WCR (vol. 2) Appendices
DUNBAR EAST - 1
W1150

BASIN OIL N.L.

PPL 1

Onshore Otway Basin

VICTORIA

DUNBAR EAST-1

Well Completion Report

Volume 2

Drilling and Appendices

BASIN OIL N.L.

PPL 1 - Onshore Otway Basin _ VICTORIA
DUNBAR EAST-1
Well Completion Report Vol.2

WCR (vol 2) W1150

APPENDIX 1.

CULTUS PETROLEUM N.L.

APPENDIX

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
GEOLOGIST:	Dave Horner	**PAGE:**	1

Interval (m)	%	Description
For geological report 5		
764-770	100	Claystone: medium to dark brown grey to medium grey, common dispersed very fine to grit quartz sand grains, moderately to very silty, common dark green argillaceous glauconite, trace pyrite, trace fine mica flakes, soft, moderately dispersive, non fissile.
770-775	100	Claystone: medium to dark brown grey to medium grey, trace dispersed very fine to grit quartz sand grains, moderately to very silty, trace dark green argillaceous glauconite, trace pyrite, trace fine mica flakes, soft, moderately dispersive, non fissile.
775-780	100	Claystone: medium to dark brown grey to medium grey, trace dispersed very fine to grit quartz sand grains, moderately to very silty, trace dark green argillaceous glauconite, trace pyrite, trace fine mica flakes, soft, moderately dispersive, non fissile.
780-785	100	Claystone: medium to dark brown grey to medium grey, trace dispersed very fine to grit quartz sand grains, moderately to very silty, common dark green argillaceous glauconite, trace pyrite, trace fine mica flakes, soft, moderately dispersive, non fissile.
785-790	100	Claystone: medium to dark brown grey to medium grey, trace dispersed very fine to grit quartz sand grains, moderately to very silty, common to abundant dark green argillaceous glauconite, trace pyrite, trace fine mica flakes, soft, moderately dispersive, non fissile.
790-795	80	Sandstone: light to medium brown grey, very fine to coarse, dominantly medium, angular to subangular, moderately sorted, moderate silica cement, trace to common medium to dark brown argillaceous and silt matrix, clear to opaque quartz grains often with light brown argillaceous staining, trace brown lithics, trace green green and yellow brown clay lithics, friable, fair inferred porosity, no oil fluorescence.
	20	Claystone: medium to dark brown grey to medium grey, trace dispersed very fine to grit quartz sand grains, moderately to very silty, common to abundant dark green argillaceous glauconite, trace pyrite, trace fine mica flakes, soft, moderately dispersive, non fissile.
795-800	30	Sandstone: medium brown grey, very fine to very coarse, dominantly coarse, angular to subangular, moderately sorted, moderate silica cement, trace to common medium to dark brown argillaceous and silt matrix, clear to opaque quartz grains often with light brown argillaceous staining, trace brown lithics, trace green green and yellow brown clay lithics, trace coarse mica flakes, friable, poor inferred porosity, no oil fluorescence.
	70	Claystone: medium to dark brown grey, moderately to very silty, trace to common dispersed very fine to very coarse quartz sand grains, trace mica flakes, soft, very dispersive, non to slightly subfissile.
800-805	20	Sandstone: medium brown grey, very fine to very coarse, dominantly coarse, angular to subangular, moderately sorted, moderate silica cement, abundant medium to dark brown argillaceous and silt matrix - matrix supported, clear to opaque quartz grains often with light brown argillaceous staining, trace brown lithics, trace green green and yellow brown clay lithics, trace coarse mica flakes, friable, poor inferred porosity, no oil fluorescence.
	80	Claystone: medium to dark brown grey, moderately to very silty, trace to common dispersed very fine to very coarse quartz sand grains, trace mica flakes, soft, very dispersive, non to slightly subfissile.

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Interval (m)	%	Description	PAGE: 2
805-810	10	Sandstone: medium brown grey, very fine to very coarse, dominantly coarse, angular to subangular, moderately sorted, moderate silica cement, abundant medium to dark brown argillaceous and silt matrix - matrix supported, clear to opaque quartz grains often with light brown argillaceous staining, trace brown lithics, trace green green and yellow brown clay lithics, trace coarse mica flakes, friable, poor inferred porosity, no oil fluorescence.
	90	Claystone: medium to dark brown grey, moderately to very silty, trace to common dispersed very fine to very coarse quartz sand grains, trace brown and green lithics sand grains, trace mica flakes, soft, very dispersive, non to slightly subfissile.
810-815	10	Sandstone: medium brown grey, very fine to very coarse, dominantly coarse, angular to subangular, moderately sorted, moderate silica cement, abundant medium to dark brown argillaceous and silt matrix - matrix supported, clear to opaque quartz grains often with light brown argillaceous staining, trace brown lithics, trace green green and yellow brown clay lithics, trace coarse mica flakes, friable, poor inferred porosity, no oil fluorescence.
	90	Claystone: medium to dark brown grey, moderately to very silty, trace to common dispersed very fine to very coarse quartz sand grains, trace brown and green lithics sand grains, trace red volcanic lithics, common very coarse mica flakes, soft, very dispersive, non to slightly subfissile.
815-820	20	Sandstone: medium brown, very fine to grit, dominantly coarse, angular to subangular, very poorly sorted, weak to moderate silica cement, abundant medium to dark brown grey argillaceous and silt matrix - often matrix supported, clear to opaque quartz grains with moderate brown clay stain, trace red and brown lithics, rare black carbonaceous detritus, friable, very poor inferred porosity, no oil fluorescence.
	80	Claystone: medium to dark brown grey, moderately to very silty, trace to common dispersed very fine to very coarse quartz sand grains, trace brown and green lithics sand grains, trace red volcanic lithics, common very coarse mica flakes, soft, very dispersive, non to slightly subfissile.
820-825	10	Sandstone: medium brown, very fine to grit, dominantly coarse, angular to subangular, very poorly sorted, weak to moderate silica cement, abundant medium to dark brown grey argillaceous and silt matrix - often matrix supported, clear to opaque quartz grains with moderate brown clay stain, trace red and brown lithics, rare black carbonaceous detritus, friable, very poor inferred porosity, no oil fluorescence.
	90	Claystone: medium to dark brown grey, moderately to very silty, trace to common dispersed very fine to very coarse quartz sand grains, trace brown and green lithics sand grains, trace red volcanic lithics, common very coarse mica flakes, soft, very dispersive, non to slightly subfissile.
825-830	100	Claystone: dark brown grey, moderately to very silty, trace dispersed very fine to very coarse quartz sand grains, common micromica, trace coarse mica flakes, rare black carbonaceous detritus, soft to firm, moderately dispersive, non to slightly subfissile.
	Trace	Sandstone: medium brown, very fine to grit, dominantly coarse, angular to subangular, very poorly sorted, weak to moderate silica cement, abundant medium to dark brown grey argillaceous and silt matrix - often matrix supported, clear to opaque quartz grains with moderate brown clay stain, trace red and brown lithics, rare black carbonaceous detritus, friable, very poor inferred porosity, no oil fluorescence.
830-835	100	Claystone: medium to dark brown grey, moderately to very silty, rare dispersed very fine to very coarse quartz sand grains, common micromica, trace coarse mica flakes, rare black carbonaceous detritus, soft to firm, moderately dispersive, non to slightly subfissile.
835-840	10	Sandstone: light brown grey, very fine to very coarse, dominantly coarse, angular to subrounded, moderately sorted, weak silica cement, trace to common white to light brown argillaceous matrix, trace yellow quartz grains, trace yellow and red lithics, trace mica flakes, trace black carbonaceous detritus, friable, fair inferred porosity, no oil fluorescence.
	90	Claystone: dark brown grey to light yellow brown, trace to common dispersed quartz sand grains, trace micromica, trace coarse mica flakes, rare black cabonaceous detritus, soft, very dispersive, non to slightly subfissile.

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Interval (m)	%	Description	PAGE: 3
840-845	10	Sandstone: light brown grey, very fine to very coarse, dominantly coarse, angular to subrounded, moderately sorted, weak silica cement, trace to common white to light brown argillaceous matrix, trace yellow quartz grains, trace yellow and red lithics, trace mica flakes, trace black carbonaceous detritus, friable, fair inferred porosity, no oil fluorescence.
	90	Claystone: medium brown grey, trace to common dispersed quartz sand grains, trace micromica, trace coarse mica flakes, rare black cabonaceous detritus, soft, very dispersive, non to slightly subfissile.

(AJ/GFE:F53)

CULTUS PETROLEUM N.L. APPENDIX

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	DATE:	30 May, 1997
GEOLOGIST:	Dave Horner	PAGE:	1

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Interval (m)	%	Description
845-850	80	Sandstone: light brown grey, very fine to very coarse, dominantly coarse, angular to subrounded, moderately sorted, weak silica cement, trace to common white to light brown argillaceous matrix, trace yellow quartz grains, trace yellow and red lithics, trace mica flakes, trace black carbonaceous detritus, friable, fair inferred porosity, no oil fluorescence.
	20	Claystone: medium brown grey, trace to common dispersed quartz sand grains, trace micromica, trace coarse mica flakes, rare black cabonaceous detritus, soft, very dispersive, non to slightly subfissile.
850-855	30	Sandstone: light brown grey, very fine to very coarse, dominantly coarse, angular to subrounded, moderately sorted, weak silica cement, trace to common white to light brown argillaceous matrix, trace yellow quartz grains, trace yellow and red lithics, trace mica flakes, trace black carbonaceous detritus, friable, fair inferred porosity, no oil fluorescence.
	70	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.
855-860	90	Sandstone: very light brown, very fine to very coarse, dominantly coarse, angular to subrounded, moderately sorted, weak silica cement, trace white argillaceous matrix, trace yellow to brown quartz grains, common yellow green red and brown volcanic lithics, trace coarse mica flakes, trace black coaly detritus, friable, good visual porosity, no oil fluorescence.
	10	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.
860-865	70	Sandstone: very light brown, very fine to very coarse, dominantly coarse, angular to subrounded, moderately sorted, weak silica cement, trace white argillaceous matrix, abundant medium brown grey argillaceous matrix in part, trace yellow to brown quartz grains, common yellow green red and brown volcanic lithics, trace coarse mica flakes, trace black coaly detritus, friable, fair to good visual porosity, no oil fluorescence.
	30	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.
865-870	90	Sandstone: very light brown, very fine to very coarse, dominantly coarse, angular to subrounded, moderately sorted, weak silica cement, trace white argillaceous matrix, trace yellow to brown quartz grains, common yellow green red and brown volcanic lithics, trace coarse mica flakes, trace black coaly detritus, friable, good visual porosity, no oil fluorescence.
	10	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.
870-875	100	Sandstone: light brown, very fine to coarse, dominantly medium to coarse, angular to subrounded, dominantly subangular to angular, moderately to well sorted, weak silica cement, trace weak calcareous cement, trace light brown to white argillaceous matrix, trace yellow to orange quartz grains, common red yellow brown green and grey volcanic lithics, trace coarse clear mica flakes, trace black coaly detritus, friable, good inferred porosity.

(AJ/GFE:F53)

Interval (m)	%	Description	PAGE: 2
875-880	90	Sandstone: light brown, very fine to coarse, dominantly medium to coarse, angular to subrounded, dominantly subangular to angular, moderately to well sorted, weak silica cement, trace weak calcareous cement, trace light brown to white argillaceous matrix, trace yellow to orange quartz grains, common red yellow brown green and grey volcanic lithics, trace coarse clear mica flakes, trace black coaly detritus, friable, good inferred porosity.	
	10	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.	
880-885	40	Sandstone: light brown, very fine to coarse, dominantly medium , angular to subrounded, dominantly subangular to angular, moderately to well sorted, weak silica cement, trace weak calcareous cement, trace light brown to white argillaceous matrix, trace yellow to orange quartz grains, common red yellow brown green and grey volcanic lithics, trace coarse clear mica flakes, trace black coaly detritus, friable, good inferred porosity.	
	60	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.	
885-895	100	Sandstone: light brown, very fine to coarse, dominantly medium to coarse, angular to subrounded, dominantly subangular to angular, moderately to well sorted, weak silica cement, trace weak calcareous cement, trace light brown to white argillaceous matrix, trace yellow to orange quartz grains, common red yellow brown green and grey volcanic lithics, trace coarse clear mica flakes, trace black coaly detritus, friable, good inferred porosity.	
	Trace	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.	
895-915	NR	No samples due to shaker screen blinding.	
915-925	100	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.	
925-935	80	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.	
	20	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.	
935-945	100	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.	
	Trace	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.	
945-950	90	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.	

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Interval (m)	%	Description	PAGE: 3
	10	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.
950-960	100	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace to common red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	Trace	Claystone: medium brown grey, moderately to very silty, common dispersed very fine to coarse quartz sand grains in part, trace coarse mica flakes, tace to common micromica, trace black carbonaceous detritus, firm, very dispersive, slightly subfissile.
960-965	30	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace to common red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	70	Claystone: medium grey to occasionally medium brown grey, moderately to very silty, occasionally abundant dispersed very fine to rarely coarse quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
965-970	40	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace to common red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	60	Claystone: medium grey to occasionally medium brown grey, moderately to very silty, occasionally abundant dispersed very fine to rarely coarse quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
970-975	80	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace to common red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	20	Claystone: medium grey to occasionally medium brown grey, moderately to very silty, occasionally abundant dispersed very fine to rarely coarse quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
975-980	90	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace to common red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	10	Claystone: medium grey to occasionally medium brown grey, moderately to very silty, occasionally abundant dispersed very fine to rarely coarse quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.

Interval (m)	%	Description	PAGE: 4
980-995	100	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace to common red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
995-1000	100	Sandstone: light grey to light brown grey, very fine to very coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace light brown argillaceous and silt matrix, trace yellow to orange quartz grains, trace to common red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	Tr	Claystone: medium grey, moderately to very silty, occasionally abundant dispersed very fine to medium quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
1000-1010	80	Sandstone: light grey to light green grey, very fine to coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace off white argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	20	Claystone: medium grey, moderately to very silty, occasionally abundant dispersed very fine to medium quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
1010-1020	90	Sandstone: light grey to light green grey, very fine to coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace off white argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	10	Claystone: medium grey, moderately to very silty, occasionally abundant dispersed very fine to medium quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
1020-1025	80	Sandstone: light grey to light green grey, very fine to coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace off white argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	20	Claystone: medium grey, moderately to very silty, occasionally abundant dispersed very fine to medium quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
1025-1030	90	Sandstone: light grey, very fine to coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace off white argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	10	Claystone: medium grey, moderately to very silty, occasionally abundant dispersed very fine to medium quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.

