

APPENDIX 2.

EAST MEREENIE NO. 7.

CORE DESCRIPTIONS.

Core No.1:	4012 to 4022 feet
Core No.2:	4224 to 4235 feet
Core No.3:	4235 to 4235.5 feet
Core No.4:	4628 to 4683 feet
Core No.5:	4736 to 4761.7 feet

CORE NO. 1 - 4012 to 4022 ft. CUT 10 ft. RECOVERY 9.5 ft.

Interval: 4012 to 4022 ft. (10 ft.)

Core Rates: 22, 24, 6, 12, 12, 8, 10, 12, 25, 35.

Lithology: Thinly interbedded sandstone and siltstone with a mottled texture. The sandstone has abundant dewatering distortion of the bedding with the sands being dislocated into elongated pods giving the mottled texture.

Sandstone: Light grey, very hard, very fine grained, subangular, moderately to well sorted, quartzose, with minor glauconite and trace of carbonaceous detritus, minor white argillaceous matrix and common silica cement.

Siltstone: Grey-brown, very hard, subfissile, finely micaceous, very argillaceous.

Porosity and Permeability: Planes between the sandstone and siltstone portions tend to be partially open and gas was seen bubbling from these planes. Intergranular porosity and permeability is very low.

Hydrocarbons: Minor hydrocarbon odour. Weak pale white cut and fluorescence.

CORE NO. 2 - 4224 to 4235 ft. CUT 11 ft. RECOVERY 7.9 ft.

Interval: 4224 - 4230.3 ft. (6.3 ft.)

Core Rates: 19, 19, 16, 16, 12, 14, 16 (min/ft)

Lithology: Thinly interbedded thin sandstone, shale, and bioturbated mixed sand shale horizons. In the undisturbed zones cross bedding and ripple cross stratification are common. The shales are finely laminated.

Shale: Very dark grey-black, very hard, fissile, very carbonaceous, silty in part, very finely micaceous, trace pyrite.

Sandstone: light grey, very hard, very fine, subangular, well sorted, quartzose, minor mica, moderately carbonaceous and argillaceous in part. Ubiquitous silica cement.

Porosity and Permeability: Very poor porosity and permeability.

Hydrocarbons: Nil.

CORE NO. 2 - 4224 to 4235 ft. CUT 11 ft. RECOVERY 7.9 ft. (Contd.)

Interval: 4230.3 - 4231.9 ft. (1.6 ft.)

Core Rates: 16, 17 (min/ft)

Lithology: Massive buff, very hard, fine grained quartzose sandstone.

Sandstone: buff, very hard, medium grained, subangular, well sorted, quartzose, trace carbonaceous detritus, minor white argillaceous matrix, very strong silica cement.

Porosity and Permeability: Trace of intergranular porosity. Poor permeability.

Hydrocarbons: No hydrocarbon odour. Weak pale yellow and white fluorescence and cut.

CORE NO. 3 - 4235 to 4235.5 ft. CUT 0.5 ft. RECOVERY 0.25 ft.

Interval: 4235 - 4235.5 ft.

Core Rates: N/A.

Lithology: Massive, buff, very hard, medium grained quartzose sandstone. The matrix is white and argillaceous and the rock has a strong silica cement.

Porosity and Permeability: Poor due to silica cement and white argillaceous matrix.

Hydrocarbons: Slight hydrocarbon odour and a weak white fluorescence and cut.

CORE NO. 4 - 4628 to 4683 ft. CUT 55 ft. RECOVERY 55 ft.

Interval: 4628 - 4648 ft. (20 ft.)

Core Rates: 38, 20, 14, 18, 16, 18, 18, 16, 20, 20, 22, 20, 18, 16, 15, 14, 14, 12, 18, 20 (min/ft).

Lithology: Buff massive quartzose sandstone with sporadic pink spotting. Commonly finely crosslaminated with wisps of micaceous siltstone. The top 5 ft has a few scattered black shale erratics. The crosslaminae are generally planar and dip at a maximum of 30° to the horizontal.

