Company Black Gold Exploration Ltd. Lease & Well No. Broomfield #4

Elevation ---- Formation Arbuckle Effective Pay --- Ft. Ticket No. 7783

Date 11/4/80 Sec. 17 Twp. 28S Range 4E County Butler State Kansas

Test Approved by J. W. Thompson Western Representative Kenny Kirkendall

Formation Test No. 1 Interval Tested from 2428 ft. to 2449 ft. Total Depth 2449 ft.

Packer Depth 2428 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2423 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 2433 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 2438 ft. Recorder Number 1560 Cap. 4500

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

Drilling Contractor White & Ellis Drilling Rig #7 Drill Collar Length 270 I. D. - in.

Mud Type chemical Viscosity 47 Weight Pipe Length - I. D. - in.

Weight 9.6 Water Loss 11.2 cc. Drill Pipe Length 2138 I. D. - in.

Chlorides 1,000 P.P.M. Test Tool Length 20 ft. Tool Size 5½ in.

Jars: Make No Serial Number - Anchor Length 21 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 4½ in.

Blow: Weak blow throughout test.

Recovered 4 ft. of free oil

Recovered 15 ft. of oil cut mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 12:30 A.M. P.M. Time Started Off Bottom 2:30 A.M. P.M. Maximum Temperature -

Initial Hydrostatic Pressure ..... (A) 1236 P.S.I.

Initial Flow Period ..... Minutes 35 (B) 34 P.S.I. to (C) 28 P.S.I.

Initial Closed In Period ..... Minutes 30 (D) 871 P.S.I.

Final Flow Period ..... Minutes 30 (E) 55 P.S.I. to (F) 31 P.S.I.

Final Closed In Period ..... Minutes 39 (G) 724 P.S.I.

Final Hydrostatic Pressure ..... (H) 1209 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 11-4-80 Test Ticket No. 7783

Recorder No. 2605 Capacity 4150 Location 2433 Ft.

Clock No. - Elevation - Well Temperature 97 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1236	P.S.I.
B	First Initial Flow Pressure	34	P.S.I.
C	First Final Flow Pressure	28	P.S.I.
D	Initial Closed-in Pressure	871	P.S.I.
E	Second Initial Flow Pressure	55	P.S.I.
F	Second Final Flow Pressure	31	P.S.I.
G	Final Closed-in Pressure	724	P.S.I.
H	Final Hydrostatic Mud	1209	P.S.I.

	Time Given	Time Computed
Open Tool	12:30 M	
First Flow Pressure	30 Mins.	35 Mins.
Initial Closed-in Pressure	30 Mins.	30 Mins.
Second Flow Pressure	30 Mins.	30 Mins.
Final Closed-in Pressure	30 Mins.	39 Mins.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc. of 5 mins. and a final inc. of 0 Min.

Point	Mins.	Press.
P 1	0	34
P 2	5	32
P 3	10	28
P 4	15	28
P 5	20	28
P 6	25	28
P 7	30	28
P 8	35	28
P 9		
P10		
P11		
P12		
P13		
P14		
P15		
P16		
P17		
P18		
P19		
P20		

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

Point	Minutes	Press.
	0	28
	3	89
	6	345
	9	552
	12	674
	15	748
	18	792
	21	823
	24	848
	27	863
	30	871

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

Point	Minutes	Press.
	0	55
	5	44
	10	36
	15	32
	20	32
	25	32
	30	31

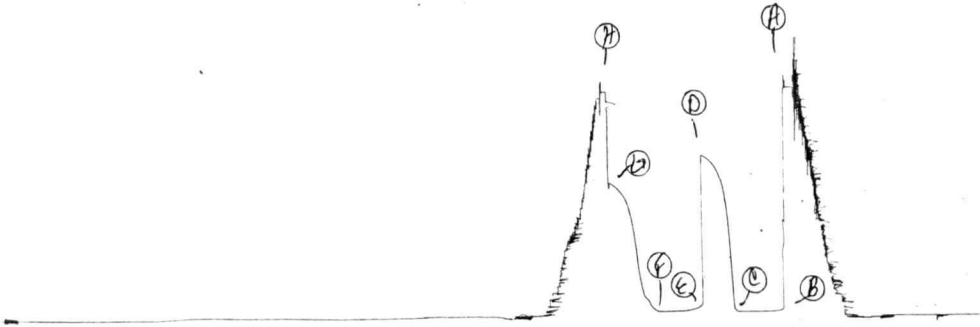
Final Shut-In
Breakdown: 13 Inc. of 3 mins. and a final inc. of 0 Min.

