

Woodside Offshore Petroleum

Thylacine-1

16/05/01

Core-1 (2165 to 2201 mMDRT)

Cut 36 m, Recovered 35.73 m (99.3%)

Depth mMDRT	Lithology
2165 Start of Core 1 Note profile of PDC drill bit clearly visible.	SANDSTONE: medium grey, moderately hard, very fine to fine rare medium quartz grains, subangular, moderately spherical, moderately sorted to well sorted, strong siliceous cement, minor light grey argillaceous matrix, trace carbonaceous detritus and microlaminae, trace silty pyritic microlaminae, 5% visual porosity, no natural fluorescence, no cut fluorescence, trace dull off white to pale yellow crush cut.(glycol in mud?), no residue.
2166 ROP: 5.3 m/hr	SANDSTONE: light grey, friable to moderately hard, fine to coarse rare very coarse quartz grains, subangular, moderately spherical, poorly sorted, 10% siliceous cement, 10% light grey argillaceous slightly calcareous matrix, minor dark grey claystone laminae and clasts, trace pyrite, 10% visual porosity, no direct fluorescence, moderate pale yellow-white cut fluorescence (glycol in mud?), thick yellow white residual ring.
2167 ROP: 26 m/hr	SANDSTONE with intelaminated CLAYSTONE SANDSTONE: medium grey, moderately hard, predominantly very fine, minor fine, subangular, moderately spherical, well sorted 15% siliceous cement, 5% light grey argillaceous matrix, trace carbonaceous detritus, 5% visual porosity, no natural fluorescence, no cut fluorescence, trace dull off white to pale yellow crush cut.(glycol in mud?), no residue. CLAYSTONE: dark grey
2168 ROP: 20 m/hr	ARGILLACEOUS SANDSTONE: dark grey, moderately hard, very fine rare fine grained, subangular, moderately spherical, poorly sorted, 10% siliceous cement, 25% dark brown grey argillaceous matrix, trace to 5% predominantly silty to very fine rare medium and coarse carbonaceous detritus, trace micromica, trace pyrite? < 5% visual porosity, no natural fluorescence, no cut fluorescence, dull off white to pale yellow crush cut.(glycol in mud?), no residue.
2169 ROP: 18 m/hr	CLAYSTONE with rare SANDSTONE microlaminae. CLAYSTONE: dark grey, moderately hard, subblocky to angular fracture, 10% siliceous silt, 5% silty carbonaceous detritus, trace micromica, trace pyrite, No natural fluorescence, trace dull off white to pale yellow crush cut.(glycol in mud?), no residue. SANDSTONE: light grey, very fine to fine grained, tight, no natural fluorescence.
2170 ROP: 58 m/hr	SANDSTONE: light grey, friable, fine to medium quartz grains, subangular, moderately spherical, moderately to well sorted, 5% siliceous cement, 5% light grey argillaceous matrix, trace carbonaceous detritus and microlaminae, trace pyritic microlaminae, trace glauconite? Chlorite? 20% visual porosity, no direct fluorescence, moderate pale yellow-white cut fluorescence (glycol in mud?), no residue.
2171 ROP: 40 m/hr	SANDSTONE: light grey, friable, fine to medium quartz grains, subangular, moderately spherical, moderately to well sorted, 5% siliceous cement, 5% light grey argillaceous matrix, trace carbonaceous detritus and microlaminae, 20% visual porosity, no direct fluorescence, moderate pale yellow-white cut fluorescence (glycol in mud?), no residue.