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Interval (m)	%	Description	PAGE: 5
1030-1035	100	Sandstone: light grey, very fine to coarse, dominantly fine to medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace off white argillaceous and silt matrix, trace yellow to orange quartz grains, trace red brown yellow green and grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
1035-1045	70	Sandstone: light grey, very fine to medium, dominantly fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace off white argillaceous and silt matrix, trace yellow to orange quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	30	Claystone: medium grey, moderately to very silty, occasionally abundant dispersed very fine to medium quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
1045-1050	90	Sandstone: light grey, very fine to coarse, dominantly medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace off white argillaceous and silt matrix, rare yellow orange quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	10	Claystone: medium grey, moderately to very silty, occasionally abundant dispersed very fine to medium quartz sand grains, trace black coaly detritus occasionally with associated pyrite, trace pyrite, trace to common micromica, soft, very dispersive and washing from samples, slightly subfissile.
1050-1055	30	Sandstone: light grey, very fine to coarse, dominantly medium, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace off white argillaceous and silt matrix, rare yellow orange quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace coarse clear and green mica flakes, friable, fair inferred porosity, no oil fluorescence.
	70	Claystone: medium to dark grey, moderately to very silty, trace black coaly detritus occasionally with associated pyrite, very finely arenaceous in part, trace to common micromica, soft, very dispersive, slightly subfissile.
1055-1060	50	Sandstone: light grey, very fine to coarse, dominantly very fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, abundant light grey argillaceous and silt matrix, trace yellow quartz grains, trace volcanic lithics, trace mica flakes, trace black coaly detritus, friable, very poor to poor visual porosity, no oil fluorescence.
	50	Claystone: light to dark grey, very silty, trace black coaly detritus occasionally with associated pyrite, very finely arenaceous - in part grading to silty sandstone, trace to common micromica, soft, very dispersive, slightly subfissile.
1060-1065	10	Sandstone: light grey, very fine to coarse, dominantly very fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, abundant light grey argillaceous and silt matrix, trace yellow quartz grains, trace volcanic lithics, trace mica flakes, trace black coaly detritus, friable, very poor to poor visual porosity, no oil fluorescence.
	90	Claystone: light to dark grey, dominantly medium grey, very silty, trace black coaly detritus occasionally with associated pyrite, very finely arenaceous in part, trace to common micromica, soft, very dispersive, slightly subfissile.
1065-1070	50	Sandstone: light grey, very fine to coarse, dominantly fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace to abundant light grey argillaceous and silt matrix, rare yellow quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, poor to fair inferred porosity, no oil fluorescence.

Interval (m)	%	Description
	50	Claystone: medium to dark grey, dominantly medium grey, very silty, trace black coaly detritus occasionally with associated pyrite, very finely arenaceous in part, trace to common micromica, soft, very dispersive, slightly subfissile.
1070-1075	70	Sandstone: light grey, very fine to coarse, dominantly fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace to abundant light grey argillaceous and silt matrix, rare yellow quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, poor to fair inferred porosity, no oil fluorescence.
	30	Claystone: medium to dark grey, dominantly medium grey, very silty, trace black coaly detritus occasionally with associated pyrite, very finely arenaceous in part, trace to common micromica, soft, very dispersive, slightly subfissile.
1075-1085	20	Sandstone: light grey, very fine to coarse, dominantly fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace to abundant light grey argillaceous and silt matrix, rare yellow quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, poor to fair inferred porosity, no oil fluorescence.
	80	Claystone: light to dark grey, very silty, trace black coaly detritus occasionally with associated pyrite, very finely arenaceous in part, trace to common micromica, soft, very dispersive, slightly subfissile.
1085-1090	10	Sandstone: light grey, very fine to coarse, dominantly fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace to abundant light grey argillaceous and silt matrix, rare yellow quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, poor to fair inferred porosity, no oil fluorescence.
	90	Claystone: light to dark grey, very silty grading to siltstone, trace black coaly detritus occasionally with associated pyrite, very finely arenaceous in part, trace to common micromica, soft, very dispersive, slightly subfissile.
1090-1095	20	Sandstone: light grey, very fine to coarse, dominantly fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace to abundant light grey argillaceous and silt matrix, rare yellow quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, poor to fair inferred porosity, no oil fluorescence.
	80	Claystone: medium grey, very silty grading to siltstone in part, often very finely arenaceous, trace to common black coaly detritus often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.
1095-1100	10	Sandstone: light grey, very fine to coarse, dominantly fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, trace to abundant light grey argillaceous and silt matrix, rare yellow quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, poor to fair inferred porosity, no oil fluorescence.
	90	Claystone: medium grey, very silty grading to siltstone in part, often very finely arenaceous, trace to common black coaly detritus often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.
1100-1105	10	Sandstone: light grey, very fine to fine, dominantly veryfine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, abundant light grey argillaceous and silt matrix, rare yellow quartz grains, rare volcanic lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, very poor inferred porosity, no oil fluorescence.
	90	Claystone: light to medium grey, very silty grading to siltstone, often very finely arenaceous grading in part to very fine sandstone, trace black coaly detritus often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.

CULTUS PETROLEUM N.L. **APPENDIX**

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
GEOLOGIST:	Dave Horner	**PAGE:**	1

Interval (m)	%	Description
For geological report-7		
1105-1110	70	Sandstone: off white to light grey, very fine to fine, dominantly very fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, abundant light grey argillaceous and silt matrix -often matrix supported, rare multicoloured lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, very poor inferred porosity, no oil fluorescence.
	30	Claystone: light to medium grey, very silty grading to siltstone, often very finely arenaceous grading in part to very fine sandstone, trace black coaly detritus often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.
1110-1115	20	Sandstone: off white to light grey, very fine to fine, dominantly very fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, abundant light grey argillaceous and silt matrix -often matrix supported, rare multicoloured lithics, trace black coaly detritus occasionally with associated pyrite, trace mica flakes, friable, very poor inferred porosity, no oil fluorescence with medium to coarse grains - probable cavings after trip.
	80	Claystone: light to medium grey, very silty grading to siltstone, often very finely arenaceous grading in part to very fine sandstone, trace black coaly detritus often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.
1115-1120	10	Sandstone: off white to light grey, very fine to fine, dominantly very fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, abundant light grey argillaceous and silt matrix -often matrix supported, rare multicoloured lithics, trace very fine to fine black coaly detritus, trace mica flakes, friable, very poor inferred porosity, no oil fluorescence.
	90	Claystone: off white to medium grey, often very silty grading to siltstone, often very finely arenaceous grading in part to very fine sandstone, trace very fine black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.
1120-1125	30	Sandstone: off white to light grey, very fine to fine, dominantly very fine, trace medium to very coarse grains, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, abundant light grey argillaceous and silt matrix -often matrix supported, rare multicoloured lithics, trace very fine to fine black coaly detritus, trace mica flakes, friable, very poor inferred porosity, no oil fluorescence.
	70	Claystone: off white to medium grey, often very silty grading to siltstone, often very finely arenaceous grading in part to very fine sandstone, trace very fine black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.
1125-1130	50	Sandstone: off white to light grey, very fine to fine, dominantly very fine, angular to subrounded, dominantly subangular, moderately sorted, weak silica cement, abundant light grey argillaceous and silt matrix -often matrix supported, rare multicoloured lithics, trace very fine to fine black coaly detritus, trace mica flakes, friable, very poor inferred porosity, no oil fluorescence.
		Claystone: off white to medium grey, often very silty grading to siltstone, often very finely arenaceous grading in part to very fine sandstone, trace very fine black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.

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Interval (m)	%	Description	PAGE: 2
1130-1135	30	Sandstone: off white to light grey, very fine to medium with common coarse to very coarse grains, dominantly very fine, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally poor visual porosity, no oil fluorescence.	
	70	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, trace black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.	
1135-1140	40	Sandstone: off white to light grey, very fine to medium with common coarse to very coarse grains, dominantly medium, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally fair visual porosity, no oil fluorescence.	
	60	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, trace black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.	
1140-1145	50	Sandstone: off white to light grey, very fine to medium with common coarse to very coarse grains, dominantly medium, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally fair visual porosity, no oil fluorescence.	
	50	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, trace black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.	
1145-1150	40	Sandstone: off white to light grey, very fine to medium with common coarse to very coarse grains, dominantly medium, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally fair visual porosity, no oil fluorescence.	
	60	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, trace black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.	
1150-1155	60	Sandstone: off white, silt-fine grained, dominantly very fine, angular to subrounded, moderately sorted, weak to moderate silica cement, abundant white argillaceous matrix - matrix supported, trace very fine black carbonaceous detritus, trace volcanic lithics, friable to moderately hard, very poor visual porosity, no oil fluorescence.	
	40	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, trace black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.	
1155-1160	50	Sandstone: off white to light grey, silt to very fine to occasionally medium with common coarse to very coarse grains, dominantly very fine, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally poor visual porosity, no oil fluorescence.	
	50	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, common black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.	

Interval (m)	%	Description	PAGE: 3
1160-1165	30	Sandstone: off white to light grey, silt to fine, occasionally medium with common coarse to very coarse grains, dominantly very fine to fine, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally poor visual porosity, no oil fluorescence.
	70	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, common black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.
1165-1170	40	Sandstone: off white to light grey, silt to fine, occasionally medium with common coarse to very coarse grains, dominantly very fine to fine, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally poor visual porosity, no oil fluorescence.
	60	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, common black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.
1170-1175	30	Sandstone: off white to light grey, silt to fine, occasionally medium with common coarse to very coarse grains, dominantly very fine to fine, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally poor visual porosity, no oil fluorescence.
	70	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, common black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.
1175-1180	30	Sandstone: off white to light grey, silt to fine, occasionally medium with common coarse to very coarse grains, dominantly very fine to fine, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, trace strong medium brown dolomite cement, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally poor visual porosity, no oil fluorescence.
	70	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, common black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.

(AJ/GFE:F53)

CULTUS PETROLEUM N.L. APPENDIX

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	DATE:	30 May, 1997
GEOLOGIST:	Dave Horner	PAGE:	1

Interval (m)	%	Description
For geology report-8		
1180-1185	40	Sandstone: off white to light grey, silt to fine, occasionally medium with common coarse to very coarse grains, dominantly very fine to fine, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, trace strong medium brown dolomite cement, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally poor visual porosity, no oil fluorescence.
	60	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, common black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.
1185-1190	30	Sandstone: off white to light grey, silt to fine, occasionally medium with common coarse to very coarse grains, dominantly very fine to fine, angular to subrounded, poor to moderately sorted, weak silica and calcareous cements, trace strong medium brown dolomite cement, abundant white argillaceous matrix - matrix supported, trace red and green grey volcanic lithics, trace black coaly detritus occasionally with associated pyrite, friable to moderately hard, very poor to occasionally poor visual porosity, no oil fluorescence.
	70	Claystone: off white to medium grey, moderately to very silty, abundant dispersed quartz sand grains especially where off white - grading in part to very fine sandstone, common black carbonaceous detritus and flecks, trace micromica, soft, very dispersive, slightly subfissile.
1190-1195	20	Sandstone: off white to light grey, very fine to occasionally fine, trace medium grains, angular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, trace strong dolomite cement, common to abundant white argillaceous matrix - often matrix supported, trace red and green grey volcanic lithics, trace black carbonaceous detritus often with associated pyrite, trace coarse mica flakes, friable to occasionally hard, very poor to poor inferred porosity, no oil fluorescence.
	80	Claystone: off white to medium grey, moderately to very silty, often very finely arenaceous, common black carbonaceous detritus and flecks often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.
1195-1200	10	Sandstone: off white to light grey, very fine to occasionally fine, trace medium grains, angular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, trace strong dolomite cement, common to abundant white argillaceous matrix - often matrix supported, trace red and green grey volcanic lithics, trace black carbonaceous detritus often with associated pyrite, trace coarse mica flakes, friable to occasionally hard, very poor to poor inferred porosity, no oil fluorescence.
	90	Claystone: off white to medium grey, moderately to very silty, often very finely arenaceous, common black carbonaceous detritus and flecks often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.
1200-1205	100	Claystone: off white to medium grey, light brown grey in part, moderately to very silty, often very finely arenaceous, common black carbonaceous detritus and flecks often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.

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Interval (m)	%	Description	PAGE: 2
	Tr	Sandstone: off white to light grey, very fine to occasionally fine, trace medium grains, angular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, trace strong dolomite cement, common to abundant white argillaceous matrix - often matrix supported, trace red and green grey volcanic lithics, trace black carbonaceous detritus often with associated pyrite, trace coarse mica flakes, friable to occasionally hard, very poor to poor inferred porosity, no oil fluorescence.
1205-1210	80	Claystone: off white to medium grey, light brown grey in part, moderately to very silty, often very finely arenaceous, common black carbonaceous detritus and flecks often with associated pyrite, trace micromica, soft, very dispersive, slightly subfissile.
	20	Sandstone: off white to light grey, very fine to occasionally fine, common medium to very coarse grains, angular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, trace strong dolomite cement, common to abundant white argillaceous matrix - often matrix supported, trace red and green grey volcanic lithics, trace black carbonaceous detritus often with associated pyrite, trace coarse mica flakes, friable to occasionally hard, very poor to poor inferred porosity, no oil fluorescence.
1210-1215	100	Claystone: light brown grey, moderately to very silty often grading to siltstone, occasionally very finely arenaceous, trace black carbonaceous flecks and detritus, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.
	Tr	Sandstone: off white, very fine to fine, dominantly very fine, angular to subrounded, moderately to well sorted, weak silica cement, abundant white argillaceous matrix, trace very fine black to dark brown carbonaceous detritus, trace pyrite, trace green lithics, friable, no visual porosity, no oil fluorescence.
1215-1220	90	Claystone: light brown grey, moderately to very silty often grading to siltstone, occasionally very finely arenaceous, trace black carbonaceous flecks and detritus, trace to occasionally common light green glauconitic clay, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.
	10	Sandstone: off white, very fine to fine, dominantly very fine, angular to subrounded, moderately to well sorted, weak silica cement, abundant white argillaceous matrix, trace very fine black to dark brown carbonaceous detritus, trace pyrite, trace green lithics, friable, no visual porosity, no oil fluorescence.
1220-1225	80	Claystone: light brown grey, moderately to very silty often grading to siltstone, occasionally very finely arenaceous, slightly to moderately calcareous, trace black carbonaceous flecks and detritus, trace to occasionally common light green glauconitic clay, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.
	20	Sandstone: off white, very fine to fine, dominantly very fine, angular to subrounded, moderately to well sorted, weak silica cement, moderate calcareous cement, abundant white argillaceous matrix occasionally with light green glauconitic staining, trace very fine black to dark brown carbonaceous detritus, trace pyrite, trace green lithics, friable, no visual porosity, no oil fluorescence - common white rock flour in samples along possibly slickensided surfaces - possible fracture/fault zone.
1230-1240	100	Claystone: off white to light brown grey, moderately to very silty often grading to siltstone, occasionally very finely arenaceous, slightly calcareous in part, trace black carbonaceous flecks and detritus, trace to occasionally common light green glauconitic clay, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.
	Tr	Sandstone: off white, very fine to occasionally fine,angular to subrounded, moderately to well sorted, weak silica cement, nil to rarely moderate calcareous cement, abundant white argillaceous matrix occasionally with light green glauconitic staining, trace very fine black to dark brown carbonaceous detritus, trace pyrite, trace green lithics, friable, no visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 3
1240-1250	100	Claystone: off white to light brown grey, moderately to dominantly very silty often grading to siltstone, very finely arenaceous in part grading to silty sandstone, slightly calcareous in part, trace black carbonaceous flecks and detritus, trace green glauconitic clay, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.	
	Tr	Sandstone: off white, silty to very fine to rarely fine,angular to subrounded, moderately to well sorted, weak silica cement, nil to rarely moderate calcareous cement, abundant white argillaceous and silt matrix occasionally with light green glauconitic staining, trace very fine black to dark brown carbonaceous detritus, trace pyrite, trace green lithics, friable, no visual porosity, no oil fluorescence.	
1250-1255	90	Claystone: off white to light brown grey, moderately to dominantly very silty often grading to siltstone, very finely arenaceous in part grading to silty sandstone, slightly calcareous in part, trace black carbonaceous flecks and detritus, trace green glauconitic clay, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.	
	10	Sandstone: off white, silty to very fine to rarely fine,angular to subrounded, moderately to well sorted, weak silica cement, nil to rarely moderate calcareous cement, abundant white argillaceous and silt matrix occasionally with light green glauconitic staining, trace very fine black to dark brown carbonaceous detritus, trace pyrite, trace green lithics, friable, no visual porosity, no oil fluorescence.	
1255-1265	95	Claystone: off white to light brown grey, moderately to dominantly very silty often grading to siltstone, very finely arenaceous in part grading to silty sandstone, slightly calcareous in part, trace black carbonaceous flecks and detritus, trace green glauconitic clay, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.	
	5	Sandstone: off white, silty to very fine to rarely fine,angular to subrounded, moderately to well sorted, weak silica cement, nil to rarely moderate calcareous cement, abundant white argillaceous and silt matrix occasionally with light green glauconitic staining, trace very fine black to dark brown carbonaceous detritus, trace pyrite, trace green lithics, friable, no visual porosity, no oil fluorescence.	
1265-1270	80	Claystone: off white to light brown grey, occasionally light to medium grey, moderately to dominantly very silty often grading to siltstone, very finely arenaceous in part grading to silty sandstone, slightly calcareous in part, trace black carbonaceous flecks and detritus, trace green glauconitic clay, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.	
	20	Sandstone: off white to light brown, very fine to occasionally fine, angular to subrounded, moderately sorted, weak silica and calcareous cements, moderate dolomite cement in part, abundant white argillaceous and silt matrix - matrix supported, trace to common very fine green lithics, trace very fine red brown and black lithics, trace black to medium brown carbonaceous detritus, trace very fine brown and clear mica flakes, friable to moderately hard, no visual porosity, no oil fluorescence.	
1270-1275	95	Claystone: off white to light brown grey, occasionally light to medium grey, moderately to dominantly very silty often grading to siltstone, very finely arenaceous in part grading to silty sandstone, slightly calcareous in part, trace black carbonaceous flecks and detritus, trace green glauconitic clay, trace pyrite, trace to common micromica, trace fine to medium brown mica flakes, soft to firm, moderately to very dispersive, slightly subfissile.	
	5	Sandstone: off white to light brown, very fine to occasionally fine, angular to subrounded, moderately sorted, weak silica and calcareous cements, moderate dolomite cement in part, abundant white argillaceous and silt matrix - matrix supported, trace to common very fine green lithics, trace very fine red brown and black lithics, trace black to medium brown carbonaceous detritus, trace very fine brown and clear mica flakes, friable to moderately hard, no visual porosity, no oil fluorescence.	
1275-1285	100	Claystone: light to medium brown grey, moderately to very silty grading in part to siltstone, very finely arenaceous in part, slightly calcareous in part, trace black carbonaceous flecks and detritus, rare light green glauconitic clay, trace pyrite, trace micromica, soft , moderately to very dispersive, slightly subfissile.	

