

## Scallop-1 Lithology / Show Descriptions

Interval (m)		Lithology / Show Description	
From	To	%	
			From mudline to 917m, well drilled without riser, all returns to the seafloor. All depths are MDRT unless otherwise specified. Hole Diameter 12 1/4", Smith MA89PXX Bit, 6% KCl/ PHPA / Glycol
917	930	10	Cement
		90	<b>CALCILUTITE:</b> medium grey when hydrated, light olive grey, very soft, dispersive, sub blocky to amorphous, moderately argillaceous, trace carbonaceous specks, rare trace micro-fossils (forams),
930	960	100	<b>CALCILUTITE:</b> medium to very light grey as above.
960	990	100	<b>CALCILUTITE:</b> medium to light olive grey, firm, blocky, moderately argillaceous, trace carbonaceous specks, trace Forams.
990	1020	100	<b>CALCILUTITE:</b> medium to light olive grey, as above.
1020	1050	100	<b>CALCILUTITE:</b> medium to light olive grey, as above.
1050	1080	100	<b>CALCILUTITE:</b> medium to light olive grey, as above.
1080	1110	100	<b>CALCILUTITE:</b> medium to light olive grey, as above.
1110	1140	100	<b>CALCILUTITE:</b> medium to light olive grey, soft to moderately firm, trace forams, slight trace carbonaceous specks, homogenous, as above.
1140	1170	100	<b>CALCILUTITE:</b> medium to light olive grey as above, clay content increasing to 20%
1170	1200	100	<b>CALCILUTITE:</b> occasionally calcisiltite, light to medium grey to olive grey, argillaceous (10% clay), soft, friable,
1216	Spot	100	<b>Slow drilling, CALCILUTITE,</b> as above, trace calcisiltite, rare grains of dolomitic calcilutite, hard. ? very thin stringer dolomite cemented calcilutite, argillaceous.
1200	1230	100	<b>CALCILUTITE:</b> as above, rare dolomitic calcilutite as above
1230	1260	100	<b>CALCILUTITE:</b> light to medium olive grey, trace carbonaceous specks, soft, argillaceous (5-10% clay)
1260	1290	100	<b>CALCILUTITE:</b> light to medium grey, soft, with very rare hard spherical concretions, argillaceous, rare pyrite nodules, trace clear very finely crystalline calcite as loose grains, trace glauconite and black lithic grains.
1290	1320	100	<b>CALCILUTITE:</b> light to medium grey as above, no pyrite or glauconite.
1320	1350	100	<b>CALCILUTITE:</b> as above, very argillaceous, trace very fine to fine quartz sand, trace pyrite, grades to
		Tr	<b>MARL:</b> very light grey, dispersive to very soft.
1350	1380	90	<b>CALCILUTITE:</b> light to medium grey, very argillaceous, soft to firm, grades to
		10	<b>MARL:</b> very light grey, very soft -dispersive
1380	1410	80	<b>CALCILUTITE:</b> as above, very argillaceous, trace forams and fossil fragments,
		20	<b>MARL:</b> light grey very soft to dispersive, amorphous, with minor small pyritic nodules, trace quartz grains.
1410	1440	100	<b>MARL:</b> trace very fine quartz, and orange and black lithic grains, loose and as occasional very fine laminations in marl.
1440	1470	100	<b>MARL:</b> medium grey to olive grey, firm, appearing light grey & very soft to dispersive when hydrated, occasional laminations of very fine sand & silt sized quartz, orange & black lithic grains, trace pyrite nodules, common planktonic forams, trace benthic forams.
1470	1500	100	<b>MARL:</b> as above.
1500	1510	40	<b>MARL:</b> as above.
		60	<b>CALCILUTITE:</b> light to medium grey, soft, moderately argillaceous, rare pyrite nodules, trace glauconite and common planktonic forams,
1510	1520	60	<b>MARL:</b> as above.
		40	<b>CALCILUTITE:</b> as above.

Interval (m)		Lithology / Show Description	
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1520	1530	70	<b>MARL:</b> as above.
		30	<b>CALCILUTITE:</b> as above.
1530	1540	90	<b>MARL:</b> as above, general absence of sand & silt.
		10	<b>CALCILUTITE:</b> as above.
1540	1550	80	<b>MARL:</b> as above.
		20	<b>CALCILUTITE:</b> as above.
1550	1560	80	<b>MARL:</b> as above.
		20	<b>CALCILUTITE:</b> as above.
1560	1570	70	<b>MARL:</b> as above.
		30	<b>CALCILUTITE:</b> as above.
1570	1580	70	<b>MARL:</b> generally as above, medium grey to olive grey, firm, appearing light grey & very soft to dispersive when hydrated, occasional laminations of very fine sand & silt sized quartz & black lithic grains, trace disseminated and nodular pyrite, common planktonic forams, trace benthic forams.
		30	<b>CALCILUTITE:</b> as above grading to Calcisiltite
1580	1590	90	<b>MARL:</b> as above.
		10	<b>CALCILUTITE:</b> as above.
		Tr	<b>LIMESTONE:</b> Dark tan, firm, slightly argillaceous
1590	1600	90	<b>MARL:</b> as above.
		10	<b>CALCILUTITE:</b> as above.
1600	1610	90	<b>MARL:</b> as above.
		10	<b>CALCILUTITE:</b> as above.
1610	1620	90	<b>MARL:</b> as above.
		10	<b>CALCILUTITE:</b> as above.
1620	1630	100	<b>MARL:</b> generally as above, medium grey to olive grey, firm, blocky to sub-blocky, appearing light grey & very soft to dispersive when hydrated, trace very fine glauconite grains, trace disseminated and nodular pyrite, common planktonic forams, trace benthic forams.
1630	1640	100	<b>MARL:</b> as above.
1640	1650	90	<b>MARL:</b> as above.
		10	<b>SANDSTONE:</b> Moderate brown, very fine to fine dis-aggregated colourless & orange quartz & coloured lithic grains, subrounded to rounded, low to high sphericity, well sorted, fair to good inferred porosity. No Show
1650	1660	100	<b>MARL:</b> as above.
1660	1665	100	<b>Commenced adding Baracarb (sized calcium carbonate) to mud system, Samples have up to 60% Baracarb contamination.</b>
			<b>MARL:</b> as above.
1665	1670	100	<b>MARL:</b> as above.
1670	1675	100	<b>MARL:</b> as above.
1675	1680	100	<b>MARL:</b> as above.
1680	1685	100	<b>MARL:</b> as above.
1685	1690	100	<b>MARL:</b> as above.
1690	1695	100	<b>MARL:</b> as above.
1695	1700	90	<b>MARL:</b> as above, becoming more argillaceous.
		10	<b>LIMESTONE:</b> white to green grey, firm, lutitic, but maybe as a result of PDC bit, common medium sized green glauconite grains, trace forams.
1700	1705	100	<b>MARL:</b> as above.
		Tr	<b>LIMESTONE:</b> as above.
1705	1710	80	<b>MARL:</b> as above.
		20	<b>LIMESTONE:</b> as above, glauconite abundant in part, grading to calcareous greensand.

Interval (m)		Lithology / Show Description	
From	To	%	
1710	1715	100	<b>MARL:</b> as above.
		Tr	<b>LIMESTONE:</b> as above.
1715	1720	90	<b>MARL:</b> as above.
		10	<b>LIMESTONE:</b> as above.
1720	1725	100	<b>CLAYSTONE:</b> brownish grey, occasionally yellowish brown, soft, dispersive, commonly laminated, micromicaceous, silty in part, common to abundant relic glauconite grains oxidised to limonite.
1725	1730	80	<b>CLAYSTONE:</b> as above, with occasional carbonaceous laminae. Commonly
		20	interlaminated with <b>SILTSTONE:</b> light to light brownish grey, soft, laminated, very argillaceous, very white to pale yellow fluorescence, no cut.
1730	1735	100	<b>CLAYSTONE:</b> generally as above, light to medium brownish grey, soft, dispersive, commonly laminated, micromicaceous, silty in part, with occasional carbonaceous and sandy laminae, non calcareous.
1735	1740	100	<b>CLAYSTONE:</b> as above, with trace disseminated pyrite
1740	1745	100	<b>CLAYSTONE:</b> as above, with large clots of disseminated pyrite
1745	1750	100	<b>CLAYSTONE:</b> greyish brown laminated and mottled with very light grey, very finely micromicaceous, trace fine disseminated pyrite and carbonaceous material, very soft.
1750	1755	100	<b>CLAYSTONE:</b> as above, occasional isolated very coarse quartz grain inclusions.
1755	1760	100	<b>CLAYSTONE:</b> as above with trace very fine quartz sand.
1760	1765	70	<b>CLAYSTONE:</b> laminated as above, becoming silty, pale laminations are sandy w/ very fine quartz , trace pyrite as above, grades to
		30	<b>ARGILLACEOUS SANDSTONE:</b> very light grey, very fine grained, abundant kaolinitic matrix, soft, plastic, visual porosity nil,
			<b>SHOWS:</b> 30% of sample, moderate pale straw yellow direct fluorescence, nil solvent fluorescence and strong straw yellow crush solvent fluorescence. Fluorescence associated with very dense argillaceous aggregates.
1765	1770	90	<b>CLAYSTONE:</b> as above
		10	<b>ARGILLACEOUS SANDSTONE:</b> as above, <b>SHOWS:</b> trace pale straw yellow fluorescence as above associated with dense argillaceous/ kaolinitic aggregates.
spot	1770	35	<b>CARBONACEOUS SHALE:</b> very dark brown, subfissile firm, grades to
		5	<b>COAL:</b> black, brittle
		40	<b>CLAYSTONE:</b> as above
		20	<b>SANDSTONE:</b> translucent to very light grey, very fine to medium predominantly medium grained, moderately sorted, subangular to subrounded, predominantly clean, in part very argillaceous, visual porosity nil to fair.
			<b>SHOWS:</b> trace associated with argillaceous sandstone aggregates.
1770	1775	30	<b>SANDSTONE:</b> clear to translucent, fine to occasionally very coarse grained, subangular, poorly sorted, dispersive white silty clay matrix
		55	<b>CLAYSTONE:</b> as above, grades to and interlaminated with
		5	<b>CARBONACEOUS SHALE:</b> as above
1775	1780	80	<b>SANDSTONE:</b> translucent, very fine to very coarse grained, subangular to subrounded, poorly sorted, quartzose, variable nil to dense kaolinitic matrix, visual porosity poor to good, no shows.
		20	<b>CLAYSTONE:</b> light greyish brown to very pale grey, mottled and interlaminated, sandy in part. Soft.
1780	1785	80	<b>SANDSTONE:</b> as above no shows.
		20	<b>CLAYSTONE:</b> as above.
1785	1790	90	<b>CLAYSTONE:</b> interlaminated pale to light greyish brown, silty soft, trace carbonaceous material, and white to very pale grey, kaolinitic, sandy, very soft,
		10	<b>SANDSTONE:</b> clear, translucent as above, washing out of claystone? No shows

Interval (m)		Lithology / Show Description	
From	To	%	
spot	1792	80	(Slow drilling) <b>SANDSTONE:</b> clear translucent, fine to very coarse grained, poorly sorted, subangular to subrounded, loose, ? white clay matrix washing out? Visible porosity moderately. No shows.
		20	<b>CLAYSTONE:</b> white to very light grey, silty.
1790	1795	70	<b>ARGILLACEOUS SANDSTONE:</b> very light grey, very fine to occasionally coarse grained, poorly sorted, subangular, ?kaolinitic, quartzose, abundant clay matrix washing out,
		30	<b>CLAYSTONE:</b> as above, predominantly sandy, soft to very soft.
			<b>SHOWS:</b> 20% of sample, dull yellowish white direct fluorescence, slow moderate blooming solvent fluorescence, moderate greenish yellow ring residue.
Spot	1796	20	<b>CLAYSTONE:</b> medium brown to medium grey to very light grey, occasionally yellowish brown, grades to
		80	<b>SANDSTONE:</b> (1) white to very light grey, very fine to fine grained, poorly sorted, dense kaolinitic matrix, trace carbonaceous grains, visual porosity very poor - nil. (2): translucent, fine to coarse grained, moderately sorted, subrounded, predominantly loose with ? slight white clay matrix washing out, quartzose,
			<b>SHOWS:</b> 10% of sample, dull to moderate yellow direct fluorescence, very slow very faint diffuse solvent fluorescence on cleaner sand grains and slow moderate crush solvent fluorescence associated with dense argillaceous aggregates. Moderate ring residue.
1795	1800	90	<b>CLAYSTONE:</b> light greyish brown to yellowish brown, silty, occasionally smooth, homogenous, and light grey sandy as above, sandy claystone grades to
		10	<b>SANDSTONE:</b> white to pale brown, very argillaceous, very fine to fine grained occasionally with isolated medium to very coarse grains, soft to very soft.
			<b>SHOWS:</b> Trace bright gold direct fluorescence associated w/ argillaceous sandstone aggregates, slow diffuse crush solvent fluorescence with thin yellow ring residue.
1800	1805	50	<b>SANDSTONE:</b> translucent, medium to very coarse, well sorted, subrounded, clean, visual porosity very good. No shows.
		45	<b>SANDY CLAYSTONE:</b> interlaminated, pale brown to light grey, very soft, common carbonaceous material, common fine quartz sand washing out.
		5	<b>CARBONACEOUS SHALE:</b> as above.
1805	1810	90	<b>CLAYSTONE:</b> brownish grey to light brownish grey, mottled in part, predominantly smooth, occasionally sandy with very fine sand grains, soft, blocky.
		10	<b>SANDSTONE:</b> as loose grains, very fine to fine grained, quartzose ? washing out of claystone.
1810	1815	90	<b>CLAYSTONE:</b> brownish grey to light brownish grey, mottled in part, predominantly smooth, occasionally sandy with very fine sand grains, soft, blocky.
		10	<b>SANDSTONE:</b> as loose grains, very fine to fine grained, quartzose ? washing out of claystone
1815	1820	80	<b>CLAYSTONE:</b> light greyish brown to very light grey, silty, sandy in part with very fine to fine quartz grains washing out, kaolinitic in part, trace pyrite, grades to
		10	<b>ARGILLACEOUS SANDSTONE:</b> white, very fine to fine grained, poorly sorted, kaolinitic, trace carbonaceous material, visual porosity nil. No shows.
		10	<b>SANDSTONE:</b> translucent, fine to medium grained, loose grains, no shows.
1820	1825	70	<b>CLAYSTONE:</b> as above .
		20	<b>ARGILLACEOUS SANDSTONE:</b> as above.
		10	<b>SANDSTONE:</b> as above .

