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RESERVOIR FLUID STUDIES
FOR
PHILLIPS PETROLEUM COMPANY - NORWAY
2/4-2X WELL
DST NOS. 6C, 7, 8 AND 9
EKOFISK FIELD
NORTH SEA, NORWAY



CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS 75207

February 18, 1971

RESERVOIR FLUID ANALYSIS

Phillips Petroleum Company - Norway
P. O. Box 72
Stavanger, Norway

Attention: Mr. P. W. Reynolds

Subject: Reservoir Fluid Studies
2/4-2X Well
DST Nos. 6C, 7, 8 and 9
Ekofisk Field
North Sea, Norway
Our File Numbers: RFL 6438 through
RFL 6441

Gentlemen:

Separator liquid and vapor samples were collected during four drill stem tests on the 2/4-2X well and the samples were forwarded to our Dallas laboratory for use in reservoir fluid studies. Presented in this report are the results of these studies as requested by Phillips Petroleum Company - Norway.

The separator samples from DST No. 6C were physically recombined in a producing gas-liquid ratio of 1209 cubic feet of separator gas at 14.696 psia and 60° F. per barrel of separator liquid at 700 psig and 110° F. This ratio was used in conjunction with the measured compositions of the separator products to calculate the composition of the well stream material. The bubble point pressure of this recombined well stream was determined to be 6043 psig at 268° F. The results of the tests that were performed on these samples are presented on pages one through four in this report.

The separator products from DST No. 7 were recombined to a producing ratio of 1124 standard cubic feet of gas per barrel of separator liquid at 500 psig and 102° F. The bubble point pressure of this recombined fluid

was 5515 psig at 265° F. The results of the tests that were performed using these samples are reported on pages five through eight of the report.

The separator samples from DST No. 8 were recombined at the producing ratio of 1226 standard cubic feet of separator gas per barrel of separator liquid at 600 psig and 93° F. The bubble point pressure of this fluid was 5923 psig at the reservoir temperature of 263° F. The results of the tests that were performed using these samples are reported on pages nine through 12 of the report.

The separator products collected during DST No. 9 were physically recombined to a producing ratio of 1187 standard cubic feet of separator gas per barrel of separator liquid at 720 psig and 126° F. The bubble point pressure of this mixture was determined to be 6016 psig at 268° F. The results of the measurements that were performed using these samples are reported on pages 13 through 16 of the report.

A preliminary report containing the results of the hydrocarbon analyses of the separator products, the calculated well stream compositions and the bubble point determinations of each mixture at their respective reservoir temperatures was issued to you on July 28, 1970. At that time we were requested to hold all remaining gas and liquid samples until these preliminary data had been analyzed by Phillips Petroleum Company - Norway. On February 12, 1971 we were instructed by telex that no further testing would be required using these samples and any remaining gas and liquid samples could be discarded.

It has been our pleasure to perform these tests for Phillips Petroleum Company - Norway. If you have any questions regarding these data, please do not hesitate to contact us.

Very truly yours,

Core Laboratories, Inc.
Reservoir Fluid Analysis



P. L. Moses
Manager

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DALLAS, TEXAS

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 File RFI 6438

Company Phillips Petroleum Co. - Norway Date Sampled May 14, 1970
 Well 2/4-2X, DST No. 6C County _____
 Field Ekofisk State North Sea, Norway

FORMATION CHARACTERISTICS

Formation Name Danian
 Date First Well Completed May 14, 1970
 Original Reservoir Pressure _____ PSIG @ _____ Ft.
 Original Produced Gas-Liquid Ratio _____ SCF/Bbl
 Production Rate _____ Bbls/Day
 Separator Pressure and Temperature _____ PSIG _____ ° F.
 Liquid Gravity at 60° F. 34 _____ ° API
 Datum _____ Ft. Subsea

WELL CHARACTERISTICS

Elevation 89 Ft.
 Total Depth 11257 Ft.
 Producing Interval 10480-10580 Ft.
 Tubing Size and Depth 2-7/8 In. to 10480 Ft.
 Open Flow Potential _____ MMSCF/Day
 Last Reservoir Pressure 7085 PSIG @ 10530 Ft.
 Date May 14, 1970
 Reservoir Temperature 268 ° F. @ 10530 Ft.
 Status of Well Flowing DST 6C
 Pressure Gauge Custer 10000 psi

