

EAST JOHNNY'S CREEK NO. 1 WELLCORE DESCRIPTIONS

Core No. 1: 610' - 614' recovered 1'5"

Coring Times: 49, 38, 34, 45 mins./ft.

1'5" Interbedded grey Sandstone, minor black Shale, scattered worm tubes: Sandstone is white, light grey, fine grained, occasionally medium grained, well sorted, siliceous, quartz is clear, angular to sub-rounded. Minor scattered patches pyrite, Shale is dark grey, black, micaceous, argillaceous. Streaks and patches of argillaceous material are scattered throughout sand sections of core, some minor scattered stylolites. Worm tubes are scattered at random angles through core. Core is approximately 80% Sandstone and 20% Shale. The Shale being thin (up to 2") wavy interbeds scattered through Sandstone. Minor vuggy patches are present in Sandstone but these may be due to Shale washing out. Interval tight, purple sheen fluorescence.

Dip 0°.

Core No. 2: 1836' - 1848' recovered 12'

Coring Times: 13, 16, 13, 10, 10, 10, 8, 12, 12, 11, 10  
15 mins./ft.

Interbedded Sandstone, Dolomite and Siltstone (Shale in part). Top 2' Interbedded Sandstone and Shale. Sandstone is grey, fine to medium grained, medium sorting, quartz is clear, greyish, angular to sub-rounded, slightly micaceous, slightly dolomitic. Grey cementing material appears to be very fine grained to silty quartz with dolomitic material. Shale is black, argillaceous, very micaceous, grades to Siltstone in part. Sandstone and Shale in this interval are in equal percentages and are thinly bedded (up to 4"). Small patches ( $\frac{1}{2}$ " across), of clear gypsum crystals are scattered through interval.

3'6" Silty Dolomite and Shale. (90% Dolomite 10% Shale). Dolomite is very sandy to silty, grey, dense, and finely crystalline in part, in general section is silty Dolomite with scattered patches of fine to coarse grained sandy Dolomite. Shale is in thin lenses and partings and is black, argillaceous, very micaceous. Grades to Siltstone in part. Scattered patches clear gypsum crystals occur (up to  $\frac{1}{2}$ " across) silty Dolomite very rarely grades to pure Dolomite and is in part a dolomitic Siltstone. Sand grains range from silt to coarse and are angular to sub-rounded.

7' Dolomite, Sandstone and Shale (Siltstone in part). This section is thinly interbedded and overall is made up of approximately 20% Dolomite, 50% Sandstone and 30% Shale. Dolomite is grey, sometimes brown, dense, finely crystalline, very silty in part, sandy in part. Sandstone is grey, fine to medium grained, occasionally coarse, medium to poor sorting, very dolomitic, micaceous, quartz is clear, greyish, angular to sub-rounded. Shale is dark grey, black, grades to Siltstone in part, argillaceous, very micaceous. Shale is scattered through interval as thin lenses patches and

Core No. 2: (cont.)

partings. Very minor patches gypsum scattered at random through interval. Bedding (particularly Shale and Siltstone) over part of interval appears contorted (slump like) appears to be some random oriented worm tubes scattered through interval.

Bottom 6" Dolomite, partly silty to sandy, grey, dense, patches and partings dark grey, black, argillaceous, micaceous, Shale and Siltstone, small patches brown dolomitic crystals (rhombs) up to 1" across, minor patches of clear gypsum occur scattered through interval.

Overall core is tight. Core in general is section of thinly bedded Dolomite, dolomitic Siltstone and Sandstone and Shale (Siltstone in part). Bedding is flat except for local contortions noted above. Dolomite ranges from silty to sandy and is rarely pure. Gypsum noted above is in well developed crystal form and appears to be scattered throughout interval and is generally associated with more Dolomite sections.

Interval tight, very minor patches yellow mineral fluorescence. Very slight bluish sheen fluorescence in scattered patches (may be due Dolomite or gypsum).

Dip 0°.

Core No. 3: 2215' - 2230' recovered 15'

Coring Times: 12, 9, 6, 7, 8, 9, 8, 9, 8, 13, 8, 9, 6,  
15, 14 mins./ft.

White, brown Sandstone with interbeds lenses and patches brown and green Siltstone and Shale.

