Company Imperial Oil Company — Lease & Well No. #1-13 Rose "A"

Elevation 2077 Kelly Bushing — Formation Kansas City — Effective Pay - Ft. — Ticket No. 12989

Date 10/4/81 — Sec. 13 — Twp. 27S — Range 16W — County Kiowa — State Kansas

Test Approved by Peter J Stubbs — Western Representative Louis Spencer

Formation Test No. 1 — Interval Tested from 4275 ft. to 4303 ft. — Total Depth 4303 ft.

Packer Depth 4270 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Packer Depth 4275 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4285 ft. — Recorder Number 1560 — Cap. 4500

Bottom Recorder Depth (Outside) 4288 ft. — Recorder Number 11019 — Cap. 4500

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

Drilling Contractor Red Tiger Rig #6 — Drill Collar Length - — I. D. - in.

Mud Type Drispac — Viscosity 54 — Weight Pipe Length 1258 — I. D. 3.2 in.

Weight 9.3 — Water Loss 18.8 cc. — Drill Pipe Length 2989 — I. D. 3.8 in.

Chlorides 12,000 P.P.M. — Test Tool Length 28 ft. — Tool Size 5½ in.

Jars: Make WTC — Serial Number 13029 — Anchor Length 28 ft. — Size 5½ in.

Did Well Flow? No — Reversed Out - — Surface Choke Size 3/4 in. — Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. — Tool Joint Size 3½ in.

Blow: Initial flow period good - off bottom in 5 minutes. Good blow off bottom of bucket in

Recovered 1000 ft. of gas in pipe

Recovered 5 ft. of oil

Recovered 100 ft. of slightly oil cut mud - 5% oil

Recovered 180 ft. of very slighlty oil cut muddy water - 2% oil

Recovered 360 ft. of water Chlorides 135,000 PPM

Remarks:

Time Set Packer(s) 5:45 ~~A.M.~~ ~~P.M.~~ — Time Started Off Bottom 10:45 ~~A.M.~~ ~~P.M.~~ — Maximum Temperature 118

Initial Hydrostatic Pressure			(A)	2186	P.S.I.	
Initial Flow Period	Minutes 60	(B)	93	P.S.I. to (C)	220	P.S.I.
Initial Closed In Period	Minutes 90	(D)	1193	P.S.I.		
Final Flow Period	Minutes 60	(E)	282	P.S.I. to (F)	378	P.S.I.
Final Closed In Period	Minutes 93	(G)	1110	P.S.I.		
Final Hydrostatic Pressure		(H)	2130	P.S.I.		

WESTERN TESTING CO., INC.

Pressure Data

Date 10/4/81 Test Ticket No. 12989

Recorder No. 1560 Capacity 4500 Location 4285 Ft.

Clock No. - Elevation 2077 Kelly Bushing Well Temperature 118 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2186 P.S.I.	Open Tool	5:45P M	
B First Initial Flow Pressure	93 P.S.I.	First Flow Pressure	60 Mins.	60 Mins.
C First Final Flow Pressure	220 P.S.I.	Initial Closed-in Pressure	90 Mins.	90 Mins.
D Initial Closed-in Pressure	1193 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	282 P.S.I.	Final Closed-in Pressure	90 Mins.	93 Mins.
F Second Final Flow Pressure	378 P.S.I.			
G Final Closed-in Pressure	1110 P.S.I.			
H Final Hydrostatic Mud	2130 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	93
P 2 5	93
P 3 10	102
P 4 15	111
P 5 20	125
P 6 25	139
P 7 30	153
P 8 35	165
P 9 40	176
P10 45	188
P11 50	199
P12 55	211
P13 60	220
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 30 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	220
3	359
6	527
9	644
12	723
15	786
18	831
21	870
24	905
27	932
30	959
33	980
36	1000
39	1018
42	1034
45	1050
48	1063
51	1077
54	1088
57	1099
60	1110

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	282
5	282
10	287
15	296
20	308
25	319
30	329
35	337
40	345
45	353
50	362
55	370
60	378

Final Shut-In
Breakdown: 31 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	378
3	580
6	678
9	739
12	386
15	827
18	856
21	883
24	903
27	921
30	937
33	953
36	964
39	977
42	990
45	1001
48	1008
51	1018
54	1029
57	1036
60	1045

CONT'D NEXT PAGE

CONT'D NEXT PAGE

WESTERN TESTING CO., INC.
Pressure Data

Date 10/4/81 Test Ticket No. 12989

Recorder No. 1560 Capacity 4500 Location 4285 Ft.

