Apache Energy

Cuttings Descriptions Report

Well Name : Elver-1	**Print Date** 5/01/2009
Wellsite Geologist(s) : J Eastwood T Lobo	

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
Main				
3240.0 - 3245.0	100	**CALCAREOUS CLAYSTONE:** as above, trace to common pyrite nodules.		
3245.0 - 3248.9	100	**CALCAREOUS CLAYSTONE:** medium grey to medium light grey, light olive grey, abundantly calcareous grading to CALCILUTITE, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, trace pyrite nodules, trace very fine carbonaceous specks, trace ooids, trace microfossils (ostracods), soft to dominantly firm, amorphous to sub blocky. 3.9 metre bagged sample from 3245.0 m to 3248.9 mMDRT (TD 311 mm section). 311 mm section TD of 3248.9 mMDRT reached at 1300 hrs, 29 December 2008.		
3248.9 - 3251.0	100	**CALCAREOUS CLAYSTONE:** as above. 216 mm hole. Spot sample. 30% cement contamination.		
3251.0 - 3253.0	100	**CALCAREOUS CLAYSTONE:** as above. Spot sample. 15% cement contamination.		
3253.0 - 3255.0	100	**CALCAREOUS CLAYSTONE:** medium grey to medium light grey, light olive grey, abundantly calcareous grading to CALCILUTITE, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, trace fine to medium angular quartz grains, trace very fine carbonaceous specks, trace ooids, soft to dominantly firm, amorphous to sub blocky. Collected as a bagged 6.1 metre sample from 3248.9 m to 3255.0 mMDRT. (5% cement contamination)		
3255.0 - 3260.0	100	**CALCAREOUS CLAYSTONE:** medium grey to medium light grey, light olive grey, abundantly calcareous grading to CALCILUTITE, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, trace fine to medium angular quartz grains, trace very fine carbonaceous specks, trace ooids, soft to dominantly firm, amorphous to sub blocky. 5.0 m bagged samples from 3255.0 m to 3260.0 mMDRT.		
3260.0 - 3265.0	100	**CALCAREOUS CLAYSTONE:** as above		
3265.0 - 3270.0	100	**CALCAREOUS CLAYSTONE:** as above		
3270.0 - 3275.0	100	**CALCAREOUS CLAYSTONE:** medium grey to medium light grey, light olive grey, abundantly calcareous grading to CALCILUTITE, occasionally medium dark grey, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, trace very fine carbonaceous specks, trace ooids, trace forams, soft to dominantly firm, moderately hard where medium dark grey, amorphous to sub blocky.		
3275.0 - 3280.0	100	**CALCAREOUS CLAYSTONE:** medium dark grey, medium grey to rare medium light grey, light olive grey, light brownish grey, very calcareous grading to MARL, trace micromicaceous, silty where light brownish grey, trace very fine glauconite, trace disseminated pyrite, trace ooids, trace forams, soft to dominantly firm, moderately hard where medium dark grey, amorphous to sub blocky, rare sub fissile.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		Lakes Entrance: 3273.0 mMDRT / 2514.5 mTVDRT / -2493.0 mTVDAHD. Cuttingsfrom 3280.0 mMDRT, becoming firmer, darker and less calcareous with depth.		
3280.0 - 3285.0	100	**CALCAREOUS CLAYSTONE:** as above		
3285.0 - 3290.0	100	**CALCAREOUS CLAYSTONE:** as above		
3290.0 - 3295.0	100	**CALCAREOUS CLAYSTONE:** medium dark grey, medium grey, light olive grey, light brownish grey, very calcareous, grading to MARL, silty where light brownish grey, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, soft to dominantly firm, moderately hard where medium dark grey, amorphous to sub blocky, rare sub fissile.		
3295.0 - 3300.0	100	**CALCAREOUS CLAYSTONE:** medium dark grey, medium grey, light olive grey, light brownish grey, very calcareous grading to MARL, silty where light brownish grey, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky, rare sub fissile.		
