

**LAKES OIL N.L.****CUTTINGS DESCRIPTIONS****WELL NAME:** Wombat No.3**DATE:**22-09-04**GEOLOGIST:** David Horner**PAGE:** 1

Interval (m)	%	Description
12-20	100	SAND: light orange grey, very fine to pebble, dominantly coarse, angular to rounded, very poorly sorted, no cement, trace orange brown argillaceous matrix, clear to milky to orange to red quartz grains, unconsolidated, very good inferred porosity.
20-30	80	SAND: light grey to medium brown grey, very fine to pebble, dominantly fine, subangular to rounded, very poorly sorted, no cement, trace to abundant medium grey argillaceous and silt matrix, clear to milky quartz grains, trace to common orange stained quartz grains, trace black lithics, trace black coal detritus, unconsolidated, fair to very good inferred porosity.
	20	CLAYSTONE: medium to dark grey, very silty, soft, very dispersive, non fissile.
30-40	100	SAND: light grey to medium brown grey, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, no cement, trace to occasionally abundant medium grey argillaceous and silt matrix, clear to milky quartz grains, trace orange stained quartz grains, common black lithics, trace black coal detritus, unconsolidated, good inferred porosity.
40-50	100	SAND: light grey to medium brown grey, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, no cement, trace to occasionally abundant medium grey argillaceous and silt matrix, clear to milky quartz grains, trace orange stained quartz grains, common black lithics, trace coarse brown and clear mica flakes, trace black coal detritus, unconsolidated, very good inferred porosity.
50-70	100	SAND: light grey to medium brown grey, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, no cement, trace to common medium grey argillaceous and silt matrix, clear to milky quartz grains, trace orange stained quartz grains, common black lithics, trace coarse brown and clear mica flakes, trace black coal detritus, unconsolidated, very good inferred porosity.
70-90	100	SAND: light grey to medium brown grey, very fine to pebble, dominantly very coarse, subangular to rounded, poorly sorted, no cement, trace to common medium grey argillaceous and silt matrix, clear to milky quartz grains, trace orange stained quartz grains, common black lithics, trace coarse brown and clear mica flakes, trace black coal detritus, unconsolidated, very good inferred porosity.
90-100	20	SAND: as for 70-90m.
	80	MARL: light to medium grey to medium green grey to medium brown grey, abundant fossil fragments including abundant bryozoa forams and shell fragments, common echinoid spines and sponge spicules, very soft, very dispersive and washing from samples, non fissile.
100-110	Trace	SAND: as for 70-90m.
	100	MARL: as for 90-100m.
110-120	60	CALCARENITE: light grey to light brown grey, minor yellow grey, fine to coarse grained, weak to moderate calcareous cement, abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace dispersed quartz sand grains in part, trace glauconite, friable, poor visual porosity, no oil fluorescence.
	40	MARL: as for 90-100m.
120-140	100	CALCARENITE: as for 110-120m.
140-160	100	CALCARENITE: light grey to light brown grey, fine to coarse grained, weak to moderate calcareous cement, abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly argillaceous, trace dispersed very fine to fine quartz sand grains in part, trace medium to dark green glauconite, friable, poor visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 2
--------------	---	-------------	---------

160-190	100	CALCARENITE: light grey to light brown grey, fine to coarse grained, weak to moderate calcareous cement, abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly argillaceous, poor visual porosity, no oil fluorescence.
190-220	100	CALCARENITE: light grey to light brown grey, fine to coarse grained, weak to moderate calcareous cement, common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately argillaceous in part, poor visual porosity, no oil fluorescence.
220-240	100	CALCARENITE: light grey to light brown grey, fine to coarse grained, weak to moderate calcareous cement, common to abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately argillaceous in part, poor visual porosity, no oil fluorescence.
240-270	100	CALCARENITE: light grey to light brown grey, fine to coarse grained, weak to moderate calcareous cement, common to abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately argillaceous in part, rare glauconite, poor visual porosity, no oil fluorescence.
270-290	100	CALCARENITE: off white to light brown grey, very fine to coarse dominantly fine grained, weak to moderate calcareous cement, common to abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly argillaceous, trace glauconite, poor visual porosity, no oil fluorescence.
290-320	100	CALCARENITE: off white to light brown grey, very fine to coarse dominantly fine grained, weak to moderate calcareous cement, common to abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace glauconite, poor visual porosity, no oil fluorescence.
320-330	100	CALCARENITE: off white to light brown grey, very fine to coarse dominantly fine grained, weak to moderate calcareous cement, common to abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace to common glauconite, poor visual porosity, no oil fluorescence.
330-352	100	CALCARENITE: light grey to light brown grey, very fine to coarse dominantly fine grained, weak to moderate calcareous cement, common to abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace to common glauconite, poor visual porosity, no oil fluorescence.
352-365	100	CALCARENITE: light grey to light brown grey, very fine to coarse dominantly fine grained, weak to moderate calcareous cement, common to abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace to common glauconite, poor visual porosity, no oil fluorescence.
365-385	100	CALCARENITE: light grey to light brown grey, very fine to coarse dominantly fine grained, weak to moderate calcareous cement, common to abundant fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace glauconite, poor visual porosity, no oil fluorescence.
385-390	100	CALCARENITE: light to medium brown grey, very fine to medium dominantly fine grained, weak to moderate calcareous cement, common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace glauconite, very poor visual porosity, no oil fluorescence.
390-405	100	CALCARENITE: light to medium brown grey, very fine to medium dominantly fine grained, weak to moderate calcareous cement, calcilitic in part, common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace glauconite, very poor visual porosity, no oil fluorescence.
405-425	100	CALCARENITE: light to medium brown grey, very fine to medium dominantly fine grained, weak to moderate calcareous cement, very calcilitic in part, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, slightly to moderately argillaceous, trace glauconite, very poor visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 3
--------------	---	-------------	---------

425-450	100	CALCARENITE: light to medium brown grey, very fine to medium dominantly fine grained, weak to moderate calcareous cement, very calcilutitic, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately argillaceous, trace glauconite, very poor visual porosity, no oil fluorescence.
450-455	100	CALCARENITE: light to medium brown grey, very fine to medium, dominantly fine grained, weak calcareous cement, very calcilutitic, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately argillaceous, trace glauconite, very poor visual porosity, no oil fluorescence.
455-460	100	CALCARENITE: light to dominantly medium brown grey, very fine to medium, dominantly fine grained, weak calcareous cement, very calcilutitic, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately argillaceous, trace glauconite, very poor visual porosity, no oil fluorescence.
460-480	100	CALCARENITE: light to dominantly medium brown grey, very fine to medium, dominantly fine grained, weak calcareous cement, very calcilutitic, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately to very argillaceous - marly in part, trace glauconite, very poor visual porosity, no oil fluorescence.
480-495	100	CALCARENITE: light to dominantly medium brown grey, very fine to medium, dominantly fine grained, weak calcareous cement, very calcilutitic, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately to very argillaceous, trace glauconite, very poor visual porosity, no oil fluorescence.
495-505	100	CALCARENITE: light to dominantly medium brown grey, very fine to medium, dominantly fine grained, weak calcareous cement, very calcilutitic, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately to very argillaceous - marly in part, trace glauconite, very poor visual porosity, no oil fluorescence.
505-515	90	CALCARENITE: light to dominantly medium brown grey, very fine to fine grained, weak calcareous cement, very calcilutitic, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately to very argillaceous - grades in part to marl, trace glauconite, very poor visual porosity, no oil fluorescence.
	10	MARL: light to medium brown grey to medium grey, very calcareous grading to calcilutite, soft, sticky, non fissile.
515-530	80	CALCARENITE: as for 505-515m.
	20	MARL: as for 505-515m.
530-540	70	CALCARENITE: light to dominantly medium brown grey, very fine to fine grained, weak to rarely strong calcareous cement, very calcilutitic, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately to very argillaceous - grades in part to marl, trace glauconite, very poor visual porosity, no oil fluorescence.
	30	MARL: medium brown to medium brown grey, very calcareous grading to calcilutite, soft, sticky, non fissile.
540-555	80	CALCARENITE: as for 530-540m.
	20	MARL: as for 530-540m.
555-560	70	CALCARENITE: as for 530-540m.
	30	MARL: medium brown to medium brown grey, medium grey, very calcareous grading to calcilutite, soft, sticky, non fissile.
560-570	80	CALCARENITE: light to medium brown grey, very fine to fine grained, weak to rarely strong calcareous cement, very calcilutitic, trace fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, moderately to very argillaceous - grades in part to marl, trace glauconite, very poor visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 4
--------------	---	-------------	---------