Top 3'7" Sandstone with minor Shale inclusions and lenses. Sandstone white, brown, pink brown, fine to medium grained, well (mainly) to medium sorted, dolomitic to calcareous, some black argillaceous inclusions, faintly glauconitic in part. Appears to have slight porosity (maximum 3%) but little permeability. Quartz is clear, frosted, brownish, pink brown, angular to sub-rounded. Minor amount brown, dense Dolomite scattered in grains through quartz. Minor inclusions Shale, green (mainly) some brown, partly micaceous, usually occurs in patches up to 1/2" across. Small lenses red-brown Shale (micaceous) at top of interval (in top 1') appears to be faintly current bedded (sets up to 8°).

3'9" Interbedded Sandstone and Shale with patches and including Siltstone and Shale.

Sandstone: brown, white, very fine to medium grained, well (mainly) to medium sorted, quartz clear, frosted, brownish, angular to sub-rounded, generally clean Sandstone, dolomitic, with some scattered. Brown dense dolomitic grains. Occasional coarse quartz grains around Shale inclusions, thin interbeds Shale scattered throughout interval.

Shale is brown minor green, platy, micaceous, grades to Siltstone in part (minor). Some brown Shale inclusions up to 1 1/2" across scattered through lower half of interval (inclusions are usually ellipsoid with longer axis parallel

Core No. 3: (cont.)

to bedding). Scattered streaks and lenses brown, green, micaceous Siltstone and Shale through interval (these Siltstone patches are not continuous and appear to be due to extremely local variation in sedimentary conditions).

Bottom 7'8" brown, white Sandstone with very minor lenses patches and inclusions of shale. Sandstone is white, minor brown, generally clean fine to medium grained, well to medium sorted, quartz clear, frosted brownish, angular to sub-rounded, dolomitic, minor brown dense dolomite grains in Sandstone minor black inclusions of argillaceous material (possibility this may be heavy mineral). Lenses and patches up to 1" across green Shale inclusions. Shale is micaceous in part but in part appears to be cementing material around quartz grains. Some thin lenses brown, very micaceous Shale scattered through interval (mainly in bottom 2').

Sandstone throughout core fractures around quartz grains and is slightly friable. Patchy intergranular porosity throughout core is slight (maximum 5%) but little permeability is apparent. Vuggy porosity in centre section of core around Shale inclusions may be quite good.

Very slight intergranular porosity in top of interval (approximately 3-5%). Very slight scattered purple with some yellow fluorescence (mineral). Interval generally tight, slight intergranular porosity in centre section of core (3%). Some vuggy porosity around Shale inclusions (up to 10%). Bottom Sandstone section of core has very slight porosity (patches) but does not appear permeable.

Dip 0° - 3°:

Core No. 4: 3393' - 3408' recovered 15'

Coring Times: 20, 13, 13, 14, 13, 12, 13, 12, 12, 15, 14,  
16, 15, 16, 17 mins./ft.

15' Sandstone with very minor Shale lenses and patches near bottom of interval. Sandstone brown, minor white (patches generally) fine to medium grained good (mainly) to medium sorting, quartz is clear, frosted, brownish, angular to sub-rounded, dolomitic, very slightly micaceous in part. Slight trace dense brown Dolomite grains, minor black argillaceous inclusions scattered through Sandstone. Bottom 1' has lenses and patches Shale, green, brown, platy micaceous occurring in ellipsoid inclusions up to 1" across (long axis usually parallel to bedding). Faint trace current bedding (sets up to 10°). This may be illusionary. Sandstone is generally clean and has slight evidence of permeability (soaks up water) however, it appears tight under the binocular microscope. Minor lenses of brown Siltstone occur (these are up to 1" long and are not continuous) in bottom half of interval. Interval is tight with Sandstone breaking around quartz grains. Some thin streaks occur (up to 1/4" thick) containing high concentration of black rounded (pellets) inclusions. These may be argillaceous, but appear to be heavy mineral (probably ilmenite?). Colouring throughout core is patchy with brown predominate grading through pink brown to white.

Very slight scattered blue, yellow fluorescence (mineral). Interval generally tight.

Dip 0°.

Core No. 5: 4359' - 4375' recovered 14'10"

Coring Times: 10, 15, 10, 9, 8, 9, 8, 7, 8, 9, 7, 7, 9, 7,  
6, 6 mins./ft.

14'10" Shale: Red, minor brown, very platy, breaks into thin laminations (poker chips) is very micaceous, some clear (white) mica, some bronze (brown) mica which may be biotite? Slightly dolomitic throughout. Grades in part to Siltstone (bottom of interval) without altering nature of sediment (grain size difference). Core contains very scattered minor black grains which may be heavy mineral but possibly is some quartz form. Shale is uniform throughout and is very platy, and reddish purple in part.

