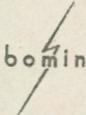


Initial Closed in Time	30 Minutes	 BOMIN TESTING BOX 782 LIBERAL, KANSAS	Date	4-8-68	LOCATION Sec. 26-34S-32W		
Tool Open Flow Period	30-45 Minutes		Ticket No.	3990			
Final Closed In Time	45 Minutes		DISTRICT	Woodward, Okla.			
Depth Top Gauge	4525 Ft.		Blanked Off	No		Kind of Job	Open Hole Test
Recorder No.	649	12 Hr. Clock	CONTRACTOR Zenith Drilling				
Pressure Readings	Field	Office Corrected	HOLE & TOOL DATA				
Initial Hydro Mud Pressure A-	2143	2145	Elevation	2743'	Top Packer Depth	4532'	
Initial Closed in Pres. B-	1026	1028	Total Depth	4557'	Bottom Packer Depth	4537'	
Initial Flow Pres. C-	275	278	Casing or Hole Size	7-7/8"	Size & Type Wall Packer	6 1/2 B.T.	
Final Flow Pres. D-	329	331	Liner or Rathole Size		Size Bottom Choke	1/2"	
Final Closed in Pres. E-	1039	1042			Size Surface Choke	1"	
Final Hydro Mud Pressure F-	2140	2142	Interval Tested	4537'-4557'	ID & Length Air Chamber		
Depth Bottom Gauge	4557 Ft.	Blanked Off	Yes	Formation Tested	Lansing	ID & Length Drill Collars	2 1/2" x 690'
Recorder No.	650	4 Hr. Clock	Est. Gauge Depth Temp.	128	Size Drill Pipe	4 1/2 XH	
Pressure Readings	Field	Office Corrected	MUD DATA Weight	9.8	Viscosity	44	
Initial Hydro Mud Pressure			All depths measured from	KB	No. Folders Reproduced	5	
Initial Closed in Pres.			REMARKS: Open tool with good blow and				
Initial Flow Pres.			gas to surface in 30 minutes -- too				
Final Flow Pres.			small to measure; Closed for 30 min.;				
Final Closed in Pres.			Open for 45 minutes; Closed for 45 min.				
Final Hydro Mud Pressure							
42 Gravity at 52 Degrees; Salt 140,000 PPM							
PreFlow = 71#-159#							
Recovered	270	Feet of	Gassy Slightly Mud Cut Oil				
Recovered	150	Feet of	Oil and Gas Cut Mud				
Recovered	430	Feet of	Gas, Slightly Oil Cut Salt Water				
Recovered		Feet of					
Witnessed By W. R. Atkinson							
Amount-Type of Cushion		Tester	J. C. Kime				

 Thompson
 LEASE NAME

 #1
 WELL NO.

 #1
 TEST NO.

 Beacon Resources
 LEASE OWNER

 Wichita, Kansas
 OWNERS DISTRICT

4537'-4557'

 Seward
 COUNTY
 STATE Kansas

BOMIN TESTING, INC.