Interval (m)	%	Description	PAGE: 4
	Tr	Sandstone: off white to medium brown, very fine to occasionally fine, angular to subrounded, moderately sorted, weak silica and calcareous cements, moderate dolomite cement in part, abundant white argillaceous and silt matrix - matrix supported, trace very fine green lithics, trace very fine red brown and black lithics, trace black to medium brown carbonaceous detritus, trace very fine brown and clear mica flakes, friable to moderately hard, no visual porosity, no oil fluorescence.
1285-1299	100	Claystone: light to dominantly medium brown grey, moderately to very silty, occasionally very finely arenaceous, minor very fine sandstone laminations, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, trace medium brown dolomite nodules, rare pyrite, trace micromica, soft to firm, slightly subfissile.
1299-1308	100	Claystone: light to dominantly medium brown grey, moderately to very silty, occasionally very finely arenaceous, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, trace medium brown dolomite nodules, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	Tr	Sandstone: light to medium brown grey, very fine to fine, subangular to subrounded, moderately sorted, very strong dolomite cement in part, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, no visual porosity, no oil fluorescence.
1308-1314	100	Claystone: light to dominantly medium brown grey, moderately to very silty, occasionally very finely arenaceous with minor very fine sandstone laminations, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, trace medium brown dolomite nodules, rare pyrite, trace micromica, soft to firm, slightly subfissile.
1314-1326	100	Claystone: light to dominantly medium brown grey, moderately to very silty, occasionally very finely arenaceous, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, trace medium brown dolomite nodules, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	Tr	Sandstone: light to medium brown grey, very fine to fine, subangular to subrounded, moderately sorted, very strong dolomite cement in part, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, no visual porosity, no oil fluorescence.
1326-1329	95	Claystone: light to dominantly medium brown grey, moderately to very silty, occasionally very finely arenaceous, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, trace medium brown dolomite nodules, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	5	Sandstone: light to medium brown grey, very fine to dominantly fine, subangular to subrounded, poor to moderate sorting, often very strong dolomite cement, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1329-1332	80	Claystone: light to dominantly medium brown grey, moderately to very silty, occasionally very finely arenaceous, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	20	Sandstone: light to medium brown grey, very fine to dominantly fine, subangular to subrounded, poor to moderate sorting, often very strong dolomite cement, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1332-1335	90	Claystone: off white to dominantly medium brown grey, moderately to very silty, occasionally very finely arenaceous, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.

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Interval (m)	%	Description	PAGE: 5
	10	Sandstone: light to medium brown grey, very fine to dominantly fine, subangular to subrounded, poor to moderate sorting, occasionally very strong dolomite cement, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1335-1338	80	Claystone: off white to dominantly medium brown grey, moderately to very silty, abundant dispersed very fine to fine quartz grains, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	20	Sandstone: light to medium brown grey, very fine to dominantly fine, subangular to subrounded, poor to moderate sorting, trace strong dolomite cement, weak silica cement, occasional strong calcareous cement, abundant white argillaceous matrix - often matrix supported, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1338-1341	90	Claystone: off white to dominantly medium brown grey, moderately to very silty, abundant dispersed very fine to fine quartz grains, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	10	Sandstone: light to medium brown grey, very fine to dominantly fine, subangular to subrounded, poor to moderate sorting, often very strong dolomite cement, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1341-1344	80	Claystone: off white to dominantly medium brown grey, moderately to very silty, abundant dispersed very fine to fine quartz grains, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	20	Sandstone: light to medium brown grey, very fine to dominantly fine, subangular to subrounded, poor to moderate sorting, often very strong dolomite cement, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1344-1347	95	Claystone: off white to dominantly medium brown grey, moderately to very silty, abundant dispersed very fine to fine quartz grains, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	5	Sandstone: light to medium brown grey, very fine to dominantly fine, subangular to subrounded, poor to moderate sorting, occasional strong dolomite cement, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1347-1350	90	Claystone: off white to dominantly medium brown grey, moderately to very silty, abundant dispersed very fine to fine quartz grains, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	10	Sandstone: off white to medium brown grey, very fine to dominantly fine, subangular to subrounded, moderately sorted, often strong calcareous cement, weak silica cement, occasional strong dolomite cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1350-1353	100	Claystone: off white to dominantly medium brown grey, moderately to very silty, abundant dispersed very fine to fine quartz grains, trace light green glauconite, trace red brown and grey lithics, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.

Interval (m)	%	Description	PAGE: 6
	Tr	Sandstone: off white to medium brown grey, very fine to dominantly fine, subangular to subrounded, moderately sorted, often strong calcareous cement, weak silica cement, occasional strong dolomite cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, very poor visual porosity, no oil fluorescence.
1353-1361	100	Claystone: light to dominantly medium brown grey, moderately to very silty, trace to common dispersed very fine to fine quartz grains, rare light green glauconite,trace finely arenaceous dolomite nodules, trace black carbonaceous flecks and rare coaly detritus, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	Tr	Sandstone: off white to medium brown grey, very fine to dominantly fine, subangular to subrounded, moderately sorted, often strong dolomite cement, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, no visual porosity, no oil fluorescence.

(AJ/GFE:F53)

CULTUS PETROLEUM N.L. **APPENDIX**

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
GEOLOGIST:	Dave Horner	**PAGE:**	1

Interval (m)	%	Description
For geology report-9		
1361-1365	100	Claystone: light to dominantly medium brown grey to medium grey, moderately to very silty, trace to common dispersed very fine to fine quartz grains, trace glauconite,trace finely arenaceous dolomite nodules, trace black carbonaceous flecks, rare pyrite, trace micromica, soft to firm, slightly subfissile.
	Tr	Sandstone: off white to medium brown grey, very fine to dominantly fine, subangular to subrounded, moderately sorted, often strong dolomite cement, weak silica cement, occasional strong calcareous cement, trace to abundant white argillaceous matrix, trace light green glauconite, trace brown lithics, trace black coaly detritus, trace pyrite, friable to very hard, no visual porosity, no oil fluorescence.
1365-1371	100	Claystone: light to medium brown grey to medium grey, moderately to very silty occasionally grading to siltstone, very fine to finely arenaceous in part, minor dispersed medium to coarse quartz sand grains, trace glauconite, trace dolomite nodules, trace black carbonaceous flecks, trace to common micromica, soft to firm, moderately dispersive, slightly subfissile.
1371-1377	100	Claystone: light to medium brown grey to medium grey, moderately to very silty occasionally grading to siltstone, very fine to finely arenaceous in part, minor dispersed medium to coarse quartz sand grains, common glauconite, trace dolomite nodules, trace black carbonaceous flecks, trace to common micromica, soft to firm, moderately dispersive, slightly subfissile.
1377-1380	100	Claystone: light to medium brown grey to medium grey, occasionally medium green and glauconitic, moderately to very silty occasionally grading to siltstone, very fine to finely arenaceous in part, minor dispersed medium to coarse quartz sand grains, common glauconite, trace dolomite nodules, trace black carbonaceous flecks, trace to common micromica, soft to firm, moderately dispersive, slightly subfissile.
1380-1386	95	Claystone: light to medium brown grey to medium grey, occasionally medium green and glauconitic, moderately to very silty occasionally grading to siltstone, very fine to finely arenaceous in part, minor dispersed medium to coarse quartz sand grains, common glauconite, trace dolomite nodules, trace black carbonaceous flecks, trace to common micromica, soft to firm, moderately dispersive, slightly subfissile.
	5	Sandstone: off white to very light brown, very fine to fine with occasional medium to coarse grains, subangular to subrounded, poorly sorted, weak silica calcareous and dolomite cements, abundant very light brown argillaceous matrix - matrix supported, common glauconite and light green glauconitic clay matrix, trace brown lithics, friable, no visual porosity, no oil fluorescence.
1386-1389	100	Claystone: light to dark grey, medium brown grey, dominantly medium to dark grey, moderately silty, common dispersed very fine to occasionally coarse rounded quartz sand grains, trace off white very fine sandstone lamination in part, common dark green glauconite, moderately carbonaceous, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description	PAGE: 2
	Tr	Sandstone: off white to very light brown, very fine to fine with occasional medium to coarse grains, subangular to subrounded, poorly sorted, weak silica calcareous and dolomite cements, abundant very light brown argillaceous matrix - matrix supported, common glauconite and light green glauconitic clay matrix, trace brown lithics, friable, no visual porosity, no oil fluorescence.
1389-1398	100	Claystone: light to dark grey, medium brown grey, dominantly medium to dark grey, moderately silty, common dispersed very fine to occasionally coarse rounded quartz sand grains, trace off white very fine sandstone lamination in part, common dark green glauconite, moderately carbonaceous, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1398-1401	100	Claystone: light to dark grey, medium brown grey, dominantly medium to dark grey, moderately silty, common dispersed very fine to occasionally coarse rounded quartz sand grains, trace off white very fine sandstone lamination in part, common dark green glauconite, moderately carbonaceous, trace black coal detritus with associated pyrite, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1401-1404	100	Claystone: light to dark grey, medium brown grey, dominantly medium to dark grey, moderately silty, common dispersed very fine to occasionally coarse rounded quartz sand grains, trace off white very fine sandstone lamination in part, common dark green glauconite, moderately carbonaceous, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1404-1413	100	Claystone: light to dark grey, medium brown grey, dominantly medium to dark grey, moderately silty, common dispersed very fine to occasionally coarse rounded quartz sand grains, trace off white very fine sandstone lamination in part, common dark green glauconite, moderately carbonaceous, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1413-1419	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, common dispersed very fine to occasionally coarse rounded quartz sand grains, trace off white very fine sandstone lamination in part, common dark green glauconite, moderately carbonaceous, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1419-1425	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, common dispersed very fine to occasionally coarse rounded quartz sand grains, trace off white very fine sandstone lamination in part, common to abundant dark green glauconite, moderately carbonaceous, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1425-1434	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, common dispersed very fine to occasionally coarse rounded quartz sand grains, trace off white very fine sandstone lamination in part, abundant dark green glauconite, moderately carbonaceous, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1434-1446	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, trace dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.

Interval (m)	%	Description	PAGE: 3
1446-1455	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, trace dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, common dark green glauconite, moderately carbonaceous, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	
1455-1473	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, trace dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	
1473-1479	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	
1479-1485	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, rare medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	
1485-1488	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, trace white calcilutite, rare medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	
1488-1494	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, trace white calcilutite, rare medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	
1494-1497	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, common white calcilutite, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	
1497-1500	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, common white calcilutite, common medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace Inoceramus, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	

Interval (m)	%	Description	PAGE: 4
1500-1506	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, trace white calcilutite, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1506-1509	NR	No sample due to shaker screen blinding.
1509-1515	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, trace white calcilutite, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1515-1518	Tr	Sandstone: off white to very light brown, very fine to fine, trace medium to coarse grains, poor to moderate sorting, angular to subrounded, weak silica cement, trace weak calcareous cement, abundant white to light brown argillaceous matrix - matrix supported, quartzose with common fine brown to black lithics, trace glauconite, friable, no visual porosity, no oil fluorescence.
	100	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, trace white calcilutite, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1518-1521	30	Sandstone: off white to very light brown, very fine to fine, trace medium to coarse grains, poor to moderate sorting, angular to subrounded, weak silica cement, trace weak calcareous cement, abundant white to light brown argillaceous matrix - matrix supported, quartzose with common fine brown to black lithics, trace glauconite, friable, no visual porosity, no oil fluorescence.
	70	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, trace white calcilutite, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1521-1524	40	Sandstone: off white to very light brown, very fine to fine with common medium to very coarse clear subangular quartz grains, angular to subrounded, very poorly sorted, weak silica and trace weak calcareous cements, abundant white argillaceous matrix - matrix supported, quartzose with common brown to black lithics, trace glauconite, friable, no visual porosity, no oil fluorescence.
	60	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, trace white calcilutite, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.
1524-1530	50	Sandstone: off white to very light brown, very fine to fine with common medium to very coarse clear subangular quartz grains, angular to subrounded, very poorly sorted, weak silica and trace weak calcareous cements, abundant white argillaceous matrix - matrix supported, quartzose with common brown to black lithics, trace glauconite, friable, no visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 5
	50	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, trace white calcilutite, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile.	

(AJ/GFE:F53)

CULTUS PETROLEUM N.L. **APPENDIX**

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
GEOLOGIST:	Dave Horner	**PAGE:**	1

Interval (m)	%	Description
For geology report-11		
1537.5-1539	60	Sandstone: very light grey, very fine to grit, dominantly coarse, angular to subangular, poorly sorted, weak silica cement, trace white argillaceous matrix, abundant white rock flour, trace black carbonaceous detritus, rare pyrite, friable, good inferred porosity, no oil fluorescence.
	40	Claystone: light to dark grey, common medium to dark brown grey, dominantly medium to dark grey, moderately silty, rare dispersed very fine to occasionally coarse rounded quartz sand grains, rare off white very fine sandstone laminations, abundant dark green glauconite, moderately carbonaceous, slightly calcareous, trace white calcilutite, trace medium brown cryptocrystalline dolomite often with dispersed very fine to fine quartz grains and light green glauconite grains, trace pyrite, trace micromica, soft to firm, moderately dispersive, slightly subfissile - probably cavings.
1539-1542	70	Sandstone: light grey, very fine to grit, dominantly fine to medium, angular to subrounded, poorly sorted, weak silica cement, trace calcareous cement, trace pyrite cement, trace to occasionally common white argillaceous matrix, trace to common black carbonaceous detritus, friable, good inferred porosity, no oil fluorescence.
	30	Claystone: as above - probable cavings.
1542-1545	40	Sandstone: light grey, very fine to grit, dominantly fine to medium, angular to subrounded, poorly sorted, weak silica cement, trace calcareous cement, trace pyrite cement, trace to occasionally common white argillaceous matrix, trace to common black carbonaceous detritus, friable, good inferred porosity, no oil fluorescence.
	40	Claystone: off white to medium grey, occasionally medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, slightly calcareous in part, trace black carbonaceous detritus, trace pyrite, trace to common very fine to fine off white partially altered feldspar grains, trace micromica, soft, very dispersive, slightly subfissile.
	20	Claystone: as above - probable cavings.
1545-1548	100	Claystone: off white to medium grey, occasionally medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, slightly calcareous in part, trace black carbonaceous detritus, trace pyrite, trace to common very fine to fine off white partially altered feldspar grains, trace micromica, soft, very dispersive, slightly subfissile.
1548-1551	80	Claystone: off white to medium grey to medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, slightly to moderately calcareous in part, trace black carbonaceous detritus, trace medium brown cryptocrystalline dolomite, trace pyrite, trace to common very fine to fine off white partially altered feldspar grains, trace micromica, soft, very dispersive, slightly subfissile.
	10	Sandstone: off white, very fine to dominantly fine, angular to subrounded, moderately sorted, weak silica cement, occasional strong dolomite cement, common to abundant white argillaceous matrix, common off white partially altered feldspar grains, trace to common brown green grey and black lithics, trace to common fine black to dark brown carbonaceous detritus, trace pyrite, friable to hard, no visual porosity, no oil fluorescence.