No fluorescence, interval tight.

Dip 0°.

Core No. 6: 5091' - 5113' recovered 2'

Coring Times: 5, 9, 10, 8, 5, 5, 6, 6, 4, 5, 5, 6, 9, 6, 5,  
5, 4, 4, 5, 11, 7, 6 mins./ft.

2' highly fractured green Shale: Shale is platy, very slightly micaceous, dolomitic, grades very slightly to Siltstone in part. Core is very brittle, Shale shows marked slickensides on most pieces and from attitude of these it appears fractures are near vertical, overall core is broken up into small very angular, platy slices. Silty section of core (probably only minor patches) contains small grains of dense, grey dolomite. Core is generally soft; Shale absorbs water and may be crushed in fingers when wet.

Interval tight, scattered blue (mineral) fluorescence. Very highly fractured.

Dip indeterminate.

Core No. 7: 6015' - 6030' recovered 7'5"

Coring Times: 30, 15, 25, 19, 15, 15, 14, 15, 12, 13, 11, 13,  
12, 13, 12 mins./ft.

7'5" interbedded Dolomite and Limestone. Dolomite is white, dense, fine to medium crystalline. Limestone is grey, dense, finely crystalline, breaks in part along well developed rhombs approximately parallel to bedding. Limestone becomes slightly silty towards bottom of interval. Stylolites are scattered at random throughout interval and are filled with black shale material. Pressure cracks are scattered at random angles (are not continuous) through interval, core generally breaks into small chunks along these. Slumping is prominent in middle and lower sections of core and in part has brecciated core. (pieces of limestone breccia). Slight vuggy porosity is present throughout core, but vugs do not appear to be connected (no permeability). Limestone and Dolomite are not clearly defined beds and in part grade into one another.

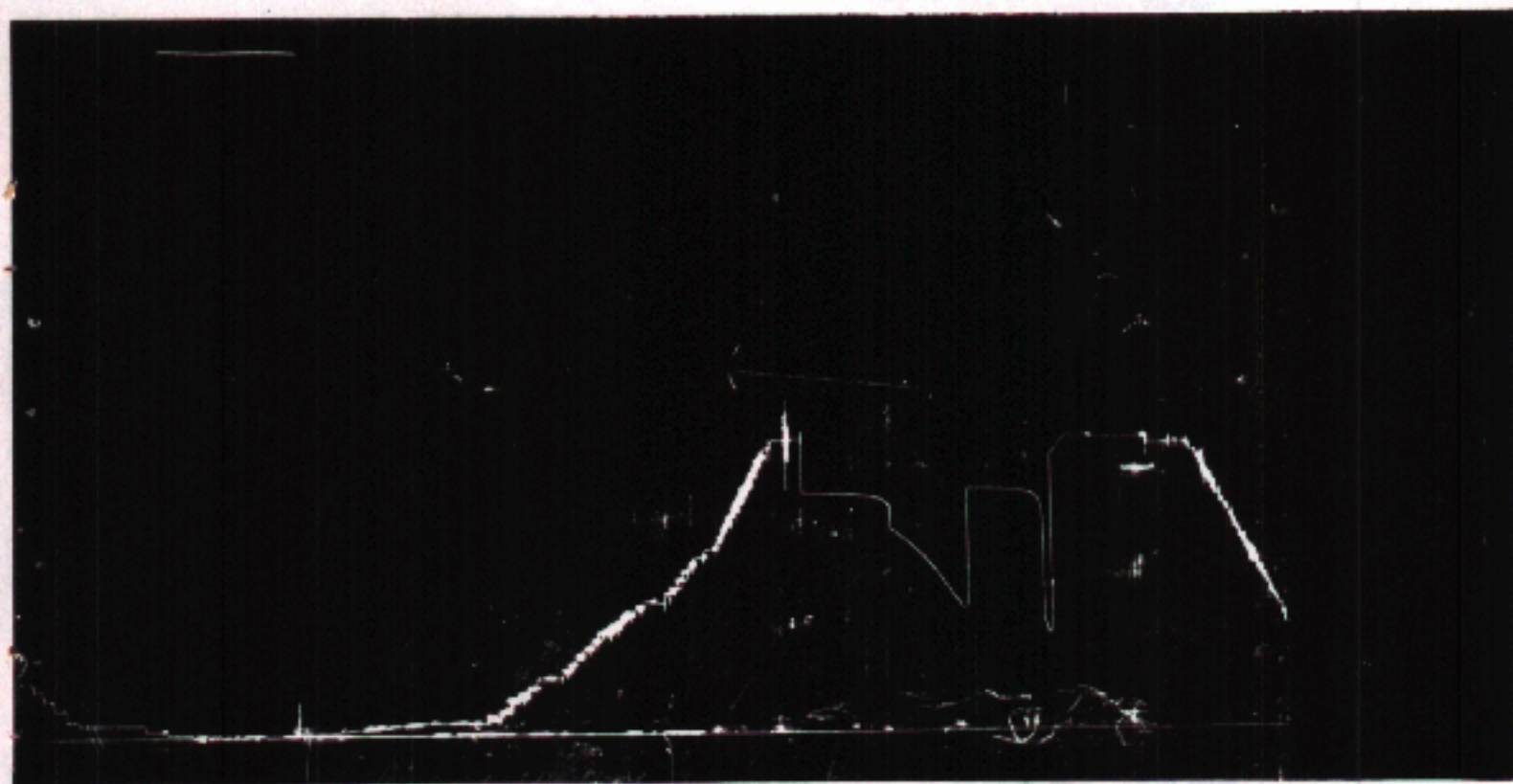
Blue and minor yellow scattered mineral fluorescence. Some vuggy porosity with no apparent permeability.