Point	Minutes	Press.
	0	31
	3	33
	6	44
	9	82
	12	104
	15	182
	18	316
	21	460
	24	558
	27	616
	30	657
	33	684
	36	705
	39	724

2506

JH # 7783

I



Company Black Gold Exploration Ltd. Lease & Well No. Broomfield #4

Elevation ----- Formation Arbuckle Effective Pay - Ft. Ticket No. 7784

Date 11/5/80 Sec. 17 Twp. 28S Range 4E County Butler State Kansas

Test Approved by J. W. Thompson Western Representative Kenny Kirkendall

Formation Test No. 2 Interval Tested from 2449 ft. to 2456 ft. Total Depth 2456 ft.

Packer Depth 2440 ft. Size 6 3/4 Packer Depth - ft. Size - in.

Packer Depth 2444 ft. Size 6 3/4 Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2453 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 2456 ft. Recorder Number 1560 Cap. 4500

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

Drilling Contractor Lo & E. Drlg. Rig #7 Drill Collar Length 270 I. D. - in.

Mud Type chemical Viscosity 47 Weight Pipe Length - I. D. - in.

Weight 9.6 Water Loss 11.2 cc. Drill Pipe Length 2159 I. D. - in.

Chlorides 1,000 P.P.M. Test Tool Length 20 ft. Tool Size 5½ in.

Jars: Make No Serial Number - Anchor Length 7 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 4½XH in.

Blow: Weak blow throughout test.

Recovered 120 ft. of free oil

Recovered 30 ft. of heavy oil cut mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 8:30 A.M. P.M. Time Started Off Bottom 10:30 A.M. P.M. Maximum Temperature 99°

Initial Hydrostatic Pressure ..... (A) 1230 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 23 P.S.I. to (C) 36 P.S.I.

Initial Closed In Period ..... Minutes 33 (D) 825 P.S.I.

Final Flow Period ..... Minutes 35 (E) 108 P.S.I. to (F) 84 P.S.I.

Final Closed In Period ..... Minutes 30 (G) 832 P.S.I.

Final Hydrostatic Pressure ..... (H) 1213 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 11-5-80 Test Ticket No. 7784

Recorder No. 2605 Capacity 4150 Location 2453 Ft.

Clock No. - Elevation - Well Temperature 99 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1230 P.S.I.		Open Tool	8:30 M	
B	First Initial Flow Pressure	23 P.S.I.		First Flow Pressure	- Mins.	30 Mins.
C	First Final Flow Pressure	36 P.S.I.		Initial Closed-in Pressure	- Mins.	33 Mins.
D	Initial Closed-in Pressure	825 P.S.I.		Second Flow Pressure	- Mins.	35 Mins.
E	Second Initial Flow Pressure	108 P.S.I.		Final Closed-in Pressure	- Mins.	30 Mins.
F	Second Final Flow Pressure	84 P.S.I.				
G	Final Closed-in Pressure	832 P.S.I.				
H	Final Hydrostatic Mud	1213 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	23
P 2	5	23
P 3	10	25
P 4	15	27
P 5	20	30
P 6	25	33
P 7	30	36
P 8		
P 9		
P10		
P11		
P12		
P13		
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In

Breakdown: 11 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	36
3	38
6	41
9	54
12	70
15	254
18	583
21	705
24	755
27	782
30	809
33	825

Second Flow Pressure

Breakdown: 7 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	108
5	97
10	87
15	84
20	84
25	84
30	84
35	84

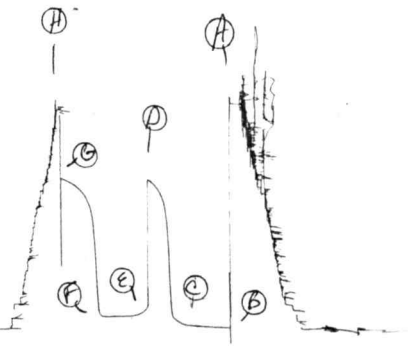
Final Shut-In

Breakdown: 10 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	84
3	222
6	522
9	657
12	715
15	750
18	773
21	794
24	807
27	819
30	832

JLH #7784

I



Company Black Gold Exploration Ltd. Lease & Well No. Broomfield #4

Elevation N/A Formation Arbuckle Effective Pay - Ft. Ticket No. 7785

Date 11/5/80 Sec. 17 Twp. 28S Range 4E County Butler State Kansas

Test Approved by J. W. Thompson Western Representative Kenny Kirkendall

Formation Test No. 3 Interval Tested from 2461 ft. to 2472 ft. Total Depth 2472 ft.

