

Company Raymond Oil Company, Inc. Lease & Well No. Mills "A" #2
 Elevation 1927 Kelly Bushing Formation Indian Cave Effective Pay - Ft. Ticket No. 9207
 Date 2/2/81 Sec. 26 Twp 32S Range 15W County Barber State Kansas
 Test Approved by Joe M. Baker Western Representative Jim Wondra

Formation Test No. 1 Interval Tested from 3129 ft. to 3198 ft. Total Depth 3198 ft.
 Packer Depth 3124 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3129 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set =
 Top Recorder Depth (Inside) 3156 ft. Recorder Number 2606 Cap. 4150
 Bottom Recorder Depth (Outside) 3159 ft. Recorder Number - Cap. -
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Graves Drilling Rig #1 Drill Collar Length 90 I. D. 2 1/4 in.
 Mud Type premix Viscosity 34 Weight Pipe Length - I. D. - in.
 Weight 9.2 Water Loss 75 cc. Drill Pipe Length 3018 I. D. 3.8 in.
 Chlorides 28,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.
 Jars: Make - Serial Number - Anchor Length 69 ft. Size 5 1/2 OD in.
 Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Fair blow throughout initial flow period. Weak blow throughout final flow period.

Recovered 135 ft. of drilling mud
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Remarks: _____

Time Set Packer(s) 12:15 ~~AM~~ P.M. Time Started Off Bottom 2:15 ~~AM~~ P.M. Maximum Temperature 110°
 Initial Hydrostatic Pressure (A) 1590 P.S.I.
 Initial Flow Period Minutes 30 (B) 94 P.S.I. to (C) 104 P.S.I.
 Initial Closed In Period Minutes 27 (D) 684 P.S.I.
 Final Flow Period Minutes 30 (E) 139 P.S.I. to (F) 108 P.S.I.
 Final Closed In Period Minutes 33 (G) 412 P.S.I.
 Final Hydrostatic Pressure (H) 1569 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 2/2/81

Test Ticket No. 9207

Recorder No. 2606

Capacity 4150

Location 3156 Ft.

Clock No. - Elevation 1927 Kelly Bushing

Well Temperature 110 °F

Point	Pressure	
A Initial Hydrostatic Mud	<u>1590</u>	P.S.I.
B First Initial Flow Pressure	<u>94</u>	P.S.I.
C First Final Flow Pressure	<u>104</u>	P.S.I.
D Initial Closed-in Pressure	<u>684</u>	P.S.I.
E Second Initial Flow Pressure	<u>139</u>	P.S.I.
F Second Final Flow Pressure	<u>108</u>	P.S.I.
G Final Closed-in Pressure	<u>412</u>	P.S.I.
H Final Hydrostatic Mud	<u>1569</u>	P.S.I.

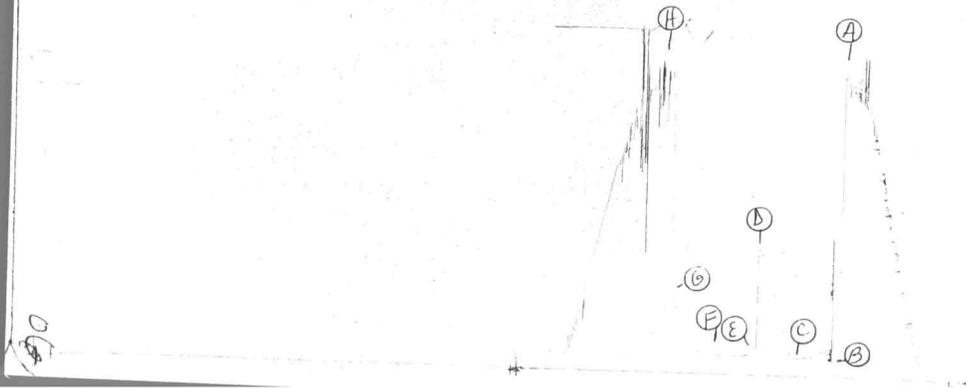
	Time Given	Time Computed
Open Tool	<u>12:15P</u> M	
First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Initial Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.