BOX 782

LIBERAL, KANSAS

THOMPSON
LEASE NAME

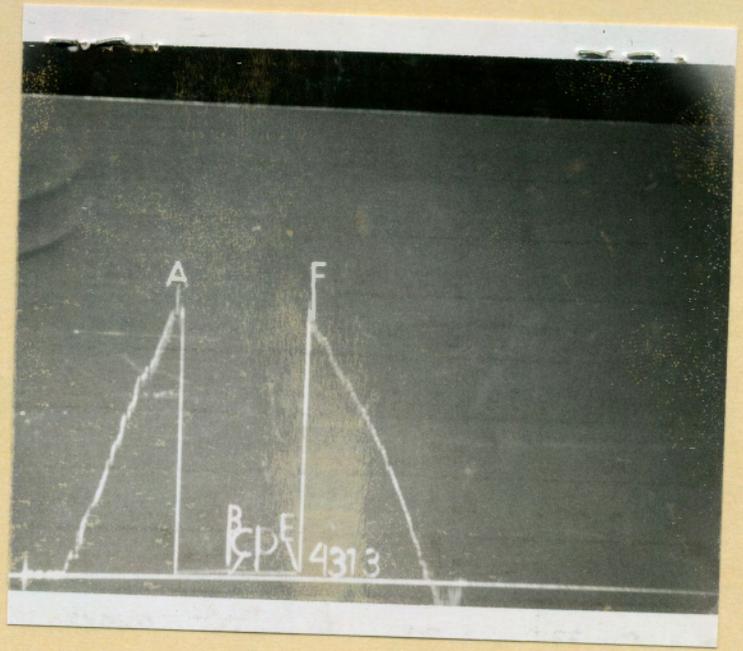
#1
WELL NO

#2
TEST NO

58241-59111

Beacon Resources Corp.
LEASE OWNER

Wichita, Kansas
OWNERS DISTRICT



Initial Closed in Time	30 Minutes	Date	4-14-68
Tool Open Flow Period	10-20 Minutes	Ticket No.	4313
Final Closed in Time	30 Minutes	DISTRICT	Liberal, Kansas
Depth Top Gauge	5835 Ft.	Blanked Off	No
Recorder No.	2772	12 Hr. Clock	CONTRACTOR Zenith Drilling Co.
Pressure Readings	Field	Office Corrected	
Initial Hydro Mud Pressure	A- 2968	2970	Elevation 2743' KH
Initial Closed in Pres.	B- 40	43	Total Depth 5911'
Initial Flow Pres.	C- 33	30	Casing or Hole Size 7-7/8"
Final Flow Pres.	D- 33	30	Liner or Rathole Size
Final Closed in Pres.	E- 33	30	Interval Tested 5824'-5911'
Final Hydro Mud Pressure	F- 2946	2949	Formation Tested U. Morrow
Depth Bottom Gauge	5911 Ft.	Blanked Off	Yes
Recorder No.	88	4 Hr. Clock	Est. Gauge Depth Temp. 131
Pressure Readings	Field	Office Corrected	MUD DATA Weight 9.4
Initial Hydro Mud Pressure			All depths measured from KB
Initial Closed in Pres.			No. Follies Reproduced 5
Initial Flow Pres.			REMARKS: 10 minute pre flow with weak blow. Re-open tool after ICIP with weak blow and died in 12 minutes.
Final Flow Pres.			Shut tool in for 30 minutes.
Final Closed in Pres.			
Final Hydro Mud Pressure			
Recovered	15	Feet of	Drilling Mud
Recovered		Feet of	
Recovered		Feet of	
Recovered		Feet of	
Witnessed By	W. R. Atkinson		
Amount-Type of Cushion		Tester	Tom Brown

LOCATION Sec. 26-34S-32W

FIELD Willdout

COUNTY Seward

STATE Kansas

THOMPSON
LEASE NAME

#1
WELL NO.

#2
TEST NO.

5824'-5911'
Beegon Resources Corp.
LEASE OWNER

Wichita, Kansas
OWNERS DISTRICT

BOMIN TESTING, INC.

BOX 782

LIBERAL, KANSAS

THOMPSON
LEASE NAME

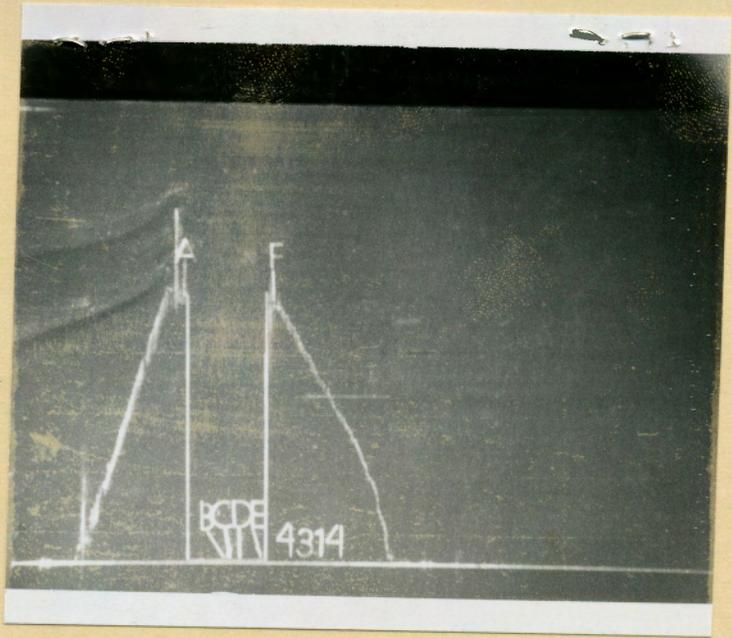
#1
WELL NO.

#3
TEST NO.

