Company Catt Drilling Company, Inc. Lease & Well No. Campbell "B"#1

Elevation -- Formation Herrington Effective Pay -- Ft. Ticket No. 2633

Date 2/6/79 Sec. 11 Twp. 19S Range 15W County Barton State Kansas

Test Approved by Jeffery J. Buntz Western Representative Vernon Wondra

Formation Test No. 1 Interval Tested from 1790' ft. to 1840' ft. Total Depth 1840' ft.

Packer Depth 1785 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 1790 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 1794 ft. Recorder Number 1567 Cap. 4300

Bottom Recorder Depth (Outside) 1797 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Husky Drilling Company Drill Collar Length - I. D. - in.

Mud Type Viscosity 33 Weight Pipe Length 630 I. D. 2.7 in.

Weight 9.6 Water Loss cc. Drill Pipe Length 1038 I. D. 3.8 in.

Chlorides - P.P.M. Test Tool Length 22' Tool Size 5½OD in.

Jars: Make -- Serial Number -- Anchor Length 50' ft. Size 5½OD+32' W.P. 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 4½FH in.

Blow: Gas to surface on second shut-in (90 minutes)

Recovered 100 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 9:15 A.M. P.M. Time Started Off Bottom 12:15 A.M. P.M. Maximum Temperature 83

Initial Hydrostatic Pressure ..... (A) 872 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 69 P.S.I. to (C) 60 P.S.I.

Initial Closed In Period ..... Minutes 45 (D) 181 P.S.I.

Final Flow Period ..... Minutes 60 (E) 78 P.S.I. to (F) 69 P.S.I.

Final Closed In Period ..... Minutes 45 (G) 357 P.S.I.

Final Hydrostatic Pressure ..... (H) 916 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 2/6/79 Test Ticket No. 2633

Recorder No. 1567 Capacity 4300 Location 1794 Ft.

Clock No. -- Elevation -- Well Temperature 83 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	872 P.S.I.	Open Tool	9:15A M	
B First Initial Flow Pressure	69 P.S.I.	First Flow Pressure	30 Mins.	25 Mins.
C First Final Flow Pressure	60 P.S.I.	Initial Closed-in Pressure	45 Mins.	27 Mins.
D Initial Closed-in Pressure	181 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	78 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	69 P.S.I.			
G Final Closed-in Pressure	357 P.S.I.			
H Final Hydrostatic Mud	916 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	69
P 2 5	65
P 3 10	60
P 4 15	60
P 5 20	60
P 6 25	60
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 9 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	60
3	67
6	76
9	93
12	108
15	119
18	138
21	156
24	178
27	181

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

Point Minutes	Press.
0	78
5	71
10	67
15	65
20	65
25	65
30	65
35	65
40	65
45	65
50	68
55	69
60	69

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

Point Minutes	Press.
0	69
3	82
6	110
9	138
12	162
15	184
18	205
21	220
24	244
27	264
30	281
33	296
36	310
39	325
42	342
45	357

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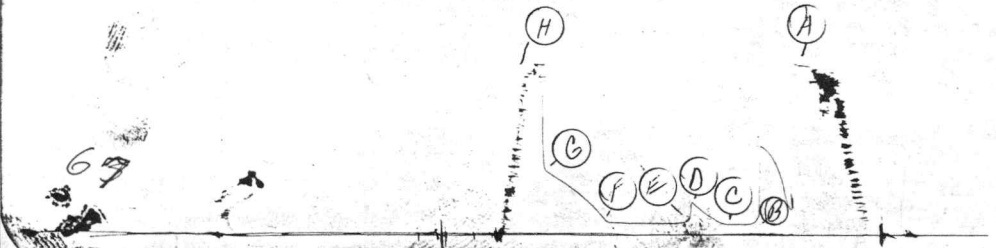

Company Catt Drilling Company, Inc. Lease & Well No. Campbell "B"#1

Elevation 1973 Formation Arbuckle-Reagan Effective Pay -- Ft. Ticket No. 2151

Date 2/11/79 Sec. 11 Twp. 19S Range 15W County Barton State Kansas

Test Approved by Jeffery J. Buntz Western Representative Vernon Wondra

Formation Test No. 2 Interval Tested from 3582' ft. to 3596' ft. Total Depth 3596' ft.

Packer Depth 3577 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3482 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 3586 ft. Recorder Number 1563 Cap. 4200

Bottom Recorder Depth (Outside) 3589 ft. Recorder Number 1565 Cap. 3150

~~Below Straddle Recorder Depth~~ 3592 ft. Recorder Number 1567 Cap. 4300

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

Mud Type starch Viscosity 34 Weight Pipe Length 630 I. D. 2.7 in.

Weight 9.8 Water Loss 16.0 cc. Drill Pipe Length 2930 I. D. 3.8 in.

Chlorides 50,000 P.P.M. Test Tool Length 22' ~~In~~ Tool Size 5½OD in.

Jars: Make -- Serial Number -- Anchor Length 14' ft. Size 5½OD 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 4½FH in.

Blow: Very weak blow throughout first flow period. Weak 2" blow throughout second opening.

Recovered 180 ft. of gas in pipe

Recovered 30 ft. of oil cut mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 11:20 A.M. ~~P.M.~~ Time Started Off Bottom 2:20 ~~A.M.~~ P.M. Maximum Temperature 116

Initial Hydrostatic Pressure (A) 1859 P.S.I.

Initial Flow Period Minutes 30 (B) 39 P.S.I. to (C) 34 P.S.I.

Initial Closed In Period Minutes 45 (D) 114 P.S.I.