Clock No. - Elevation 2077 Kelly Bushing Well Temperature 118 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2186 P.S.I.	Open Tool	5:45P M	
B First Initial Flow Pressure	93 P.S.I.	First Flow Pressure	60 Mins.	60 Mins.
C First Final Flow Pressure	220 P.S.I.	Initial Closed-in Pressure	90 Mins.	90 Mins.
D Initial Closed-in Pressure	1193 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	282 P.S.I.	Final Closed-in Pressure	90 Mins.	93 Mins.
F Second Final Flow Pressure	378 P.S.I.			
G Final Closed-in Pressure	1110 P.S.I.			
H Final Hydrostatic Mud	2130 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1	
P 2	
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 30 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
63	1124
66	1131
69	1142
72	1149
75	1158
78	1165
81	1173
84	1182
87	1187
90	1193

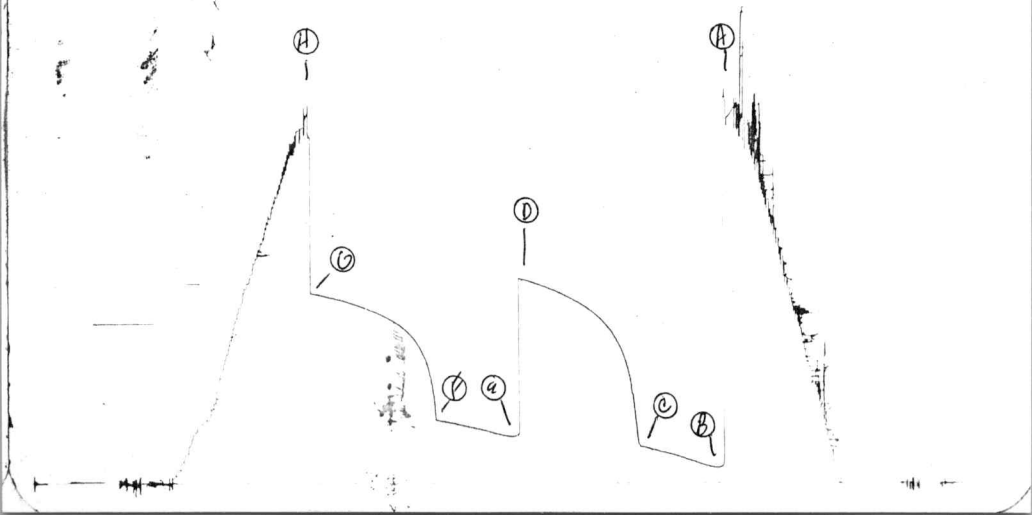
Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.

Final Shut-In
Breakdown: 31 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
63	1052
66	1061
69	1068
72	1072
75	1079
78	1086
81	1090
84	1096
87	1103
90	1106
93	1110

Tkt # 12985



Company Imperial Oil Company — Lease & Well No. Rose "A" #1-13

Elevation 2077 Kelly Bushing — Formation Marmaton — Effective Pay - Ft. — Ticket No. 12990

Date 10/5/81 — Sec. 13 — Twp 27S — Range 16W — County Kiowa — State Kansas

Test Approved by Peter J. Stubbs — Western Representative Louis Spencer

Formation Test No. 2 — Interval Tested from 4382 ft. to 4430 ft. — Total Depth 4430 ft.

Packer Depth 4377 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Packer Depth 4382 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4385 ft. — Recorder Number 1560 — Cap. 4500

Bottom Recorder Depth (Outside) 4388 ft. — Recorder Number 11019 — Cap. 4500

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

Drilling Contractor Red Tiger Drlg. Rig #6 — Drill Collar Length - — I. D. - in.

Mud Type drispac — Viscosity - — Weight Pipe Length 1228 — I. D. 3.2 in.

Weight - — Water Loss - cc. — Drill Pipe Length 3026 — I. D. 3.8 in.