59401-59601

Beacon Resources Corp.
LEASE OWNER

Wichita, Kansas
OWNERS DISTRICT



Initial Closed in Time	20 Minutes	 BOMIN TESTING BOX 782 LIBERAL, KANSAS	Date	4-15-68		
Tool Open Flow Period	10-10 Minutes		Ticket No.	4314		
Final Closed In Time	20 Minutes		DISTRICT	Liberal, Kansas		
Depth Top Gauge	5950 Ft.		Blanked Off No		Kind of Job	Open Hole Test
Recorder No.	2772	12 Hr. Clock	CONTRACTOR Zenith Drilling, Inc.			
Pressure Readings	Field	Office Corrected	HOLE & TOOL DATA			
Initial Hydro Mud Pressure	A- 3057	3059	Elevation	2743' KB	Top Packer Depth	5935'
Initial Closed in Pres.	B- 18	20	Total Depth	5960'	Bottom Packer Depth	5940'
Initial Flow Pres.	C- 18	20	Casing or Hole Size	7-7/8"	Size & Type Wall Packer	6 1/2 B.T.
Final Flow Pres.	D- 18	20	Liner or Rathole Size		Size Bottom Choke	1/2"
Final Closed in Pres.	E- 18	20			Size Surface Choke	1"
Final Hydro Mud Pressure	F- 3035	3037	Interval Tested	5940'-5960'	ID & Length Air Chamber	
Depth Bottom Gauge	5960 Ft.	Blanked Off Yes	Formation Tested	M. Morrow	ID & Length Drill Collars	2 1/4" x 695'
Recorder No.	88	4 Hr. Clock	Est. Gauge Depth Temp.	133	Size Drill Pipe	4 1/2 XH
Pressure Readings	Field	Office Corrected	MUD DATA Weight	9.4	Viscosity	48
Initial Hydro Mud Pressure			All depths measured from	KB	No. Folders Reproduced	5
Initial Closed in Pres.			REMARKS: 10 minute pre flow with very			
Initial Flow Pres.			weak blow. Shut tool for 20 minutes.			
Final Flow Pres.			Re-open with few bubbles and died.			
Final Closed in Pres.						
Final Hydro Mud Pressure						
PreFlow = 18#-18#						
Recovered	15 Feet of Drilling Mud					
Recovered	Feet of					
Recovered	Feet of					
Recovered	Feet of					
Witnessed By	W. R. Atkinson					
Amount-Type of Cushion	Tester Tom Brown					

LOCATION Sec. 26-34S-32W

FIELD #111doat

COUNTY Seward

STATE Kansas

 Thompson
 LEASE NAME

 #1
 WELL NO.

 #3
 TEST NO.

 Beacon Resources Corp.
 LEASE OWNER

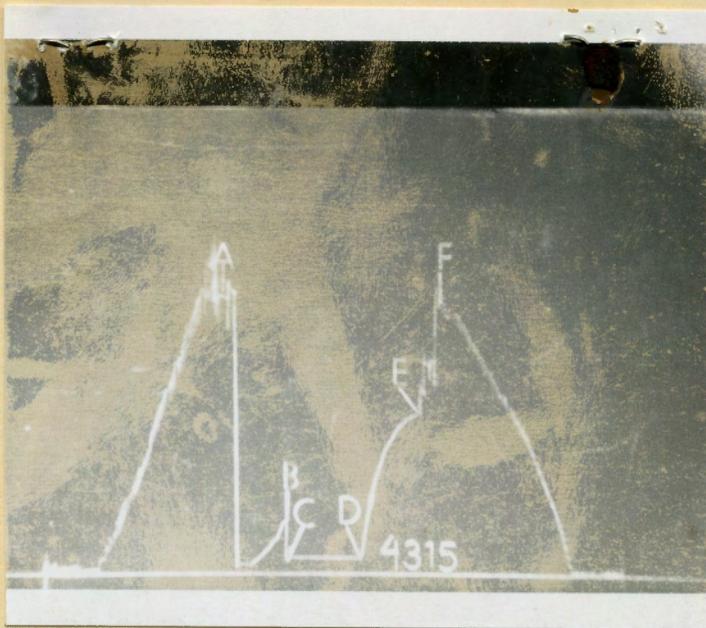
 Wichita, Kansas
 OWNERS DISTRICT

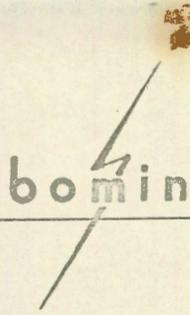
5940'-5960'

BOMIN TESTING, INC.