(AJ/GFE:F53)

Interval (m)	%	Description	PAGE: 2
	10	Sandstone: light grey, very fine to grit, dominantly fine to medium, angular to subrounded, poorly sorted, weak silica cement, trace calcareous cement, trace pyrite cement, trace to occasionally common white argillaceous matrix, trace to common black carbonaceous detritus, friable, good inferred porosity, no oil fluorescence - possible cavings.
1551-1554	100	Claystone: off white to medium grey to medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, slightly to moderately calcareous in part, trace black carbonaceous detritus, trace medium brown cryptocrystalline dolomite, trace pyrite, trace to common very fine to fine off white partially altered feldspar grains, trace micromica, soft, very dispersive, slightly subfissile.
	Tr	Sandstone: off white, very fine to dominantly fine, angular to subrounded, moderately sorted, weak silica cement, occasional strong dolomite cement, common to abundant white argillaceous matrix, common off white partially altered feldspar grains, trace to common brown green grey and black lithics, trace to common fine black to dark brown carbonaceous detritus, trace pyrite, friable to hard, no visual porosity, no oil fluorescence.
1554-1557	60	Sandstone: light grey, very fine to very coarse, dominantly fine, angular to subrounded, poorly sorted, strong silica cement in part, trace strong dolomite cement, common to abundant white argillaceous matrix, trace partially altered feldspar grains, common black carbonaceous detritus, friable to hard, poor visual porosity, fair inferred porosity, no oil fluorescence.
	40	Claystone: off white to medium grey to medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, slightly to moderately calcareous in part, trace black carbonaceous detritus, trace medium brown cryptocrystalline dolomite, trace pyrite, trace to common very fine to fine off white partially altered feldspar grains, trace micromica, soft, very dispersive, slightly subfissile.
1557-1560	80	Sandstone: light grey, very fine to very coarse, dominantly fine, angular to subrounded, poorly sorted, strong silica cement in part, trace strong dolomite cement, common to abundant white argillaceous matrix, trace partially altered feldspar grains, common black carbonaceous detritus, friable to hard, poor visual porosity, fair inferred porosity, no oil fluorescence.
	20	Claystone: off white to medium grey to medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, slightly to moderately calcareous in part, trace black carbonaceous detritus, trace medium brown cryptocrystalline dolomite, trace pyrite, trace to common very fine to fine off white partially altered feldspar grains, trace micromica, soft, very dispersive, slightly subfissile.
1560-1566	50	Claystone: off white to medium grey to medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, common very fine partially altered feldspar grains, common medium brown to black carbonaceous flecks and detritus, slightly calcareous in part, trace micromica, firm, moderately dispersive, slightly subfissile.
	50	Sandstone: off white to very light brown grey, very fine, angular to subrounded, moderately sorted, weak silica and occasional weak calcareous cement, abundant white argillaceous and silt matrix - matrix supported, abundant very fine to fine partially altered feldspar grains, common black to medium brown carbonaceous detritus and flecks, friable, no visual porosity, no oil fluorescence.
1566-1569	40	Claystone: off white to medium grey to medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, common very fine partially altered feldspar grains, common medium brown to black carbonaceous flecks and detritus, slightly calcareous in part, trace micromica, firm, moderately dispersive, slightly subfissile.
	60	Sandstone: off white to very light brown grey, very fine, angular to subrounded, moderately sorted, weak silica and occasional weak calcareous cement, abundant white argillaceous matrix - matrix supported, abundant very fine to fine partially altered feldspar grains, common black to medium brown carbonaceous detritus and flecks, friable, no visual porosity, no oil fluorescence.

(AJ/GFE:F53)

Interval (m)	%	Description
1569-1572	30	Claystone: off white to medium grey to medium brown grey, often very silty grading to siltstone, often very finely arenaceous grading to argillaceous sandstone, common very fine partially altered feldspar grains, common medium brown to black carbonaceous flecks and detritus, slightly calcareous in part, trace micromica, firm, moderately dispersive, slightly subfissile.
	70	Sandstone: off white to very light brown grey, very fine, angular to subrounded, moderately sorted, weak silica and occasional weak calcareous cement, abundant white argillaceous matrix - matrix supported, abundant very fine to fine partially altered feldspar grains, common black to medium brown carbonaceous detritus and flecks, friable, no visual porosity, no oil fluorescence.
1572-1575	70	Claystone: off white to dominantly medium brown grey, slightly to moderately silty, trace very fine off white partially altered feldspar grains, trace to common black carbonaceous flecks, trace pyrite, firm, moderately dispersive, slightly subfissile.
	30	Sandstone: off white to very light brown grey, very fine, angular to subrounded, moderately sorted, weak silica and occasional weak calcareous cement, abundant white argillaceous matrix - matrix supported, abundant very fine to fine partially altered feldspar grains, common black to medium brown carbonaceous detritus and flecks, friable, no visual porosity, no oil fluorescence.
1575-1581	80	Claystone: off white to dominantly medium brown grey, slightly to moderately silty, trace very fine off white partially altered feldspar grains, trace to common black carbonaceous flecks, trace pyrite, firm, moderately dispersive, slightly subfissile.
	20	Sandstone: off white to very light brown grey, very fine, angular to subrounded, moderately sorted, weak silica and occasional weak calcareous cement, abundant white argillaceous matrix - matrix supported, abundant very fine to fine partially altered feldspar grains, common black to medium brown carbonaceous detritus and flecks, friable, no visual porosity, no oil fluorescence.
1581-1587	70	Sandstone: off white, very fine to fine, occasional medium grains, angular to subrounded, moderately sorted, weak silica cement, trace weak calcareous cement, abundant white argillaceous matrix - often matrix supported, trace red green and black lithics, trace off white partially altered feldspar grains, trace fine black coaly detritus, rare pyrite, friable, poor visual porosity, no oil fluorescence.
	30	Claystone: off white to dominantly medium brown grey, slightly to moderately silty, trace very fine off white partially altered feldspar grains, trace to common black carbonaceous flecks, trace pyrite, firm, moderately dispersive, slightly subfissile.
1587-1590	80	Sandstone: off white, very fine to fine, occasional medium grains, angular to subrounded, moderately sorted, weak silica cement, trace weak calcareous cement, abundant white argillaceous matrix - often matrix supported, trace red green and black lithics, trace off white partially altered feldspar grains, trace fine black coaly detritus, rare pyrite, friable, poor visual porosity, no oil fluorescence.
	20	Claystone: off white to dominantly medium brown grey, slightly to moderately silty, trace very fine off white partially altered feldspar grains, trace to common black carbonaceous flecks, trace pyrite, firm, moderately dispersive, slightly subfissile.
1590-1593	80	Sandstone: off white, very fine to fine, common medium to very coarse grains, angular to subrounded, moderately sorted, weak silica cement, trace weak calcareous cement, abundant white argillaceous matrix - often matrix supported, trace red green and black lithics, trace off white partially altered feldspar grains, trace fine black coaly detritus, rare pyrite, friable, poor visual porosity, no oil fluorescence.
	20	Claystone: off white to dominantly medium brown grey, slightly to moderately silty, trace very fine off white partially altered feldspar grains, trace to common black carbonaceous flecks, trace pyrite, firm, moderately dispersive, slightly subfissile.
1593-1596	90	Sandstone: off white, very fine to fine, common medium to very coarse grains, angular to subrounded, moderately sorted, weak silica cement, trace weak calcareous cement, abundant white argillaceous matrix - often matrix supported, common red green and black lithics, trace off white partially altered feldspar grains, trace fine black coaly detritus, rare pyrite, friable, poor visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 4
	10	Claystone: off white to dominantly medium brown grey, slightly to moderately silty, trace very fine off white partially altered feldspar grains, trace to common black carbonaceous flecks, trace pyrite, firm, moderately dispersive, slightly subfissile.	
1596-1598.5	70	Sandstone: off white, very fine to fine, trace medium to very coarse grains, angular to subrounded, moderately sorted, weak silica cement, trace weak calcareous cement, abundant white argillaceous matrix - often matrix supported, common red green and black lithics, common off white partially altered feldspar grains, trace fine black coaly detritus, rare pyrite, friable, poor visual porosity, no oil fluorescence.	
	30	Claystone: off white to dominantly medium brown grey, minor light green grey, slightly to moderately silty, trace very fine off white partially altered feldspar grains, trace to common black carbonaceous flecks, trace pyrite, firm, moderately dispersive, slightly subfissile.	

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CULTUS PETROLEUM N.L. **APPENDIX**

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
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Interval (m)	%	Description
For geology report-12		
1598.5-1599	50	Claystone: off white to light green grey, slightly silty in part, common dispersed very fine lithic, quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, soft, subfissile.
	30	Claystone: as above - probably cavings.
	20	Sandstone: light green grey, very fine to fine, occasional medium grains, subangular to subrounded, moderately sorted, weak to moderate calcareous cement, common to abundant green brown red and black lithics, common partially altered feldspar grains, rare carbonaceous material, friable to moderately hard, no visual porosity, no oil fluorescence.
1599-1602	80	Sandstone: light green grey, very fine to fine, occasional medium grains, subangular to subrounded, moderately sorted, weak to moderate calcareous cement, common to abundant green brown red and black lithics, common partially altered feldspar grains, rare carbonaceous material, friable to moderately hard, no visual porosity, no oil fluorescence.
	20	Claystone: off white to light green grey, slightly silty in part, trace dispersed very fine lithic, quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, soft, subfissile.
1602-1605	70	Sandstone: light green grey, very fine to occasionally coarse, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate calcareous cement, common to abundant green brown red and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
	30	Claystone: off white to light green grey, slightly silty in part, trace dispersed very fine lithic, quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, soft, subfissile.
1605-1611	80	Sandstone: light green grey, very fine to occasionally coarse, dominantly fine, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
	20	Claystone: off white to light green grey, slightly to occasionally moderately silty, trace fine lithic, quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, trace coarse brown mica flakes, soft, subfissile.
1611-1614	70	Sandstone: light green grey, very fine to occasionally coarse, dominantly fine, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
	30	Claystone: off white to light green grey, slightly to occasionally moderately silty, trace fine lithic, quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, trace coarse brown mica flakes, soft, subfissile.

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Interval (m)	%	Description	PAGE: 2
1614-1617	80	Sandstone: light green grey, very fine to occasionally coarse, dominantly fine, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
	20	Claystone: off white to light green grey, slightly to occasionally moderately silty, trace fine lithic, quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, trace coarse brown mica flakes, soft, subfissile.
1617-1620	50	Sandstone: off white to light green grey, very fine to fine, occasional medium grains,, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
	50	Claystone: off white to light green grey, medium brown, slightly to occasionally moderately silty, trace fine lithic, quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, trace coarse brown mica flakes, soft, subfissile.

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CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
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Interval (m)	%	Description
For geological report-13		
1620-1626	90	Claystone: light blue grey to light green grey, slightly silty, trace fine multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, trace coarse brown mica flakes, soft and sticky, slightly subfissile.
	10	Sandstone: off white to light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable with loose grains in sample, no visual porosity, no oil fluorescence.Claystone: light blue grey to light green grey, slightly silty, trace fine multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly laminae, trace coarse brown mica flakes, soft and sticky, slightly subfissile.
1626-1629	95	Claystone: light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.
	5	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1629-1635	90	Claystone: light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.
	10	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1635-1641	95	Claystone: light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.
	5	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1641-1647	90	Claystone: light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.

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Interval (m)	%	Description
	10	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1647-1650	95	Claystone: light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.
	5	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1650-1656	90	Claystone: light blue grey to light green grey, medium brown in part, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.
	10	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1656-1659	95	Claystone: light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.
	5	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1659-1665	90	Claystone: light blue grey to light green grey, medium brown in part, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.
	10	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1665-1668	100	Claystone: light blue grey to light green grey, trace medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.
	Tr	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1668-1674	100	Claystone: light blue grey to light green grey, common medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.

Interval (m)	%	Description	PAGE: 3
	Tr	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.	
1674-1680	100	Claystone: light to medium brown, light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, trace coarse brown mica flakes, soft, sticky.	
	Tr	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.	

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Interval (m)	%	Description
1680-1683	100	Claystone: light to medium brown, light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, soft, sticky.
1683-1686	100	Claystone: light to medium brown, light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, soft, sticky.
	Tr	Sandstone: off white to light green grey, mottled, very fine to occasionally coarse, dominantly fine to medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1686-1689	100	Claystone: light to medium brown, light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black coaly matter, soft, sticky.
1689-1692	80	Claystone: light to medium brown, light blue grey to light green grey, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter, soft, sticky.
	20	Sandstone: off white to light green grey, very fine to dominantly fine, occasional medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1692-1695	90	Claystone: light blue grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter, soft, sticky.
	10	Sandstone: off white to light green grey, very fine to dominantly fine, occasional medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace pyrite, friable but with only loose grains in sample, very poor inferred porosity, no oil fluorescence.
1695-1698	100	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter, soft, sticky.
	Tr	Sandstone: off white to light green grey, very fine to dominantly fine, occasional medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, common brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace pyrite, friable, no visual porosity, no oil fluorescence.
1698-1701	90	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter, soft, sticky.

Interval (m)	%	Description	PAGE: 2
	10	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace pyrite, friable, no visual porosity, no oil fluorescence.
1701-1704	80	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter, soft, sticky.
	20	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace pyrite, friable, no visual porosity, no oil fluorescence.
1704-1710	70	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter, soft, sticky.
	30	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace pyrite, friable, no visual porosity, no oil fluorescence.
1710-1716	80	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter, soft, sticky.
	20	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace pyrite, friable,, no visual porosity, no oil fluorescence.
1716-1722	90	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter, soft, sticky.
	10	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, no visual porosity, no oil fluorescence.
1722-1725	90	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, common black coaly matter, trace pyrite, soft, sticky.
	10	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, no visual porosity, no oil fluorescence.
1725-1731	90	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, common black coaly matter, trace pyrite, soft, sticky.
	10	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, no visual porosity, no oil fluorescence.
1731-1734	95	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.

Interval (m)	%	Description	PAGE: 3
	5	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable,, no visual porosity, no oil fluorescence.	
1734-1743	100	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	Tr	Sandstone: off white to light green grey, very fine to dominantly fine, rare medium grains, subangular to subrounded, moderately sorted, weak calcareous cement, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, rare carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable,, no visual porosity, no oil fluorescence.	
1743-1746	90	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	10	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.	
1746-1749	50	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	50	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.	
1749-1752	40	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	60	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.	
1752-1755	30	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	70	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.	
1755-1761	40	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	60	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 4
1761-1764	30	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	70	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.	
1764-1773	50	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	50	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.	
1773-1776	60	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.	
	40	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.	

