



KANSAS CORPORATION COMMISSION 1067539  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

June 2009

Form Must Be Typed  
Form must be Signed  
All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1067539

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Shelby Resources LLC
Well Name	Eakin Unit #1-7
Doc ID	1067539

All Electric Logs Run

Dual Induction
Compensated Neutron Density
Micro
Sonic
Cement Bond



# Eakin Unit #1-7

W/2-E/2-E/2-E/2  
2640' FNL & 445' FEL  
Sec. 7, T22s-R16w  
Pawnee County, Kansas

## CAPTIVA II, LLC

API # 15-145-21625-0000

Spud Date: 1/14/2011

Completed:

Field: Wildcat

GL: 2007'

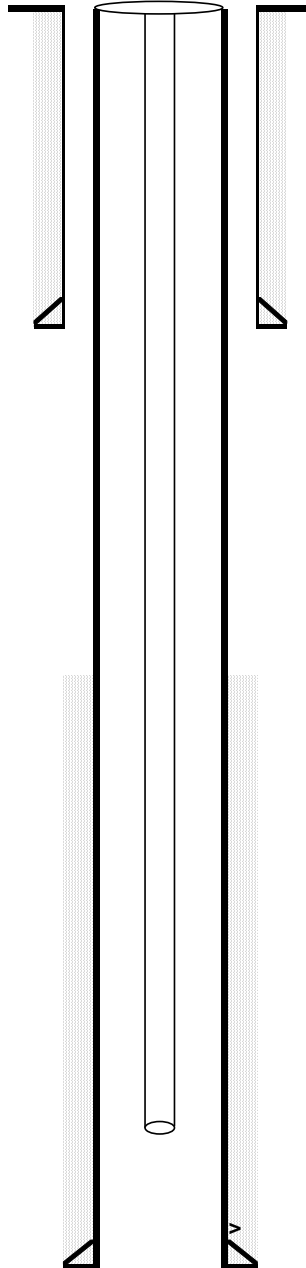
KB: 2018'

### Surface Casing :

8-5/8" 23# set @ 1019'  
Cemented with sx  
400 sx 60/40 Poz-Mix

### Production Casing:

5-1/2", 15.5# set @ 3972'  
Cemented with sx  
50 sx 60/40 scavenger  
200 sx AA2



TOC: Surface

**Pumping Unit:**  
Parkersburg 160-64

**Tubing:**  
124 x 2-3/8"

**Rods:**  
156 x 3/4"

**Pump:**  
2" x 1.5" x 12' RWT

TOC:2692' CBL

### Arbuckle perfs:

3909' & 3912' (2) 2/11/11 150 gal 20% NE

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PBTD: 3940'

TD: 3988'





## *CAPTIVA II, LLC*

### **Eakin Unit # 1-7/Casing Report**

**API# 15-145-21625-0000**

W/2-E/2-E/2-E/2

2640' FNL & 445' FEL

Sec. 7, T22s-R16w

Pawnee County, Kansas

**GL: 2007'**

**KB: 2018'**

#### 1/15/2011 **Surface Casing**

Spud at 9:00 p.m. on 1/14/11. Drill 12¼" hole to 1024'. Ran 24 joints of new 8.5/8"-23# casing, tallied 1006.54' and set at 1019' KB. Cemented by Quality Cementing with 400 sx 60/40 Poz 2% gel, 3% CC. cement did circulate. Plug down at 11:45 p.m. a.m. welded straps on the bottom 3 joints and welded straps on the top 5 joints.

#### 1/25/11 **Production Casing**

On location @ 2:00 p.m. RIH with drill pipe and condition the hole. Laying down drill pipe and collars, Begin running 95 joints 5 ½" (15.5#) S-55 casing. Shoe joint was 20.90'. Insert @ 3951.32'. Marker joint was 8 joints off bottom and measured 20.93'. Set casing @ 3972.22' KB. Landed casing 15.78' off RTD 3990' and LTD, 3988'. Ran a basket and insert on top of #1 and centralizers on #2, #4, #6, #8, #10, #12 and #14. Landed casing @ 5:00 p.m. (1/25/11) Circulate hole for 60 minutes to lower viscosity in mud. RU Basic Services, plug RH with 30 sx. and MH with 20 sx. Mix and pump 50 sx 60/40 Poz-Mix as scavenger flush, followed by 200 sx AA-2 cement down casing. Had good circulation throughout the job. Plug down @ 6:45 p.m. and held 1500#. Release pressure and float held. Release Sterling Rig #4 @ 10:45 p.m.



	DRILLING WELL	COMPARISON WELL
	Captiva II #1-7 Eakin Unit	Captiva II #2-7 Eakin Unit
	2676' FNL & 423' FEL	

2051' FSL & 1500' FEL

Sec. 7, T22S R16W					Sec. 7, T22S R16W			
					Structural			
2018 KB					2018 KB Relationship			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log
Anhydrite	1015	1003	1010	1008	1020	998	5	10
Topeka	3062	-1044	3060	-1042	3078	-1060	16	18
Heebner	3428	-1410	3424	-1406	3443	-1425	15	19
Toronto	3442	-1424	3443	-1425	3462	-1444	20	19
Douglas	3464	-1446	3461	-1443	3478	-1460	14	17
Brown Lime	3527	-1509	3525	-1507	3543	-1525	16	18
Lansing	3536	-1518	3534	-1516	3552	-1534	16	18
Muncie Creek	3664	-1646	3661	-1643	3676	-1658	12	15
Stark Shale	3729	-1711	3729	-1711	3748	-1730	19	19
Base KC	3792	-1774	3792	-1774	3801	-1783	9	9
Marmaton	3804	-1786	3801	-1783	3816	-1798	12	15
Arbuckle	3886	-1868	3883	-1865	3916	-1898	30	33
Total Depth	4000	-1982	3988	-1970	4025	-2007	25	37

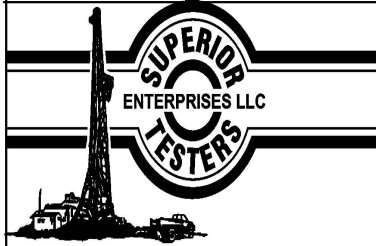
Custom Header 2

<b>Company:</b>	Charlie Sturdavant Consulting			<b>Well:</b>	#1-7 Eakin Unit
	920 12th Street			<b>Location:</b>	2676' FNL & 423' FEL
	Golden, CO 80401				Sec. 7 T22S R16W
					Pawnee County, KS
<b>Captiva II</b>	Office: 303-274-4682			<b>Elevation:</b>	2007' KB 2018' GL
<b>Jim Waechter</b>	Cell: 303-478-3388			<b>Field:</b>	Wildcat
				<b>API No.:</b>	15-145-21625-0000
				<b>Surface Casing:</b>	8 5/8" set @ 1021' KB
<b>Drilling Contractor: Sterling Drilling Rig #2 620-388-5651, Tool Pusher: Shane Downs, cell: 620-388-3474</b>					
<b>DATE</b>	<b>7:00 AM DEPTH</b>	<b>REMARKS</b>			
1/14/2011	0 ft.	Moving into location.			
1/15/2011	569 ft.	Drilling ahead.			
1/16/2011	1024 ft.	Waiting on cement. Set 1019 ft. of 8 5/8" surface casing.			
1/17/2011	2016 ft.	Drilling ahead.			
1/18/2011	2881 ft.	Drilling ahead.			
1/19/2011	3436 ft.	Servicing rig.			
1/20/2011	3587 ft.	Pulling pipe on drill stem test #1. Not yet finished, but about 140' of total fluid with oil.			
1/21/2011	3622 ft.	Circulating to clean hole after DST #2. Recovered 260' of water, 15% mud, 85%water.			
1/22/2011	3769 ft.	Drilling ahead. No shows in the Lansing J zone last night. DST #3 of the			

Lansing H zone recovered 360' of water, 15% mud, yesterday.

1/23/2011	3896 ft.	Pulling DST #4, Arbuckle test. We have GIP, but the draw works engine died with 2 1/4 stands to pull.
1/24/2011	3918 ft.	Preparing for DST #6. Yesterday's Arb test recovered 2280' GIP, 420' CGO, 60' SGMO (88% oil).
1/25/2011	3990 ft.	Completing logging operations with Superior Well Services. Geologist off location @ 0955 hrs, 1/25/2011

### Drill Stem Test #1



## DRILL STEM TEST REPORT

Captiva  
2717 Canal Blvd. Suite C  
Hays Kansas 67601  
ATTN: Charlie Sturdavant

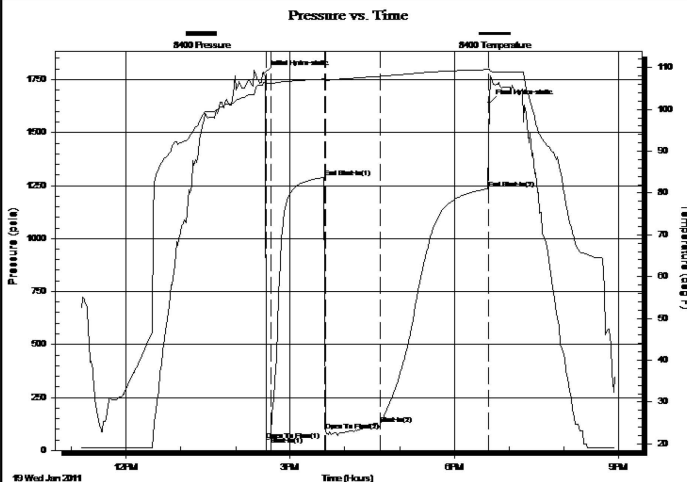
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
Job Ticket: 16018      **DST#: 1**  
Test Start: 2011.01.19 @ 11:11:00

