



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 19284

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 3343 GL Formation Toronto Eff. Pay Ft.

District Colby Date 1-8-93 Customer Order No.

COMPANY NAME Raymond Oil Company, Inc

ADDRESS P.O. Box 48788 Wichita Ks 67201

LEASE AND WELL NO. Birney Farms 1 COUNTY Cheyenne STATE Ks Sec. 4 Twp. 5 Rge. 37w

Mail Invoice To James #1 Birney Farms Co. Name Address No. Copies Requested Reg

Mail Charts To Same Address No. Copies Requested Reg

Formation Test No. 1 Interval Tested From 4159 ft. to 4206 ft. Total Depth 4206 ft.

Packer Depth 4146 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4159 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4202 ft. Recorder Number 13521 Cap. 4375

Bottom Recorder Depth (Outside) 4205 ft. Recorder Number 13548 Cap. 4075

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

Drilling Contractor Murfin Rig 3 Drill Collar Length 207 179 I. D. 2.2 in.

Mud Type Chemical Viscosity 41 Weight Pipe Length 476 I. D. in.

Weight 9.3 Water Loss 8.0 cc. Drill Pipe Length 3454 3482 I. D. 3.8 in.

Chlorides 750 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 47 ft. Size 5 1/2 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 x H in.

Blow: IF Weak surface Blow Building to 1 inch in Bucket IS No Blow FF NO Blow FS NO Blow

Recovered 20 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks: JAN 13 1993

Time On Location 6:00 A.M. Time Pick Up Tool 8:30 P.M. Time Off Location A.M.

Time Set Packer(s) 10:15 P.M. Time Started Off Bottom 12:45 P.M. Maximum Temperature 111°

Initial Hydrostatic Pressure (A) 2067 P.S.I.

Initial Flow Period (B) 30 Minutes (C) 66 P.S.I. to (D) 66 P.S.I.

Initial Closed In Period (E) 45 Minutes (F) 1191 P.S.I.

Final Flow Period (G) 30 Minutes (H) 77 P.S.I. to (I) 77 P.S.I.

Final Closed In Period (J) 45 Minutes (K) 1105 P.S.I.

Final Hydrostatic Pressure (L) 2056 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 [Signature] Signature of Customer or his authorized representative

Western Representative Joe Savage

FIELD INVOICE

Table with 2 columns: Item Name and Price. Items include Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL.

WESTERN TESTING CO., INC.

Pressure Data

Date 1-8-93 Test Ticket No. 19284
 Recorder No. 13521 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F

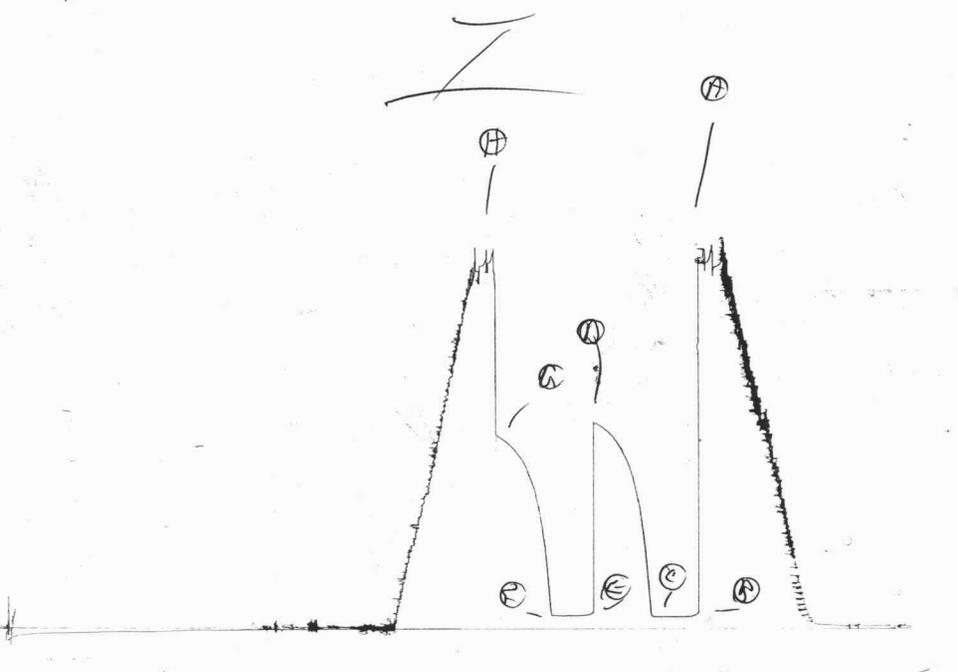
Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2089</u> P.S.I.			M
B First Initial Flow Pressure	<u>73</u> P.S.I.	First Flow Pressure	Mins. <u>30</u>	Mins.
C First Final Flow Pressure	<u>73</u> P.S.I.	Initial Closed-in Pressure	Mins. <u>45</u>	Mins.
D Initial Closed-in Pressure	<u>1184</u> P.S.I.	Second Flow Pressure	Mins. <u>40</u>	Mins.
E Second Initial Flow Pressure	<u>80</u> P.S.I.	Final Closed-in Pressure	Mins. <u>45</u>	Mins.
F Second Final Flow Pressure	<u>80</u> P.S.I.			
G Final Closed-in Pressure	<u>1113</u> P.S.I.			
H Final Hydrostatic Mud	<u>2072</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ 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	<u>73</u>	0	<u>73</u>	0	<u>80</u>	0	<u>80</u>
P 2 5	<u>73</u>	3	<u>206</u>	5	<u>73</u>	3	<u>240</u>
P 3 10	<u>73</u>	6	<u>472</u>	10	<u>73</u>	6	<u>450</u>
P 4 15	<u>73</u>	9	<u>627</u>	15	<u>73</u>	9	<u>604</u>
P 5 20	<u>73</u>	12	<u>756</u>	20	<u>73</u>	12	<u>725</u>
P 6 25	<u>73</u>	15	<u>816</u>	25	<u>73</u>	15	<u>816</u>
P 7 30	<u>73</u>	18	<u>936</u>	30	<u>80</u>	18	<u>864</u>
P 8 35	<u>73</u>	21	<u>985</u>	35	<u>80</u>	21	<u>917</u>
P 9 40	<u>73</u>	24	<u>1018</u>	40	<u>80</u>	24	<u>972</u>
P10 45	<u>73</u>	27	<u>1064</u>	45	<u>80</u>	27	<u>999</u>
P11 50	<u>73</u>	30	<u>1099</u>	50	<u>80</u>	30	<u>1054</u>
P12 55	<u>73</u>	33	<u>1124</u>	55	<u>80</u>	33	<u>1055</u>
P13 60	<u>73</u>	36	<u>1144</u>	60	<u>80</u>	36	<u>1072</u>
P14 65	<u>73</u>	39	<u>1160</u>	65	<u>80</u>	39	<u>1088</u>
P15 70	<u>73</u>	42	<u>1173</u>	70	<u>80</u>	42	<u>1104</u>
P16 75	<u>73</u>	45	<u>1184</u>	75	<u>80</u>	45	<u>1113</u>
P17 80	<u>73</u>	48		80	<u>80</u>	48	
P18 85	<u>73</u>	51		85	<u>80</u>	51	
P19 90	<u>73</u>	54		90	<u>80</u>	54	
P20 95	<u>73</u>	57		95	<u>80</u>	57	
100	<u>73</u>	60		100	<u>80</u>	60	