Interval (m)		Lithology / Show Description	
From	To	%	
1825	1830	90	<b>CLAYSTONE:</b> light to medium greyish brown, occasionally very pale yellowish brown, occasionally very dark brown/carbonaceous, in part sandy, predominantly smooth, blocky, soft.
		10	<b>SANDSTONE:</b> translucent very fine to medium grained, quartzose washing out of sandy claystone? No shows
1830	1835	80	<b>CLAYSTONE:</b> (1) medium to dark grey to greyish brown, subfissile, non-sandy, firm. (2) pale greyish to yellowish brown, occasionally white, sandy, soft to very soft, dispersive.
		20	<b>SANDSTONE:</b> ?very argillaceous, fine to medium sand grains washing out of kaolinitic matrix. No shows.
1835	1840	80	<b>CLAYSTONE:</b> as above, predominantly type (2), grades to
		20	<b>ARGILLACEOUS SANDSTONE:</b> white to very pale grey, very fine to very coarse grains, abundant clean very coarse grains ?washing out, visible porosity poor to occasionally good. No shows
1840	1845	90	<b>CLAYSTONE:</b> very pale greyish brown, occasionally off -white silty and very finely sandy, occasionally dark grey, subfissile.
		10	<b>SANDSTONE:</b> as above. no shows.
1845	1850	90	<b>CLAYSTONE:</b> light greyish brown, mottled in part, silty, very finely sandy soft to very soft dispersive.
		10	<b>SANDSTONE:</b> as loose very fine grains, ? washing out of clay
1850	1855	90	<b>CLAYSTONE:</b> as above
		10	<b>SANDSTONE:</b> as above
1855	1860	40	<b>SANDSTONE:</b> clear translucent, fine to very coarse, poorly sorted, subangular, predominantly loose with trace clay matrix adhering, quartzose, visual porosity good. no shows.
		60	<b>CLAYSTONE:</b> sandy in part, as above
1860	1865	70	<b>SANDSTONE:</b> clear translucent, fine to very coarse, poorly sorted, subangular, predominantly loose with trace clay matrix adhering, quartzose, visual porosity good. no shows.
		30	<b>SANDY CLAYSTONE:</b> light brown to very light grey, soft, very finely quartz sandy
1865	1870	90	<b>SANDSTONE:</b> as above becoming predominantly coarse to very coarse grained. Visual porosity very good. no shows.
		10	<b>SANDSTONE:</b> as above becoming predominantly coarse to very coarse grained. Visual porosity very good. no shows.
1870	1875	70	<b>SANDSTONE:</b> clear translucent, very pale brown, very fine to occasionally very coarse grained, predominantly very fine. Moderately sorted, subangular to subrounded, predominantly loose with ?argillaceous matrix washing out. Quartzose. Visual porosity poor. no shows.
		30	<b>SANDY CLAYSTONE:</b> as above
1875	1880	Tr	<b>CARBONACEOUS SHALE:</b> very dark brown, firm to hard
		60	<b>SANDSTONE:</b> as above, fine to very coarse grained, poorly sorted, nil to common clay matrix, visual porosity poor to fair. no shows.
		20	<b>CLAYSTONE:</b> medium to dark greyish brown, subfissile
		20	<b>SANDY CLAYSTONE:</b> off-white to pale greyish brown, trace carbonaceous material, abundant very fine And fine quartz grains washing out.
1880	1885	90	<b>SANDSTONE:</b> as above, very fine to very coarse predominantly medium, poorly sorted, predominantly clean, visual porosity very good, no shows.
		10	<b>SANDY CALYSTONE:</b> as above
1885	1890	60	<b>SANDSTONE:</b> as above
		40	<b>SANDY CLAYSTONE:</b> as above
1890	1895	30	<b>SANDSTONE:</b> as above
		70	<b>SANDY CLAYSTONE,</b> medium brownish grey, speckled w/ very fine carbonaceous material as above

Interval (m)		Lithology / Show Description	
From	To	%	
1895	1900	30	<b>SANDSTONE:</b> as above
		Tr	<b>CARBONACEOUS SHALE:</b> as above
		70	<b>SANDY CLAYSTONE,</b> as above
1900	1905	60	<b>SANDSTONE:</b> as above
		30	<b>SANDY CLAYSTONE,</b> as above,
1905	1910	20	<b>SANDSTONE:</b> as above, predominantly very fine to medium grained
		80	<b>CLAYSTONE:</b> sandy in part, medium brownish grey, micromicaceous, common fine carbonaceous material, blocky, in part very light brown to mottled white, very sandy, grades to sandstone, abundant clay matrix washing out.
1910	1920	30	<b>SANDSTONE:</b> as above, predominantly very fine to fine grained, trace grey lithic grains.
		60	<b>CLAYSTONE:</b> as above
		10	<b>CARBONACEOUS SHALE:</b> very dark brown, blocky, firm to hard.
1920	1925	80	<b>CLAYSTONE:</b> light grey, greyish brown, mottled white in part, soft - dispersive to occasionally firm, finely sandy in part, grades to
		20	<b>SANDSTONE:</b> as above, very fine to very coarse, quartzose with common grey lithic grains.
		5	<b>CARBONACEOUS SHALE:</b> as above
1925	1930	60	<b>SANDY CLAYSTONE:</b> as above.
		40	<b>SANDSTONE:</b> as above, common very coarse grains
1930	1935	60	<b>SANDY CLAYSTONE:</b> as above.
		40	<b>SANDSTONE:</b> as above, common very coarse grains
1935	1940	30	<b>CLAYSTONE:</b> medium greyish brown, blocky, soft to firm,
		60	<b>SANDY CLAYSTONE:</b> as above, trace pyrite,
		40	<b>SANDSTONE:</b> as above, predominantly fine grained,
1940	1945	80	<b>CLAYSTONE:</b> interlaminated, light grey, medium to dark greyish brown, mottled white, sandy in part, carbonaceous in part, soft to firm.
		20	<b>SANDSTONE:</b> clear translucent to very light brown, very fine to very coarse grained, poorly sorted, subrounded, argillaceous, visual porosity nil
1945	1950	20	<b>CLAYSTONE:</b> as above, non carbonaceous, predominantly mottled white, sandy, kaolinitic
		80	<b>SANDSTONE:</b> clear translucent, very fine to very coarse bimodal, moderately sorted, subangular, quartzose, slight clay matrix washing out, loose predominantly clean, visual porosity fair to good.
1950	1955	20	<b>CLAYSTONE:</b> dark greyish brown, silty, blocky, soft to very soft, trace disseminated and nodular pyrite.
		80	<b>SANDSTONE:</b> as above, becoming clean, visual porosity good.
1955	1960	50	<b>CLAYSTONE:</b> as above become very silty, speckled and laminated with carbonaceous material, ?feldspathic, soft.
		50	<b>SANDSTONE:</b> translucent, very coarse grained, well sorted, subangular, loose, predominantly clean, occasionally with white clay matrix adhering. Visual porosity good.
			<b>SHOWS:</b> trace dull yellow spotty direct fluorescence, slow bleeding white solvent fluorescence.
1960	1965	90	<b>CLAYSTONE:</b> brownish grey, occasionally mottled white, finely sandy, trace carbonaceous flakes and specks, soft.
		10	<b>SANDSTONE:</b> as above.
1965	1970	80	<b>CLAYSTONE:</b> as above.
		20	<b>SANDSTONE:</b> as above.
1970	1975	90	<b>CLAYSTONE:</b> as above, micromicaceous
		10	<b>SANDSTONE:</b> as above

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1975	1980	90	<b>CLAYSTONE:</b> generally as above, brownish grey, occasionally olive grey, firm, becoming soft & dispersive when water wet, laminated & speckled, micromicaceous, frequent carbonaceous specks and laminae, rare pyrite nodules.
		10	<b>SANDSTONE:</b> as above, very coarse to 3mm granules.
1980	1985	90	<b>CLAYSTONE:</b> as above.
		10	<b>SANDSTONE:</b> generally as above, translucent, to transparent, occasionally milky white & pale orange, disaggregated, medium to 3mm granules, subangular to well rounded generally with increasing grain size, low to high sphericity, grains commonly rimmed with traces of pyrite & clay. Poor to fair inferred porosity.
		Tr	<b>COAL:</b> brown black, soft, blocky, lignitic, trace pyrite.
1986	Spot	100	<b>CONGLOMERATE:</b> 3-5mm disaggregated quartz granules, rounded, high to moderate sphericity, occasionally with clay matrix adhering.
1985	1990	60	<b>CLAYSTONE:</b> as above, becoming dark grey and fissile in part.
		40	<b>CONGLOMERATE:</b> as above.
1990	1995	90	<b>CLAYSTONE:</b> two types; Type 1, brownish grey & dark grey, fissile in part as above, Type 2, off white to light grey, soft, dispersive, laminated, kaolinitic, micromicaceous, silty with altered feldspar grains, trace carbonaceous specks.
		10	<b>CONGLOMERATE:</b> as above.
1995	2000	80	<b>CLAYSTONE:</b> as above.
		20	<b>SANDSTONE:</b> translucent to transparent, disaggregated, fine to medium grained, subangular to well rounded, low to high sphericity, moderate to well sorted, grains commonly rimmed with traces of clay. Poor to fair inferred porosity.
		Tr	<b>COAL:</b> brown black, soft, blocky, lignitic, trace pyrite.
2000	2005	90	<b>CLAYSTONE:</b> as above.
		10	<b>SANDSTONE:</b> generally as above, predominantly fine grained. No fluorescence.
		Tr	<b>COAL:</b> brown black, firm to hard, blocky, lignitic, trace pyrite.
2005	2010	80	<b>CLAYSTONE:</b> as above, predominantly Type 2.
		10	<b>SANDSTONE:</b> generally as above, predominantly fine grained. No fluorescence.
		10	<b>COAL:</b> brown black, firm to hard, blocky, lignitic, trace pyrite, grades to carbonaceous claystone.
2010	2015	70	<b>CLAYSTONE:</b> predominantly Type 1 brownish grey to dark brownish grey, soft to firm, dispersive, laminated & speckled, micromicaceous, slightly carbonaceous, slightly silty in part.
		30	<b>SANDSTONE:</b> generally as above, predominantly fine grained. No fluorescence.
2019	Spot		<b>CONGLOMERATE:</b> translucent to transparent fine to very coarse quartz grains and milky white to grey 3-5mm disaggregated quartz granules, subangular to rounded with increasing grain size, high to moderate sphericity, occasionally with clay matrix adhering, common broken quartz grains, rare aggregates with strong pyritic cement. Poor inferred porosity, no fluorescence.
2019.5	Spot		<b>CONGLOMERATE:</b> as above.
2015	2020	80	<b>CLAYSTONE:</b> predominantly Type 2 as above.
		20	<b>CONGLOMERATE:</b> as above.
2020	2025	80	<b>CLAYSTONE:</b> predominantly Type 2 as above, medium light grey to brownish grey, soft to firm, dispersive, laminated, subfissile, micromicaceous, kaolinitic in part, silty in part.
		20	<b>CONGLOMERATE:</b> as above, common broken grains with relic texture outlined by pyrite rims.
		Tr	<b>COAL:</b> brown black, firm to hard, blocky, lignitic, grades to Carbonaceous Claystone.
2025	2030	100	<b>CLAYSTONE:</b> predominantly Type 2 as above with occasional carbonaceous laminae.