	20	MARL: as for 555-560m.
570-590	70	CALCARENITE: light to medium brown grey, very fine to fine grained, moderate calcareous cement, very calcilutitic and calcisiltitic, trace fossil fragments, often very argillaceous - grades in part to marl, trace glauconite, moderately hard, very poor visual porosity, no oil fluorescence.
	30	MARL: medium brown grey, very calcareous grading to calcilutite, trace fossil fragments, soft, sticky, non fissile.
590-595	80	CALCARENITE: as for 570-590m.
	20	MARL: as for 570-590m.
595-600	60	CALCARENITE: as for 570-590m.
	40	MARL: as for 570-590m.
600-605	10	CALCARENITE: as for 570-590m.
	40	CALCILUTITE: white to very light brown white, siltitic in part, slightly to very argillaceous - grades in part to marl, soft, sticky, non fissile.
	50	MARL: light to medium brown grey, very light to medium grey, very calcareous grading to calcilutite, trace fossil fragments, soft, sticky, non fissile.
605-610	10	CALCILUTITE: as for 600-605m.
	90	MARL: as for 600-605m.
610-620	100	MARL: light to medium brown grey, very light to medium grey to medium green grey, very calcareous grading to calcilutite, trace fossil fragments, soft, sticky, non fissile.
620-625	10	CALCILUTITE: as for 600-605m.
	90	MARL: as for 610-620m.
625-645	100	MARL: as for 610-620m.
645-665	100	MARL: light to medium brown grey to medium green grey to medium grey, very calcareous grading to calcilutite, trace fine black carbonaceous flecks, trace fossil fragments, soft, sticky, non fissile.
665-690	100	MARL: light to medium brown grey to medium green grey to medium grey, very calcareous grading to calcilutite, trace fine black carbonaceous flecks, trace fossil fragments, soft, sticky, non fissile.
690-700	100	MARL: light to medium green grey to medium brown grey to medium grey, very calcareous grading to calcilutite, trace fine black carbonaceous flecks, trace fossil fragments, rare glauconite, soft, sticky, non fissile.
700-710	100	MARL: light to medium green grey to medium brown grey, very calcareous, trace fine black carbonaceous flecks, trace fossil fragments, trace medium brown cryptocrystalline dolomite, rare glauconite, trace disseminated pyrite, soft, sticky, non fissile.
710-725	100	MARL: light to medium green grey to medium brown grey, very calcareous, trace fine black carbonaceous flecks, trace fossil fragments, trace medium brown cryptocrystalline dolomite, trace glauconite, trace disseminated pyrite, soft, sticky, non fissile.
725-735	100	MARL: light to medium green grey to medium brown grey, very calcareous, trace fine black carbonaceous flecks, trace fossil fragments, trace medium brown cryptocrystalline dolomite, common to abundant glauconite, trace disseminated pyrite, soft, sticky, non fissile.
735-740	100	MARL: light to medium green grey to medium brown grey, very calcareous, trace fine black carbonaceous flecks, trace fossil fragments, trace medium brown cryptocrystalline dolomite, abundant glauconite, trace disseminated pyrite, soft, sticky, non fissile.

Interval (m)	%	Description	PAGE: 5
--------------	---	-------------	---------

740-745	100	MARL: light to medium green grey to medium brown grey, very calcareous, trace fine black carbonaceous flecks, trace fossil fragments, common white cryptocrystalline calcite, trace medium brown cryptocrystalline dolomite, abundant glauconite, trace disseminated pyrite, soft, sticky, non fissile.
745-750	50	MARL: as for 740-745m.
	50	COAL: black, earthy to slightly subvitreous texture, blocky fracture, hard, brittle.
750-755	20	MARL: as for 740-745m.
	30	SILTY CLAYSTONE: light to medium brown, occasionally dark brown grey and very carbonaceous, slightly to very carbonaceous, common black coal detritus, soft, non fissile.
	50	COAL: black to dark brown, very argillaceous in part, earthy to slightly subvitreous texture, blocky fracture, hard, brittle.
755-760	80	SILTY CLAYSTONE: light to medium brown, occasionally dark brown grey, slightly to very carbonaceous, very finely arenaceous and kaolinitic in part, common black coal detritus, soft, non fissile.
	20	COAL: as for 750-755m.
760-765	80	SANDSTONE: light to dark brown, very fine to granule, dominantly very coarse, subangular to rounded, very poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix - often matrix supported, clear to milky quartz grains often with brown staining, common black coal detritus, friable, very poor to occasionally good inferred porosity, no oil fluorescence.
	20	SILTY CLAYSTONE: off white to dark brown grey, slightly to very carbonaceous, abundant dispersed very fine to granular quartz sand grains in part, common black coal detritus, soft, non fissile.
765-770	30	SANDSTONE: as for 760-765m.
	60	SILTY CLAYSTONE: light brown to dark brown grey, slightly to very carbonaceous, abundant dispersed very fine to granular quartz sand grains in part, common black coal detritus, soft, non fissile.
	10	COAL: as for 750-755m.
770-775	10	SANDSTONE: as for 760-765m.
	80	SILTY CLAYSTONE: off white to dark brown grey, slightly to very carbonaceous, abundant dispersed very fine to granular quartz sand grains in part, common black coal detritus, soft, non fissile.
	10	COAL: as for 750-755m.
775-780	30	SANDSTONE: light to medium brown, very fine to granule, dominantly very coarse, subangular to rounded, very poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix - often matrix supported, clear to milky quartz grains with minor brown staining, common black coal detritus, friable, very poor to occasionally good inferred porosity, no oil fluorescence.
	60	SILTY CLAYSTONE: off white to light brown to dark brown, slightly to very carbonaceous, abundant dispersed very fine to granular quartz sand grains - grades to argillaceous sandstone, common black coal detritus, soft, non fissile.
	10	COAL: as for 750-755m.
780-785	60	SANDSTONE: light to medium brown, very fine to granule, dominantly very coarse, subangular to rounded, very poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix - often matrix supported and grading to silty claystone, clear to milky quartz grains with minor brown staining, common black coal detritus, friable, very poor to occasionally good inferred porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 6
--------------	---	-------------	---------

	40	SILTY CLAYSTONE: as for 775-780m.
785-795	40	SANDSTONE: as for 780-785m.
	60	SILTY CLAYSTONE: as for 775-780m.
795-805	20	SANDSTONE: as for 780-785m.
	80	SILTY CLAYSTONE: medium brown grey to dark brown, slightly to very carbonaceous, abundant dispersed very fine to granular quartz sand grains - grades to argillaceous sandstone, common black coal detritus, soft, non fissile.
805-810	20	SANDSTONE: light to medium brown, very fine to granule, dominantly very coarse, subangular to rounded, very poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix - often matrix supported and grading to silty claystone, clear to milky quartz grains with minor brown staining, common black coal detritus, friable, very poor to occasionally good inferred porosity, no oil fluorescence.
	80	SILTY CLAYSTONE: off white to light brown to dark brown, slightly to very carbonaceous, abundant dispersed very fine to granular quartz sand grains - grades to argillaceous sandstone, common black coal detritus, soft, non fissile.
810-815	30	SANDSTONE: light to medium brown, very fine to very coarse, dominantly coarse, subangular to rounded, very poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix - often matrix supported, clear to opaque quartz grains with minor brown staining, trace to common black coal detritus, friable, very poor to occasionally good inferred porosity, no oil fluorescence.
	70	SILTY CLAYSTONE: as for 805-810m.
815-820	10	SANDSTONE: as for 810-815m.
	90	SILTY CLAYSTONE: off white to medium brown grey, minor dark brown, slightly to very carbonaceous, abundant dispersed very fine to very coarse quartz sand grains in part - grades to argillaceous sandstone, common black coal detritus, soft, non fissile.
820-825	50	SANDSTONE: light to medium brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix - often matrix supported, clear to opaque quartz grains with minor brown staining, trace to common black coal detritus, friable, very poor to good inferred porosity, no oil fluorescence.
	50	SILTY CLAYSTONE: as for 820-825m.
825-835	20	SANDSTONE: as for 820-825m.
	80	SILTY CLAYSTONE: as for 820-825m.
835-845	40	SANDSTONE: as for 820-825m.
	60	SILTY CLAYSTONE: off white to medium brown grey, minor dark brown, slightly to occasionally very carbonaceous, abundant dispersed very fine to very coarse quartz sand grains in part, common black coal detritus, soft, non fissile.
845-850	70	SANDSTONE: light to medium brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains with minor brown staining, trace to common black coal detritus, friable, fair to good inferred porosity, no oil fluorescence.
	30	SILTY CLAYSTONE: as for 835-845m.
850-855	20	SANDSTONE: as for 845-850m.
	80	SILTY CLAYSTONE: as for 835-845m.

