



P. O. BOX 1599 PHONE (316) 838-0601  
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.  
FORMATION TESTING

TICKET No 6219

Elevation 1875 *K.B. Manning* Formation K.C. (80) Eff. Pay — Ft.

District Great Bend Date 7-23-80 Customer Order No. —

COMPANY NAME Raymond Oil Co., Inc.

ADDRESS One Main Place Suite 900 Wichita, Ks. 67202

LEASE AND WELL NO. Merten #1 COUNTY Barton STATE Kansas Sec. 1 Twp 20 Rge 14 W

Mail Invoice To Same as above Co. Name — Address — No. Copies Requested 6

Mail Charts To Same as above Co. Name — Address — No. Copies Requested 6

Formation Test No. 1 Interval Tested from 3212 ft. to 3288 ft. Total Depth 3288 ft.  
Packer Depth 3207 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.  
Packer Depth 3212 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.  
Depth of Selective Zone Set —

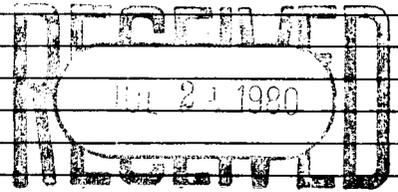
Top Recorder Depth (Inside) 3214 ft. Recorder Number 6074 Cap. 5/00  
Bottom Recorder Depth (Outside) 3217 ft. Recorder Number 1563 Cap. 42.00  
Below Straddle Recorder Depth — ft. Recorder Number — Cap. —

Drilling Contractor Duke Drilling Co. Rig #1 Drill Collar Length — I. D. — in.  
Mud Type Starch Viscosity 40 Weight Pipe Length 816 I. D. 2.7 in.  
Weight 9.8 Water Loss 14.0 cc. Drill Pipe Length 2375 I. D. 3.8 in.  
Chlorides 80,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 5/8 in.  
Jars: Make — Serial Number — Anchor Length 7 1/2 ft. Size 5 3/8 + 6 3/4 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: Weak blow, increased to fair 4" blow by end of 1st flow period.  
Weak blow, increased to fair 3" blow by end of 2nd flow period.

Recovered 375 ft. of 5 li gas cut muddy water w/ few specks of oil through  
Recovered — ft. of —  
Recovered — ft. of —  
Recovered — ft. of —  
Recovered — ft. of —

Remarks: —



Time Set Packer(s) 2:45 AM Time Started Off Bottom 5:15 AM Maximum Temperature 111  
Initial Hydrostatic Pressure 1737 P.S.I. (A) 1747 P.S.I.  
Initial Flow Period 30 Minutes (B) 51 56 P.S.I. to (C) 140 140 P.S.I.  
Initial Closed In Period 45 Minutes (D) 1150 1154 P.S.I.  
Final Flow Period 30 Minutes (E) 166 171 P.S.I. to (F) 217 222 P.S.I.  
Final Closed In Period 45 Minutes (G) 1112 1127 P.S.I.  
Final Hydrostatic Pressure 1711 P.S.I. (H) 1718 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Timothy D. Hellman Timothy D. Hellman  
Signature of Customer or his authorized representative

Western Representative Vernon Warden  
Thank You

FIELD INVOICE

Open Hole Test \$ 550.00  
Miscrun \$ —  
Straddle Test \$ —  
Jars \$ —  
Selective Zone \$ —  
Safety Joint \$ —  
Standby \$ —  
Evaluation \$ —  
Extra Packer \$ —  
Circ. Sub. \$ —  
Mileage \$ —  
Fluid Sampler \$ —  
Extra Charts \$ —

TOTAL \$ 550.00

# WESTERN TESTING CO., INC.

## Pressure Data

Date 7-23-80 Test Ticket No. 6219  
 Recorder No. 6074 Capacity 5100 Location 3214 Ft.  
 Clock No. \_\_\_\_\_ Elevation 1875-K.B Well Temperature 111 °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1747</u> P.S.I.		<u>2:45 A</u> M	
B First Initial Flow Pressure	<u>56</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>140</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>1154</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>171</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>222</u> P.S.I.			
G Final Closed-in Pressure	<u>1127</u> P.S.I.			
H Final Hydrostatic Mud	<u>1716</u> P.S.I.			

### PRESSURE BREAKDOWN

First Flow Pressure  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

Initial Shut-In  
 Breakdown: 15 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

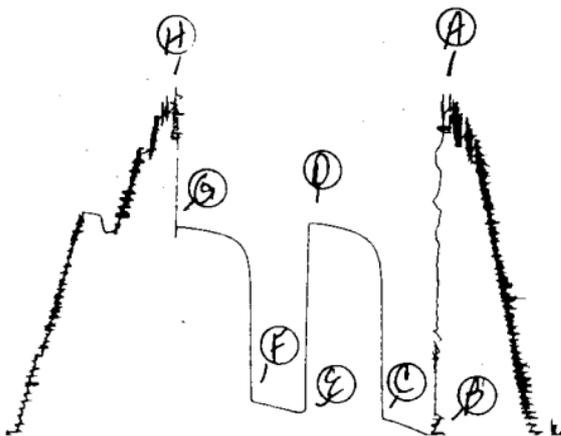
Second Flow Pressure  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

Final Shut-In  
 Breakdown: 15 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>56</u>	0	<u>140</u>	0	<u>171</u>	0	<u>222</u>
P 2 5	<u>63</u>	3	<u>907</u>	5	<u>171</u>	3	<u>879</u>
P 3 10	<u>81</u>	6	<u>1025</u>	10	<u>181</u>	6	<u>1000</u>
P 4 15	<u>104</u>	9	<u>1057</u>	15	<u>194</u>	9	<u>1040</u>
P 5 20	<u>120</u>	12	<u>1079</u>	20	<u>204</u>	12	<u>1058</u>
P 6 25	<u>135</u>	15	<u>1091</u>	25	<u>214</u>	15	<u>1076</u>
P 7 30	<u>140</u>	18	<u>1107</u>	30	<u>222</u>	18	<u>1084</u>
P 8 35		21	<u>1119</u>	35		21	<u>1094</u>
P 9 40		24	<u>1127</u>	40		24	<u>1099</u>
P 10 45		27	<u>1133</u>	45		27	<u>1104</u>
P 11 50		30	<u>1140</u>	50		30	<u>1112</u>
P 12 55		33	<u>1145</u>	55		33	<u>1115</u>
P 13 60		36	<u>1147</u>	60		36	<u>1118</u>
P 14		39	<u>1153</u>	65		39	<u>1121</u>
P 15		42	<u>1154</u>	70		42	<u>1124</u>
P 16		45	<u>1154</u>	75		45	<u>1127</u>
P 17		48		80		48	
P 18		51		85		51	
P 19		54		90		54	
P 20		57				57	
		60				60	

Kit # 6219

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Company Raymond Oil Co., Inc. Lease & Well No. Merten #1  
 Elevation 1875 Kelly Bushing Formation Kansas City (80) Effective Pay ----- Ft. Ticket No. 6219  
 Date 7-23-80 Sec. 1 Twp. 20 S Range 14 W County Barton State KS  
 Test Approved by Timothy D. Hellman Western Representative Vernon Wondra