Interval (m)		Lithology / Show Description	
From	To	%	
2030	2035	100	<b>CLAYSTONE:</b> brownish grey to dark brownish grey, soft to firm, dispersive, laminated, micromicaceous, moderately carbonaceous in part, occasional silty laminae.
		Tr	<b>COAL:</b> brown black to black, dull to sub-vitreous, firm to hard, blocky, trace pyrite.
2035	2040	100	<b>CLAYSTONE:</b> as above.
		Tr	<b>COAL:</b> as above.
2040	2045	30	<b>CLAYSTONE: type 1</b> as above.
		40	<b>CLAYSTONE:</b> as type 2 above, medium light grey to brownish grey, soft to firm, dispersive, laminated, subfissile, micromicaceous, kaolinitic in part, silty in part.
		20	<b>SILTSTONE:</b> medium light grey to brownish grey, off white, soft, dispersive with abundant white kaolinitic clay matrix, common very fine to fine disseminated quartz grains.
		10	<b>CARBONACEOUS CLAYSTONE:</b> very dark brown to brownish black, firm, subfissile, very carbonaceous, grades to <b>CLAYSTONE</b>
2045	2050	100	<b>CLAYSTONE: type 1</b> as above, non calcareous.
2050	2055	90	<b>CLAYSTONE:</b> predominantly Type 2 as above, medium light grey to brownish grey, soft to firm, dispersive, laminated, subfissile, micromicaceous, kaolinitic in part, silty in part, carbonaceous specks & laminae.
		10	<b>SILTSTONE:</b> as above.
		Tr	<b>CARBONACEOUS CLAYSTONE:</b> as above.
2055	2060	85	<b>CLAYSTONE:</b> as type 2 above, medium light grey to brownish grey, soft to firm, dispersive, laminated, subfissile, micromicaceous, kaolinitic in part, commonly silty.
		15	<b>SILTSTONE:</b> medium light grey to brownish grey, off white, soft, dispersive with abundant white kaolinitic clay matrix, common very fine to fine disseminated quartz grains.
		Tr	<b>CARBONACEOUS CLAYSTONE:</b> very dark brown to brownish black, firm, subfissile, very carbonaceous, grades to <b>CLAYSTONE</b> .
		Tr	<b>CONGLOMERATE:</b> as above,
2060	2065	100	<b>SILTY CLAYSTONE:</b> medium brownish grey, predominantly soft dispersive & hydrated, very silty, very micromicaceous, trace carbonaceous specks, grades to <b>ARGILLACEOUS SILTONE</b>
2065	2070	70	<b>SILTY CLAYSTONE:</b> as above.
		20	<b>SILTY SANDSTONE:</b> off white to medium brown, grey, silt to very fine grained translucent quartz, friable, abundant argillaceous matrix, trace calcareous cement, poor visual porosity, no show.
		10	<b>CARBONACEOUS CLAYSTONE:</b> as above, grading to <b>COAL</b> in part.
2070	2075	80	<b>CLAYSTONE:</b> light olive grey, subfissile, soft, dispersive, rare carbonaceous specks, micromicaceous, occasional very silty laminations.
		10	<b>SILTSTONE:</b> as above.
		10	<b>CARBONACEOUS CLAYSTONE:</b> very dark brown to brownish black, firm, subfissile, very carbonaceous, grades to <b>CLAYSTONE</b> .
2075	2080	100	<b>CLAYSTONE:</b> as above.
2080	2085	100	<b>CLAYSTONE:</b> 2 types (1) mottled white, kaolinitic, very soft, plastic to friable, silty and very finely sandy, (2): medium greyish brown, silty, trace to common carbonaceous flakes, grades in part to:
			<b>CARBONACEOUS SHALE:</b> as above
2085	2090	100	<b>CLAYSTONE:</b> as above becoming very light grey.
		Tr	<b>CARBONACEOUS SHALE:</b> as above



Interval (m)		Lithology / Show Description	
From	To	%	
2090	2095	70	<b>CLAYSTONE:</b> as above, silty, very finely sandy, kaolinitic in part..
		20	<b>COAL:</b> black blocky to subfissile, shaley grades to
		10	<b>CARBONACEOUS SHALE:</b> very dark brown, firm
2095	2100	100	<b>CLAYSTONE:</b> 2 types (1) mottled white, kaolinitic, very soft, plastic to friable, silty and very finely sandy, (2): medium greyish brown, silty, trace to common carbonaceous flakes, grades in part to:
		Tr	<b>CARBONACEOUS SHALE:</b> as above
2100	2105	95	<b>CLAYSTONE:</b> 2 types as above, type 1 finely sandy, with quartz, grey lithic and carbonaceous grains.
		5	<b>CARBONACEOUS SHALE:</b> as above
2105	2110	95	<b>CLAYSTONE:</b> as above, finely sand content increasing
		5	<b>CARBONACEOUS SHALE:</b>
2110	2115	30	<b>ARGILLACEOUS SANDSTONE:</b> very light grey to greyish brown, very fine to occasional medium grained, subangular, poorly sorted, dense kaolinitic clay matrix washing out, visual porosity poor. no shows.
		70	<b>CLAYSTONE:</b> two types as above
2115	2120	20	<b>ARGILLACEOUS SANDSTONE:</b> as above
		70	<b>CLAYSTONE:</b> as above
		10	<b>COAL:</b> black, splintery, shaley, subfissile
2120	2125	10	<b>ARGILLACEOUS SANDSTONE:</b> as above grades to
		70	<b>SANDY CLAYSTONE:</b> very light grey, very soft, friable to plastic
		30	<b>SILTY CLAYSTONE:</b> medium greyish brown, homogeneous, trace carbonaceous material.
2125	2130	90	<b>SILTY CLAYSTONE:</b> medium greyish brown, finely sandy, soft, plastic when hydrated, micromicaceous, blocky to occasionally subfissile, homogenous
		10	<b>ARGILLACEOUS SANDSTONE:</b> as above
		Tr	<b>COAL:</b> as above
2130	2135	10	<b>SANDY CLAYSTONE:</b> distinctive white, yellowish white, blocky, soft friable to plastic, fine to occasional very coarse quartz grains,
		50	<b>ARGILLACEOUS SANDSTONE:</b> very fine to coarse as above.
		40	<b>SILTY CLAYSTONE:</b> as above
2135	2140	60	<b>SANDSTONE:</b> argillaceous in part, in part clean, fine to very coarse, loose, trace silica cement adhering to grains, visual porosity very good, no shows.
		10	<b>SANDY CLAYSTONE:</b> white as above
		30	<b>SILTY CLAYSTONE:</b> medium greyish brown as above
2140	2145	100	<b>SANDSTONE:</b> clear, milky, very fine to coarse grained, poorly sorted, angular to subangular, quartzose, predominantly loose, clean, trace smoky quartz and grey cherty lithic grains, occasional aggregates with silica cement, visual porosity good. no shows.
2145	2150	100	<b>SANDSTONE:</b> as above, becoming fine to coarse grained. No shows.
2150	2155	100	<b>SANDSTONE:</b> as above fine to very coarse predominantly medium grained.
2155	2160	100	<b>SANDSTONE:</b> as above trace pyrite
2160	2165	95	<b>SANDSTONE:</b> as above, predominantly fine grained? Blinding shaker screens, poor sample.
		5	<b>CLAYSTONE:</b> two types as above: ?cavings
2165	2170	100	<b>SANDSTONE:</b> translucent to light grey, very fine to coarse predominantly fine grained, moderately sorted, angular to subangular, quartzose, silica cement, predominantly loose with common fractured grains, common smoky quartz and grey lithic grains. Visual porosity fair. no shows

Interval (m)		Lithology / Show Description	
From	To	%	
2170	2175	80	<b>CLAYSTONE:</b> mottled white to greyish brown, finely sandy, soft to dispersive, kaolinitic, carbonaceous specks and lithic grains,
		20	<b>SANDSTONE:</b> translucent to light grey, very fine to fine grained, moderately sorted, subangular, predominantly loose grains ? washing out of dense clay matrix, visible porosity poor.
2175	2180	30	<b>CLAYSTONE:</b> mottled as above
		70	<b>SANDSTONE:</b> as above, with very coarse grains, occasional hard pyrite cemented aggregates, becoming less argillaceous, visual porosity fair. no shows.
2180	2185	50	<b>SANDSTONE:</b> translucent to off light grey, very fine to medium, predominantly fine, angular to subrounded, predominantly subangular, very friable to predominantly loose quartz, occasional pyrite cemented aggregates, common white kaolinitic argillaceous matrix, common smoky quartz and grey lithic grains. Visual porosity fair. no shows
		50	<b>CLAYSTONE:</b> off white to light grey, frequent grey laminations, soft, dispersive, kaolinitic common very fine quartz 'floating' within clay, commonly silty, non calcareous.
2185	2190	20	<b>SANDSTONE:</b> as above.
		80	<b>CLAYSTONE:</b> dark grey to dark brownish grey, soft to firm, dispersive, subfissile, micromicaceous, trace black carbonaceous specks, occasional silty laminae, non calcareous.
2190	2195	90	<b>CLAYSTONE:</b> as above, with trace green 'glauconite' grains
		10	<b>SANDSTONE:</b> as above.
2195	2200	100	<b>CLAYSTONE:</b> as above, with common green 'glauconite' grains.
2203	Spot	100	<b>CLAYSTONE:</b> generally as above, mottled dark green & dark grey, firm, very glauconitic, abundant disseminated pyrite, trace dolomitic concretions, trace pyrite nodules with quartz grains.
2200 spot	2205 2208.5	100	<b>CLAYSTONE:</b> as above.
		50	<b>CLAYSTONE:</b> as above.
		50	<b>SANDSTONE:</b> grey, translucent quartz, very fine to very coarse, poorly sorted, angular to subrounded, common broken grains, weak siliceous? cement, occasional strong pyritic cement, trace argillaceous matrix, poor visual porosity, no shows.
2205	2210	60	<b>SANDSTONE:</b> as above, predominantly fine grained, moderately sorted.
		40	<b>CLAYSTONE:</b> as above.
2210	2215	50	<b>SANDSTONE:</b> as above.
		50	<b>CLAYSTONE:</b> dark grey, soft, dispersive, laminated, subfissile, micromicaceous, trace carbonaceous specks, occasional silty laminae.
2215	2220	60	<b>SANDSTONE:</b> light to medium grey, translucent quartz, very fine to very coarse, predominantly fine to coarse, poorly sorted, angular to rounded, predominantly subangular, weak to moderately siliceous cement, trace strong pyritic cement, abundant kaolinitic matrix in part, poor visual porosity, no show.
		40	<b>CLAYSTONE:</b> as above.
2220	2225	80	<b>CLAYSTONE:</b> as above with occasional coaly laminations.
		20	<b>SANDSTONE:</b> as above.
2225	2230	90	<b>CLAYSTONE:</b> as above becoming brownish grey.
		10	<b>SANDSTONE:</b> as above, trace dolomitic concretions or lithic grains.
		Tr	<b>COAL:</b> brown black, dull, firm to soft, blocky, commonly argillaceous.

Interval (m)		Lithology / Show Description	
From	To	%	
2230	2235	90	<b>SANDSTONE:</b> light to medium grey, translucent quartz, friable to commonly disaggregated, very fine to very coarse, predominantly fine to medium grained, rounded to predominantly subangular, moderately sorted, weak siliceous cement, occasional strong pyrite cemented aggregates, locally abundant kaolinitic matrix, trace grey cherty lithic grains, poor visual porosity, no show.
		10	<b>CLAYSTONE:</b> as above.
2235	2240	100	<b>SANDSTONE:</b> light grey, translucent quartz, very fine to granules, predominantly medium grained, very poorly sorted, angular to subangular, moderate sphericity, common quartz overgrowths, weak siliceous cement, trace strongly cemented pyrite aggregates, trace white kaolinitic matrix, poor visual porosity, no show.
2240	2245	70	<b>SANDSTONE:</b> as above.
		30	<b>CLAYSTONE:</b> medium grey, firm to soft, laminated, commonly sticky, very silty in part, common carbonaceous & coaly specks, occasional silty laminae.
2245	2250	80	<b>SANDSTONE:</b> as above, very fine to 3mm granules, very poor sorted, predominantly coarse to very coarse, fair inferred porosity, no show.
		10	<b>CLAYSTONE:</b> as above.
		10	<b>CARBONACEOUS SHALE:</b> brown black to black, dull, fissile.
2250	2255	80	<b>CLAYSTONE:</b> medium to dark brownish grey, firm, becoming soft and dispersive when wet, laminated, common carbonaceous specks.
		20	<b>SANDSTONE:</b> as above.
2255	2260	100	<b>CLAYSTONE:</b> as above, light to dark brownish grey.
2260	2265	90	<b>CLAYSTONE:</b> as above, light to dark brownish grey, occasionally off white & kaolinitic.
		10	<b>CARBONACEOUS SHALE:</b> brown black to black, dull, fissile.
2265	2270	90	<b>CLAYSTONE:</b> as above
		10	<b>CARBONACEOUS SHALE:</b> as above
2270	2275	100	<b>CLAYSTONE:</b> light to dark brown, and white kaolinitic, sandy, as above.
		Tr	<b>COAL:</b> black, conchoidal fracture, firm to hard.
2275	2280	90	<b>CLAYSTONE:</b> as above
		10	<b>CARBONACEOUS SHALE:</b> as above interlaminated.
Spot	2281	100	<b>Slow CLAYSTONE:</b> predominantly medium greyish brown, silty, trace carbonaceous matter, soft, in part white, kaolinitic, sandy, in part green, glauconitic
2280	2285	10	<b>SANDSTONE:</b> translucent very fine to fine grained, poorly sorted, subrounded, very argillaceous with silty and kaolinitic matrix. Visual porosity poor nil.
		90	<b>CLAYSTONE:</b> silty, sandy in part, two types interlaminated white/kaolinitic sandy with occasional coarse grains, predominantly medium to dark brown, common carbonaceous flakes and grains, sandy, silty in part.
2285	2290	100	<b>CLAYSTONE:</b> predominantly white to very light grey, mottled, kaolinitic, finely quartz sandy, very soft, friable, occasionally with fine carbonaceous flakes
Spot	2292	100	<b>Fast drilling CLAYSTONE:</b> two types as above,
2290	2295	90	<b>SANDSTONE:</b> translucent, very fine to fine grained, predominantly very fine grained. Moderately sorted, subangular, quartzose, slight white clay matrix washing out.
		10	<b>CLAYSTONE:</b> as above.
2295	2300	80	<b>SANDSTONE:</b> translucent, very fine to occasionally medium grained, predominantly fine, moderately sorted, subangular, quartzose, predominately loose clean grains, clay matrix in part. Visual porosity poor to fair. no shows.
		20	<b>CLAYSTONE:</b> mottled white to greyish brown as above
2300	2305	60	<b>SILTY SANDSTONE:</b> light greyish brown, very fine grained, argillaceous matrix, visual porosity nil. grades to
		40	<b>CLAYSTONE:</b> medium greyish brown, silty, sandy, trace carbonaceous material, occasional kaolinite patches.