Chlorides - P.P.M. — Test Tool Length 28 ft. — Tool Size 5½ in.

Jars: Make WIC — Serial Number 13029 — Anchor Length 48 ft. — Size 5½ in.

Did Well Flow? - — Reversed Out Yes — Surface Choke Size 3/4 in. — Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. — Tool Joint Size 3½ in.

Blow: Initial flow period gas to surface in fifteen minutes.
See attached sheet for gas measurements.

Recovered 1060 ft. of oil

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Remarks:

Time Set Packer(s) 9:20 ~~P.M.~~ A.M. — Time Started Off Bottom 2:20 ~~A.M.~~ P.M. — Maximum Temperature 119°

Initial Hydrostatic Pressure			(A)	2170	P.S.I.	
Initial Flow Period	Minutes 60		(B)	102	P.S.I. to (C)	191 P.S.I.
Initial Closed In Period	Minutes 96		(D)	1306	P.S.I.	
Final Flow Period	Minutes 60		(E)	260	P.S.I. to (F)	372 P.S.I.
Final Closed In Period	Minutes 93		(G)	1239	P.S.I.	
Final Hydrostatic Pressure			(H)	2099	P.S.I.	

GAS FLOW REPORT

Date 10/5/81 Ticket 12990 Company Imperial Oil Company

Well Name and No. Rose "A" #1-13 Dst No. 2 Interval Tested 4382'-4430'

County Kiowa State Kansas Sec. 13 Twp. 27S Rg. 16W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla 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
Gas to surface fifteen minutes.			**PRE FLOW**			
	15 min.	2.0 PSIG	1/2" orifice			47,700 CFPD
	25 min.	2.0 PSIG	1/2" orifice			47,700 CFPD
	35 min.	2.0 PSIG	1/2" orifice			47,700 CFPD
	45 min.	2.0 PSIG	1/2" orifice			47,700 CFPD
	55 min.	2.0 PSIG	1/2" orifice			47,700 CFPD
			SECOND FLOW			
	10 min.	2.0 PSIG	1/4" orifice			12,700 CFPD
	20 min.	3.0 PSIG	1/4" orifice			15,700 CFPD
	30 min.	4.0 PSIG	1/4" orifice			18,500 CFPD
	40 min.	5.0 PSIG	1/4" orifice			20,700 CFPD
	50 min.	6.0 PSIG	1/4" orifice			22,900 CFPD
	60 min.	7.0 PSIG	1/4" orifice			25,000 CFPD

GAS BOTTLE

Serial No. ---- Date Bottle Filled --- Date to be Invoiced 10/5/81

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 Imperial Oil Company

Authorized by Peter J. Stubbs

FORM WTC 6

WESTERN TESTING CO., INC.

Pressure Data

Date 10/5/81 Test Ticket No. 12990

Recorder No. 1560 Capacity 4500 Location 4385 Ft.

Clock No. - Elevation 2077 Kelly Bushing Well Temperature 119 °F

Point		Pressure	
A	Initial Hydrostatic Mud	2170	P.S.I.
B	First Initial Flow Pressure	102	P.S.I.
C	First Final Flow Pressure	191	P.S.I.
D	Initial Closed-in Pressure	1306	P.S.I.
E	Second Initial Flow Pressure	260	P.S.I.
F	Second Final Flow Pressure	372	P.S.I.
G	Final Closed-in Pressure	1239	P.S.I.
H	Final Hydrostatic Mud	2099	P.S.I.

	Time Given	Time Computed
Open Tool	9:20A M	
First Flow Pressure	60 Mins.	60 Mins.
Initial Closed-in Pressure	90 Mins.	96 Mins.
Second Flow Pressure	60 Mins.	60 Mins.
Final Closed-in Pressure	90 Mins.	93 Mins.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.