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2172 ROP: 31 m/hr	SANDSTONE: light grey, friable to moderately hard, very fine to medium quartz grains, subangular, moderately spherical, moderately to sorted, 5% siliceous cement, 10% off white to light grey argillaceous matrix, trace carbonaceous detritus and microlaminae, 12% visual porosity, no direct fluorescence, dull pale yellow-white cut fluorescence (glycol in mud?), thin off white to pale yellow residual ring.
2172.82 ROP: 55 m/hr	SANDSTONE: light grey, friable, medium to very coarse quartz grains, minor quartz pebbles > 5mm, subangular, slightly to moderately spherical, weak siliceous cement, trace pyritic cement, trace light grey brown argillaceous? Matrix (possible mud invasion), trace carbonaceous material and microlaminae, trace pyritic silty laminae, 20% visual porosity, no natural fluorescence, trace pale yellow-white cut fluorescence (glycol in mud?), trace residue.
2174 ROP: 31 m/hr	SANDSTONE: light grey, friable to moderately hard, very fine to very coarse quartz grains, dominantly medium to coarse grained, subspherical to subangular slightly to moderately spherical, weak to moderate siliceous cement, 5 to 10% off white argillaceous matrix, common carbonaceous material, 15-18% visual porosity, no natural fluorescence, trace dull pale yellow-white cut fluorescence, trace thin off white to pale yellow residual ring.
2175 ROP: 29 m/hr	SANDSTONE: light grey, friable to moderately hard, very fine to very coarse quartz grains, dominantly medium to coarse grained, subangular to angular slightly to moderately spherical, weak to moderate siliceous cement, 5 to 10% off white argillaceous matrix, common carbonaceous material, 15% visual porosity, no natural fluorescence, trace dull pale yellow-white cut fluorescence, trace thin residual ring.
2176 ROP: 38 m/hr	SANDSTONE: light grey, friable to moderately hard, very fine to very coarse quartz grains, dominantly fine to coarse grained, subangular to angular slightly to moderately spherical, weak to moderate siliceous cement, 5 to 10% off white argillaceous matrix, common carbonaceous material, 15% visual porosity, no natural fluorescence, trace dull pale yellow-white cut fluorescence, trace thin residual ring.
2177 ROP: 35 m/hr	CLAYSTONE: dark grey to dark brown grey, hard, sub blocky to angular fracture, 10% siliceous silt, 5% very fine grained quartz, trace to 5% carbonaceous material, trace micromica, no natural fluorescence, thin (less than 1mm) sandstone laminations
2178 ROP: 23 m/hr	SANDSTONE: very light grey, hard, fine to medium grained, dominantly medium grained colourless quartz, sub rounded to sub angular, slightly spherical, 15 to 20% off white argillaceous matrix, strong siliceous cement, trace quartz silt, common carbonaceous specks, trace micro mica, 5% visible porosity, no natural fluorescence, no cut fluorescence, dull off white to pale yellow crush cut fluorescence, thin dull off white to pale yellow residue
2179 ROP: 21 m/hr	SANDSTONE: very light grey, hard, fine to medium grained, dominantly medium grained colourless quartz, sub rounded to sub angular, slightly spherical, 15 to 20% off white argillaceous matrix, strong siliceous cement, trace quartz silt, common carbonaceous specks, trace micro mica, 5% visible porosity, no natural fluorescence, no cut fluorescence, no crush cut fluorescence, no residue

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2180 ROP: 18 m/hr	SANDSTONE: very light grey, friable, fine to very coarse colourless quartz grains, sub angular to angular, slightly elongated, 5 to 10% off white argillaceous matrix, trace silt, trace carbonaceous fragments, trace chlorite, 15% visible porosity, no natural fluorescence, off white to pale yellow cut fluorescence, thin dull off white to yellow residual ring
2181 ROP: 20 m/hr	ARGILLACEOUS SILTSTONE: med dark grey to dark grey to slightly dark brown grey, sub blocky to sub elongate fracture, 20% argillaceous, abundant very fine to medium grained, sub angular to angular quartz, common carbonaceous specks, non calcareous
2182.04 ROP: 26 m/hr	SANDSTONE: light grey, friable, medium to very coarse quartz grains, minor quartz granules > 3mm, subangular, moderately sorted, slightly to moderately spherical, weak siliceous cement, trace pyritic cement, trace light grey brown argillaceous? Matrix (possible mud invasion), trace carbonaceous material, 20% visual porosity, no natural fluorescence, trace pale yellow-white crush cut fluorescence (glycol in mud?), trace residue.
2183 ROP: 24 m/hr	SANDSTONE: very light grey, to light grey, friable, medium to very coarse quartz grains, minor quartz granules > 3mm, subangular, moderately sorted, slightly to moderately spherical, weak siliceous cement, trace pyritic cement, trace light grey brown argillaceous? Matrix (possible mud invasion), common carbonaceous material occasionally as thin laminae, 20% visual porosity, no natural fluorescence, slow dull off white to pale yellow cut fluorescence (glycol in mud?), thin dull off white to pale yellow residue
2184 ROP: 20 m/hr	SANDSTONE WITH CARBONACEOUS LAMINAE (up to 1 mm): very light grey to light grey, moderately hard, fine to medium, occasionally very fine grained colourless quartz, sub angular to sub rounded, sub spherical, moderately sorted, 10 to 15% off white to light brown argillaceous matrix, moderate siliceous cement, trace silt, trace carbonaceous specks, trace dark brown lithics, trace micromica, 7% visible porosity, no natural fluorescence, slow dull off white to pale yellow cut fluorescence. thin dull off white to pale yellow residue.
2185 ROP: 19 m/hr	SANDSTONE: very light grey to very light brown grey, friable, very fine to very coarse colourless quartz grains, minor quartz granules > 3mm, subangular, poorly sorted, sub angular to sub rounded, sub spherical, 10 to 15% off white to light brown argillaceous matrix, silty, trace carbonaceous specks, trace micromica, trace dark brown lithic fragments, 20 to 25% visible porosity with occasional pore throats of over 0.25 mm, trace dull yellow pinpoint to patchy natural fluorescence, slow dull off white to pale yellow cut fluorescence, thin dull off white to pale yellow residue.
2186 ROP: 28 m/hr	SANDSTONE: very light grey, friable, very fine to coarse, dominantly fine to medium colourless quartz grains, sub angular, slightly to moderately spherical, weak siliceous cement, trace to 5% off white to pinkish grey argillaceous matrix, trace carbonaceous grains, trace dark brown lithic fragments, trace disseminated pyrite (possible cement) 15% visible porosity, no natural fluorescence, slow dull off white to pale yellow cut fluorescence. thin dull off white to pale yellow residual ring. Sandstone contains 3mm clast of mudstone.