3300.0 - 3305.0	100	**CALCAREOUS CLAYSTONE:** as above		
3305.0 - 3310.0	100	**CALCAREOUS CLAYSTONE:** as above		
3310.0 - 3315.0	100	**CALCAREOUS CLAYSTONE:** as above		
3315.0 - 3320.0	100	**CALCAREOUS CLAYSTONE:** medium dark grey, medium grey, light olive grey, light brownish grey, very calcareous grading to MARL, silty where light brownish grey, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky, rare sub fissile.		
3320.0 - 3325.0	100	**CALCAREOUS CLAYSTONE:** as above		
3325.0 - 3330.0	100	**CALCAREOUS CLAYSTONE:** as above		
3330.0 - 3335.0	100	**CALCAREOUS CLAYSTONE:** as above		
3335.0 - 3340.0	100	**CALCAREOUS CLAYSTONE:** as above Riser booster pump on. Earlier drilled cuttings seen in the sample.		
3340.0 - 3345.0	100	**CALCAREOUS CLAYSTONE:** as above		
3345.0 - 3350.0	100	**CALCAREOUS CLAYSTONE:** medium dark grey, medium grey, light olive grey, light brownish grey, light greenish grey, very calcareous grading to MARL, silty where light brownish grey, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky, rare sub fissile.		
3350.0 - 3355.0	100	**CALCAREOUS CLAYSTONE:** medium dark grey, medium grey, light olive grey, light brownish grey, light greenish grey, very calcareous grading to MARL, silty where light brownish grey, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, trace pyrite nodules, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky rare sub fissile.		
3355.0 - 3360.0	100	**CALCAREOUS CLAYSTONE:** as above, very calcareous becoming less calcareous with depth, trace pyrite nodules.		
3360.0 - 3365.0	100	**CALCAREOUS CLAYSTONE:** as above, trace pyrite nodules.		
3365.0 - 3370.0	100	**CALCAREOUS CLAYSTONE:** medium dark grey, medium grey, light olive grey, light brownish grey, light greenish grey, very calcareous becoming less calcareous with depth, silty where light brownish grey, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, trace pyrite nodules, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky, rare sub fissile. Starglide lubricant (0.5%) added to the mud system at 3370.0 mMDRT at 1530 hrs, 03 January 2008.		
3370.0 - 3375.0	100	**CALCAREOUS CLAYSTONE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
3375.0 - 3380.0	100	**CALCAREOUS CLAYSTONE:** as above		
3380.0 - 3385.0	100	**CALCAREOUS CLAYSTONE:** as above		
3385.0 - 3390.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey to light greenish grey, moderately calcareous, silty in part, trace micromicaceous, trace very fine glauconite, trace disseminated pyrite, trace very finely arenaceous, trace very fine carbonaceous specks, dominantly firm to moderately hard where medium dark grey, soft to dispersive in part where medium light grey, amorphous to sub blocky, rare sub fissile.		
3390.0 - 3395.0	100	**CALCAREOUS CLAYSTONE:** as above		
3395.0 - 3400.0	100	**CALCAREOUS CLAYSTONE:** as above		
3400.0 - 3405.0	100	**CALCAREOUS CLAYSTONE:** as above		
3405.0 - 3410.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey to light greenish grey, moderately calcareous, silty in part, trace micromicaceous, trace very fine glauconite, trace very finely arenaceous, trace very fine carbonaceous specks, dominantly firm to moderately hard where medium dark grey, soft in part where medium light grey, amorphous to sub blocky, trace sub fissile.		
3410.0 - 3415.0	100	**CALCAREOUS CLAYSTONE:** as above		
3415.0 - 3420.0	100	**CALCAREOUS CLAYSTONE:** as above - trace disseminated pyrite.		
3420.0 - 3425.0	100	**CALCAREOUS CLAYSTONE:** as above - trace nodular and disseminated pyrite.		