Interval (m)		Lithology / Show Description	
From	To	%	
2305	2310	90	<b>CLAYSTONE:</b> two types, white sandy, kaolinitic, and greyish brown, silty, carbonaceous in part.
2310	2315	100	<b>CLAYSTONE:</b> two types interlaminated, (1) off white, mottled, finely sandy and with occasional medium and coarse quartz grains, soft, friable, occasional carbonaceous flakes, (2) dominant, medium greyish brown, homogenous to speckled, occasional fine carbonaceous material, silty, very soft to firm.
Spot	2319.5	100	<b>CLAYSTONE:</b> as above, trace <b>CARBONACEOUS SHALE</b>
2315	2320	100	<b>CLAYSTONE:</b> as above, trace pyrite, trace very coarse quartz grains, trace <b>CARBONACEOUS SHALE</b>
2320	2325	100	<b>CLAYSTONE:</b> mottled light grey, greyish brown to white, very silty & finely sandy, common fine and medium grained pyrite aggregates.
2325	2330	100	<b>CLAYSTONE:</b> sandy and silty as above
2330	2335	90	<b>CLAYSTONE:</b> as above.
		10	<b>SANDSTONE:</b> light grey, translucent, transparent quartz, very fine to coarse grained, predominantly fine grained, subangular, friable, abundant white kaolinitic argillaceous matrix, trace pyrite nodules, poor porosity, no show.
2335	2340	70	<b>CLAYSTONE:</b> as above, becoming predominantly brownish grey with common carbonaceous specks and laminae, trace micromicaceous.
		30	<b>SANDSTONE:</b> as above.
2340	2345	100	<b>CLAYSTONE:</b> as above, predominantly off white & silty.
2345	2350	100	<b>CLAYSTONE:</b> as above, predominantly brownish grey, laminated, silty in part, common carbonaceous specks.
		Tr	<b>CARBONACEOUS SHALE:</b> brownish black, firm, dull, earthy, trace pyrite.
2350	2355	100	<b>CLAYSTONE:</b> as above.
2355	2360	90	<b>CLAYSTONE:</b> as above.
		10	<b>SANDSTONE:</b> as above.
2360	2365	100	<b>CLAYSTONE:</b> as above, predominantly brownish grey, laminated, silty in part, common carbonaceous specks.
2365	2370	80	<b>CLAYSTONE:</b> dark brownish grey, lighter in parts, occasionally light grey, laminated, silty in part, common carbonaceous specks.
		20	<b>SANDSTONE:</b> light grey, translucent, transparent quartz, very fine to coarse grained, predominantly fine to medium grained, subangular, friable, abundant white kaolinitic argillaceous matrix, trace pyrite nodules, poor porosity, no show.
2370	2375	100	<b>CLAYSTONE:</b> brownish black, firm, subfissile, laminated in part, common carbonaceous specks and coaly streaks.
2375	2380	70	<b>CLAYSTONE:</b> light grey to off white, soft, dispersive, kaolinitic, silty with common very fine quartz grains, trace carbonaceous specks and pyrite nodules.
		30	<b>SANDSTONE:</b> translucent to transparent quartz, off white to light grey, friable to predominantly disaggregated grains, very fine to coarse, predominantly medium, abundant kaolinitic matrix, trace carbonaceous specks and pyrite nodules.
2380	2385	80	<b>CLAYSTONE:</b> as above.
		20	<b>SANDSTONE:</b> as above.
2385	2390	100	<b>CLAYSTONE:</b> brownish black, firm, subfissile, laminated in part, common carbonaceous specks and coaly streaks, occasionally off white to light grey and silty.
2390	2395	100	<b>CLAYSTONE:</b> light grey to off white, soft, dispersive, kaolinitic, silty, common carbonaceous specks.
2395	2400	100	<b>CLAYSTONE:</b> brownish black, soft and dispersive, laminated in part, common carbonaceous specks and coaly streaks, occasionally off white to light grey and silty.
2400	2405	100	<b>CLAYSTONE:</b> as above.

Interval (m)		Lithology / Show Description	
From	To	%	
2405	2410	100	<b>CLAYSTONE:</b> generally as above, brownish grey, soft, plastic, common laminations, common carbonaceous specks, slightly micromicaceous, occasional silty laminae.
2410	2415	90	<b>CLAYSTONE:</b> predominantly as above, also off white to light grey in part.
		10	<b>SANDSTONE:</b> light grey, very friable, very fine to medium grained, subangular, moderately sorted, trace siliceous and pyrite cement, abundant kaolinitic matrix, poor visible porosity. No show.
2415	2420	90	<b>CLAYSTONE:</b> as above, commonly off white.
		10	<b>SANDSTONE:</b> as above.
2420	2425	90	<b>CLAYSTONE:</b> as above, commonly off white.
		10	<b>SANDSTONE:</b> as above.
2425	2430	90	<b>CLAYSTONE:</b> as above.
		10	<b>SANDSTONE:</b> light grey, very friable, very fine to granular, abundant broken grains, subangular to subrounded, poorly sorted, trace siliceous and pyrite cement, abundant kaolinitic matrix, poor visible porosity. No show.
2430	2435	80	<b>CLAYSTONE:</b> two types, predominantly greyish brown to brown, silty, homogenous to occasionally carbonaceous, in part off-white, kaolinitic, sandy.
		20	<b>SANDSTONE:</b> as above
2435	2440	90	<b>CLAYSTONE:</b> predominantly as above, also off white to light grey in part.
		10	<b>SANDSTONE:</b> light grey, very friable, very fine to medium grained, subangular, moderately sorted, trace siliceous and pyrite cement, abundant kaolinitic matrix, poor visible porosity. No show.
2440	2445	70	<b>CLAYSTONE:</b> two types equal amounts, (1) mottled white, to very light brown, kaolinitic, sandy, carbonaceous in part, loose fine to coarse quartz grains washing out, (2) light to medium greyish brown, silty, soft, carbonaceous laminae in part.
		30	<b>SANDSTONE:</b> light grey, very friable, very fine to granular, abundant loose broken grains, angular to subrounded, poorly sorted, trace siliceous cement, abundant kaolinitic matrix, poor visible porosity. No shows.
2445	2450	70	<b>CLAYSTONE:</b> as above
		30	<b>SANDSTONE:</b> as above ?fluorescent lubricating oil scum on mud from shaker lubrication, no show in sample.
2450	2455	20	<b>SANDSTONE:</b> light grey, very friable, very fine to granular, abundant loose broken grains, angular to subrounded, poorly sorted, trace siliceous cement, occasional pyritic gags abundant kaolinitic matrix, poor visible porosity.
		80	<b>CLAYSTONE:</b> two types, mottled white, to very light brown, kaolinitic, sandy, carbonaceous in part, loose quartz grains washing out, light to medium greyish brown, silty, soft, carbonaceous laminae in part.
2455	2460	100	<b>CLAYSTONE:</b> as above, predominantly, medium greyish brown, silty, homogenous, trace carbonaceous material, 20% white mottled, kaolinitic.
2460	2465	100	<b>CLAYSTONE:</b> as above, predominantly greyish brown, silty, very finely sandy in part, grades to
		Tr	<b>CARBONACEOUS SHALE and trace COAL</b>
2465	2470	70	<b>CLAYSTONE:</b> medium greyish brown, soft, carbonaceous in part,
		30	<b>ARGILLACEOUS SANDSTONE:</b> white, very fine to coarse grained, poorly sorted, subangular, kaolinitic, visual porosity nil, no show.
2470	2475	90	<b>CLAYSTONE:</b> predominantly light to medium greyish brown as above, silty, grades in part to siltstone, 10% mottled white, sandy as above, trace pyrite nodules, occasional very coarse quartz grains and grey siliceous lithic grains.
		10	<b>SILTSTONE:</b> light grey, firm, friable, micromicaceous
2475	2480	85	<b>CLAYSTONE:</b> as above
		10	<b>SANDSTONE:</b> very fine to medium grained as above.
		5	<b>SILTSTONE:</b> as above

Interval (m)		Lithology / Show Description	
From	To	%	
Spot	2482	20	Fast drilling, <b>SANDSTONE</b> : light grey, translucent, fine to very coarse grained, predominantly loose, abundant white clay matrix
		60	<b>CLAYSTONE</b> : as above
		20	<b>CARBONACEOUS SHALE</b> , grades to trace <b>COAL</b>
2480	2485		
2485	2490	80	<b>CLAYSTONE</b> : as above.
		20	<b>SILTSTONE</b> : light grey, firm to hard, siliceous, micromicaceous.
		Tr	<b>CARBONACEOUS SHALE</b> : very dark brown to brownish black firm.
2490	2495	70	<b>CLAYSTONE</b> : dark to medium brownish grey, soft to firm, subfissile, common carbonaceous specks & micro laminations, occasionally silty.
		20	<b>SANDSTONE</b> : off white to light grey, very fine to very coarse grained, predominantly fine grained, poorly sorted, angular to subrounded, moderately sphericity, trace strong pyrite cement, abundant white kaolinitic matrix, very poor visual porosity, no show.
		10	<b>SILTSTONE</b> : light grey and brownish grey, firm, blocky to friable, argillaceous.
2495	2500	80	<b>CLAYSTONE</b> : as above, very carbonaceous in part, grading to <b>CARBONACEOUS SHALE</b> .
		10	<b>SANDSTONE</b> : as above.
		10	<b>SILTSTONE</b> : as above.
2500	2505	60	<b>CLAYSTONE</b> : as above, very carbonaceous in part with abundant carbonaceous laminae, grading to <b>CARBONACEOUS SHALE</b> and earthy <b>COAL</b>
		40	<b>SANDSTONE</b> : as above.
2509	Spot	100	Gas peak, 0.08%. <b>CLAYSTONE</b> : light brownish grey, firm to soft, micromicaceous in part, common carbonaceous specks, silty in part, trace pyrite nodules.
2505	2510	90	<b>CLAYSTONE</b> : as above.
		10	<b>CARBONACEOUS SHALE</b> : brownish black, to greyish black, firm, extremely carbonaceous in part, grades to trace earthy <b>COAL</b>
2510	2515	40	<b>CLAYSTONE</b> : as above.
		60	<b>SANDSTONE</b> : off white to light grey, translucent quartz, friable, very fine to coarse, occasional very coarse grains, predominantly fine grained, subrounded, moderately sorted, trace pyrite cement, abundant white kaolinitic matrix, poor visual porosity, no show.
2515	2520	90	<b>CLAYSTONE</b> : predominantly dark brownish grey as above.
		10	<b>SANDSTONE</b> : as above.
2520	2525	60	<b>CLAYSTONE</b> : predominantly dark brownish grey as above.
		30	<b>SANDSTONE</b> : as above.
		10	<b>SILTSTONE</b> : grey, firm, micromicaceous, argillaceous matrix.
2525	2530	90	<b>CLAYSTONE</b> : light brownish grey, firm to soft, micromicaceous in part, common carbonaceous specks, silty in part, trace pyrite nodules.
		10	<b>SANDSTONE</b> : as above.
2530	2535	90	<b>CLAYSTONE</b> : as above, common hard pyrite nodules.
		10	<b>SANDSTONE</b> : as above.
2535	2540	90	<b>CLAYSTONE</b> : as above, common hard pyrite nodules. Also dark brownish grey in part.
		10	<b>SANDSTONE</b> : as above.