Formation Test No. 1 Interval Tested from 3212 ft. to 3288 ft. Total Depth 3288 ft.  
 Packer Depth 3207 ft. Size 6 3/4 in. Packer Depth ----- ft. Size ----- in.  
 Packer Depth 3212 ft. Size 6 3/4 in. Packer Depth ----- ft. Size --- in.  
 Depth of Selective Zone Set -----

Top Recorder Depth (Inside) 3214 ft. Recorder Number 6074 Cap. 5100  
 Bottom Recorder Depth (Outside) 3217 ft. Recorder Number 1563 Cap. 4200  
 Below Straddle Recorder Depth ----- ft. Recorder Number ----- Cap. -----

Drilling Contractor Duke Drilling Co. Rig #1 Drill Collar Length ----- I. D. ----- in.  
 Mud Type Starch Viscosity 40 Weight Pipe Length 816 I. D. 2.7 in.  
 Weight 9.8 Water Loss 14.0 cc. Drill Pipe Length 2375 I. D. 3.8 in.  
 Chlorides 80,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.  
 Jars: Make ----- Serial Number ----- Anchor Length 76 ft. Size 5 1/2 OD & 63 1/2 in. W.P.  
 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: Weak blow increased to fair 4" blow by end of first flow period.  
Weak blow increased to fair 3" blow by the end of the final flow period.

Recovered 375 ft. of Slightly gas cut muddy water with a few specks of oil throughout.  
 Recovered      ft. of       
 Recovered      ft. of       
 Recovered      ft. of       
 Recovered      ft. of     

Remarks:     

Time Set Packer(s) 2:45 ~~P.M.~~ <sup>A.M.</sup> Time Started Off Bottom 5:15 ~~P.M.~~ <sup>A.M.</sup> Maximum Temperature 111<sup>0</sup> F.  
 Initial Hydrostatic Pressure 1747 P.S.I. (A)  
 Initial Flow Period 30 Minutes (B) 56 P.S.I. to (C) 140 P.S.I.  
 Initial Closed In Period 45 Minutes (D) 1154 P.S.I.  
 Final Flow Period 30 Minutes (E) 171 P.S.I. to (F) 222 P.S.I.  
 Final Closed In Period 45 Minutes (G) 1127 P.S.I.  
 Final Hydrostatic Pressure 1716 P.S.I. (H)

# WESTERN TESTING CO., INC.

## Pressure Data

Date 7-23-80 Recorder No. 6074 Capacity 5100 Test Ticket No. 6219  
 Clock No. - Elevation 1875 Kelly Bushing Location 3214 Ft.  
 Well Temperature 111 °F

Point	Pressure	P.S.I.	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	1747	P.S.I.		2:45A	
B First Initial Flow Pressure	56	P.S.I.	Open Tool		
C First Final Flow Pressure	140	P.S.I.	First Flow Pressure	30	30
D Initial Closed-in Pressure	1154	P.S.I.	Initial Closed-in Pressure	45	45
E Second Initial Flow Pressure	171	P.S.I.	Second Flow Pressure	30	30
F Second Final Flow Pressure	222	P.S.I.	Final Closed-in Pressure	45	45
G Final Closed-in Pressure	1127	P.S.I.			
H Final Hydrostatic Mud	1716	P.S.I.			

### PRESSURE BREAKDOWN

**First Flow Pressure**  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

**Initial Shut-In**  
 Breakdown: 15 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

**Second Flow Pressure**  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

**Final Shut-In**  
 Breakdown: 15 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>56</u>	<u>0</u>	<u>140</u>	<u>0</u>	<u>171</u>	<u>0</u>	<u>222</u>
P 2 <u>5</u>	<u>63</u>	<u>3</u>	<u>907</u>	<u>5</u>	<u>171</u>	<u>3</u>	<u>879</u>
P 3 <u>10</u>	<u>81</u>	<u>6</u>	<u>1025</u>	<u>10</u>	<u>181</u>	<u>6</u>	<u>1000</u>
P 4 <u>15</u>	<u>104</u>	<u>9</u>	<u>1057</u>	<u>15</u>	<u>194</u>	<u>9</u>	<u>1040</u>
P 5 <u>20</u>	<u>120</u>	<u>12</u>	<u>1079</u>	<u>20</u>	<u>204</u>	<u>12</u>	<u>1058</u>
P 6 <u>25</u>	<u>135</u>	<u>15</u>	<u>1091</u>	<u>25</u>	<u>214</u>	<u>15</u>	<u>1076</u>
P 7 <u>30</u>	<u>140</u>	<u>18</u>	<u>1107</u>	<u>30</u>	<u>222</u>	<u>18</u>	<u>1084</u>
P 8 _____	_____	<u>21</u>	<u>1119</u>	_____	_____	<u>21</u>	<u>1094</u>
P 9 _____	_____	<u>24</u>	<u>1127</u>	_____	_____	<u>24</u>	<u>1099</u>
P10 _____	_____	<u>27</u>	<u>1133</u>	_____	_____	<u>27</u>	<u>1104</u>
P11 _____	_____	<u>30</u>	<u>1140</u>	_____	_____	<u>30</u>	<u>1112</u>
P12 _____	_____	<u>33</u>	<u>1145</u>	_____	_____	<u>33</u>	<u>1115</u>
P13 _____	_____	<u>36</u>	<u>1147</u>	_____	_____	<u>36</u>	<u>1118</u>
P14 _____	_____	<u>39</u>	<u>1153</u>	_____	_____	<u>39</u>	<u>1121</u>
P15 _____	_____	<u>42</u>	<u>1154</u>	_____	_____	<u>42</u>	<u>1124</u>
P16 _____	_____	<u>45</u>	<u>1154</u>	_____	_____	<u>45</u>	<u>1127</u>
P17 _____	_____	_____	_____	_____	_____	_____	_____
P18 _____	_____	_____	_____	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____



P. O. BOX 1599 PHONE (316) 838-0601  
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

Kelly Bushing

TICKET NO. 6220

Elevation 1875 KB Formation K.C. Kansas City Eff. Pay — Ft.

District Great Bend Date 7-23-80 Customer Order No. —

COMPANY NAME Raymond Oil Co. Inc.

ADDRESS One Main Place, Suite 900, Wichita, Kansas

LEASE AND WELL NO. Merten #1 COUNTY Barton STATE Kansas Sec. 1 Twp. 20 Rge. 14W

Mail Invoice To Same as above No. Copies Requested 6

Co. Name Same as above Address Same as above No. Copies Requested 6

Mail Charts To Same as above Address Same as above No. Copies Requested 6

Formation Test No. 2 Interval Tested from 3344 ft. to 3365 ft. Total Depth 3365 ft.

Packer Depth 3339 ft. Size 6 7/8 in. Packer Depth — ft. Size — in.

Packer Depth 3344 ft. Size 6 7/8 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 3354 ft. Recorder Number 6074 Cap 5/80

Bottom Recorder Depth (Outside) 3357 ft. Recorder Number 1563 Cap 4300

Below Straddle Recorder Depth — ft. Recorder Number — Cap —

Drilling Contractor Dyke Drilling Co. Rig #1 Drill Collar Length — I. D. — in.

Mud Type Starch Viscosity 46 Weight Pipe Length 879 I. D. 2.7 in.

Weight 10.0 Water Loss 14.2 cc. Drill Pipe Length 2444 I. D. 3.8 in.

Chlorides 84,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 00 in.