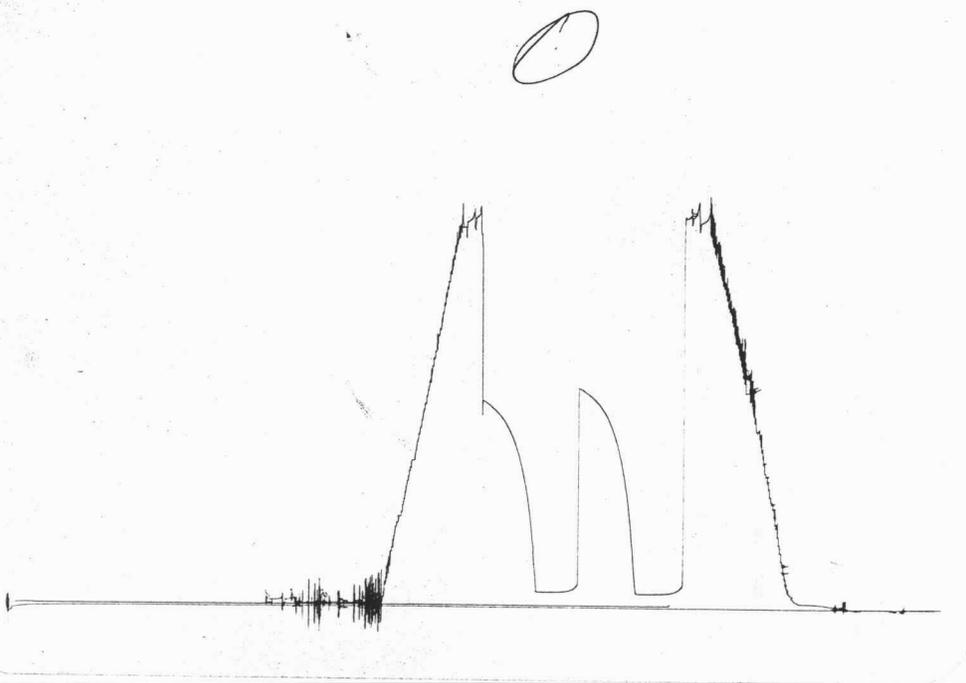
13521
DST 41

KT 19284



DST 41
13548

KT 19284



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone **1 - 800-688-7021**

DST REPORT

GENERAL INFORMATION

DATE : 1/8/93
CUSTOMER : RAYMOND OIL CO., INC.
WELL : 1 TEST: 1
ELEVATION: 3343 GL
SECTION : 4
RANGE : 37W COUNTY: CHEYENNE
GAUGE SN#: 13521 RANGE : 4375
TICKET : 19284
LEASE : BIRNEY FARMS
GEOLOGIST: CLARKE SANDBERG
FORMATION: TORONTO
TOWNSHIP : 5S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4159.00 ft TO: 4206.00 ft TVD: 4206.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4202.0 ft 4205.0 ft
TEMPERATURE: 111.0
DRILL COLLAR LENGTH: 179.0 ft I.D.: 2.200 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 3482.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 22.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 47.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 4146.0 ft SIZE: 6.630 in
PACKER DEPTH: 4159.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 3
MUD TYPE : CHEMICAL VISCOSITY : 41.00 cp
WEIGHT : 9.300 ppg WATER LOSS: 8.000 cc
CHLORIDES : 750 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK SURFACE BLOW BUILDING TO
A 1 INCH BLOW IN BUCKET. FINAL FLOW PERIOD NO BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
20.0	0.0	0.0	0.0	100.0	MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	60.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.0940	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.0940	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1245.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	66.00	66.00
INITIAL SHUT-IN	45.00		1171.00
FINAL FLOW	30.00	77.00	77.00
FINAL SHUT-IN	45.00		1105.00

FINAL HYDROSTATIC PRESSURE: 2056.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2089.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	73.00	73.00
INITIAL SHUT-IN	45.00		1184.00
FINAL FLOW	30.00	80.00	80.00
FINAL SHUT-IN	45.00		1113.00

FINAL HYDROSTATIC PRESSURE: 2072.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/8/93	TICKET : 19284
CUSTOMER : RAYMOND OIL CO., INC.	LEASE : BIRNEY FARMS
WELL : 1 TEST: 1	GEOLOGIST: CLARKE SANDBERG
ELEVATION: 3343 GL	FORMATION: TORONTO
SECTION : 4	TOWNSHIP : 5S
RANGE : 37W	COUNTY: CHEYENNE
GAUGE SN#: 13521	RANGE : 4375
	STATE : KS
	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	73.00	73.00
5.00	73.00	0.00
10.00	73.00	0.00
15.00	73.00	0.00
20.00	73.00	0.00
25.00	73.00	0.00
30.00	73.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	206.00	206.00	11.00
6.00	473.00	267.00	6.00
9.00	637.00	164.00	4.33
12.00	756.00	119.00	3.50
15.00	861.00	105.00	3.00
18.00	936.00	75.00	2.67
21.00	982.00	46.00	2.43
24.00	1028.00	46.00	2.25
27.00	1064.00	36.00	2.11
30.00	1099.00	35.00	2.00
33.00	1124.00	25.00	1.91
36.00	1144.00	20.00	1.83
39.00	1160.00	16.00	1.77
42.00	1173.00	13.00	1.71
45.00	1184.00	11.00	1.67

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	80.00	80.00
5.00	80.00	0.00
10.00	80.00	0.00
15.00	80.00	0.00
20.00	80.00	0.00
25.00	80.00	0.00
30.00	80.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	240.00	240.00	16.00
6.00	450.00	210.00	8.50
9.00	604.00	154.00	6.00
12.00	735.00	131.00	4.75
15.00	816.00	81.00	4.00
18.00	864.00	48.00	3.50
21.00	927.00	63.00	3.14
24.00	973.00	46.00	2.88
27.00	999.00	26.00	2.67
30.00	1031.00	32.00	2.50
33.00	1055.00	24.00	2.36
36.00	1072.00	17.00	2.25
39.00	1088.00	16.00	2.15
42.00	1104.00	16.00	2.07
45.00	1113.00	9.00	2.00



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

No 19285

P. O. BOX 1599 PHONE (316) 262-5861 WICHITA, KANSAS 67201

Elevation 3343 GL Formation K.C. "ABC zones" Eff. Pay Ft.

District Colby Date 1-9-92 Customer Order No. COMPANY NAME Raymond Oil Company Inc ADDRESS Box 48788 Wichita KS 67201 LEASE AND WELL NO. Birney Farms #4 COUNTY Cheyenne STATE KS Sec. 4 Twp. 5 Rge. 37 Mail Invoice To Same #1 Birney Farms Co. Name Same #1 Birney Farms Address Address No. Copies Requested Reg Mail Charts To Same Address No. Copies Requested Reg

Formation Test No. 2 Interval Tested From 4197 ft. to 4319 ft. Total Depth 4319 ft. Packer Depth 4192 ft. Size 6 3/8 in. Packer Depth - ft. Size - in. Packer Depth 4197 ft. Size 6 3/8 in. Packer Depth - ft. Size - in. Depth of Selective Zone Set

Top Recorder Depth (Inside) 4206 ft. Recorder Number 13521 Cap. 4375 Bottom Recorder Depth (Outside) 4209 ft. Recorder Number 13548 Cap. 4075 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Marfin Rig 3 Mud Type Chemical Viscosity 41 Weight 9.3 Water Loss 8.0 cc. Chlorides 750 P.P.M. Jars: Make - Serial Number - Did Well Flow? NO Reversed Out NO Drill Collar Length 179 I. D. 2.2 in. Weight Pipe Length 412 I. D. in. Drill Pipe Length 3584 I. D. 3.8 in. Test Tool Length 22 ft. Tool Size 5 1/2 in. Anchor Length 122 ft. Size 5 1/2 in. 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 x 1 1/2 in.