#### GENERAL INFORMATION:

Formation: **Lansing " B " Zone**  
 Deviated: No Whipstock:                      ft (KB)  
 Time Tool Opened: 14:33:30  
 Time Test Ended: 20:57:00  
 Interval: **3565.00 ft (KB) To 3587.00 ft (KB) (TVD)**  
 Total Depth: 3587.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dylan E Ellis  
 Unit No: 3345/Great Bend/50  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8400      Outside**  
 Press@RunDepth: 123.95 psia @ 3584.00 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2011.01.19      End Date: 2011.01.19      Last Calib.: 2011.01.20  
 Start Time: 11:11:10      End Time: 20:56:59      Time On Btm: 2011.01.19 @ 14:31:00  
 Time Off Btm: 2011.01.19 @ 18:38:30

TEST COMMENT: 1ST Opening 5 Minutes w eak blow /blow built to 1.50 inches into a 5 gallon bucket of w ater  
 1ST Shut-In 60 Minutes no blow back  
 2ND Opening 60 Minutes w eak blow at first/blow blew to bottom of a bucket of w ater in 12 minutes  
 2ND Shut-In 120 Minutes no blow back



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1777.46	106.47	Initial Hydro-static
3	48.50	106.17	Open To Flow (1)
8	63.58	106.18	Shut-In(1)
67	1288.72	107.30	End Shut-In(1)
68	91.90	107.02	Open To Flow (2)
128	123.95	107.93	Shut-In(2)
247	1236.52	109.54	End Shut-In(2)
248	1640.25	109.64	Final Hydro-static

#### Recovery

Length (ft)	Description	Volume (bbl)
20.00	Oil cut Mud	0.10
0.00	10% Oil 90% Mud	0.00

#### Gas Rates

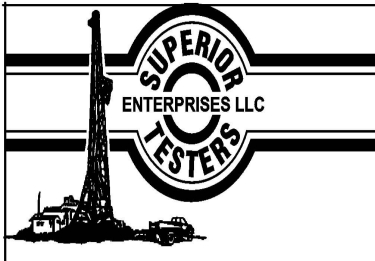
Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)

63.00	Mud cut Gassy Oil	0.31
0.00	40% Gas 40% Oil 20% Mud	0.00
63.00	Oil cut Gassy Mud	0.31
0.00	20% Oil 40% Mud 40% Gassy	0.00

Superior Testers Enterprises LLC

Ref. No: 16018

Printed: 2011.01.20 @ 12:23:23



## DRILL STEM TEST REPORT

Captiva

Eakin Unit # 1-7

2717 Canal Blvd. Suite C  
Hays Kansas 67601

7/22S/16W Pawnee

Job Ticket: 16019

DST#: 2

ATTN: Charlie Sturdavant

Test Start: 2011.01.20 @ 19:23:00

### GENERAL INFORMATION:

Formation: **LANSING F ZONE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:34:38

Time Test Ended: 03:56:08

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3345-GREAT BEND-50

Interval: **3605.00 ft (KB) To 3622.00 ft (KB) (TVD)**

Reference Elevations: 2018.00 ft (KB)

Total Depth: 3322.00 ft (KB) (TVD)

2007.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 11.00 ft

**Serial #: 8405 Inside**

Press@RunDepth: 151.46 psia @ 3618.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.01.20

End Date:

2011.01.21

Last Calib.:

2011.01.21

Start Time: 19:23:00

End Time:

03:56:08

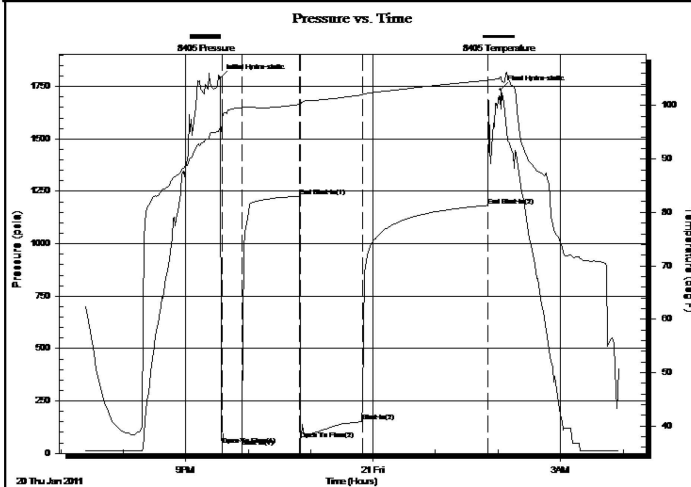
Time On Btm:

2011.01.20 @ 21:33:08

Time Off Btm:

2011.01.21 @ 02:02:38

TEST COMMENT: 15/INITIAL OPEN :WEAK BUT BUILDING BLOW BUILT 3 1/4 INCH INTO WATER IN 15 MINUTES  
60/INITIAL SHUT IN:1/2 INCH BLOW BACK  
60/FINAL OPEN :WEAK BLOW BUILT BOTTOM OF BUCKET IN 48 MINUTES  
120/FINAL SHUT IN :1/4 INCH BLOW BACK



### PRESSURE SUMMARY

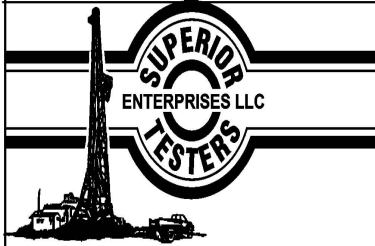
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1790.76	95.84	Initial Hydro-static
2	40.46	97.06	Open To Flow (1)
21	69.11	99.58	Shut-In(1)
76	1225.94	100.24	End Shut-In(1)
77	64.74	100.09	Open To Flow (2)
137	151.46	102.00	Shut-In(2)
257	1182.67	104.73	End Shut-In(2)
270	1735.26	105.33	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
260.00	WATER 15% MUD 85% WATER	1.29
0.00	CHLORIDES 43,000	0.00
0.00	RESISTIVITY .2 @73 DEGREES	0.00

### Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



## DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

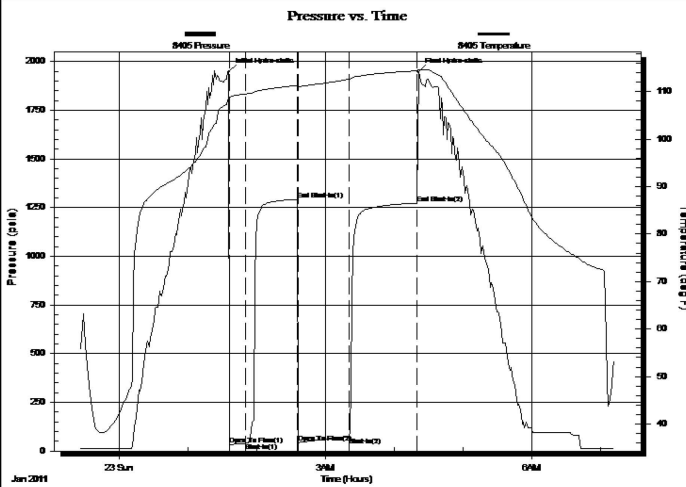
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16021      **DST#: 4**  
 Test Start: 2011.01.22 @ 23:25:00

### GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 01:36:06  
 Time Test Ended: 07:12:06  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3320-GREAT BEND-50  
 Interval: **3888.00 ft (KB) To 3896.00 ft (KB) (TVD)**  
 Total Depth: 3896.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8405      Inside**  
 Press@RunDepth: 72.60 psia @ 3892.00 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2011.01.23      End Date: 2011.01.23      Last Calib.: 2011.01.23  
 Start Time: 23:25:00      End Time: 07:12:06      Time On Btm: 2011.01.23 @ 01:35:36  
 Time Off Btm: 2011.01.23 @ 04:21:06

**TEST COMMENT:** 15/INITIAL OPEN:WEAK BUT BUILDING BLOW BUILT 5 INCHES INTO WATER IN 15 MINUTES  
 45/INITIAL SHUT IN:NO BLOW BACK  
 45/FINAL OPEN:FAIR BLOW BUILT BOTTOM OF BUCKET IN 20 MINUTES  
 60/FINAL SHUT IN:NO BLOW BACK



### PRESSURE SUMMARY

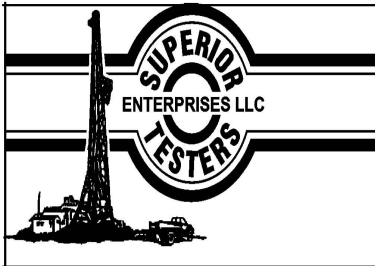
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1947.00	108.52	Initial Hydro-static
1	34.99	108.41	Open To Flow (1)
15	40.02	109.49	Shut-In(1)
60	1291.86	111.33	End Shut-In(1)
61	42.87	111.09	Open To Flow (2)
105	72.60	112.62	Shut-In(2)
165	1273.67	114.39	End Shut-In(2)
166	1946.79	114.53	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
420.00	GAS IN PIPE	3.53
130.00	CLEAN GASSEY OIL 10%GAS 90%OIL	1.82
0.00		0.00

### Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

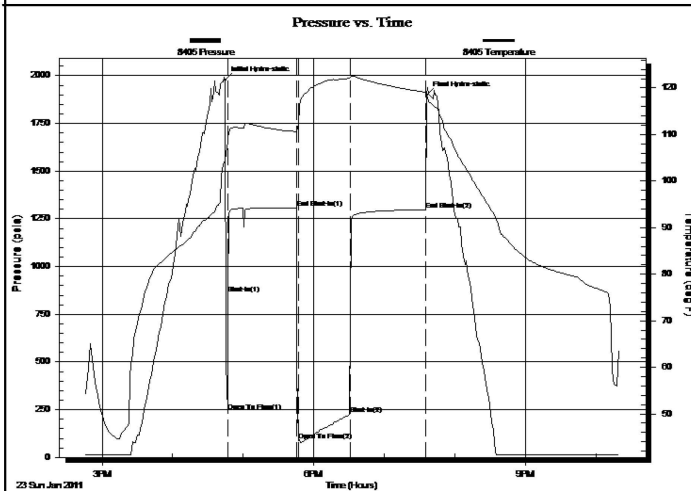
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16022      **DST#: 5**  
 Test Start: 2011.01.23 @ 14:45:00

## GENERAL INFORMATION:

Formation: **ARBCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:46:35  
 Time Test Ended: 22:19:35  
 Interval: **3897.00 ft (KB) To 3906.00 ft (KB) (TVD)**  
 Total Depth: 3906.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3320-GREAT BEND-50  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8405 Inside**  
 Press@RunDepth: 224.23 psia @ 3902.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.23 End Date: 2011.01.23 Last Calib.: 2011.01.23  
 Start Time: 14:45:00 End Time: 22:19:35 Time On Btm: 2011.01.23 @ 16:44:35  
 Time Off Btm: 2011.01.23 @ 19:36:05

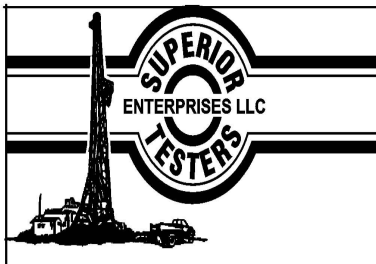
**TEST COMMENT:** 15/INITIAL OPEN:WEAK BLOW BUILT 2 1/4 INCHES INTO BUCKET WATER DIED OFF AFTER 8 MINUTES  
 45/INITIAL SHUT IN:NO BLOW BACK  
 45/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET WATER IN 2 MINUTES  
 60/FINAL SHUT IN:BLOW BACK BOTTOM OF BUCKET



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1977.50	104.27	Initial Hydro-static
2	242.44	108.37	Open To Flow (1)
3	857.88	109.55	Shut-In(1)
61	1306.46	110.63	End Shut-In(1)
62	88.09	112.30	Open To Flow (2)
106	224.23	122.08	Shut-In(2)
171	1298.11	119.08	End Shut-In(2)
172	1897.72	118.49	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
60.00	SLIGHTLEY GASSEY MUD CUT OIL	0.30
0.00	2% GAS 10% MUD 88% OIL	0.00
420.00	CLEAN GASSY OIL 15% GAS 85% OIL	4.08
0.00	2280 GAS IN PIPE	0.00

Gas Rates			
	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

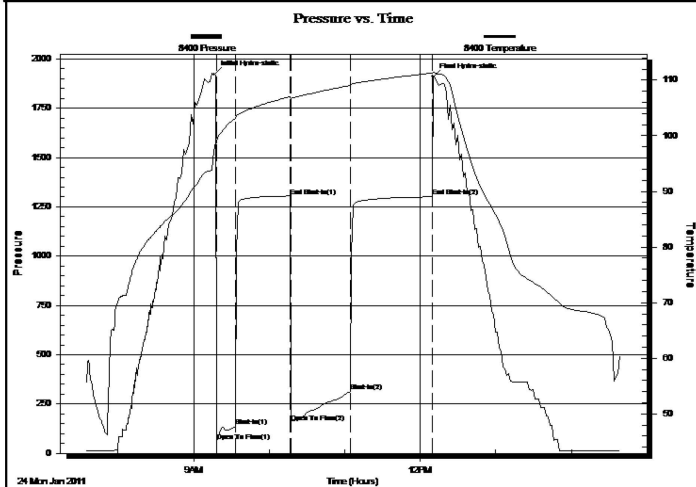
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16023      **DST#: 6**  
 Test Start: 2011.11.23 @ 19:23:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:34:05  
 Time Test Ended: 02:57:35  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3345-GREAT BEND-50  
 Interval: **3910.00 ft (KB) To 3918.00 ft (KB) (TVD)**  
 Total Depth: 3918.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8400      Outside**  
 Press@RunDepth: 1300.66 psia @ 3915.00 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2011.01.24      End Date: 2011.01.24      Last Calib.: 2011.01.25  
 Start Time: 07:35:00      End Time: 14:39:00      Time On Btm: 2011.01.24 @ 09:16:30  
 Time Off Btm: 2011.01.24 @ 12:10:00

TEST COMMENT: 15/INITIAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 2 MINUTES  
 45/INITIAL SHUT IN:BOTTOOM OF BUCKET  
 45/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 2 MINUTES  
 60/FINAL SHUT IN:BOTTOM OF BUCKET BLOW BACK



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1920.94	97.83	Initial Hydro-static
2	60.09	98.81	Open To Flow (1)
17	136.28	103.10	Shut-In(1)
60	1304.82	107.00	End Shut-In(1)
61	159.03	106.72	Open To Flow (2)
108	313.27	109.03	Shut-In(2)
173	1300.66	111.31	End Shut-In(2)
174	1910.08	111.47	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
120.00	Oil Cut Muddy Water	0.59
0.00	5%Gas 10%Oil 30%Mud 55%Water	0.00
60.00	Oil and Gas cut muddy w ater	0.30
0.00	10%Gas 10%Oil 30%Mud 50%Water	0.00
60.00	Clean gassy oil 15% gas 85%Oil	0.30
550.00	Clean Gassy Oil 10%Gas 90% Oil	7.54

Gas Rates			
	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)















### SURFACE CO-ORDINATES

Well Type: Vertical  
 Longitude: Latitude:  
 N/S Co-ord: x=1823138  
 E/W Co-ord: y=541615

### CONTRACTOR

Contractor: Sterling Drilling  
 Rig #: 2  
 Rig Type: Rotary  
 Spud Date: 1/14/2011 Time: 3:34 PM  
 TD Date: 1/24/2011 Time: 11:00 PM  
 Rig Release: Time:










### ROCK TYPES

 Congl	 Lmst fw<7	 Shgy	 shale, red
 Chtcongl	 Lmst fw>7	 shale, gry	 Ss
 Dolsec	 shale, grn	 Carbon Sh	 Sltst

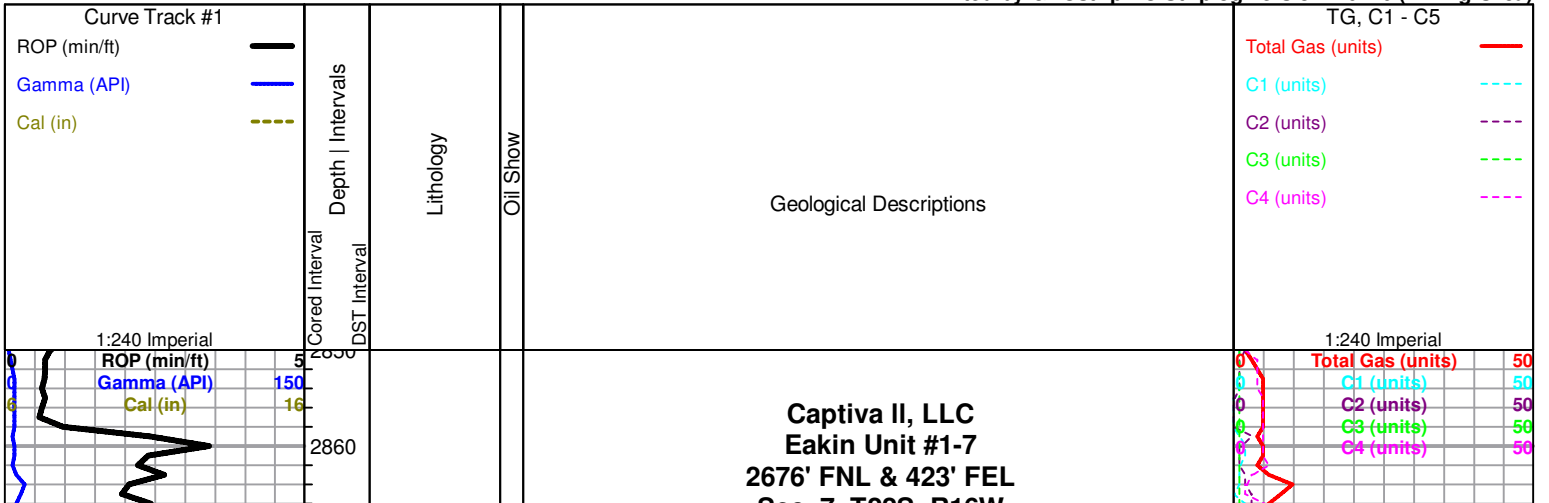
### ACCESSORIES

<b>MINERAL</b>	<b>FOSSIL</b>	<b>STRAT./SED. STRUCTS</b>	<b>STRINGER</b>	<b>TEXTURE</b>
⊥ Calcareous	⊖ Brachiopod	 Stylolite	 Sandstone	FX Finexln
▲ Chert, dark	▽ Brachiopods	 Stylolites	 Siltstone	
∩ Glauconite	⌈ Bryozoa		— Argillaceous	
P Pyrite	⊙ Crinoids			
△ Chert White	F Fossils < 20%			
	⊕ Fossilinid			
	⊖ Oolite			
	♁ Pellets			
	▲ Spicules			
	⊙ Oolites			

### OTHER SYMBOLS

<b>EVENTS</b>	<b>INTERVALS</b>	<b>MISC</b>
⊥ Casing Shoe	■ Core	 Daily Report
▶ RTF	⋯ DST	 Digital Photo
▶ Sidewall		 Document
▲ Left Casing Shoe		 Folder
▼ Right Casing Shoe		 Link
		 Vertical Log File
		 Horizontal Log File
		 Core Log File
		 Drill Cuttings Rpt

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)



Sec. 7, T22S, R16W  
**Pawnee County, KS**

20' samples begin at 2900'.