Interval (m)	%	Description	PAGE: 7
--------------	---	-------------	---------

855-860	70	SANDSTONE: light brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, trace to common off white to medium brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, very good inferred porosity, no oil fluorescence.
	30	SILTY CLAYSTONE: as for 835-845m.
860-880	100	SANDSTONE: as for 855-860
880-885	60	SANDSTONE: light brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, very poor to good inferred porosity, no oil fluorescence.
	40	SILTY CLAYSTONE: off white to dark brown, slightly to very carbonaceous, abundant dispersed very fine to very coarse quartz sand grains in part, common black coal detritus, soft, non fissile.
885-895	20	SANDSTONE: as for 880-885m.
	80	SILTY CLAYSTONE: as for 880-885m.
895-900	10	SANDSTONE: as for 880-885m.
	90	SILTY CLAYSTONE: as for 880-885m.
900-905	20	SANDSTONE: light brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, poor inferred porosity, no oil fluorescence.
	80	SILTY CLAYSTONE: dark brown grey, very carbonaceous - grades to argillaceous coal, abundant dispersed very fine to very coarse quartz sand grains in part, common black coal detritus, soft, non fissile.
905-910	10	SANDSTONE: as for 900-905m.
	70	SILTY CLAYSTONE: as for 900-905m.
	20	COAL: black to very dark brown grey, earthy to slightly subvitreous lustre, blocky fracture, often very argillaceous grading to carbonaceous claystone, hard, brittle.
910-915	10	SANDSTONE: as for 900-905m.
	60	SILTY CLAYSTONE: as for 900-905m.
	30	COAL: as for 905-910m.
915-925	50	SANDSTONE: light brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, poor to good inferred porosity, no oil fluorescence.
	30	SILTY CLAYSTONE: as for 900-905m.
	20	COAL: as for 905-910m.
925-930	10	SANDSTONE: light brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, poor inferred porosity, no oil fluorescence.
	90	SILTY CLAYSTONE: off white to dark brown, slightly to very carbonaceous, trace dispersed very fine to fine quartz sand grains in part, common black coal detritus, soft, non fissile.

Interval (m)	%	Description	PAGE: 8
--------------	---	-------------	---------

	Trace	COAL: as for 905-910m.
930-935	20	SANDSTONE: light brown, very fine to very coarse, dominantly medium, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, poor inferred porosity, no oil fluorescence.
	50	SILTY CLAYSTONE: medium to very dark brown grey, moderately to very carbonaceous, abundant dispersed very fine to very coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.
	30	COAL: black to very dark brown grey, earthy texture, blocky fracture, very argillaceous grading to carbonaceous claystone, hard, brittle.
935-945	10	SANDSTONE: as for 930-935m.
	50	SILTY CLAYSTONE: as for 930-935m.
	40	COAL: as for 930-935m.
945-950	70	SILTY CLAYSTONE: medium to very dark brown, very carbonaceous, abundant dispersed very fine to very coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.
	30	COAL: as for 930-935m.
950-955	20	SANDSTONE: light brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, poor inferred porosity, no oil fluorescence.
	60	SILTY CLAYSTONE: as for 945-950m.
	20	COAL: as for 930-935m.
955-960	70	SANDSTONE: light brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, good inferred porosity, no oil fluorescence.
	30	SILTY CLAYSTONE: as for 945-950m.
960-965	10	SANDSTONE: as for 955-960m.
	90	SILTY CLAYSTONE: medium to very dark brown, moderately to very carbonaceous, common dispersed very fine to very coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.
965-970	50	SANDSTONE: light brown, very fine to fine, subangular to rounded, moderately sorted, strong calcareous cement, abundant off white argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, hard, no visual porosity, no oil fluorescence.
	40	SILTY CLAYSTONE: as for 960-965m.
	10	COAL: black to very dark brown grey, earthy texture, blocky to platy fracture, very argillaceous grading to carbonaceous claystone, hard, brittle.
970-975	10	SANDSTONE: light brown, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coal detritus, friable, good inferred porosity, no oil fluorescence.
	30	SILTY CLAYSTONE: as for 960-965m.
	60	COAL: as for 965-970m.



Interval (m)	%	Description	PAGE: 9
975-980	60	SANDSTONE: light brown grey, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coaly detritus, friable, good inferred porosity, no oil fluorescence.	
	20	SILTY CLAYSTONE: off white to very dark brown, slightly to very carbonaceous, common dispersed very fine to very coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.	
	20	COAL: as for 965-970m.	
980-985	70	SANDSTONE: as for 975-980m.	
	30	SILTY CLAYSTONE: as for 975-980m.	
985-990	30	SILTY CLAYSTONE: medium to very dark brown, moderately to very carbonaceous, common dispersed very fine to very coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.	
	70	COAL: black to very dark brown grey, earthy texture, blocky to platy fracture, often very argillaceous grading to carbonaceous claystone, hard, brittle.	
990-1000	50	SANDSTONE: as for 975-980m.	
	50	SILTY CLAYSTONE: off white to medium brown, slightly to moderately carbonaceous, common dispersed very fine to very coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.	
1000-1005	10	SANDSTONE: as for 975-980m.	
	40	SILTY CLAYSTONE: medium to very dark brown, moderately to very carbonaceous, common dispersed very fine to very coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.	
	50	COAL: black to very dark brown grey, earthy texture, blocky to platy fracture, very argillaceous grading to carbonaceous claystone, hard, brittle.	
1005-1010	40	SILTY CLAYSTONE: as for 1000-1005m.	
	60	COAL: as for 1000-1005m.	
1010-1020	80	SANDSTONE: light brown grey, very fine to very coarse, dominantly medium to coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coaly detritus, friable, good inferred porosity, no oil fluorescence.	
	20	SILTY CLAYSTONE: off white to medium brown, occasionally very dark brown, slightly to very carbonaceous, common dispersed very fine to coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.	
1020-1025	50	SANDSTONE: as for 1010-1020m.	
	50	SILTY CLAYSTONE: off white to dark brown, slightly to very carbonaceous, common dispersed very fine to coarse quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.	
	Trace	COAL: black to very dark brown grey, earthy texture, blocky to platy fracture, very argillaceous grading to carbonaceous claystone, hard, brittle.	
1025-1030	70	SANDSTONE: light brown grey, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, abundant off white to dark brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coaly detritus, friable, good inferred porosity, no oil fluorescence.	
	20	SILTY CLAYSTONE: as for 1020-1025m.	
	10	COAL: as for 1020-1025m.	

Interval (m)	%	Description	PAGE: 10
1030-1035	10	SANDSTONE: as for 1025-1030m.	
	80	SILTY CLAYSTONE: off white to medium brown, occasionally dark brown, slightly to very carbonaceous, common dispersed very fine to fine quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.	
	10	COAL: as for 1020-1025m.	
1035-1040	70	SANDSTONE: light brown grey, very fine to very coarse, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, common to abundant off white to medium brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coaly detritus, friable, very good inferred porosity, no oil fluorescence.	
	30	SILTY CLAYSTONE: as for 1030-1035m.	
1040-1045	30	SANDSTONE: as for 1035-1040m.	
	70	SILTY CLAYSTONE: as for 1030-1035m.	
1045-1050	80	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, common to abundant off white to medium brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coaly detritus, friable, very good inferred porosity, no oil fluorescence.	
	20	SILTY CLAYSTONE: as for 1030-1035m.	
1050-1055	80	SANDSTONE: as for 1045-1050m.	
	10	SILTY CLAYSTONE: as for 1030-1035m.	
	10	COAL: black to very dark brown, earthy to slightly subvitreous texture, blocky to platy fracture, very argillaceous grading to carbonaceous claystone, hard, brittle.	
1055-1060	60	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, trace off white to medium brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coaly detritus, friable, very good inferred porosity, no oil fluorescence.	
	40	COAL: as for 1050-1055m.	
1060-1065	60	SILTY CLAYSTONE: off white to dark brown, slightly to very carbonaceous, common dispersed very fine to fine quartz sand grains in part, common black coal detritus and flecks, trace micromica, soft, non fissile.	
	40	COAL: black to very dark brown, earthy to slightly subvitreous texture, blocky to platy fracture, very argillaceous - in part grading to carbonaceous claystone, hard, brittle.	
1065-1075	30	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, subangular to rounded, poorly sorted, weak silica cement, common off white to medium brown argillaceous and silt matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coaly detritus, friable, good to very good inferred porosity, no oil fluorescence.	
	70	CLAYSTONE: off white to medium brown, dominantly light brown, trace black coal detritus and flecks, common dispersed very fine to very coarse quartz sand grains in part, soft, sticky, non fissile.	
1075-1080	100	CLAYSTONE: as for 1065-1070m.	
1080-1090	90	SANDSTONE: as for 1065-1075m.	
	10	CLAYSTONE: as for 1065-1070m.	

Interval (m)	%	Description	PAGE: 11
--------------	---	-------------	----------

1090-1095	80	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, subangular to rounded, very poorly sorted, weak silica cement, common off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace to common black coaly detritus, friable, good to very good inferred porosity, no oil fluorescence.
	20	CLAYSTONE: as for 1065-1070m.
1095-1100	50	SANDSTONE: as for 1090-1095m.
	50	CLAYSTONE: off white to medium brown, dominantly light brown, trace black coal detritus and flecks, common dispersed very fine to very coarse quartz sand grains in part, soft, sticky, non fissile.
1100-1105	30	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, subangular to rounded, very poorly sorted, weak silica cement, common off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace to common black coaly detritus, friable, fair to good inferred porosity, no oil fluorescence.
	70	CLAYSTONE: as for 1095-1100m.
1105-1115	90	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, subangular to rounded, very poorly sorted, weak silica cement, abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace to common black coaly detritus, trace pyrite, friable, fair to good inferred porosity, no oil fluorescence.
	10	CLAYSTONE: as for 1095-1100m.
1115-1125	20	SANDSTONE: as for 1105-1115m.
	80	CLAYSTONE: off white to light brown, occasionally medium brown, trace black coal detritus and flecks, abundant dispersed very fine to very coarse quartz sand grains in part, slightly carbonaceous in part, soft, sticky, non fissile.
1125-1130	50	SANDSTONE: as for 1105-1115m.
	50	CLAYSTONE: as for 1125-1130m.
1130-1140	70	SANDSTONE: as for 1105-1115m.
	30	CLAYSTONE: as for 1125-1130m.
1140-1145	60	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, subangular to rounded, very poorly sorted, weak silica cement, abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, fair to good inferred porosity, no oil fluorescence.
	40	CLAYSTONE: as for 1125-1130m.
1145-1150	10	SANDSTONE: as for 1140-1145m.
	90	CLAYSTONE: off white to light brown, trace black coal detritus and flecks, abundant dispersed very fine to very coarse quartz sand grains in part, soft, sticky, non fissile.
1150-1155	40	SANDSTONE: as for 1140-1145m.
	60	CLAYSTONE: as for 1145-1150m.
1155-1160	90	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, angular to subrounded, very poorly sorted, weak silica cement, abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, fair to good inferred porosity, no oil fluorescence.
	10	CLAYSTONE: as for 1145-1150m.