Blow: IF Fair Building Blow to Bottom Bucket in 21 min. FS No Blow FF Fair Building Blow to Bottom Bucket in 30 min. FS No Blow Recovered 67 ft. of Mud Oil cut Mud 92% mud 8% oil Recovered 125 ft. of Oil & water cut Mud 70% mud 25% water 5% oil Recovered 410 ft. of Oil & mud cut Water 52% water 45% mud 3% oil Recovered ft. of Recovered ft. of

Chlorides 28000 P.P.M. Sample Jars used 602 ft Total Fluid 16 Kw @ 65° Remarks: 602 ft Total Fluid

JAN 13 1993

Time On Location 6000 A.M. P.M. Time Pick Up Tool 730 A.M. P.M. Time Off Location A.M. P.M. Time Set Packer(s) 930 A.M. P.M. Time Started Off Bottom 1215 A.M. P.M. Maximum Temperature 112° Initial Hydrostatic Pressure (A) 2175 P.S.I. Initial Flow Period (B) 30 Minutes (C) 55 P.S.I. to (D) 143 P.S.I. Initial Closed In Period (D) 45 Minutes (E) 1237 P.S.I. Final Flow Period (E) 45 Minutes (F) 1465 P.S.I. to (G) 265 P.S.I. Final Closed In Period (G) 75 Minutes (H) 1171 P.S.I. Final Hydrostatic Pressure (H) 2111 P.S.I.

COMPANY TERMS

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Test Approved By [Signature] Signature of Customer or his authorized representative

Western Representative [Signature]

FIELD INVOICE

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

WESTERN TESTING CO., INC.

Pressure Data

Date 1-9-93 Test Ticket No. 19285
 Order No. 1254 Capacity _____ Location _____ Ft.
 Well No. _____ Elevation _____ Well Temperature _____ °F

Pressure	Open Tool	Time Given	Time Computed
Initial Hydrostatic Mud 1023 <u>1023</u> P.S.I.			M
First Initial Flow Pressure <u>69</u> P.S.I.	First Flow Pressure	Mins. <u>30</u>	Mins.
First Final Flow Pressure <u>125</u> P.S.I.	Initial Closed-in Pressure	Mins. <u>45</u>	Mins.
Initial Closed-in Pressure <u>125</u> P.S.I.	Second Flow Pressure	Mins. <u>45</u>	Mins.
Second Initial Flow Pressure <u>179</u> P.S.I.	Final Closed-in Pressure	Mins. <u>45</u>	Mins.
Second Final Flow Pressure <u>268</u> P.S.I.			
Final Closed-in Pressure <u>1179</u> P.S.I.			
Final Hydrostatic Mud 1023 <u>1023</u> P.S.I.			

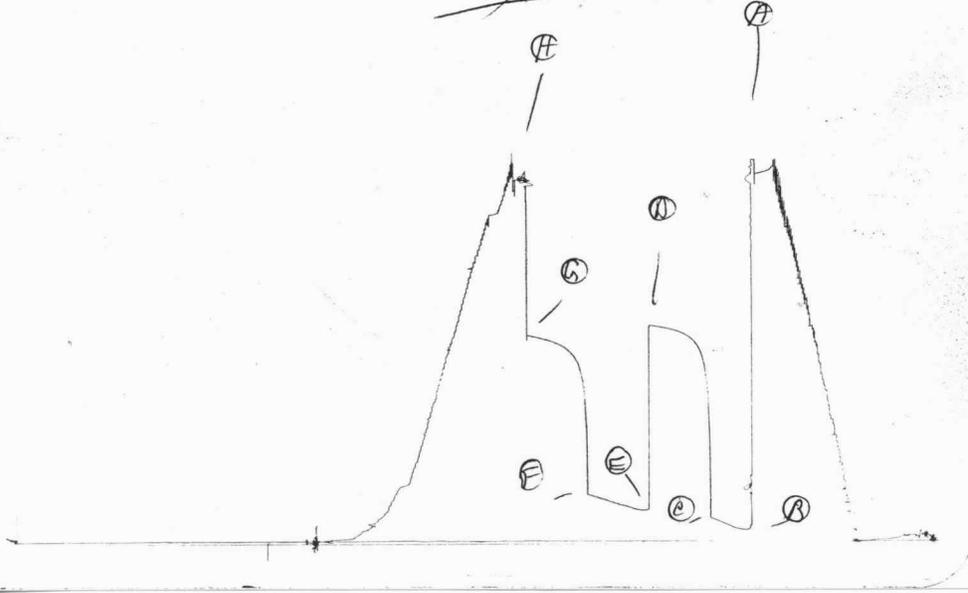
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ 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	Press.	Point	Press.	Point	Press.	Point	Press.
Minutes		Minutes		Minutes		Minutes	
0	69	0	125	0	179	0	268
5	69	3	820	5	179	3	179
10	73	6	1012	10	185	6	945
15	89	9	1088	15	197	9	1019
20	104	12	1124	20	208	12	1058
25	119	15	1156	25	219	15	1089
30	125	18	1171	30	220	18	1105
35		21	1185	35	243	21	1120
40		24	1196	40	256	24	1132
45		27	1206	45	268	27	1142
50		30	1211	50		30	1149
55		33	1219	55		33	1157
60		36	1224	60		36	1162
65		39	1227	65		39	1169
70		42	1234	70		42	1171
75		45	1235	75		45	1179
80		48		80		48	
85		51		85		51	
90		54		90		54	
95		57		95		57	
100		60		100		60	

