

OIL and GAS DIVISION

Deeper Zones

DEPT. NAT. RES & ENV



PE801071

HYDROCARBON

REPORT

MARLIN-A24

H/c REBAR BOX



ESSO AUSTRALIA LTD.

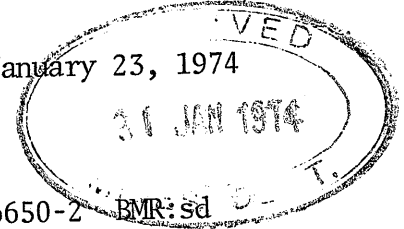
(INCORPORATED IN NEW SOUTH WALES)
G.P.O. BOX 4047 SYDNEY 2001 * TELEPHONE 2-0557 (AREA CODE 02)
ESSO HOUSE, 127 KENT STREET, SYDNEY, NEW SOUTH WALES.
TELEGRAMS "ESSO" * CABLES "ESSEAST"

SYDNEY January 23, 1974

YOUR REF.

OUR REF. 6650-2 BMR:sd

SUBJECT Turrum Fluid Analyses -
Marlin A-24 Well.



Mr. E.J. Condon
Secretary
Department of Mines
Princes Gate West
171 Flinders Street
MELBOURNE, VIC. 3000

Attention: Mr. R.G. Whiting

Dear Sir,

Please find enclosed two (2) copies of tables 1, 11, and 111 summarizing the results of analyses recently performed by Esso Production Research Company, Houston, on Marlin A-24 F.I.T. gas samples 10, 11 and 16, and oil samples 13 and 22.

Yours very truly,

W. J. Bielstein
Production Manager

*Copy of this letter
ens well file
24/10/74. 10*

Attch.

TABLE I

Hydrocarbon Analysis of Subsurface Oil Sample

Source: Marlin A-24 Well, FIT No. 13, 10,600 Ft.MDKB; 8,623 Ft.TVDKB.

Formation Conditions: 3787 psig, 236°F.

<u>Component</u>	<u>Weight Percent</u>	<u>Density, gm/cc at 60°F</u>	<u>Molecular Weight</u>	<u>Mol %</u>
Carbon Dioxide	1.66			4.13
Nitrogen	0.13			0.51
Methane	6.11			41.66
Ethane	1.68			6.11
Propane	1.55			3.84
Iso-Butane	0.35			0.66
N-Butane	0.87			1.64
Iso-Pentane	0.40			0.61
N-Pentane	0.56			0.85
Hexanes	1.10	0.7025	91	1.32
Heptanes	1.40	0.7445	102	1.50
Octanes	1.92	0.7695	115	1.83
Nonanes	1.72	0.7888	127	1.48
Decanes Plus	80.55	0.8420	260	33.86
TOTAL	100.00			100.00
Hexane Plus Fraction		0.8363	237	

Experimental Bubble point at 236°F. : 3160 psig.

TABLE II

Hydrocarbon Analysis of Subsurface Oil Sample

Source: Marlin A-24 Well, FIT No. 22, 10,465 Ft.MDKB, 8513 Ft.TVDKB

Formation Conditions: 3,739 psig, 234°F.

<u>Component</u>	<u>Weight %</u>	<u>Density, gm/cc at 60°F</u>	<u>Molecular Weight</u>	<u>Mol %</u>
Carbon Dioxide	2.95			5.98
Nitrogen	0.05			0.16
Methane	6.81			37.89
Ethane	2.32			6.89
Propane	3.07			6.21
Iso-Butane	0.77			1.18
N-Butane	1.61			2.47
Iso-Pentane	0.81			1.00
N-Pentane	0.88			1.09
Hexanes	2.75	0.6852	89	2.76
Heptanes	3.55	0.7374	99	3.20
Octanes	3.42	0.7612	115	2.65
Nonanes	3.51	0.7805	129	2.43
Decanes Plus	67.50	0.8286	231	26.09
TOTAL	100.00			100.00
Hexane Plus Fraction		0.8130	194	

Experimental Bubble point at 234°F. : 3135 psig.