* Pressures questionable due to plugging action.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>9</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>11</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>94</u>	<u>0</u>	<u>104</u>	<u>0</u>	<u>139</u>	<u>0</u>	<u>108</u>
P 2 <u>5</u>	<u>92</u>	<u>3</u>	<u>123</u>	<u>5</u>	<u>119</u>	<u>3</u>	<u>108</u>
P 3 <u>10</u>	<u>133 *</u>	<u>6</u>	<u>183</u>	<u>10</u>	<u>110</u>	<u>6</u>	<u>110</u>
P 4 <u>15</u>	<u>110 *</u>	<u>9</u>	<u>254</u>	<u>15</u>	<u>108</u>	<u>9</u>	<u>116</u>
P 5 <u>20</u>	<u>107</u>	<u>12</u>	<u>370</u>	<u>20</u>	<u>108</u>	<u>12</u>	<u>129</u>
P 6 <u>25</u>	<u>103</u>	<u>15</u>	<u>446</u>	<u>25</u>	<u>108</u>	<u>15</u>	<u>141</u>
P 7 <u>30</u>	<u>104</u>	<u>18</u>	<u>514</u>	<u>30</u>	<u>108</u>	<u>18</u>	<u>166</u>
P 8		<u>21</u>	<u>595</u>			<u>21</u>	<u>200</u>
P 9		<u>24</u>	<u>645</u>			<u>24</u>	<u>243</u>
P10		<u>27</u>	<u>684</u>			<u>27</u>	<u>291</u>
P11		<u>30</u>				<u>30</u>	<u>350</u>
P12						<u>33</u>	<u>412</u>
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

TKT # 9207
I



Company Raymond Oil Company, Inc. Lease & Well No. Mills "A" #2
 Elevation 1927 Kelly Bushing Formation Topeka Effective Pay - Ft. Ticket No. 9284
 Date 2/3/81 Sec. 26 Twp. 32S Range 15W County Barber State Kansas
 Test Approved by Joe M. Baker Western Representative Jeff Piotrowski

Formation Test No. 2 Interval Tested from 3532 ft. to 3578 ft. Total Depth 3578 ft.
 Packer Depth 3527 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3532 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 3535 ft. Recorder Number 5673 Cap. 5400
 Bottom Recorder Depth (Outside) 3578 ft. Recorder Number 1565 Cap. 4900
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Graves Drilling Drill Collar Length 120 I. D. 2.2 in.
 Mud Type drispac Viscosity 34 Weight Pipe Length - I. D. - in.
 Weight 9.3 Water Loss 46 cc. Drill Pipe Length 3392 I. D. 3.8 in.
 Chlorides 24,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD
 Jars: Make - Serial Number - Anchor Length 46 ft. Size 5 1/2 OD in.
 Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Strong throughout both flow period. Gas to surface in final shut-in.

Recovered 1020 ft. of heavy gas cut mud
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Remarks: Lost mud through both flow periods. Slid tool twenty feet.

Time Set Packer(s) 8:50 AM P.M. Time Started Off Bottom 10:30 AM P.M. Maximum Temperature 120°
 Initial Hydrostatic Pressure (A) 1781 P.S.I.
 Initial Flow Period Minutes 10 (B) 158 P.S.I. to (C) 251 P.S.I.
 Initial Closed In Period Minutes 30 (D) 1275 P.S.I.
 Final Flow Period Minutes 25 (E) 276 P.S.I. to (F) 467 P.S.I.
 Final Closed In Period Minutes 33 (G) 1330 P.S.I.
 Final Hydrostatic Pressure (H) 1781 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 2/3/81

Recorder No. 5673

Test Ticket No. 9284

Capacity 5400

Location 3535 Ft.