13521
DST #2

KT 19285

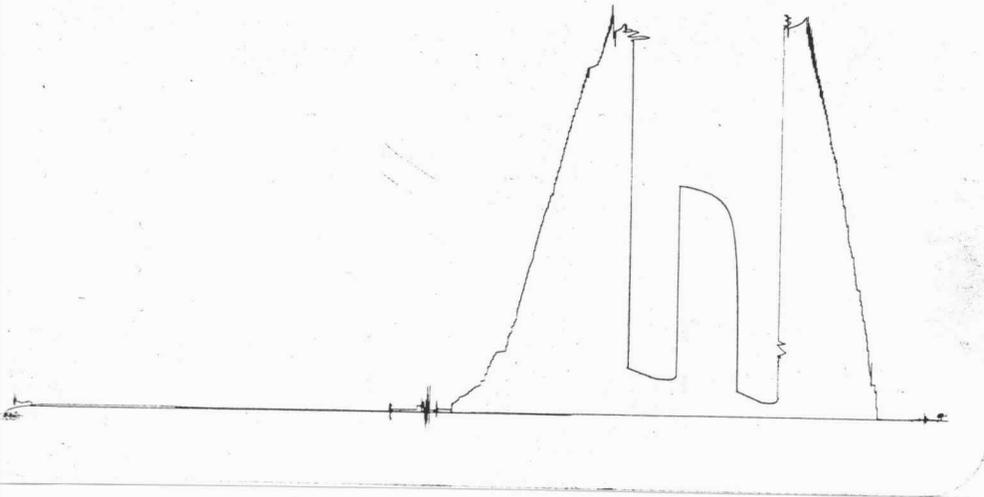
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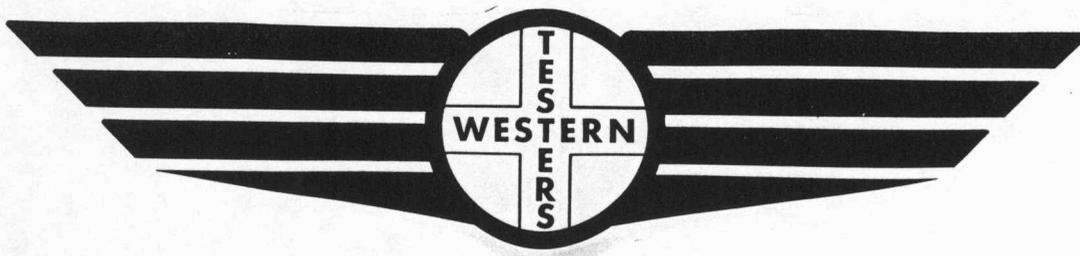
13548
DST #2

KT 19285

O



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone **1 - 800-688-7021**

DST REPORT

GENERAL INFORMATION

DATE : 1/9/93
CUSTOMER : RAYMOND OIL CO., INC.
WELL : 1 TEST: 2
ELEVATION: 3343 GL
SECTION : 4
RANGE : 37W COUNTY: CHEYENNE
GAUGE SN#: 13521 RANGE : 4375
TICKET : 19285
LEASE : BIRNEY FARMS
GEOLOGIST: CLARKE SANDBERG
FORMATION: KANSAS CITY, A,B,C
TOWNSHIP : 5S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4197.00 ft TO: 4319.00 ft TVD: 4319.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4206.0 ft 4209.0 ft
TEMPERATURE: 112.0
DRILL COLLAR LENGTH: 179.0 ft I.D.: 2.200 in
WEIGHT PIPE LENGTH : 412.0 ft I.D.: 2.700 in
DRILL PIPE LENGTH : 3584.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 22.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 122.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 4192.0 ft SIZE: 6.630 in
PACKER DEPTH: 4197.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 3
MUD TYPE : CHEMICAL VISCOSITY : 41.00 cp
WEIGHT : 9.300 ppg WATER LOSS: 8.000 cc
CHLORIDES : 750 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD FAIR BLOW BUILDING TO BOTTOM
OF BUCKET IN 21 MINUTES. FINAL FLOW PERIOD FAIR
BLOW BUILDING TO BOTTOM OF BUCKET IN 30 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
67.0	8.0	0.0	0.0	92.0	OIL CUT MUD
125.0	5.0	0.0	25.0	70.0	OIL & WATER CUT MUD
410.0	3.0	0.0	52.0	45.0	OIL & MUD CUT WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 28000 P.P.M.
0.0	0.0	0.0	0.0	0.0	.16 R.W. @ 65 DEGREES
0.0	0.0	0.0	0.0	0.0	

RATE INFORMATION

OIL VOLUME:	0.1626 STB	TOTAL FLOW TIME:	75.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	16.0029 STB/D
MUD VOLUME:	2.2412 STB	AVERAGE WATER RATE:	59.1320 STB/D
WATER VOLUME:	1.5095 STB		
TOTAL FLUID :	3.9133 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2175.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	55.00	143.00
INITIAL SHUT-IN	45.00		1237.00
FINAL FLOW	45.00	165.00	265.00
FINAL SHUT-IN	45.00		1171.00

FINAL HYDROSTATIC PRESSURE: 2111.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2133.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	69.00	135.00
INITIAL SHUT-IN	45.00		1235.00
FINAL FLOW	45.00	179.00	268.00
FINAL SHUT-IN	45.00		1179.00

FINAL HYDROSTATIC PRESSURE: 2093.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/9/93	TICKET : 19285
CUSTOMER : RAYMOND OIL CO., INC.	LEASE : BIRNEY FARMS
WELL : 1 TEST: 2	GEOLOGIST: CLARKE SANDBERG
ELEVATION: 3343 GL	FORMATION: KANSAS CITY, A,B,C
SECTION : 4	TOWNSHIP : 5S
RANGE : 37W	STATE : KS
COUNTY: CHEYENNE	CLOCK : 12
GAUGE SN#: 13521	RANGE : 4375

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	69.00	69.00
5.00	69.00	0.00
10.00	73.00	4.00
15.00	89.00	16.00
20.00	104.00	15.00
25.00	119.00	15.00
30.00	135.00	16.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	823.00	823.00	11.00
6.00	1012.00	189.00	6.00
9.00	1088.00	76.00	4.33
12.00	1124.00	36.00	3.50
15.00	1156.00	32.00	3.00
18.00	1171.00	15.00	2.67
21.00	1185.00	14.00	2.43
24.00	1196.00	11.00	2.25
27.00	1206.00	10.00	2.11
30.00	1211.00	5.00	2.00
33.00	1219.00	8.00	1.91
36.00	1224.00	5.00	1.83
39.00	1227.00	3.00	1.77
42.00	1231.00	4.00	1.71
45.00	1235.00	4.00	1.67

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	179.00	179.00
5.00	179.00	0.00
10.00	185.00	6.00
15.00	197.00	12.00
20.00	208.00	11.00
25.00	219.00	11.00
30.00	230.00	11.00
35.00	243.00	13.00
40.00	256.00	13.00
45.00	268.00	12.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	792.00	792.00	16.00
6.00	945.00	153.00	8.50
9.00	1019.00	74.00	6.00
12.00	1058.00	39.00	4.75
15.00	1089.00	31.00	4.00
18.00	1105.00	16.00	3.50
21.00	1120.00	15.00	3.14
24.00	1132.00	12.00	2.88
27.00	1142.00	10.00	2.67
30.00	1149.00	7.00	2.50
33.00	1157.00	8.00	2.36
36.00	1162.00	5.00	2.25
39.00	1169.00	7.00	2.15
42.00	1171.00	2.00	2.07
45.00	1179.00	8.00	2.00



WESTERN TESTING CO., INC.
FORMATION TESTING

LAST
No. 19475

TICKET

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 3343 GS. Formation Padnee Eff. Pay _____ Ft.

District Colby Date Jan 12 1993 Customer Order No. _____

COMPANY NAME Raymond Oil Co

ADDRESS One Main Place Suite 900 Wichita KS 67201

LEASE AND WELL NO. Birney Farms #1 COUNTY Cheyenne STATE KS. Sec. 4 Twp. 5 Rge. 37

Mail Invoice To Same #1 Birney Farms No. Copies Requested Req
Co. Name Address

Mail Charts To Same No. Copies Requested Req
Address

Formation Test No. 3 Interval Tested From 4579 ft. to 4606 ft. Total Depth 4606 ft.
Packer Depth 4579 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.
Packer Depth 4579 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4582 ft. Recorder Number 10330 Cap. 4000
Bottom Recorder Depth (Outside) 4585 ft. Recorder Number 13400 Cap. 3950
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____

Drilling Contractor Murfin Rig #3 Drill Collar Length 207 I. D. 2.2 in.
Mud Type Chem Viscosity 48 Weight Pipe Length 476 I. D. 3.2 in.
Weight 9.7 Water Loss 8.4 cc. Drill Pipe Length 3873 I. D. 3.8 in.
Chlorides 800 P.P.M. Test Tool Length 23 ft. Tool Size 5/200 in.
Jars: Make no Serial Number _____ Anchor Length 27 ft. Size 5/200 in.
Did Well Flow? no Reversed Out no Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7/8 in. Tool Joint Size 4 1/2 x 1 in.