Jars: Make — Serial Number — Anchor Length 2 1/2 ft. Size 5 1/2 00 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: Very weak blow died in 15 min on 1st flow period. No blow on 2nd flow period.

Recovered 20 ft. of Mud w/ few spots of oil

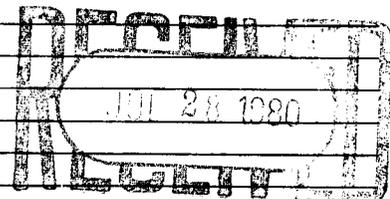
Recovered — ft. of with

Recovered — ft. of —

Recovered — ft. of —

Recovered — ft. of —

Remarks: —



Time Set Packer(s) 4:30 AM Time Started Off Bottom 6:30 AM Maximum Temperature 109

Initial Hydrostatic Pressure (A) 1788 P.S.I.

Initial Flow Period Minutes 30 (B) 2.5 P.S.I. to (C) 35 P.S.I.

Initial Closed In Period Minutes 30 (D) 12.7 P.S.I.

Final Flow Period Minutes 30 (E) 38 P.S.I. to (F) 38 P.S.I.

Final Closed In Period Minutes 30 (G) 76 P.S.I.

Final Hydrostatic Pressure (H) 1750 P.S.I.

COMPANY TERMS

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All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Timothy D. Hellenbar Signature of Customer or his authorized representative

Western Representative Vernon Wondra  
Thank You

FIELD INVOICE

Open Hole Test	\$ 550.00
Misrun	\$
Straddle Test	\$
Jars	\$
Selective Zone	\$
Safety Joint	\$
Standby	\$
Evaluation	\$
Extra Packer	\$
Circ. Sub.	\$
Mileage N.C.	\$ 3.00
Fluid Sampler	\$
Extra Charts	\$

TOTAL \$ 550.00

WESTERN TESTING CO., INC.

Pressure Data

Date 7-23 Test Ticket No. 6220  
 Recorder No. 6074 Capacity 5100 Location 3354 Ft.  
 Clock No. — Elevation 1875 KB Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1803</u>	P.S.I.	<u>4:30 P</u>	<u>M</u>
B First Initial Flow Pressure	<u>40</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
C First Final Flow Pressure	<u>38</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>128</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>48</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
F Second Final Flow Pressure	<u>46</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
G Final Closed-in Pressure	<u>82</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1790</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

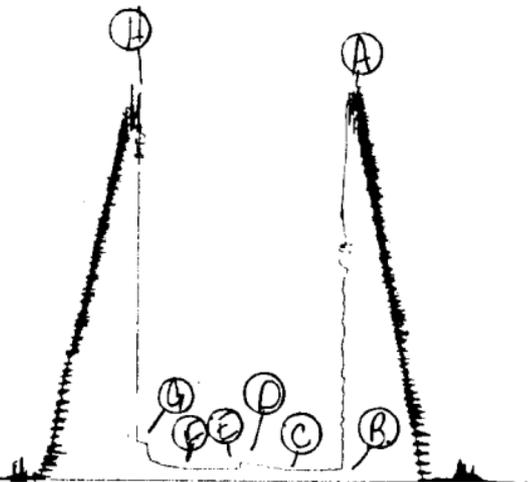
Initial Shut-In  
 Breakdown: 10 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Second Flow Pressure  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

Final Shut-In  
 Breakdown: 10 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>40</u>	0	<u>38</u>	0	<u>48</u>	0	<u>46</u>
P 2 5	<u>38</u>	3	<u>41</u>	5	<u>46</u>	3	<u>47</u>
P 3 10		6	<u>46</u>	10		6	<u>49</u>
P 4 15		9	<u>51</u>	15		9	<u>52</u>
P 5 20		12	<u>56</u>	20		12	<u>55</u>
P 6 25		15	<u>64</u>	25		15	<u>59</u>
P 7 30	<u>38</u>	18	<u>72</u>	30	<u>46</u>	18	<u>61</u>
P 8 35		21	<u>84</u>	35		21	<u>68</u>
P 9 40		24	<u>97</u>	40		24	<u>74</u>
P10 45		27	<u>113</u>	45		27	<u>79</u>
P11 50		30	<u>128</u>	50		30	<u>82</u>
P12 55		33		55		33	
P13 60		36		60		36	
P14		39		65		39	
P15		42		70		42	
P16		45		75		45	
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

PK# 6221  
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Company Raymond Oil Co., Inc. Lease & Well No. Merten #1  
 Elevation 1875 Kelly Bushing Formation Arbuckle Effective Pay ----- Ft. Ticket No. 6221  
 Date 7/24/80 Sec. 1 Twp. 20S Range 14W County Barton State Kansas  
 Test Approved by Robert O'Dell Western Representative Vernon Wondra

Formation Test No. 3 Interval Tested from 3463 ft. to 3500 ft. Total Depth 3500 ft.  
 Packer Depth 3458 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 3463 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3490 ft. Recorder Number 6074 Cap 5100  
 Bottom Recorder Depth (Outside) 3493 ft. Recorder Number 1563 Cap 4200  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap -

Drilling Contractor Duke Drilling Co. Rig #1 Drill Collar Length - I. D. - in.  
 Mud Type starch Viscosity 46 Weight Pipe Length 879 I. D. 2.7 in.  
 Weight 10.0 Water Loss 16.4 cc. Drill Pipe Length 2663 I. D. 3.8 in.  
 Chlorides 78,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.  
 Jars: Make -- Serial Number - Anchor Length 37 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: Weak one inch blow throughout both flow periods.

Recovered 20 ft. of mud  
 Recovered     ft. of      
 Recovered     ft. of      
 Recovered     ft. of      
 Recovered     ft. of    

Remarks:    

Time Set Packer(s) 12:30 AM P.M. Time Started Off Bottom 2:30 AM P.M. Maximum Temperature 113°  
 Initial Hydrostatic Pressure (A) 1949 P.S.I.  
 Initial Flow Period Minutes 30 (B) 65 P.S.I. to (C) 63 P.S.I.  
 Initial Closed In Period Minutes 30 (D) 100 P.S.I.  
 Final Flow Period Minutes 30 (E) 69 P.S.I. to (F) 66 P.S.I.  
 Final Closed In Period Minutes 30 (G) 205 P.S.I.  
 Final Hydrostatic Pressure (H) 1883 P.S.I.

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 7-24-80 Test Ticket No. 6221  
 Recorder No. 6074 Capacity 5100 Location 3490 Ft.  
 Clock No. -- Elevation 1875 Kelly Bushing Well Temperature 113 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1949	P.S.I.	12:30 P.M.	
B First Initial Flow Pressure	65	P.S.I.	30 Mins.	30 Mins.
C First Final Flow Pressure	63	P.S.I.	30 Mins.	30 Mins.
D Initial Closed-in Pressure	100	P.S.I.	30 Mins.	30 Mins.
E Second Initial Flow Pressure	69	P.S.I.	30 Mins.	30 Mins.
F Second Final Flow Pressure	66	P.S.I.		
G Final Closed-in Pressure	205	P.S.I.		
H Final Hydrostatic Mud	1883	P.S.I.		