Sandstone: Quartzose, very siliceous, very fine to fine grained, subrounded, moderately to well sorted, minor mica and minor green and black accessories. Siliceous cement. Pink sideritic spots.

Siltstone: Grey, grey white, argillaceous and micaceous, subfissile.

Porosity & Permeability: Porosity is poor throughout. Siliceous cement has destroyed most primary intergranular porosity. Minor permeability is evident along the contacts of the siltstone crosslaminae with the sandstone.

Hydrocarbons: Hydrocarbon odour is light throughout. Light brown to clear crude sweats out of core over interval 4638 to 4648 ft. White even and white spotty fluorescence.

CORE NO. 4 - 4628 to 4683 ft. CUT 55 ft. RECOVERY 55 ft.

Interval: 4648 - 4652 ft. (4 ft.)

Core Rates: 26, 30, 20, 16 (min/ft).

Lithology: Dark grey to green chloritic micaceous silty shales with minor bands of red brown micaceous material is relatively coarse and diagenetic. The shales are subfissile.

Porosity & Permeability: Nil porosity, very poor permeability. May be minor permeability along parting planes.

Hydrocarbons: Nil.

CORE NO. 4 - 4628 to 4683 ft. CUT 55 ft. RECOVERY 55 ft.

Interval: 4652 - 4672 ft. (20 ft.)

Core Rates: 16, 15, 15, 16, 20, 42, 34, 66, 28, 54, 44, 45,
50, 40, 40, 44, 36, 40, 40, 60 (min/ft).

Lithology: White to buff quartzose, siliceous and slightly
micaceous fine grained sandstone. Massive with
minor subhorizontal silty crosslaminae.

Sandstone: White, buff, quartzose, siliceous
and slightly micaceous, fine to very fine
grained, subrounded to subangular. Siliceous
cement. Green and black accessories tight.

Siltstone: Grey, micaceous and chloritic in
part.

Porosity &
Permeability: Porosity is poor to very poor intergranular
because of siliceous cement. Best permeability
is along contacts with siltstone crosslaminae.

Hydrocarbons: Faint to moderate odour throughout. Sandstone
freely sweating light brown to clear crude from
4652 to 4669 ft. Even white fluorescence.

CORE NO. 4 - 4628 to 4683 ft. CUT 55 ft. RECOVERY 55 ft.

Interval: 4672 - 4683 ft. (11 ft.)

Core Rates: 74, 56, 50, 40, 50, 48, 60, 48, 40, 36, 34
(min/ft)

Lithology: Grey and white to buff crosslaminated silty sandstone, sandstone and siltstone. Multi-directional and subhorizontal siltstone laminae in the sandstones and minor horizontal laminated siltstones with rare shales. Diagenetic mica is common along parting planes. Some sandstones are mottled pink with sideritic 2° mineralization.

Sandstone: White to grey, quartzose, siliceous, fine to very fine, subrounded to sub-angular, moderately sorted, common green and black accessories. Minor pink sideritic blotches. Siliceous cement. Very tight.

Siltstone: Black, dark green, micaceous and chloritic. Common large flakes of diagenetic mica along parting planes. Common black accessories.

Shale: Black, dark green, micaceous, sub-fissile.

Porosity &
Permeability: All lithologies are very tight.

Hydrocarbons: Nil.

CORE NO. 5 - 4736 to 4761.7 ft. CUT 25.7 ft. RECOVERY 25.7 ft.

Interval: 4736 - 4742 ft. (6 ft.)

Core Rates: 40, 30, 26, 28, 28, 38 (min/ft).

Lithology: Interbedded and laminated sandstone, siltstone and shale. Laminae are thin (1/4" max) and often inclined at low angles to the horizontal. Current direction is variable. Diagenetic mica is abundant along bedding planes and crosslaminae.