3425.0 - 3430.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey to light greenish grey, moderately calcareous, silty in part, trace micromicaceous, trace very fine glauconite, trace very finely arenaceous, trace very fine carbonaceous specks, trace nodular and disseminated pyrite, dominantly firm to moderately hard where medium dark grey, soft in part where medium light grey, amorphous to sub blocky, trace sub fissile.		
3430.0 - 3435.0	100	**CALCAREOUS CLAYSTONE:** as above		
3435.0 - 3440.0	100	**CALCAREOUS CLAYSTONE:** as above Calcium carbonate added to mud from 3440.0 mMDRT.		
3440.0 - 3445.0	100	**CALCAREOUS CLAYSTONE:** as above		
3445.0 - 3450.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey to light greenish grey, moderately calcareous, silty in part, trace micromicaceous, trace very fine glauconite, trace very finely arenaceous, trace very fine carbonaceous specks, trace disseminated pyrite, dominantly firm to moderately hard where medium dark grey, soft in part where medium light grey, amorphous to sub blocky, trace sub fissile.		
3450.0 - 3455.0	100	**CALCAREOUS CLAYSTONE:** as above		
3455.0 - 3460.0	100	**CALCAREOUS CLAYSTONE:** as above		
3460.0 - 3465.0	100	**CALCAREOUS CLAYSTONE:** as above		
3465.0 - 3470.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey to light greenish grey, moderately calcareous, silty in part, trace micromicaceous, trace very fine glauconite, trace very finely arenaceous, dominantly firm to moderately hard where medium dark grey, soft in part where medium light grey, amorphous to sub blocky, trace sub fissile.		
3470.0 - 3475.0	100	**CALCAREOUS CLAYSTONE:** as above		
3475.0 - 3480.0	100	**CALCAREOUS CLAYSTONE:** as above - soft to moderately hard.		
3480.0 - 3485.0	100	**CALCAREOUS CLAYSTONE:** as above - soft to moderately hard.		
3485.0 - 3490.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey to light greenish grey, moderately calcareous, silty in part, trace micromicaceous, trace very fine glauconite, trace very finely arenaceous, dominantly firm to moderately hard where medium dark grey, soft in part where medium light		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		grey, amorphous to sub blocky, trace sub fissile.		
3490.0 - 3495.0	100	**CALCAREOUS CLAYSTONE:** as above - trace carbonaceous specks.		
3495.0 - 3500.0	100	**CALCAREOUS CLAYSTONE:** as above - trace carbonaceous specks.		
3500.0 - 3505.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey to light greenish grey, moderately calcareous, silty in part, trace micromicaceous, trace very fine glauconite, trace very finely arenaceous, trace carbonaceous specks, trace nodular pyrite, rare pale green yellow calcite flakes, dominantly firm to moderately hard where medium dark grey, dominantly soft where medium light grey, amorphous to sub blocky, trace sub fissile.		
3505.0 - 3510.0	100	**CALCAREOUS CLAYSTONE:** as above		
3510.0 - 3515.0	100	**CALCAREOUS CLAYSTONE:** as above		
3515.0 - 3520.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey to light greenish grey, moderately calcareous, silty in part, trace micromicaceous, trace very fine glauconite, trace very finely arenaceous, trace carbonaceous specks, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky, trace sub fissile.		
3520.0 - 3525.0	100	**CALCAREOUS CLAYSTONE:** as above - trace nodular pyrite.		
3525.0 - 3530.0	100	**CALCAREOUS CLAYSTONE:** as above		
3530.0 - 3535.0	100	**CALCAREOUS CLAYSTONE:** as above		
3535.0 - 3540.0	100	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey, increasing light greenish grey, moderately calcareous, very silty, trace micromicaceous, trace very fine glauconite, trace very finely arenaceous, trace carbonaceous specks, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky, trace sub fissile.		