SAMPLING CONDITIONS

Flowing Tubing Pressure 1862 PSIG
 Flowing Bottom Hole Pressure _____ PSIG
 Primary Separator Pressure 700 PSIG
 Primary Separator Temperature 110 ° F.
 Secondary Separator Pressure _____ PSIG
 Secondary Separator Temperature _____ ° F.
 Field Stock Tank Liquid Gravity _____ ° API @ 60° F.
 Primary Separator Gas Production Rate 3928 MSCF/Day
 Pressure Base 14.696 PSIA
 Temperature Base 60 ° F.
 Compressibility Factor (F_{pv}) 1.059
 Gas Gravity (Laboratory) 0.678
 Gas Gravity Factor (F_g) 1.2145
 Separator Liquid Production Rate @ 110° F. & 700 psig 3250 Bbls/Day
 Primary Separator Gas/ Separator Liquid Ratio 1209 SCF/Bbl
 or _____ Bbls/MMSCF

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REMARKS:

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Well 2/4-2X, DST No. 6C

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

<u>Component</u>	<u>Separator Liquid Mol Per Cent</u>	<u>Separator Gas Mol Per Cent</u>	<u>GPM</u>	<u>Well Stream* Mol Per Cent</u>
Hydrogen Sulfide				
Carbon Dioxide		1.75		1.12
Nitrogen	0.03	0.26		0.18
Methane	15.58	84.13		59.62
Ethane	5.98	8.68	2.186	7.71
Propane	5.51	3.27	0.898	4.07
iso-Butane	1.23	0.40	0.130	0.70
n-Butane	3.77	0.88	0.277	1.91
iso-Pentane	1.50	0.19	0.069	0.66
n-Pentane	1.74	0.23	0.083	0.77
Hexanes	6.29	0.12	0.049	2.33
Heptanes plus	58.37	0.09	0.041	20.93
	<u>100.00</u>	<u>100.00</u>	<u>3.733</u>	<u>100.00</u>

Properties of Heptanes plus

API gravity @ 60° F.	<u>32.1</u>		
Specific gravity @ 60/60° F.	<u>0.8650</u>		<u>0.865</u>
Molecular weight	<u>238</u>	<u>103</u>	<u>238</u>

Calculated separator gas gravity (air = 1.000) = 0.678
 Calculated gross heating value for separator gas = 1155 BTU
 per cubic foot of dry gas @ 14.696 psia and 60° F.

Primary separator gas collected @ 700 psig and 110 °F.
 Primary separator liquid collected @ 700 psig and 110 °F.

Primary separator gas/separator liquid ratio 1209 SCF/Bbl @ 110° F.

* Bubble point pressure = 6043 psig at 268° F.

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Well 2/4-2X, DST No. 6C

VOLUMETRIC DATA OF Reservoir Fluid SAMPLE

1. Saturation pressure (bubble-point pressure) 6043 PSIG @ 268 °F.

2. Thermal expansion of saturated oil @ 7500 PSI = $\frac{V @ 268 \text{ } ^\circ\text{F}}{V @ 72 \text{ } ^\circ\text{F}}$ = 1.14066

3. Compressibility of saturated oil @ reservoir temperature: Vol/Vol/PSI:

From 7500 PSI to 7000 PSI = 18.98 x 10⁻⁶

From 7000 PSI to 6500 PSI = 20.23 x 10⁻⁶

From 6500 PSI to 6043 PSI = 24.44 x 10⁻⁶

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Well 2/4-2X, DST No. 6C

Pressure-Volume Relations of Reservoir Fluid at 268° F.

<u>Pressure,</u> <u>PSIG</u>	<u>Relative</u> <u>Volume</u>
7500	0.9695
7000	0.9788
6500	0.9888
6400	0.9912
6300	0.9940
6200	0.9961
6100	0.9986
<u>6043</u>	1.0000
<u>6009</u>	1.0018
5965	1.0037
5830	1.0097
5523	1.0255
5179	1.0458
4756	1.0766
3813	1.1809
3336	1.2654
2870	1.3822
2458	1.5316
2166	1.6815
1645	2.0938
1212	2.7378
852	3.7999