Point	Mins.	Press.
P 1	0	102
P 2	5	102
P 3	10	102
P 4	15	108
P 5	20	115
P 6	25	130
P 7	30	141
P 8	35	150
P 9	40	160
P10	45	168
P11	50	177
P12	55	185
P13	60	191
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In
Breakdown: 32 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	191
3	326
6	441
9	542
12	654
15	769
18	852
21	921
24	997
27	1017
30	1054
33	1082
36	1108
39	1131
42	1151
45	1168
48	1184
51	1198
54	1212
57	1221
60	1232

Second Flow Pressure
Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	260
5	260
10	261
15	266
20	274
25	280
30	286
35	289
40	290
45	298
50	308
55	308
60	312

Final Shut-In
Breakdown: 31 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	312
3	508
6	634
9	738
12	824
15	881
18	936
21	979
24	1010
27	1036
30	1059
33	1078
36	1094
39	1108
42	1121
45	1135
48	1146
51	1155
54	1166
57	1172
60	1181

CONTINUED

CONTINUED

WESTERN TESTING CO., INC.

Pressure Data

Date 10/5/81 Test Ticket No. 12990

Recorder No. 1560 Capacity 4500 Location 4385 Ft.

Clock No. - Elevation 2077 Kelly Bushing Well Temperature 119 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2170 P.S.I.	Open Tool	9:20A M	
B First Initial Flow Pressure	102 P.S.I.	First Flow Pressure	60 Mins.	60 Mins.
C First Final Flow Pressure	191 P.S.I.	Initial Closed-in Pressure	90 Mins.	96 Mins.
D Initial Closed-in Pressure	1306 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	260 P.S.I.	Final Closed-in Pressure	90 Mins.	93 Mins.
F Second Final Flow Pressure	372 P.S.I.			
G Final Closed-in Pressure	1239 P.S.I.			
H Final Hydrostatic Mud	2099 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1	
P 2	
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 32 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
63	1241
66	1249
69	1257
72	1264
75	1273
78	1278
81	1284
84	1290
87	1294
90	1300
93	1304
96	1306

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.

Final Shut-In
Breakdown: 31 Inc.
of 3 mins. and a
final inc. of 0 Min.

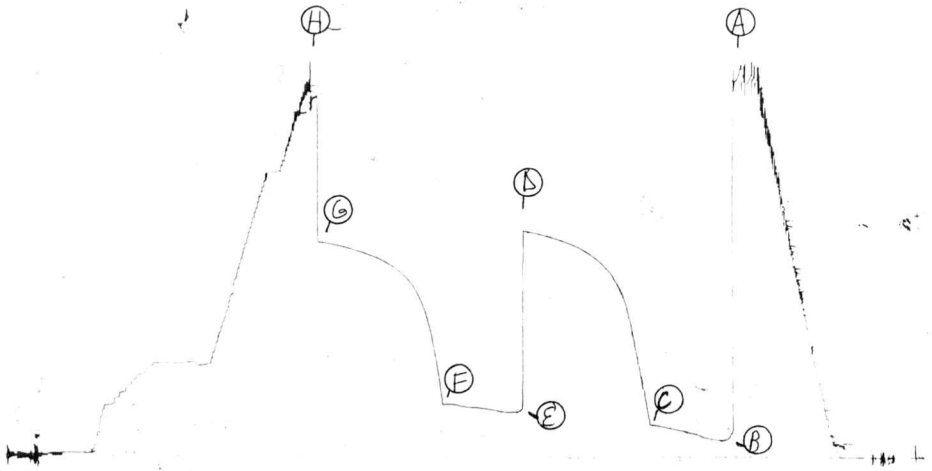
Point Minutes	Press.
63	1187
66	1196
69	1202
72	1209
75	1214
78	1220
81	1224
84	1229
87	1233
90	1237
93	1239

WTC - 4

1560

IKT #12990

I



Company Imperial Oil Company — Lease & Well No. Rose "A" #1-13

Elevation 2077 Kelly Bushing — Formation Cherokee-Mississippi — Effective Pay 20 Ft. — Ticket No. 12991

Date 10/6 /81 — Sec. 13 — Twp. 27S — Range 16W — County Kiowa — State Kansas

Test Approved by Peter J.Stubbs — Western Representative Louis Spencer

Formation Test No. 3 — Interval Tested from 4449 ft. to 4528 ft. — Total Depth 4528 ft.

Packer Depth 4444 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Packer Depth 4449 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4454 ft. — Recorder Number 1560 — Cap. 4500

Bottom Recorder Depth (Outside) 4457 ft. — Recorder Number 11019 — Cap. 4500

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

Drilling Contractor Red Tiger Drlg. Rig #6 — Drill Collar Length - — I. D. - in.