Blow: 1FP - Strong blow - bottom of bucket in 30 sec
2FP - Gas to surface at end of first shut in

Recovered 3413 ft. of gassy oil To 90 oil 30 90 gas
Recovered _____ ft. of _____
Recovered _____ ft. of Gravity 39 corrected to 60°F
Recovered _____ ft. of _____
Recovered 1191 ft. of Gas in pipe
Chlorides _____ P.P.M. Sample Jars used _____ Remarks: _____

JAN 21 1993

Time On Location 6:00 A.M. Time Pick Up Tool 7:30 P.M. Time Off Location 7:00 A.M.
Time Set Packer(s) 10:15 A.M. Time Started Off Bottom 1:45 P.M. Maximum Temperature 148
Initial Hydrostatic Pressure (A) 2341 P.S.I.
Initial Flow Period (B) 30 Minutes (C) 729 P.S.I. to (D) 1010 P.S.I.
Initial Closed In Period (E) 60 Minutes (F) 1260 P.S.I.
Final Flow Period (G) 45 Minutes (H) 1110 P.S.I. to (I) 1210 P.S.I.
Final Closed In Period (J) 75 Minutes (K) 1270 P.S.I.
Final Hydrostatic Pressure (L) 2301 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 [Signature]
Signature of Customer or his authorized representative

Western Representative [Signature]

FIELD INVOICE

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

PAGE (1)

WESTERN TESTING CO., INC.
Pressure Data

Date Jan 12 - 93 Test Tube No. 19473
 Fracture No. 10330 Capacity 4000 Location 4582
 Check No. _____ Direction 2343 GR Well Temperature 148
 Pilot Pressure _____ Time Given _____ Time Computed _____
 A Initial Hydrostatic Mod. 2340 P.S.I. Open Tool _____
 B First Initial Flow Pressure 708 P.S.I. First Flow Pressure _____ Min. _____ Min.
 C First Final Flow Pressure 1010 P.S.I. Initial Closure Pressure _____ Min. _____ Min.
 D Initial Closure Pressure 1265 P.S.I. Second Flow Pressure _____ Min. _____ Min.
 E Second Initial Flow Pressure 1103 P.S.I. Final Closure Pressure _____ Min. _____ Min.
 F Second Final Flow Pressure 1214 P.S.I.
 G Final Closure Pressure 1285 P.S.I.
 H Final Hydrostatic Mod. 2312 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ loc.		Breakdown: _____ loc.		Breakdown: _____ loc.		Breakdown: _____ loc.	
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 loc. of <u>0</u> Min.		final loc. of <u>0</u> Min.		final loc. of <u>0</u> Min.		final loc. of <u>0</u> Min.	
Pilot Min.	Press.	Pilot Minutes	Press.	Pilot Minutes	Press.	Pilot Minutes	Press.
P 1	<u>708</u>	0	<u>1010</u>	0	<u>1103</u>	0	<u>1214</u>
P 2	<u>734</u>	3	<u>1139</u>	5	<u>1103</u>	3	<u>1228</u>
P 3	<u>793</u>	6	<u>1149</u>	10	<u>1116</u>	6	<u>1237</u>
P 4	<u>879</u>	9	<u>1108</u>	15	<u>1129</u>	9	<u>1241</u>
P 5	<u>937</u>	12	<u>1178</u>	20	<u>1160</u>	12	<u>1243</u>
P 6	<u>976</u>	15	<u>1189</u>	25	<u>1176</u>	15	<u>1251</u>
P 7	<u>1010</u>	18	<u>1197</u>	30	<u>1189</u>	18	<u>1253</u>
P 8		21	<u>1210</u>	35	<u>1203</u>	21	<u>1253</u>
P 9		24	<u>1216</u>	40	<u>1210</u>	24	<u>1257</u>
P 10		27	<u>1224</u>	45	<u>1214</u>	27	<u>1260</u>
P 11		30	<u>1232</u>	50		30	<u>1262</u>
P 12		33	<u>1237</u>	55		33	<u>65 1264</u>
P 13		36	<u>1243</u>	60		36	<u>1268</u>
P 14		39	<u>1245 47</u>	65		39	<u>1270</u>
P 15		42	<u>1247 50</u>	70		42	<u>1272</u>
P 16		45	<u>1249 53</u>	75		45	<u>1273</u>
P 17		48	<u>1253 56</u>	80		48	<u>75 1274</u>
P 18		51	<u>1256 59</u>	85		51	<u>1276</u>
P 19		54	<u>1262 62</u>	90		54	<u>1278</u>
P 20		57	<u>1264 64</u>	95		57	<u>1279</u>
		60	<u>1265 65</u>	100		60	<u>1280</u>

Pressure Data

Date Jan 12 - 93 Test Ticker No. 19475
 Recorder No. 10330 Capacity 4000 Location 4382 Ft.
 Clock No. _____ Elevation _____ Well Temperature 148 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2340</u> P.S.I.		M
B First Initial Flow Pressure	<u>708</u> P.S.I.		Mins.
C First Final Flow Pressure	<u>1010</u> P.S.I.		Mins.
D Initial Closed-in Pressure	<u>1265</u> P.S.I.		Mins.
E Second Initial Flow Pressure	<u>1103</u> P.S.I.		Mins.
F Second Final Flow Pressure	<u>1214</u> P.S.I.		Mins.
G Final Closed-in Pressure	<u>1285</u> P.S.I.		Mins.
H Final Hydrostatic Mud	<u>2312</u> P.S.I.		