Clock No. --- Elevation 1927 Kelly Bushing

Well Temperature 120 °F

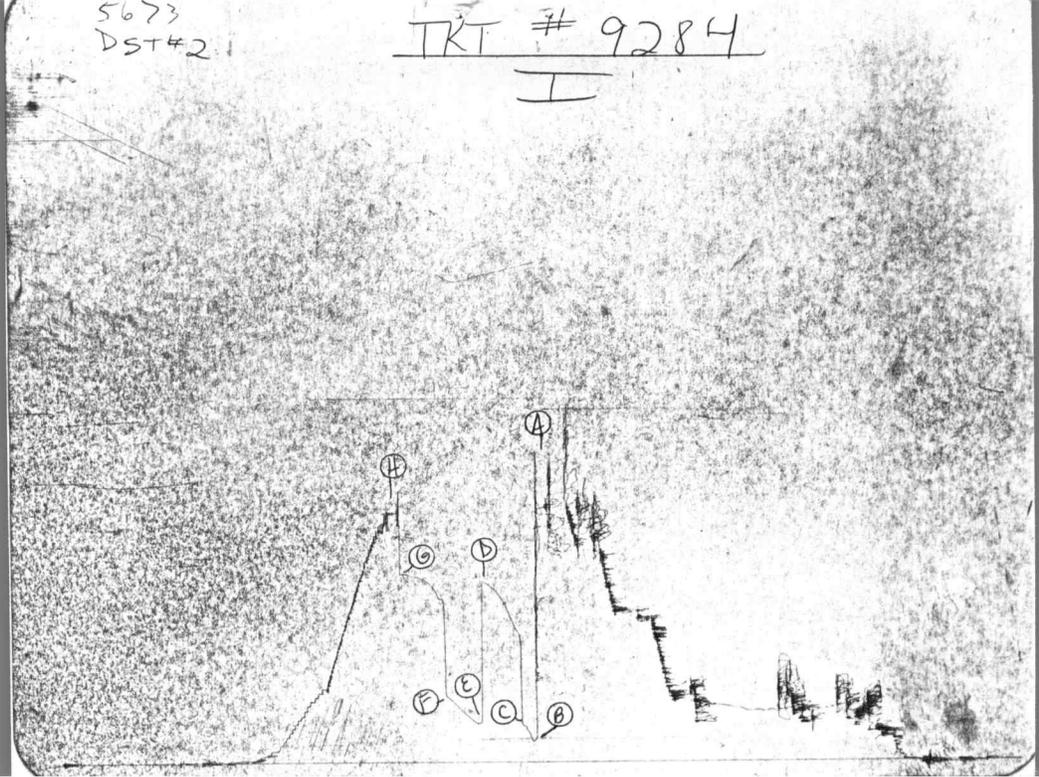
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1781</u> P.S.I.	Open Tool	<u>8:50P</u> M	
B First Initial Flow Pressure	<u>158</u> P.S.I.	First Flow Pressure	<u>10</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>251</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1275</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>25</u> Mins.
E Second Initial Flow Pressure	<u>276</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
F Second Final Flow Pressure	<u>467</u> P.S.I.			
G Final Closed-in Pressure	<u>1330</u> P.S.I.			
H Final Hydrostatic Mud	<u>1781</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>2</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>5</u> Inc.		Breakdown: <u>11</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>158</u>	<u>0</u>	<u>251</u>	<u>0</u>	<u>276</u>	<u>0</u>	<u>467</u>
P 2 <u>5</u>	<u>180</u>	<u>3</u>	<u>861</u>	<u>5</u>	<u>281</u>	<u>3</u>	<u>1154</u>
P 3 <u>10</u>	<u>251</u>	<u>6</u>	<u>929</u>	<u>10</u>	<u>325</u>	<u>6</u>	<u>1184</u>
P 4 _____	_____	<u>9</u>	<u>995</u>	<u>15</u>	<u>369</u>	<u>9</u>	<u>1235</u>
P 5 _____	_____	<u>12</u>	<u>1065</u>	<u>20</u>	<u>418</u>	<u>12</u>	<u>1268</u>
P 6 _____	_____	<u>15</u>	<u>1130</u>	<u>25</u>	<u>467</u>	<u>15</u>	<u>1286</u>
P 7 _____	_____	<u>18</u>	<u>1173</u>	_____	_____	<u>18</u>	<u>1300</u>
P 8 _____	_____	<u>21</u>	<u>1214</u>	_____	_____	<u>21</u>	<u>1311</u>
P 9 _____	_____	<u>24</u>	<u>1238</u>	_____	_____	<u>24</u>	<u>1316</u>
P10 _____	_____	<u>27</u>	<u>1257</u>	_____	_____	<u>27</u>	<u>1324</u>
P11 _____	_____	<u>30</u>	<u>1275</u>	_____	_____	<u>30</u>	<u>1330</u>
P12 _____	_____	_____	_____	_____	_____	<u>33</u>	<u>1330</u>
P13 _____	_____	_____	_____	_____	_____	_____	_____
P14 _____	_____	_____	_____	_____	_____	_____	_____
P15 _____	_____	_____	_____	_____	_____	_____	_____
P16 _____	_____	_____	_____	_____	_____	_____	_____
P17 _____	_____	_____	_____	_____	_____	_____	_____
P18 _____	_____	_____	_____	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____

