

## DRILL-STEM TEST DATA

**Well Name:** ROBERT HOEME JR #1  
**Company :** WABASH ENERGY CORP  
**Location - Sec:** 31                      **Twp:** 17S                      **Rge:** 31W  
**County:** SCOTT                      **State:** KS  
**Date:** 07/11/95

TRILOBITE TESTING L.L.C.

OPERATOR : Wabash Energy Corp.

DATE 7-11-95

WELL NAME: Robert Hoeme JR #1

KB 2959.00 ft

TICKET NO: 8075 DST #1

LOCATION : 31-17S-31W, Scott County

GR 2954.00 ft

FORMATION: Cherokee

INTERVAL : 4538.00 To 4563.00 ft

TD 4563.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	AK-1	AK-1	ALPINE			PF Fr. 30 to hr
SI 60 Range(Psi )	4700.0	4700.0	4995.0	0.0	0.0	IS Fr. to 1 hr
SF 60 Clock(hrs)	23832	23832				SF Fr. to 1 hr
FS 90 Depth(ft )	4558.0	4558.0	4540.0	0.0	0.0	FS Fr. to 1.5 hr

	Field	1	2	3	4	
A. Init Hydro	2241.0	2252.0	2243.0	0.0	0.0	T STARTED 0430 hr
B. First Flow	23.0	26.0	39.0	0.0	0.0	T ON BOTM 0658 hr
B1. Final Flow	35.0	41.0	43.0	0.0	0.0	T OPEN 0700 hr
C. In Shut-in	650.0	657.0	684.0	0.0	0.0	T PULLED 1100 hr
D. Init Flow	58.0	57.0	46.0	0.0	0.0	T OUT 1245 hr
E. Final Flow	70.0	71.0	75.0	0.0	0.0	
F. Fl Shut-in	626.0	628.0	651.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2230.0	2218.0	2236.0	0.0	0.0	Tool Wt. 2000.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 70000.00 lbs
						Initial Str Wt 54000.00 lbs
						Unseated Str Wt 64000.00 lbs
						Bot Choke 0.75 in
						Hole Size 8.88 in
						D Col. ID 0.00 in
						D. Pipe ID 3.70 in
						D.C. Length 0.00 ft
						D.P. Length 4226.00 ft
						H.W. I.D 2.70 in
						H.W. Length 319.00 ft

RECOVERY

Tot Fluid 150.00 ft of 0.00 ft in DC and 150.00 ft in DP  
 30.00 ft of Mud Cut Oil - 70% oil, 30% mud  
 60.00 ft of Gassy Mud Cut Oil -55% gas, 35% oil, 10% mud  
 60.00 ft of Gassy Oil Cut Mud - 50% gas, 20% oil, 30% mud  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of

Est. Ft of Pay 4'

SALINITY 0.00 P.P.M. A.P.I. Gravity 29.00

BLOW DESCRIPTION

Initial Blow -  
 Weak to fair blow off bottom in 30 min

Initial Shutin -  
 Bled off blow - weak return died in 40 min

Final Blow -  
 Fair to strong return off bottom in 5 min

Final Shutin -  
 Bled off blow, surface return died in 30 min

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/cf
Vis.	46.00 S/L
W.L.	10.40 in3
F.C.	0.00 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	134.00 F
Hole Condition	Good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	
Reversed Out N	
Tool Chased N	
Tester	Rod Steinbrink
Co. Rep.	Larry Whitmer
Contr.	Abercrombie
Rig #	#4
Unit #	
Pump T.	

Test Successful: Y

# TEST HISTORY

8075 DST #1 Wabash Energy Corp.

## Flag Points

t (Min.)	P (PSig)
A: 0.00	2243.13
B: 0.00	39.10
C: 32.00	42.79
D: 58.00	684.26
E: 0.00	46.24
F: 58.00	74.77
G: 92.00	650.85
Q: 0.00	2236.33