1160-1165	60	SANDSTONE: as for 1155-1160m.	
	40	CLAYSTONE: off white to light brown, occasionally medium brown, trace black coal detritus and flecks, abundant dispersed very fine to very coarse quartz sand grains in part, slightly carbonaceous in part, soft, sticky, non fissile.	
1165-1174	40	SANDSTONE: light brown grey, very fine to granular, dominantly coarse, angular to subrounded, very poorly sorted, weak silica cement, abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, common black coaly detritus, trace pyrite, friable, fair to good inferred porosity, no oil fluorescence.	
	60	CLAYSTONE: off white to light brown, occasionally medium brown, common black coal detritus and flecks, abundant dispersed very fine to very coarse quartz sand grains in part, slightly carbonaceous in part, soft, sticky, non fissile.	
1174-1180	30	SANDSTONE: light brown grey, very fine to very coarse, dominantly coarse, angular to subrounded, very poorly sorted, weak silica cement, abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, fair to good inferred porosity, no oil fluorescence.	
	70	CLAYSTONE: off white to light brown, occasionally medium brown, trace black coal detritus and flecks, abundant dispersed very fine to very coarse quartz sand grains in part, slightly carbonaceous in part, soft, sticky, non fissile.	
1180-1185	10	SANDSTONE: as for 1174-1180m.	
	90	CLAYSTONE: as for 1174-1180m.	
1185-1190	100	SANDSTONE: light brown grey, very fine to very coarse, dominantly coarse, angular to subrounded, very poorly sorted, weak silica cement, trace to common off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, very good inferred porosity, no oil fluorescence.	
1190-1195	60	SANDSTONE: light brown grey, very fine to very coarse, dominantly coarse, angular to subrounded, very poorly sorted, weak silica cement, abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, fair to good inferred porosity, no oil fluorescence.	
	40	CLAYSTONE: as for 1174-1180m.	
1195-1200	100	CLAYSTONE: off white to light brown, minor medium brown, trace black coal detritus and flecks, trace dispersed very fine to very coarse quartz sand grains in part, slightly carbonaceous in part, soft, sticky, non fissile.	
1200-1210	80	SANDSTONE: very light brown grey, very fine to very coarse, dominantly coarse, angular to subrounded, very poorly sorted, weak silica cement, trace to common off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, very good inferred porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 1195-1200m.	
1210-1215	20	SANDSTONE: as for 1200-1210m.	
	80	CLAYSTONE: as for 1195-1200m.	
1215-1230	100	CLAYSTONE: off white to medium brown, dominantly light brown, trace black coal detritus and flecks, trace dispersed very fine to coarse quartz sand grains in part, very slightly carbonaceous in part, soft, sticky, non fissile.	
1230-1240	100	CLAYSTONE: off white to medium brown, light grey, dominantly light brown, trace black coal detritus and flecks, trace dispersed very fine to coarse quartz sand grains in part, very slightly carbonaceous in part, soft, sticky, non fissile.	
1240-1245	10	SANDSTONE: as for 1200-1210m.	

Interval (m)	%	Description	PAGE: 13
--------------	---	-------------	----------

	90	CLAYSTONE: off white to medium brown, dominantly light brown, trace black coal detritus and flecks, trace dispersed very fine to coarse quartz sand grains in part, very slightly carbonaceous in part, soft, sticky, non fissile.
1245-1250	40	SANDSTONE: very light brown grey, very fine to very coarse, dominantly medium, angular to subrounded, very poorly sorted, weak silica cement, trace to common off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, very good inferred porosity, no oil fluorescence.
	60	CLAYSTONE: as for 1240-1245m.
1250-1255	50	SANDSTONE: as for 1245-1250m.
	50	CLAYSTONE: off white to medium brown, dominantly light brown, common black coal detritus and flecks, trace dispersed very fine to coarse quartz sand grains in part, moderately carbonaceous in part, soft, sticky, non fissile.
1255-1260	100	CLAYSTONE: as for 1250-1255m.
1260-1270	60	SANDSTONE: very light brown grey, very fine to granule, dominantly medium, angular to subrounded, very poorly sorted, weak silica cement, common to abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, good inferred porosity, no oil fluorescence.
	40	CLAYSTONE: off white to medium brown, dominantly light brown, trace black coal detritus and flecks, trace dispersed very fine to coarse quartz sand grains in part, slightly carbonaceous in part, soft, sticky, non fissile.
1270-1275	100	SANDSTONE: as for 1260-1270m.
1275-1285	80	SANDSTONE: as for 1260-1270m.
	20	CLAYSTONE: as for 1260-1270m.
1285-1290	70	SANDSTONE: very light brown grey, very fine to granule, dominantly medium, angular to subrounded, very poorly sorted, weak silica cement, common off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, good inferred porosity, no oil fluorescence.
	30	CLAYSTONE: off white to light brown, trace black coal detritus and flecks, trace dispersed very fine to coarse quartz sand grains in part, slightly carbonaceous in part, soft, sticky, non fissile.
1290-1295	10	SANDSTONE: as for 1285-1290m.
	90	CLAYSTONE: as for 1285-1290m.
1295-1300	70	SANDSTONE: as for 1285-1290m.
	30	CLAYSTONE: as for 1285-1290m.
1300-1305	30	SANDSTONE: very light brown grey, very fine to granule, dominantly medium, angular to subrounded, very poorly sorted, weak silica cement, abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, fair to good inferred porosity, no oil fluorescence.
	70	CLAYSTONE: as for 1285-1290m.
1305-1308	30	SANDSTONE: as for 1300-1305m.
	70	CLAYSTONE: off white to light brown, occasionally medium brown grey, trace to common black coal detritus and flecks, trace dispersed very fine to coarse quartz sand grains in part, slightly carbonaceous in part, soft, sticky, non fissile.