5673
DST#2

TKT # 9284
I



Company Raymond Oil Company, Inc. Lease & Well No. Mills #'A'#2
 Elevation 1927 Kelly Bushing Formation Topeka Effective Pay -- Ft. Ticket No. 9285
 Date 2/4/81 Sec. 26 Twp. 32S Range 15W County Barber State Kansas
 Test Approved by Joe M. Baker Western Representative Jeff Piotrowski

Formation Test No. 3 Interval Tested from 3573 ft. to 3583 ft. Total Depth 3583 ft.
 Packer Depth 3568 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3573 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3576 ft. Recorder Number 5673 Cap. 5400
 Bottom Recorder Depth (Outside) 3580 ft. Recorder Number 1565 Cap. 4900
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Graves Drilling Drill Collar Length _____ I. D. _____ in.
 Mud Type drispac Viscosity 40 Weight Pipe Length _____ I. D. _____ in.
 Weight 9.3 Water Loss 16.4 cc. Drill Pipe Length _____ I. D. _____ in.
 Chlorides 28,000 P.P.M. Test Tool Length _____ ft. Tool Size _____ in.
 Jars: Make - Serial Number - Anchor Length _____ ft. Size _____ in.
 Did Well Flow? No Reversed Out No Surface Choke Size _____ in. Bottom Choke Size _____ in.
 Main Hole Size _____ in. Tool Joint Size _____ in.

Blow: _____

Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____ MISRUN
 Recovered _____ ft. of _____

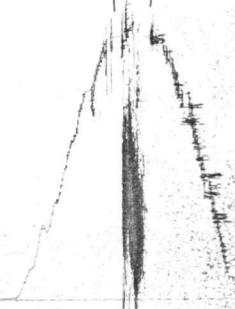
Remarks: SLID TOOL TEN FEET TO BOTTOM. PACKER SEAT FAILURE

Time Set Packer(s) _____ A.M. P.M. Time Started Off Bottom _____ A.M. P.M. Maximum Temperature _____
 Initial Hydrostatic Pressure _____ (A) 1849 P.S.I.
 Initial Flow Period _____ Minutes (B) -- P.S.I. to (C) -- P.S.I.
 Initial Closed In Period _____ Minutes (D) -- P.S.I.
 Final Flow Period _____ Minutes (E) -- P.S.I. to (F) -- P.S.I.
 Final Closed In Period _____ Minutes (G) -- P.S.I.
 Final Hydrostatic Pressure _____ (H) 1849 P.S.I.

DST #3

TKT # 9285
I

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1565
DST #3

TKT # 9285
O