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File RFL 6439

Company Phillips Petroleum Co. - Norway Date Sampled May 17, 1970

Well 2/4-2X, DST No. 7 County _____

Field Ekofisk State North Sea, Norway

FORMATION CHARACTERISTICS

Formation Name	<u>Danian</u>
Date First Well Completed	<u>May 17</u> , 19 <u>70</u>
Original Reservoir Pressure	_____ PSIG @ _____ Ft.
Original Produced Gas-Liquid Ratio	_____ SCF/Bbl
Production Rate	_____ Bbls/Day
Separator Pressure and Temperature	_____ PSIG _____ ° F.
Liquid Gravity at 60° F.	<u>34.1</u> _____ ° API
Datum	_____ Ft. Subsea

WELL CHARACTERISTICS

Elevation	<u>89</u>	Ft.
Total Depth	<u>11257</u>	Ft.
Producing Interval	<u>10300-10330</u>	Ft.
Tubing Size and Depth	<u>2-7/8</u> In. to <u>10315</u>	Ft.
Open Flow Potential	_____	MMSCF/Day
Last Reservoir Pressure	<u>7024</u> PSIG @ <u>10315</u>	Ft.
Date	<u>May 17</u>	, 19 <u>70</u>
Reservoir Temperature	<u>265</u> ° F. @ <u>10315</u>	Ft.
Status of Well	<u>Flowing DST 7</u>	
Pressure Gauge	<u>Custer 10000 psi</u>	

SAMPLING CONDITIONS

Flowing Tubing Pressure	<u>1650</u>	PSIG
Flowing Bottom Hole Pressure	_____	PSIG
Primary Separator Pressure	<u>500</u>	PSIG
Primary Separator Temperature	<u>102</u>	° F.
Secondary Separator Pressure	_____	PSIG
Secondary Separator Temperature	_____	° F.
Field Stock Tank Liquid Gravity	_____	° API @ 60° F.
Primary Separator Gas Production Rate	<u>1332</u>	MSCF/Day
Pressure Base	<u>14.696</u>	PSIA
Temperature Base	<u>60</u>	° F.
Compressibility Factor (F_{pv})	<u>1.038</u>	
Gas Gravity (Laboratory)	<u>0.682</u>	
Gas Gravity Factor (F_g)	<u>1.2109</u>	
Separator Liquid Production Rate @ 102° F. & 500 psig	<u>1185</u>	Bbls/Day
Primary Separator Gas/ Separator Liquid Ratio	<u>1124</u>	SCF/Bbl
or	_____	Bbls/MMSCF

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REMARKS:

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Well 2/4-2X, DST No. 7

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

<u>Component</u>	<u>Separator Liquid Mol Per Cent</u>	<u>Separator Gas</u>		<u>Well Stream * Mol Per Cent</u>
		<u>Mol Per Cent</u>	<u>GPM</u>	
Hydrogen Sulfide				
Carbon Dioxide	Trace	1.75		1.08
Nitrogen	0.08	0.26		0.19
Methane	11.54	83.69		56.10
Ethane	5.32	8.90	2.242	7.53
Propane	5.15	3.40	0.933	4.07
iso-Butane	1.29	0.41	0.134	0.75
n-Butane	3.94	0.91	0.286	2.07
iso-Pentane	1.61	0.19	0.069	0.73
n-Pentane	2.00	0.23	0.083	0.91
Hexanes	6.19	0.13	0.053	2.45
Heptanes plus	<u>62.88</u>	<u>0.13</u>	<u>0.059</u>	<u>24.12</u>
	100.00	100.00	3.859	100.00

Properties of Heptanes plus

API gravity @ 60° F.	<u>33.3</u>		
Specific gravity @ 60/60° F.	<u>0.8586</u>		<u>0.859</u>
Molecular weight	<u>215</u>	<u>103</u>	<u>215</u>

Calculated separator gas gravity (air = 1.000) = 0.682
 Calculated gross heating value for separator gas = 1162 BTU
 per cubic foot of dry gas @ 14.696 psia and 60° F.

Primary separator gas collected @ 500 psig and 102 °F.
 Primary separator liquid collected @ 500 psig and 102 °F.

Primary separator gas/separator liquid ratio 1124 SCF/Bbl @ 102° F.

* Bubble point pressure = 5515 psig at 265° F.