Interval (m)		Lithology / Show Description	
From	To	%	
2540	2545	40	<b>CLAYSTONE:</b> light grey brown to light grey, soft, dispersive, laminated, common carbonaceous and coaly specks, silty in part, micromicaceous in part, trace hard pyrite nodules.
		60	<b>SANDSTONE:</b> grey to off white, very fine to fine grained, subrounded, moderately to well sorted, abundant white kaolinitic matrix, trace carbonaceous specks, very poor porosity visual porosity, no show, grades to arenaceous <b>CLAYSTONE</b> .
2545	2550	30	<b>CLAYSTONE:</b> as above, common hard pyrite nodules.
2550	2555	70	<b>SANDSTONE:</b> as above.
		70	<b>CLAYSTONE:</b> as above.
2555	2560	20	<b>SANDSTONE:</b> as above, trace pyrite cemented aggregates.
		10	<b>SILTSTONE:</b> grey, firm, micromicaceous, argillaceous matrix.
		20	<b>CLAYSTONE:</b> as above, common carbonaceous specks.
2560	2565	80	<b>SANDSTONE:</b> light grey, very fine to granular, predominantly fine translucent quartz, friable, subangular - subrounded, moderately to high sphericity, occasional aggregates well cemented by pyrite, abundant kaolinitic matrix, trace dark grey lithic grains, poor inferred porosity, no show.
		20	<b>CLAYSTONE:</b> as above.
2568	Spot	80	<b>SANDSTONE:</b> as above.
		100	Slower drilling. <b>CLAYSTONE:</b> dark brownish grey to brownish black, firm, dispersive, common carbonaceous specks and laminations.
2565	2570	70	<b>CLAYSTONE:</b> as above.
		30	<b>SANDSTONE:</b> as above, common broken quartz grains and pyrite cemented aggregates..
2570	2575	80	<b>CLAYSTONE:</b> pale yellowish brown to light brownish grey, smooth to silty, trace carbonaceous material, soft.
		20	<b>SANDSTONE:</b> translucent to light brown, very fine to predominantly fine grained, moderately sorted, quartzose, with trace carbonaceous grains, predominantly loose, clay matrix washing out.
2575	2580	70	<b>CLAYSTONE:</b> very distinct two-tone colour in sample tray, (1) white, kaolinitic, sandy grades to argillaceous sandstone, (2) medium brownish grey to moderate yellowish brown, silty, grades to siltstone.
		10	<b>ARGILLACEOUS SANDSTONE.</b> Kaolinitic fine to occasional very coarse grained.
		20	<b>SILTSTONE:</b> light to medium grey to occasionally greyish brown.
2583	spot	80	<b>CLAYSTONE:</b> two types as above.
		10	Carbonate cemented <b>SANDSTONE:</b> translucent to light grey, fine to medium grained, moderately sorted, dense silica cement, hard,
		10	<b>SANDSTONE:</b> translucent, loose grains washing out of claystone.
2580	2585	Tr	<b>COAL:</b> black, small fragments,
		100	<b>CLAYSTONE:</b> 100% moderate yellowish brown, smooth to slightly silty, blocky,
2585	2590	70	<b>CLAYSTONE:</b> two types, yellowish brown as above, and white/ kaolinitic, grades to
		20	<b>ARGILLACEOUS SANDSTONE:</b> white, very fine to occasionally medium grained, poorly sorted, very hard/siliceous in part visual porosity poor.
		10	<b>SILTSTONE:</b> light grey, soft to firm, friable.
spot	2591.5	80	Fast drilling <b>CLAYSTONE:</b> two types, medium brownish grey, silty, soft, and white sandy, kaolinitic, grades to
		20	<b>ARGILLACEOUS SANDSTONE:</b> as above fine grained, well sorted, loose grains washing out, occasionally ?clean, visual porosity fair.

Interval (m)		Lithology / Show Description	
From	To	%	
spot	2594.4	80	Very slow drilling, mixed <b>claystone</b> lithologies as above and,
		Tr	<b>SILICIFIED CLAYSTONE</b> ?tuffaceous, very light grey to very light greenish/bluish grey, splintery, very hard.
		10	<b>SILICEOUS SANDSTONE</b> : light grey, very fine to medium grained, pyritic cement in part, visual porosity nil, interlaminated with
		10	<b>SILTSTONE</b> : light to medium grey, hard to very hard, siliceous.
		Tr	? <b>BASALT</b> : black, very hard, aphanitic, splintery, trace biotite.
spot	2594.6		Slow drilling, mixed <b>CLAYSTONE</b> and <b>ARGILLACEOUS SANDSTONE</b> lithologies as above with 5% <b>silicified</b> lithologies as for previous spot sample.
2590	2595	70	<b>Minimal sample SANDSTONE</b> : translucent to white, very fine to fine grained, moderately sorted, subrounded, in part clean, in part very argillaceous/ kaolinitic with disseminated pyrite, visual porosity fair to nil.
		30	<b>CLAYSTONE</b> : two types, kaolinitic and yellowish brown as above
spot	2595.3	70	<b>Slow drilling, Well cemented ARGILLACEOUS SANDSTONE</b> : mottled white to light grey, fine to coarse grained, poorly sorted, abundant white kaolinitic and occasional very dense calci-dolomitic cement, trace very fine carbonaceous material and occasional disseminated, pyrite, visual porosity nil. Grades to
		10	<b>SANDY CLAYSTONE</b> , white, kaolinitic.
		20	<b>SILTSTONE</b> : medium to dark grey, soft/argillaceous to occasionally very hard/silicified,
spot	2599	90	<b>CLAYSTONE</b> : two types, (1) sandy kaolinitic, pyritic, grades to kaolinitic sandstone (2) dominant, <u>moderate</u> yellow brown, silty, occasional fine to coarse carbonaceous flakes,
		10	<b>ARGILLACEOUS SANDSTONE</b> : mottled white as above.
2595	2600	70	<b>CLAYSTONE</b> : two types as above.
		30	<b>SANDSTONE</b> : very light grey, very fine to occasionally fine grained, white kaolinitic matrix and siliceous cement, occasionally dense pyritic cement. Visual porosity nil.
		Tr	<b>SILTSTONE</b> : light grey, siliceous
2600	2605	90	<b>CLAYSTONE</b> : moderate to very light brown, smooth to silty, occasional large carbonaceous flakes, firm, soft/amorphous when hydrated.
		10	<b>ARGILLACEOUS SANDSTONE</b> : off white to very light yellowish grey, very fine to medium grained,
2605	2610	90	<b>CLAYSTONE</b> : 70% moderate to light yellowish brown, silty in part, occasional fine to coarse grained carbonaceous flakes, 30%: light brown to off-white, finely sandy,
		10	<b>SILTSTONE</b> : light grey as above,
			Trace pyrite nodules.
2610	2615	90	<b>ALTERED VOLCANICS</b> : light grey, mottled and speckled white, red, black, brown and rarely green, soft to firm, predominantly argillaceous alteration products of basic volcanics, occasional remnant partially altered feldspars, slightly calcareous.
		10	<b>CLAYSTONE</b> : as above.
2615	2618.4	100	<b>ALTERED VOLCANICS</b> : as above.
		Tr	<b>BASALT</b> : grey black to black, very hard, micro-crystalline,
2618.4	2620		Bottoms up sample after bit trip. Predominantly <b>VOLCANICS</b> as above, with abundant cavings.
2620	2625	100	<b>ALTERED VOLCANICS</b> : generally as above, but less altered and hard in part



Interval (m)		Lithology / Show Description	
From	To	%	
2628.4	Spot	30	<b>SANDSTONE:</b> white to light grey, fine to medium grained, subrounded to subangular, moderately sorted, friable, variably cemented with carbonate cement, abundant kaolinitic matrix, poor visual porosity.
		50	<b>CLAYSTONE:</b> cream to light grey, soft to firm, kaolinitic, probably altered volcanics.
		20	<b>ALTERED VOLCANICS:</b> as above, predominantly cream to light grey with relic crystalline texture.
			<b>SHOW:</b> 80% moderately bright white <b>fluorescence</b> with very bright spots, very slow blooming white cut using isopropyl alcohol, leaving a thin ring residue. <b>NOTE carbonate cement also exhibits pale orange mineral fluorescence.</b>
2625	2630	70	<b>SANDSTONE:</b> as above, predominantly as disaggregated quartz grains. 90% fluorescence as above..
		20	<b>CLAYSTONE:</b> as above.
		10	<b>ALTERED VOLCANICS:</b> as above, predominantly cream to light grey with relic crystalline texture.
2630	2635	60	<b>SANDSTONE:</b> as above, strong pyrite & sideritic cements in part. 20% dull white spotty fluorescence, no visible cut, and trace ring residue, common pale orange mineral fluorescence.
		30	<b>ALTERED VOLCANICS:</b> as above, commonly green & red brown.
		10	<b>CLAYSTONE:</b> greyish brown, soft, plastic, silty in part, trace to common carbonaceous specs and laminations.
2635	2640	30	<b>SANDSTONE:</b> as above.
		70	<b>ALTERED VOLCANICS:</b> very light grey, slightly greenish in part, soft to firm, predominantly kaolinitic alteration products of basic volcanics, trace relic crystal texture, slightly calcareous in part.
2640	2645	100	<b>ALTERED BASALT:</b> greenish grey, mottled green, black & white, firm to hard, sub-blocky, common relic euhedral crystal texture, trace to common white kaolin from altered feldspars.
2645	2650	60	<b>ALTERED BASALT &amp; VOLCANICS:</b> generally as above, but abundantly off white.
		40	<b>SANDSTONE:</b> white to light grey, fine to medium grained, subangular, moderately sorted, friable to hard, variably cemented with strong sideritic and pyritic cements. carbonate cement, abundant kaolinitic matrix, poor visual porosity. Common dull orange mineral fluorescence.
2650	2655	100	<b>VOLCANICS (ALTERED):</b> light grey to greenish grey, soft to firm, predominantly kaolinitic alteration products of basic volcanics, trace relic crystal texture, slightly calcareous in part, common flinty white siliceous spheroids broken into shards & fragments (pseudomorphs after amygdales)
			<b>VOLCANICS (Slightly ALTERED BASALT):</b> black to greenish black, hard to very hard, micro crystalline to cryptocrystalline, occasional white halos around feldspar grains.
2655	2660	90	<b>VOLCANICS (ALTERED):</b> as above with minor slightly <b>ALTERED BASALT.</b>
		10	<b>SANDSTONE:</b> as above.
2660	2665	100	<b>ALTERED VOLCANICS:</b> very light grey, frequently greenish, mottled red brown, white & black in part, soft to firm, occasionally hard, predominantly kaolinitic alteration products of basic volcanics, trace relic crystal texture, slightly calcareous in part, common flinty white siliceous spheroids broken into shards & fragments (pseudomorphs after amygdales), trace drusy siderite crystals, with pinky orange mineral fluorescence.
2665	2670	100	<b>ALTERED VOLCANICS:</b> as above
2670	2675	100	<b>ALTERED VOLCANICS:</b> as above

Interval (m)		Lithology / Show Description	
From	To	%	
2675	2680	95 Tr	<b>ALTERED VOLCANICS:</b> as above <b>SANDSTONE:</b> light grey, very fine to fine grained,
2680	2685	95 5	<b>ALTERED VOLCANICS:</b> as above, light grey to black with translucent to clear green mineral, coarsely crystalline, acicular in part, soft (hardness ~2).
2685	2690	95 5	<b>ALTERED VOLCANICS:</b> light grey and greenish grey to black, crypto to microcrystalline, common spherical and fractured amygdales filled with white to moderate green mineral.
2690	2695	100	<b>ALTERED VOLCANICS:</b> light grey to black, friable firm to hard, also mottled white kaolinitic, with occasional green carbonate inclusions, soft, friable. Trace dull pink mineral fluorescence.
2695	2700	100	<b>ALTERED VOLCANICS:</b> predominantly very light greenish to pinkish grey, kaolinitic, aphanitic ?tuffaceous, calcareous in part, in part light to moderate brown/sideritic.
2700	2705	100	<b>ALTERED VOLCANICS:</b> 50% black to dark green, microcrystalline, friable to very hard, 50% light coloured, tuffaceous.
2705	2710	100	<b>ALTERED VOLCANICS:</b> as above, predominantly light grey to greyish green, rarely pink, kaolinitic in part, calcareous partly dolomitic, dark grey microcrystalline, friable in part.
2710	2715	70 10 20 Tr	<b>CLAYSTONE:</b> ?tuffaceous, light to moderate brown, silty & finely sandy in part, soft to firm, fine carbonaceous flakes and trace white and pale green mineral grains. Grades to <b>SILTSTONE</b> <b>ALTERED VOLCANICS:</b> light /kaolinitic calcareous, and dark as above, <b>SANDSTONE:</b> ?volcaniclastic medium grey, mottled, very fine to coarse grained, poorly sorted, multicoloured lithic grains and quartz fully cemented with argillaceous matrix and variable siliceous dolomitic calcareous and pyritic cements.
2715	2720	50 40 10 Tr	<b>CLAYSTONE:</b> as above becoming pale greyish orange, occasionally light to moderate brown as above grades to <b>SILTSTONE:</b> light brownish grey, soft to firm, friable, abundant argillaceous matrix. <b>ALTERED VOLCANICS:</b> kaolinitic and black/hard as above.
2720	2725	50 10 20 Tr 20	<b>SANDSTONE:</b> as above <b>ALTERED VOLCANICS:</b> off white to light bluish grey, soft to firm, plastic, argillaceous, probably kaolinitic, trace relic quartz grains, slightly calcareous, common siliceous spheroids, pseudomorphs after amygdales? <b>VOLCANICS: unaltered?</b> black to greenish black, micro-crystalline, hard, brittle. <b>CLAYSTONE:</b> light to moderate brown as above.
		Tr	<b>SILTSTONE:</b> as above. <b>SANDSTONE:</b> light grey, translucent quartz, very fine to very coarse, predominantly fine to medium, poorly sorted, angular to rounded, predominantly subangular, friable to predominantly loose quartz grains, moderately siliceous & pyrite cemented aggregates, trace to common white argillaceous matrix in part, poor porosity, no show.
2725	2730	80 10 10	<b>DOLOMITE:</b> grey brown with dark grey spots, very hard, cryptocrystalline, angular shards, brittle. <b>ALTERED VOLCANICS:</b> as above, soapy waxy texture in part, possibly tuffaceous. <b>CLAYSTONE:</b> light to moderate brown as above.
		10	<b>SANDSTONE:</b> as above.
2730	2735	80 20	<b>ALTERED VOLCANICS:</b> as above. <b>CLAYSTONE:</b> as above.