Dip 0° - 3°.

EXOIL NO LIABILITY  
DRILL STEM TEST REPORTWell: East Johnny's Elevation K.B. 2200' approx. L.L.: - Date: 27th April, 1965.Test No.: Creek No. 1 Interval: 3500'-3665' Operator: ExoilTester, Size & Type: 4 3/4 Johnston CO Packer, Size & Type 9" Open HoleAnchor, Length & O.D.: 165' 6 1/4" Drill Collar Footage above Tester: 520'Capacity (bbl./foot) - Drill Pipe: 0.0142 Drill Collars: 0.0045Pressure (Type: T1 Position: Above Packer (From 3501' To 3531'Bombs { T1 Bottom Tail Pipe Anchor { (From - To -Shut in Tool Perforations (From - To -~~Disk Valve~~ Position: Above Test Water Cushion: Nil Mud Wt.: 8.9 Vis: 53Chokes - Top: Nil B.H.\* 3/8" Drill pipe, size & Type: 4 1/2 x 16.6Full Hole, Size & Depth: 9 7/8" 3665' Rat Hole, Size & Depth: -Mud Level, Before Valve Opened: Surface After Valve Opened: SurfaceTime Record: Started In: 4.15 am. Set Packer: 6.10 am. Valve Opened: 6.18 am.Tool Opened 6.51 am. Valve Shut: 7.22 am. Pulled Packer: 8.12 am. Out of Hole: 10.30 am.~~Disk Breaker~~ Nature of Blow: Strong Initial Air Blow remaining steady throughout Flow Period (did not decrease).Gas flow Measuring Method: No Gas to Surface.Time: -Reading: -Rate of Flow: -Oil or Water Flow: -Fluid Recovery: 2420' slightly mud-cut fresh waterChart Readings: Time Elapsed, mins: ISI 30 Flowing: 30 FSI 30Pressures: IHP 1632 ISIP 1370 IFP 704 FFP 1148 FSIP 1344 FHP 1645Maximum Temperature: 139° F.Samples: 2 galls. Fluid recovery.Remarks: \* NOTE: 5/8" Wash Pipe in 4 stage initial shut in Tool acts as an effective choke. 2 minute Drawdown on formation before Initial Shut in. Both charts identical, Readings above from Bottom Chart. Interval appears to contain Porous and Permeable Beds. Almost straight line build up in pressure during Flow Period. Chloride of water is 500 p.p.m. (Recovery sample.)Geologist: Dennis D. Herbow.