Packer Depth 2461 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2456 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2466 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 2468 ft. Recorder Number 1560 Cap. 4500

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

Drilling Contractor White & Ellis Drlg. Rig #7 Drill Collar Length 270 I. D. - in.

Mud Type chemical Viscosity 47 Weight Pipe Length - I. D. - in.

Weight 9.6 Water Loss - cc. Drill Pipe Length 2171 I. D. - in.

Chlorides 1,000 P.P.M. Test Tool Length 20 ft. Tool Size 5½ in.

Jars: Make No Serial Number - Anchor Length 11 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 4½XH in.

Blow: Weak to fair blow initial flow period. Weak ;building to fair final flow period.

Recovered 300 ft. of free gassy oil

Recovered 30 ft. of heavy oil and gas cut mud

Recovered 60 ft. of gas and oil cut muddy water

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 6:30 ~~A.M.~~ P.M. Time Started Off Bottom 9:00 A.M. P.M. Maximum Temperature 100°

Initial Hydrostatic Pressure			(A) 1242	P.S.I.		
Initial Flow Period	Minutes 30	(B) 72	P.S.I. to	(C) 108	P.S.I.	
Initial Closed In Period	Minutes 48	(D) 938	P.S.I.			
Final Flow Period	Minutes 30	(E) 192	P.S.I. to	(F) 179	P.S.I.	
Final Closed In Period	Minutes 48	(G) 940	P.S.I.			
Final Hydrostatic Pressure			(H) 1217	P.S.I.		

WESTERN TESTING CO., INC.

Pressure Data

Date 11-5-80 Test Ticket No. 7785

Recorder No. 2605 Capacity 4150 Location 2466 Ft.

Clock No. - Elevation - Well Temperature 100 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1242	P.S.I.
B	First Initial Flow Pressure	72	P.S.I.
C	First Final Flow Pressure	108	P.S.I.
D	Initial Closed-in Pressure	938	P.S.I.
E	Second Initial Flow Pressure	192	P.S.I.
F	Second Final Flow Pressure	179	P.S.I.
G	Final Closed-in Pressure	940	P.S.I.
H	Final Hydrostatic Mud	1217	P.S.I.

	Time Given	Time Computed
Open Tool	6:30 M	
First Flow Pressure	30 Mins.	30 Mins.
Initial Closed-in Pressure	45 Mins.	48 Mins.
Second Flow Pressure	30 Mins.	30 Mins.
Final Closed-in Pressure	45 Mins.	48 Mins.

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	72
P 2 5	63
P 3 10	65
P 4 15	73
P 5 20	81
P 6 25	95
P 7 30	108
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 16 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	108
3	808
6	846
9	869
12	881
15	889
18	898
21	906
24	913
27	918
30	923
33	928
36	932
39	934
42	936
45	938
48	938

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

Point Minutes	Press.
0	192
5	186
10	183
15	179
20	179
25	179
30	179

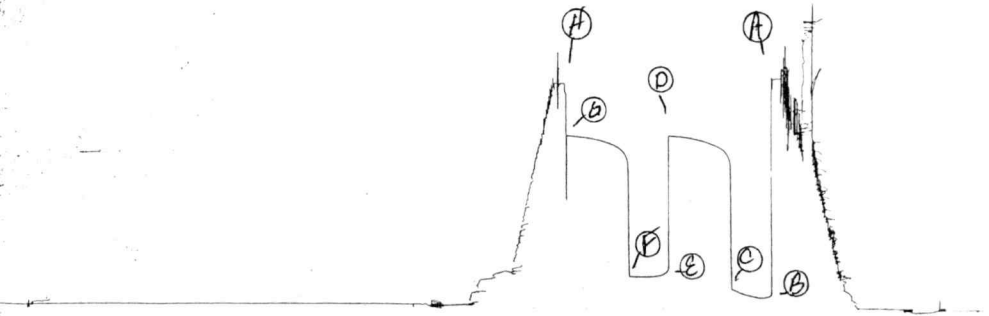
Final Shut-In
Breakdown: 16 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	179
3	808
6	850
9	869
12	881
15	892
18	900
21	908
24	915
27	919
30	925
33	929
36	932
39	936
42	938
45	940
48	940