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Depth mMDRT	Lithology
2187 ROP: 20 m/hr	SANDSTONE: very light grey, friable, very fine to coarse, dominantly fine to medium colourless quartz grains, sub angular, slightly to moderately spherical, weak siliceous cement, trace to 5% off white to pinkish grey argillaceous matrix, trace carbonaceous grains, trace dark brown lithic fragments, trace disseminated pyrite (possible cement) 10-15% visible porosity, no natural fluorescence, slow dull off white to pale yellow cut fluorescence. thin dull off white to pale yellow residual ring. Sandstone contains 5mm clast of argillaceous sandstone.
2188 ROP: 27 m/hr	SANDSTONE: very light grey to light grey, friable to moderately hard, very fine to medium, dominantly fine to medium colourless to white quartz grains, occasionally iron stained, moderately well sorted, sub rounded to sub angular, slightly spherical, 5–10% off white to very light grey, occasionally light redish brown argillaceous matrix, weak siliceous cement, trace calcareous cement, trace carbonaceous fragments, trace glauconite, 12-15% visible porosity, trace to 5% pinpoint moderately bright yellow direct fluorescence, slow dull off white to pale yellow cut fluorescence.
2189 ROP: 22 m/hr	CLAYSTONE: dark grey, moderately hard, sub blocky to angular fracture, 10% siliceous silt, trace to 5% carbonaceous material, trace very fine to fine quartz grains, trace micromica, trace disseminated pyrite, no natural fluorescence, no cut fluorescence. Note non-calcareous
2190 ROP: 16 m/hr	CLAYSTONE: dark grey, moderately hard, sub blocky to angular fracture, 10% siliceous silt, trace to 5% carbonaceous material, trace micromica, trace disseminated pyrite, no natural fluorescence, no cut fluorescence. Note non-calcareous
2191.2 ROP: 14 m/hr	CLAYSTONE: dark grey, moderately hard, sub blocky to angular fracture, 10% siliceous silt, trace to 5% carbonaceous material, trace micromica, trace disseminated pyrite, no natural fluorescence, no cut fluorescence. Note non-calcareous.
2192 ROP: 17 m/hr	ARENACEOUS CLAYSTONE: medium dark grey, moderately hard, sub blocky to angular fracture, 20% colourless quartz, 5% silt, trace to 5% carbonaceous specks, trace micromica, trace glauconite, trace disseminated and nodular pyrite.
2193 ROP: 18 m/hr	SANDSTONE: medium light grey, friable, very fine to medium grained, dominantly medium grained colourless quartz, moderately well sorted, subangular to subrounded, sub angular to sub rounded, sub spherical, trace off white to very light yellowish grey argillaceous matrix, weak siliceous cement, weak calcareous cement, trace silt, trace carbonaceous specks, common pyrite, 18% visual porosity, no natural fluorescence, no cut fluorescence, no residual ring.
2194 ROP: 18 m/hr	SANDSTONE: medium light grey, friable, very fine to medium grained, dominantly medium grained colourless quartz, moderately well sorted, subangular to subrounded, sub angular to sub rounded, sub spherical, trace off white to very light yellowish grey argillaceous matrix, weak siliceous cement, weak calcareous cement, trace silt, trace carbonaceous specks, common pyrite, 18% visual porosity, no natural fluorescence, slow dull off white to dull pale yellow cut fluorescence, thin off white to pale yellow residual ring.