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CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
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Interval (m)	%	Description
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1776-1779	50	Claystone: off white to light grey to light green grey, light to medium brown, slightly silty, trace multicoloured lithics in part, trace quartz and partially altered feldspar grains in part, trace micromica, trace black carbonaceous matter,trace pyrite, soft, sticky.
	50	Sandstone: off white to light green grey, very fine to dominantly medium, subangular to subrounded, moderately sorted, weak calcareous cement, abundant white argillaceous matrix, abundant green lithics, trace brown red grey and black lithics, common partially altered feldspar grains, trace carbonaceous material, trace coarse brown mica flakes,trace pyrite, friable, very poor visual porosity, no oil fluorescence.
1779-1782	30	Claystone: off white to medium grey, light green grey, light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	70	Sandstone: off white to light green grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1782-1785	40	Claystone: off white to medium grey, light green grey, light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	60	Sandstone: off white to light green grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1785-1791	30	Claystone: off white to medium grey, light green grey, light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	70	Sandstone: off white to light green grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1791-1794	60	Claystone: off white to medium grey, light green grey, light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description	PAGE: 2
	40	Sandstone: off white to light green grey, very fine to medium, dominantly fine, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1794-1797	70	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	30	Sandstone: off white to light green grey, very fine to medium, dominantly fine, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1797-1806	80	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: off white to light green grey, very fine to medium, dominantly fine, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1806-1809	60	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	40	Sandstone: off white to light green grey, very fine to medium, dominantly fine, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1809-1812	40	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	60	Sandstone: off white to light green grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1812-1815	50	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	50	Sandstone: off white to light green grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.

Interval (m)	%	Description
1815-1821	60	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	40	Sandstone: off white to light green grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, trace weak calcareous cement, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1821-1827	90	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous cement in part, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1827-1830	100	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, common black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	Tr	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous cement in part, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1830-1833	90	Claystone: off white to medium grey, light green grey, often very light to medium brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous cement in part, common to abundant white argillaceous matrix - in part matrix supported, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1833-1836	80	Claystone: off white to medium grey, light green grey, often very light to medium brown, dominantly off white to light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous cement in part, common to abundant white argillaceous matrix - in part matrix supported and grading to arenaceous claystone, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1836-1842	70	Claystone: off white to medium grey, light green grey, often very light to medium brown, dominantly off white to light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description	PAGE: 4
	30	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous cement in part, common to abundant white argillaceous matrix - in part matrix supported and grading to arenaceous claystone, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1842-1845	50	Claystone: off white to medium grey, light green grey, often very light to medium brown, dominantly off white to light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	50	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous and silica cement, common to abundant white argillaceous matrix - in part matrix supported and grading to arenaceous claystone, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1845-1851	30	Claystone: off white to medium grey, light green grey, often very light to medium brown, dominantly off white to light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	70	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous and silica cement, common to abundant white argillaceous matrix - in part matrix supported and grading to arenaceous claystone, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1851-1854	50	Claystone: off white to medium grey, light green grey, very light to medium brown, dominantly off white to light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	50	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous and silica cement, common to abundant white argillaceous matrix - in part matrix supported and grading to arenaceous claystone, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1854-1857	70	Claystone: off white to medium grey, light green grey, very light to medium brown, dominantly off white to light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	30	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous and silica cement, common to abundant white argillaceous matrix - in part matrix supported and grading to arenaceous claystone, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 5
1857-1860	80	Claystone: off white to light grey, light green grey, often very light brown, dominantly off white to light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous and silica cement, common to abundant white argillaceous matrix - in part matrix supported and grading to arenaceous claystone, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1860-1863	90	Claystone: off white to light brown, light green grey, light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to light green grey to light grey, very fine to medium, dominantly fine to medium, moderately sorted, subangular to subrounded, weak calcareous and silica cement, common to abundant white argillaceous matrix - in part matrix supported and grading to arenaceous claystone, abundant green lithics, trace to common brown red grey and black lithics, common off white partially altered feldspar grains, trace coarse brown mica flakes, rare black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
1863-1866	40	Claystone: off white to light brown, light green grey, light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	60	Sandstone: light to medium green grey, very fine to medium, occasional coarse grains, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to poor visual porosity, no oil fluorescence.
1866-1869	30	Claystone: off white to light brown, light green grey, light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	70	Sandstone: light to medium green grey, very fine to medium, occasional coarse grains, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to poor visual porosity, no oil fluorescence.
1869-1872	50	Claystone: off white to light brown, light green grey, light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	50	Sandstone: light to medium green grey, very fine to medium, occasional coarse grains, dominantly medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to poor visual porosity, no oil fluorescence.
1872-1875	40	Claystone: off white to light brown, light green grey, light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description
	60	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, trace to dominantly common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1875-1878	20	Claystone: off white to light brown, light green grey, light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	80	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, trace to dominantly common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1878-1881	10	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	90	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, trace to dominantly common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1881-1884	40	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	60	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, trace to dominantly common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1884-1887	30	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	70	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, trace to dominantly common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1887-1890	50	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	50	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, trace to dominantly common white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 7
1890-1893	60	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	40	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1893-1896	70	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	30	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1896-1899	80	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1899-1902	50	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	50	Sandstone: medium green grey, very fine to coarse, dominantly medium to coarse, medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1902-1914	80	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: medium green grey, very fine to medium, occasional coarse grains, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1914-1920	90	Claystone: off white to light brown, light green grey, light grey, dominantly very light grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.

Interval (m)	%	Description	PAGE: 8
	10	Sandstone: medium green grey, very fine to medium, occasional coarse grains, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1920-1926	80	Claystone: off white to light brown, light green grey, light grey, dominantly very light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: medium green grey, very fine to medium, occasional coarse grains, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
1926-1932	70	Claystone: off white to light brown, light green grey, light grey, dominantly very light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	30	Sandstone: medium green grey, very fine to medium, occasional coarse grains, dominantly fine to medium, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, abundant loose grains in sample, very poor to fair visual porosity, poor inferred porosity, no oil fluorescence.
		Continued on report 15A.

CULTUS PETROLEUM N.L. **APPENDIX**

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
GEOLOGIST:	Dave Horner	**PAGE:**	1

Interval (m)	%	Description
Continuation for report-15		
1932-1938	80	Claystone: off white to light brown, light green grey, light grey, dominantly very light brown, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: off white to medium green grey, very fine to medium, occasional coarse grains, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor to poor visual porosity, no oil fluorescence.
1938-1944	90	Claystone: off white to light brown, light green grey, light grey, dominantly light green grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to medium green grey, very fine to medium, occasional coarse grains, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor to poor visual porosity, no oil fluorescence.
1944-1953	100	Claystone: off white to light brown, light green grey, light grey, dominantly light green grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	Tr	Sandstone: off white to medium green grey, very fine to medium, occasional coarse grains, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor to poor visual porosity, no oil fluorescence.
1953-1965	90	Claystone: off white to light brown, light green grey, light grey, dominantly light green grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to medium green grey, very fine to medium, occasional coarse grains, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor to poor visual porosity, no oil fluorescence.
1965-1971	80	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.

Interval (m)	%	Description	PAGE: 2
	20	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
1971-1977	100	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	Tr	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
1977-1983	90	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
1983-1986	95	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	5	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
1986-1992	80	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
1992-2004	90	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
2004-2010	95	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description
	5	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
2010-2016	85	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	15	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
2016-2019	60	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	40	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
2019-2025	80	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	20	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
2025-2031	100	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
2031-2043	100	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	Tr	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
2043-2067	90	Claystone: off white to light brown, light green grey, light to medium grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.

Interval (m)	%	Description
2067-2070	100	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	Tr	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.
2070-2088	90	Claystone: off white to light brown, light green grey, light grey, dominantly light brownish grey, slightly to occasionally moderately silty, occasionally very finely to finely arenaceous with multicoloured lithics, partially altered feldspar and quartz grains, trace black carbonaceous detritus, trace micromica, rare pyrite, firm to sticky, slightly subfissile.
	10	Sandstone: off white to medium green grey, dominantly light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix - often matrix supported, abundant green lithics and partially altered feldspar grains, trace orange brown and black lithics, trace pyrite, trace brown mica flakes, friable, very poor visual porosity, no oil fluorescence.

CULTUS PETROLEUM N.L. **APPENDIX**

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
GEOLOGIST:	Dave Horner	**PAGE:**	1

Interval (m)	%	Description
For geological report-16		
2088-2094	100	Claystone: off white to light brown grey, light to medium grey, light to medium green grey, slightly to occasionally very silty, trace dispersed very fine to fine altered feldspar quartz and lithics grains in part, trace black coaly detritus, rare pyrite, trace micromica, firm to sticky, subfissile.
	Tr	Sandstone: off white to medium green, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common to dominantly abundant white argillaceous matrix, abundant green lithics, common off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
2094-2100	90	Claystone: off white to light brown grey, light to medium grey, light to medium green grey, slightly to occasionally very silty, trace dispersed very fine to fine altered feldspar quartz and lithics grains in part, trace black coaly detritus, rare pyrite, trace micromica, firm to sticky, subfissile.
	10	Sandstone: off white to medium green, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common to dominantly abundant white argillaceous matrix, abundant green lithics, common off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
2100-2106	80	Claystone: off white to light brown grey, light to medium grey, light to medium green grey, slightly to occasionally very silty, trace dispersed very fine to fine altered feldspar quartz and lithics grains in part, trace black coaly detritus, rare pyrite, trace micromica, firm to sticky, subfissile.
	20	Sandstone: off white to medium green, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common to dominantly abundant white argillaceous matrix, abundant green lithics, common off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
2106-2109	70	Claystone: off white to light brown grey, light to medium grey, light to medium green grey, slightly to occasionally very silty, trace dispersed very fine to fine altered feldspar quartz and lithics grains in part, trace black coaly detritus, rare pyrite, trace micromica, firm to sticky, subfissile.
	30	Sandstone: off white to medium green, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common to dominantly abundant white argillaceous matrix, abundant green lithics, common off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
2109-2015	70	Claystone: off white to light brown grey, light to medium grey, light to medium green grey, slightly to occasionally very silty, trace dispersed very fine to fine altered feldspar quartz and lithics grains in part, trace black coaly detritus, rare pyrite, trace micromica, firm to sticky, subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description
	30	Sandstone: off white to medium green, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common to dominantly abundant white argillaceous matrix, abundant green lithics, common off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black carbonaceous detritus, rare pyrite, friable, nil to very poor visual porosity, no oil fluorescence.
2015-2121	100	Claystone: light to medium green grey, light brown grey, slightly to often very silty, occasionally very finely arenaceous, trace to common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm, subfissile.
	Tr	Sandstone: off white to medium green, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common to dominantly abundant white argillaceous matrix, abundant green lithics, common off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable, no visual porosity, no oil fluorescence.
2121-2124	100	Claystone: light to medium green grey, light brown grey, slightly to often very silty, occasionally very finely arenaceous, trace to common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm, subfissile.
2124-2136	100	Claystone: light to dominantly medium green grey, light to medium brown grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm, subfissile.
	Tr	Sandstone: off white to medium green, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, common to dominantly abundant white argillaceous matrix, abundant green lithics, common off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable, no visual porosity, no oil fluorescence.
2136-2142	90	Claystone: light to dominantly medium green grey, light to medium brown grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm, subfissile.
	10	Sandstone: off white to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
2142-2145	80	Claystone: light to dominantly medium green grey, light to medium brown grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm, subfissile.
	20	Sandstone: off white to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
2145-2148	70	Claystone: light to dominantly medium green grey, light to medium brown grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm, subfissile.

Interval (m)	%	Description
	30	Sandstone: off white to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
2148-2151	50	Claystone: light to dominantly medium green grey, light to medium brown grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm, subfissile.
	50	Sandstone: off white to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
2151-2160	70	Claystone: light to dominantly medium green grey, light to medium brown grey, medium grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	30	Sandstone: off white to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
2160-2166	90	Claystone: light to dominantly medium green grey, light to medium brown grey, medium grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	10	Sandstone: off white to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
2166-2169	40	Claystone: light to dominantly medium green grey, light to medium brown grey, medium grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	60	Sandstone: off white to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
2169-2175	70	Claystone: light to dominantly medium green grey, light to medium brown grey, medium grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	30	Sandstone: off white to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics, trace coarse brown mica flakes, trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.

CULTUS PETROLEUM N.L. APPENDIX

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
GEOLOGIST:	Dave Horner	**PAGE:**	1

Interval (m)	%	Description
For geological report-19 - No cuttings descriptions for reports 17 & 18 due to rig break down - no new formation drilled		
2175-2178	70	Claystone: light to medium green grey, light to medium brown grey, off white to medium grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	30	Sandstone: off white to light grey to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity.
	Fluor	The sandstone has trace very dull to dull pinpoint very pale yellowish white fluorescence giving a very dull milky white crush cut, trace residue.
2178-2181	40	Claystone: light to medium green grey, light to medium brown grey, off white to medium grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	60	Sandstone: off white to light grey to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity.
	Fluor	The sandstone has trace dull to rarely moderately bright pinpoint very pale yellowish white fluorescence giving a very dull to dull milky white crush cut, trace residue.
2181-2184	20	Claystone: light to medium green grey, light to medium brown grey, off white to medium grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	80	Sandstone: off white to light grey to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity.
	Fluor	The sandstone has 5% dull to rarely moderately bright pinpoint very pale yellowish white fluorescence giving a very dull to dull milky white crush cut, trace residue.
2184-2187	70	Claystone: light to medium green grey, light to medium brown grey, off white to medium grey, slightly to often very silty in part grading to siltstone, occasionally very finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description	PAGE: 2
	30	Sandstone: off white to light grey to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2187-2190	80	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	20	Sandstone: off white to light grey to light greenish grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2190-2196	90	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	10	Sandstone: off white to light grey to light greenish grey, very fine to dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2196-2199	100	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	Tr	Sandstone: off white to light grey to light greenish grey, very fine to dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2199-2202	70	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	30	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, strong calcareous cement, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity.
	Fluor	The sandstone has 5% dull to rarely moderately bright pinpoint very pale yellowish white fluorescence giving a very dull to dull milky white crush cut, trace residue.
2202-2205	70	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.

Interval (m)	%	Description	PAGE: 3
	30	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, strong calcareous cement, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2205-2208	80	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	20	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, strong calcareous cement, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2208-2211	70	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	30	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, strong calcareous cement, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2211-2217	60	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	40	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, strong calcareous cement, common to dominantly abundant white argillaceous matrix, common green lithics, abundant off white partially altered feldspar grains, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity.
	Fluor	The sandstone has trace dull pinpoint very pale yellowish white fluorescence giving a very dull milky white crush cut, trace residue.
2217-2220	40	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	60	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to abundant white argillaceous matrix, abundant very fine to occasionally medium off white partially altered feldspar grains, common green lithics, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity.
	Fluor	The sandstone has 5% dull to rarely moderately bright pinpoint very pale yellowish white fluorescence giving a very dull to dull milky white crush cut, trace residue.
2220-2223	70	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.

Interval (m)	%	Description	PAGE: 4
	30	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to abundant white argillaceous matrix, abundant very fine to occasionally medium off white partially altered feldspar grains, common green lithics, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2223-2232	80	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	20	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to abundant white argillaceous matrix, abundant very fine to occasionally medium off white partially altered feldspar grains, common green lithics, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.

(AJ/GFE:F53)

CULTUS PETROLEUM N.L. **APPENDIX**

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	**DATE:**	30 May, 1997
GEOLOGIST:	Dave Horner	**PAGE:**	1

Interval (m)	%	Description
For geological report-20		
2232-2235	90	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	10	Sandstone: off white to light grey to light greenish grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, common to abundant white argillaceous matrix, abundant very fine to occasionally medium off white partially altered feldspar grains, common green lithics, trace orange brown grey and black lithics,trace black to brown carbonaceous detritus, rare pyrite, friable to moderately hard, very poor visual porosity, no oil fluorescence.
2235-2238	80	Claystone: off white to medium brown grey, light to medium green grey, light to medium grey, slightly to often very silty, occasionally very finely to finely arenaceous, common very fine partially altered feldspar grains in part, trace brown to black carbonaceous flecks, trace micromica, firm to moderately hard, subfissile.
	20	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2238-2241	60	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, slightly to very silty, occasionally abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	40	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2241-2244	30	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, slightly to very silty, occasionally abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	70	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.

