unknown as the hole was shutdown. RQD 277.00 - 280.00 : 100.00 % RQD 100.00 % Core 280.00 - 283.00 : 100.00 % RQD 100.00 % Core 283.00 - 286.00 : 95.00 % RQD 100.00 % Core 286.00 - 289.00 : 94.00 % RQD 100.00 % Core 289.00 - 292.00 : 98.00 % RQD 100.00 % Core 292.00 - 294.75 : 93.00 % RQD 100.00 % Core								

Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type ASSAY					
PG00401	55.50	56.06	0.0250	0.0250	0.0100
PG00402	56.06	56.60	0.0250	0.0250	0.0200
PG00403	56.60	57.05	0.0250	0.0250	0.0100
PG00404	57.05	57.40	0.1000	0.0600	0.0100
PG00405	57.40	58.55	0.0250	0.0250	0.0100
PG00406	62.50	63.25	0.0250	0.0250	0.0100
PG00407	63.25	64.25	0.1800	0.1500	0.0300
PG00408	64.25	65.60	0.0600	0.0600	0.0100
PG00409	65.60	67.05	0.0500	0.0250	0.0100
PG00410	67.05	68.00	0.0250	0.0250	0.0100