3540.0 - 3545.0	100	**CALCAREOUS CLAYSTONE:** as above		
3545.0 - 3550.0	80	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey, increasing light greenish grey, moderately calcareous, very silty, trace micromicaceous, trace very fine glauconite, common very finely arenaceous grading to a SANDY SILTSTONE, trace carbonaceous specks, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky, sub fissile		
	15	**SANDY SILTSTONE:** off white to very lght grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
	5	**SILTY SANDSTONE:** clear to translucent, dominanly very fne to fine, well sorted, dominantly sub rounded to rounded, abundant silty matrix occurring as soft to firm aggregates, trace very fine glauconite, trace loose, trace calcareous, poor visible porosity, no hydrocarbon fluorescence.		
3550.0 - 3555.0	50	**CALCAREOUS CLAYSTONE:** as above		
	40	**SANDY SILTSTONE:** as above		
	10	**SILTY SANDSTONE:** as above		
3555.0 - 3560.0	45	**CALCAREOUS CLAYSTONE:** as above		
	45	**SANDY SILTSTONE:** as above		
	10	**SILTY SANDSTONE:** as above		
3560.0 - 3565.0	40	**SANDY SILTSTONE:** off white to very lght grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
	30	**SILTY SANDSTONE:** as above		
	25	**CALCAREOUS CLAYSTONE:** as above		
	5	**CLAYSTONE:** moderate yelow to light olive brown, non calcareous, soft, amorphous, dispersive.		
		Gurnard Claystone that is the thin marker of the Top of Latrobe.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
3565.0 - 3570.0	40	**SANDY SILTSTONE:** as above		
	30	**SANDSTONE:** clear to translucent, light olivegrey to pale yellowish brown, very fine to dominantly fine, trace coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a with a very dispersive argillaceous matrix, trace to common very fine glauconite, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
	25	**CALCAREOUS CLAYSTONE:** as above		
	5	**CLAYSTONE:** moderate yelow to light olive brown, non calcareous, soft, amorphous, dispersive.		
3570.0 - 3575.0	40	**CALCAREOUS CLAYSTONE:** medium light grey to medium dark grey, light olive grey, increasing light greenish grey, moderately calcareous, very silty, trace micromicaceous, trace very fine glauconite, common very finely arenaceous grading to a SANDY SILTSTONE, trace carbonaceous specks, dominantly firm to moderately hard where medium dark grey, amorphous to sub blocky, sub fissile		
	30	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace glauconite, firm, dominantly sub fissile to sub blocky.		
	20	**SANDY SILTSTONE:** off white to very lght grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
	10	**SANDSTONE:**		
3575.0 - 3580.0	45	**SILTSTONE:** as above		
	25	**CALCAREOUS CLAYSTONE:** as above		
	20	**SANDSTONE:** clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
	10	**SANDY SILTSTONE:** as above		
3580.0 - 3585.0	55	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace glauconite, firm, dominantly sub fissile to sub blocky.		
	25	**SANDSTONE:** clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
	10	**CALCAREOUS CLAYSTONE:** as above		
	10	**SANDY SILTSTONE:** as above		
3585.0 - 3590.0	45	**SILTSTONE:** as above		
	40	**SANDSTONE:** clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
	10	**SANDY SILTSTONE:** as above		
	5	**CALCAREOUS CLAYSTONE:** as above		
3590.0 - 3595.0	60	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace glauconite, firm, dominantly sub fissile to sub blocky.		
	30	**SANDSTONE:** clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
	10	**SANDY SILTSTONE:** off white to very lght grey, light greenish grey, common very		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
3595.0 - 3600.0	70	**SILTSTONE:** as above		
	20	**SANDSTONE:** clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
	10	**SANDY SILTSTONE:** as above		
3600.0 - 3605.0	75	**SILTSTONE:** as above		
	15	**SANDSTONE:** as above		
	10	**SANDY SILTSTONE:** as above		
3605.0 - 3610.0	70	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace glauconite, firm, dominantly sub fissile to sub blocky.		