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Interval (m)	%	Description	PAGE: 2
2244-2247	20	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, slightly to very silty, occasionally abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	80	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2247-2250	40	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, slightly to very silty, occasionally abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	60	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2250-2253	60	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, slightly to very silty, occasionally abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	40	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2253-2259	60	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	40	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2259-2262	90	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.

Interval (m)	%	Description
	10	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2262-2265	80	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	20	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2265-2271	50	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	50	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2271-2274	80	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	20	Sandstone: off white to light grey, occasionally light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2274-2280	90	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	10	Sandstone: off white to light grey, occasionally light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly strong calcareous cement, dominantly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.

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2280-2283	80	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	20	Sandstone: off white to light grey, occasionally light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2283-2286	70	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, dark grey and very carbonaceous in part, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	30	Sandstone: off white to light grey, occasionally light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionallly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2286-2289	40	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, dark grey and very carbonaceous in part, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	60	Sandstone: off white to light grey, occasionally light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica cement, nil to occasionallly trace calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2289-2292	30	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	70	Sandstone: off white to light grey, occasionally light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica cement, nil to occasionallly trace calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2292-2295	20	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.

Interval (m)	%	Description
	80	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, strong silica cement, nil to occasionallly trace calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2295-2298	30	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	70	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica cement, nil to occasionallly moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, common black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2298-2304	20	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	80	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2304-2307	40	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	60	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2307-2310	60	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	40	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 6
2310-2313	50	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	50	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, moderate silica cement, weak calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2313-2316	40	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	60	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, moderate silica cement, moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2316-2319	70	Claystone: off white to medium grey, light to medium brown grey, occasionally light to medium greenish grey, dominantly medium grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	30	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionally moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2319-2322	80	Claystone: off white to medium grey, light to medium brown grey, light to medium green grey, dominantly medium green grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	20	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to occasionally moderate calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.
2322-2325	70	Claystone: off white to medium grey, light to medium brown grey, light to medium green grey, dominantly medium green grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.

Interval (m)	%	Description	PAGE: 7
	30	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to weak calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common grey lithics, trace green brown orange and black lithics, trace fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.	
2325-2331	40	Claystone: off white to medium grey, light to medium brown grey, light to medium green grey, dominantly medium green grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.	
	60	Sandstone: off white to light grey, occasionally light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to weak calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common red and grey lithics, trace green brown orange and black lithics, common fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.	
2331-2334	20	Claystone: off white to medium grey, light to medium brown grey, light to medium green grey, dominantly medium green grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.	
	80	Sandstone: off white to light grey, occasionally light green grey, very fine to dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, nil to weak calcareous cement, common to abundant white argillaceous matrix, common to abundant partially altered feldspar grains, common red and grey lithics, trace green brown orange and black lithics, common fine black to brown carbonaceous detritus, trace fine brown mica flakes, moderately hard, nil to very poor visual porosity, no oil fluorescence.	
2334-2337	20	Claystone: off white to medium grey, light to medium brown grey, light to medium green grey, dominantly medium green grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine to fine sandstone, moderately to dominantly non calcareous, trace to common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.	
	80	Sandstone: off white to light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, trace weak calcareous cement, common to abundant white argillaceous matrix, abundant partially altered feldspar grains, common grey and green lithics, trace red brown and black lithics, trace fine to medium brown mica flakes, trace to common black to occasionally brown carbonaceous detritus, friable to moderately hard, nil to very poor visual porosity, no oil fluorescence.	
2337-2344	100	Sandstone: off white to medium green, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, trace weak calcareous cement, common to abundant white to medium green argillaceous matrix, abundant partially altered feldspar grains, common grey and green lithics, trace red brown and black lithics, trace fine to medium brown mica flakes, trace to common black to occasionally brown carbonaceous detritus, friable to moderately hard, nil to very poor visual porosity, no oil fluorescence.	

(AJ/GFE:F53)

CULTUS PETROLEUM N.L. APPENDIX

CUTTINGS DESCRIPTION

WELL NAME:	Dunbar East-1	DATE:	30 May, 1997
GEOLOGIST:	Dave Horner	PAGE:	1

Interval (m)	%	Description
For geological report-22		
2344-2346	60	Claystone: off white to medium green grey, light to medium brown grey, dominantly light to medium brown grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine sandstone, non to slightly calcareous, common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile. Abundant cavings from Belfast Mudstone after DST-1.
	40	Sandstone: off white to light brown grey to light green, very fine to occasionally medium, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica cement, trace weak calcareous cement, common to abundant white argillaceous matrix, abundant partially altered feldspar grains, common grey and green lithics, trace red brown and black lithics, trace fine to medium brown mica flakes, common black to occasionally brown carbonaceous detritus, friable to moderately hard, no visual porosity, no oil fluorescence.
2346-2349	50	Claystone: off white to medium green grey, light to medium brown grey, dominantly light to medium brown grey, slightly to very silty, occasional abundant very fine to fine dispersed quartz and lithic sand grains - in part grading to very fine sandstone, non to slightly calcareous, common brown to black carbonaceous flecks and detritus, trace to common micromica, firm, moderately dispersive, subfissile.
	50	Sandstone: off white to light brown grey to light green, very fine to occasionally medium, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica cement, trace weak calcareous cement, common to abundant white argillaceous matrix, abundant partially altered feldspar grains, common grey and green lithics, trace red brown and black lithics, trace fine to medium brown mica flakes, common black to occasionally brown carbonaceous detritus, friable to moderately hard, no visual porosity, no oil fluorescence.
2349-2352	60	Claystone: off white to medium green grey, dominantly light green grey, moderately to very silty, abundant dispersed very fine to occasionally medium quartz and lithic sand grains often grading to argillaceous sandstone, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	40	Sandstone: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, rare moderate calcareous cement, abundant light green argillaceous matrix - matrix supported, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2352-2355	50	Claystone: off white to medium green grey, dominantly light green grey, moderately to very silty, abundant dispersed very fine to occasionally medium quartz and lithic sand grains often grading to argillaceous sandstone, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description
	50	Sandstone: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, rare moderate calcareous cement, abundant light green argillaceous matrix - matrix supported, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2355-2361	60	Claystone: off white to medium green grey, dominantly light green grey, moderately to very silty, abundant dispersed very fine to occasionally medium quartz and lithic sand grains often grading to argillaceous sandstone, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	40	Sandstone: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, rare moderate calcareous cement, abundant light green argillaceous matrix - matrix supported, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2361-2364	70	Claystone: off white to medium green grey, dominantly light green grey, moderately to very silty, abundant dispersed very fine to occasionally medium quartz and lithic sand grains often grading to argillaceous sandstone, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	30	Sandstone: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, rare moderate calcareous cement, abundant light green argillaceous matrix - matrix supported, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2364-2370	50	Claystone: off white to medium green grey, dominantly light green grey, moderately to very silty, abundant dispersed very fine to occasionally medium quartz and lithic sand grains often grading to argillaceous sandstone, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	50	Sandstone: light green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, rare moderate calcareous cement, abundant light green argillaceous matrix - matrix supported, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2370-2379	70	Claystone: off white to medium green grey, dominantly light green grey, moderately to very silty, abundant dispersed very fine to occasionally medium quartz and lithic sand grains often grading to argillaceous sandstone, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	30	Sandstone: light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, rare moderate calcareous cement, abundant light green argillaceous matrix - matrix supported, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2379-2391	80	Claystone: off white to medium green grey, dominantly light green grey, moderately to very silty, abundant dispersed very fine to occasionally medium quartz and lithic sand grains often grading to argillaceous sandstone, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.

(AJ/GFE:F53)

Interval (m)	%	Description
	20	Sandstone: light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, rare moderate calcareous cement, abundant light green argillaceous matrix - matrix supported, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2391-2400	70	Claystone: off white to medium green grey, dominantly light green grey, moderately to very silty, abundant dispersed very fine to occasionally medium quartz and lithic sand grains often grading to argillaceous sandstone, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	30	Sandstone: light green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, weak to moderate silica cement, trace weak calcareous cement, rare moderate calcareous cement, abundant light green argillaceous matrix - matrix supported, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2400-2406	70	Claystone: off white to medium green grey, dominantly light green grey, light to medium brown, moderately to very silty, common dispersed very fine to occasionally medium quartz and lithic sand grains, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	30	Sandstone: light green grey, occasionally medium green, occasionally light brown, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica cement, weak to moderate calcareous cement, common to abundant off white to light green argillaceous matrix, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace to common black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2406-2412	80	Claystone: off white to medium green grey, dominantly light green grey, light to medium brown, moderately to very silty, abundant dispersed very fine to fine quartz and lithic sand grains, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	20	Sandstone: light green grey, occasionally light brown, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica cement, weak to moderate calcareous cement, common to abundant off white to light green argillaceous matrix, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace to common black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2412-2418	90	Claystone: off white to medium green grey, light to medium brown, dominantly light brown, moderately to very silty, trace to common dispersed very fine to occasionally medium quartz and lithic sand grains, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.
	10	Sandstone: light green grey, occasionally light brown, very fine to medium, dominantly very fine to fine, subangular to subrounded, moderately sorted, moderate silica cement, weak to moderate calcareous cement, common to abundant off white to light green argillaceous matrix, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace to common black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.
2418-2419 TD	90	Claystone: off white to medium green grey, light to medium brown, medium grey, dominantly light brown, moderately to very silty, trace to common dispersed very fine to occasionally medium quartz and lithic sand grains, trace black carbonaceous detritus, trace micromica, firm, very dispersive, subfissile.

Interval (m)	%	Description - PAGE: 4
	10	Sandstone: light green grey, occasionally light brown, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, moderate silica cement, weak to moderate calcareous cement, common to abundant off white to light green argillaceous matrix, abundant off white partially altered feldspars and green lithics, common yellow-orange-red-brown-black lithics, trace pink to red translucent garnet, trace to common black carbonaceous detritus, trace brown mica flakes, friable, no visual porosity, no oil fluorescence.

(AJ/GFE:F53)

PART - 2

DRILLING

1.0 Drilling Engineering

1.1 General Information

Operator Personnel on Site	Drilling Supervisor Engineer/Night Supervisor Geologist
Drilling Contractor	Oil Drilling and Exploration Pty Ltd (O.D.&E.) Rig #30
Drilling Fluids	Independent Drilling Fluid Services Pty Ltd
Cementing	Halliburton
Directional Drilling	Halliburton
Mud Logging	Halliburton
Coring & Testing	Australian DST
Wireline Logging	BPB Logging

1.2 Drilling Summary

Dunbar East-1 was spudded at 12:00 hrs on 26th March 1996 in PPL-1 Onshore Otway Basin with O.D. & E. Rig #30. The well was drilled vertically to 1620m TVD and directionally to a total measured depth of 2419m RT. The Waarre and Heathfield objectives were found to be uncommercial, the well was subsequently plugged and abandoned and the rig released on 21st April 1996.

12¼" Hole

A 12¼" Tricone Bit was used with Gel Spud Mud to drill the surface hole to 764m. The Port Campbell Limestone was intersected trouble free. After the Gellibrand Marl was penetrated, considerable time was lost cleaning out mud rings due to insufficient dilution of the drilling fluid. The marl was highly dispersive causing excess viscosity and subsequent blocking of the flowline, possum belly and conductor. At casing point, a wiper trip was run with minimal drag. $9^5/_8$" surface casing was run and landed at 755m, and cemented with 500 sx lead slurry and 150 sx tail slurry. Casing was successfully tested to 3000 psi. The annulus dropped requiring a cement top up job. The BOP's were nippled up and pressure tested prior to drilling out.

8½" Production Hole

An 8½" Rock Bit was used to drill out the float collar, cement, float shoe and 3m of new formation. A formation integrity test was conducted with 9.0 ppg drilling fluid to 13.5 ppg equivalent.

Drilling continued with a packed hole assembly and 1% KCl Polymer drilling fluid. Tight hole was experienced during connections across Paaratte sands, probably due to filter cake build up. High torque was experienced and the bit was subsequently pulled at 1110m.

Drilled ahead to 1529m in the Waarre Fm where samples were circulated. Drilled to 1537m and the bit was pulled due to slow rate of penetration. Tight hole was experienced across the Belfast, Nullawarre and Skull Creek Formations. The caliper log showed the hole to be in or near gauge with the Belfast 9-10 in. average diameter.

While running in the hole with a new bit the drawworks broke down resulting in 23½ hours downtime. Drilling subsequently continued to 1560m and a wiper trip was run prior to DST#1. The

test was postponed and wireline logs were run as follows; MSFL-DLL-GR-CAL Evaluation of logs resulted in the cancellation of any further evaluation of the Waarre Fm.

An MWD directional drilling assembly was run with a PDC bit, but due to poor hydraulics the bit was pulled balled up. A tricone bit was run with MWD and built angle to 22 deg. by 1910m. At 1958m a wiper trip was run with the hole in good condition. Drilling continued with a combination of sliding and rotating to drop angle back to vertical. See Halliburton Report for full details of directional surveys.

A bit trip was carried out at 2176m due to hours on the bit. 50k lbs overpull was experienced in the build section at 1897, 1755 and 1613-1504m. While running in the hole with a new bit and MWD, the drawworks again broke down with the bit at 2150m. The main shaft was found to have failed resulting in 62 hours lost time.
Drilling continued dropping angle until the Heathfield was intersected. By 2344m hole angle was brought back to approximately 8 deg and a wiper trip was run prior to DST#1 as follows:

DST #1 Heathfield 2324-2344
Conventional off bottom test
NFTS, GTS RTSTM
Well dead after 20 mins flow period
P* 3313 psi, Formation Pressure 8.4 ppg EMW

After the test, drilling continued with a slick assembly and Dynadrill PDM to 2419m MD total depth. Hole conditions were good during a wiper trip to 1600m. Wireline logs were subsequently run as follows:

Logging Run #1 MLL-DLL-BHC-SP-GR-CAL
#2 DRHO-NPHI-RHOB-GR-CAL
#3 RFT-GR
#4 Check Shot Survey

After logging ran in hole open ended to set plug #1; 1550-1490m. Tagged plug #1 with 15,000 lbs at 1491m. Pulled out of the hole to 750m and conducted an injectivity test to 970 psi at 2 bpm, resulting in a leak off pressure of 16.7 ppg equivalent. The injectivity test was run to measure the feasibility of using the Paaratte Sandstone for disposal of drilling fluid from future wells. Ran plug #2 785-725m and displaced inhibitive mud into the surface casing. Tagged plug #2 at 729m and laid down remaining drill pipe.

Laid down the kelly, swivel, nippled down the BOP's and released the rig on the 21st April 1996.

1.3 Drilling Fluid Summary

12¼" Surface Hole

A bentonite water based mud was used to drill the surface hole. 20 ppb gel spud mud was flocculated with lime to drill through the Port Campbell Limestone without problem. However upon entering the Gellibrand Marl, a highly dispersive formation, excess viscosity and subsequent down time was experienced due to mud rings. Insufficient dilution was the primary cause of excessive viscosities. In future wells, the hole should be displaced to water prior to intersecting the Marl, then allow the fluid to mud up with native clays and prehydrated gel while drilling to casing point.

8½" Hole

A 1% KCl Polymer fluid was used to successfully drill the 8½" production hole to total depth. PHPA at a minimum 0.5 ppb and 1% KCl provided the necessary inhibition. The lower KCl content was successful in stabilising the hole and minimising cost. It also provided a considerable salinity contrast between formation water and filtrate thereby improving log analysis.