Interval (m)	%	Description	PAGE: 14
1308-1311	50	SANDSTONE: as for 1300-1305m.	
	50	CLAYSTONE: as for 1305-1308m.	
1311-1314	100	SANDSTONE: very light brown grey, very fine to occasionally pebble, dominantly coarse, angular to subrounded, very poorly sorted, weak silica cement, common to abundant off white to light brown argillaceous matrix, clear to opaque quartz grains, trace green and black cherty lithics, trace black coaly detritus, trace pyrite, friable, good inferred porosity, no oil fluorescence.	
1314-1317	10	SANDSTONE: as for 1311-1314m.	
	90	CLAYSTONE: light to medium brown grey, very silty in part, trace black carbonaceous specks, trace pyrite, trace micromica, soft, sticky, non fissile.	
1317-1320	100	CLAYSTONE: as for 1314-1317m.	
1320-1323	100	CLAYSTONE: light to medium brown grey, light to medium grey, very silty in part, trace black carbonaceous specks, trace pyrite, trace micromica, soft, sticky, non fissile.	
1323-1332	100	CLAYSTONE: off white to light brown, very silty in part, trace black carbonaceous specks, trace pyrite, trace micromica, soft, sticky, non fissile.	
1332-1338	100	CLAYSTONE: off white to medium brown grey to medium grey, very silty in part, trace black carbonaceous specks and coaly detritus, trace pyrite, trace micromica, soft, sticky, slightly subfissile.	
1338-1341	100	CLAYSTONE: off white to medium brown grey to medium grey, very silty in part, trace black carbonaceous specks and coaly detritus, trace pyrite, trace micromica, abundant carbonate and quartz fracture infill, soft, sticky, slightly subfissile, 5% moderately bright patchy yellow mineral fluorescence, no cut.	
1341-1344	100	CLAYSTONE: off white to medium brown grey to medium grey, very silty in part, trace black carbonaceous specks and coaly detritus, trace pyrite, trace micromica, abundant carbonate and quartz fracture infill, soft, sticky, slightly subfissile, trace moderately bright patchy yellow mineral fluorescence, no cut.	
1344-1358	100	CLAYSTONE: off white to medium brown grey to medium grey, very silty in part, slightly calcareous in part, trace to common black carbonaceous specks and coaly detritus, trace pyrite, trace micromica, soft, slightly subfissile.	
1358-1362	70	CLAYSTONE: as for 1344-1359m.	
	30	VOLCANICS: light to medium green to medium green grey, dominantly weathered to green claystone, chloritic(?), composed of green to occasionally off white volcanogenic matrix with common diffuse crystal growth, trace vein calcite, soft to hard.	
1362-1368	20	CLAYSTONE: as for 1344-1359m.	
	80	VOLCANICS: as for 1359-1362m.	
1368-1371	10	CLAYSTONE: as for 1344-1359m.	
	90	VOLCANICS: light to medium green to medium green grey, dominantly weathered to green claystone, chloritic(?), composed of green to occasionally off white volcanogenic matrix with abundant diffuse off white to black crystal growth, trace vein calcite, soft to hard.	
1371-1374	80	VOLCANICS: as for 1368-1371m.	
	20	SANDSTONE: medium green, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, weak silica cement, abundant light green argillaceous matrix, composed of common quartz grains with abundant off white altered feldspars and green to red to black volcanogenic lithics, trace vein calcite, friable, very poor visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 15
1374-1376	100	SANDSTONE: light to medium green, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, weak silica cement, abundant light green argillaceous matrix - matrix supported, composed of common quartz grains with abundant off white altered feldspars and green to red to black volcanogenic lithics, trace vein calcite, friable, very poor visual porosity, no oil fluorescence.	
1376-1379	10	SANDSTONE: light to medium green, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, weak silica cement, abundant light green argillaceous matrix - matrix supported, composed of abundant off white altered feldspars and green to red to black volcanogenic lithics and minor quartz grains, friable, very poor visual porosity, no oil fluorescence.	
	60	CLAYSTONE: off white to dominantly medium brown, very silty in part, slightly calcareous in part, trace black carbonaceous specks, trace micromica, soft, slightly subfissile.	
	30	VOLCANICS: medium green to medium green grey, weathered in part to green claystone, chloritic(?), composed of green to occasionally off white volcanogenic matrix with common diffuse crystal growth, soft to hard.	
1379-1383	40	SANDSTONE: medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, weak silica cement, abundant light green argillaceous matrix, composed of abundant off white altered feldspars and green to red to black volcanogenic lithics with common quartz grains, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: off white to dominantly medium brown to medium green, very silty in part, slightly calcareous in part, trace black carbonaceous specks, trace micromica, soft, slightly subfissile - washing from samples due to drilling with water.	
	40	VOLCANICS: as for 1376-1379m.	
1383-1386	70	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, common white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, common quartz grains, trace coarse brown mica flakes, friable, very poor to poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 1379-1383m.	
	10	VOLCANICS: as for 1376-1379m.	
1386-1389	80	SANDSTONE: as for 1383-1386m.	
	20	CLAYSTONE: as for 1379-1383m.	
1389-1395	80	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, common white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown mica flakes, friable, very poor to poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: off white to light brown to light green, moderately to very silty, trace micromica, soft, slightly subfissile - washing from samples due to drilling with water.	
1395-1398	70	SANDSTONE: as for 1389-1395m.	
	30	CLAYSTONE: as for 1389-1395m.	
1398-1401	90	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica cement, common white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and clear mica flakes, friable, poor visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1389-1395m.	

Interval (m)	%	Description	PAGE: 16
1401-1404	80	SANDSTONE: as for 1398-1401m.	
	20	CLAYSTONE: as for 1389-1395m.	
1404-1407	90	SANDSTONE: as for 1398-1401m.	
	10	CLAYSTONE: as for 1389-1395m.	
1407-1413	100	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica cement, common white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and clear mica flakes, friable, poor to fair visual porosity, no oil fluorescence.	
1413-1425	100	SANDSTONE: light to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, weak silica cement, common white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown and clear mica flakes, friable, fair visual porosity, no oil fluorescence.	
1425-1428	90	SANDSTONE: as for 1413-1425m.	
	10	CLAYSTONE: off white to light brown to light green to dark grey, moderately to very silty, trace micromica, soft, slightly subfissile - washing from samples due to drilling with water.	
1428-1434	70	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica cement, common white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown and clear mica flakes, friable, poor visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 1425-1428m.	
1434-1437	80	SANDSTONE: as for 1428-1434m.	
	20	CLAYSTONE: as for 1425-1428m.	
1437-1440	80	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica cement, common white to light green argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown and green mica flakes, friable, poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: light to medium brown to light green to medium grey, slightly to moderately silty, trace micromica, soft, slightly subfissile.	
1440-1443	90	SANDSTONE: as for 1437-1440m.	
	10	CLAYSTONE: as for 1437-1440m.	
1443-1446	30	SANDSTONE: as for 1437-1440m.	
	70	CLAYSTONE: light to medium green grey to light brown to medium grey, slightly to moderately silty, trace black carbonaceous specks, trace micromica, soft, slightly subfissile.	
1446-1455	10	SANDSTONE: as for 1437-1440m.	
	90	CLAYSTONE: light to medium green grey to light brown to medium grey, dominantly medium green grey, slightly to moderately silty, trace black carbonaceous specks, trace micromica, soft, slightly subfissile.	



Interval (m)	%	Description	PAGE: 17
1455-1464	30	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, common white to light green argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown and green mica flakes, friable, nil to very poor visual porosity, no oil fluorescence.	
	70	CLAYSTONE: light to medium grey to light brown to medium green, slightly to moderately silty, trace black carbonaceous specks, trace micromica, soft, slightly subfissile.	
1464-1467	20	SANDSTONE: as for 1455-1464m.	
	80	CLAYSTONE: as for 1455-1464m.	
1467-1472	30	SANDSTONE: light to medium green grey, very fine to fine, rarely medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, common white to light green argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown and green mica flakes, friable, nil to very poor visual porosity, no oil fluorescence.	
	70	CLAYSTONE: light to medium green grey to light brown to medium grey, slightly to moderately silty, trace black carbonaceous specks, trace micromica, soft, slightly subfissile.	
1472-1476	20	SANDSTONE: light to medium green grey, very fine to fine, rarely medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, common white to light green argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown and green mica flakes, friable, nil to very poor visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to medium green grey to light brown to medium grey, slightly to moderately silty, trace black carbonaceous specks, trace micromica, soft, slightly subfissile.	
1476-1482	30	SANDSTONE: light to medium green grey, very fine to rarely medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and green mica flakes, friable, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium grey to medium green grey to medium brown grey, moderately silty, trace black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1482-1488	60	SANDSTONE: light to medium green grey, very fine to rarely medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and green mica flakes, friable, very poor visual porosity, no oil fluorescence.	
	40	CLAYSTONE: as for 1476-1482m.	
1488-1491	70	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and green mica flakes, friable, very poor visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 1476-1482m.	
1491-1494	80	SANDSTONE: light to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, weak silica cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and green mica flakes, friable, very poor to poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 1476-1482m.	

1494-1503	90	SANDSTONE: light to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and green mica flakes, friable, poor visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1476-1482m.	
1503-1506	80	SANDSTONE: as for 1494-1503m.	
	20	CLAYSTONE: medium brown grey to medium green grey to medium grey, moderately silty, trace black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1506-1509	100	SANDSTONE: light to medium green grey, very fine to rarely coarse, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and green mica flakes, friable, poor visual porosity, no oil fluorescence.	
1509-1515	90	SANDSTONE: light to medium green grey, very fine to rarely coarse, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown and green mica flakes, common vein calcite, friable, poor visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1503-1506m.	
1515-1527	100	SANDSTONE: light to medium green grey, very fine to rarely coarse, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite and trace vein quartz, friable, poor to fair visual porosity, no oil fluorescence.	
1527-1530	40	SANDSTONE: as for 1515-1527m.	
	60	CLAYSTONE: light to medium grey to light brown grey to medium green grey, moderately silty, rare black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1530-1536	10	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, very poor visual porosity, no oil fluorescence.	
	90	CLAYSTONE: as for 1527-1530m.	
1536-1539	40	SANDSTONE: as for 1530-1536m.	
	60	CLAYSTONE: medium grey to medium brown grey to medium green grey, moderately silty, rare black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1539-1545	30	SANDSTONE: as for 1530-1536m.	
	70	CLAYSTONE: as for 1536-1539m.	
1545-1548	60	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, friable, poor visual porosity, no oil fluorescence.	
	40	CLAYSTONE: light to medium grey to medium brown grey to medium green grey, moderately silty, rare black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1548-1551	70	SANDSTONE: as for 1545-1548m.	

Interval (m)	%	Description	PAGE: 19
	30	CLAYSTONE: as for 1545-1548m.	
1551-1554	20	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, very poor visual porosity, no oil fluorescence.	
	80	CLAYSTONE: as for 1545-1548m.	
1554-1560	10	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: light to medium brown grey to medium grey to medium green grey, moderately silty, rare black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1560-1566	30	SANDSTONE: as for 1554-1560m.	
	70	CLAYSTONE: as for 1554-1560m.	
1566-1572	70	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, friable, poor visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 1554-1560m.	
1572-1578	90	SANDSTONE: as for 1566-1572m.	
	10	CLAYSTONE: as for 1554-1560m.	
1578-1584	100	SANDSTONE: light to medium green grey, very fine to occasionally coarse, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, friable, poor to fair visual porosity, no oil fluorescence.	
1584-1590	100	SANDSTONE: light to medium green grey, very fine to occasionally coarse, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, poor visual porosity, no oil fluorescence.	
1590-1608	90	SANDSTONE: light to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, friable, poor visual porosity, no oil fluorescence.	
	10	CLAYSTONE: light to medium brown grey to medium grey to medium green grey, moderately silty, rare black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1608-1611	100	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, friable, very poor to poor visual porosity, no oil fluorescence.	
1611-1617	90	SANDSTONE: as for 1608-1611m.	
	10	CLAYSTONE: as for 1608-1611m.	