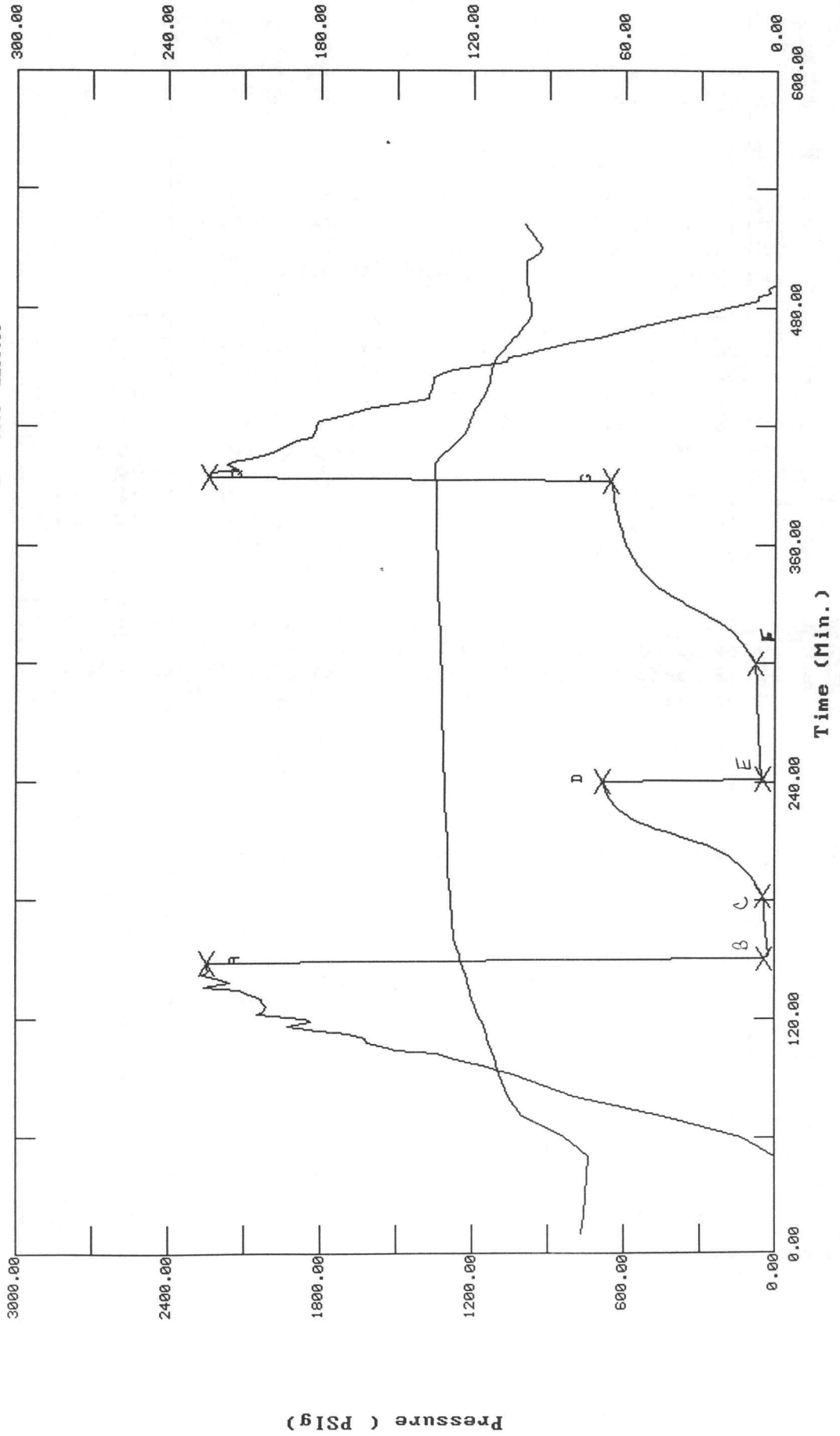
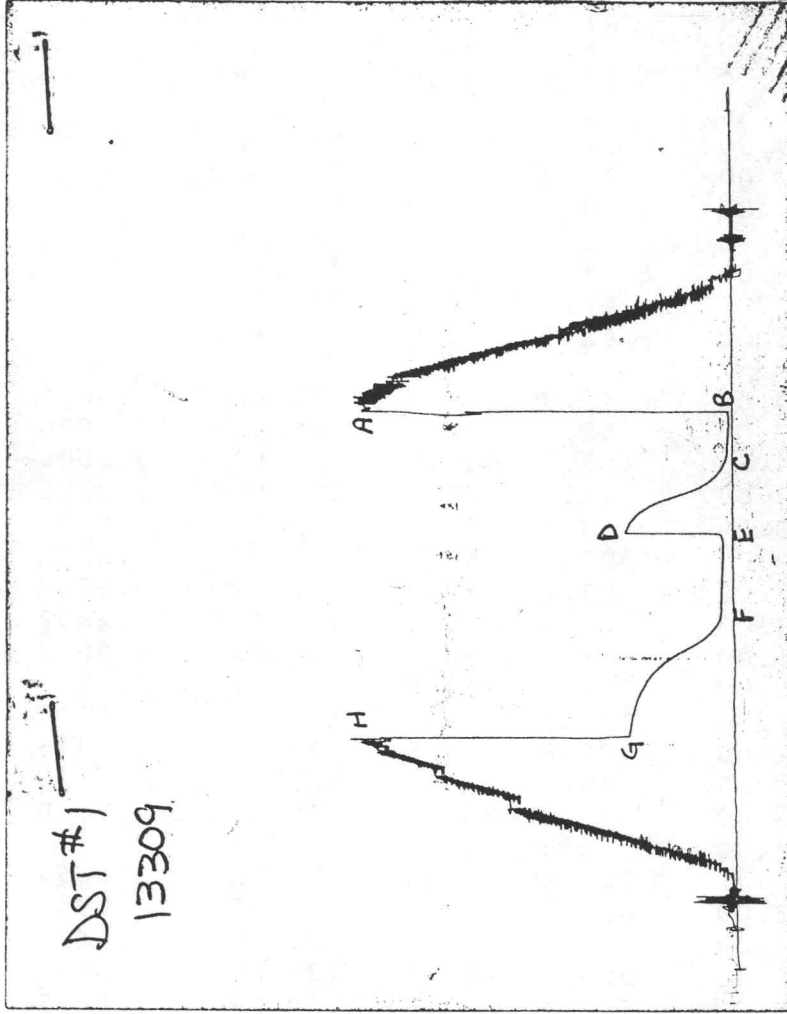