Final Flow Period Minutes 60 (E) 47 P.S.I. to (F) 39 P.S.I.

Final Closed In Period Minutes 45 (G) 84 P.S.I.

Final Hydrostatic Pressure (H) 1838 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 2/11/79 Test Ticket No. 2151

Recorder No. 1563 Capacity 4200 Location 3586 Ft.

Clock No. -- Elevation -- Well Temperature 116 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1859 P.S.I.	Open Tool	11:20A M	
B First Initial Flow Pressure	39 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	34 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	114 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	47 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	39 P.S.I.			
G Final Closed-in Pressure	84 P.S.I.			
H Final Hydrostatic Mud	1838 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	39
P 2 5	34
P 3 10	34
P 4 15	34
P 5 20	34
P 6 25	34
P 7 30	34
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
0	34
3	41
6	43
9	47
12	54
15	58
18	65
21	71
24	75
27	80
30	86
33	93
36	99
39	106
42	110
45	114

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

Point Minutes	Press.
0	47
5	41
10	39
15	39
20	39
25	39
30	39
35	39
40	39
45	39
50	39
55	39
60	39

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

Point Minutes	Press.
0	39
3	43
6	46
9	47
12	52
15	54
18	58
21	60
24	63
27	67
30	69
33	73
36	76
39	78
42	80
45	84

TBt # 2151
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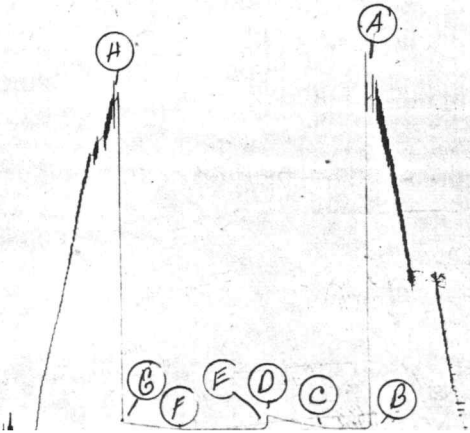

Company Catt Drilling Company — Lease & Well No. Campbell "B" #1

Elevation 1973 Kelly Bushing — Formation Arbuckle-Reagan — Effective Pay --- Ft. — Ticket No. 2152

Date 2-12-79 — Sec. 11 — Twp. 19 — Range 15 — County Barton — State Kansas

Test Approved by Jeffery J. Buntz — Western Representative Vernon Wondra

Formation Test No. 3 — Interval Tested from 3602 ft. to 3619 ft. — Total Depth 3619 ft.

Packer Depth 3597 ft. — Size 6 3/4 in. — Packer Depth --- ft. — Size --- in.

Packer Depth 3602 ft. — Size 6 3/4 in. — Packer Depth --- ft. — Size --- in.

Depth of Selective Zone Set ---

Top Recorder Depth (Inside) 3609 ft. — Recorder Number 1563 — Cap. 4200

Bottom Recorder Depth (Outside) 3612 ft. — Recorder Number 1565 — Cap. 3150

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

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

Mud Type Starch — Viscosity 40 — Weight Pipe Length 630 — I. D. 2.7 in.

Weight 9.6 — Water Loss 12.0 cc. — Drill Pipe Length 2950 — I. D. 3.8 in.

Chlorides 44,000 P.P.M. — Test Tool Length 22' — Tool Size 5½ O.D. in.

Jars: Make --- — Serial Number --- — Anchor Length 17 ft. — Size 5½ 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 4½ F.H. in.

Blow: Strong blow throughout flow periods.

Recovered 60 ft. of Gas in Pipe

Recovered 150 ft. of Gas and Oil Cut Watery Mud

Recovered 1175 ft. of Oily Water

Recovered ____ ft. of

Recovered ____ ft. of

Remarks:

Time Set Packer(s) 2:10 A.M. P.M. — Time Started Off Bottom 5:10 A.M. P.M. — Maximum Temperature 121°

Initial Hydrostatic Pressure			(A) 1861	P.S.I.		
Initial Flow Period	Minutes 30	(B) 112	P.S.I. to	(C) 351	P.S.I.	
Initial Closed In Period	Minutes 45	(D) 1105	P.S.I.			
Final Flow Period	Minutes 60	(E) 392	P.S.I. to	(F) 613	P.S.I.	
Final Closed In Period	Minutes 45	(G) 1097	P.S.I.			
Final Hydrostatic Pressure			(H) 1842	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 2-12-79 Test Ticket No. 2152

Recorder No. 1563 Capacity 4200 Location 3609 Ft.

Clock No. --- Elevation 1973 Kelly Bushing Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1861 P.S.I.	Open Tool	2:10 AM	
B First Initial Flow Pressure	112 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	351 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	1105 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	392 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	613 P.S.I.			
G Final Closed-in Pressure	1097 P.S.I.			
H Final Hydrostatic Mud	1842 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	112
P 2 5	136
P 3 10	192
P 4 15	252
P 5 20	297
P 6 25	328
P 7 30	351
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
0	351
3	804
6	987
9	1036
12	1061
15	1074
18	1082
21	1089
24	1093
27	1097
30	1099
33	1103
36	1103
39	1103
42	1105
45	1105

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

Point Minutes	Press.
0	392
5	399
10	422
15	442
20	463
25	483
30	509
35	528
40	547
45	566
50	581
55	598
60	613

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

Point Minutes	Press.
0	613
3	1006
6	1042
9	1059
12	1070
15	1078
18	1082
21	1086
24	1087
27	1091
30	1093
33	1093
36	1095
39	1095
42	1097
45	1097

TKt # 2152
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