With the use of linear motion shakers, mud weight was kept to a minimum with no problems. Yield point was maintained above 15 lbs/100 sqft with Drispac and PHPA for good hole cleaning. Some tight hole was evident due to filter cake across Paaratte sands however regular wiper and bit trips eliminated further problems. In the Belfast Mudstone, PHPA was quickly absorbed together with a rise in rheology due to the increase in reactive clay drilled solids. Increased chemical consumption was required to maintain stable mud properties.

Generally the drilling fluid performed well, as minimal hole related time was lost. The caliper log showed the hole to be in good condition with all formation evaluation attempted being successful.

This drilling fluid is recommended for future wells of this type in the area. The final mud cost was approximately $30k resulting in a cost of $12.40 per metre.

For an in depth discussion of the drilling fluid refer to the appendix.

1.4 Wellbore Pressure Summary

The Dunbar East - 1 well was drilled to a total depth of 2419m MD with no evidence of any overpressure. Mud weights used were in the range of 8.4 - 9.3 ppg with no kicks or major losses experienced.

Offset information has shown mud weight increases were necessary in the past due to overpressure in the Belfast Mudstone. This was not necessary at Dunbar East -1 as the mudstone was penetrated with 9.1 ppg without problems. The caliper log and cuttings description show no evidence of overpressure.

All pore pressures were assumed to be water gradient (8.34 ppg) or less and this was verified by drilling and evaluation data.

A formation integrity test was done below the surface casing shoe at 755m RT, with an equivalent mud weight of 13.5 ppg. An injectivity test was done prior to plugging and abandoning the well, with a subsequent leak off strength of 16.7 ppg below the shoe.

LOT, FIT and Pore Pressure Graphs are attached overleaf.

1.5 Recommendations

Offset wells have traditionally had problems as follows:

- Muds rings in surface hole
- Tight hole on the first 8½" bit trip across sands and shales
- Differential sticking across sands
- Failure to get logs to bottom at total depth.

The Gellibrand Marl was drilled with a gel mud which was not diluted adequately. Considerable time was subsequently lost due to mud rings. In future wells it is imperative that in order to optimize penetration rates, the marl must be drilled with a flocculated water system. Thereafter the system can be mudded up with gel additions. Expensive additives such as PAC or polyacrylamide are not necessary.

Tight hole on offset wells was possibly due to a combination of filter cake build up on sands, reactive clays, and doglegs due to pendulum assemblies. A good quality filter cake is required and can be best achieved with regular prehydrated gel additions.

The strategy at Dunbar East - 1 was to use packed hole assemblies throughout the vertical drilling section to eliminate doglegs, as shown on the BHA Summary. This was successful in reducing tight hole considerably, as well as providing good hole conditions for evaluation. All evaluation attempted was successful.

High torque was experienced in the 8½" top hole section with three stabilizers. This may have been due to the BHA in interbedded formations and/or lack of rotary power. An SCR problem was rectified on a subsequent well which improved the performance of the rotary, suggesting a cause of the problems at Dunbar East - 1. Nevertheless, due to the abrasive nature of the Dilwyn and Paaratte sands, it is recommended that future packed hole assemblies use roller reamers in place of stabilizers.

The drilling fluid density was kept as low as possible throughout to avoid differential sticking, with no problems encountered. Various drilling fluids were used in offset wells with varying degrees of success. A 1% KCl Polymer was used with good results, as it was thought that high KCl concentrations may be "drying out" the clays.

Bit hydraulics were optimized with flow rates over 400 gpm in 8½" hole. This provided good penetration rates and hole cleaning, with no adverse effects on hole conditions as seen by the caliper log. Bit performance is best shown in the Bit Summary.

1.6 Time Analysis

APPENDIX 2.

(refer attachment to WCR)

APPENDIX 3.

DUNBAR EAST-1

LOG EVALUATION REPORT

BASIN OIL N.L.

APPENDIX-3
Dunbar East-1
Well Completion Report

DUNBAR EAST-1

LOG EVALUATION REPORT

1-Conclusions

The main results arising after drilling Dunbar East-1 well are:

1. The Waarre Formation primary objective is water wet as indicated by RFT pressure data, log evaluation (Figures 1,2 and 3) and mud gas readings (Enclosure 1).

2. The Heathfield Sansdstone secondary objectice is tight as indicated by DST-1 results, log data and cutting descriptions (Figures 4 and 5).

3. Intra Eumeralla sandstones displayed gas shows of up to 4% total gas C1 to C5 with minor fluorescence in parts. However, cuttings descriptions, log data and RFT pressures indicated that they are tight or likely to produce at non commercial rates. At nearby Vaughan-1, equivalent sandstone flowed at a modest 100 MCFD. Cuttings descriptions suggested these sands to be of higher reservoir quality than those encountered at Dunbar East-1.

2- Discussion

Waarre Formation

The Waarre Formation was encountered between 1509.5 and 1595.5 mkb. Top porosity was encountered at 1517.5 mkb. The formation is 86 m thick and subunits A, B and C can be easily correlated with Dunbar-1 well nearby (Enclosure 2). Gas readings through the Waarre remained low averaging 1% total gas in the sands. Nearby gas wells recorded total gas of over 10% in this unit. Log evaluation indicates a water wet reservoir with minor residual gas saturations in Unit A. The RFT pressure plot confirms the log data. Two water trends were identified separated by an intervening claystone unit (Unit B).

Heathfiled Sandstone

The Heathfield Sandstone was intersected at 2329 mkb (app 2300 m TVD). It consisted of massive sandstone, fine to medium grained, predominantly subangular, with abundant argillaceous matrix, calcareous and silica cement , abundant feldspars, lithics and some mica and displayed very poor to tight visual porosity. Gas readings in this unit remained low at the top, but increased to more than 3% at around 2334 mkb. A Drill Stem Test was conducted over the interval 2323-2344 mkb recovering RHM and indicating tight formation (Figure 4). A well corrlation indicates that Dunbar East-1 intersected a sequence equivalent to the first of two massive sandstones encountered at Port Campbell-4.

Intra Eumeralla

Between 1865 mkb and 2050 mkb and also between 2175 and 2300 mkb. Several sand packages displayed gas peaks consisting of C1 to C4 with traces of C5 in parts. The shallower interval displays better reservoir quality and can be correlated to intervals which flowed gas at Vaughan-1 and gas and oil at Port Campbell-4. At Dunbar East-1 the sandstones appeared to be tight from examination of cuttings samples. This was confirmed by the RFT pressure survey. Nevertheless, the sandstone at 1865 to 1895 mkb displays low travel times of 90 us/ft suggesting high porosity. Plots of porosity vs permeability indicate that a minimum of 19% porosity is required to achieve 1 mD pereability. The intra-Eumeralla unit at 1865mkb appears to satisfy this requirement, but the RFT tool failed to record any pressure.

PE905736

This is an enclosure indicator page.
The enclosure PE905736 is enclosed within the container PE900837 at this location in this document.

The enclosure PE905736 has the following characteristics:

ITEM_BARCODE	= PE905736
CONTAINER_BARCODE	= PE900837
NAME	= Composite Log of Waarre Formation
BASIN	= OTWAY BASIN
PERMIT	= PP/L1
TYPE	= WELL
SUBTYPE	= COMPOSITE_LOG
DESCRIPTION	= Composite Log of Waarre Formation(figure 1 of appendix 3 from WCR vol. 2) for Dunbar East-1
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W1150
WELL_NAME	= DUNBAR EAST-1
CONTRACTOR	=
CLIENT_OP_CO	= CULTUS PETROLEUM NL.

(Inserted by DNRE - Vic Govt Mines Dept)

DUNBAR EAST-1

COMPOSITE LOG

WAARRE FORMATION

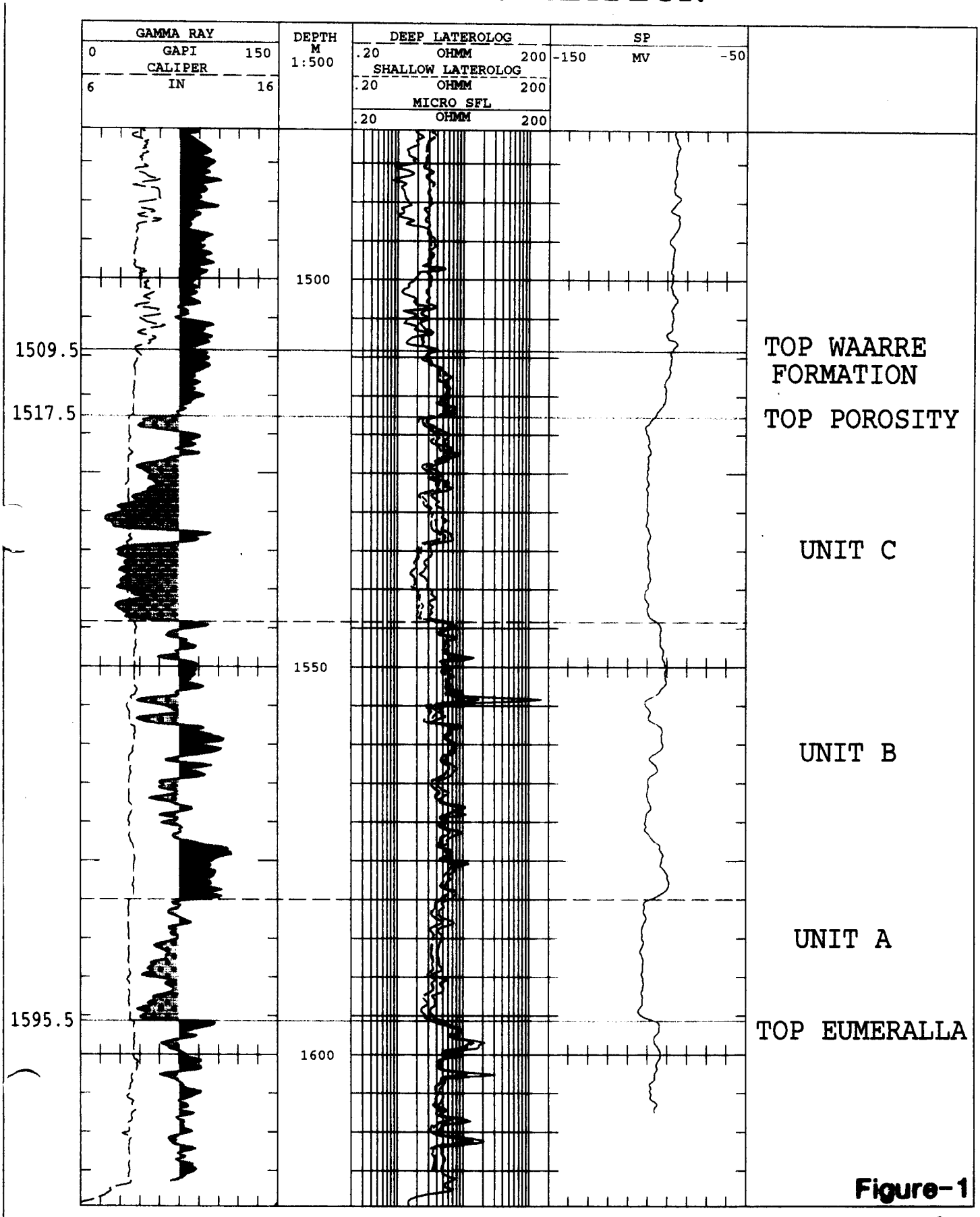


Figure-1

PE905737

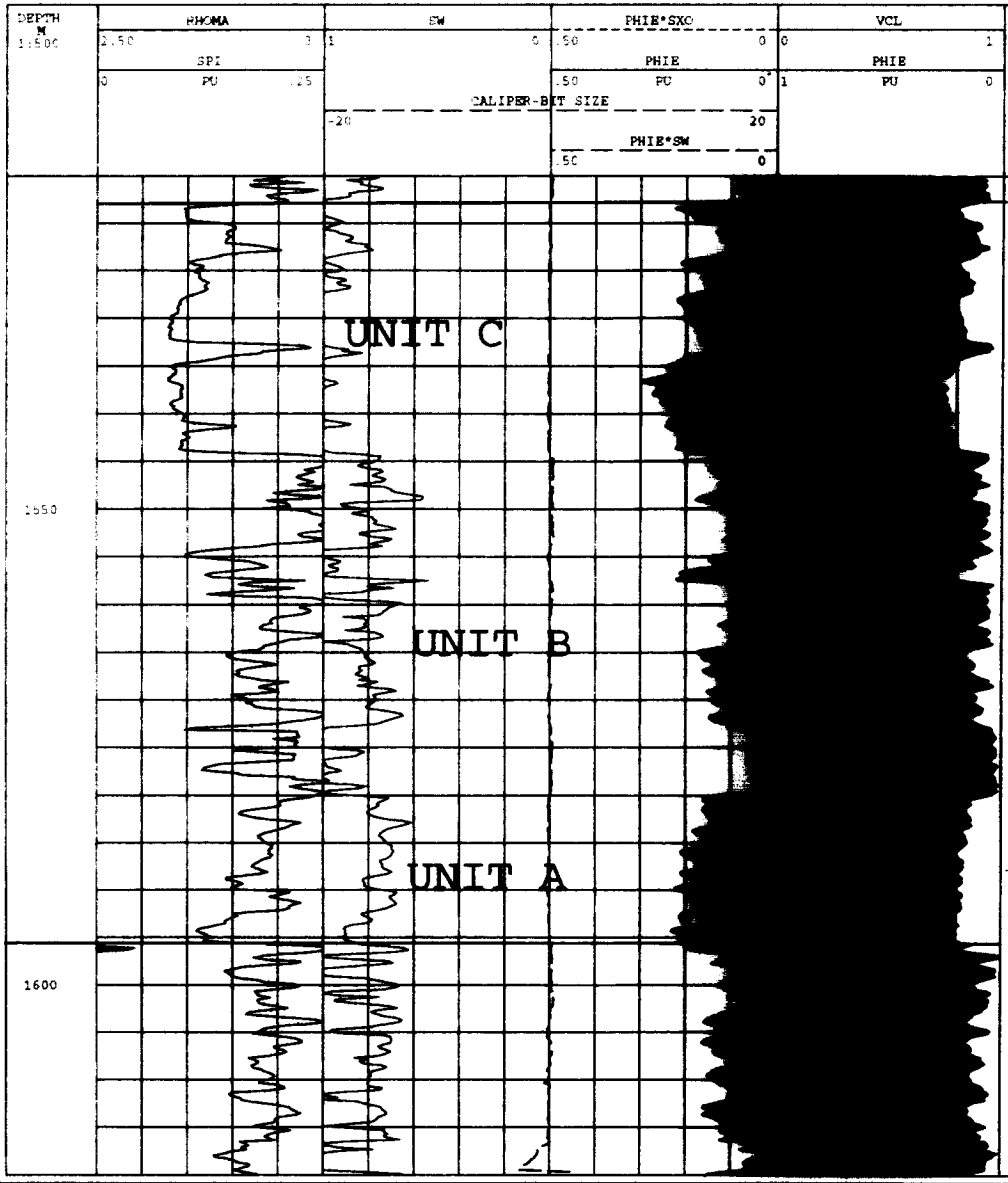
This is an enclosure indicator page.
The enclosure PE905737 is enclosed within the container PE900837 at this location in this document.

The enclosure PE905737 has the following characteristics:

ITEM_BARCODE	= PE905737
CONTAINER_BARCODE	= PE900837
NAME	= Log Evaluation for Waarre Formation
BASIN	= OTWAY BASIN
PERMIT	= PP/L1
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Log Evaluation of Waarre Formation(figure 2 of appendix 3 from WCR vol. 2) for Dunbar East-1
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W1150
WELL_NAME	= DUNBAR EAST-1
CONTRACTOR	=
CLIENT_OP_CO	= CULTUS PETROLEUM NL.