Very coarse-grained free/loose sand grains, comprised of well-rounded qtz, granite, and orthoclase grains...probably from an arkosic source. Grains up to 6mm in dia.

Mud-Co mud check  
 @ 2881 ft.  
 1010 hrs. 1/18/11  
 Vis 83 Wt. 8.8  
 PV 28, YP 21  
 WL 8.8  
 Cake 1/32, pH 10.5  
 CHL 8100 ppm  
 Ca 80 ppm  
 Sol 3.2, LCM 3  
 DMC \$1881.85  
 CMC \$7591.30

**Tarkio Ls 2918 (-900)**

Limestone: mixed cream micrite to sli fossiliferous wackestone and brown, sli fossiliferous wackestone. Both are micro-xln with little porosity. Crinoids, fussulinids, brachiopods, pelets, tr glauconite.

Limestone: tan, oolite grainstone, hard, dense, no porosity.

Shale: gray, calcareous.

Limestone: tan to brown, mottled, sli fossiliferous, wackestone, fussulinids and fossil debris.

Limestone: tan to brown, sli fossiliferous, argillaceous to streaks of gray, calc shale, wackestone.

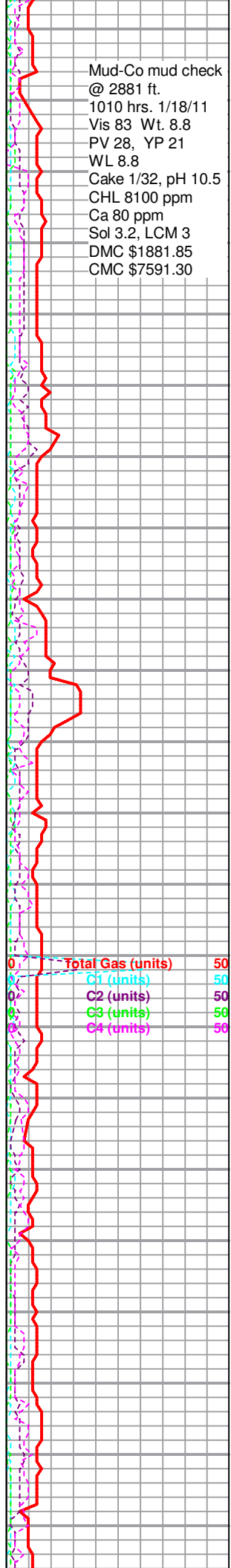
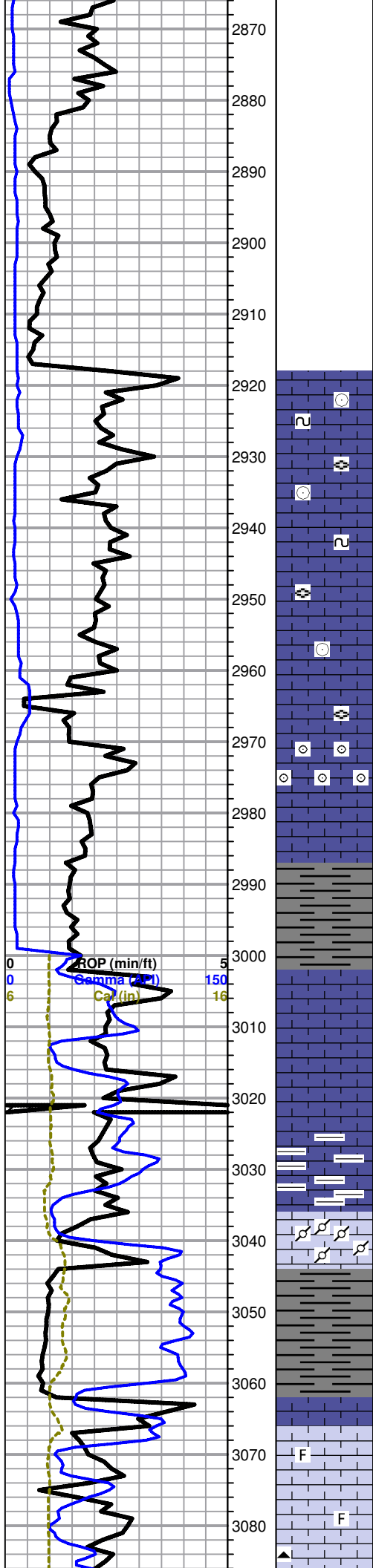
Limestone: tan and brown mottled pelletal packstone.

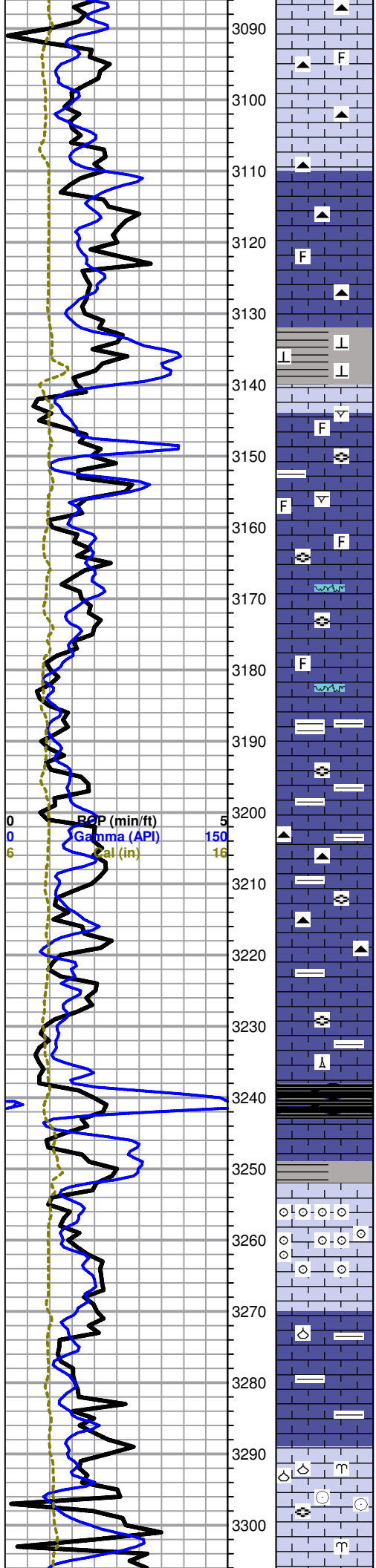
Shale: gray to dark gray, fussulinids, calcareous.

**Topeka 3062 (-1410)**

Limestone: mottled tan/gray/brown, fossiliferous, pelletal, packstone, micro-xln, no porosity.

Limestone: cream, fossiliferous, packstone, brachiopods, bryozoans, tr brn, gray, vitreous chert





Limestone: gray micro-xln, sli fossiliferous, wackestone, to brown to gray micrite. Brachiopods. No porosity. No shows.

Shale, gray, calcareous, fussulinids.

Limestone: cream to lt gray, tr fossiliferous, fussulinids, brach., stylolitic in parts, argillaceous in some frags, mudstone to wackestone. Tight, crypto-to micro-xln. No shows.

Limestone: tan to brown, tr fossiliferous, fussulinids, argillaceous, tr stylolites, tr pyrite, wackestone.

Limestone: cream to lt tan, micro-xln, mud-supported fossils, fussulinids, wackestone. Tr dark gray, fossiliferous, vitreous chert. No shows.

Limestone as above, with spicules. No chert, no shows.

### King Hill Shale 3238 (-1220)

Limestone: lt gray micrite. Tight.

Limestone: Cream, oolite grainstone, spicules, brach., tight, dense, well-cemented, No shows.

Limestone: Ten to grayish-brown, fossiliferous, brach., argillaceous, micro-xln, little por., packstone.

Limestone: lt tan to lt brown, fossiliferous, crinoids, bryozoans, fussulinids, micro-xln, weak por., packstone, tr glauconite.

Limestone: cream to lt grayish-tan, fossiliferous, bryozoans, fussulinids, brachiopods, packstone, some micro-xln, sucrosic ls w/ fair inter-xln por

Total Gas (units) 50  
 C1 (units) 50  
 C2 (units) 50  
 C3 (units) 50  
 C4 (units) 50

Gas

brachiopods, packstone. Some micro-xln, succrosic ls w/ fair inter-xln por., no shows.

### Queen Hill Shale 3315 (-1297)

Limestone as above, tr dark, vitreous chert, tr tan to lt brown micrite.

Limestone: tan to lt gray, fossiliferous, some frags ar agillaceous, tr oolites, tr pellets, wackestone, little to no porosity. No shows.