EX OIL N. L. - EAST JOHNNY'S CREEK No. 1 27.4.65

D. S. T. No. 1 3500' - 3665' BOTTOM RECORDER



EXOIL NO LIABILITY  
DRILL STEM TEST REPORTWell: East Johnny's Elevation K.B.: 2200' approx L.: - Date: 7th May, '65.  
Creek No 1Test No.: 2 Interval: 5025'-5113' Operator: ExoilTester, Size & Type: 4 3/4" Johnston C.O. Packer, Size & Type 6 1/2" Open HoleAnchor, Length & O.D.: 88' 6 1/4" Drill Collar Footage above Tester: 350'Capacity (bbl./foot) - Drill Pipe: 0.0142 Drill Collars: 0.0045Pressure (Type: T1 Position: Above Packer (From 5026' To 5046'  
Bombs { T1 Bottom Tail Anchor  
{ Perforations (From      To     )

Shut in Tool

~~Disc Valve~~ Position: Above test Water Cushion: Nil Mud Wt.: - Vis: -Chokes - Top: Nil B.H.: 5' <sup>er wash</sup> pipe Drill pipe, size & Type: 4 1/2 x 16.6Full Hole, Size & Depth: 7 5/8" 5113' Rat Hole, Size & Depth: -Mud Level, Before Valve Opened: - After Valve Opened: -  
reset packer 5:05pm.Time Record: Started In: 2:30p.m. Set Packer: 4:37p.m. Valve Opened: 5:08 p.m.

Tool opened

~~Disc Valve~~ 5:42p.m. Valve Shut: 6:12 p.m. Pulled Packer: 6:40p.m. Out of Hole: 9:30p.m.Nature of Blow: Good initial Air Blow remaining steady throughout flow period.Gas flow Measuring Method: No gas to surfaceTime: -Reading: -Rate of Flow: -Oil or Water Flow: NilFluid Recovery: 320' Fresh water - Chloride 2200 p.p.m.Chart Readings: Time Elapsed, mins: ISI 30 Flowing: 30 FSI 30Pressures: IHP 1775 ISIP 286 IFP 155 FFP 181 FSIP \*----- FHP 1723Maximum Temperature: 146° F (Bottom Hole)Samples: 3 jars fluid recovery.

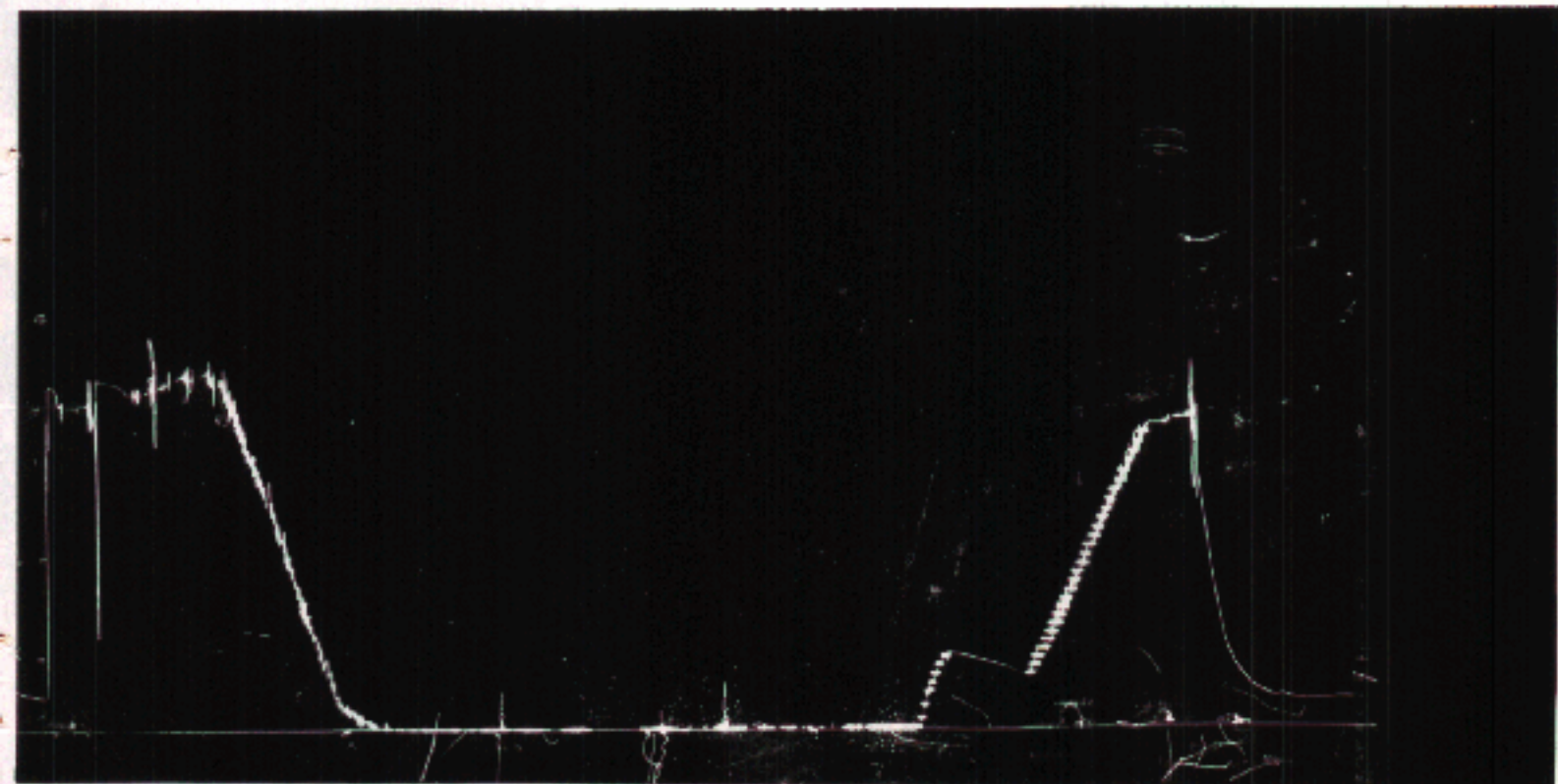
Remarks: Hole was not full to surface when test run, Hydrostatic pressures indicate approximately 3970' of water in hole. Packer slipped 17' on fill when initially set. Reset Packer. 2 minute drawdown on formation before initial Shut In. \*No final Shut In obtained - Packer worked loose during final Shut In period and pressure gradually built up to Hydrostatic. Pressures indicate interval tight. Soapy nature of fluid recovery indicates fluid being used for injection at surface (i.e. Little or no fluid recovered from formation.)