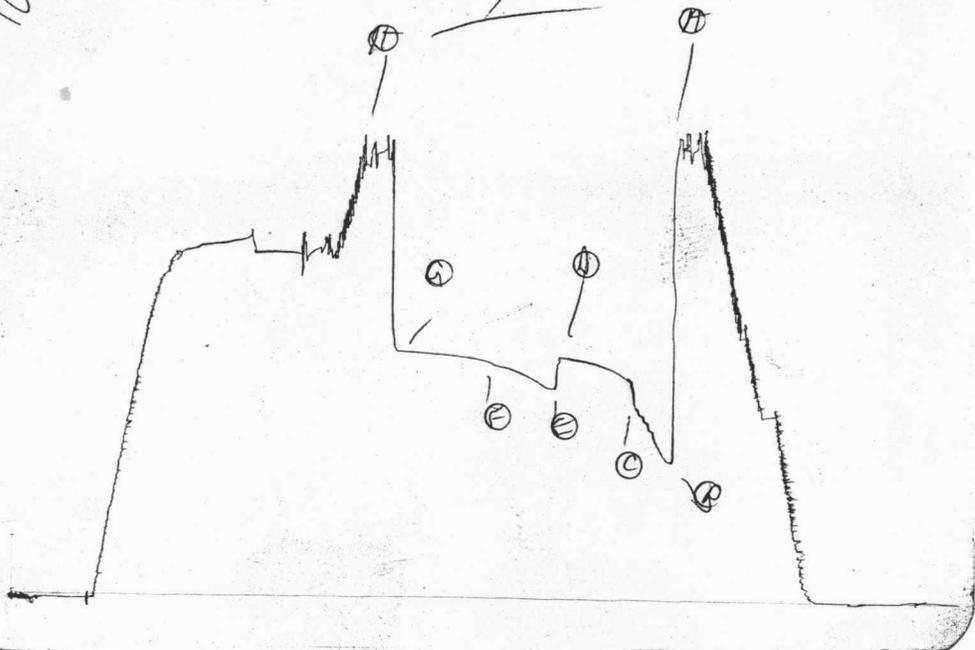
PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.
	Point Minutes	Point Minutes	Point Minutes	Point Minutes
P 1 <u>105</u>	<u>63</u>	<u>63</u>	<u>105</u>	<u>63</u> <u>1281</u>
P 2 <u>110</u>	<u>66</u>	<u>66</u>	<u>110</u>	<u>66</u> <u>1282</u>
P 3 <u>115</u>	<u>69</u>	<u>69</u>	<u>115</u>	<u>69</u> <u>1283</u>
P 4 <u>120</u>	<u>72</u>	<u>72</u>	<u>120</u>	<u>72</u> <u>1284</u>
P 5 <u>125</u>	<u>75</u>	<u>75</u>	<u>125</u>	<u>75</u> <u>1285</u>
P 6 <u>130</u>	<u>78</u>	<u>78</u>	<u>130</u>	<u>78</u>
P 7 <u>135</u>	<u>81</u>	<u>81</u>	<u>135</u>	<u>81</u>
P 8 <u>140</u>	<u>84</u>	<u>84</u>	<u>140</u>	<u>84</u>
P 9 <u>145</u>	<u>87</u>	<u>87</u>	<u>145</u>	<u>87</u>
P10 <u>150</u>	<u>90</u>	<u>90</u>	<u>150</u>	<u>90</u>
P11 <u>155</u>	<u>93</u>	<u>93</u>	<u>155</u>	<u>93</u>
P12 <u>160</u>	<u>96</u>	<u>96</u>	<u>160</u>	<u>96</u>
P13 <u>165</u>	<u>99</u>	<u>99</u>	<u>165</u>	<u>99</u>
P14 <u>170</u>	<u>102</u>	<u>102</u>	<u>170</u>	<u>102</u>
P15 <u>175</u>	<u>105</u>	<u>105</u>	<u>175</u>	<u>105</u>
P16 <u>180</u>	<u>108</u>	<u>108</u>	<u>180</u>	<u>108</u>
P17 <u>185</u>	<u>111</u>	<u>111</u>	<u>185</u>	<u>111</u>
P18 <u>190</u>	<u>114</u>	<u>114</u>	<u>190</u>	<u>114</u>
P19 <u>195</u>	<u>117</u>	<u>117</u>	<u>195</u>	<u>117</u>
P20 <u>200</u>	<u>120</u>	<u>120</u>	<u>200</u>	<u>120</u>

10330

JK 19475

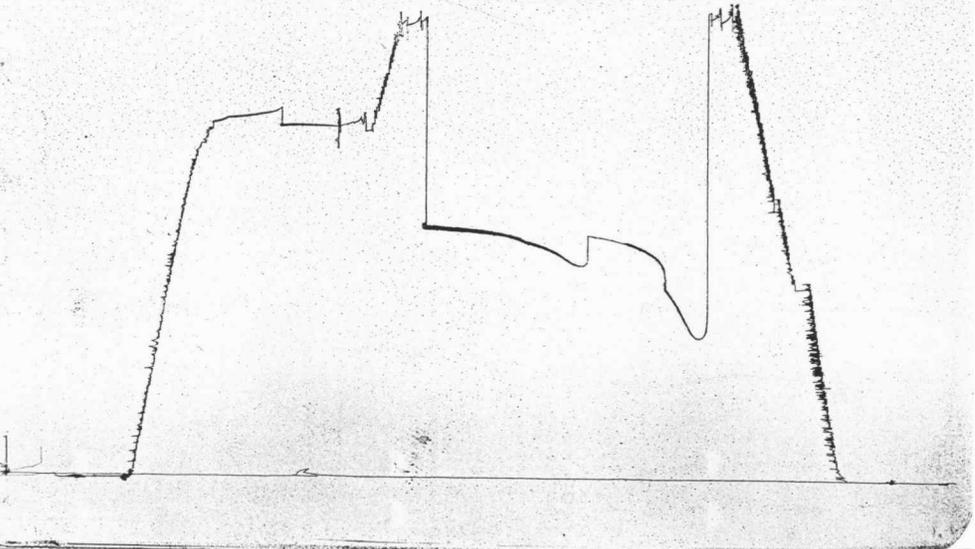
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1344

JK 19475

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DST REPORT

GENERAL INFORMATION

DATE : 1/12/93	TICKET : 19475
CUSTOMER : RAYMOND OIL CO., INC.	LEASE : BIRNEY FARMS
WELL : 1	TEST: 3
ELEVATION: 3343 GL	GEOLOGIST: CLARKE SANDBERG
SECTION : 4	FORMATION: PAWNEE
RANGE : 37W	COUNTY: CHEYENNE
GAUGE SN#: 10330	RANGE : 4000
	TOWNSHIP : 5S
	STATE : KS
	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4579.00 ft	TO: 4606.00 ft	TVD: 4606.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 4582.0 ft	4585.0 ft	
TEMPERATURE: 148.0		
DRILL COLLAR LENGTH: 207.0 ft	I.D.: 2.200 in	
WEIGHT PIPE LENGTH : 476.0 ft	I.D.: 3.200 in	
DRILL PIPE LENGTH : 3873.0 ft	I.D.: 3.800 in	
TEST TOOL LENGTH : 23.0 ft	TOOL SIZE : 5.500 in	
ANCHOR LENGTH : 27.0 ft	ANCHOR SIZE: 5.500 in	
SURFACE CHOKE SIZE : 0.750 in	BOTTOM CHOKE SIZE: 0.750 in	
MAIN HOLE SIZE : 7.875 in	TOOL JOINT SIZE : 4.5XH	
PACKER DEPTH: 4574.0 ft	SIZE: 6.750 in	
PACKER DEPTH: 4579.0 ft	SIZE: 6.750 in	
PACKER DEPTH: 0.0 ft	SIZE: 0.000 in	
PACKER DEPTH: 0.0 ft	SIZE: 0.000 in	

MUD INFORMATION

DRILLING CON. : MURFIN RIG 3	
MUD TYPE : CHEMICAL	VISCOSITY : 48.00 cp
WEIGHT : 9.700 ppg	WATER LOSS: 8.400 cc
CHLORIDES : 800 ppm	
JARS-MAKE :	SERIAL NUMBER:
DID WELL FLOW?: NO	REVERSED OUT?: YES