**PRESSURE BREAKDOWN**

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In		
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>10</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	0	65	0	63	0	69	0	66
P 2	5	65	3	64	5	66	3	69
P 3	10	63	6	69	10	66	6	74
P 4	15	63	9	73	15	66	9	78
P 5	20	63	12	77	20	66	12	82
P 6	25	63	15	84	25	66	15	85
P 7	30	63	18	90	30	66	18	97
P 8			21	93			21	107
P 9			24	96			24	194
P10			27	98			27	202
P11			30	100			30	205
P12								
P13								
P14								
P15								
P16								
P17								
P18								
P19								
P20								



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 6221

P. O. BOX 1599 WICHITA, KANSAS 67201

Elevation 1875 KB Formation Kelly Bushing Arbuckle Eff. Pay Ft.

District Great Bend Date 7-24-80 Customer Order No.

COMPANY NAME Raymond Oil Co. Inc.

ADDRESS One Main Place, Suite 900, Wichita, Kansas

LEASE AND WELL NO. Merten #1 COUNTY Barton STATE Kansas Sec. 1 Twp 20 Rge 14

Mail Invoice To Same as above No. Copies Requested 6

Mail Charts To Same as above No. Copies Requested 6

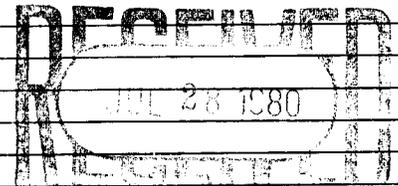
Formation Test No. 3 Interval Tested from 3463 ft. to 3500 ft. Total Depth 3500 ft. Packer Depth 3458 ft. Size 6 3/4 in. Packer Depth 3463 ft. Size 6 3/4 in. Depth of Selective Zone Set

Top Recorder Depth (Inside) 3490 ft. Recorder Number 6074 Cap. 5100 Bottom Recorder Depth (Outside) 3493 ft. Recorder Number 1563 Cap. 4200 Below Straddle Recorder Depth Recorder Number Cap.

Drilling Contractor Duke Drilling Co. Rig #1 Mud Type Starch Viscosity 46 Weight 10.0 Water Loss 16.4 cc. Chlorides 78,000 P.P.M. Jars: Make No Serial Number No Did Well Flow? No Reversed Out No Drill Collar Length I. D. Weight Pipe Length I. D. 2.7 in. Drill Pipe Length I. D. 3.8 in. Test Tool Length 21 ft. Tool Size 5 200 in. Anchor Length 37 ft. Size 5 200 in. Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in. Main Hole Size 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Weak 1" blow throughout both flow periods

Recovered 20 ft. of Mud Recovered ft. of Recovered ft. of Recovered ft. of Recovered ft. of Remarks:



Time Set Packer(s) 12:30 AM PM Time Started Off Bottom 2:30 AM PM Maximum Temperature 113 Initial Hydrostatic Pressure (A) 1954 P.S.I. Initial Flow Period Minutes 30 (B) 51 P.S.I. to (C) 51 P.S.I. Initial Closed In Period Minutes 30 (D) 102 P.S.I. Final Flow Period Minutes 30 (E) 51 P.S.I. to (F) 51 P.S.I. Final Closed In Period Minutes 30 (G) 2.04 P.S.I. Final Hydrostatic Pressure (H) 1890 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Robert O'Dell Robert O'Dell Signature of Customer or his authorized representative

Western Representative Vernon Wondra Thank You

FIELD INVOICE

Open Hole Test \$550.00 Misrun \$ Straddle Test \$ Jars \$ Selective Zone \$ Safety Joint \$ Standby \$ Evaluation \$ Extra Packer \$ Circ. Sub. \$ Mileage \$ Fluid Sampler \$ Extra Charts \$ TOTAL \$550.00

WESTERN TESTING CO., INC.

Pressure Data

Date 7-24 Test Ticket No. 6221  
 Recorder No. 6074 Capacity 5100 Location 3490 Ft.  
 Clock No. \_\_\_\_\_ Elevation 1875 KB Well Temperature 113 °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1949</u> P.S.I.		<u>12:30 P</u> M	
B First Initial Flow Pressure	<u>65</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>63</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>100</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>69</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>66</u> P.S.I.			
G Final Closed-in Pressure	<u>205</u> P.S.I.			
H Final Hydrostatic Mud	<u>1883</u> <del>1875</del> P.S.I.			

PRESSURE BREAKDOWN

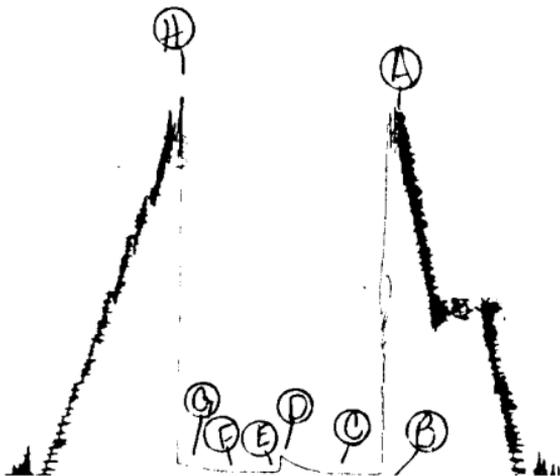
<p><b>First Flow Pressure</b>                  Breakdown: <u>6</u> Inc.                  of <u>5</u> mins. and a                  final inc. of <u>0</u> Min.</p>	<p><b>Initial Shut-In</b>                  Breakdown: <u>10</u> Inc.                  of <u>3</u> mins. and a                  final inc. of <u>0</u> Min.</p>	<p><b>Second Flow Pressure</b>                  Breakdown: <u>6</u> Inc.                  of <u>5</u> mins. and a                  final inc. of <u>0</u> Min.</p>	<p><b>Final Shut-In</b>                  Breakdown: <u>10</u> Inc.                  of <u>3</u> mins. and a                  final inc. of <u>0</u> Min.</p>
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<del>65</del> 65	0	63	0	69	0	66
P 2 5	<del>65</del> 65	3	64	5	66	3	69
P 3 10	63	6	69	10	}	6	74
P 4 15	63	9	73	15		9	78
P 5 20	}	12	77	20		12	82
P 6 25		15	84	25		15	85
P 7 30	63	18	90	30		18	97
P 8 35		21	93	35		21	107
P 9 40		24	96	40		24	194
P 10 45		27	98	45		27	202
P 11 50		30	100	50		30	205
P 12 55		33		55		33	
P 13 60		36		60	36		
P 14		39		65	39		
P 15		42		70	42		
P 16		45		75	45		
		48		80	48		
		51		85	51		
		54		90	54		
		57			57		
		60			60		

TK#6220

I.

76



Company Raymond Oil Company, Inc. Lease & Well No. Merten #1  
 Elevation 1875 Kelly Bushing Formation Kansas City Effective Pay ----- Ft. Ticket No. 6220  
 Date 7/23/80 Sec. 1 Twp. 20S Range 14W County Barton State Kansas  
 Test Approved by Timothy Helleman Western Representative Vernon Wondra

Formation Test No. 2 Interval Tested from 3344 ft. to 3365 ft. Total Depth 3365 ft.  
 Packer Depth 3339 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 3344 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -  
 Top Recorder Depth (Inside) 3354 ft. Recorder Number 6074 Cap. 5100  
 Bottom Recorder Depth (Outside) 3357 ft. Recorder Number 1563 Cap. 4200  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Duke Drilling Co. Rig #1 Drill Collar Length - I. D. - in.  
 Mud Type starch Viscosity 46 Weight Pipe Length 879 I. D. 2.7 in.  
 Weight 10.0 Water Loss 14.2 cc. Drill Pipe Length 2444 I. D. 3.8 in.  
 Chlorides 84,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.  
 Jars: Make - Serial Number - Anchor Length 21 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: Initial flow period weak blow; died in fifteen minutes. No blow on final flow period.