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File RFL 6439
Well 2/4-2X, DST No. 7

VOLUMETRIC DATA OF Reservoir Fluid SAMPLE

1. Saturation pressure (bubble-point pressure) 5515 PSIG @ 265 °F.

2. Thermal expansion of saturated oil @ 7500 PSI = $\frac{V @ 265 \text{ }^\circ\text{F}}{V @ 70 \text{ }^\circ\text{F}}$ = 1.13798

3. Compressibility of saturated oil @ reservoir temperature: Vol/Vol/PSI:

From 7500 PSI to 6500 PSI = 17.40 x 10⁻⁶

From 6500 PSI to 6000 PSI = 21.04 x 10⁻⁶

From 6000 PSI to 5515 PSI = 24.14 x 10⁻⁶

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Well 2/4-2X, DST No. 7

Pressure-Volume Relations of Reservoir Fluid at 265° F.

<u>Pressure,</u> <u>PSIG</u>	<u>Relative</u> <u>Volume</u>
7500	0.9609
7000	0.9691
6500	0.9779
6000	0.9883
5900	0.9904
5800	0.9928
5700	0.9952
5600	0.9977
<u>5515</u>	1.0000
5476	1.0021
5444	1.0039
5354	1.0084
5178	1.0183
4890	1.0365
4530	1.0640
4147	1.1010
3700	1.1570
3265	1.2320
2835	1.3359
2452	1.4685
2137	1.6205
1638	1.9915
1228	2.5639
878	3.5065

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File RF 6440

Company Phillips Petroleum Co. - Norway Date Sampled May 21, 1970

Well 2/4-2X, DST No. 8 County _____

Field Ekofisk State North Sea, Norway

FORMATION CHARACTERISTICS

Formation Name Danian
 Date First Well Completed May 21, 1970
 Original Reservoir Pressure _____ PSIG @ _____ Ft.
 Original Produced Gas-Liquid Ratio _____ SCF/Bbl
 Production Rate _____ Bbls/Day
 Separator Pressure and Temperature _____ PSIG _____ ° F.
 Liquid Gravity at 60° F. 35.4 _____ ° API
 Datum _____ Ft. Subsea

WELL CHARACTERISTICS

Elevation 89 Ft.
 Total Depth 11257 Ft.
 Producing Interval 10250-10350 Ft.
 Tubing Size and Depth 2-7/8 In. to 10315 Ft.
 Open Flow Potential _____ MMSCF/Day
 Last Reservoir Pressure 7020 PSIG @ 10300 Ft.
 Date May 21, 1970
 Reservoir Temperature 263 ° F. @ 10300 Ft.
 Status of Well Flowing DST 8
 Pressure Gauge Custer 10000 psi

SAMPLING CONDITIONS

Flowing Tubing Pressure 801 PSIG
 Flowing Bottom Hole Pressure _____ PSIG
 Primary Separator Pressure 600 PSIG
 Primary Separator Temperature 93 ° F.
 Secondary Separator Pressure _____ PSIG
 Secondary Separator Temperature _____ ° F.
 Field Stock Tank Liquid Gravity _____ ° API @ 60° F.
 Primary Separator Gas Production Rate 2400 MSCF/Day
 Pressure Base 14.696 PSIA
 Temperature Base 60 ° F.
 Compressibility Factor (F_{pv}) 1.050
 Gas Gravity (Laboratory) 0.683
 Gas Gravity Factor (F_g) 1.2109
 Separator Liquid Production Rate @ 93° F. & 600 psig 1958 Bbls/Day
 Primary Separator Gas/ Separator Liquid Ratio 1226 SCF/Bbl
 or _____ Bbls/MMSCF

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REMARKS:

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Well 2/4-2X₂ DST No. 8

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

<u>Component</u>	<u>Separator Liquid Mol Per Cent</u>	<u>Separator Gas</u>		<u>Well Stream *</u> <u>Mol Per Cent</u>
		<u>Mol Per Cent</u>	<u>GPM</u>	
Hydrogen Sulfide	0.41	1.94		1.40
Carbon Dioxide	0.04	0.26		0.18
Nitrogen	0.04	0.26		0.18
Methane	13.05	83.88		59.01
Ethane	5.51	8.55	2.154	7.48
Propane	5.46	3.33	0.914	4.08
iso-Butane	1.14	0.40	0.130	0.66
n-Butane	4.40	0.90	0.283	2.13
iso-Pentane	1.96	0.20	0.073	0.82
n-Pentane	2.56	0.24	0.087	1.05
Hexanes	5.56	0.15	0.061	2.05
Heptanes plus	<u>59.91</u>	<u>0.15</u>	<u>0.068</u>	<u>21.14</u>
	100.00	100.00	3.770	100.00