	20	**SANDSTONE:** clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
	10	**SANDY SILTSTONE:** off white to very lght grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
3610.0 - 3615.0	90	**SILTSTONE:** as above		
	5	**SANDY SILTSTONE:** as above		
	5	**SANDSTONE:** as above		
3615.0 - 3620.0	93	**SILTSTONE:** as above		
	5	**SANDSTONE:** as above		
	2	**SANDY SILTSTONE:** as above		
3620.0 - 3625.0	90	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace disseminated pyrite, trace to common micromicaceous, trace glauconite, firm, dominantly sub fissile to sub blocky.		
	5	**SANDY SILTSTONE:** off white to very lght grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
	5	**SANDSTONE:** clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
3625.0 - 3630.0	90	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace disseminated pyrite, trace to common micromicaceous, trace glauconite, firm, dominantly sub fissile to sub blocky.		
	7	**SANDSTONE:** as above		
	3	**SANDY SILTSTONE:** as above		
3630.0 - 3635.0	90	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace disseminated pyrite, trace to common pyrite nodules, trace to common micromicaceous, trace glauconite, firm, dominantly sub fissile to sub blocky.		
	7	**SANDSTONE:** as above		
	3	**SANDY SILTSTONE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
3635.0 - 3640.0	90	**SILTSTONE:** as above		
	7	**SANDSTONE:** clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite grading in part to GLAUCONITIC SANDSTONE, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.		
	3	**SANDY SILTSTONE:** off white to very lght grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
3640.0 - 3645.0	95	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace disseminated pyrite, trace to common pyrite nodules, trace to common micromicaceous, trace to common glauconite grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
	3	**SANDY SILTSTONE:** as above		
	2	**SANDSTONE:** as above		
3645.0 - 3650.0	95	**SILTSTONE:** greyish brown to dusky brown, dark olive grey, olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace disseminated pyrite, trace to common pyrite nodules, trace to common micromicaceous, trace to common glauconite grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
	3	**SANDY SILTSTONE:** off white to very lght grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
	2	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a very dispersive argillaceous/glauconitic matrix, common to abundant very fine glauconite and glauconite pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
3650.0 - 3655.0	70	**SILTSTONE:** as above		
	20	**GLAUCONITIC SANDSTONE:** as above		
	10	**SANDY SILTSTONE:** as above		
3655.0 - 3660.0	40	**SILTSTONE:** as above		
	35	**SANDY SILTSTONE:** as above		
	25	**GLAUCONITIC SANDSTONE:** as above		
3660.0 - 3665.0	50	**SILTSTONE:** olive grey to dark olive grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace disseminated pyrite, trace to common micromicaceous, trace to common glauconite grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
	40	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a very dispersive argillaceous/glauconitic matrix, common to abundant very fine glauconite and glauconite pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
	10	**SANDY SILTSTONE:** off white to very light grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky.		
3665.0 - 3670.0	50	**SILTSTONE:** as above		
	45	**GLAUCONITIC SANDSTONE:** as above		
	5	**SANDY SILTSTONE:** as above		
3670.0 - 3675.0	55	**SILTSTONE:** as above		
	40	**GLAUCONITIC SANDSTONE:** as above		
	5	**SANDY SILTSTONE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
3675.0 - 3680.0	65	**SILTSTONE:** olive grey to dark olive grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace disseminated pyrite, trace pyrite nodules, trace to common micromicaceous, trace to common glauconite grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
	33	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a very dispersive argillaceous/glauconitic matrix, common to abundant very fine glauconite and glauconite pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
	2	**SANDY SILTSTONE:** trace, as above		
3680.0 - 3685.0	67	**SILTSTONE:** as above, trace pyrite nodules.		
	30	**GLAUCONITIC SANDSTONE:** as above		
	3	**SANDY SILTSTONE:** as above		
3685.0 - 3690.0	70	**SILTSTONE:** as above, trace pyrite nodules.		