Recovered 20 ft. of mud with few spots of oil  
 Recovered - ft. of -  
 Recovered - ft. of -  
 Recovered - ft. of -  
 Recovered - ft. of -

Remarks: -

Time Set Packer(s) 4:30 A.M. P.M. Time Started Off Bottom 6:30 A.M. P.M. Maximum Temperature 109°  
 Initial Hydrostatic Pressure (A) 1803 P.S.I.  
 Initial Flow Period Minutes 30 (B) 40 P.S.I. to (C) 38 P.S.I.  
 Initial Closed In Period Minutes 30 (D) 128 P.S.I.  
 Final Flow Period Minutes 30 (E) 48 P.S.I. to (F) 46 P.S.I.  
 Final Closed In Period Minutes 30 (G) 82 P.S.I.  
 Final Hydrostatic Pressure (H) 1790 P.S.I.

**WESTERN TESTING CO., INC.**

**Pressure Data**

Date 7-23-80 Test Ticket No. 6220  
 Recorder No. 6074 Capacity 5100 Location 3354 Ft.  
 Clock No. -- Elevation 1875 Kelly Bushing Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1803	P.S.I.	4:30 P. M.	
B First Initial Flow Pressure	40	P.S.I.	30	30 Mins.
C First Final Flow Pressure	38	P.S.I.	30	30 Mins.
D Initial Closed-in Pressure	128	P.S.I.	30	30 Mins.
E Second Initial Flow Pressure	48	P.S.I.	30	30 Mins.
F Second Final Flow Pressure	46	P.S.I.		
G Final Closed-in Pressure	82	P.S.I.		
H Final Hydrostatic Mud	1790	P.S.I.		

**PRESSURE BREAKDOWN**

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In			
	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.			
	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	40	0	38	0	48	0	46
P 2	38	3	41	5	46	3	47
P 3	38	6	46	10	46	6	49
P 4	38	9	51	15	46	9	52
P 5	38	12	56	20	46	12	55
P 6	38	15	64	25	46	15	59
P 7	38	18	72	30	46	18	61
P 8		21	84			21	68
P 9		24	97			24	74
P10		27	113			27	79
P11		30	128			30	82
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							



P. O. BOX 1599 PHONE (316) 838-0601  
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET NO 6222

Elevation 1875 K.B Formation Arbuckle Eff. Pay      Ft.

District Great Bend Date 7-24-80 Customer Order No.     

COMPANY NAME Raymond Oil Co. Inc

ADDRESS One Main Place, Suite 900, Wichita, Kansas

LEASE AND WELL NO. Merten #1 COUNTY Barton STATE Kansas Sec. 1 Twp 20 Rge 14

Mail Invoice To Same as above No. Copies Requested 6

Co. Name Same as above Address     

Mail Charts To Same as above No. Copies Requested 6

Formation Test No. 4 Interval Tested from 3505 ft. to 3520 ft. Total Depth 3520 ft.

Packer Depth 3500 ft. Size 6 3/4 in. Packer Depth      ft. Size      in.

Packer Depth 3505 ft. Size 6 3/4 in. Packer Depth      ft. Size      in.

Depth of Selective Zone Set     

Top Recorder Depth (Inside) 3510 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3513 ft. Recorder Number 1563 Cap. 4200

Below Straddle Recorder Depth      ft. Recorder Number      Cap.     

Drilling Contractor Duke Drilling Co. Rig #1 Drill Collar Length      I. D.      in.

Mud Type Starch Viscosity 57 Weight Pipe Length 879 I. D. 2.7 in.

Weight 10.0 Water Loss 12.0 cc. Drill Pipe Length 2605 I. D. 3.8 in.

Chlorides 78,000 P.P.M. Test Tool Length 21 ft. Tool Size 5.200 in.

Jars: Make      Serial Number      Anchor Length 15 ft. Size 5.600 in.

Did Well Flow? Yes Reversed Out No Surface Choke Size 7/8 in. Bottom Choke Size 3/4 in.

Main Hole Size 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Gas to surface in 30 min on 1st flow period (See gas report)

Reattached sheet for gas measurements initial flow

Recovered 90 ft. of Gas cut + 5/10 cm

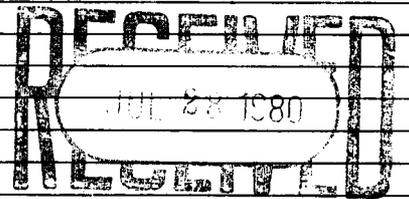
Recovered 60 ft. of oil + gas cut mud (No water)

Recovered      ft. of     

Recovered      ft. of     

Recovered      ft. of     

Remarks: Hit bridges going in hole with tool



Time Set Packer(s) 10:15 <sup>AM</sup> <sub>PM</sub> Time Started Off Bottom 1:45 <sup>AM</sup> <sub>PM</sub> Maximum Temperature 115

Initial Hydrostatic Pressure (A) 1966 P.S.I.

Initial Flow Period Minutes 45 (B) 38 P.S.I. to (C) 63 P.S.I.

Initial Closed In Period Minutes 60 (D) 1150 P.S.I.

Final Flow Period Minutes 45 (E) 63 P.S.I. to (F) 63 P.S.I.

Final Closed In Period Minutes 60 (G) 1137 P.S.I.

Final Hydrostatic Pressure (H) 1954 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Robert O'Dell Robert O'Dell  
Signature of Customer or his authorized representative

Western Representative Vernon Wanda  
Thank You

FIELD INVOICE

Open Hole Test	\$ 550 <sup>00</sup>
Misrun	\$
Straddle Test	\$
Jars	\$
Selective Zone	\$
Safety Joint	\$
Standby	\$
Evaluation	\$
Extra Packer	\$
Circ. Sub.	\$
Mileage	\$
Fluid Sampler	\$
Extra Charts	\$

TOTAL \$ 550<sup>00</sup>

WESTERN TESTING CO., INC.