Limestone: lt tan to tan, sli fossiliferous, fussulinids, mud-supported wackestone, crypto- to micro-xln, tight rock. No shows.

Limestone as above w/ tr brown chert.

Limestone: lt tan to tan, sli fossiliferous, cherty, wackestone with crypto- to micro-xln matrix. No shows. Some fragments have stylolites.

### Heebner Shale 3427 (-1409)

Shale: black, carbonaceous, dolomitic.

Limestone: similar to above, but w/ crinoids and fussulinids.

### Toronto 3442 (-1424)

Shale: gray, calcareous, pyritized brachiopod.

Limestone: tan to lt gray, micritic, stylolites, gray, spiculated chert.

### Douglas Shale 3464 (-1446)

Shale: gray, calcareous, a few silty laminations.

Shale: vari-colored, gray and maroon, silty. The colored shales are non-calc.

Shale: gray, greenish-gray, lt greenish-gray, brown, lt brown, maroon.

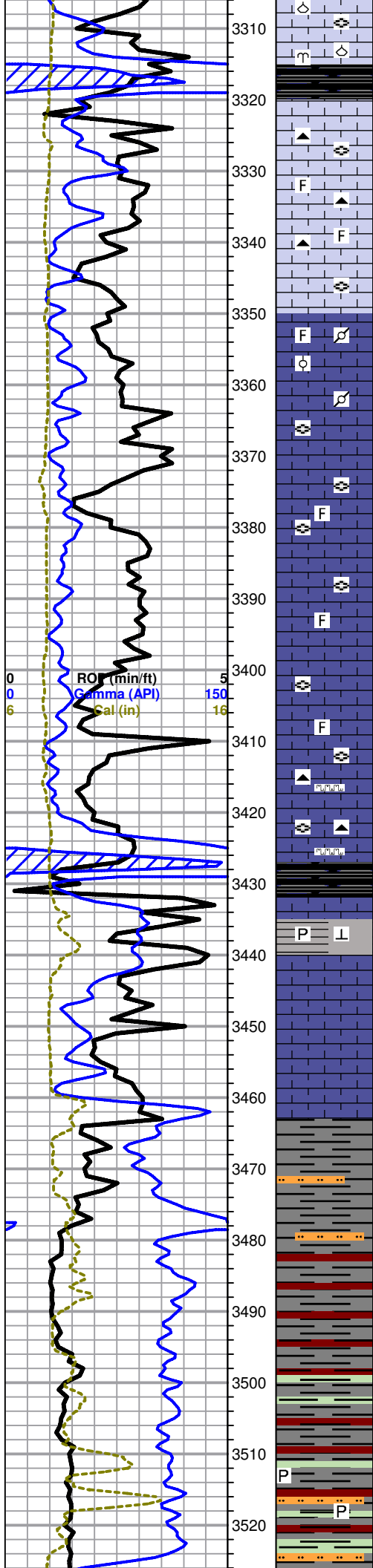
Shales as above w/ tr pyrite. Laminated dark and light shale.

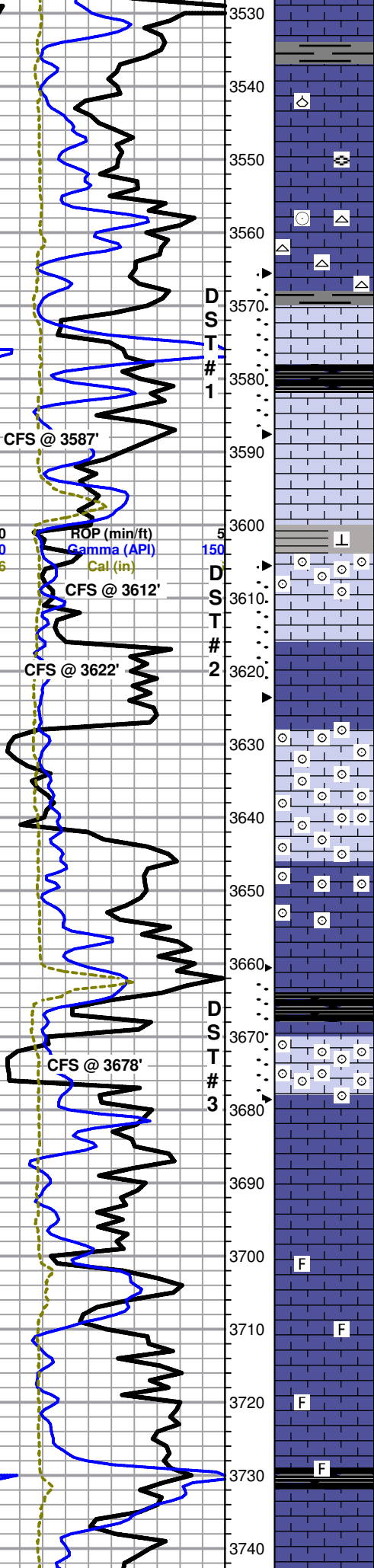
### Brown Lime 3527 (-1509)

detector was off line with a blown fuse from 3293'-3398'.

Total Gas (units) 50  
C1 (units) 50  
C2 (units) 50  
C3 (units) 50  
C4 (units) 50

Mud-Co mud check @ 3507 ft.  
1155 hrs. 1/19/11  
Vis. 49, Wt. 9.3  
PV 13 YP 11  
WL 10.8  
Cake 1/32, pH 9.5  
CHL 7800 ppm  
Ca 80 ppm  
Sol 6.7, LCM 2  
DMC \$588.15  
CMC \$8179.45





Limestone: brown micrite w/ stylolites. Crypto-xln, tite, no shows,

### Lansing 3536 (-1518)

Limestone: white to lt tan, lithographic micrite, tr fossiliferous, fusselsinids, brachiopods, crinoids.

Limestone: Cream to white, micrite w/ lithographic texture. White to vy lt gray, vitreous chert.

Eakin Unit #1-7 DST #1.pdf

Circulated samples: Oil aroma, succrosic ls w/ good inter-xln porosity, and oil staining. Bright yellow fluorescence and good streaming cut.

Shale: black, carbonaceous.

Poor samples after returning to drilling, abundant cavings.

Limestone: lt tan, oolitic grainstone w/ good oomoldic porosity, no shows.

Limestone: cream to lt tan, oolitic grainstone to succrosic, recrystalzsd w/ fair inter-xln porosity. No shows of oil, but there is a gas kick.

Eakin Unit #1-7 DST #2.pdf

### Lansing G zone porosity 3628

Lansing: cream to lt tan, some succrosic, porous ls and oolite grainstone, with inter-xln porosity and oomoldic porosity. Odor in sample cup, spotty oil staining in some fragments, with good cut, bright yellow fluorescence. Sample cups from 3640'-3670' had hydrocarbon aroma.

Limestone: tan to lt brown, micritic/lithographic to micro-xln, tr sparry calcite, dense, tight, the only porosity is in the spar pockets. A few fragments w/ well-cemented oolites.

### Muncie Creek 3664 (-1646)

Eakin Unit #1-7 DST #3.pdf

Limestone: tan, oolite grainstone, fair inter-xln porosity and oomoldic porosity. 30 min. sample cup had a rainbow of oil in the surface of the water and a strong oil aroma. Some fragments had oil staining, bright yellow fluorescence, and good cut. 60 min. sample had no aroma, no oil staining, and no shows.

Limestone: cream, chalky, micro-xln to crypto-xln lithographic micrite.

Limestone: cream to lt tan, crypto-xln, tr fossil., micrite, tr sparry calcite, dense, tight, no porosity, no shows.

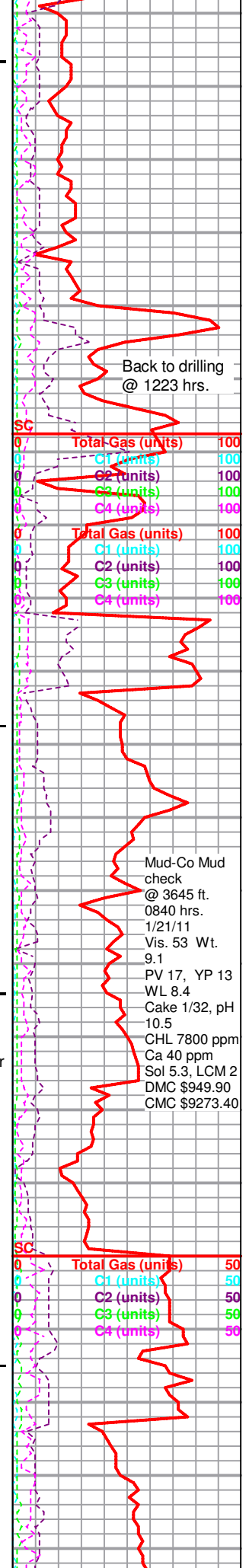
### Lansing J 3715 (-1697)

Limestone: cream to tan, crypto-xln, lithographic micrite. Very few fossil fragments. Tight, no shows.