BOX 782

LIBERAL, KANSAS





bomin

BOMIN TESTING, INC.

P. O. BOX 782

KANSAS 67901

FORMATION EVALUATION ANALYSIS

SUMMARY: The Lower Morrow zone tested can be evaluated as a low permeability reservoir. Calculation of the formation transmissibility, damage ratio, etc., was not possible because the final closed in period was of insufficient length to enable a complete pressure build up. The formation permeability to gas in the well bore area is estimated to be less than (1) md. The low permeability is shown by the very low flow rate during the test (18 MCF/D) and slow rate of pressure build up during the closed in periods after minute production from the reservoir. The test results are typical of those obtained from low permeability reservoirs in the area. Completion as a commercial well is possible if the stimulation treatment can substantially increase the permeability in a large area around the well bore.

STATIC RESERVOIR PRESSURE:

A static pressure could not be determined since the bottom hole pressure was still increasing at the end of the final closed in period. This can be clearly seen on the attached pressure plot. The low initial closed in pressure can be attributed to formation plugging and damage, which was removed during the second flow period resulting in a higher final closed in pressure. The static reservoir pressure is estimated to be approximately 1900 to 2000 psi.

TRANSMISSIBILITY:

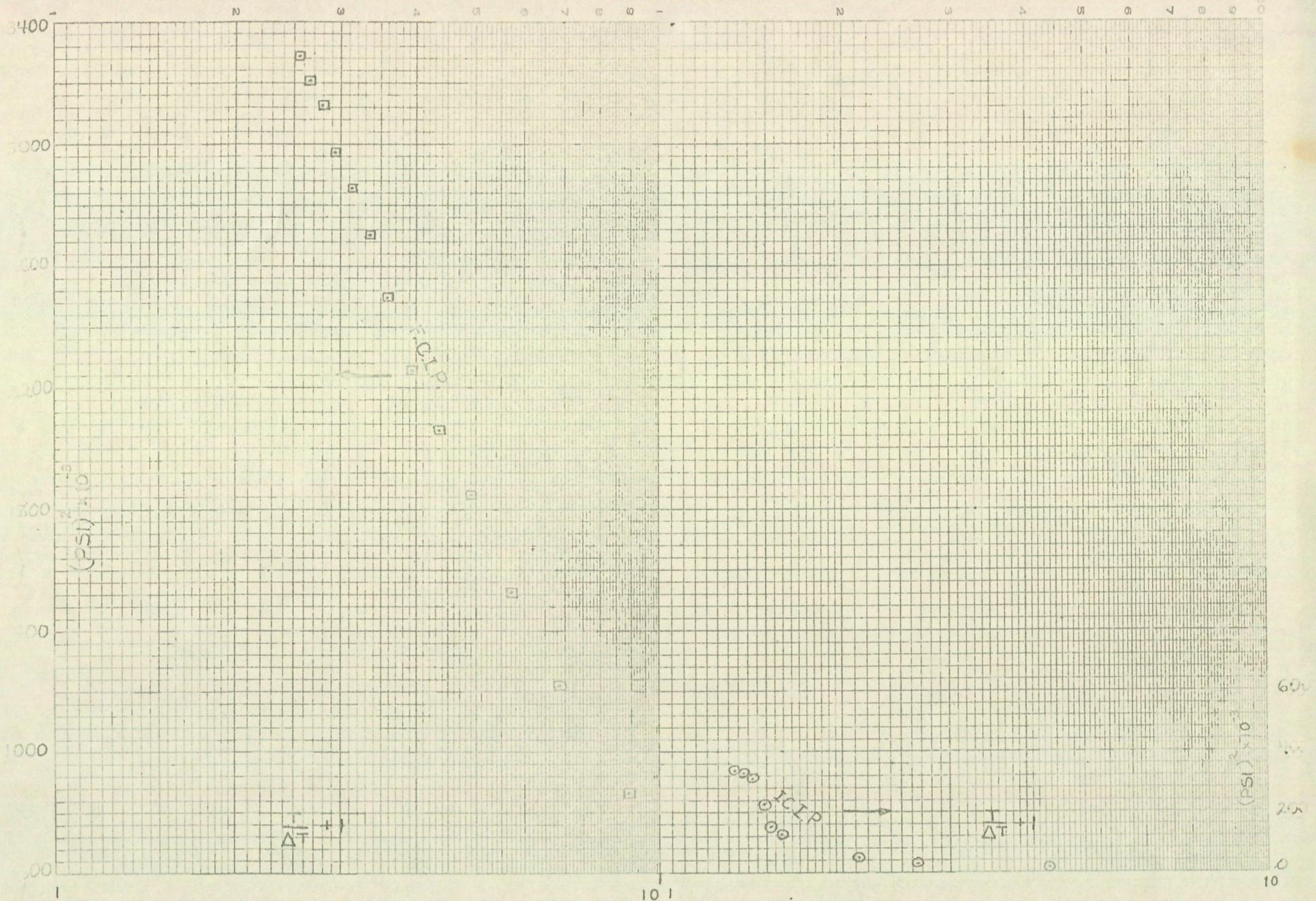
Formation transmissibility could not be calculated for reasons discussed above.