CHART PAGE



This is an actual photograph of an AK1 recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8075 DST #1 Wabash Energy Corp.  
 DATE: 07/11/95 TIME: 04:30:17

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	148.00	2243.1	0.0	124.35		
***** Start Flow 1	0.00	39.1	0.0	124.76		
	2.00	21.3	-17.8	124.97		
	4.00	24.2	-14.9	125.55		
	6.00	26.3	-12.8	126.13		
	8.00	28.5	-10.6	126.56		
	10.00	30.0	-9.1	126.86		
	12.00	31.5	-7.6	127.10		
	14.00	33.1	-6.0	127.29		
	16.00	34.4	-4.7	127.45		
	18.00	35.7	-3.4	127.59		
	20.00	37.0	-2.1	127.72		
	22.00	38.0	-1.1	127.86		
	24.00	39.3	0.2	127.96		
	26.00	40.3	1.2	128.05		
	28.00	41.3	2.2	128.18		
	30.00	42.0	2.9	128.30		
***** End Flow 1	32.00	42.8	3.7	128.42		
***** Start Shutin 1	0.00	42.8	0.0	128.42	0.0000	0.002
	2.00	52.4	9.6	128.55	17.0000	0.003
	4.00	61.9	19.1	128.68	9.0000	0.004
	6.00	72.1	29.3	128.86	6.3333	0.005
	8.00	83.1	40.3	129.02	5.0000	0.007
	10.00	95.0	52.2	129.39	4.2000	0.009
	12.00	108.2	65.4	129.39	3.6667	0.012
	14.00	122.9	80.1	129.40	3.2857	0.015
	16.00	139.1	96.3	129.40	3.0000	0.019
	18.00	157.7	114.9	129.41	2.7778	0.025
	20.00	179.1	136.3	129.41	2.6000	0.032
	22.00	204.6	161.8	129.41	2.4545	0.042
	24.00	235.6	192.8	129.41	2.3333	0.055
	26.00	272.9	230.1	129.42	2.2308	0.074
	28.00	317.5	274.7	129.43	2.1429	0.101
	30.00	367.8	325.0	129.51	2.0667	0.135
	32.00	419.1	376.3	129.79	2.0000	0.176
	34.00	467.6	424.8	129.95	1.9412	0.219
	36.00	509.9	467.1	130.06	1.8889	0.260
	38.00	545.4	502.6	130.19	1.8421	0.298
	40.00	574.6	531.9	130.27	1.8000	0.330
	42.00	598.5	555.7	130.37	1.7619	0.358
	44.00	617.5	574.7	130.45	1.7273	0.381
	46.00	633.1	590.3	130.52	1.6957	0.401
	48.00	645.7	602.9	130.58	1.6667	0.417
	50.00	656.1	613.3	130.65	1.6400	0.431
	52.00	664.9	622.1	130.71	1.6154	0.442
	54.00	672.3	629.5	130.76	1.5926	0.452
	56.00	678.6	635.8	130.79	1.5714	0.461
***** End Shut-in 1	58.00	684.3	641.5	130.85	1.5517	0.468
***** Start Flow 2	0.00	46.2	0.0	130.85		
	2.00	52.9	6.7	130.93		
	4.00	54.6	8.4	131.04		

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TEST: 8075 DST #1 Wabash Energy Corp.

DATE: 07/11/95

TIME: 04:30:17  
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	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	6.00	56.0	9.7	131.16		
	8.00	57.0	10.7	131.24		
	10.00	57.9	11.7	131.29		
	12.00	58.9	12.7	131.36		
	14.00	59.8	13.6	131.39		
	16.00	60.6	14.4	131.42		
	18.00	61.3	15.1	131.47		
	20.00	62.2	15.9	131.52		
	22.00	62.9	16.6	131.58		
	24.00	63.6	17.4	131.62		
	26.00	64.2	18.0	131.68		
	28.00	64.9	18.6	131.71		
	30.00	65.7	19.5	131.76		
	32.00	66.3	20.1	131.80		
	34.00	66.9	20.6	131.84		
	36.00	67.5	21.2	131.90		
	38.00	68.8	22.6	131.94		
	40.00	69.0	22.7	131.97		
	42.00	69.7	23.4	132.02		
	44.00	70.2	24.0	132.07		
	46.00	70.8	24.6	132.11		
	48.00	71.4	25.2	132.13		
	50.00	72.0	25.8	132.16		
	52.00	72.5	26.3	132.19		
	54.00	73.3	27.0	132.22		
	56.00	74.2	27.9	132.23		
***** End Flow 2	58.00	74.8	28.5	132.27		
***** Start Shutin 2	0.00	74.8	0.0	132.27	0.0000	0.006
	2.00	81.0	6.2	132.30	46.0000	0.007
	4.00	92.0	17.2	132.34	23.5000	0.008
	6.00	103.2	28.5	132.38	16.0000	0.011
	8.00	115.1	40.3	132.43	12.2500	0.013
	10.00	127.8	53.0	132.49	10.0000	0.016
	12.00	141.6	66.8	132.54	8.5000	0.020
	14.00	156.4	81.7	132.61	7.4286	0.024
	16.00	173.1	98.3	132.67	6.6250	0.030
	18.00	191.9	117.2	132.76	6.0000	0.037
	20.00	213.6	138.8	132.87	5.5000	0.046
	22.00	238.3	163.5	132.98	5.0909	0.057
	24.00	265.8	191.0	133.09	4.7500	0.071
	26.00	295.2	220.5	133.16	4.4615	0.087
	28.00	325.7	250.9	133.26	4.2143	0.106
	30.00	355.8	281.0	133.36	4.0000	0.127
	32.00	384.5	309.7	133.44	3.8125	0.148
	34.00	411.2	336.4	133.49	3.6471	0.169
	36.00	435.3	360.6	133.57	3.5000	0.190
	38.00	457.2	382.5	133.63	3.3684	0.209
	40.00	477.0	402.2	133.68	3.2500	0.227
	42.00	494.6	419.8	133.73	3.1429	0.245
	44.00	510.4	435.6	133.78	3.0455	0.260
	46.00	524.5	449.7	133.84	2.9565	0.275