Properties of Heptanes plus

API gravity @ 60° F.	<u>33.8</u>		
Specific gravity @ 60/60° F.	<u>0.8560</u>		<u>0.855</u>
Molecular weight	<u>236</u>	<u>103</u>	<u>235</u>

Calculated separator gas gravity (air = 1.000) = 0.683
 Calculated gross heating value for separator gas = 1157 BTU
 per cubic foot of dry gas @ 14.696 psia and 60° F.

Primary separator gas collected @ 600 psig and 93 °F.
 Primary separator liquid collected @ 600 psig and 93 °F.

Primary separator gas/separator liquid ratio 1226 SCF/Bbl @ 93° F.

* Bubble point pressure = 5923 psig at 263° F.

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File RFL 6440
Well 2/4-2X, DST No. 8

VOLUMETRIC DATA OF Reservoir Fluid SAMPLE

1. Saturation pressure (bubble-point pressure) 5923 PSIG @ 263 °F.

2. Thermal expansion of saturated oil @ 7500 PSI = $\frac{V @ 263 \text{ } ^\circ\text{F}}{V @ 72 \text{ } ^\circ\text{F}}$ = 1.13913

3. Compressibility of saturated oil @ reservoir temperature: Vol/Vol/PSI:

From 7500 PSI to 7000 PSI = 19.16 x 10⁻⁶

From 7000 PSI to 6300 PSI = 21.69 x 10⁻⁶

From 6300 PSI to 5923 PSI = 25.52 x 10⁻⁶

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File RFL 6440

Well 2/4-2X, DST No. 8

Pressure-Volume Relations of Reservoir Fluid at 263° F.

<u>Pressure,</u> <u>PSIG</u>	<u>Relative</u> <u>Volume</u>
7500	0.9660
7000	0.9753
6600	0.9836
6300	0.9904
6200	0.9928
6100	0.9951
6000	0.9979
<u>5923</u>	1.0000
5890	1.0016
5848	1.0036
5807	1.0056
5705	1.0107
5458	1.0231
5128	1.0434
4719	1.0742
4290	1.1156
3803	1.1784
3326	1.2626
2867	1.3791
2461	1.5279
2148	1.6878
1632	2.1045
1213	2.7469
860	3.7972

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 File RFL 6441

Company Phillips Petroleum Co. - Norway Date Sampled May 25, 1970
 Well 2/4-2X, DST No. 9 County _____
 Field Ekofisk State North Sea, Norway

FORMATION CHARACTERISTICS

Formation Name	<u>Danian</u>
Date First Well Completed	<u>May 25</u> , 19 <u>70</u>
Original Reservoir Pressure	_____ PSIG @ _____ Ft.
Original Produced Gas-Liquid Ratio	_____ SCF/Bbl
Production Rate	_____ Bbls/Day
Separator Pressure and Temperature	_____ PSIG _____ ° F.
Liquid Gravity at 60° F.	<u>33.2</u> _____ ° API
Datum	_____ Ft. Subsea

WELL CHARACTERISTICS

Elevation	<u>89</u> Ft.
Total Depth	<u>11257</u> Ft.
Producing Interval	<u>10250-350, 10480-580</u> Ft.
Tubing Size and Depth	<u>2-7/8</u> In. to <u>10195</u> Ft.
Open Flow Potential	_____ MMSCF/Day
Last Reservoir Pressure	<u>7085</u> PSIG @ <u>10530</u> Ft.
Date	<u>May 25</u> , 19 <u>70</u>
Reservoir Temperature	<u>268</u> ° F. @ <u>10530</u> Ft.
Status of Well	<u>Flowing DST 9</u>
Pressure Gauge	<u>Custer 10000 psi</u>