Geologist: Dennis D. Benbow.



EX OIL N. L. - EAST JOHNNY'S CREEK No. 1

7. 5. 65 D. S. T. No. 2 5025' - 5113' BOTTOM RECORDER





NORTHERN TERRITORY ADMINISTRATION—ANIMAL INDUSTRY BRANCH

WATER ANALYSIS

Origin of water EAST JOHNNY CREEK Reference Sn 65/607

RECOVERY SAMPLE DST. NO. 2-5028-5113' Specimen Advice Note No. 9501

Date sampled \_\_\_\_\_ Date received 19/5/65

\* Results in milligrams per litre of filtered sample. Recommended Maximums (see over page).

	Sample	Domestic	Stock	Agriculture
HARDNESS (calculated as CaCO <sub>3</sub> )—				
" Total . . . . .	<u>1048</u>	500	—	—
" Carbonate . . . . .	<u>174</u>	—	—	—
" Non-Carbonate . . . . .	<u>874</u>	—	—	—
ALKALINITY IN EXCESS OF				
TOTAL HARDNESS . . . . .	<u>Nil</u>	—	—	—
CHLORIDE . . . . .	<u>1700</u>	500	—	—
SULPHATE . . . . .	<u>586</u>	250	2,000	—
BICARBONATE . . . . .	<u>213</u>	—	—	—
		Child 20	—	—
NITRATE . . . . .	<u>Not Determined</u>	Adult 120	—	—
FLUORIDE . . . . .	<u>" "</u>	1.5	5.0	—
CARBONATE . . . . .	<u>Nil</u>	—	—	—
SODIUM . . . . .	<u>1225 Approx.</u>	—	—	—
POTASSIUM . . . . .	<u>170</u>	—	—	—
CALCIUM . . . . .	<u>255</u>	100	—	—
MAGNESIUM . . . . .	<u>100</u>	100	300	—
TOTAL DISSOLVED SALTS . . . . .	<u>—</u>	3,000	8,000	1,000
RESIDUE ON EVAPORATION . . . . .	<u>4250 Approx.</u>	3,000	8,000	1,000
pH <u>7.6</u>				

General remarks of Analysing Officer with particular reference to suitability of the water for the purpose for which it is stated to be required.

The above results are forwarded for your information.

Signature Dean W. R. Newman  
 Date 5-7-65

\* 14.3 milligrams per litre equals 1 grain per gallon. 437.5 grains equals 1oz.

