

# CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

## DRILL-STEM TEST DATA

Company <u>Viking Resources Inc.</u>	Test No. <u>1</u>
Well Name & Number <u>Potter #1</u>	Zone Tested <u>Mississippi</u>
Company Address <u>105 S. Broadway #1040, Wichita, Kan.</u>	Date <u>1-5-91</u>
Company Rep. <u>Rob Patton</u>	Tester <u>Gary Pevoteaux</u>
Tractor <u>Mallard J.V. INC</u>	Elevation <u>2323 K.B.</u>
Location: Sec. <u>4</u> Twp. <u>18S</u> Rge. <u>24W</u> Co. <u>Ness</u> State <u>Kan.</u>	Est. Feet of Pay _____
Recorder No. <u>13224</u> Type <u>AK-1</u> Range <u>4350</u> PSI	Recorder No. <u>10290</u> Type <u>AK-1</u> Range <u>22993</u> PSI
Recorder Depth <u>4347</u> Clock # <u>30410</u>	Recorder Depth <u>4342</u> Clock # <u>22993</u>
(A) Initial Hydrostatic Mud <u>2223</u> PSI	Tool Open Before I.S. <u>30</u> Mins.
(B) First Initial Flow Pressure <u>47</u> PSI	Initial Shut-in <u>45</u> Mins.
(C) First Final Flow Pressure <u>108</u> PSI	Flow Period <u>30</u> Mins.
(D) Initial Shut-in Pressure <u>924</u> PSI	Final Shut-in <u>60</u> Mins.
(E) Second Initial Flow Pressure <u>134</u> PSI	Top Choke Size <u>1"</u> Hole Size <u>7 7/8"</u>
(F) Second Final Flow Pressure <u>163</u> PSI	Bottom Choke Size <u>3/4"</u> Rubber Size <u>6 3/4"</u>
(G) Final Shut-in Pressure <u>867</u> PSI	Tool Open @ <u>12:04 P.M.</u>
(H) Final Hydrostatic Mud <u>2153</u> PSI	Blow Remarks <u>1st open; Fair to strong blow.</u>
Temperature <u>124°</u>	<u>2" increasing to 13" after 30 minutes.</u>
Mud Weight <u>9.5</u> Viscosity <u>45</u>	<u>2nd open; Fair blow, 1" to 5" in water.</u>
Mud Loss <u>7.0 c.c.</u>	
Interval Tested <u>4330-4350</u>	
Anchor Length <u>20'</u>	Well chlorides; <u>6,000 P.P.M.</u>
Top Packer Depth <u>4325</u>	Rec chlorides; <u>6,000 P.P.M.</u>
Bottom Packer Depth <u>4330</u>	
Total Depth <u>4350</u>	
Well Pipe Size <u>4 1/2 EX.H.</u>	
Well Pipe I. D. collars <u>2.25 Ft. Run</u> <u>338</u>	
Recovery-Total Feet <u>402</u> Fluid	
Recovery <u>150</u> Feet Of <u>G.I.P.</u>	
Recovery <u>220</u> Feet Of <u>Clean Oil (Gravity 37 @ 60°F)</u>	
Recovery <u>182</u> Feet Of <u>G.O.C.M. (10% Gas 35% Oil 55% Mud)</u>	
Recovery _____ Feet Of _____	
Recovery _____ Feet Of _____	
Recovery _____ Feet Of _____	
Extra Equipment <u>Safety Joint</u>	Price of Job _____

CHENEY TESTING CO, INC.  
CALCULATION OF FORMATION CHARACTERISTICS  
FROM DST DATA

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FOR: VIKING RESOURCES INC.  
POTTER #1 DST # 1  
4-18S-24W FORMATION: MISSISSIPPI  
NESS CO., KANSAS ELEVATION: 2323 KB

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TEST PARAMETERS

TEST INTERVAL: 4330 - 4350 EST PAY: 10  
TIME INTERVAL: 30 - 45 - 30 - 60 VISCOSITY OF FLUID: 3.5  
INITIAL FLOW PRESS: 50.8- 118.6 HOLE SIZE: 7.875  
FINAL FLOW PRESS: 156.8- 166.3 D.C. CAPACITY:0.00492  
SHUT-IN PRESS(I-F): 908.9- 863.3 W.P. CAPACITY:0.00000  
BOTTOM HOLE TEMPERATURE: 124 D.P. CAPACITY:0.01402  
TOTAL FEET OF RECOVERY: 402 TOTAL BARRELS RECOVERY: 2.5587

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EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1160  
SLOPE (PSI-CYCLE): 1080 POINTS USED: 3

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1150  
SLOPE (PSI-CYCLE): 940 POINTS USED: 4