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TIME: 04:30:17

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>	
	48.00	537.2	462.4	133.87	2.8750	0.289	
	50.00	548.5	473.7	133.91	2.8000	0.301	
	52.00	558.8	484.0	133.94	2.7308	0.312	
	54.00	567.8	493.1	133.99	2.6667	0.322	
	56.00	576.1	501.3	134.02	2.6071	0.332	
	58.00	583.6	508.9	134.04	2.5517	0.341	
	60.00	590.3	515.6	134.08	2.5000	0.349	
	62.00	596.5	521.7	134.10	2.4516	0.356	
	64.00	602.1	527.3	134.12	2.4062	0.363	
	66.00	607.3	532.5	134.15	2.3636	0.369	
	68.00	612.2	537.4	134.18	2.3235	0.375	
	70.00	616.6	541.8	134.20	2.2857	0.380	
	72.00	620.8	546.0	134.22	2.2500	0.385	
	74.00	624.6	549.8	134.25	2.2162	0.390	
	76.00	628.2	553.4	134.28	2.1842	0.395	
	78.00	631.6	556.9	134.32	2.1538	0.399	
	80.00	634.7	560.0	134.33	2.1250	0.403	
	82.00	637.8	563.0	134.34	2.0976	0.407	
	84.00	640.6	565.8	134.37	2.0714	0.410	
	86.00	643.4	568.6	134.39	2.0465	0.414	
	88.00	646.0	571.2	134.41	2.0227	0.417	
	90.00	648.5	573.7	134.44	2.0000	0.421	
*****	End Shut-in 2	92.00	650.9	576.1	134.45	1.9783	0.424
*****	Final Hydro.	394.00	2236.3	0.0	134.78		

Operator.....: WABASH ENERGY CORPORATION  
Well Name.....: ROBERT HOEME JR #1  
DST Number.....: 1

Location.: 31-17S-31W, SCOTT CTY      Recorder No...: 2351  
Test Type: CONVENTIONAL              Recorder Depth: 4540  
Formation: CHEROKEE                  Test Interval.: 4538-4563

RESERVOIR CALCULATIONS: Fluid calculations based on shut-in #2

RESERVOIR PARAMETERS USED:

Net Pay.....:	4.00 ft
Porosity.....:	9.00 %
Bottom Hole Temp.....:	134.00 F
Specific Gravity.....:	0.882
API Gravity.....:	29.00
Compressibility.....:	0.000008 /psi
Viscosity.....:	8.7784 cp
Total Recovery.....:	150.00 ft
Total Flowing Time.....:	90.00 min.
Flow Rate.....:	6.05 bbls/d
Final Flowing Pressure.....:	74.77 psi
Horner Slope.....:	587.9353 psi/cycle
Extrapolated Pressure.....:	826.60 psi
Formation Volume Factor.....:	1.05 Reservoir/Surface
Well Bore Radius.....:	3.94 in

RESULTS:

Effective Permeability.....:	3.853950 md
Flow Capacity.....:	15.4158 md.ft
Transmissibility.....:	1.7561 md.ft/cp
Skin Factor.....:	-2.3201
Radius of Investigation.....:	26.90657 ft
Damage Ratio.....:	0.3882
Productivity Index.....:	0.0080 bbls/psi.d
Productivity Index W/O Damage.:	0.0031 bbls/psi.d