Mud Type drispac — Viscosity 48 — Weight Pipe Length 1216 — I. D. 2.8 in.

Weight 9.5 — Water Loss 16 cc. — Drill Pipe Length 3205 — I. D. 3.8 in.

Chlorides 1 ,000 P.P.M. — Test Tool Length 28 ft. — Tool Size 5½ in.

Jars: Make WTC — Serial Number 13029 — Anchor Length 79 ft. — Size 5½ 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 3½ in.

Blow: Initial flow period fair building to good; off bottom in sixteen minutes.

Recovered 50 ft. of mud Chlorides 20,000 ppm

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 1:12 ~~A.M.~~ P.M. — Time Started Off Bottom 6:12 ~~A.M.~~ P.M. — Maximum Temperature 119°

Initial Hydrostatic Pressure			(A)	2208	P.S.I.	
Initial Flow Period	Minutes 60		(B)	49	P.S.I. to (C)	49 P.S.I.
Initial Closed In Period	Minutes 90		(D)	122	P.S.I.	
Final Flow Period	Minutes 65		(E)	56	P.S.I. to (F)	56 P.S.I.
Final Closed In Period	Minutes 87		(G)	428	P.S.I.	
Final Hydrostatic Pressure			(H)	2208	P.S.I.	

WESTERN TESTING CO., INC.
Pressure Data

Date 10/6/81 Test Ticket No. 12991

Recorder No. 1560 Capacity 4500 Location 4454 Ft.

Clock No. - Elevation 2077 Kelly Bushing Well Temperature 119 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2208 P.S.I.	Open Tool	1:12P M	
B First Initial Flow Pressure	49 P.S.I.	First Flow Pressure	60 Mins.	60 Mins.
C First Final Flow Pressure	49 P.S.I.	Initial Closed-in Pressure	90 Mins.	90 Mins.
D Initial Closed-in Pressure	122 P.S.I.	Second Flow Pressure	60 Mins.	65 Mins.
E Second Initial Flow Pressure	56 P.S.I.	Final Closed-in Pressure	90 Mins.	87 Mins.
F Second Final Flow Pressure	56 P.S.I.			
G Final Closed-in Pressure	428 P.S.I.			
H Final Hydrostatic Mud	2208 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	49
P 2 5	49
P 3 10	49
P 4 15	49
P 5 20	49
P 6 25	49
P 7 30	49
P 8 35	49
P 9 40	49
P10 45	49
P11 50	49
P12 55	49
P13 60	49
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 30 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	49
3	49
6	49
9	49
12	49
15	49
18	50
21	50
24	53
27	56
30	61
33	65
36	70
39	75
42	79
45	81
48	86
51	89
54	93
57	96
60	100

Second Flow Pressure
Breakdown: 13 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	56
5	56
10	56
15	56
20	56
25	56
30	56
35	56
40	56
45	56
50	56
55	56
60	56
65	56

Final Shut-In
Breakdown: 29 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	56
3	56
6	69
9	81
12	95
15	111
18	125
21	139
24	155
27	169
30	181
33	194
36	209
39	222
42	237
45	250
48	262
51	275
54	289
57	304
60	318

CONT'D NEXT PAGE

CONT'D NEXT PAGE

WESTERN TESTING CO., INC.

Pressure Data

Date 10/6/81 Test Ticket No. 12991

Recorder No. 1560 Capacity 4500 Location 4454 Ft.

Clock No. - Elevation 2077 Kelly Bushing Well Temperature 119 °F

Point		Pressure		Time Given		Time Computed	
A	Initial Hydrostatic Mud	2208 P.S.I.	Open Tool	1:12P M			
B	First Initial Flow Pressure	49 P.S.I.	First Flow Pressure	60 Mins.		60 Mins.	
C	First Final Flow Pressure	49 P.S.I.	Initial Closed-in Pressure	90 Mins.		90 Mins.	
D	Initial Closed-in Pressure	122 P.S.I.	Second Flow Pressure	60 Mins.		65 Mins.	
E	Second Initial Flow Pressure	56 P.S.I.	Final Closed-in Pressure	90 Mins.		87 Mins.	
F	Second Final Flow Pressure	56 P.S.I.					
G	Final Closed-in Pressure	428 P.S.I.					
H	Final Hydrostatic Mud	2208 P.S.I.					