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CALCULATIONS

PRODUCTION POTENTIAL (B/D) : 61.41  
TRANSMISSIBILITY (MD-FT/CP) : 10.62  
EFFECTIVE PERMEABILITY (MD) : 3.72  
PRODUCTIVITY INDEX (B/D/PSI) : 0.0120  
DAMAGE RATIO : 0.192  
APPROXIMATE RADIUS OF INVESTIGATION (FT) : 14.9  
DRAWDOWN FACTOR (%) : 0.862  
POTENTIOMETRIC SURFACE (FT) : 639.85

INITIAL SHUT-IN

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RECORDER NO: 10290      DEPTH: 4350 FT.  
 INITIAL FLOW TIME (T): 30 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(PSIG)
0	0.000	118.6
5	0.845	587.9
10	0.602	681.1
15	0.477	727.8
20	0.398	774.4
25	0.342	809.3
30	0.301	834.7
35	0.269	862.3
40	0.243	884.5
45	0.222	908.9

FINAL SHUT-IN

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RECORDER NO: 10290      DEPTH: 4350 FT.  
 TOTAL FLOW TIME: 60 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(PSIG)
0	0.000	166.3
5	1.114	566.7
10	0.845	615.5
15	0.699	654.7
20	0.602	690.7
25	0.531	720.3
30	0.477	745.8
35	0.434	772.2
40	0.398	793.4
45	0.368	812.5
50	0.342	826.3
55	0.320	846.4
60	0.301	863.3

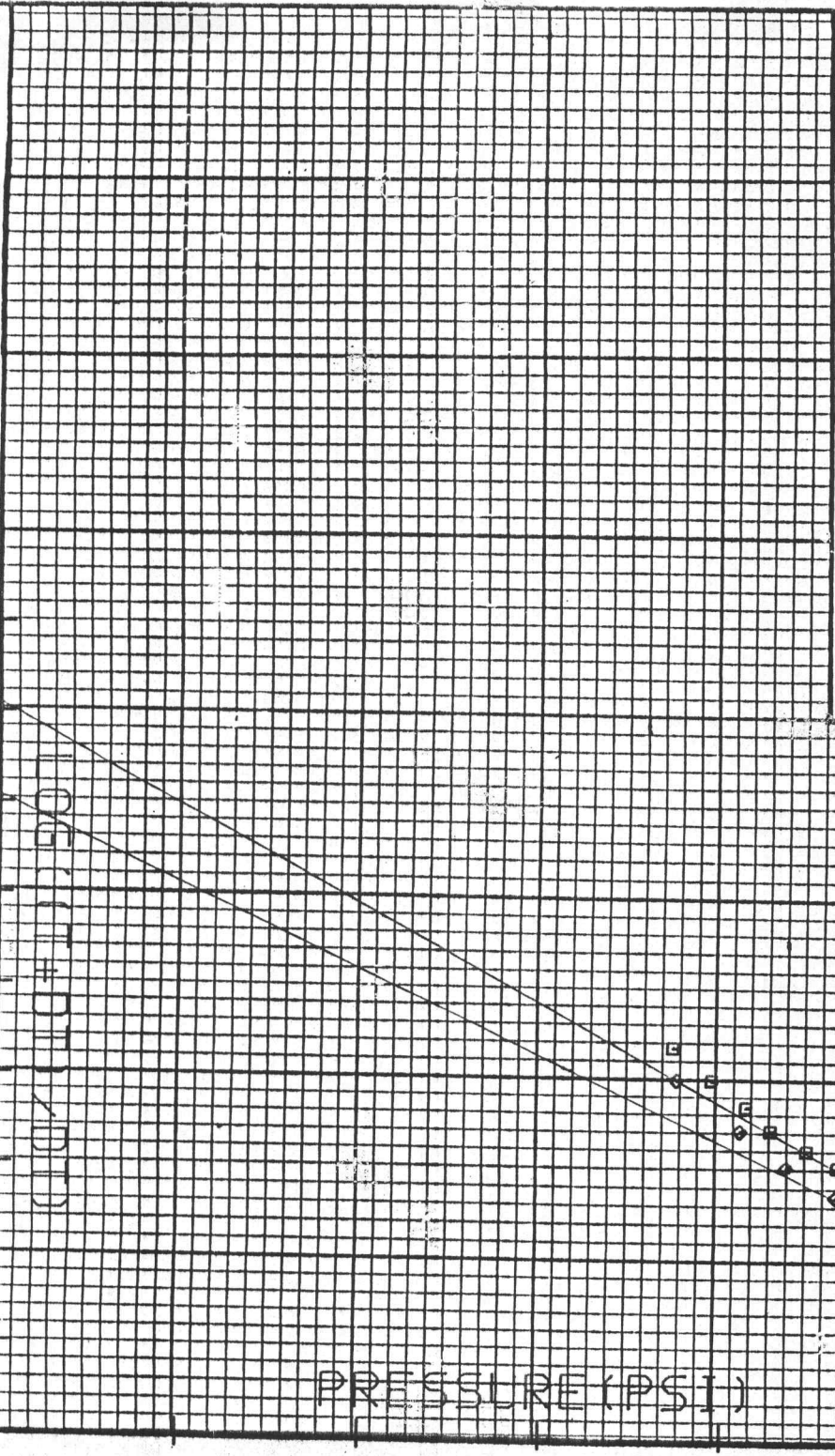
HORNER PLOT  
 VIKING RESOURCES INC.  
 POTTER #1  
 DST # 1 DEPTH: 4350  
 RECORDER NO. 10290  
 INITIAL SHUT-IN:  $\diamond$   
 FINAL SHUT-IN:  $\square$