Sandstone: 40% of interval.

Grey, white, red spotted in part. Quartzose siliceous, very fine grained to fine grained, subrounded moderately sorted, siliceous cement, siderite red spots. Tight.

Siltstone: Red, green, quartzose, chloritic and micaceous. 30% of interval.

Shale: As for siltstone. 30% of interval. some very micaceous.

Porosity & Permeability: Nil throughout the section. Minor permeability along some bedding planes.

Hydrocarbons: No odour but faint sweating of oil along few bedding planes.

CORE NO. 5 - 4736 to 4761.7 ft. CUT 25.7 ft. RECOVERY 25.7 ft. (Contd.)

Interval: 4742 - 4747 ft. (5 ft.)

Core Rates: 28, 26, 22, 26, 36 (Min/ft).

Lithology: Massive, buff and red spotted sandstone with minor silty and micaceous crosslaminae. The crosslaminae are generally planar and sometimes very faint. They are also silty and often micaceous.

Sandstone: White and buff with red spots, quartzose, siliceous, siderite spots. Fine grained, subrounded, moderately to well sorted, siliceous cement. Minor chlorite, mica and black opaque accessory minerals.

Porosity & Permeability: Porosity is generally poor although the interval 4743 - 4746 ft. develops minor porosity. Permeability is evident along the crosslaminations probably at the contact of the sandstone and silty crosslaminations.

Hydrocarbons: Moderate to strong hydrocarbon odour throughout and weak to copious amounts of oil bleeding from the core. Even white and sometimes spotty white fluorescence.

CORE NO. 5 - 4736 to 4761.7 ft. CUT 25.7 ft. RECOVERY 25.7 ft. (Contd.)

Interval: 4747 - 4757 ft. (10 ft.)

Core Rates: 41, 28, 42, 46, 50, 34, 50, 42, 62, 60 (min/ft).

Lithology: Buff and grey sandstones with common grey green crosslamination of siltstone and minor green and red laminated siltstone and shale beds. Both planar and small scale festooned cross-stratification is present some at angles as high as 45° to horizontal. The sandstones, siltstones and shales are sometimes mottled a grey green colour. The sandstones are spotted with small red siderite accumulations. Occasional angular shale clasts occur within the sandstones.

Sandstone: Buff, white, spotted pink sometimes grey very fine grained to fine grained occasionally medium grained, subrounded, moderately sorted, siliceous cement, green and black accessory minerals, occasional mica along crosslaminae.

Siltstone: Grey, green, some reddish, micaceous, some chlorite, sandy in part.

Shale: As for siltstone.

Porosity & Permeability: No visible porosity. Permeability estimated to be poor.

Hydrocarbons: One or two zones with very light sweat of oil along bedding planes. No odour. No fluorescence.

CORE NO. 5 - 4736 to 4761.7 ft. CUT 25.7 ft. RECOVERY 25.7 ft. (Contd.)

Interval: 4757 - 4761.7 ft. (4.7 ft.)

Core Rates: 70, 72, 52, 60, 56 (min/ft).

Lithology: Buff, white, red spotted and crosslaminated sandstone with minor grey green siltstone horizon. Crosslaminae are present but not abundant. They are planar and inclined at a maximum of 30% to horizontal. Crosslaminae are commonly silty and micaceous.

Sandstone: Buff, white, red spotted, quartzose siliceous, sideritic. Fine grained to very fine grained, moderately sorted, sub-rounded. Siliceous cement with minor green and black opaque accessory minerals.

Siltstone: Grey, green, firm and micaceous especially along bedding planes.

Porosity & Permeability: Porosity is poor but good permeability is evident along crosslaminations where gas and oil is clearly sweating out.

Hydrocarbons: Copious oil sweating from interval 4758 - 4760.5 ft. especially along crossbedding. Minor bubbles of gas also present. Good odour throughout whole sandstone section. Even white and spotty white fluorescence.