	28	**GLAUCONITIC SANDSTONE:** as above		
	2	**SANDY SILTSTONE:** as above		
3690.0 - 3695.0	50	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a very dispersive off-white argillaceous/glauconitic matrix, common to abundant very fine glauconite and glauconite pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
	48	**SILTSTONE:** olive grey to dark olive grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace disseminated pyrite, trace to common pyrite nodules, trace to common micromicaceous, trace to common glauconite grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
	2	**SANDY SILTSTONE:** off white to very light grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky		
3695.0 - 3700.0	50	**GLAUCONITIC SANDSTONE:** as above		
	48	**SILTSTONE:** as above, trace to common pyrite nodules.		
	2	**SANDY SILTSTONE:** as above.		
3700.0 - 3705.0	55	**SILTSTONE:** as above - trace nodular pyrite.		
	40	**GLAUCONITIC SANDSTONE:** as above		
	5	**SANDY SILTSTONE:** as above		
3705.0 - 3710.0	50	**SILTSTONE:** as above		
	45	**GLAUCONITIC SANDSTONE:** as above		
	5	**SANDY SILTSTONE:** as above		
3710.0 - 3715.0	60	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a dispersive light grey to dark greenish grey glauconitic/argillaceous matrix, common to abundant very fine to medium glauconite grains, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
	30	**SILTSTONE:** olive grey to dark grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace nodular and disseminated pyrite, trace to common micromicaceous, common fine glauconite grains grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
	10	**SANDY SILTSTONE:** off white to light grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky		
3715.0 - 3720.0	50	**GLAUCONITIC SANDSTONE:** as above		
	30	**SILTSTONE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
3715.0 - 3720.0	20	**SANDY SILTSTONE:** as above		
3720.0 - 3725.0	50	**GLAUCONITIC SANDSTONE:** as above		
	30	**SANDY SILTSTONE:** as above		
	20	**SILTSTONE:** as above		
3725.0 - 3730.0	50	**GLAUCONITIC SANDSTONE:** as above		
	30	**SILTSTONE:** as above		
	20	**SANDY SILTSTONE:** as above		
3730.0 - 3735.0	50	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, trace coarse grains, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a dispersive light grey to dark greenish grey glauconitic/argillaceous matrix, common to abundant very fine to medium glauconite grains and pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
	30	**SANDY SILTSTONE:** as above.		
	20	**SILTSTONE:** olive grey to dark grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace nodular and disseminated pyrite, trace to common micromicaceous, common fine glauconite grains grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
3735.0 - 3740.0	70	**GLAUCONITIC SANDSTONE:** as above		
	20	**SILTSTONE:** off white to light grey, light greenish grey, rare to minor very fine arenaceous grains, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky		
	10	**SILTSTONE:** as above		
3740.0 - 3745.0	80	**GLAUCONITIC SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	10	**SILTSTONE:** as above		
3745.0 - 3750.0	80	**GLAUCONITIC SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	10	**SILTSTONE:** as above		
3750.0 - 3755.0	75	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, trace coarse grains, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a dispersive light grey to dark greenish grey glauconitic/argillaceous matrix, common to abundant very fine to medium glauconite grains and pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
	15	**SILTSTONE:** off white to light grey, light greenish grey, rare to minor very fine arenaceous grains, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky		
	10	**SILTSTONE:** olive grey to dark olive grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace nodular pyrite, common fine glauconite grains grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
3755.0 - 3760.0	35	**SILTSTONE:** off white to light grey, light greenish grey, rare to minor very fine arenaceous grains, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky		
	35	**SILTSTONE:** olive grey to dark olive grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace nodular pyrite, common fine glauconite grains grading to GLAUCONITIC SILTSTONE, firm, dominantly sub fissile to sub blocky.		
	30	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a dispersive light grey to dark greenish grey glauconitic/argillaceous matrix, common very fine to medium glauconite grains and pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
3760.0 - 3765.0	40	**SILTSTONE:** SILTSTONE 2. olive grey to dark olive grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		common micromicaceous, trace nodular pyrite, trace fine glauconite grains firm, dominantly sub fissile to sub blocky.		