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW, BOTTOM OF BUCKET
 IN 30 SECONDS. FINAL FLOW PERIOD GAS TO SURFACE AT
 END OF FIRST SHUT-IN PERIOD.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
3413.0	70.0	30.0	0.0	0.0	GASSY OIL
0.0	0.0	0.0	0.0	0.0	GRAVITY 35 CORRECTED AT
0.0	0.0	0.0	0.0	0.0	60 DEGREES
0.0	0.0	0.0	0.0	0.0	1191' OF GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	30.7998	STB	TOTAL FLOW TIME:	75.0000	min.
GAS VOLUME:	74.1176	SCF	AVERAGE OIL RATE:	591.3566	STB/D
MUD VOLUME:	0.0000	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	30.7998	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2341.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	729.00	1010.00
INITIAL SHUT-IN	60.00		1260.00
FINAL FLOW	45.00	1110.00	1210.00
FINAL SHUT-IN	75.00		1270.00

FINAL HYDROSTATIC PRESSURE: 2301.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2340.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	708.00	1010.00
INITIAL SHUT-IN	60.00		1265.00
FINAL FLOW	45.00	1103.00	1214.00
FINAL SHUT-IN	75.00		1285.00

FINAL HYDROSTATIC PRESSURE: 2312.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/12/93	TICKET : 19475
CUSTOMER : RAYMOND OIL CO., INC.	LEASE : BIRNEY FARMS
WELL : 1 TEST: 3	GEOLOGIST: CLARKE SANDBERG
ELEVATION: 3343 GL	FORMATION: PAWNEE
SECTION : 4	TOWNSHIP : 5S
RANGE : 37W COUNTY: CHEYENNE	STATE : KS
GAUGE SN#: 10330 RANGE : 4000	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	708.00	708.00
5.00	734.00	26.00
10.00	793.00	59.00
15.00	879.00	86.00
20.00	937.00	58.00
25.00	976.00	39.00
30.00	1010.00	34.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	1139.00	1139.00	11.00
6.00	1149.00	10.00	6.00
9.00	1168.00	19.00	4.33
12.00	1178.00	10.00	3.50
15.00	1189.00	11.00	3.00
18.00	1197.00	8.00	2.67
21.00	1210.00	13.00	2.43
24.00	1216.00	6.00	2.25
27.00	1224.00	8.00	2.11
30.00	1232.00	8.00	2.00
33.00	1237.00	5.00	1.91
36.00	1243.00	6.00	1.83
39.00	1245.00	2.00	1.77
42.00	1247.00	2.00	1.71
45.00	1249.00	2.00	1.67
48.00	1253.00	4.00	1.63
51.00	1260.00	7.00	1.59
54.00	1262.00	2.00	1.56
57.00	1264.00	2.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1265.00	1.00	1.50

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	1103.00	1103.00
5.00	1103.00	0.00
10.00	1116.00	13.00
15.00	1139.00	23.00
20.00	1160.00	21.00
25.00	1176.00	16.00
30.00	1189.00	13.00
35.00	1203.00	14.00
40.00	1210.00	7.00
45.00	1214.00	4.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	1228.00	1228.00	16.00
6.00	1237.00	9.00	8.50
9.00	1241.00	4.00	6.00
12.00	1245.00	4.00	4.75
15.00	1251.00	6.00	4.00
18.00	1253.00	2.00	3.50
21.00	1255.00	2.00	3.14
24.00	1257.00	2.00	2.88
27.00	1260.00	3.00	2.67
30.00	1262.00	2.00	2.50
33.00	1264.00	2.00	2.36
36.00	1268.00	4.00	2.25
39.00	1270.00	2.00	2.15
42.00	1272.00	2.00	2.07
45.00	1273.00	1.00	2.00
48.00	1274.00	1.00	1.94
51.00	1276.00	2.00	1.88
54.00	1278.00	2.00	1.83
57.00	1279.00	1.00	1.79

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

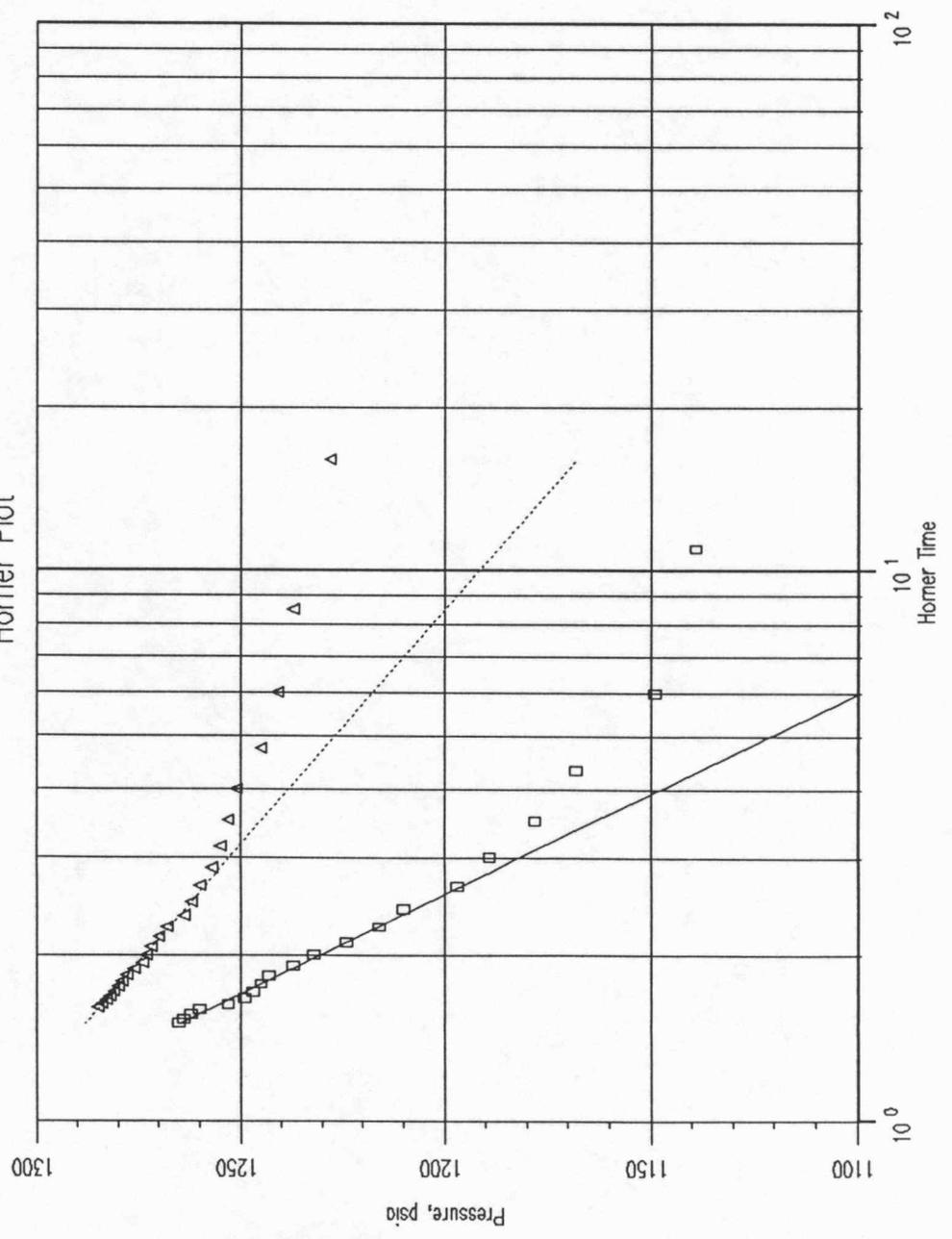
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1280.00	1.00	1.75
63.00	1281.00	1.00	1.71
66.00	1282.00	1.00	1.68
69.00	1283.00	1.00	1.65
72.00	1284.00	1.00	1.63
75.00	1285.00	1.00	1.60