Interval (m)	%	Description	PAGE: 20
1617-1623	100	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, friable, poor visual porosity, no oil fluorescence.	
1623-1629	50	SANDSTONE: as for 1617-1623m.	
	50	CLAYSTONE: light to medium grey to medium brown grey to medium green grey, moderately silty, rare black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1629-1635	100	CLAYSTONE: as for 1623-1629m.	
1635-1641	70	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, friable, poor visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 1623-1629m.	
1641-1647	20	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, nil to very poor visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to medium brown grey to medium grey to medium green grey, moderately to very silty, trace black carbonaceous specks, trace micromica, firm, slightly subfissile.	
1647-1653	10	SANDSTONE: as for 1641-1647m.	
	90	CLAYSTONE: as for 1641-1647m.	
1653-1656	10	SANDSTONE: as for 1641-1647m.	
	90	CLAYSTONE: as for 1641-1647m.	
* 1656-1659	70	SANDSTONE: light to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace black coal detritus, trace vein calcite, friable, poor visual porosity, no oil fluorescence.	
	30	CLAYSTONE: light to medium brown grey to medium grey to medium green grey, moderately to very silty, trace black carbonaceous specks, common black coal detritus, trace micromica, firm, slightly subfissile.	
1659-1662	80	SANDSTONE: as for 1656-1659m.	
	20	CLAYSTONE: light to medium brown grey to medium grey to medium green grey, moderately to very silty, trace black carbonaceous specks, trace black coal detritus, trace micromica, firm, slightly subfissile.	
1662-1665	30	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, nil to very poor visual porosity, no oil fluorescence.	
	70	CLAYSTONE: as for 1659-1662m.	

Interval (m)	%	Description	PAGE: 21
--------------	---	-------------	----------

1665-1668	60	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, poor visual porosity, no oil fluorescence.
	40	CLAYSTONE: as for 1659-1662m.
1668-1671	80	SANDSTONE: light to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and moderate calcareous cements, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown mica flakes, common vein calcite, friable, nil to very poor visual porosity, no oil fluorescence.
	20	CLAYSTONE: as for 1659-1662m.
1671-1674	70	SANDSTONE: as for 1668-1671m.
	30	CLAYSTONE: as for 1659-1662m.
1674-1677	40	SANDSTONE: as for 1668-1671m.
	60	CLAYSTONE: off white to medium brown grey to light to medium green grey, moderately to very silty, trace black carbonaceous specks, trace black coal detritus, trace micromica, firm, slightly subfissile.
1677-1680	70	SANDSTONE: as for 1668-1671m.
	30	CLAYSTONE: as for 1674-1677m.
1680-1683	100	SANDSTONE: light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and moderate calcareous cements, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown mica flakes, common vein calcite, friable, no visual porosity, no oil fluorescence.
1683-1686	90	SANDSTONE: as for 1680-1683m.
	10	CLAYSTONE: as for 1674-1677m.
1686-1689	20	SANDSTONE: light green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, weak silica and moderate calcareous cements, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown mica flakes, common vein calcite, friable, no visual porosity, no oil fluorescence.
	80	CLAYSTONE: light to medium brown grey to light to medium green grey, moderately to very silty, trace black carbonaceous specks, very finely arenaceous in part, trace black coal detritus, trace micromica, firm, slightly subfissile.
1689-1692	10	SANDSTONE: as for 1686-1689m.
	90	CLAYSTONE: light to medium brown grey to light to medium green grey, dark brown and very carbonaceous in part, moderately to very silty, trace black carbonaceous specks, very finely arenaceous in part, common black coal detritus, trace micromica, firm, slightly subfissile.
1692-1698	100	CLAYSTONE: as for 1689-1692m.
1698-1707	10	SANDSTONE: light green grey, very fine, subangular to subrounded, moderately sorted, weak silica and moderate calcareous cements, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown mica flakes, common vein calcite, friable, no visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 22
--------------	---	-------------	----------

	90	CLAYSTONE: light to medium brown grey to light to medium green grey, moderately to very silty, trace black carbonaceous specks, very finely arenaceous in part, trace black coal detritus, trace micromica, firm, slightly subfissile.
1707-1713	30	SANDSTONE: as for 1698-1707m.
	70	CLAYSTONE: as for 1698-1707m.
1713-1716	50	SANDSTONE: as for 1698-1707m.
	50	CLAYSTONE: as for 1698-1707m.
1716-1719	20	SANDSTONE: light green grey, very fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, trace quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, no visual porosity, no oil fluorescence.
	80	CLAYSTONE: off white to medium grey to medium brown grey, moderately to very silty, trace black carbonaceous specks, very finely arenaceous in part, trace micromica, firm, slightly subfissile.
1719-1722	40	SANDSTONE: as for 1716-1719m.
	60	CLAYSTONE: as for 1716-1719m.
1722-1725	50	SANDSTONE: light green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, trace quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, no visual porosity, no oil fluorescence.
	50	CLAYSTONE: as for 1716-1719m.
1725-1734	70	SANDSTONE: as for 1722-1725m.
	30	CLAYSTONE: as for 1716-1719m.
1734-1737	80	SANDSTONE: as for 1722-1725m.
	20	CLAYSTONE: as for 1716-1719m.
1737-1746	70	SANDSTONE: light green grey, very fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, trace quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, no visual porosity, no oil fluorescence.
	30	CLAYSTONE: as for 1716-1719m.
1746-1749	60	SANDSTONE: as for 1737-1746m.
	40	CLAYSTONE: as for 1716-1719m.
1749-1755	90	SANDSTONE: light green grey, very fine to occasionally medium, dominantly very fine to fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, trace quartz grains, trace coarse brown mica flakes, trace vein calcite, friable, nil to very poor visual porosity, no oil fluorescence.
	10	CLAYSTONE: off white to medium grey to medium brown grey, moderately to very silty, trace black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, firm, slightly subfissile.

Interval (m)	%	Description	PAGE: 23
1755-1761	90	SANDSTONE: light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and strong calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1749-1755m.	
1761-1770	100	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and moderate calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace red lithics, common quartz grains, trace coarse brown mica flakes, trace to common vein calcite, hard, poor visual porosity, no oil fluorescence.	
1770-1773	100	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor to poor visual porosity, no oil fluorescence.	
1773-1776	90	SANDSTONE: as for 1770-1773m.	
	10	CLAYSTONE: off white to medium green grey to medium brown grey, moderately to very silty, trace black carbonaceous specks, often very finely arenaceous, slightly calcareous, trace micromica, firm, slightly subfissile.	
1776-1785	80	SANDSTONE: as for 1770-1773m.	
	20	CLAYSTONE: as for 1773-1776m.	
1785-1788	50	SANDSTONE: light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	50	CLAYSTONE: off white to medium brown grey to medium grey to medium green grey, moderately to very silty, trace black carbonaceous specks, often very finely arenaceous, trace black coal detritus, slightly calcareous, trace micromica, firm to moderately hard, subfissile.	
1788-1791	30	SANDSTONE: light green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, nil to very poor visual porosity, no oil fluorescence.	
	70	CLAYSTONE: as for 1785-1788m.	
1791-1797	20	SANDSTONE: as for 1788-1791m.	
	80	CLAYSTONE: as for 1785-1788m.	
1797-1800	30	SANDSTONE: as for 1788-1791m.	
	70	CLAYSTONE: as for 1785-1788m.	
1800-1803	50	SANDSTONE: light green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	50	CLAYSTONE: off white to medium brown grey to medium grey to medium green grey, often very silty grading to siltstone, trace black carbonaceous specks, very finely arenaceous in part, trace black coal detritus, slightly calcareous, trace micromica, firm to moderately hard, subfissile.	

1803-1806	30	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common quartz grains, trace coarse brown mica flakes, common vein calcite, hard, nil to very poor visual porosity, no oil fluorescence.
	70	CLAYSTONE: as for 1800-1803m.
1806-1812	10	SANDSTONE: as for 1803-1806m.
	90	CLAYSTONE: off white to medium brown grey to medium grey , often very silty, trace black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, moderately hard, subfissile.
1812-1815	30	SANDSTONE: as for 1803-1806m.
	70	CLAYSTONE: as for 1806-1812m.
1815-1818	70	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common quartz grains, trace coarse brown mica flakes, common vein calcite, hard, no visual porosity, no oil fluorescence.
	30	CLAYSTONE: as for 1806-1812m.
1818-1821	80	SANDSTONE: as for 185-1818m.
	20	CLAYSTONE: as for 1806-1812m.
1821-1827	90	SANDSTONE: as for 185-1818m.
	10	CLAYSTONE: as for 1806-1812m.
1827-1830	10	SANDSTONE: as for 185-1818m.
	90	CLAYSTONE: light to medium brown grey to medium grey , moderately to very silty, trace black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, moderately hard, subfissile.
1830-1836	30	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, common to abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, no visual porosity, no oil fluorescence.
	70	CLAYSTONE: as for 1827-1830m.
1836-1839	40	SANDSTONE: as for 1830-1836m.
	60	CLAYSTONE: light to medium brown grey to medium grey to medium green grey, moderately to very silty, trace black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, moderately hard, subfissile.
1839-1848	90	SANDSTONE: light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, common to abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.
	10	CLAYSTONE: as for 1836-1839m.