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2195 ROP: 10 m/hr	<p>SANDSTONE INTERBEDDED WITH CLAYSTONE</p> <p>SANDSTONE: medium light grey, friable, very fine to medium grained, dominantly medium grained colourless quartz, subangular to subrounded, sub angular to sub rounded, sub spherical, off white to very light yellowish grey argillaceous matrix, weak siliceous cement, trace silt, trace carbonaceous specks, trace pyrite, trace light to dark brown lithic fragments, 15% visual porosity, no natural fluorescence, slow dull off white cut fluorescence, thin off white to pale yellow residual ring.</p> <p>CLAYSTONE: dark grey, moderately hard, sub blocky to angular fracture, 10% siliceous silt, trace to 5% carbonaceous material, trace micromica, trace disseminated pyrite, no natural fluorescence, no cut fluorescence. Note non-calcareous.</p>
2196 ROP: 13 m/hr	<p>SANDSTONE WITH CLAYSTONE LAMINATIONS (2-4 mm) AND CARBONACEOUS MICRO LAMINATIONS</p> <p>SANDSTONE: Medium light grey, hard, very fine to medium, dominantly fine grained colourless quartz, sub angular to sub rounded, slightly spherical to slightly elongated, moderately well sorted, 10-20% off white to very light grey argillaceous matrix, trace quartz silt, abundant carbonaceous specks, trace light to dark brown lithic fragments, trace pyrite, trace micromica, 7% visual porosity, trace dull off white to pale yellow fluorescence, slow off white to pale yellow cut, thin pale yellow residual ring.</p> <p>ARENACEOUS CLAYSTONE: medium grey to medium dark grey, hard, very fine to medium, dominantly fine grained colourless quartz, abundant carbonaceous flecks, common pyrite, grades to carbonaceous claystone and argillaceous sandstone in parts.</p>
2197 ROP: 21 m/hr	<p>ARGILLACEOUS SANDSTONE: medium light grey, hard, very fine to medium, dominantly fine grained colourless quartz, sub angular to sub rounded, slightly spherical to slightly elongated, moderately well sorted, trace quartz silt, trace carbonaceous specks, trace light to dark brown lithic fragments, trace pyrite, trace micromica, rare trace glauconite, 7% visual porosity, grades to sandstone, no natural fluorescence, no cut fluorescence, no crush fluorescence, no residue.</p>

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Depth mMDRT	Lithology
2198 ROP: 9 m/hr	<p>SANDY CLAYSTONE WITH ARGILLACEOUS SANDSTONE MICROLAMINAE (1 to 2 mm)</p> <p>SANDY CLAYSTONE: medium grey, hard, subblocky to angular fracture, 20% very fine to fine grained, occasionally medium grained colourless quartz, silty, trace carbonaceous specks, trace light to dark brown lithic fragments, trace pyrite, trace micromica, grades to argillaceous sandstone as below.</p> <p>ARGILLACEOUS SANDSTONE: medium light grey to medium grey, hard, very fine to fine grained, occasionally medium grained colourless quartz, sub angular, moderately to well sorted, strong siliceous cement, abundant light grey argillaceous matrix, silty, trace carbonaceous specks, trace light to dark brown lithic fragments, rare trace glauconite, trace pyrite, trace micromica, 5% visual porosity, grades to sandy claystone as above, no natural fluorescence, no cut fluorescence, dull off white to pale yellow crush cut.(glycol in mud?), thin off white to pale yellow residue..</p>
2199 ROP: 11 m/hr	<p>SANDSTONE: light grey to rarely yellowish grey, hard, fine to medium grained, occasionally very fine grained colourless quartz, sub angular to sub rounded, slightly spherical to slightly elongated, moderately to well sorted, strong calcareous cement, minor off white to light grey argillaceous matrix, trace light to dark brown lithic fragments, trace pyrite, rare trace glauconite, 5% visual porosity, no natural fluorescence, trace pale yellow-white crush cut fluorescence (glycol in mud?), thin off white to pale yellow residue.</p>
2200 ROP: 17 m/hr	<p>ARGILLACEOUS SANDSTONE WITH CARBONACEOUS MICRO LAMINAE</p> <p>ARGILLACEOUS SANDSTONE: medium dark grey, moderately hard to hard, very fine grained, occasionally medium grained colourless quartz, sub angular, moderately to well sorted, strong siliceous cement, 20% light grey argillaceous matrix, trace carbonaceous specks, trace light to dark brown lithic fragments, rare trace glauconite, 5% visual porosity, no natural fluorescence, no cut fluorescence, dull off white to pale yellow crush cut.(glycol in mud?), no residue.</p>
2200.73 ROP: 14 m/hr End of Core 1	<p>SANDSTONE WITH CLAYSTONE LAMINAE (1 to 3 mm)</p> <p>SANDSTONE: light to medium grey, moderately hard, very fine to fine grained quartz, subangular, moderately to well sorted, strong siliceous cement, minor pyritic cement, rare light grey argillaceous matrix, minor very fine to medium carbonaceous material, minor light grey to off white lithics? (Partially altered feldspars?), 7% visual porosity, no natural fluorescence, trace slow pale yellow-white crush cut fluorescence (glycol in mud?), trace residue.</p> <p>CLAYSTONE: dark grey, moderately hard, subblocky to angular fracture, 10% siliceous silt, trace to 5% carbonaceous material, trace micromica, trace disseminated pyrite, no natural fluorescence, no cut fluorescence. Note non-calcareous.</p>