WELL BORE DAMAGE:

A valid well bore damage ratio could not be calculated.

RADIUS OF INVESTIGATION:

The radius of investigation of this test cannot be accurately determined.



FORMULA USED FOR CALCULATIONS
GAS RESERVOIRS
LIQUID RESERVOIRS

TRANSMISSIBILITY: $\frac{(Kh)}{\mu}_{\text{THEORETICAL GAS}} = \frac{1627 QZT}{m}$

$$\frac{(Kh)}{\mu}_{\text{INDICATED GAS}} = \frac{3267 QZT \text{ Log } (0.472 \frac{b}{r_w})}{(P_s^2 - P_f^2)}$$

$$b \cong \sqrt{Kt} = \frac{162 Q}{m}$$

$$\frac{(Kh)}{\mu B}_{\text{OIL}}$$

DAMAGE RATIO: $DR = \frac{(Kh)_{\text{THEORETICAL}}}{(Kh)_{\text{INDICATED}}} = \frac{0.183 (P_s - P_f)}{m}$

MAXIMUM FLOW RATE: $Q_{\text{max}} = Q \times DR$

L E G E N D
DEMENSION

SYMBOLS:

GAS
OIL

Q = Average adjusted production rate during test

Mcfd

bbls/day

B = Formation volume factor

Z = Compressibility factor

vol/vol/psi

T = Temperature

°R

°R

 μ = Viscosity (Centipose)

 C_p
 C_p

m = Slope of pressure plot

 psia²/cycle

psia / cycle

K = Permeability (Millidarcies)

md

md

h = Formation interval tested

FT

FT

b = Approximate radius or drainage

FT

FT

t = Flow period

Minutes

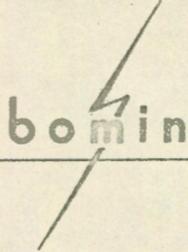
Minutes

 P_s = Extrapolated Static Pressure

psia

psia

 P_f = Final Flow Pressure



bomin

BOMIN TESTING, INC.

P. O. BOX 782

LIBERAL, KANSAS 67901

PRESSURE DATA

INITIAL CLOSED IN PERIOD

FINAL CLOSED IN PERIOD

ΔT (Minutes)	$\frac{t}{\Delta t} + 1$	Pressure		$\frac{t'}{\Delta t} + 1$	Pressure	
		PSIA	PSIA x 10 ³		PSIA	PSIA x 10 ³
0	∞	108	11.7	∞	176	31.0
3	4.33	132	17.4	24.30	440	193.6
6	2.67	172	29.6	12.67	660	435.6
9	2.11	242	58.6	8.88	924	853.8
12	1.83	308	94.9	6.83	1102	1214.4
15	1.67	370	136.9	5.67	1235	1525.2
18	1.56	396	156.8	4.89	1357	1841.4
21	1.48	484	234.3	4.33	1435	2059.2
24	1.42	550	302.5	3.92	1502	2256.0
27	1.37	572	327.2	3.59	1579	2493.2
30	1.33	581	337.6	3.33	1646	2709.3
33				3.12	1690	2856.1
36				2.94	1724	2972.2
39				2.79	1768	3125.8
42				2.67	1790	3204.1
45				2.56	1813	3287.0
48						
51						
54						
57						
60						
63						
66						
69						
72						
75						
78						
81						
84						
87						
90						

t = 10

t' = 70

bomin

COMPANY Beacon Resources Date 4-16-68

LEASE & WELL NO. Thompson #1 Test No. #4 (5990'-6060')

Pressure	Time	P.S.I.	Ticket No. 4315
I.H.M.P.		3149	
I.S.I.P.	30	581	Packer Set 5985'-5990'
Flow P.	10-60	154-176	
B.H.P.	45	1813	
F.H.M.P.		3072	Recorder No. 2772

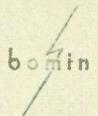
3 Min.
I.S.I.P.