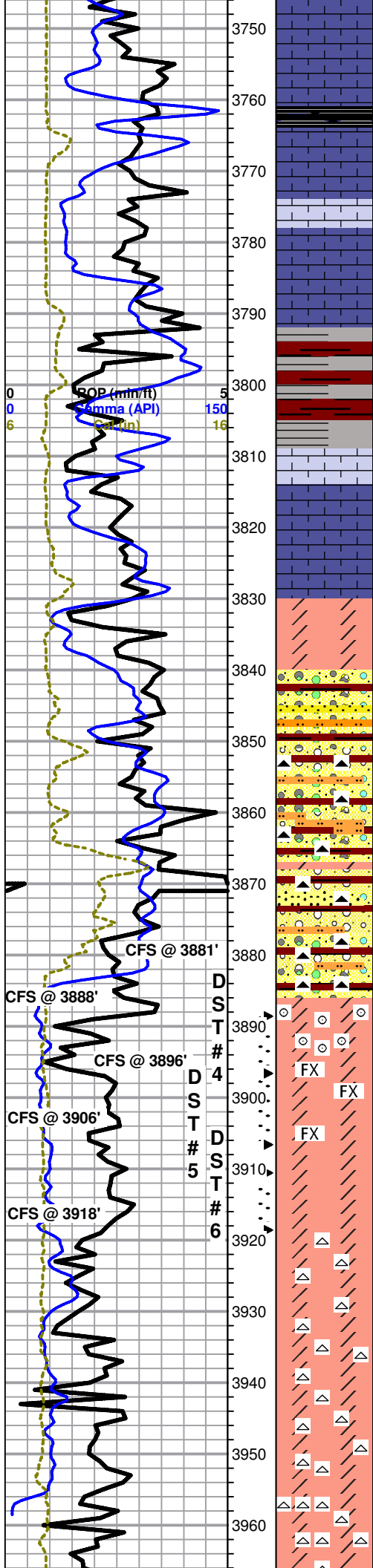
Limestone: cream to lt tan to lt gray, crypto-xln, lithographic micrite. Tight, no shows.

Trace of black carbonaceous shale.

Limestone as above, but with a few included fossil fragments, tr lt green







glauconite.

Limestone: lt gray to tan, micrite, tr sparry calcite, tr of fossil fragments, dense, no porosity, no shows.

Black shale: carbonaceous, dolomitic.

Limestone as above w/ fragments of lt tan bioclastic, fossiliferous packstone. Tight, no porosity, no shows.

### Base Kansas City 3792 (-1774)

Limestone: cream to lt gray, crypto-xln, micrite. Starting to pick up reddish-brown and gray shale.

Shale: vari-colored, gray, lt gray, dark gray, lt greenish-gray, maroon.

Limestone: Tan, lithographic, sli fossiliferous, dense, tight no porosity. Also brown fossiliferous, pelletal, crystalline packstone w/ tr oolites.

Dolomite: very lt green and lt gray, micro-xln mudstone. Tr reddish-brown, vitreous, pyritic chert.

Limestone: white, bryozoan-rich boundstone.

Sample washes red. 3860-3870'. Shale/Conglomerate zone, mixed red shales, and tr orange chert.

Conglomerate: red, greenish-aqua, and waxy green shale and vari-colored chert, red rust, yellow, white, gray, some are weathered, some are fresh and vitreous.

Circulated samples are all conglomerate as above, and include very coarse, well-rounded, clear, free, individual sand grains. F-gr individual qtz sand is in the 60 min sample. Sample cups have faint oil odor.

### Arbuckle 3886 (-1868)

Dolomite: very lt brown, succrosic, the sample cup has a very strong hydrocarbon aroma. The color is due to uniform oil saturation. Bright yellow fluorescence and instant streaming cut.

Eakin Unit #1-7 DST #4.pdf

Eakin Unit #1-7 DST #5.pdf

Circ sample at 3896': Dolomite: recrystallized, crystalline, succrosic (0.2mm crystal size), good inter-xln porosity, fully saturated oil staining, BRIGHT yellow fluor, cuts with HCl, very strong H2S odor. Also oolitic, dolomitic grainstone with inter-xln porosity and oomoldic porosity, saturated with oil. Examination of the dry samples shows some impermeability between the oomoldic voids.

3906' circ samples: tr pyrite in the dolo. Dolo rhombs to 0.3mm. Gas is seeping from the pores. Almost all frags are succrosic-very little oomoldic.

Eakin Unit #1-7 DST #6.pdf

3918 circ sample: Dolomite: bright white, micritic, with intermittent sparry streaks that have flaky oil staining, but good cut. Dissolved dolo yields black, floating fragments of dead oil. White, vitreous chert has dark, heavy oil staining along fractured surfaces. Continues through 3930'. Strong oil aroma in sample cup. Still lt brn, oil-stained succrosic dolo w/ bleeding gas.

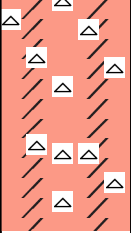
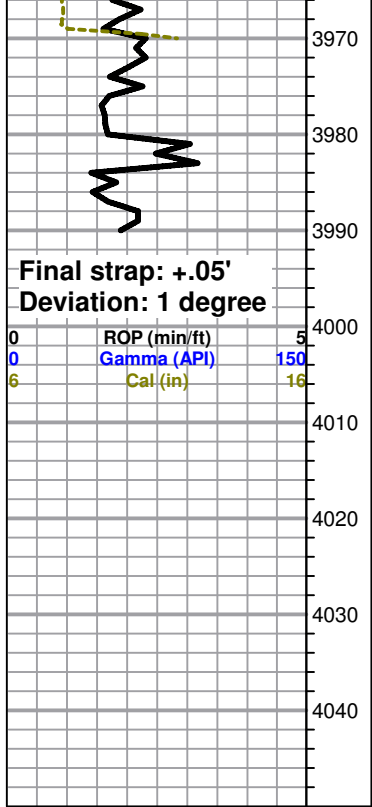
Snow white chert increases with depth. Both vitreous and tripolitic in the same fragment. White to tan succrosic, f-xln dolo. Oil staining along fractured surfaces of both chert and dolo. Oil shows decrease with depth.

Total Gas (units)	50
C1 (units)	50
C2 (units)	50
C3 (units)	50
C4 (units)	50

Mud-Co mud check @ 3833 ft. 1015 hrs. 1/22/11  
Vis 69, Wt. 9.25  
PV 24, YP 15  
WL 8.4  
Cake 1/32, pH 10.5  
CHL 7700 ppm  
Ca 40 ppm  
Sol. 6.3, LCM 2  
DMC \$2847.70  
CMC \$12121.10

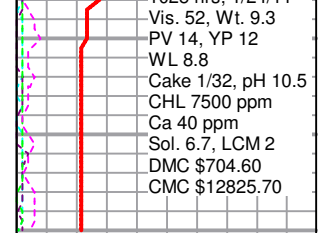
Filter was plugged.

Mud-Co mud check @ 3918 ft. 1025 hrs. 1/24/11



3960-3990 samples: tan to lt brown dolo, some are mottled, f-xln, succrosic, fair inter-xln porosity, no shows, no fluor, no cut. White chert as above.

Dolomite as above with some lighter fragments that include f-gr qtz sand grains, also a tr of micritic dolo.



Vis. 52, Wt. 9.3  
 PV 14, YP 12  
 WL 8.8  
 Cake 1/32, pH 10.5  
 CHL 7500 ppm  
 Ca 40 ppm  
 Sol. 6.7, LCM 2  
 DMC \$704.60  
 CMC \$12825.70

**Rotary TD 3990' (-1972)**

**Rotary TD @ 3990', corrected to 3988', 2100 hrs,  
 1/24/11**

**Superior Well Services Logging TD 3988'  
 Complete logging operations 0725 hrs. 1/25/2011**

**Geologist: Charlie Sturdavant off location @ 0955  
 1/25/2011**

0	Total Gas (units)	50
0	C1 (units)	50
0	C2 (units)	50
0	C3 (units)	50
0	C4 (units)	50

**Eakin Unit #1-7 DST #1.pdf**

**Eakin Unit #1-7 DST #2.pdf**

**Eakin Unit #1-7 DST #3.pdf**

**Eakin Unit #1-7 DST #4.pdf**

**Eakin Unit #1-7 DST #5.pdf**

**Eakin Unit #1-7 DST #6.pdf**



## DRILL STEM TEST REPORT

Prepared For: **Captiva**

2717 Canal Blvd. Suite C  
Hays Kansas 67601

ATTN: Charlie Sturdavant

**7/22S/16W Pawnee**

**Eakin Unit # 1-7**

Start Date: 2011.01.19 @ 11:11:00

End Date: 2011.01.19 @ 20:57:00

Job Ticket #: 16018                      DST #: 1

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2011.01.20 @ 12:23:23

Captiva  
Eakin Unit # 1-7  
7/22S/16W Pawnee  
DST # 1  
Lansing " B " Zone  
2011.01.19





# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

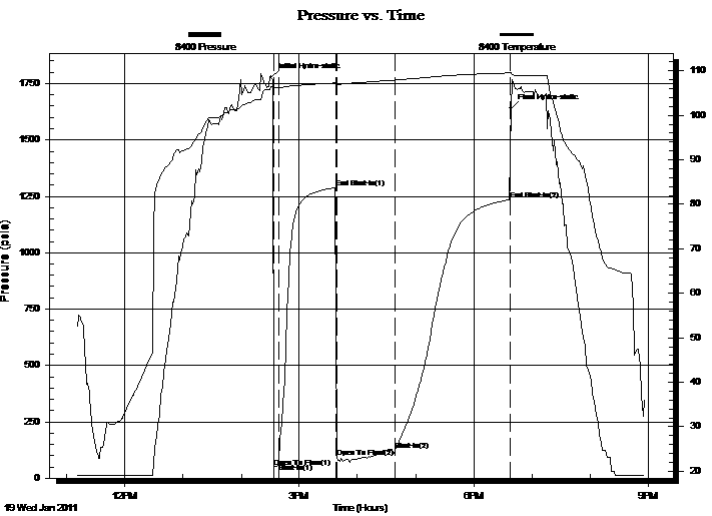
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16018 **DST#: 1**  
 Test Start: 2011.01.19 @ 11:11:00