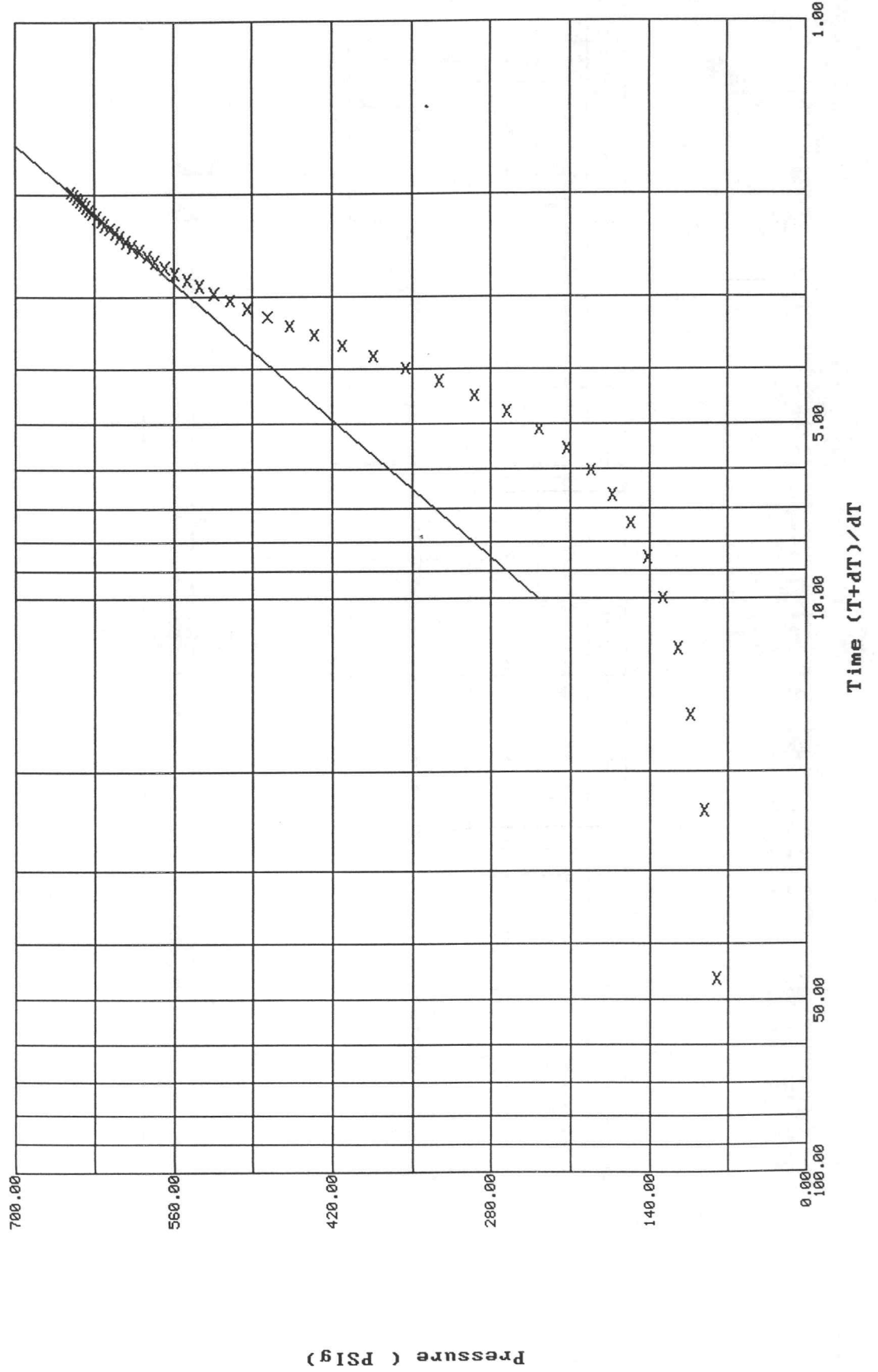


# Horner Plot: shut-in #2

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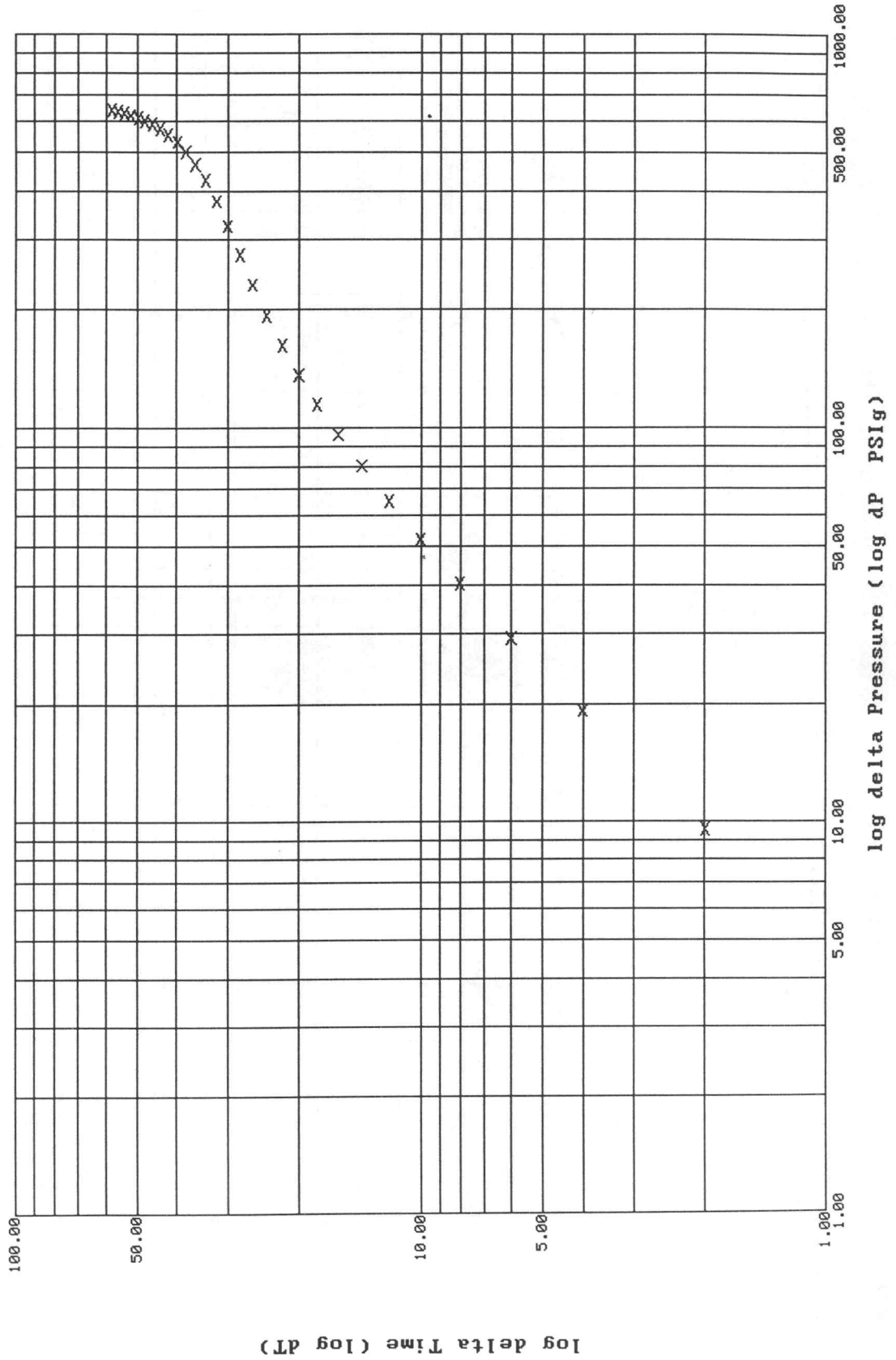
Slope: 587.9353 PSig/cycle