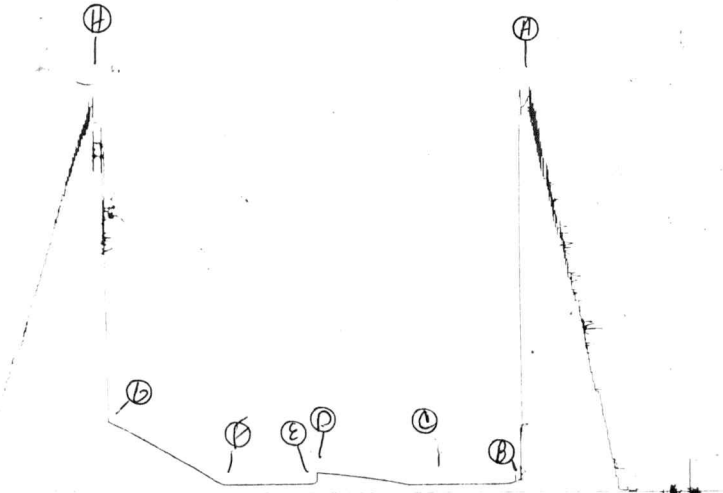
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 12 Inc.		Breakdown: 30 Inc.		Breakdown: 13 Inc.		Breakdown: 29 Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1		63	103			63	331
P 2		66	106			66	345
P 3		69	108			69	359
P 4		72	110			72	370
P 5		75	112			75	384
P 6		78	114			78	395
P 7		81	116			81	407
P 8		84	118			84	417
P 9		87	120			87	428
P10		90	122				
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

1560

Tkt #12991

I



Company Imperial Oil Company — Lease & Well No. Rose "A" #1-13

Elevation 2077 Kelly Bushing — Formation Kinderhook — Effective Pay - Ft. — Ticket No. 12992

Date 10/ 7/81 — Sec. 13 — Twp. 27S — Range 16W — County Kiowa — State Kansas

Test Approved by Peter J. Stubbs — Western Representative Louis Spencer

Formation Test No. 4 — Interval Tested from 4521 ft. to 4573 ft. — Total Depth 4573 ft.

Packer Depth 4516 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Packer Depth 4521 ft. — Size 6 3/4 in. — Packer Depth - ft. — Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4531 ft. — Recorder Number 1560 — Cap. 4500

Bottom Recorder Depth (Outside) 4534 ft. — Recorder Number 11019 — Cap. 4500

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

Drilling Contractor Red Tiger Drlg. Rig #6 — Drill Collar Length - — I. D. - in.

Mud Type drispac — Viscosity 48 — Weight Pipe Length 1246 — I. D. 2.8 in.

Weight 9.4 — Water Loss 12.8 cc. — Drill Pipe Length 3247 — I. D. 3.8 in.

Chlorides 19,000 P.P.M. — Test Tool Length 28 ft. — Tool Size 5½ in.

Jars: Make WTC — Serial Number 13029 — Anchor Length 52 ft. — Size 5½ in.

Did Well Flow? Yes — Reversed Out Yes — Surface Choke Size 3/4 in. — Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. — Tool Joint Size 3½ in.

Blow: Initial flow period gas to surface thirty seconds. Oil to surface in thirty minutes. Reversed out. See attached sheet for gas measurements.

Recovered --- ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 7:40 A.M. ~~P.M.~~ — Time Started Off Bottom 11:35 A.M. P.M. — Maximum Temperature 120°

Initial Hydrostatic Pressure			(A)	2253	P.S.I.	
Initial Flow Period	Minutes 30	(B)	644	P.S.I. to (C)	935	P.S.I.
Initial Closed In Period	Minutes 90	(D)	1497	P.S.I.		
Final Flow Period	Minutes 20	(E)	788	P.S.I. to (F)	953	P.S.I.
Final Closed In Period	Minutes 90	(G)	1487	P.S.I.		
Final Hydrostatic Pressure		(H)	2251	P.S.I.		