Pressure Data

Date 7-24 Test Ticket No. 6222  
 Recorder No. 6074 Capacity 5100 Location 3510 Ft.  
 Clock No. — Elevation 1875 KB Well Temperature 115 °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1977</u> P.S.I.		<u>10:15</u> P	<u>—</u> M
B First Initial Flow Pressure	<u>51</u> P.S.I.	First Flow Pressure	<u>45</u> Mins.	<u>45</u> Mins.
C First Final Flow Pressure	<u>64</u> P.S.I.	Initial Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>1161</u> P.S.I.	Second Flow Pressure	<u>45</u> Mins.	<u>45</u> Mins.
E Second Initial Flow Pressure	<u>66</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
F Second Final Flow Pressure	<u>68</u> P.S.I.			
G Final Closed-in Pressure	<u>1150</u> P.S.I.			
H Final Hydrostatic Mud	<u>1959</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure  
 Breakdown: 9 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

Initial Shut-In  
 Breakdown: 20 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Second Flow Pressure  
 Breakdown: 9 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

Final Shut-In  
 Breakdown: 20 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>51</u>	0	<u>64</u>	0	<u>66</u>	0	<u>68</u>
P 2	<u>47</u>	3	<u>440</u>	5	<u>66</u>	3	<u>506</u>
P 3	<u>49</u>	6	<u>722</u>	10	<u>—</u>	6	<u>690</u>
P 4	<u>51</u>	9	<u>890</u>	15	<u>—</u>	9	<u>836</u>
P 5	<u>54</u>	12	<u>987</u>	20	<u>—</u>	12	<u>941</u>
P 6	<u>55</u>	15	<u>1043</u>	25	<u>—</u>	15	<u>995</u>
P 7	<u>60</u>	18	<u>1077</u>	30	<u>66</u>	18	<u>1036</u>
P 8	<u>64</u>	21	<u>1097</u>	35	<u>67</u>	21	<u>1059</u>
P 9	<u>64</u>	24	<u>1110</u>	40	<u>68</u>	24	<u>1079</u>
P10	<u>64</u>	27	<u>1120</u>	45	<u>68</u>	27	<u>1094</u>
P11	<u>—</u>	30	<u>1130</u>	50	<u>—</u>	30	<u>1105</u>
P12	<u>—</u>	33	<u>1135</u>	55	<u>—</u>	33	<u>1115</u>
P13	<u>—</u>	36	<u>1141</u>	60	<u>—</u>	36	<u>1120</u>
P14	<u>—</u>	39	<u>1145</u>	65	<u>—</u>	39	<u>1125</u>
P15	<u>—</u>	42	<u>1148</u>	70	<u>—</u>	42	<u>1130</u>
P16	<u>—</u>	45	<u>1050</u>	75	<u>—</u>	45	<u>1135</u>
P17	<u>—</u>	48	<u>1052</u>	80	<u>—</u>	48	<u>1138</u>
P18	<u>—</u>	51	<u>1054</u>	85	<u>—</u>	51	<u>1141</u>
P19	<u>—</u>	54	<u>1056</u>	90	<u>—</u>	54	<u>1144</u>
P20	<u>—</u>	57	<u>1058</u>			57	<u>1147</u>
		60	<u>1161</u>			60	<u>1150</u>



### GAS FLOW REPORT

Nº 1460

Date 7-24-80 Ticket 6222 Company Raymond Oil Co. Inc.  
 Well Name and No. Merten #1 Dst No. 4 Interval Tested 3505 - 3520  
 County Barton State Kansas Sec. 1 Twp. 20 Rg. 14

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitor Tester	P.S.I. on Side Static Tester	Description of Flow
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#### PRE FLOW

Gas to surface in 30 min.

<u>10m</u>	<u>22 H<sub>2</sub>O</u>	<u>1/4"</u>	<u>—————</u>	<u>—————</u>	<u>7,880 CFPD</u>
<u>15m</u>	<u>22 H<sub>2</sub>O</u>	<u>1/4"</u>	<u>—————</u>	<u>—————</u>	<u>7,880 CFPD</u>

#### SECOND FLOW

<u>10m</u>	<u>30 H<sub>2</sub>O</u>	<u>1/4"</u>	<u>—————</u>	<u>—————</u>	<u>9,200 CFPD</u>
<u>20m</u>	<u>26 H<sub>2</sub>O</u>	<u>1/4"</u>	<u>—————</u>	<u>—————</u>	<u>8,560 CFPD</u>
<u>30m</u>	<u>26 H<sub>2</sub>O</u>	<u>1/4"</u>	<u>—————</u>	<u>—————</u>	<u>8,560 CFPD</u>
<u>40m</u>	<u>26 H<sub>2</sub>O</u>	<u>1/4"</u>	<u>—————</u>	<u>—————</u>	<u>8,560 CFPD</u>
<u>45m</u>	<u>26 H<sub>2</sub>O</u>	<u>1/4"</u>	<u>—————</u>	<u>—————</u>	<u>8,560 CFPD</u>

#### GAS BOTTLE

Serial No. \_\_\_\_\_ Date Bottle Filled \_\_\_\_\_ Date to be Invoiced \_\_\_\_\_

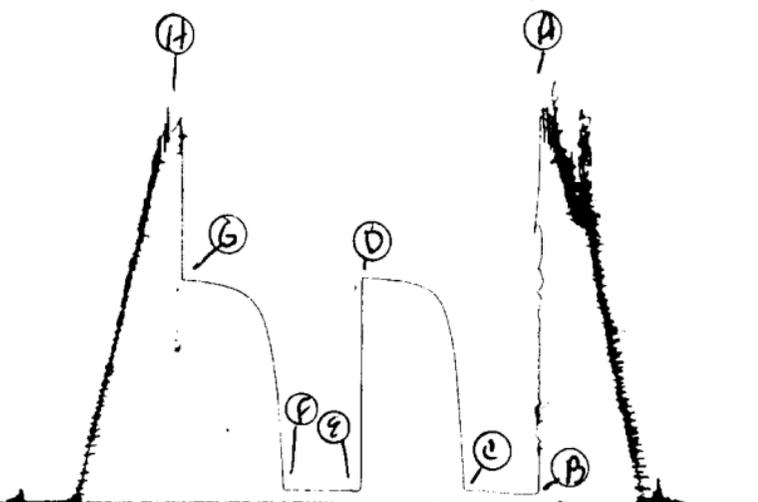
Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1% per month, equal to 12% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Raymond Oil Co. Inc.  
 Authorized by Robert O'Dell

SKT # 6222

I



2/2

Company Raymond Oil Company, Inc. Lease & Well No. Merten #1  
 Elevation 1875 Kelly Bushing Formation Arbuckle Effective Pay --- Ft. Ticket No. 6222  
 Date 7/24/80 Sec 1 Twp 20S Range 14W County Barton State Kansas  
 Test Approved by Robert O'Dell Western Representative Vernon Wondra

Formation Test No. 4 Interval Tested from 3505 ft. to 3520 ft. Total Depth 3520 ft.  
 Packer Depth 3500 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 3505 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -  
 Top Recorder Depth (Inside) 3510 ft. Recorder Number 6074 Cap. 5100  
 Bottom Recorder Depth (Outside) 3513 ft. Recorder Number 1563 Cap. 4200  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Duke Drilling Co. Rig #1 Drill Collar Length - I. D. - in.  
 Mud Type starch Viscosity 57 Weight Pipe Length 879 I. D. 2.7 in.  
 Weight 10.0 Water Loss 12.0 cc. Drill Pipe Length 2605 I. D. 3.8 in.  
 Chlorides 78,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.  
 Jars: Make - Serial Number - Anchor Length 15 ft. Size 5 1/2 OD in.  
 Did Well Flow? Yes 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: Gas to surface in thirty minutes on initial flow. See attached sheet for gas measurements.

Recovered 90 ft. of gas cut and slightly oil cut mud  
 Recovered 60 ft. of oil and gas cut mud (no water)  
 Recovered     ft. of      
 Recovered     ft. of      
 Recovered     ft. of      
 Remarks: Hit bridges going in hole with tool.