Ext. Pressure: 826.6030 PSig



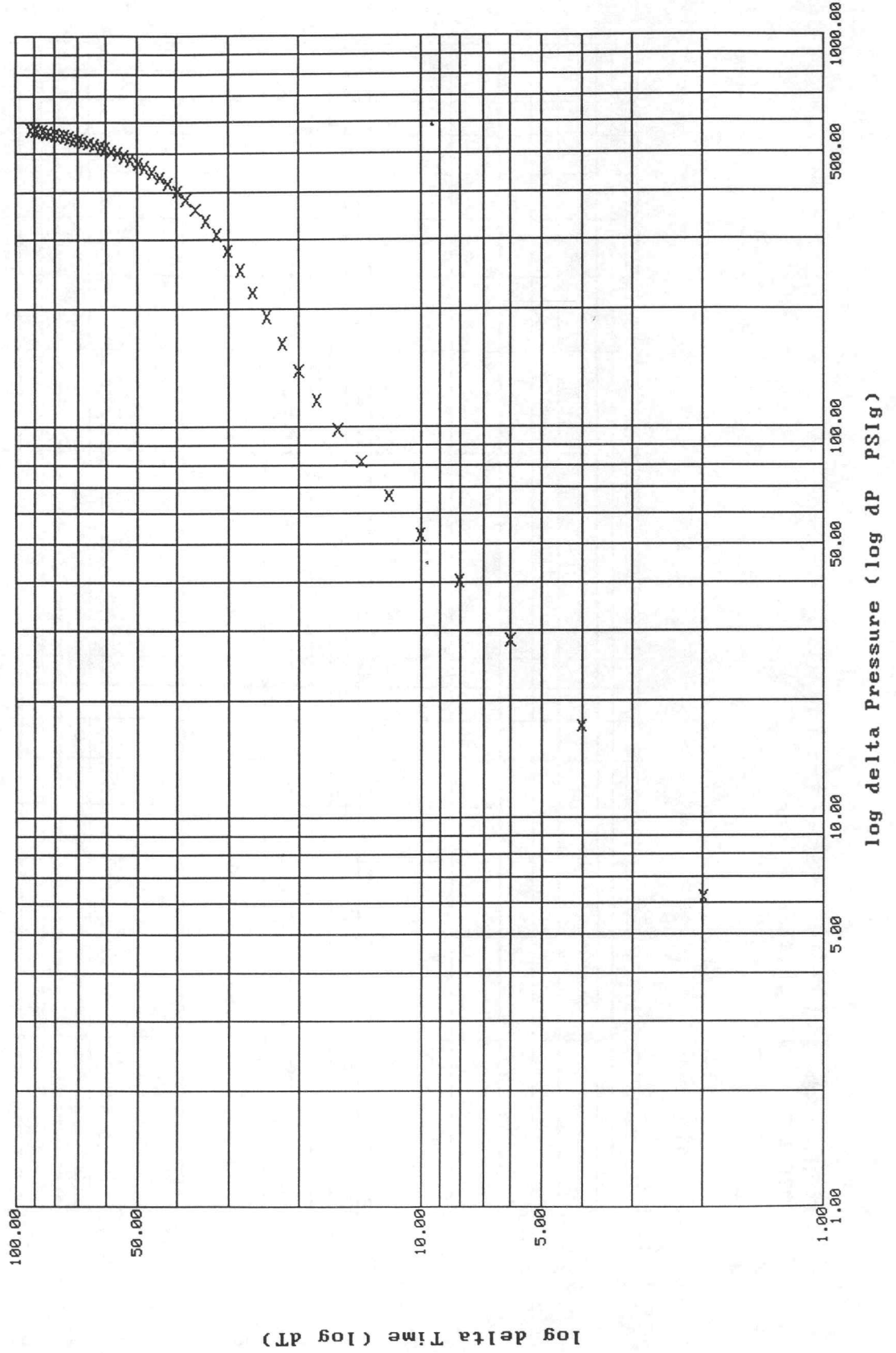
# McKinley Plot: shut-in #1

8075 DST #1 Wabash Energy Corp.



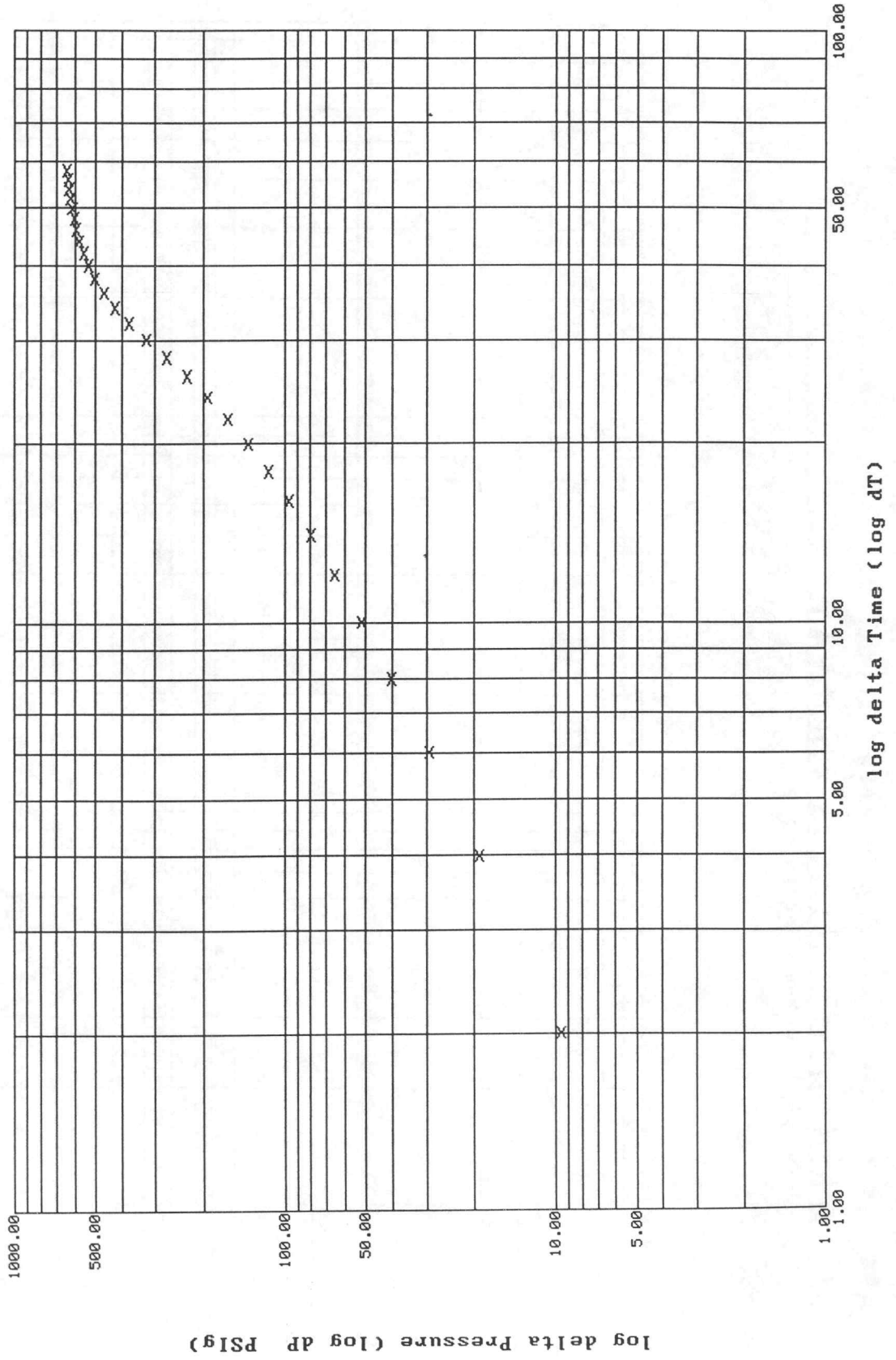
# McKinley Plot: shut-in #2

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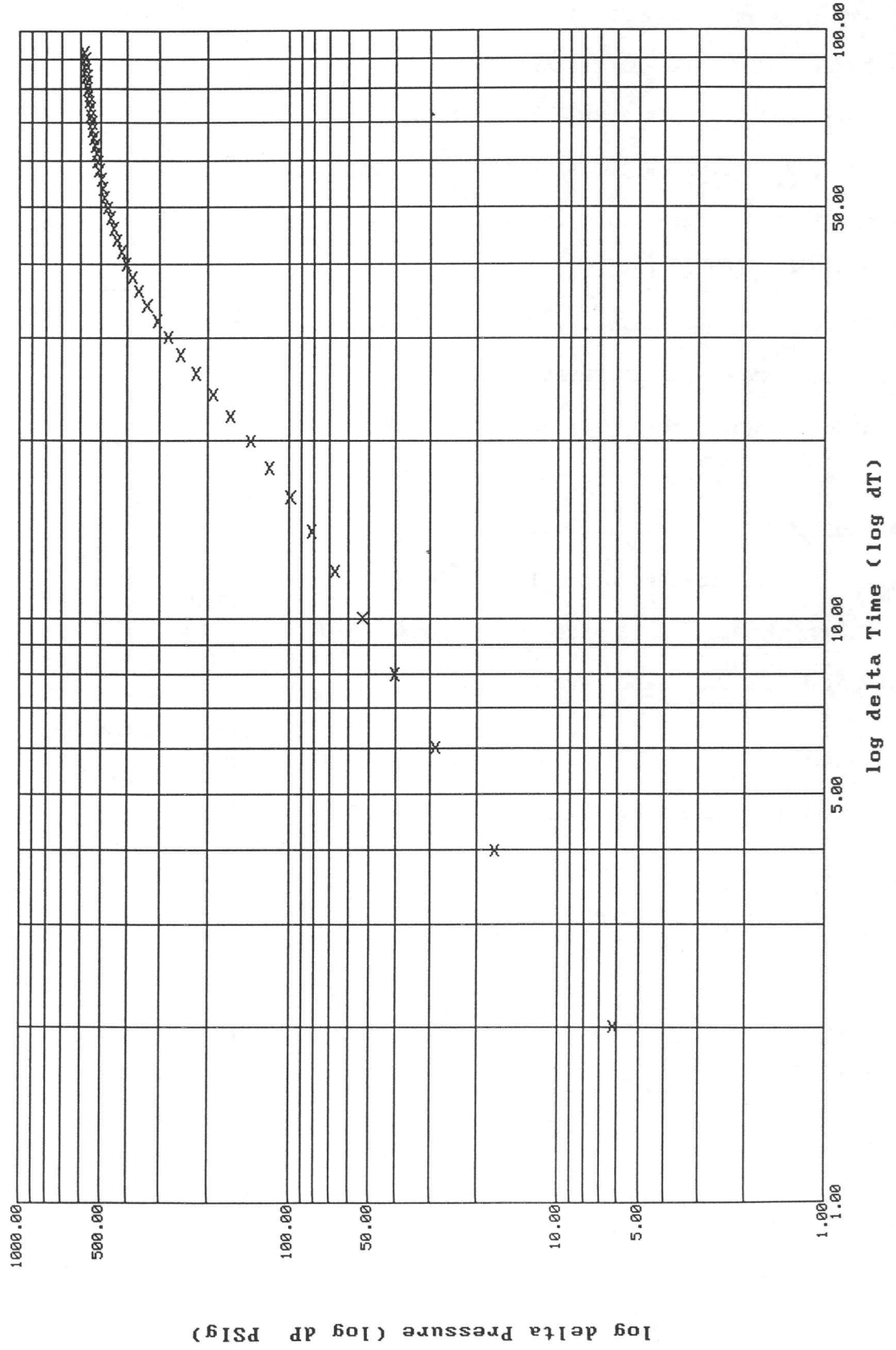
# Ramey Plot: shut-in #1

8075 DST #1 Wabash Energy Corp.



# Ramey Plot: shut-in #2

8075 DST #1 Wabash Energy Corp.



\*\*\* TOOL DIAGRAM \*\*\* CONVENTIONAL

WELL NAME: Robert Hoeme JR #1

LOCATION : 31-17S-31W, Scott County

TICKET No. 8075 D.S.T. No. 1 DATE 7-11-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 20

INTERVAL TOOL ..... 25

BOTTOM PACKERS AND ANCHOR .....

TOTAL TOOL ..... 45

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY .....

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands73 Single Total 4590

TOTAL DRILL COLLARS DRILL PIPE & TOOLS ..

TOTAL DEPTH ..... 4563

TOTAL DRILL PIPE ABOVE K.B. .... 27

REMARKS:

P.O. SUB	4402
C.O. SUB	4522
S.I. TOOL	4523
HMV	4528
JARS	
SAFETY JOINT	
PACKER	4533
PACKER	4538
DEPTH STUBB ANCHOR	4539
Elec. Rec. @	4540
25' Perf. Anchor	
T.C. DEPTH	
AK-1 Rec. @	4558
BULLNOSE T.D.	4563