Interval (m)	%	Description	PAGE: 25
1848-1854	100	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, common to abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, poor visual porosity, no oil fluorescence.	
1854-1869	90	SANDSTONE: as for 1848-1854m.	
	10	CLAYSTONE: as for 1836-1839m.	
1869-1878	80	SANDSTONE: as for 1848-1854m.	
	20	CLAYSTONE: light to medium brown grey to medium grey to medium green grey, moderately to very silty, trace black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, moderately hard, subfissile.	
1878-1883	90	SANDSTONE: light green grey, very fine to medium rare coarse grains, dominantly medium, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, common to abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1869-1878m.	
1883-1893	20	SANDSTONE: light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	80	CLAYSTONE: off white to medium brown grey to medium grey, moderately to very silty, trace to common black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, moderately hard, subfissile.	
1893-1896	50	SANDSTONE: light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, strong silica cement, weak to moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 1883-1893m.	
1896-1899	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, weak to moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 1883-1893m.	
1899-1905	80	SANDSTONE: as for 1896-1899m.	
	20	CLAYSTONE: as for 1883-1893m.	
1905-1908	40	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, weak to moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, trace pyrite, hard, very poor visual porosity, no oil fluorescence.	
	60	CLAYSTONE: off white to medium brown grey to medium grey, rarely dark grey, moderately to very silty, trace to common black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 26
--------------	---	-------------	----------

1908-1911	40	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, common vein calcite, trace pyrite, hard, very poor visual porosity, no oil fluorescence.
	60	CLAYSTONE: off white to medium brown grey to medium grey, rarely dark grey, moderately to very silty, trace to common black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, common vein calcite, moderately hard, subfissile.
1911-1914	50	SANDSTONE: as for 1908-1911m.
	50	CLAYSTONE: as for 1908-1911m.
1914-1920	80	SANDSTONE: as for 1908-1911m.
	20	CLAYSTONE: as for 1908-1911m.
1920-1923	50	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, weak calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, very poor visual porosity, no oil fluorescence.
	50	CLAYSTONE: off white to medium brown grey to medium grey, rarely dark grey, very silty, trace to common black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, trace vein calcite, moderately hard, subfissile.
1923-1929	20	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica cement, weak calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, no visual porosity, no oil fluorescence.
	80	CLAYSTONE: as for 1920-1923m.
1929-1932	30	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, nil to very poor visual porosity, no oil fluorescence.
	70	CLAYSTONE: as for 1920-1923m.
1932-1938	20	SANDSTONE: as for 1929-1932m.
	80	CLAYSTONE: as for 1920-1923m.
1938-1941	40	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, common to abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, very poor visual porosity, no oil fluorescence.
	60	CLAYSTONE: off white to medium brown grey to medium grey, rarely dark grey, very silty, trace to common black carbonaceous specks, very finely arenaceous in part, slightly to occasionally very calcareous, trace micromica, trace vein calcite, moderately hard, subfissile.
1941-1947	20	SANDSTONE: as for 1938-1941m.
	80	CLAYSTONE: as for 1938-1941m.

Interval (m)	%	Description	PAGE: 27
--------------	---	-------------	----------

1947-1953	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, very poor visual porosity, no oil fluorescence.
	20	CLAYSTONE: off white to medium brown grey to medium grey, very silty, trace to common black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, trace vein calcite, rare pyrite, moderately hard, subfissile.
1953-1956	40	SANDSTONE: as for 1947-1953m.
	60	CLAYSTONE: off white to medium brown grey to medium grey, occasionally dark brown grey and moderately carbonaceous, very silty, trace to common black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace micromica, moderately hard, subfissile.
1956-1962	20	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, nil to very poor visual porosity, no oil fluorescence.
	80	CLAYSTONE: as for 1953-1956m.
1962-1971	30	SANDSTONE: as for 1956-1962m.
	70	CLAYSTONE: as for 1953-1956m.
1971-1977	20	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, no visual porosity, no oil fluorescence.
	80	CLAYSTONE: off white to medium brown grey to medium grey, occasionally dark brown grey and moderately carbonaceous, very silty, trace to common black carbonaceous specks and coaly detritus, very finely arenaceous in part, slightly calcareous, trace micromica, moderately hard, subfissile.
1977-1980	30	SANDSTONE: as for 1971-1977m.
	70	CLAYSTONE: as for 1971-1977m.
1980-1983	30	SANDSTONE: as for 1971-1977m.
	70	CLAYSTONE: off white to medium brown grey to medium grey, occasionally dark brown grey and moderately carbonaceous, very silty, trace to common black carbonaceous specks and coaly detritus, very finely arenaceous in part, slightly calcareous, trace calcite vining, trace pyrite, trace micromica, moderately hard, subfissile.
1983-1989	20	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, no visual porosity, no oil fluorescence.
	80	CLAYSTONE: as for 1980-1983m.
1989-1995	30	SANDSTONE: light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, no visual porosity, no oil fluorescence.
	70	CLAYSTONE: as for 1980-1983m.

Interval (m)	%	Description	PAGE: 28
1995-1998	50	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: off white to medium brown grey to medium grey, occasionally dark brown grey and moderately carbonaceous, very silty, trace black carbonaceous specks and coaly detritus, very finely arenaceous in part, slightly calcareous, trace calcite vining, trace pyrite, trace micromica, moderately hard, subfissile.	
1998-2001	70	SANDSTONE: as for 1995-1998m.	
	30	CLAYSTONE: as for 1995-1998m.	
2001-2004	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, nil to very poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: off white to medium brown grey to medium grey, occasionally dark brown grey and moderately carbonaceous, very silty, trace black carbonaceous specks and coaly detritus, very finely arenaceous in part, slightly calcareous, common calcite vining, trace micromica, moderately hard, subfissile.	
2004-2007	90	SANDSTONE: as for 2001-2004m.	
	10	CLAYSTONE: as for 2001-2004m.	
2007-2010	20	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, no poor visual porosity, no oil fluorescence.	
	80	CLAYSTONE: off white to medium grey to medium brown grey, occasionally dark brown grey and moderately carbonaceous, very silty, trace black carbonaceous specks and coaly detritus, very finely arenaceous in part, slightly calcareous, common calcite vining, trace micromica, moderately hard, subfissile.	
2010-2016	40	SANDSTONE: as for 2007-2010m.	
	60	CLAYSTONE: as for 2007-2010m.	
2016-2019	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 2007-2010m.	
2019-2022	60	SANDSTONE: as for 2016-2019m.	
	40	CLAYSTONE: off white to medium grey to medium brown grey, very silty, trace black carbonaceous specks and coaly detritus, very finely arenaceous in part, slightly calcareous, common calcite vining, trace micromica, moderately hard, subfissile.	
2022-2025	30	SANDSTONE: as for 2016-2019m.	
	70	CLAYSTONE: as for 2019-2022m.	

Interval (m)	%	Description	PAGE: 29
2025-2031	70	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 2019-2022m.	
2031-2034	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 2019-2022m.	
2034-2037	20	SANDSTONE: as for 2031-2034m.	
	80	CLAYSTONE: off white to light brown to medium brown grey to medium grey, very silty, trace black carbonaceous specks and coaly detritus, very finely arenaceous in part, slightly calcareous, common calcite vining, trace micromica, moderately hard, subfissile.	
2037-2046	10	SANDSTONE: as for 2031-2034m.	
	90	CLAYSTONE: as for 2034-2037m.	
2046-2049	20	SANDSTONE: as for 2031-2034m.	
	80	CLAYSTONE: as for 2034-2037m.	
2049-2052	70	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, strong calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, hard, very poor visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 2034-2037m.	
2052-2055	90	SANDSTONE: as for 2049-2052m.	
	10	CLAYSTONE: as for 2034-2037m.	
2055-2058	70	SANDSTONE: as for 2049-2052m.	
	30	CLAYSTONE: off white to medium brown grey to medium grey, very silty, trace black carbonaceous specks, very finely arenaceous in part, slightly calcareous, common calcite vining, trace micromica, moderately hard, subfissile.	
2058-2061	10	SANDSTONE: light green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, moderately hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: off white to medium brown grey to medium grey, very silty, trace black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace calcite vining, trace micromica, moderately hard, subfissile.	
2061-2064	40	SANDSTONE: as for 2058-2061m.	
	60	CLAYSTONE: off white to medium brown grey to medium grey, very silty - grades to siltstone, trace black carbonaceous specks, very finely arenaceous in part, slightly calcareous, trace calcite vining, trace micromica, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 30
2064-2067	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, moderate calcareous cement, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, moderately hard, very poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 2061-2064m.	
2067-2070	90	SANDSTONE: as for 2064-2067m.	
	10	CLAYSTONE: as for 2061-2064m.	
2070-2073	60	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, strong calcareous cement, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, moderately hard, very poor visual porosity, no oil fluorescence.	
	40	CLAYSTONE: as for 2061-2064m.	
2073-2079	30	SANDSTONE: as for 2070-2073m.	
	70	CLAYSTONE: off white to medium brown grey to medium grey, very silty, trace black carbonaceous specks, often very finely arenaceous, moderately calcareous, trace calcite vining, trace micromica, firm to moderately hard, subfissile.	
2079-2082	90	SANDSTONE: light green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, strong calcareous cement, abundant off white argillaceous matrix - matrix supported, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein calcite, moderately hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 2073-2076m.	
2082-2088	90	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein quartz and calcite, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 2073-2076m.	
2088-2097	100	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common vein quartz and calcite, hard, no visual intergranular porosity, trace oil fluorescence as below.	
2097-2100	100	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, abundant (25% of sample) coarsely crystalline vein quartz and calcite, hard, no visual intergranular porosity, possible good fracture porosity.	
FLUOR		The vein quartz and calcite has 50% bright solid to patchy extremely pale yellow white to milky white fluorescence giving a weak white crush cut, trace dull white film residue.	
2100-2103	100	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, abundant (20% of sample) coarsely crystalline vein quartz and calcite, hard, no visual intergranular porosity, possible poor fracture porosity.	