Time Set Packer(s)	<u>10:15</u>	<u>A.M.</u> P.M.	Time Started Off Bottom	<u>1:45</u>	<u>A.M.</u> P.M.	Maximum Temperature	<u>115°</u>
Initial Hydrostatic Pressure			(A)	<u>1977</u>	P.S.I.		
Initial Flow Period	Minutes	<u>45</u>	(B)	<u>51</u>	P.S.I. to (C)	<u>64</u>	P.S.I.
Initial Closed In Period	Minutes	<u>60</u>	(D)	<u>1161</u>	P.S.I.		
Final Flow Period	Minutes	<u>45</u>	(E)	<u>66</u>	P.S.I. to (F)	<u>68</u>	P.S.I.
Final Closed In Period	Minutes	<u>60</u>	(G)	<u>1150</u>	P.S.I.		
Final Hydrostatic Pressure			(H)	<u>1959</u>	P.S.I.		

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date 7-24-80 Test Ticket No. 6222  
 Recorder No. 6074 Capacity 5100 Location 3510 Ft.  
 Clock No. -- Elevation 1875 Kelly Bushing Well Temperature 115 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1977 P.S.I.	Open Tool	10:15 P.M.	
B First Initial Flow Pressure	51 P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
C First Final Flow Pressure	64 P.S.I.	Initial Closed-in Pressure	60 Mins.	60 Mins.
D Initial Closed-in Pressure	1161 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E Second Initial Flow Pressure	66 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	68 P.S.I.			
G Final Closed-in Pressure	1150 P.S.I.			
H Final Hydrostatic Mud	1959 P.S.I.			

**PRESSURE BREAKDOWN**

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In			
	Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>20</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>20</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.			
	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	51	0	64	0	66	0	68
P 2	47	3	440	5	66	3	506
P 3	49	6	722	10	66	6	690
P 4	51	9	890	15	66	9	836
P 5	54	12	987	20	66	12	941
P 6	55	15	1043	25	66	15	995
P 7	60	18	1077	30	66	18	1036
P 8	64	21	1097	35	67	21	1059
P 9	64	24	1110	40	68	24	1079
P10	64	27	1120	45	68	27	1094
P11		30	1130			30	1105
P12		33	1135			33	1115
P13		36	1141			36	1120
P14		39	1145			39	1125
P15		42	1148			42	1130
P16		45	1050			45	1135
P17		48	1052			48	1138
P18		51	1054			51	1141
P19		54	1056			54	1144
P20		57	1058			57	1147
		60	1161			60	1150

## GAS FLOW REPORT

Date 7/24/80 Ticket 6222 Company Raymond Oil Co., Inc.  
 Well Name and No. Merten #1 Dst No. 4 Interval Tested 3505'-3520'  
 County Barton State Kansas Sec. 1 Twp. 20S Rg. 14W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Meria Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
<b>PRE FLOW</b>						
	10 min.	22" of water		1/4" orifice		7,880 CFPD
	15 min.	22" of water		1/4" orifice		7,880 CFPD

<b>SECOND FLOW</b>						
	10 min.	30" of water		1/4" orifice		9,200 CFPD
	20 min.	26" of water		1/4" orifice		8,560 CFPD
	30 min.	26" of water		1/4" orifice		8,560 CFPD
	40 min.	26" of water		1/4" orifice		8,560 CFPD
	45 min.	26" of water		1/4" orifice		8,560 CFPD

### GAS BOTTLE

Serial No. -- Date Bottle Filled --- Date to be Invoiced: 7/24/80

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Raymond Oil Co., Inc.  
 Authorized by Robert O'Dell



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 6223

OK

P. O. BOX 1599 WICHITA, KANSAS 67201
PHONE (316) 838-0601

Elevation 1875 KB Formation Arb Eff. Pay Ft.

District Great Bend Date 7-25-80 Customer Order No.

COMPANY NAME Raymond Oil Co., Inc.

ADDRESS One main Place, Suite 900, Wichita, Kansas

LEASE AND WELL NO. Merten #1 COUNTY Barton STATE Kansas Sec. 1 Twp 20 Rge 14

Mail Invoice To Same as above No. Copies Requested 6

Mail Charts To Same as above No. Copies Requested 6

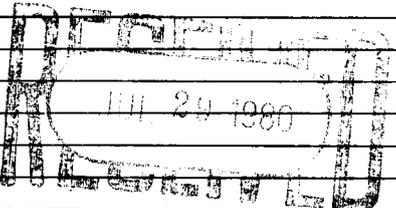
Formation Test No. 5 Interval Tested from 3521 ft. to 3550 ft. Total Depth 3550 ft.
Packer Depth 3516 ft. Size 6 3/4 in. Packer Depth ft. Size in.
Packer Depth 3521 ft. Size 6 3/4 in. Packer Depth ft. Size in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 3540 ft. Recorder Number 6074 Cap. 5100
Bottom Recorder Depth (Outside) 3543 ft. Recorder Number 1563 Cap. 4200
Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Duke Drilling Co. Rig #1 Drill Collar Length I. D. in.
Mud Type starch Viscosity 53 Weight Pipe Length 879 I. D. 2.7 in.
Weight 10.1 Water Loss 11.2 cc. Drill Pipe Length 2621 I. D. 3.8 in.
Chlorides 80,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.
Jars: Make Serial Number Anchor Length 29 ft. Size 5 1/2 in.
Did Well Flow? No Reversed Out No Surface Choke Size 7/8 in. Bottom Choke Size 3/4 in.
Main Hole Size 7/8 in. Tool Joint Size 4 1/2 in.

Blow: Fair 5" blow throughout 1st flow period. Weak 2" blow throughout 2nd flow period

Recovered 210 ft. of Gas in pipe
Recovered 150 ft. of Gas out + 5/1 O.C.M.
Recovered ft. of
Recovered ft. of
Recovered ft. of



Remarks:

Table with 4 columns: Time Set Packer(s), Time Started Off Bottom, Maximum Temperature, and P.S.I. values for various stages (A-H).

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made. All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Robert E. Odell Signature of Customer or his authorized representative

Western Representative Vernon Worden Thank You

FIELD INVOICE

Table listing items: Open Hole Test (\$550), Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, and TOTAL (\$550).

WESTERN TESTING CO., INC.

Pressure Data

Date 7-25-80 Test Ticket No. 6223  
 Recorder No. 6074 Capacity 5100 Location 2540 Ft.  
 Clock No. \_\_\_\_\_ Elevation 1875 KB Well Temperature 116 °F

Point	Pressure	P.S.I.	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1954</u>	P.S.I.	Open Tool	<u>5:30 P.M.</u>	
B First Initial Flow Pressure	<u>56</u>	P.S.I.	First Flow Pressure	<u>30</u> Mins	<u>30</u> Mins.
C First Final Flow Pressure	<u>73</u>	P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>1086</u>	P.S.I.	Second Flow Pressure	<u>30</u> Mins	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>88</u>	P.S.I.	Final Closed-in Pressure	<u>45</u> Mins	<u>45</u> Mins.
F Second Final Flow Pressure	<u>104</u>	P.S.I.			
G Final Closed-in Pressure	<u>1051</u>	P.S.I.			
H Final Hydrostatic Mud	<u>1911</u>	P.S.I.			