2605

DH # 7785

I



Company: Black Gold Exploration Ltd. | Lease & Well No.: Broomfield #4

Elevation: N/A | Formation: Arbuckle | Effective Pay: -- | Ft. | Ticket No.: 7786

Date: 11/6/80 | Sec.: 17 | Twp.: 28S | Range: 4E | County: Butler | State: Kansas

Test Approved by: Jim Thompson | Western Representative: Kenny Kirkendall

Formation Test No.: 4 | Interval Tested from: 2488 ft. to: 2501 ft. | Total Depth: 2501 ft.

Packer Depth: 2483 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Packer Depth: 2483 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Depth of Selective Zone Set: -

Top Recorder Depth (Inside): 2493 ft. | Recorder Number: 2605 | Cap.: 4150

Bottom Recorder Depth (Outside): 2498 ft. | Recorder Number: 1560 | Cap.: 4500

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

Drilling Contractor: White & Ellis Drilling Rig #7 | Drill Collar Length: 270 | I. D.: - in.

Mud Type: chemical | Viscosity: 43 | Weight Pipe Length: - | I. D.: - in.

Weight: 9.6 | Water Loss: 11.2 cc. | Drill Pipe Length: 2198 | I. D.: - in.

Chlorides: 1,000 P.P.M. | Test Tool Length: 20 ft. | Tool Size: 5½ in.

Jars: Make: No | Serial Number: - | Anchor Length: 13 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: 4½XH in.

Blow: Good blow throughout test.

Recovered: 886 ft. of gassy muddy salt water

Recovered: ft. of

Recovered: ft. of

Recovered: ft. of

Recovered: ft. of

Remarks:

Time Set Packer(s): 7:00 A.M. / P.M. | Time Started Off Bottom: 9:00 A.M. / P.M. | Maximum Temperature: 100°

Initial Hydrostatic Pressure			(A)	1234	P.S.I.	
Initial Flow Period	Minutes 35	(B)	54	P.S.I. to (C)	229	P.S.I.
Initial Closed In Period	Minutes 33	(D)	948	P.S.I.		
Final Flow Period	Minutes 30	(E)	319	P.S.I. to (F)	343	P.S.I.
Final Closed In Period	Minutes 33	(G)	944	P.S.I.		
Final Hydrostatic Pressure		(H)	1197	P.S.I.		

WTC

WESTERN TESTING CO., INC.
Pressure Data

Date 11-6-80 Test Ticket No. 7786

Recorder No. 2605 Capacity 4150 Location 2493 Ft.

Clock No. - Elevation - Well Temperature 100 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1234 P.S.I.	Open Tool	7:00A M	
B	First Initial Flow Pressure	54 P.S.I.	First Flow Pressure	30 Mins.	35 Mins.
C	First Final Flow Pressure	229 P.S.I.	Initial Closed-in Pressure	30 Mins.	33 Mins.
D	Initial Closed-in Pressure	948 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E	Second Initial Flow Pressure	319 P.S.I.	Final Closed-in Pressure	30 Mins.	33 Mins.
F	Second Final Flow Pressure	343 P.S.I.			
G	Final Closed-in Pressure	944 P.S.I.			
H	Final Hydrostatic Mud	1197 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	54
P 2 5	63
P 3 10	106
P 4 15	135
P 5 20	159
P 6 25	182
P 7 30	203
P 8 35	229
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	229
3	719
6	869
9	904
12	917
15	925
18	933
21	938
24	942
27	945
30	948
33	948

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

Point Minutes	Press.
0	319
5	305
10	304
15	309
20	318
25	330
30	343

Final Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	343
3	834
6	890
9	909
12	919
15	927
18	933
21	936
24	939
27	941
30	944
33	944

2605

JH # 7786

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