Interval (m)	%	Description	PAGE: 31
--------------	---	-------------	----------

FLUOR		The vein quartz and calcite has 50% bright solid to patchy extremely pale yellow white to milky white fluorescence giving a weak white crush cut, trace dull white film residue.
2103-2106	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, abundant (20% of sample) coarsely crystalline vein quartz and calcite, hard, no visual intergranular porosity, possible poor fracture porosity.
	20	CLAYSTONE: off white to medium brown grey to medium grey, very silty, trace black carbonaceous specks, often very finely arenaceous, moderately calcareous, trace calcite vining, trace micromica, firm to moderately hard, subfissile.
FLUOR		The vein quartz and calcite has 30% bright solid to patchy extremely pale yellow white to milky white fluorescence giving a weak white crush cut, trace dull white film residue.
2106-2109	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, abundant (5% of sample) coarsely crystalline vein quartz and calcite, hard, no visual intergranular porosity, possible poor fracture porosity.
	20	CLAYSTONE: as for 2103-2106m.
FLUOR		The vein quartz and calcite has 30% dull to moderately bright patchy to rarely solid extremely pale yellow white to milky white fluorescence giving a weak white crush cut, trace dull white film residue.
2109-2112	80	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, common (trace of sample) coarsely crystalline vein quartz and calcite, hard, no visual intergranular porosity, possible poor fracture porosity.
	20	CLAYSTONE: as for 2103-2106m.
FLUOR		The vein quartz and calcite has 10% dull to moderately bright patchy to rarely solid extremely pale yellow white to milky white fluorescence giving a weak white crush cut, trace dull white film residue.
2112-2115	70	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, no visual porosity, no oil fluorescence.
	30	CLAYSTONE: off white to medium brown grey to dark grey, very silty, trace black carbonaceous specks, often very finely arenaceous, moderately calcareous, trace calcite vining, trace micromica, firm to moderately hard, subfissile.
2115-2118	80	SANDSTONE: as for 2112-2115m.
	20	CLAYSTONE: as for 2112-2115m.
2118-2121	70	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and calcareous cements, abundant off white argillaceous matrix - matrix supported in part, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite, hard, no visual porosity, no oil fluorescence.
	30	CLAYSTONE: off white to medium brown grey to medium grey, very silty, trace black carbonaceous specks, often very finely arenaceous, slightly calcareous, trace calcite vining, trace micromica, moderately hard, subfissile.

Interval (m)	%	Description	PAGE: 32
2121-2130	80	SANDSTONE: as for 2118-2121m.	
	20	CLAYSTONE: as for 2118-2121m.	
2130-2133	10	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and calcareous cements, abundant off white argillaceous matrix - matrix supported in part, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace vein calcite and quartz, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: off white to medium brown grey to medium grey, rarely dark grey, very silty, trace black carbonaceous specks, often very finely arenaceous, slightly calcareous, trace calcite and quartz veining, trace slickensides, trace pyrite, trace micromica, moderately hard, subfissile.	
2133-2136	90	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, abundant (30% of sample) macrocrystalline vein calcite and quartz, hard, no visual intergranular porosity, very poor inferred fracture porosity.	
	10	CLAYSTONE: off white to medium brown grey to medium grey, rarely dark grey, very silty, trace black carbonaceous specks, often very finely arenaceous, slightly calcareous, abundant macrocrystalline vein calcite and quartz, trace slickensides, trace pyrite, trace micromica, moderately hard, subfissile.	
FLUOR		70% of the vein material has dull to bright solid to patchy very pale yellow white fluorescence giving an extremely weak white crush cut, trace very dull white film residue residue. Note: the oil fluorescence is partially obscured by the presence of strong calcite mineral fluorescence.	
2136-2139	40	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, abundant (30% of sample) macrocrystalline vein calcite and quartz, hard, no visual intergranular porosity, very poor inferred fracture porosity.	
	60	CLAYSTONE: off white to medium brown grey to medium grey, very silty, trace black carbonaceous specks, often very finely arenaceous, moderately calcareous, abundant (30% of total sample) macrocrystalline vein calcite and quartz, trace slickensides, trace pyrite, trace micromica, moderately hard, subfissile, very poor inferred fracture porosity.	
FLUOR		70% of the vein material in both the sandstone and claystone has dull to bright solid to patchy very pale yellow white fluorescence giving an extremely weak white crush cut, trace very dull white film residue residue. Note: the oil fluorescence is partially obscured by the presence of strong calcite mineral fluorescence.	
2139-2142	40	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, abundant (5% of sample) macrocrystalline vein calcite and quartz, hard, no visual intergranular porosity, very poor inferred fracture porosity.	
	60	CLAYSTONE: off white to medium brown grey to medium grey, occasionally dark grey, very silty, trace black carbonaceous specks, often very finely arenaceous, moderately calcareous, abundant (5% of total sample) macrocrystalline vein calcite and quartz, trace slickensides, trace pyrite, trace micromica, moderately hard, subfissile, very poor inferred fracture porosity.	
FLUOR		30% of the vein material in both the sandstone and claystone has dull to bright solid to patchy very pale yellow white fluorescence giving an extremely weak white crush cut, trace very dull white film residue residue. Note: the oil fluorescence is partially obscured by the presence of strong calcite mineral fluorescence.	



Interval (m)	%	Description	PAGE: 33
2142-2145	10	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace macrocrystalline vein calcite and quartz, hard, no visual intergranular porosity, no oil fluorescence.	
	90	CLAYSTONE: off white to medium brown grey to medium grey, occasionally dark grey, very silty, trace to common black carbonaceous specks, often very finely arenaceous, moderately calcareous, trace macrocrystalline vein calcite and quartz, trace slickensides, trace pyrite, trace micromica, moderately hard, subfissile.	
2145-2148	40	SANDSTONE: as for 2142-2145m.	
	60	CLAYSTONE: as for 2142-2145m.	
2148-2157	90	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace macrocrystalline vein calcite and quartz, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 2142-2145m.	
2157-2160	50	SANDSTONE: as for 2148-2157m.	
	50	CLAYSTONE: light to medium brown grey to medium grey, occasionally dark grey, very silty, trace to common black carbonaceous specks, often very finely arenaceous, moderately calcareous, trace macrocrystalline vein calcite and quartz, trace slickensides, trace pyrite, trace micromica, moderately hard, subfissile.	
2160-2163	20	SANDSTONE: as for 2148-2157m.	
	80	CLAYSTONE: as for 2157-2160m.	
2163-2166	30	SANDSTONE: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace macrocrystalline vein calcite and quartz, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: as for 2157-2160m.	
2166-2169	10	SANDSTONE: as for 2163-2166m.	
	90	CLAYSTONE: light to dark grey to medium brown grey, occasionally dark grey, very silty, trace to common black carbonaceous specks, often very finely arenaceous, moderately calcareous, trace macrocrystalline vein calcite and quartz, trace slickensides, trace pyrite, trace micromica, moderately hard, subfissile.	
2169-2175	20	SANDSTONE: light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, very strong silica and calcareous cements, abundant off white argillaceous matrix, abundant altered feldspar and grey green and black volcanogenic lithics, trace orange lithics, abundant quartz grains, trace coarse brown mica flakes, trace macrocrystalline vein calcite and quartz, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to medium brown grey to medium grey, occasionally dark grey, very silty, trace to common black carbonaceous specks, often very finely arenaceous, moderately calcareous, trace macrocrystalline vein calcite, trace pyrite, trace micromica, moderately hard, subfissile.	
2175-2178	10	SANDSTONE: as for 2169-2175m.	
T.D.	90	CLAYSTONE: light to medium brown grey to medium grey, occasionally dark grey, very silty, trace to common black carbonaceous specks, often very finely arenaceous, moderately calcareous, trace pyrite, trace micromica, moderately hard, subfissile.	

--	--	--