GAS FLOW REPORT

Date 10/7/81 Ticket 12992 Company Imperial Oil Company

Well Name and No. Rose "A"#1-13 Dst No. 4 Interval Tested 4521'-4573'

County Kiowa State Kansas Sec. 13 Twp. 27S Rg. 16W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla 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
			PRE FLOW			
	5 min.	3.0 PSIG	1" orifice			242,000 CFPD
	10 min.	2.0 PSIG	1" orifice			195,000 CFPD
	15 min.	1.5 PSIG	1" orifice			169,000 CFPD
	20 min.	2.0 PSIG	1" orifice			195,000 CFPD
	25 min.	2.0 PSIG	1" orifice			195,000 CFPD
			SECOND FLOW			
	NO GUAGE			OIL FLOW.		

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 Imperial Oil Company

Authorized by Peter J. Stubbs

FORM WTC 6

WESTERN TESTING CO., INC.
Pressure Data

Date 10/7/81 Test Ticket No. 12992

Recorder No. 1560 Capacity 4500 Location 4531 Ft.

Clock No. - Elevation 2077 Kelly Bushing Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2253 P.S.I.	Open Tool	7:40A M	
B First Initial Flow Pressure	644 P.S.I.	First Flow Pressure	35 Mins.	30 Mins.
C First Final Flow Pressure	935 P.S.I.	Initial Closed-in Pressure	90 Mins.	90 Mins.
D Initial Closed-in Pressure	1497 P.S.I.	Second Flow Pressure	20 Mins.	20 Mins.
E Second Initial Flow Pressure	788 P.S.I.	Final Closed-in Pressure	90 Mins.	90 Mins.
F Second Final Flow Pressure	953 P.S.I.			
G Final Closed-in Pressure	1487 P.S.I.			
H Final Hydrostatic Mud	2251 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	644
P 2 5	644
P 3 10	646
P 4 15	700
P 5 20	775
P 6 25	869
P 7 30	935
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 30 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	935
3	1448
6	1464
9	1474
12	1480
15	1482
18	1484
21	1486
24	1487
27	1488
30	1489
33	1490
36	1490
39	1491
42	1491
45	1492
48	1492
51	1493
54	1493
57	1494
60	1494

Second Flow Pressure
Breakdown: 4 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	788
5	788
10	849
15	935
20	953

Final Shut-In
Breakdown: 30 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	953
3	1450
6	1464
9	1471
12	1475
15	1478
18	1479
21	1480
24	1480
27	1481
30	1481
33	1482
36	1482
39	1482
42	1483
45	1483
48	1484
51	1484
54	1484
57	1484
60	1484

CONT'D NEXT PAGE

CONT'D NEXT PAGE

WESTERN TESTING CO., INC.
Pressure Data

Date 10/7/81 Test Ticket No. 12992

Recorder No. 1560 Capacity 4500 Location 4531 Ft.

Clock No. - Elevation 2077 Kelly Bushing Well Temperature 120 °F

Point	Pressure		Time Given		Time Computed	
A Initial Hydrostatic Mud	2253 P.S.I.	Open Tool	7:40A	M		
B First Initial Flow Pressure	644 P.S.I.	First Flow Pressure	35	Mins.	30	Mins.
C First Final Flow Pressure	935 P.S.I.	Initial Closed-in Pressure	90	Mins.	90	Mins.
D Initial Closed-in Pressure	1497 P.S.I.	Second Flow Pressure	20	Mins.	20	Mins.
E Second Initial Flow Pressure	788 P.S.I.	Final Closed-in Pressure	90	Mins.	90	Mins.
F Second Final Flow Pressure	953 P.S.I.					
G Final Closed-in Pressure	1487 P.S.I.					
H Final Hydrostatic Mud	2251 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: 30 Inc. of 3 mins. and a final inc. of 0 Min.

Second Flow Pressure
Breakdown: 4 Inc. of 5 mins. and a final inc. of 0 Min.

Final Shut-In
Breakdown: 30 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		63	1495			63	1485
P 2		66	1495			66	1485
P 3		69	1496			69	1486
P 4		72	1496			72	1486
P 5		75	1497			75	1486
P 6		78	1497			78	1486
P 7		81	1497			81	1486
P 8		84	1497			84	1486
P 9		87	1497			87	1487
P10		90	1497			90	1487
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

1560

Tkt # 12992

I