3 Min.
FLOW P.

3 Min.
B.H.P.

	Def	P.S.I.	Def	P.S.I.	Def	P.S.I.
P0	049	108	048	105	080	176
P1	060	132	048	105	200	440
P2	078	172	048	105	300	660
P3	110	242	049	108	420	924
P4	140	308	049	108	500	1102
P5	168	370	070	154	560	1235
P6	180	396	076	167	615	1357
P7	220	484	077	169	650	1435
P8	250	550	079	174	680	1502
P9	260	572	079	174	715	1579
P10	264	581	079	174	745	1646
P11			079	174	765	1690
P12			079	174	780	1724
P13			079	174	800	1768
P14			080	176	810	1790
P15			080	176	820	1813
P16			080	176		
P17			080	176		
P18			080	176		
P19			080	176		
P20			080	176		
P21			080	176		
P22			080	176		
P23			080	176		
P24			080	176		
P25			080	176		
P26						
P27						
P28						
P29						
P30						
P31						
P32						
P33						
P34						
P35						
P36						
P37						
P38						
P39						
P40						
P41						
P42						
P43						

P0-P4 = PreFlow
P4 = 1 Minute

Initial Closed in Time	30 Minutes	 BOMIN TESTING BOX 782 LIBERAL, KANSAS	Date	4-16-68			
Tool Open Flow Period	10-60 Minutes		Ticket No.	4315			
Final Closed in Time	45 Minutes		DISTRICT	Liberal, Kansas			
Depth Top Gauge	6010 Ft.	Blanked Off	No	Kind of Job	Open Hole Test		
Recorder No.	2772	12 Hr. Clock	CONTRACTOR Zenith Drlg., Inc.				
Pressure Readings	Field	Office Corrected	HOLE & TOOL DATA				
Initial Hydro Mud Pressure A-	3147	3149	Elevation	2743' KB	Top Packer Depth	5985'	
Initial Closed in Pres. B-	583	581	Total Depth	6060'	Bottom Packer Depth	5990'	
Initial Flow Pres. C-	154	154	Casing or Hole Size	7-7/8"	Size & Type Wall Packer	6 1/2 B.T.	
Final Flow Pres. D-	176	176	Liner or Rathole Size		Size Bottom Choke	1/2"	
Final Closed in Pres. E-	1813	1813			Size Surface Choke	1"	
Final Hydro Mud Pressure F-	3069	3072	Interval Tested	5990'-6060'	ID & Length Air Chamber		
Depth Bottom Gauge	6060 Ft.	Blanked Off	Yes	Formation Tested	Lwr. Morrow	ID & Length Drill Collars	2 1/4" x 640'
Recorder No.	88	4 Hr. Clock	Est. Gauge Depth Temp.	132	Size Drill Pipe	4 1/2 XH	
Pressure Readings	Field	Office Corrected	MUD DATA Weight	9.4	Viscosity	48	
Initial Hydro Mud Pressure			All depths measured from	KB	No. Folders Reproduced	5	
Initial Closed in Pres.			REMARKS: 10 minute pre flow with strong				
Initial Flow Pres.			blow of air. Shut tool for 30 minutes.				
Final Flow Pres.			Re-open with gas to surface in 10 min.				
Final Closed in Pres.			15 Min. - 2 MCF; 40 Min. - 15 MCF;				
Final Hydro Mud Pressure			20 Min. - 3 MCF; 45 Min. - 17 MCF;				
			25 Min. - 18 MCF; 50 Min. - 19 MCF;				
			30 Min. - 16 MCF; 55 Min. - 18 MCF;				
			35 Min. - 15 MCF; 60 Min. - 18 MCF.				
Pre Flow = 110#-114# (Corrected to 105#-108#)							
Estimated 40' Sand							
Recovered	268	Feet of	Gas Cut Mud				
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Witnessed By W. R. Atkinson							
Amount-Type of Cushion		Tester	Tom Brown				

LOCATION Sec. 26-34S-32W
 FIELD Wildcat
 COUNTY Seward
 STATE Kansas

Thompson
 LEASE NAME
 #1
 WELL NO.
 5990'-6060'
 #1
 TEST NO.
 Beacon Resources Corp.
 LEASE OWNER
 Wichita, Kansas
 OWNERS DISTRICT