East Johnny's Creek No. 1

Core 3 2226' (Pale pink sandstone with gray-green shale inclusions)  
Feldspathic sandstone

The clastic grains are composed of quartz, microcline and albite, orthoclase, and chert fragments, in order of decreasing abundance. Tourmaline is the most conspicuous accessory heavy mineral. It is almost as coarse as the sand grains and is pleochroic in greenish-brown and yellow. Apatite is also present, and there are traces of muscovite. The proportion of feldspar, especially the untwinned varieties, is difficult to judge, but the quantity does not appear sufficient to justify classifying the rock as arkose.

The original form of the grains has been considerably modified by secondary overgrowth of both quartz and feldspar. Traces of original iron oxide coatings suggest a fairly high degree of rounding and sphericity for the grains as originally deposited, although at present the grain boundaries are sutured, and angular with considerable intergrowth. Grain size averages about 0.2 mm. and sorting is good. Carbonate cement fills the remaining pore space and is equal to about 15% of the rock by volume. Much of the cement is unreactive in dilute acid and must be dolomite.

The sandstone encloses several inclusions of buff colored rock fragments 5-10 mm. in diameter. These are composed predominantly of subhedral carbonate which is probably dolomite as it does not react in dilute acid. The carbonate is heavily pigmented with iron oxide. One fragment contains angular, silt-sized quartz grains and traces of muscovite.

In thin section the sandstone appears massive, with no obvious variation in grain size or trace of bedding. A preferred orientation of elongated minerals and rock fragments probably parallels the depositional surface, and is approximately perpendicular to the core, suggesting horizontal bedding.

W.B. Bryan  
July 6, 1965

East Johnny's Creek No. 1

Core 6 5093' (Black shale)  
Shale

The sample is almost entirely composed of clay sized material. Orientation of clay minerals parallel to the fissility is suggested by an aggregate extinction of the clay between crossed polarizers. A tendency to swell noted during preparation of the thin section indicates the presence of montmorillonite or other expandable clay mineral. There are sparsely distributed silt-sized grains of quartz, chert, and feldspar, and laths of biotite, muscovite, and chlorite. There are a few rounded aggregates of chlorite which may represent ferromagnesian minerals weathered in situ, and some of the chlorite may be an alteration product of the biotite.

*W. B. Bryan*  
*July 6, 1965*

East Johnny's Creek No. 1

Core 7 6020'

(Gray and white limestone)

Cherty limestone

The area thin sectioned includes a large mass of chert and the limestone on either side of it. Half the thin section was stained to distinguish dolomite and calcite.

The limestone is extremely fine grained, with local coarser patches 0.1 - 0.3 mm. in diameter suggesting some recrystallization. The average grain size is well under 0.1 mm. Staining indicates that the limestone is entirely calcite except in the vicinity of the chert, where some coarsely crystallized dolomite is present in fractures and vugs. Vugs enclosed by the chert display a definite mineralogical layering, which is from outside in, dolomite, calcite, brown stained quartz with radial texture, clear quartz with mosaic texture. Carbonate enclosed by chert is much coarser than that in the limestone matrix, averaging about 0.4 mm. in diameter.

Dolomite occurs as large crystals along fractures in the chert and as wedge shaped crystals enclosed by calcite near the fractures. Irregularly shaped amoeboid calcite crystals about 0.5 mm. in diameter are distributed through the chert. The margins of these crystals and irregular zones and patches within them are composed of dolomite which appears to be replacing the calcite. The chert is cryptocrystalline except in the vugs, which contain crystalline quartz. Variation in grain size produces a vague banding suggestive of a depositional rather than replacement origin for the chert.

Stylolitic partings in the limestone contain a small amount of silt-sized quartz grains and a film of opaque material which is probably clay stained with iron oxide. Part of the chert mass is terminated against a stylolite, but elsewhere the chert has a gradational boundary with the limestone.

*W. B. Bryan*  
*July 6, 1965*

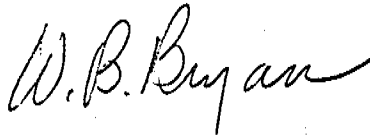
East Johnny's Creek No. 1

1950'- 1970' 3080'- 3010'

Calcareous arkose

The sample is composed of clastic grains of quartz, feldspar, and muscovite in a carbonate matrix. The feldspar includes orthoclase, microcline, and oligoclase and makes up about a third of the clastic grains. Some of the grains are partly altered (kaolinized); these probably account for the white spots observed in the chips. Muscovite is subordinate in amount, totalling less than 10% in the chips examined. The matrix totals 15-20% of the rock and appears to be calcite.