	30	**SILTSTONE:** SILTSTONE 1. off white to light grey, light greenish grey, rare to minor very fine arenaceous grains, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub fissile to sub blocky		
	15	**GLAUCONITIC SANDSTONE:** clear to translucent, light greenish grey, dominantly very fine to fine, well sorted, dominantly sub rounded to rounded, occurring as soft to firm aggregates with a dispersive light grey to dark greenish grey glauconitic/argillaceous matrix, common very fine to medium glauconite grains and pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.		
	15	**SANDSTONE:** clear to translucent, trace pale green, fine to very coarse, dominantly medium to coarse, poorly sorted, angular to sub angular, weak glauconitic matrix, dominantly loose, poor to fair inferred porosity, no hydrocarbon fluorescence.		
3765.0 - 3770.0	50	**SANDSTONE:** clear to translucent, trace frosted, medium to very coarse, dominantly coarse, moderately sorted, angular to sub angular, rare sub rounded, clean, loose, poor to fair inferred porosity, no hydrocarbon fluorescence.		
	30	**SILTSTONE:** as above		
	15	**SILTSTONE:** as above		
	5	**GLAUCONITIC SANDSTONE:** as above		
3770.0 - 3775.0	60	**SANDSTONE:** clear to translucent, trace frosted, medium to very coarse, dominantly coarse, moderately sorted, angular to sub angular, rare sub rounded, clean, loose, fair inferred porosity, no hydrocarbon fluorescence.		
	30	**SILTSTONE:** as above		
	5	**SILTSTONE:** as above		
	5	**GLAUCONITIC SANDSTONE:** as above		
3775.0 - 3780.0	80	**SANDSTONE:** clear to translucent, trace very light grey, trace frosted, medium to very coarse, dominantly coarse to very coarse, well sorted, angular to sub angular, rare sub rounded, weak pyrite cement, trace pyrite nodules, clean, loose, fair inferred porosity, no hydrocarbon fluorescence.		
	20	**SILTSTONE:** olive grey to dark olive grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace nodular pyrite, trace fine glauconite grains firm, dominantly sub fissile to sub blocky.		
	0	**SILTSTONE:** trace cavings as above		
	0	**GLAUCONITIC SANDSTONE:** trace cavings as above		
3780.0 - 3785.0	85	**SANDSTONE:** clear to translucent, trace very light grey, trace frosted, medium to very coarse, dominantly coarse to very coarse, well sorted, angular to sub angular, rare sub rounded, weak pyrite cement, trace pyrite nodules, clean, loose, fair inferred porosity, no hydrocarbon fluorescence.		
	15	**SILTSTONE:** olive grey to dark olive grey, greyish brown to dusky brown, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace nodular pyrite, trace fine glauconite grains firm, dominantly sub fissile to sub blocky.		
3785.0 - 3790.0	75	**SANDSTONE:** clear to translucent, trace very light grey, trace frosted, medium to very coarse, dominantly coarse to very coarse, well sorted, angular to sub angular, rare sub rounded, weak pyrite cement, trace pyrite nodules, clean, loose, fair inferred porosity, no hydrocarbon fluorescence.		
	25	**SILTSTONE:** as above		
3790.0 - 3795.0	80	**SANDSTONE:** clear to translucent, trace very light grey, trace frosted, medium to very coarse, dominantly coarse to very coarse, well sorted, angular to sub angular, rare sub rounded, weak pyrite cement, trace pyrite nodules, clean, loose, fair inferred porosity, no hydrocarbon fluorescence.		
	20	**SILTSTONE:** as above		
3795.0 - 3800.0	85	**SANDSTONE:** clear to translucent, trace very light grey, trace frosted, medium to very coarse, dominantly coarse to very coarse, well sorted, angular to sub angular, rare sub rounded, weak pyrite cement, trace pyrite nodules, clean, loose, fair inferred porosity, no hydrocarbon fluorescence.		
	15	**SILTSTONE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)