Interval (m)		Lithology / Show Description	
From	To	%	
2735	2740	40	<b>ALTERED VOLCANICS:</b> as above, slightly calcareous.
		40	<b>SANDSTONE:</b> light grey, translucent quartz, very fine to coarse, predominantly medium grained, moderately sorted, friable to predominantly loose quartz, subangular, occasional hard aggregates cemented by pyrite and silica, common to abundant argillaceous matrix, possibly tuffaceous, poor porosity, no show.
		20	<b>CLAYSTONE:</b> light to moderate brown as above.
2740	2745	60	<b>ALTERED VOLCANICS:</b> pale greenish grey to bluish grey, predominantly argillaceous, soft to firm, dispersive in part, common relic crystal texture, relic glassy grains, slightly calcareous, common siliceous spheroids, pseudomorphs after amygdales?.
		30	<b>CLAYSTONE:</b> moderate to dark brownish grey, firm, blocky, common black carbonaceous specks and streaks, occasionally silty.
		10	<b>SANDSTONE:</b> light grey, as above.
		Tr	<b>VOLCANICS: unaltered?</b> black to greenish black, micro-crystalline, hard, brittle.
2745	2750	20	<b>ALTERED VOLCANICS:</b> as above.
		30	<b>CLAYSTONE:</b> as above.
		10	<b>SILTSTONE:</b> moderate brownish grey, firm to generally soft, argillaceous, trace carbonaceous specks, tuffaceous in part.
		40	<b>SANDSTONE:</b> off white to light grey, quartzose, very fine to medium, moderately to poorly sorted, rounded to subangular, friable, occasionally very hard with strong pyrite cement, common white argillaceous/tuffaceous matrix, common lithic grains, poor visual porosity, no show.
2750	2755	20	<b>ALTERED VOLCANICS:</b> as above.
		50	<b>CLAYSTONE:</b> off white to light grey, soft, plastic, common silt to fine grained sized quartz, possibly altered volcanoclastics.
		10	<b>CLAYSTONE:</b> moderate to dark brownish grey as above.
2755	2760	20	<b>SANDSTONE:</b> as above.
		80	<b>SANDSTONE:</b> light grey, translucent quartz, very fine to granular, predominantly fine to medium, angular to subangular, moderately to poorly sorted, predominantly loose disaggregated & broken quartz grains, trace strong siliceous & dolomitic cement, trace hard well cemented pyrite aggregates, common grey & black cherty lithic grains, fair inferred porosity, no show.
		10	<b>CLAYSTONE:</b> off white as above
2760	2765	10	<b>CLAYSTONE:</b> moderate to dark brownish grey as above.
		60	<b>CLAYSTONE:</b> brownish grey, firm, sticky, common carbonaceous specks, arenaceous, grading to argillaceous <b>SILTSTONE &amp; SANDSTONE</b>
		30	<b>SANDSTONE:</b> as above.
2765	2770	10	<b>ALTERED VOLCANICS:</b> as above.
		80	<b>CLAYSTONE:</b> as above, very silty, grading to argillaceous <b>SILTSTONE</b> in part.
		10	<b>SANDSTONE:</b> as above.
2770	2775	10	<b>ALTERED VOLCANICS:</b> as above.
		70	<b>ALTERED VOLCANICS:</b> light bluish grey, speckled white and occasionally black, green & orange, firm, non sticky, common relic texture, slightly ferro calcitic (moderate effervescence and dull pinkish mineral fluorescence).
		20	<b>SANDSTONE:</b> as above, predominantly coarse to granules with many angular broken shards.
		10	<b>CLAYSTONE:</b> as above.

Interval (m)		Lithology / Show Description	
From	To	%	
2775	2780	50	<b>ALTERED VOLCANICS:</b> as above.
		30	<b>SANDSTONE:</b> light grey, very fine to fine grained, occasionally medium & coarse, moderately sorted, subrounded, disaggregated, weak calcareous cement, common very hard pyrite cemented aggregates, white argillaceous matrix in part, common grey lithic grains, poor porosity, no show.
		10	<b>VOLCANICS:</b> Very dark grey speckled white, frequently greenish black, very hard, brittle, microcrystalline.
		10	<b>CLAYSTONE:</b> as above, with occasional dolomitic concretions.
		Tr	<b>COAL:</b> black, subvitreous, sub-conchoidal fracture, hard, brittle.
2780	2785	70	<b>ALTERED VOLCANICS:</b> as above.
		20	<b>SANDSTONE:</b> as above, common pyrite nodules.
		10	<b>VOLCANICS:</b> Very dark grey speckled white, frequently greenish black, very hard, brittle, microcrystalline.
2785	2790	100	<b>VOLCANICS:</b> when fresh, black to greenish black & very dark grey, crypto to finely microcrystalline, very hard, occasionally tuffaceous pale green and light grey, soapy textured. When weathered/altered pale to dark brown, pale green, soft to firm friable to plastic, calcareous, common amygdaloids of green mineral, common fine loose quartz ?washing out
2790	2795	90	<b>VOLCANICS:</b> as above
		10	<b>SILTSTONE:</b> pale brown, blocky, soft.
2795	2800	100	<b>ALTERED VOLCANICS:</b> as above
2800	2805	100	<b>ALTERED VOLCANICS:</b> as above
2805	2810	100	<b>ALTERED VOLCANICS:</b> as above
2810	2815	100	<b>VOLCANICS:</b> altered in part. Predominantly light to moderate brown, very light grey, mottled with pale green and greyish green, rare flow structures ?volcaniclastic in part, calcareous, occasionally fresh volcanics, very dark grey to dark greyish green, microcrystalline, quartz, feldspar & dark minerals, with large irregular to spherical amygdaloids filled with soft pale green mineral. ? flow top?
2815	2820	100	<b>ALTERED VOLCANICS:</b> as above
2820	2825	100	<b>ALTERED VOLCANICS:</b> multicoloured white to black, very pale to dark brown, pale to dark green, very finely to medium crystal size, fresh/black to weathered/pale/amorphous.
2825	2830	100	<b>ALTERED VOLCANICS:</b> ?weathered, very pale brown, very soft, amorphous, common quartz silt and fine sand washing out, occasional subspherical amygdaloids of green mineral washing out.
		Tr	
2830	2835	100	<b>ALTERED VOLCANICS:</b> as above, becoming very clay rich/dispersive, very fine quartz washing out.
2836	2838	40	<b>ALTERED VOLCANICS:</b> ?highly weathered, very pale brown, argillaceous, very soft to dispersive.
		60	<b>SANDSTONE:</b> translucent to very light brown, very to fine grained, moderately sorted, subangular, quartzose, ?volcaniclastic and feldspathic grains, argillaceous matrix with loose grains washing out, visual porosity poor. <b>SHOW:</b> 50% of tray, patchy bright to dull pinpoint white fluorescence, very faint instant solvent fluorescence followed by very slow moderate blooming solvent fluorescence with yellow fluorescence remaining on some grains, strong irregular yellowish white residual ring,
2835	2840	10	<b>ALTERED VOLCANICS:</b> as above, trace ?serpentinite, trace chert?
		80	<b>CLAYSTONE:</b> moderate brown, smooth to occasionally silty, common large carbonaceous flakes & wisps, soft to firm.
		10	<b>SANDSTONE:</b> as above, <b>SHOW:</b> 5% of tray as above.

Interval (m)		Lithology / Show Description	
From	To	%	
2840	2845	50	<b>CLAYSTONE:</b> as above, grades to
		30	<b>SILTSTONE:</b> moderate brown, firm, argillaceous. Carbonaceous in part.
		20	<b>SANDSTONE:</b> as loose grains, clear to light brown, very fine to medium predominantly fine grained, subangular, moderately sorted, argillaceous matrix, poor to fair inferred porosity, no show.
		Tr	<b>COAL:</b> black to brownish black, dull, firm to hard, platy to blocky, argillaceous in part.
2845	2850	70	<b>ALTERED VOLCANICS:</b> ?tuffaceous, white, very pale green, very pale grey, relict ash structure and occasional amygdaloids filled with clear quartz,
		30	<b>CLAYSTONE:</b> brown, carbonaceous as above.
2850	2855	90	<b>ALTERED VOLCANICS:</b> as above, hard, glassy and cherty in part.
2855	2860	10	<b>CLAYSTONE:</b> as above.
		70	<b>ALTERED VOLCANICS:</b> as above
		20	<b>SANDSTONE:</b> as above.
2860	2865	10	<b>COAL:</b> as above, very argillaceous and earthy, grading to <b>CARBONACEOUS SHALE.</b>
		50	<b>ALTERED VOLCANICS:</b> as above.
		40	<b>CLAYSTONE:</b> moderate to dark brownish grey, soft to firm, dispersive, common carbonaceous & coaly streaks & specks, common matrix supported quartz grains.
		10	<b>CARBONACEOUS SHALE:</b> Very dark brown to brownish black, firm, subfissile.
2865	2870	20	<b>VOLCANICS:</b> light grey, off white, bluish to greenish hues, soft and dispersive, occasionally firm and waxy. Also off white, cream, blue and greenish hues, greenish black, glassy to microcrystalline, hard to very hard, brittle, common tuffaceous fabrics, but darker grains basaltic.
		80	<b>CLAYSTONE:</b> as above with occasional white tuffaceous? streaks and laminations.
		10	<b>VOLCANICS:</b> as above.
2870	2875	90	<b>CLAYSTONE:</b> as above.
2875	2880	90	<b>ALTERED VOLCANICS:</b> predominantly light grey, off white, bluish to greenish hues, soft and dispersive, occasionally firm and waxy. Also off white, cream, blue and greenish hues, occasionally greenish black, glassy to microcrystalline, hard to very hard, brittle, common tuffaceous fabrics.
		10	<b>CLAYSTONE:</b> as above, very carbonaceous in part.
2880	2885	10	<b>SANDSTONE:</b> loose grains, light grey, fine grained, well sorted, densely cemented with dolomite and occasionally pyrite.
		80	<b>SILTY CLAYSTONE:</b> brown, rarely carbonaceous as above, in part grey, waxy, subfissile.
		10	<b>VOLCANICS,</b> altered as above, and tuffaceous, hard, dolomite cemented.
2885	2890	50	<b>SILTY CLAYSTONE:</b> brown as above.
		30	<b>SANDSTONE:</b>
		20	<b>VOLCANICS:</b> light grey, off white, bluish to greenish hues, soft and dispersive, occasionally firm and waxy. Also off white, cream, blue and greenish hues, greenish black, glassy to microcrystalline, hard to very hard, brittle, common tuffaceous fabrics, but darker grains basaltic.
2888.2	spot	30	<b>SANDSTONE:</b> as loose grains, clear translucent, fine to medium grained, well sorted, angular, quartzose, trace volcanic lithic grains, clean to kaolinitic, visual porosity poor to fair. <b>SHOW:</b> trace dull yellow, spotty, slow bleeding cut, moderate ring residue, associated with tight sandstone aggregates.
		40	<b>ALTERED VOLCANICS:</b> as above
		40	<b>SILTY CLAYSTONE:</b> as above
			Trace pyrite nodules and loose green mineral filled amygdaloids.