SAMPLING CONDITIONS

Flowing Tubing Pressure	<u>1192</u> PSIG
Flowing Bottom Hole Pressure	_____ PSIG
Primary Separator Pressure	<u>720</u> PSIG
Primary Separator Temperature	<u>126</u> ° F.
Secondary Separator Pressure	_____ PSIG
Secondary Separator Temperature	_____ ° F.
Field Stock Tank Liquid Gravity	_____ ° API @ 60° F.
Primary Separator Gas Production Rate	<u>4444</u> MSCF/Day
Pressure Base	<u>14.696</u> PSIA
Temperature Base	<u>60</u> ° F.
Compressibility Factor (F _{pv})	<u>1.048</u>
Gas Gravity (Laboratory)	<u>0.685</u>
Gas Gravity Factor (F _g)	<u>1.2082</u>
Separator Liquid Production Rate @ 126° F. & 720 psig	<u>3744</u> Bbls/Day
Primary Separator Gas/ Separator Liquid Ratio	<u>1187</u> SCF/Bbl
	_____ Bbls/MMSCF

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REMARKS:

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File RFL 6441

Well 2/4-2X, DST No. 9

Hydrocarbon Analyses of Separator Products and Calculated Well Stream

<u>Component</u>	<u>Separator Liquid Mol Per Cent</u>	<u>Separator Gas Mol Per Cent</u>	<u>GPM</u>	<u>Well Stream* Mol Per Cent</u>
Hydrogen Sulfide				
Carbon Dioxide	0.19	1.75		1.21
Nitrogen	0.04	0.26		0.18
Methane	14.30	83.71		59.47
Ethane	5.68	8.67	2.184	7.63
Propane	5.22	3.47	0.952	4.08
iso-Butane	1.29	0.42	0.137	0.72
n-Butane	3.82	0.96	0.302	1.96
iso-Pentane	1.63	0.21	0.077	0.71
n-Pentane	2.50	0.25	0.090	1.04
Hexanes	5.35	0.14	0.057	1.96
Heptanes plus	59.98	0.16	0.072	21.04
	<u>100.00</u>	<u>100.00</u>	<u>3.871</u>	<u>100.00</u>

Properties of Heptanes plus

API gravity @ 60° F.	<u>33.3</u>		
Specific gravity @ 60/60° F.	<u>0.8585</u>		<u>0.858</u>
Molecular weight	<u>245</u>	<u>103</u>	<u>244</u>

Calculated separator gas gravity (air = 1.000) = 0.685

Calculated gross heating value for separator gas = 1165 BTU

per cubic foot of dry gas @ 14.696 psia and 60° F.

Primary separator gas collected @ 720 psig and 126 °F.

Primary separator liquid collected @ 720 psig and 126 °F.

Primary separator gas/separator liquid ratio 1187 SCF/Bbl @ 126° F.

* Bubble point pressure = 6016 psig at 268° F.

These analyses, opinions or interpretations are based on observations and material 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 profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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File RFL 6441
Well 2/4-2X, DST No. 9

VOLUMETRIC DATA OF Reservoir Fluid SAMPLE

1. Saturation pressure (bubble-point pressure) 6016 PSIG @ 268 °F.

2. Thermal expansion of saturated oil @ 8000 PSI = $\frac{V @ 268 \text{ } ^\circ\text{F}}{V @ 73 \text{ } ^\circ\text{F}}$ = 1.13668

3. Compressibility of saturated oil @ reservoir temperature: Vol/Vol/PSI:

From 8000 PSI to 7000 PSI = 18.00 x 10⁻⁶

From 7000 PSI to 6500 PSI = 20.76 x 10⁻⁶

From 6500 PSI to 6016 PSI = 24.50 x 10⁻⁶

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

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Well 2/4-2X, DST No. 9

Pressure-Volume Relations of Reservoir Fluid at 268° F.

<u>Pressure,</u> <u>PSIG</u>	<u>Relative</u> <u>Volume</u>
8000	0.9603
7500	0.9688
7000	0.9779
6500	0.9881
6400	0.9904
6300	0.9928
6200	0.9953
6100	0.9978
6016	1.0000
5968	1.0022
5928	1.0039
5828	1.0084
5538	1.0231
5094	1.0502
4620	1.0868
4092	1.1423
3580	1.2169
3088	1.3202
2657	1.4522
2290	1.6130
1760	1.9790
1313	2.5493
933	3.4842

Core Laboratories, Inc.
Reservoir Fluid Analysis

P. L. Moses HS

P. L. Moses
Manager

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