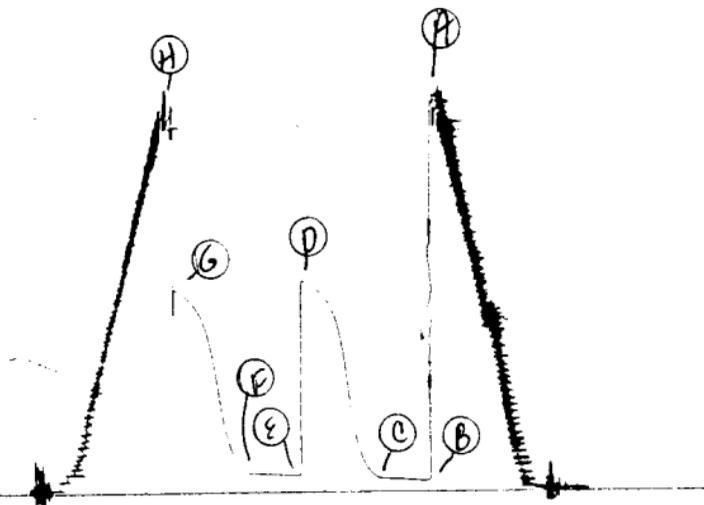
PRESSURE BREAKDOWN

<b>First Flow Pressure</b> Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	<b>Initial Shut-In</b> Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	<b>Second Flow Pressure</b> Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	<b>Final Shut-In</b> Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>56</u>	0	<u>73</u>	0	<u>88</u>	0	<u>104</u>
P 2 5	<u>58</u>	3	<u>92</u>	5	<u>90</u>	3	<u>118</u>
P 3 10	<u>64</u>	6	<u>118</u>	10	<u>92</u>	6	<u>146</u>
P 4 15	<u>67</u>	9	<u>164</u>	15	<u>95</u>	9	<u>194</u>
P 5 20	<u>69</u>	12	<u>242</u>	20	<u>98</u>	12	<u>258</u>
P 6 25	<u>71</u>	15	<u>366</u>	25	<u>101</u>	15	<u>356</u>
P 7 30	<u>73</u>	18	<u>537</u>	30	<u>104</u>	18	<u>488</u>
P 8 35		21	<u>716</u>	35		21	<u>645</u>
P 9 40		24	<u>841</u>	40		24	<u>762</u>
P10 45		27	<u>931</u>	45		27	<u>857</u>
P11 50		30	<u>985</u>	50		30	<u>921</u>
P12 55		33	<u>1005</u>	55		33	<u>962</u>
P13 60		36	<u>1026</u>	60		36	<u>995</u>
P14		39	<u>1045</u>	65		39	<u>1020</u>
P15		42	<u>1066</u>	70		42	<u>1036</u>
P16		45	<u>1086</u>	75		45	<u>1051</u>
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

JKY # 6222

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1/2

Company Raymond Oil Company, Inc. Lease & Well No. Merten #1  
 Elevation 1875 Kelly Bushing Formation Arbuckle Effective Pay ----- Ft. Ticket No. 6223  
 Date 7-25-80 Sec. 1 Twp. 20s Range 14W County Barton State Kansas  
 Test Approved by Robert O'Dell Western Representative Vernon Wondra

Formation Test No. 5 Interval Tested from 3521 ft. to 3550 ft. Total Depth 3550 ft.  
 Packer Depth 3516 ft. Size 6 3/4 in. Packer Depth ---- ft. Size ---- in.  
 Packer Depth 3521 ft. Size 6 3/4 in. Packer Depth ---- ft. Size ---- in.  
 Depth of Selective Zone Set -----

Top Recorder Depth (Inside) 3540 ft. Recorder Number 6074 Cap. 5100  
 Bottom Recorder Depth (Outside) 3543 ft. Recorder Number 1563 Cap. 4200  
 Below Straddle Recorder Depth --- ft. Recorder Number ---- Cap. -----

Drilling Contractor Duke Drilling Co. Rig #1 Drill Collar Length ---- I. D. ---- in.  
 Mud Type Starch Viscosity 53 Weight Pipe Length 879 I. D. 2.7 in.  
 Weight 10.1 Water Loss 11.2 cc. Drill Pipe Length 2621 I. D. 3.8 in.  
 Chlorides 80,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 O.D. in.  
 Jars: Make ----- Serial Number ----- Anchor Length 29 ft. Size 5 1/2 O.D. 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 F.H. in.

Blow: Fair 5" blow throughout 1st flow period. Weak 2" blow throughout 2nd flow period.

Recovered 210 ft. of Gas in Pipe  
 Recovered 150 ft. of Gas cut and slight oil cut mud  
 Recovered      ft. of       
 Recovered      ft. of       
 Recovered      ft. of     

Remarks:     

Time Set Packer(s) 5:30 ~~A.M.~~ P.M. Time Started Off Bottom 8:00 ~~A.M.~~ P.M. Maximum Temperature 116  
 Initial Hydrostatic Pressure ..... (A) 1954 P.S.I.  
 Initial Flow Period ..... Minutes 30 (B) 56 P.S.I. to (C) 73 P.S.I.  
 Initial Closed In Period ..... Minutes 45 (D) 1086 P.S.I.  
 Final Flow Period ..... Minutes 30 (E) 88 P.S.I. to (F) 104 P.S.I.  
 Final Closed In Period ..... Minutes 45 (G) 1051 P.S.I.  
 Final Hydrostatic Pressure ..... (H) 1911 P.S.I.

# WESTERN TESTING CO., INC.

## Pressure Data

Date 7-25-80 Test Ticket No. 6223  
 Recorder No. 6074 Capacity 5100 Location 3540 Ft.  
 Clock No. ----- Elevation 1875 Kelly Bushing Well Temperature 116 °F

Point	Pressure		Time	
			Given	Computed
A	Initial Hydrostatic Mud	1954 P.S.I.	5:30 P.	M
B	First Initial Flow Pressure	56 P.S.I.	30 Mins.	30 Mins.
C	First Final Flow Pressure	73 P.S.I.	45 Mins.	45 Mins.
D	Initial Closed-in Pressure	1086 P.S.I.	30 Mins.	30 Mins.
E	Second Initial Flow Pressure	88 P.S.I.	45 Mins.	45 Mins.
F	Second Final Flow Pressure	104 P.S.I.		
G	Final Closed-in Pressure	1051 P.S.I.		
H	Final Hydrostatic Mud	1911 P.S.I.		

### PRESSURE BREAKDOWN

**First Flow Pressure**  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

**Initial Shut-In**  
 Breakdown: 15 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

**Second Flow Pressure**  
 Breakdown: 6 Inc.  
 of 5 mins. and a  
 final inc. of 0 Min.

**Final Shut-In**  
 Breakdown: 15 Inc.  
 of 3 mins. and a  
 final inc. of 0 Min.

Point	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Mins.	Press.	Minutes	Press.	Minutes	Press.	Minutes	Press.
P 1	0	56	0	73	0	88	0	104
P 2	5	58	3	92	5	90	3	118
P 3	10	64	6	118	10	92	6	146
P 4	15	67	9	164	15	95	9	194
P 5	20	69	12	242	20	98	12	258
P 6	25	71	15	366	25	101	15	356
P 7	30	73	18	537	30	104	18	488
P 8			21	716			21	645
P 9			24	841			24	762
P10			27	931			27	857
P11			30	985			30	921
P12			33	1005			33	962
P13			36	1026			36	995
P14			39	1045			39	1020
P15			42	1066			42	1036
P16			45	1086			45	1051
P17								
P18								
P19								
P20								