Interval (m)		Lithology / Show Description	
From	To	%	
2890	2895	80	<b>SILTY CLAYSTONE:</b> buff to very light brown, sandy in part with occasional isolated medium quartz grains, rarely carbonaceous as above, in part grey, waxy, subfissile.
		20	<b>ALTERED VOLCANICS:</b> as above, highly weathered/altered, very soft dispersive.
2895	2900	90	<b>SILTY CLAYSTONE:</b> pale to dark brown, common coaly wisps and laminae, soft-firm, subfissile,
		10	<b>SANDSTONE:</b> as loose grains, translucent, fine grained, well sorted, quartzose, trace volcanoclastic grains, visual porosity fair. no shows.
2900	2905	80	<b>SILTY CLAYSTONE:</b> brown as above
		20	<b>ALTERED VOLCANICS:</b> white speckled, relic feldspar kaolinitic, grades to trace sandstone, fine quartz grains washing out.
2905	2910	40	<b>SILTY CLAYSTONE:</b> as above
		30	<b>ALTERED VOLCANICS:</b> as above
		30	<b>SANDSTONE:</b> loose grains as above becoming very fine grained ?partially washing out of volcanics.
Spot	2912		Hi torque. lithologies as above: plus thin stringer <b>SANDSTONE:</b> fine to occasionally medium grained, well sorted, very angular fractured grains, clean, visible porosity fair to good
2910	2915	30	<b>ALTERED VOLCANICS:</b> as above speckled to mottled white, common clear quartz with irregular crystal faces, relict textures after ?feldspar.
		70	Trace fractured milky vein quartz.
2915	2920	Tr	
		40	<b>SANDSTONE:</b> as loose grains as above, very fine to fine grained, angular, quartzose, volcanoclastic grains, matrix washing out? occasional pyrite cement, visual porosity very poor
		50	<b>SILTY CLAYSTONE:</b> as above, occasional fine and medium quartz grains, grades to siltstone.
		10	<b>ALTERED VOLCANICS:</b> as above
2920	2925		Trace large fractured microcrystalline pyrite aggregates.
		20	<b>ALTERED VOLCANICS:</b> as above, white kaolinitic and dark grey, hard microcrystalline.
		20	<b>SANDSTONE:</b> as above, clay matrix washing out.
2925	2930	60	<b>SILTY CLAYSTONE:</b> as above, very soft to dispersive.
		10	<b>ALTERED VOLCANICS:</b> as above.
		40	<b>SANDSTONE:</b> as above.
		10	<b>SILTY CLAYSTONE:</b> as above.
2930	2933	10	<b>ALTERED VOLCANICS:</b> as above.
		20	<b>SANDSTONE:</b> as above.
		70	<b>SILTY CLAYSTONE:</b> as above. Common carbonaceous and coaly fragments & laminations.
2933	2935	40	<b>VOLCANICS:</b> variably altered from slightly to extensively, dark green to greenish black microcrystalline basic volcanics, pale green to bluish white, soft to very hard, commonly tuffaceous with fine grained fabric, waxy in part, feldspars commonly altered to kaolinitic clays.
		50	<b>SILTY CLAYSTONE:</b> as above.
		10	<b>SANDSTONE:</b> as above.
2935	2940	90	<b>CLAYSTONE:</b> dark brownish grey, firm, blocky, common carbonaceous laminations in part, common 'floating' fine-very coarse quartz grains, occasionally grading to Carbonaceous Shale.
		10	<b>VOLCANICS:</b> as above.

Interval (m)		Lithology / Show Description	
From	To	%	
2941	Spot	100	<b>SANDSTONE:</b> loose medium-coarse subangular grains, moderately well sorted, clear to translucent quartz, volcanoclastic and feldspathic grains, some microcrystalline pyrite, minor muscovite and chert
2940	2945	100	<b>SANDSTONE:</b> light grey translucent quartz, fine to very coarse, predominantly medium, angular to subangular, common broken grains, common quartz overgrowths with moderate siliceous/dolomite/siderite cement, trace strong pyrite cement & nodules, trace white interstitial clay, abundant grey cherty lithic grains, poor porosity, abundant dull pinkish yellow mineral fluorescence.
		Tr	<b>COAL:</b> black, vitreous lustre, angular.
2945	2950	100	<b>SANDSTONE:</b> as above.
2950	2955	80	<b>SANDSTONE:</b> as above, with common green cherty lithic (volcanic?) grains.
		10	<b>CLAYSTONE:</b> off white to light brownish grey, soft to firm, dispersive, micro-laminated, common carbonaceous specks & wispy laminations, common silty laminations.
		10	<b>VOLCANOCLASTICS:</b> off white to light brown to greenish white, friable to very hard, abundant tuffaceous fragments and quartz in an altered groundmass.
2955	2960	60	<b>SANDSTONE:</b> generally as above, very fine to 2mm granules, poorly sorted, angular to subrounded, moderate dolomitic cement in part, friable in part, strong pyrite cemented aggregates, common volcanic lithic grains. Poor porosity, no show.
		20	<b>SILTY CLAYSTONE:</b> light grey to brownish grey, soft to firm, abundant carbonaceous & coaly specks and fragments, 'floating' coarse quartz grains, generally as
		20	<b>CLAYSTONE</b> as above. Trace dolomitic concretions.
		Tr	<b>VOLCANOCLASTICS:</b> generally as above.
2960	2965	60	<b>SILTY CLAYSTONE:</b> as above.
		30	<b>SANDSTONE:</b> as above.
		10	<b>COAL:</b> brownish black to black, earthy to vitreous lustre, firm to hard, uneven to sub-conchoidal fracture, argillaceous in part.
2965	2970	20	<b>SANDSTONE:</b> Clear to translucent, predominantly fine to medium grained, well sorted, subrounded to subangular, quartzose, moderate silica cement, trace pyrite, visual porosity poor, no shows.
		80	<b>SILTY CLAYSTONE:</b> brownish grey to light grey, very soft, blocky, common carbonaceous specks, occasional matrix supported fine grained quartz grains.
		Tr	<b>VOLCANICS:</b> Basaltic, same as above.
		Tr	<b>COAL:</b> same as above
2970	2975	95	<b>CLAYSTONE:</b> Predominantly brownish grey, very soft to dispersive, blocky, common carbonaceous specks.
		5	<b>SANDSTONE:</b> as above
2975	2980	50	<b>CLAYSTONE:</b> same as above.
		50	<b>SANDSTONE:</b> Clear to translucent, loose disaggregated quartz, very fine to medium, predominantly fine grained, well sorted, subrounded to subangular, quartzose, slight to moderate silica cement, common white argillaceous matrix, rare carbonaceous specks, visual porosity poor, no shows.
2980	2985	95	<b>CLAYSTONE:</b> same as above
		5	<b>SANDSTONE:</b> Clear to translucent, predominantly fine to medium grained, well sorted, subrounded to subangular, quartzose, slight to moderate silica cement, visual porosity poor, no shows.
		Tr	<b>QUARTZ:</b> loose medium to coarse grained, subangular quartz grains.
		Tr	<b>COAL:</b> Black, friable

Interval (m)		Lithology / Show Description	
From	To	%	
2985	2990	100	<b>CLAYSTONE:</b> Predominantly white to light grey and brownish grey, very soft, blocky, common carbonaceous specks in brown claystone, rare in white to light grey claystone, possibly weathered tuff.
		Tr	<b>COAL:</b> same as above.
		Tr	<b>QUARTZ:</b> Fractured with pyrite.
		Tr	<b>PYRITE:</b>
Spot	2993	20	<b>SANDSTONE:</b> as loose grains, clear to white, very fine to coarse, poorly sorted, sub-angular, quartzose, rarely clean, predominantly with siliceous and dolomitic cement and in part with soft white calcareous/clay matrix, visual porosity poor to ?fair.
			<b>SHOW:</b> Trace moderate yellow-white fluorescence, slow faint yellow blooming cut, moderate green-yellow crush cut, moderate green yellow ring residue. Fluorescence associated with low-porosity sand aggregates.
		80	<b>CLAYSTONE:</b> as above
2990	2995	15	<b>SANDSTONE:</b> as loose grains, clear to translucent, fine-medium grained, well sorted, subrounded to subangular, quartzose, some calcareous/clay matrix, occasional fine quartz aggregates.
		85	<b>CLAYSTONE:</b> white or light grey-brown to dark brown, very soft and dispersive with common dark carbonaceous flecks in brown claystone, white claystone slightly dolomitic
2995	3000	100	<b>CLAYSTONE:</b> white or light grey-medium brown, white claystone very soft and dispersive, darker claystone harder with common black carbonaceous fragments.
		Tr	<b>SANDSTONE:</b> as fine grained quartz aggregates in white, calcite cement with fine disseminated pyrite.
3000	3005	90	<b>CLAYSTONE:</b> white or light brown, mainly very soft and dispersive, some harder dark blocky fragments, occasional carbonaceous fragments in brown claystones, white soft clays partly calcareous.
		10	<b>SANDSTONE:</b> as loose grains, clear to translucent and fine grained, well sorted and subrounded, quartzose and generally clean, occasional very fine quartz aggregates in partially calcareous matrix, poor porosity, no show.
3005	3010	40	<b>CLAYSTONE:</b> as above.
		60	<b>SANDSTONE:</b> translucent, light brown grey, loose disaggregated quartz, very fine to fine, well sorted, subangular, moderately cemented, trace argillaceous matrix, poor to fair inferred porosity, no show.
3010	3015	90	<b>CLAYSTONE:</b> medium to dark brownish grey, soft to firm, plastic, laminae with common carbonaceous specks and wisps, silty in part, slightly dolomitic.
		10	<b>SANDSTONE:</b> as above, medium to coarse grained in part.
3015	3020	100	<b>CLAYSTONE:</b> as above. Trace dolomitic concretions.
		Tr	<b>COAL:</b> brownish black to black, dull & earthy lustre, platy, grading to carbonaceous shale.
3020	3025	90	<b>CLAYSTONE:</b> as above, in part grading to CARBONACEOUS SHALE.
		10	<b>SILTSTONE:</b> brownish grey, soft to firm, argillaceous and carbonaceous, laminated, trace altered feldspars.
3026	Spot	100	<b>SANDSTONE:</b> off white to light grey, very fine to very coarse, predominantly fine to medium grained, poorly to moderately sorted, subangular, predominantly loose quartz, but common to abundant very fine grained white argillaceous aggregates, weak dolomitic cement, trace pyrite cement, common white kaolinitic matrix & interstitial clay, common carbonaceous & coaly specs and laminations, poor to fair inferred porosity, <b>SHOW:</b> 70% moderately bright white to yellow white uniform fluorescence with brilliant yellow spots, very slow blooming white cut, thin ring residue, colourless in white light.



Interval (m)		Lithology / Show Description	
From	To	%	
3025	3030	70	<b>CLAYSTONE:</b> Light to dark brownish grey, soft to firm, common carbonaceous specks, silty in part.
		30	<b>SANDSTONE:</b> Predominantly as loose grains, clear to translucent, fine to coarse grained, subrounded, quartzose and generally clean, occasional very fine quartz aggregates in partially calcareous matrix, poor porosity, no show.
3030	3035	50	<b>SANDSTONE:</b> Predominantly as loose grains, clear to translucent, very fine to coarse grained, angular to subangular, common to abundant very fine grained white argillaceous aggregates, common white kaolinitic matrix, occasional very fine quartz aggregates in partially calcareous matrix, poor to fair porosity, 70% moderately bright white to yellow white uniform fluorescence with brilliant yellow spots, slow to moderate blooming white cut with isopropyl alcohol, thin ring residue, colourless in white light, predominantly associated with kaolinitic aggregates.
		50	<b>CLAYSTONE:</b> medium to dark brownish grey, soft to firm, plastic, occasional carbonaceous specks, silty in part.
		Tr	<b>PYRITE</b>
3035	3040	60	<b>CLAYSTONE:</b> medium to dark brownish grey, soft to firm, plastic, common carbonaceous laminae, silty in part.
		40	<b>SANDSTONE:</b> as loose grains, clear to translucent, predominantly very fine to fine grained, well sorted, angular to subangular, occasional white argillaceous aggregates, 5-10% bright yellow white fluorescence associated with kaolinitic aggregates.
		Tr	<b>COAL:</b> brownish black to black, dull & earthy lustre, platy.
3040	3045	95	<b>CLAYSTONE:</b> medium to dark brownish grey, very soft, common carbonaceous laminae and specks.
		5	<b>SANDSTONE:</b> as loose grains, clear to translucent, very fine to coarse grained, poorly sorted, angular to subangular, occasional white argillaceous aggregates, poor porosity, no shows.
		Tr	<b>COAL:</b> as above.
3045	3050	90	<b>CLAYSTONE:</b> Light to medium brownish grey, very soft, common carbonaceous specks.
		10	<b>SANDSTONE:</b> off white to light grey, very fine grained, well sorted, subangular, common to abundant loose quartz grains, common to abundant very fine grained white argillaceous aggregates, common white kaolinitic matrix & interstitial clay, common carbonaceous & coaly specs and laminations, poor to fair porosity, no shows.
		Tr	<b>COAL:</b> as above.
3050	3055	95	<b>CLAYSTONE</b> as above
		5	<b>SANDSTONE:</b> off white to light grey, very fine, well sorted, subangular, common loose quartz grains, common to abundant very fine grained white argillaceous aggregates, common white kaolinitic matrix & interstitial clay, common carbonaceous & coaly specs, poor to fair porosity, no shows.
		Tr	<b>COAL:</b> as above
3055	3060	100	<b>CLAYSTONE:</b> Light to medium brownish grey, very soft, common carbonaceous specks, silty in part, occasional 'floating' very fine grained quartz grains in white to light brownish grey claystones.
		Tr	<b>SILTSTONE:</b> Dark brown, very fine grained, soft to firm.
		Tr	<b>COAL:</b> as above
		Tr	<b>QUARTZ:</b> Fractured coarse to very coarse grained, angular to subangular grains.