(Inserted by DNRE - Vic Govt Mines Dept)

DUNBAR EAST-1
LOG EVALUATION
WAARRE FORMATION



WAARRE FORMATION

100% SW IN GOOD CLEAN SANDS

⊕ HIGH RESIDUAL GAS

EUMERALLA

Figure-2

DUNBAR EAST-1 RFT PRESSURE PLOT

WAARRE FORMATION

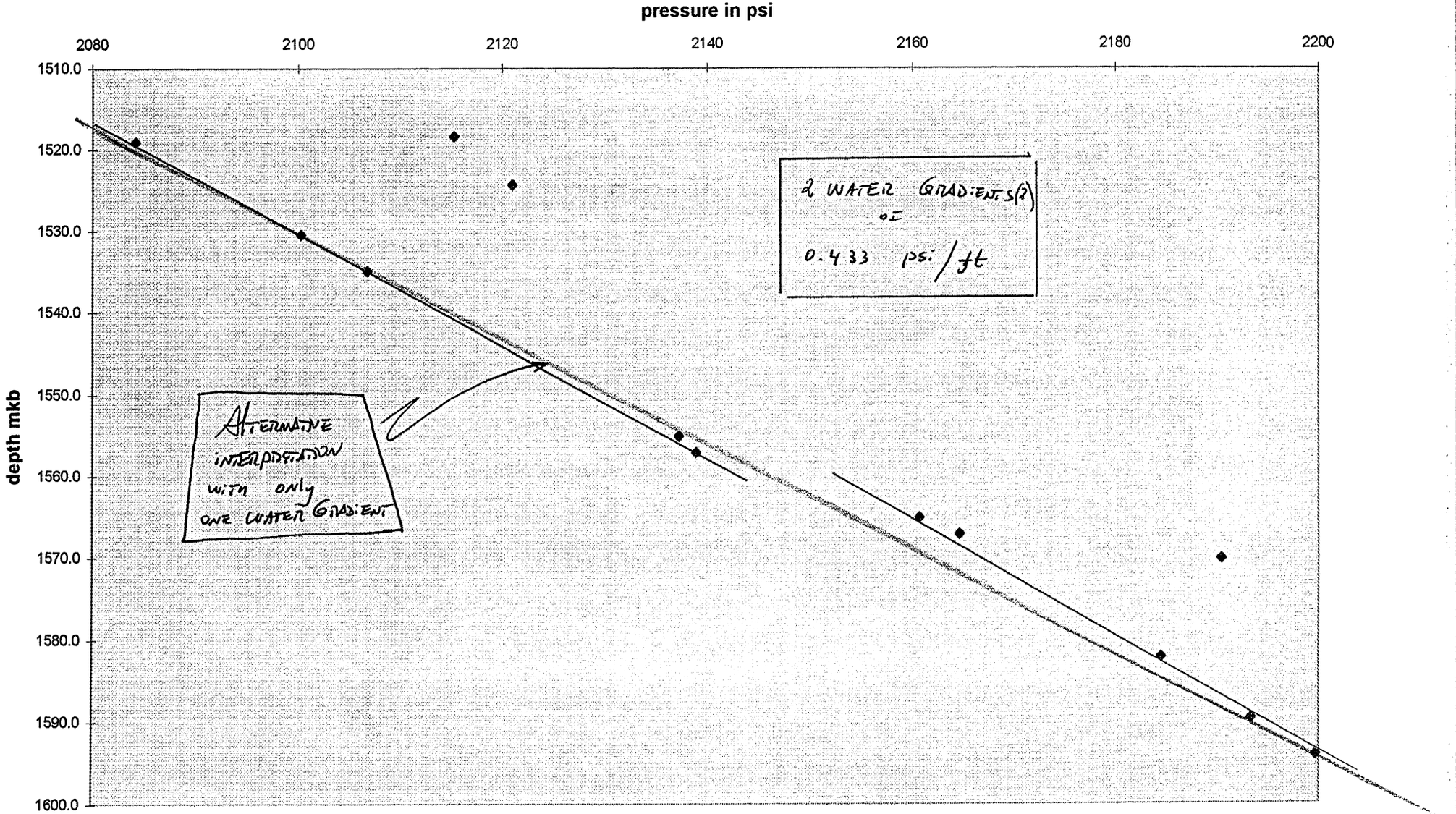


Figure-3

PE905738

This is an enclosure indicator page.
The enclosure PE905738 is enclosed within the container PE900837 at this location in this document.

The enclosure PE905738 has the following characteristics:

ITEM_BARCODE	= PE905738
CONTAINER_BARCODE	= PE900837
NAME	= Composite Log Display of Haethfeild Sandstone
BASIN	= OTWAY BASIN
PERMIT	= PP/L1
TYPE	= WELL
SUBTYPE	= COMPOSITE_LOG
DESCRIPTION	= Composite Log Display of Heathfeild Sandstone (figure 4 of appendix 3 from WCR vol. 2) for Dunbar East-1
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W1150
WELL_NAME	= DUNBAR EAST-1
CONTRACTOR	=
CLIENT_OP_CO	= CULTUS PETROLEUM NL.

(Inserted by DNRE - Vic Govt Mines Dept)

DUNBAR EAST-1

COMPOSITE LOG DISPLAY

HEATHFIELD SANDSTONE

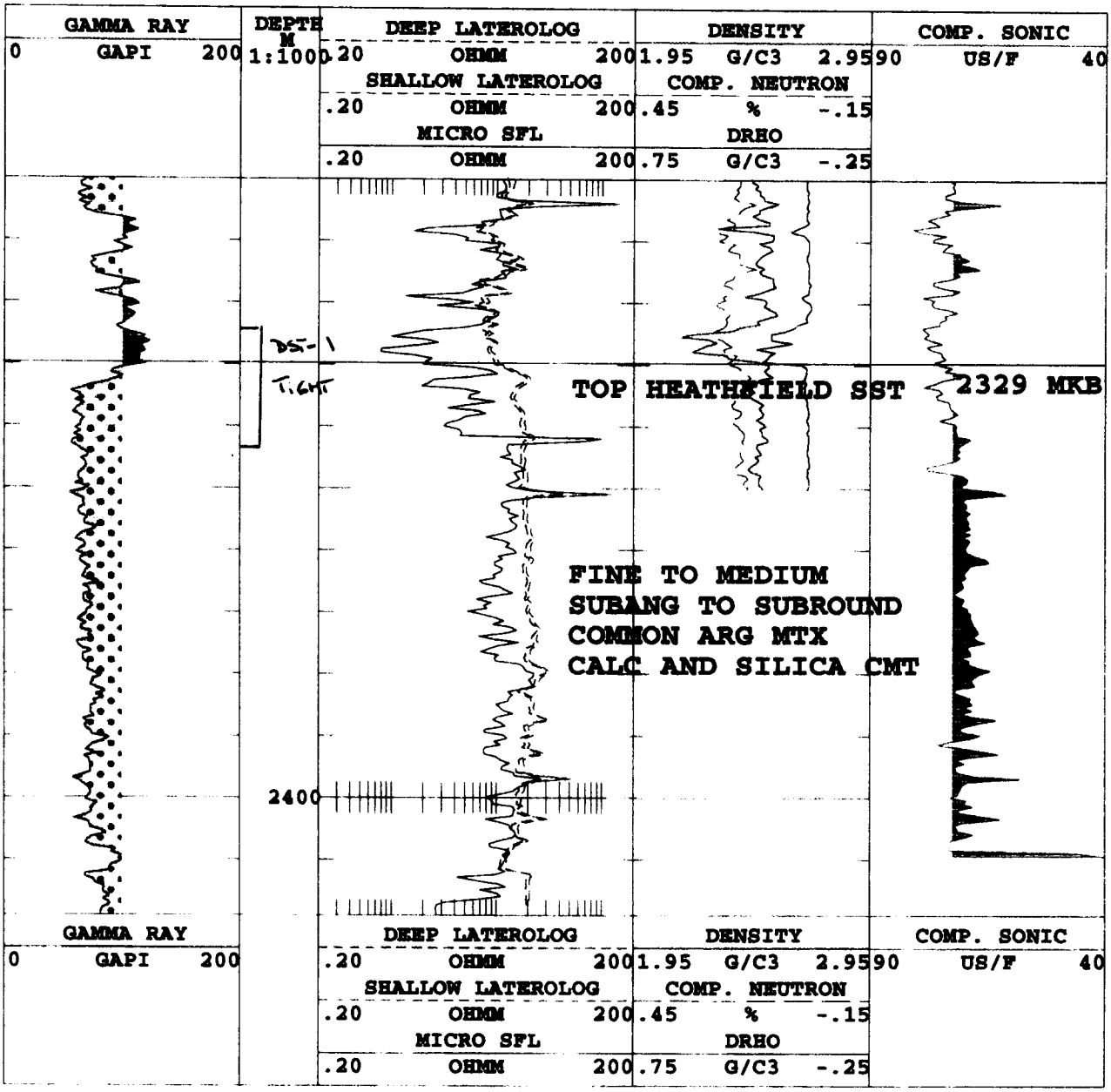


Figure-4

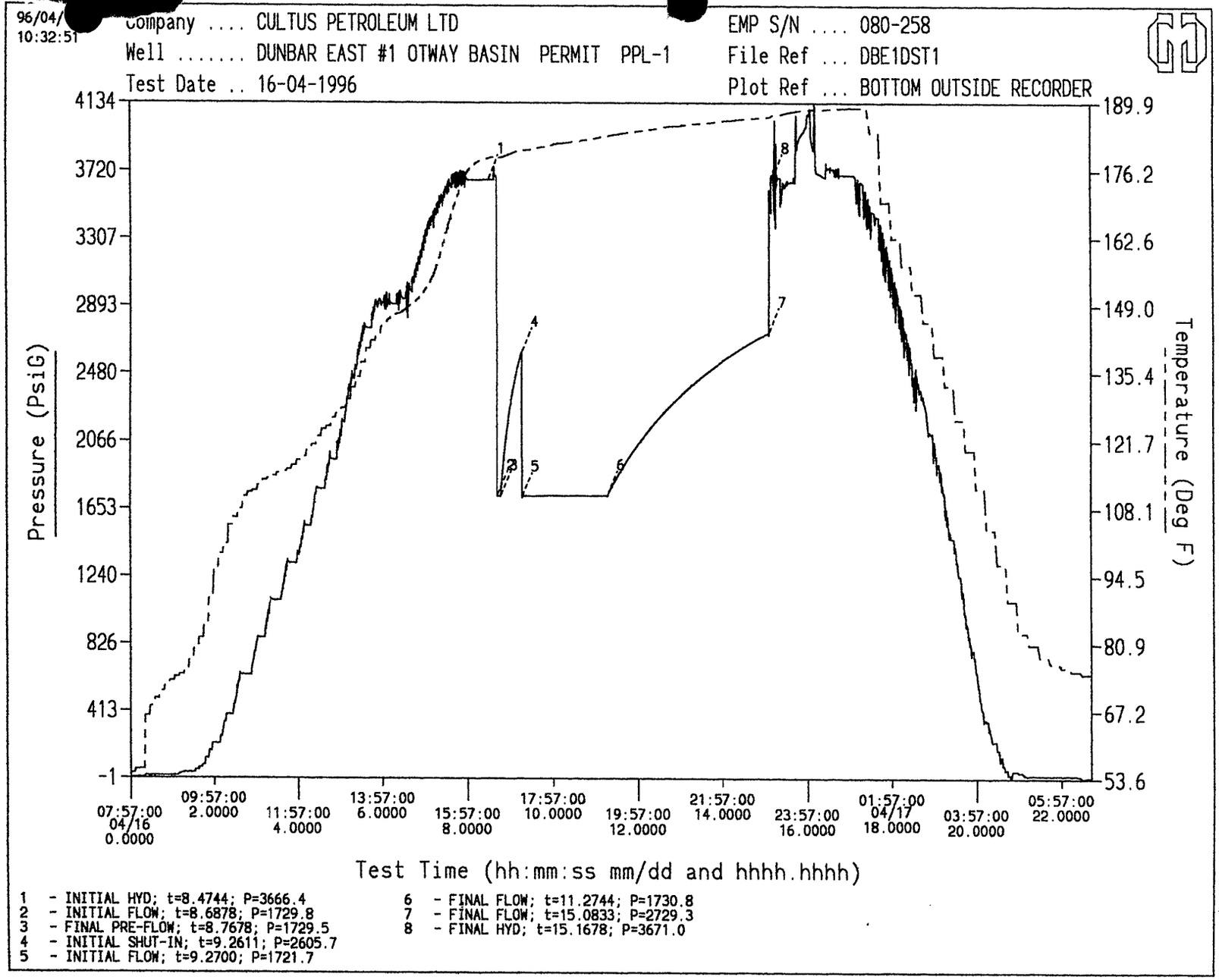

96/04/
10:32:51
Company .... CULTUS PETROLEUM LTD
Well ..... DUNBAR EAST #1 OTWAY BASIN PERMIT PPL-1
Test Date .. 16-04-1996
EMP S/N 080-258
File Ref ... DBE1DST1
Plot Ref ... BOTTOM OUTSIDE RECORDER
Pressure (PsiG)
4134
3720
3307
2893
2480
2066
1653
1240
826
413
-1
Temperature (Deg F)
189.9
176.2
162.6
149.0
135.4
121.7
108.1
94.5
80.9
67.2
53.6
07:57:00 04/16 0.0000
09:57:00 2.0000
11:57:00 4.0000
13:57:00 6.0000
15:57:00 8.0000
17:57:00 10.0000
19:57:00 12.0000
21:57:00 14.0000
23:57:00 16.0000
01:57:00 04/17 18.0000
03:57:00 20.0000
05:57:00 22.0000
Test Time (hh:mm:ss mm/dd and hhhh.hhhh)
1 - INITIAL HYD; t=8.4744; P=3666.4
2 - INITIAL FLOW; t=8.6878; P=1729.8
3 - FINAL PRE-FLOW; t=8.7678; P=1729.5
4 - INITIAL SHUT-IN; t=9.2611; P=2605.7
5 - INITIAL FLOW; t=9.2700; P=1721.7
6 - FINAL FLOW; t=11.2744; P=1730.8
7 - FINAL FLOW; t=15.0833; P=2729.3
8 - FINAL HYD; t=15.1678; P=3671.0

Figure-5

PE604076

This is an enclosure indicator page.
The enclosure PE604076 is enclosed within the container PE900837 at this location in this document.

The enclosure PE604076 has the following characteristics:

ITEM_BARCODE	= PE604076
CONTAINER_BARCODE	= PE900837
NAME	= Composite Log
BASIN	= OTWAY BASIN
PERMIT	= PP/L1
TYPE	= WELL
SUBTYPE	= COMPOSITE_LOG
DESCRIPTION	= Well Composite Log (enclosure 1 from appendix 3 of WCR vol.2--Log Evaluation Report) for Dunbar East-1
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W1150
WELL_NAME	= DUNBAR EAST-1
CONTRACTOR	=
CLIENT_OP_CO	= CULTUS PETROLEUM NL.

(Inserted by DNRE - Vic Govt Mines Dept)

PE905735

This is an enclosure indicator page.
The enclosure PE905735 is enclosed within the container PE900837 at this location in this document.

The enclosure PE905735 has the following characteristics:

ITEM_BARCODE	= PE905735
CONTAINER_BARCODE	= PE900837
NAME	= Cross Section
BASIN	= OTWAY BASIN
PERMIT	= PP/L1
TYPE	= WELL
SUBTYPE	= CROSS_SECTION
DESCRIPTION	= Well Cross Section through Dunbar-1 and Dunbar East-1 (enclosure 2 from appendix 3 of WCR vol. 2--Log Evaluation Report) for Dunbar East-1
REMARKS	= written comments included
DATE_CREATED	=
DATE_RECEIVED	=
W_NO	= W1150
WELL_NAME	= DUNBAR EAST-1
CONTRACTOR	=
CLIENT_OP_CO	=

(Inserted by DNRE - Vic Govt Mines Dept)

DRILLING FIGURES

MISSING

To be forwarded when available.