DATE 1/12/93
 CUSTOMER RAYMOND OIL CO., INC.
 WELL 1
 ELEVATION 3343 GL
 SECTION 4
 RANGE 37W
 GAUGE SN# 10330

TEST 3
 COUNTY CHEYENNE
 RANGE 4000

TICKET 19475
 LEASE BIRNEY FARMS
 GEOLOGIST CLARKE SANDBERG
 FORMATION PAWNEE
 TOWNSHIP 5S
 STATE KS
 CLOCK 12

Horner Plot



Result

	#1	#2
tp, hrs	0.50	0.75
Slope	-274.77	-116.99
Pstar, psig	1313.26	1308.51
P1hr, psig	1264.87	1280.07
Skin	-2.96	-3.93
k, md	86.90	204.10
kh/u, md-ft/cp	398.06	934.88
ri, ft	30.21	56.69
DR, %	0.23	0.13
Drawdown Factor, %		-1.581
Drawdown P*, %		0.362

— BUILD 1
 BUILD 2

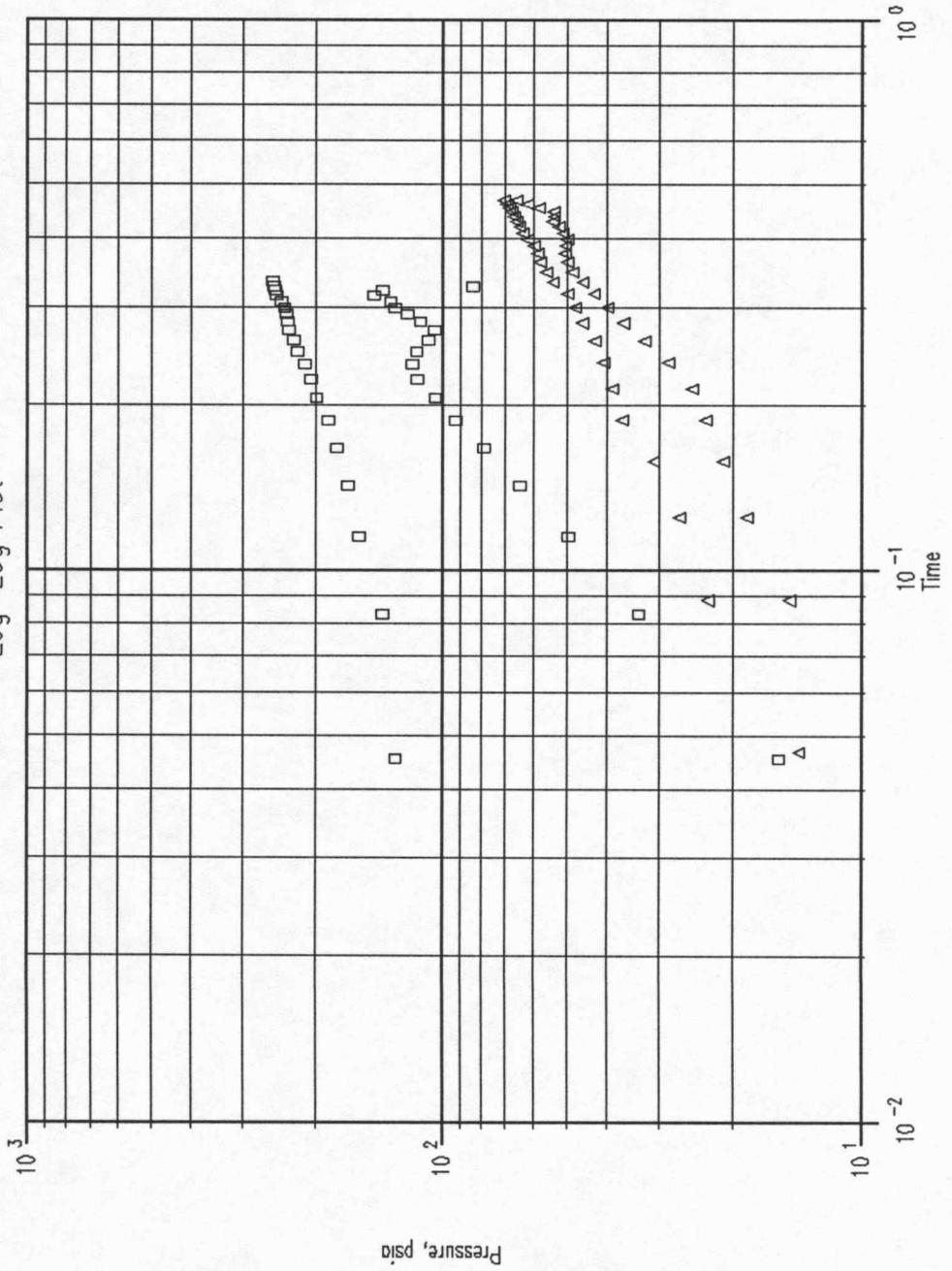
DATE 1/12/93
 CUSTOMER RAYMOND OIL CO., INC.
 WELL 1
 ELEVATION 3343 GL
 SECTION 4
 RANGE 37W
 GAUGE SN# 10330

TEST 3
 COUNTY CHEYENNE
 RANGE 4000

TICKET
 LEASE
 GEOLOGIST
 FORMATION
 TOWNSHIP
 STATE
 CLOCK

19475
 BIRNEY FARMS
 CLARKE SANDBERG
 PAWNEE
 5S
 KS
 12

Log-Log Plot



HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 1/12/93	TICKET : 19475
CUSTOMER : RAYMOND OIL CO., INC.	LEASE : BIRNEY FARMS
WELL : 1	TEST: 3
ELEVATION: 3343 GL	GEOLOGIST: CLARKE SANDBERG
SECTION : 4	FORMATION: PAWNEE
RANGE : 37W	TOWNSHIP : 5S
COUNTY: CHEYENNE	STATE : KS
GAUGE SN#: 10330	RANGE : 4000
	CLOCK : 12

Input Data

Porosity 0.180 Rw: 0.328 ft h: 5.000 ft
 go 591.4 STB GOR 251.8 SCF/STB

Pvt Data
 Evaluation Pressure : 1265.0
 Evaluation Temperature: 148.0

Oil Grav 35.00 API	Gas Grav 0.65 API	Pb 1265.00 PSIA
Bo 1.137 RBL/STB	Vis 1.000 cp	Ct 2.5567E-004 1/PSI

Horner Results

	Initial Shut-In	Final Shut-In
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pseudo pressure time	0.50 hrs	0.75 hrs
slope	-274.77	-116.99
pstar	1313.26 psig	1308.51 psig
plhr	1264.87 psig	1280.07 psig
skin	-2.96	-3.93
permeability	86.90 md	204.10 md
transmissability	398.06 md-ft/cp	934.88 md-ft/cp
radius of investigation	30.21 ft	56.69 ft
Damage-Ratio	0.23 percent	0.13 percent
Drawdown Factor		-1.581 percent
Drawdown P*		0.362 percent

Profile Plot Total Test