Interval (m)		Lithology / Show Description	
From	To	%	
3060	3065	80	<b>CLAYSTONE:</b> as above
		20	<b>SANDSTONE:</b> as loose grains, very fine to coarse grained, predominantly very fine to fine grained, common quartz aggregates with silica cement, poor visual porosity, no shows.
		Tr	<b>SILTSTONE:</b> as above
3065	3070	100	<b>CLAYSTONE/ALTERED VOLCANICS:</b> predominantly white to light grey and blue green, soft to dispersive, occasional to common 'floating' quartz grains in white to light grey claystone, ?tuffaceous, occasional green, very fine to medium grained, hard fragments in blue green claystone ?basaltic, occasional glassy shards in light bluey green claystone.
		Tr	<b>SANDSTONE:</b> predominantly quartz aggregates, clear to translucent, very fine to fine grained quartz grains, well sorted with calcareous cement, friable to hard.
3070	3075	100	<b>ALTERED VOLCANICS:</b> predominantly white to light grey, occasional to common blue green and pale pink, soft to dispersive, occasional to common 'floating' quartz grains in white to light grey claystone, ?tuffaceous, occasional green, very fine to medium grained, hard fragments in blue green claystone ?basaltic, trace dark grey/black mafic minerals altered to chlorite in part, occasional glassy shards in light bluey green claystone.
		Tr	<b>SILTSTONE:</b> Dark brown, very fine-grained, soft to firm, occasional carbonaceous specks.
		Tr	<b>SANDSTONE:</b> as above.
3075	3080	100	<b>VOLCANICS:</b> mottled light-dark grey, pink, orange and some green, hard blocky quartz-rich, fine to granular, grading to acidic volcanics, clear-light brown quartz often as loose, rounded-subrounded, very fine-fine grains, occasional green glassy shards.
3080	3085	100	<b>VOLCANICS:</b> very mottled grey, pink, and white hard granular volcanic with quartz rich bands, loose grains of quartz clear to milky white, subangular and fine grained.
3085	3090	90	<b>VOLCANICS:</b> as above becoming softer, kaolinitic, quartz grains washing out
		10	<b>SANDSTONE:</b> clear, frosted, very fine to fine grained, moderately sorted, angular quartz and volcanic lithic grains, slight siliceous cement and white kaolinitic matrix washing out. Few grain very dull yellow spotty fluorescence associated with loose sand grains, slow diffuse very faint white solvent fluorescence cut.
3090	3095	50	<b>CLAYSTONE:</b> medium greyish brown to very dark brown, silty in part, soft to firm, blocky to subfissile, in part laminated with ?tuffaceous claystone.
		50	<b>VOLCANICS:</b> as above (possible cavings)
		Tr	<b>SANDSTONE:</b> mottled green, pink, orange, very fine grained, volcanilithic and quartzose, dense silica cement, very hard, visual porosity nil.
spot	3097		Fast drilling
		20	<b>SANDSTONE:</b> clear to light brown, very light grey, speckled, very fine to fine rarely medium grained, moderately sorted, angular, loose to moderately cemented with silica and dolomite, occasionally calcareous, and with dense kaolinitic matrix in part, quartzose, volcanolithic, firm to friable, visible porosity poor. grades to
		40	<b>SANDY CLAYSTONE:</b> ?tuffaceous, mottled white, kaolinitic, very finely quartz sandy, soft, sticky to friable.
		40	<b>CLAYSTONE:</b> medium to dark brown as above.
			<b>SHOW:</b> 60% very dull yellow to brown fluorescence associated with white sandy claystone and kaolinitic sandstone aggregates very slow blooming faint milky white solvent fluorescence, strong crush cut and bright spotty white residual ring fluorescence, nil ring in white light. Clean sandstone has no show.

Interval (m)		Lithology / Show Description	
From	To	%	
spot	3098		Fast drilling, gas background rise,
		20	<b>SANDSTONE:</b> as above, predominantly very fine, quartzose loose to densely kaolinitic aggregates, grains ?washing out of matrix in part, visual porosity nil to occasionally fair, grades in part to:
		70	<b>SANDY CLAYSTONE:</b> as above, kaolinitic Fast drilling, gas background rise, <b>Show as above.</b> 70% of tray associated with white sandy claystone/kaolinitic sandstone aggregates.
		10	<b>CLAYSTONE:</b> as above
3095	3100	20	<b>SANDSTONE:</b> as above, predominantly loose. <b>SHOWS:</b> 10 % very dull fluorescence as above
		70	<b>CLAYSTONE:</b> moderate brown, as above, predominantly homogeneous, non silty
		10	<b>SANDY CLAYSTONE:</b> as above.
Spot	3102		Fast drilling
		20	<b>SANDSTONE:</b> as above, predominantly loose, but commonly with cemented and kaolinitic aggregates, grades to
		50	<b>SANDY CLAYSTONE:</b> tuffaceous, as above.
		30	<b>CLAYSTONE:</b> brown as above <b>SHOW:</b> 70% dull yellow-brown fluorescence associated with kaolinitic aggregates, very slow blooming faint milky white solvent fluorescence, strong crush cut and bright spotty white residual ring fluorescence, nil ring in white light.
Spot	3103.7	60	<b>CLAYSTONE:</b> brown as above
		35	<b>SANDY CLAYSTONE:</b> white kaolinitic as above.
		5	<b>SANDSTONE:</b> as loose grains, very fine as above. <b>SHOW:</b> 40 % very dull yellow fluorescence as above
3100	3105		<b>Show:</b> 70% very dull fluorescence as above, flu associated with kaolinitic very fine <b>SANDSTONE:</b> aggregates. Loose cleaner sandstone has no shows.
3105	3110	40	<b>SANDSTONE:</b> very fine as above,
		50	<b>CLAYSTONE:</b> brown as above.
		10	<b>SANDY CLAYSTONE:</b> tuffaceous as above. <b>SHOWS:</b> 5% bright to 50% very dull spotty fluorescence as above, very dull spotty flu associated with loose quartz grains, bright flu associated with kaolinitic aggregates.
3110	3115	95	<b>CLAYSTONE:</b> predominantly light to medium brown, occasionally white, very soft to firm, occasionally plastic, common carbonaceous specks in brown claystone, silty in part, occasional 'floating' very fine grained quartz in white claystone, ?tuffaceous.
		5	<b>SANDSTONE:</b> predominantly as loose grains, very fine to coarse grained, predominantly very fine to fine grained, common quartz aggregates with silica cement, poor visual porosity, no shows.
		Tr	<b>SILTSTONE:</b> Medium to dark brown, very fine grained, soft to firm, common to abundant carbonaceous laminae and specks. No shows
3115	3120	40	<b>SANDY CLAYSTONE:</b> ?tuffaceous, mottled white, kaolinitic, very finely quartz sandy, soft, sticky to friable.
		40	<b>CLAYSTONE:</b> medium to dark brown as above.
		20	<b>SANDSTONE:</b> predominantly as loose grains, very fine to <b>SHOWS:</b> 60% very dull yellow fluorescence associated with kaolinitic aggregates and sandy claystone, very slow very weak diffuse cut, moderate crush cut, faint ring residue.

Interval (m)		Lithology / Show Description	
From	To	%	
3120	3125	40	<b>CLAYSTONE:</b> medium to dark brown as above.
		35	<b>SANDSTONE:</b> predominantly as loose grains, very fine to medium grained, subangular to subrounded, occasional quartz aggregates with trace to minor calcareous cement.
		25	<b>SANDY CLAYSTONE:</b> as above. <b>SHOWS:</b> 20% very dull white fluorescence as above associated with kaolinitic aggregates.
3125	3130	100	<b>CLAYSTONE:</b> predominantly light to medium brown, occasionally white, very soft to soft, common carbonaceous specks in brown claystone, occasional 'floating' very fine grained quartz in white claystone, ?tuffaceous.
		Tr	<b>SILTSTONE:</b> Light brownish grey and medium to dark brown, very fine grained, soft to firm, common to abundant carbonaceous laminae and specks.
		Tr	<b>SANDSTONE:</b> as above. <b>SHOWS:</b> Nil to 5%, very weak pale yellow white fluorescence with a trace cut, moderately fast crush cut and moderately bright yellow ring residue, associated with kaolinitic aggregates.
3130	3135	100	<b>CLAYSTONE:</b> light to medium brown and white to light brownish grey, very soft to soft, occasionally plastic, common carbonaceous specks and wisps in brown claystone.
		Tr	<b>SILTSTONE:</b> medium to dark brown, as above
spot	3137.3	80	<b>CLAYSTONE:</b> predominantly white to light brownish grey, commonly light to medium brown, very soft to soft, occasionally plastic, common carbonaceous specks and wisps in brown claystone.
		20	<b>SANDSTONE:</b> predominantly as loose grains, very fine to medium grained, occasional coarse grained, subangular to subrounded, occasional quartz aggregate.
		Tr	<b>SILTSTONE:</b> as above. <b>SHOW:</b> 60% very dull yellow white, patchy, very weak and diffuse cut and moderately fast yellow white crush cut and moderate yellow ring residue. Fluorescence predominantly associated with kaolinitic aggregates.
3135	3140	60	<b>SANDY CLAYSTONE:</b> mottled white, kaolinitic, very finely quartz sandy, soft, sticky to friable.
		30	<b>SANDSTONE:</b> predominantly as loose grains, very fine to medium grained, occasionally coarse to very coarse grained, subangular to subrounded, occasional quartz aggregates with trace to minor calcareous cement.
		10	<b>CLAYSTONE:</b> Light to medium brown, very soft to soft, common carbonaceous specks and wisps in brown claystone.
		Tr	<b>SILTSTONE:</b> as above. <b>SHOW:</b> 20% predominantly very dull yellow, occasional spotty blue white fluorescence, very weak and diffuse cut, slow to moderate yellow crush cut with weak yellow ring residue. Fluorescence predominantly associated with kaolinitic aggregates.

Interval (m)		Lithology / Show Description	
From	To	%	
3140	3145	30	<b>SANDSTONE:</b> predominantly as loose grains, very fine to medium grained, occasionally coarse to very coarse grained, subangular to subrounded, occasional quartz aggregates with trace to minor calcareous cement, occasional light to medium greenish grey sandstone, very fine grained, well sorted, firm to hard with silica cement, occasional dark green, very fine grained, angular to subangular, hard fragments, ?basaltic.
		40	<b>CLAYSTONE:</b> Light to medium brown, very soft to soft, common carbonaceous specks and wisps in brown claystone.
		30	<b>SANDY CLAYSTONE:</b> mottled white, kaolinitic, very finely quartz, soft, sticky to friable.
		Tr	<b>SILTSTONE:</b> medium greenish grey, very fine grained, firm. <b>SHOW:</b> 5-10% predominantly spotty, bright, blue white solvent fluorescence, slow to moderate blooming cut, moderately fast crush cut, colourless ring residue.
3145	3150	30	<b>SANDSTONE:</b> loose hard grains, clear to milky-white, very fine grained, subrounded to subangular, occasional quartz aggregates with calcareous cement, well sorted.
		70	<b>CLAYSTONE:</b> as above <b>SHOW:</b> 5-10% predominantly dull with some spotty blue-white fluorescence, very slow blooming cut with weak ring fluorescence, colourless ring residue.
3150	3155	20	<b>SANDSTONE:</b> as loose grains, clear to milky-white, very fine grained, well sorted, subangular grains, rare soft quartz aggregates with kaolinitic matrix.
		10	<b>SANDY CLAYSTONE:</b> mottled white, fine quartz in soft sticky to friable matrix.
		70	<b>CLAYSTONE:</b> Light to medium brown, very soft to soft, common carbonaceous specks and wisps in brown claystone, occasional soft white dispersive claystones with carbonaceous specks. <b>SHOW:</b> 70% very dull yellow fluorescence, spotty on loose grains, patchy on aggregates, nil cut, very faint crush cut, stronger on kaolinitic aggregates, thin spotty white ring residue.
3155	3160	80	<b>SANDSTONE:</b> two types, (1) light brown, loose grains, very fine to occasionally fine grained, angular, white kaolinitic matrix adhering to grains, slightly calcareous in part, visual porosity poor, (2) clear/translucent, fine to occasionally medium grained, very angular, well sorted, totally cemented with dolomite, aggregates fracture across grains, slight kaolinitic matrix adhering to grains.
		10	<b>CLAYSTONE:</b> pale to dark brownish grey rarely black, coaly in part, soft to firm,
		10	<b>SANDY CLAYSTONE:</b> mottled white as above white, friable, trace to abundant fine to medium quartz grains. <b>SHOW:</b> 50% fluorescence as above, trace yellow mineral fluorescence.
3160	3165	40	<b>SANDSTONE:</b> two types, (1) light brown, loose grains, very fine to occasionally fine grained, angular, white kaolinitic matrix adhering to grains, slightly calcareous in part, visual porosity poor, (2) clear/translucent, fine to occasionally medium grained, very angular, well sorted, totally cemented with dolomite, aggregates fracture across grains, slight kaolinitic matrix adhering to grains.
		60	<b>CLAYSTONE:</b> pale to dark brownish grey rarely black, coaly in part, soft to firm, <b>SHOW:</b> 10% fluorescence as above.
3165	3170	20	<b>SANDSTONE:</b> light brown, clear/translucent, very fine to fine grained, moderately sorted, angular, predominantly loose, occasionally with dense calcareous cement occasional aggregates with dense kaolinitic matrix, visual porosity poor.
		10	
		70	<b>SANDY CLAYSTONE:</b> white, friable, trace to abundant fine to medium quartz grains. <b>CLAYSTONE:</b> medium brown ,brownish grey, as above. no shows.

Interval (m)		Lithology / Show Description	
From	To	%	
3170	3174 TD	30	<b>SANDSTONE:</b> very fine grained, angular to rarely subrounded, calcareous and kaolinitic as above, trace pyrite cement, common brown quartz grains, common volcanolithic grains, visual porosity poor to nil.
		30	<b>SANDY CLAYSTONE,</b> white as above
		40	<b>CLAYSTONE:</b> pale grey to pale brown, very silty, soft to firm.
			<b>TRACE SHOW:</b> few grains very dull yellow uniform to pinpoint fluorescence, associated with kaolinitic and cemented aggregates, nil cut, very faint crush cut.