Grains are subangular to moderately well rounded, and sorting is fair, with clastic grains in the range 0.1-0.5 mm. in diameter. Tourmaline is the only identifiable accessory mineral.



W.B. Bryan

June 14, 1965

RESEARCH FOR INDUSTRY

**THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES**

CONYNGHAM STREET · PARKSIDE · SOUTH AUSTRALIA  
 TELEPHONE 791662 · TELEGRAMS 'AMDEL' ADELAIDE

Please quote this reference in your reply:

MP 3/162/0

22nd October, 1965

Your reference:

Mr. D. Benbow,  
 Exoil N.L.,  
 Perry House,  
 Elizabeth Street,  
BRISBANE QLD.

REPORT MP2643-65

YOUR REFERENCE: Letter dated 21/6/65  
 (Fitzpatrick, Johnson and Associates)

MATERIAL: Core samples

IDENTIFICATION: East Johnny Creek No.1, Core 7  
 Ochre Hill No.1, Core 4

DATE RECEIVED: 23/6/65

WORK REQUIRED: x-radiography of vertical sections

Investigation and Report by: N.A. Trueman

Officer in Charge, Mineralogy Section: H.W. Fander

*H. W. Fander*  
 P.A. Young  
 Director

c.c. to  
 Messrs Fitzpatrick, Johnson & Associates,  
 77 Grenfell Street,  
ADELAIDE S.A.



THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIESX-RADIOGRAPHY OF CORE SAMPLES

Both samples are of carbonate sediments.

The core 7, East Johnny Creek No.1 well (6020 ft) shows irregular, plastically deformed bedding, the general direction of which is approximately  $80^{\circ}$  to the axis of the core ( $10^{\circ}$  to the horizontal). Some rafting of the sediment is evident.

Core 4, Ochre Hill No.1 well (3311 ft) shows bedding approximately  $10^{\circ}$  to the axis of the core (or  $80^{\circ}$  to the horizontal). Rafting of the sediment is also evident in this section and the rock is recrystallized. Assuming the axis of the core to be vertical the sediments would appear to be overturned approximately  $10^{\circ}$ .

ws:1

## CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

Company EXOIL (N.T.) PTY. LTD. Formation \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_  
 Well EAST JOHNNY'S CREEK NO.1 Cores \_\_\_\_\_ File AP-1-76  
 Field WILDCAT Drilling Fluid \_\_\_\_\_ Date Report 30 JUNE 65  
~~Country~~ N.T. ~~State~~ AUSTRALIA Elevation \_\_\_\_\_ Analysts GAJ:JBM  
 Location N.T., AUSTRALIA Remarks \_\_\_\_\_

## CORE ANALYSIS RESULTS

(Figures in parentheses refer to footnote remarks)

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs		POROSITY PERCENT	RESIDUAL SATURATION		PROBABLE PRODUCTION	REMARKS
		HORIZONTAL	VERTICAL		OIL % VOLUME % PORE	TOTAL WATER % PORE		
1	610	<0.1		5.8				
2	1837	<0.1		1.7				
3	1838	<0.1		1.4				
4	1839	<0.1		0.4				
5	1840	<0.1		0.6				
6	1841	<0.1		1.1				
7	1842	<0.1		1.5				
8	1843	<0.1		4.9				
9	1844	<0.1		2.1				
10	1845	<0.1		5.3				
11	1846	<0.1		1.9				
12	1847	<0.1		2.2				
13	1848	102		1.9				
14	2216	0.1		15.8				
15	2217	36		13.9				
16	2218	56		15.5				
17	2219	0.1		12.8				
18	2220	<0.1		3.3				
19	2221	<0.1		2.9				
20	2222	0.1		5.9				
21	2223	0.1		4.9				
22	2224	5.6		10.1				
23	2225	13		9.3				
24	2226	47		16.2				
25	2227	28		11.5				
26	2228	<0.1		7.5				
27	3394	0.1		11.5				
28	3395	0.1		12.9				
29	3396	0.1		11.1				
30	3397	<0.1		9.4				
31	3398	<0.1		9.4				
32	3399	1.0		10.6				
33	3400	<0.1		11.6				
34	3401	3.2		12.0				
35	3402	<0.1		6.5				

## NOTE:

(\*) REFER TO ATTACHED LETTER.

(1) INCOMPLETE CORE RECOVERY--INTERPRETATION RESERVED.

(2) OFF LOCATION ANALYSES--NO INTERPRETATION OF RESULTS.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc., and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.