TABLE 111

MARLIN A-24 GAS SAMPLES

Component	L-1 8002 TVDSS F.I.T. #10 9957 FT.KB 8092 TVDKB	L-2 7894 TVDSS F.I.T. #11 9823 FT.KB 7984 TVDKB	L-1-2 7175 TVDSS F.I.T. #16 8862 FT.KB 7265 TVDKB
	Mole %	Mole %	Mole %
Nitrogen	0.39	0.49	0.55
Hydrogen Sulphide	Nil	Nil	Nil
Carbon Dioxide	7.78	12.57	11.15
Methane	78.02	74.66	73.92
Ethane	7.10	6.20	6.25
Propane	4.39	3.78	4.06
iso-Butane	0.56	0.58	0.69
n-Butane	0.89	0.84	1.18
iso-Pentane	0.21	0.23	0.36
n-Pentane	0.20	0.21	0.40
Hexanes	0.21	0.20	1.00
Heptanes plus	0.25	0.24	0.44
Total	100.00	100.00	100.00
Mol. Wt. Heptanes plus	127	129	104
Density Heptanes plus gm/cc at 60°F.	0.7499	0.7402	0.7179
Formation Conditions -			
Pressure (psig)	3554	3507	3190
Temperature, (°F)	226	224	208

Note: F.I.T. #21 sample lost due to safety disc failure.

TABLE I

Hydrocarbon Analysis of Subsurface Oil Sample

Source: Marlin A-24 Well, FIT No. 13, 10,600 Ft.MDKB, 8,623 Ft.TVDKB.

Formation Conditions: 3787 psig, 236°F.

<u>Component</u>	<u>Weight Percent</u>	<u>Density, gm/cc at 60°F</u>	<u>Molecular Weight</u>	<u>Mol %</u>
Carbon Dioxide	1.66			4.13
Nitrogen	0.13			0.51
Methane	6.11			41.66
Ethane	1.68			6.11
Propane	1.55			3.84
Iso-Butane	0.35			0.66
N-Butane	0.87			1.64
Iso-Pentane	0.40			0.61
N-Pentane	0.56			0.85
Hexanes	1.10	0.7025	91	1.32
Heptanes	1.40	0.7445	102	1.50
Octanes	1.92	0.7695	115	1.83
Nonanes	1.72	0.7888	127	1.48
Decanes Plus	80.55	0.8420	260	33.86
TOTAL	100.00			100.00
Hexane Plus Fraction		0.8363	237	

Experimental Bubble point at 236°F. : 3160 psig.

TABLE II

Hydrocarbon Analysis of Subsurface Oil Sample

Source: Marlin A-24 Well, FIT No. 22, 10,465 Ft.MDKB, 8513 Ft.TVDKB

Formation Conditions: 3,739 psig, 234°F.

<u>Component</u>	<u>Weight %</u>	<u>Density, gm/cc at 60°F</u>	<u>Molecular Weight</u>	<u>Mol %</u>
Carbon Dioxide	2.95			5.98
Nitrogen	0.05			0.16
Methane	6.81			37.89
Ethane	2.32			6.89
Propane	3.07			6.21
Iso-Butane	0.77			1.18
N-Butane	1.61			2.47
Iso-Pentane	0.81			1.00
N-Pentane	0.88			1.09
Hexanes	2.75	0.6852	89	2.76
Heptanes	3.55	0.7374	99	3.20
Octanes	3.42	0.7612	115	2.65
Nonanes	3.51	0.7805	129	2.43
Decanes Plus	67.50	0.8286	231	26.09
TOTAL	100.00			100.00
Hexane Plus Fraction		0.8130	194	

Experimental Bubble point at 234°F. : 3135 psig.

TABLE 111

MARLIN A-24 GAS SAMPLES

<u>Component</u>	<u>F.I.T. #10</u>	<u>F.I.T. #11</u>	<u>F.I.T. #16</u>
	9957 FT.KB 8092 TVDKB	9823 FT.KB 7984 TVDKB	8862 FT.KB 7265 TVDKB
	<u>Mole %</u>	<u>Mole %</u>	<u>Mole %</u>
Nitrogen	0.39	0.49	0.55
Hydrogen Sulphide	Nil	Nil	Nil
Carbon Dioxide	7.78	12.57	11.15
Methane	78.02	74.66	73.92
Ethane	7.10	6.20	6.25
Propane	4.39	3.78	4.06
iso-Butane	0.56	0.58	0.69
n-Butane	0.89	0.84	1.18
iso-Pentane	0.21	0.23	0.36
n-Pentane	0.20	0.21	0.40
Hexanes	0.21	0.20	1.00
Heptanes plus	0.25	0.24	0.44
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Total	100.00	100.00	100.00
Mol. Wt. Heptanes plus	127	129	104
Density Heptanes plus gm/cc at 60°F.	0.7499	0.7402	0.7179
Formation Conditions -			
Pressure (psig)	3554	3507	3190
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Note: F.I.T. #21 sample lost due to safety disc failure.