1.0 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0.0

LOG((T-DT)/DT)

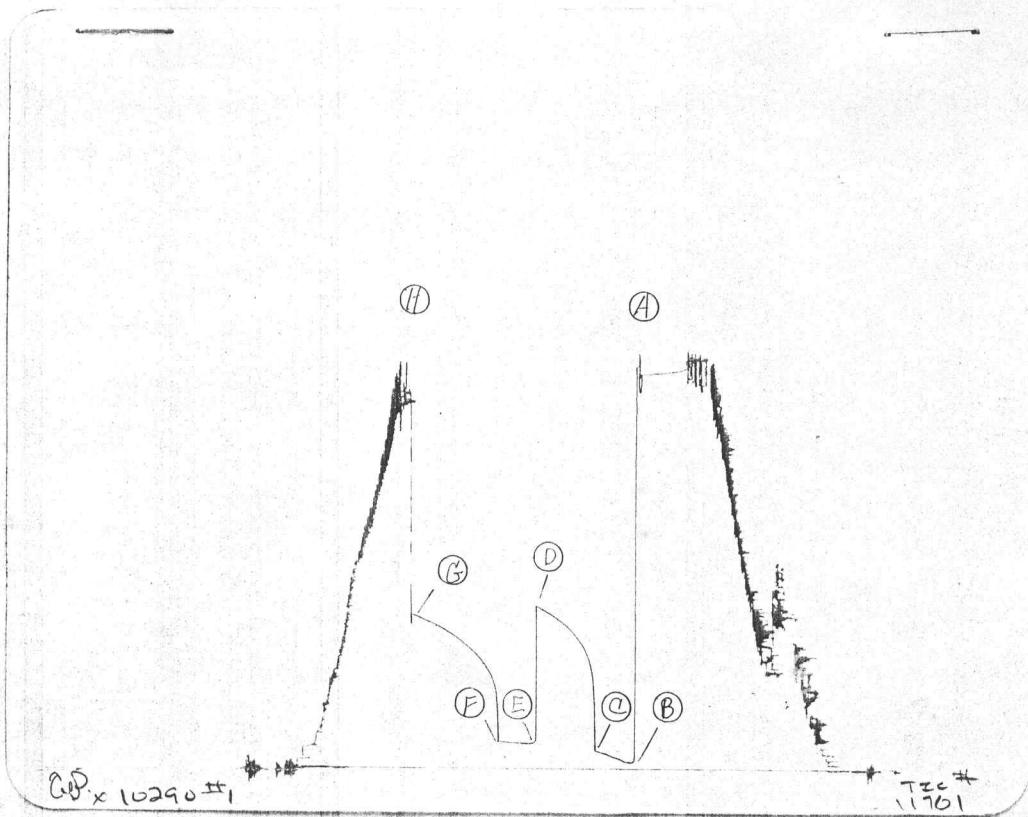
WELL HEAD PRESSURE (PSI)

500 600 700 800 900 1000



F-80  
 F-210

F-1150  
 F-1160



POINT	PRESSURE			
	FIELD READING	OFFICE READING		
(A)	Initial Hydrostatic Mud	2223	2214	PSI
(B)	First Initial Flow Pressure	47	50.8	PSI
(C)	First Final Flow Pressure	108	118.6	PSI
(D)	Initial Closed-in Pressure	924	908.9	PSI
(E)	Second Initial Flow Pressure	134	156.8	PSI
(F)	Second Final Flow Pressure	163	166.3	PSI
(G)	Final Closed-in Pressure	867	863.3	PSI
(H)	Final Hydrostatic Mud	2153	2176	PSI