## GENERAL INFORMATION:

Formation: **Lansing " B " Zone**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:33:30  
 Time Test Ended: 20:57:00  
 Interval: **3565.00 ft (KB) To 3587.00 ft (KB) (TVD)**  
 Total Depth: 3587.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dylan E Ellis  
 Unit No: 3345/Great Bend/50  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8400 Outside**  
 Press @ Run Depth: 123.95 psia @ 3584.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.19 End Date: 2011.01.19 Last Calib.: 2011.01.20  
 Start Time: 11:11:10 End Time: 20:56:59 Time On Btm: 2011.01.19 @ 14:31:00  
 Time Off Btm: 2011.01.19 @ 18:38:30

**TEST COMMENT:** 1ST Opening 5 Minutes weak blow /blow built to 1.50 inches into a 5 gallon bucket of water  
 1ST Shut-In 60 Minutes no blow back  
 2ND Opening 60 Minutes weak blow at first/blow blew to bottom of a bucket of water in 12 minutes  
 2ND Shut-In 120 Minutes no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1777.46	106.47	Initial Hydro-static
3	48.50	106.17	Open To Flow (1)
8	63.58	106.18	Shut-In(1)
67	1288.72	107.30	End Shut-In(1)
68	91.90	107.02	Open To Flow (2)
128	123.95	107.93	Shut-In(2)
247	1236.52	109.54	End Shut-In(2)
248	1640.25	109.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	Oil cut Mud	0.10
0.00	10% Oil 90% Mud	0.00
63.00	Mud cut Gassy Oil	0.31
0.00	40% Gas 40% Oil 20% Mud	0.00
63.00	Oil cut Gassy Mud	0.31
0.00	20% Oil 40% Mud 40% Gassy	0.00

## Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

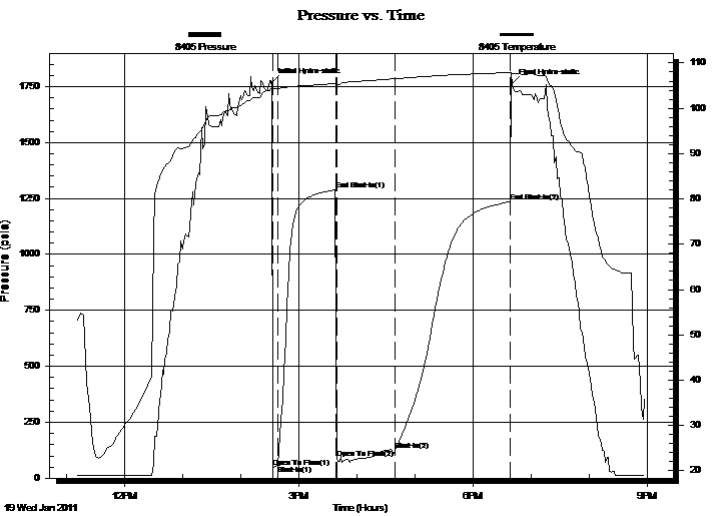
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16018 **DST#: 1**  
 Test Start: 2011.01.19 @ 11:11:00

## GENERAL INFORMATION:

Formation: **Lansing " B " Zone**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 14:33:30 Tester: Dylan E Ellis  
 Time Test Ended: 20:57:00 Unit No: 3345/Great Bend/50  
 Interval: **3565.00 ft (KB) To 3587.00 ft (KB) (TVD)** Reference Elevations: 2018.00 ft (KB)  
 Total Depth: 3587.00 ft (KB) (TVD) 2007.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

**Serial #: 8405 Inside**  
 Press @ Run Depth: 1236.09 psia @ 3583.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.19 End Date: 2011.01.19 Last Calib.: 2011.01.20  
 Start Time: 11:12:01 End Time: 20:57:09 Time On Btm: 2011.01.19 @ 14:32:09  
 Time Off Btm: 2011.01.19 @ 18:40:09

**TEST COMMENT:** 1ST Opening 5 Minutes weak blow /blow built to 1.50 inches into a 5 gallon bucket of water  
 1ST Shut-In 60 Minutes no blow back  
 2ND Opening 60 Minutes weak blow at first/blow blew to bottom of a bucket of water in 12 minutes  
 2ND Shut-In 120 Minutes no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1767.71	104.34	Initial Hydro-static
2	46.83	104.16	Open To Flow (1)
7	57.00	104.42	Shut-In(1)
66	1288.03	105.50	End Shut-In(1)
67	87.05	105.29	Open To Flow (2)
128	126.04	106.53	Shut-In(2)
246	1236.09	107.92	End Shut-In(2)
248	1763.33	107.65	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	Oil cut Mud	0.10
0.00	10% Oil 90% Mud	0.00
63.00	Mud cut Gassy Oil	0.31
0.00	40% Gas 40% Oil 20% Mud	0.00
63.00	Oil cut Gassy Mud	0.31
0.00	20% Oil 40% Mud 40% Gassy	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16018      **DST#: 1**  
 Test Start: 2011.01.19 @ 11:11:00

**Tool Information**

Drill Pipe:	Length: 3308.00 ft	Diameter: 3.80 inches	Volume: 46.40 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 259.05 ft	Diameter: 2.25 inches	Volume: 1.27 bbl	Weight to Pull Loose:	35000.00 lb
			<u>Total Volume: 47.67 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.05 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	3565.00 ft			Final	71000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	22.00 ft				
Tool Length:	51.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3537.00	
Shut-In Tool	5.00			3542.00	
Hydraulic Tool	5.00			3547.00	
Jars	6.00			3553.00	
Safety Joint	2.00			3555.00	
Packer	5.00			3560.00	29.00      Bottom Of Top Packer
Packer	5.00			3565.00	
Perforations	17.00			3582.00	
Recorder	1.00	8405	Inside	3583.00	
Recorder	1.00	8400	Outside	3584.00	
Bullnose	3.00			3587.00	22.00      Bottom Packers & Anchor

**Total Tool Length: 51.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16018      **DST#: 1**  
 Test Start: 2011.01.19 @ 11:11:00

### Mud and Cushion Information

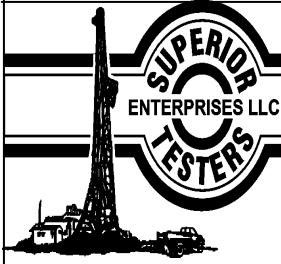
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 7800.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Oil cut Mud	0.098
0.00	10% Oil 90% Mud	0.000
63.00	Mud cut Gassy Oil	0.310
0.00	40% Gas 40% Oil 20% Mud	0.000
63.00	Oil cut Gassy Mud	0.310
0.00	20% Oil 40% Mud 40% Gassy	0.000
0.00	126 feet Gas in the pipe	0.000

Total Length: 146.00 ft      Total Volume: 0.718 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



# DRILL STEM TEST REPORT

**GAS RATES**

Captiva  
2717 Canal Blvd. Suite C  
Hays Kansas 67601  
ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
Job Ticket: 16018      **DST#: 1**  
Test Start: 2011.01.19 @ 11:11:00

## Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
		0.00	0.00	0.00

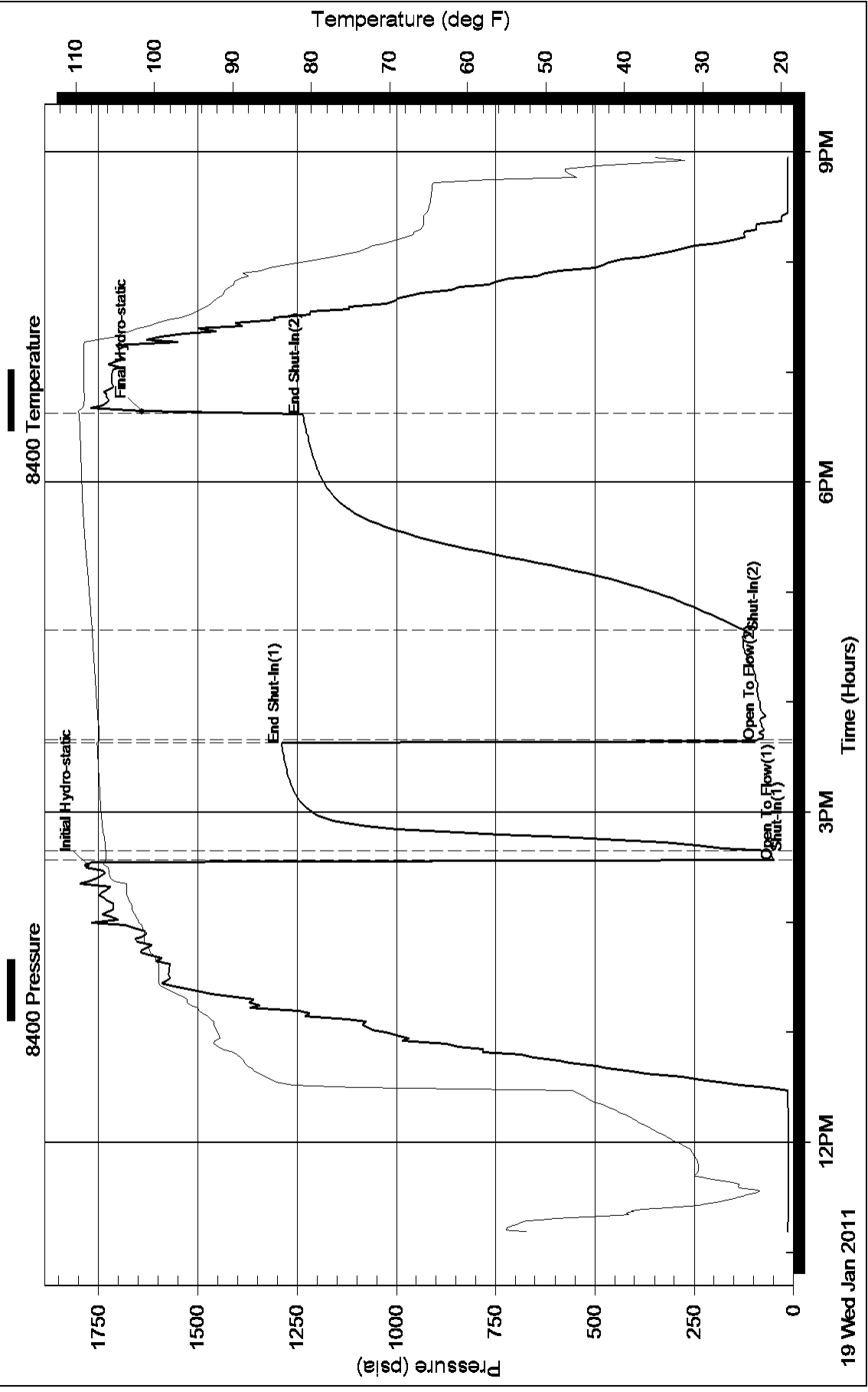
Serial #: 8400

Outside Captiva

7/22S/16W Pawnee

DST Test Number: 1

### Pressure vs. Time



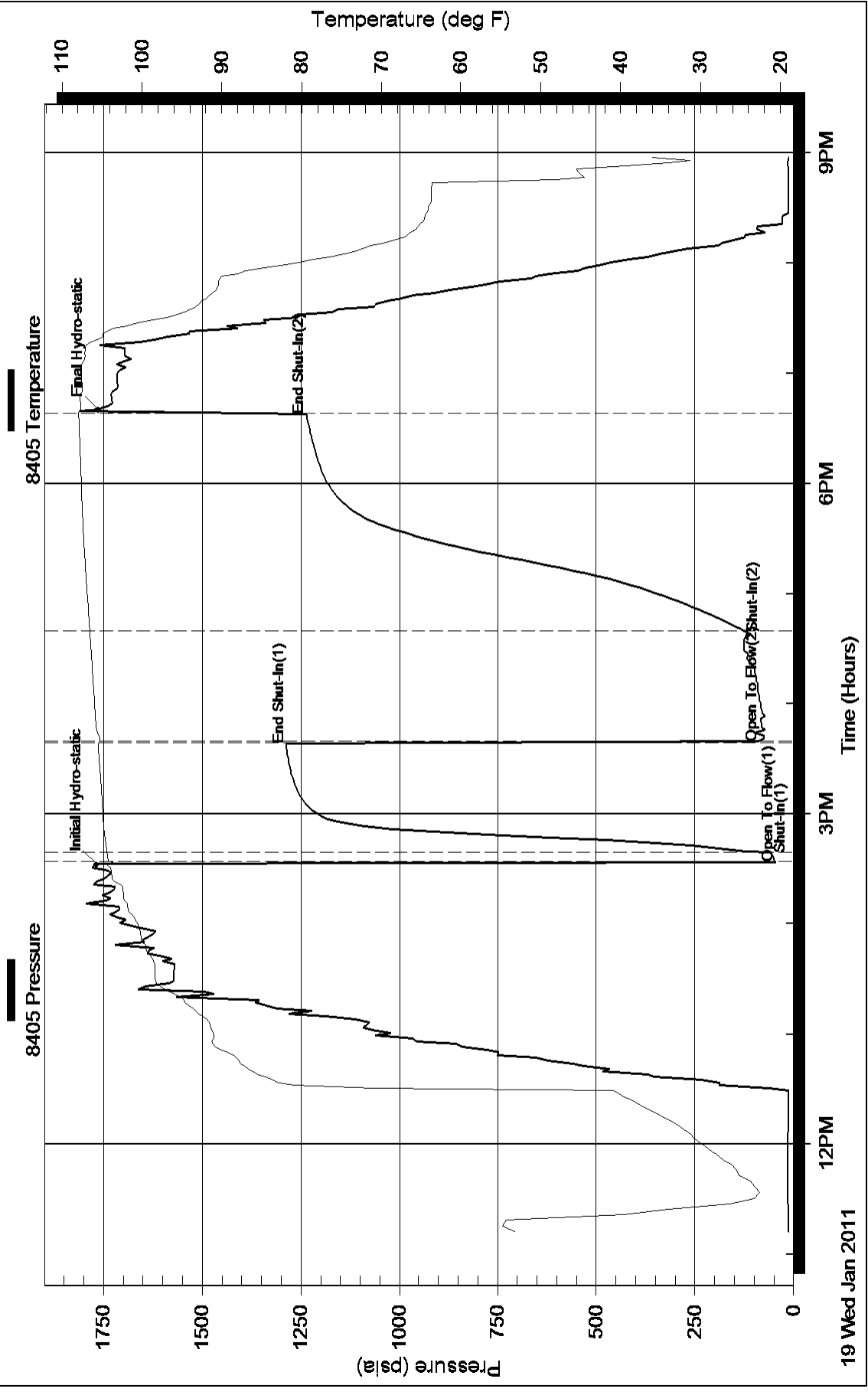
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Inside Captiva

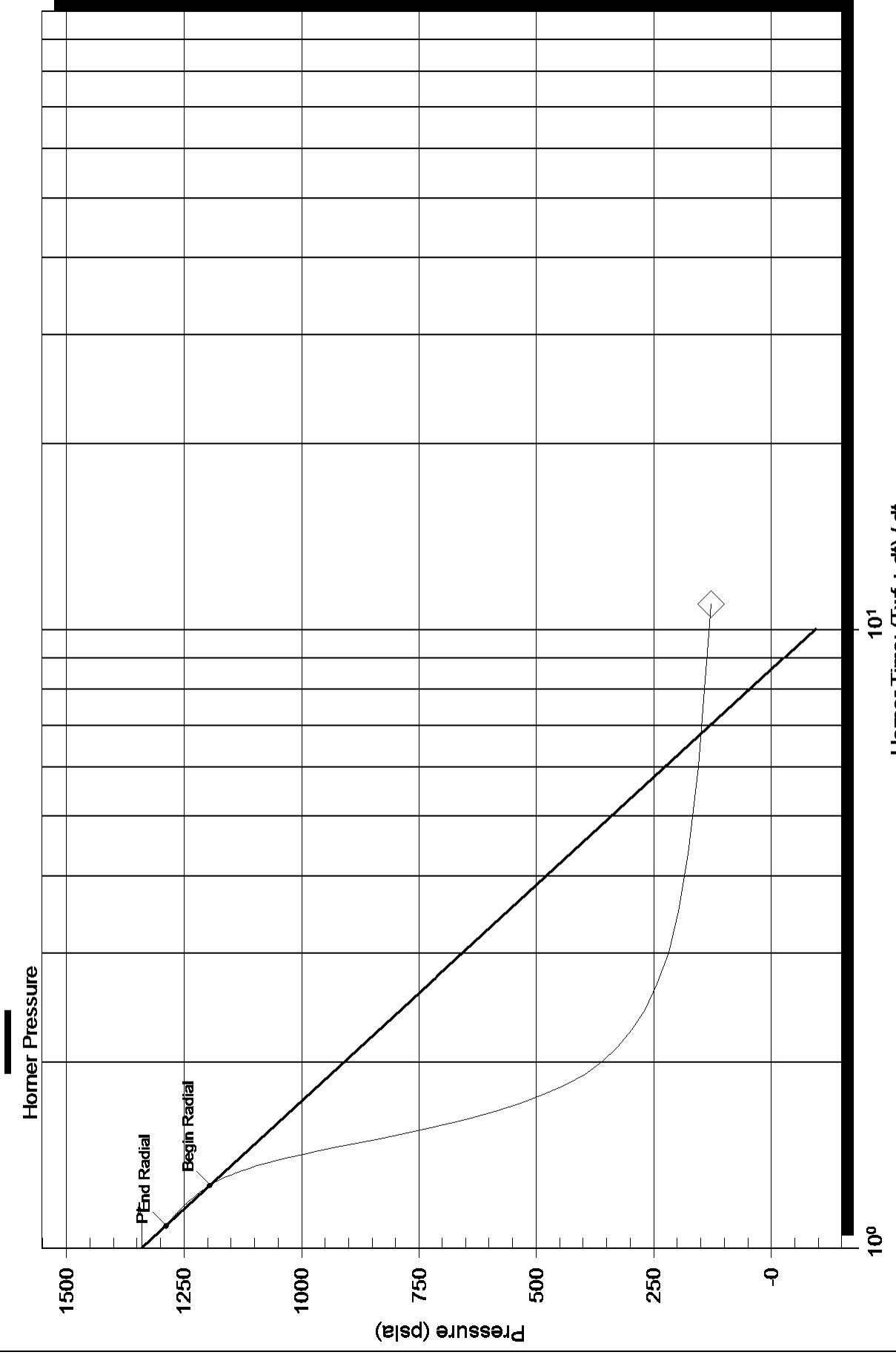
7/22S/16W Pawnee

DST Test Number: 1

### Pressure vs. Time

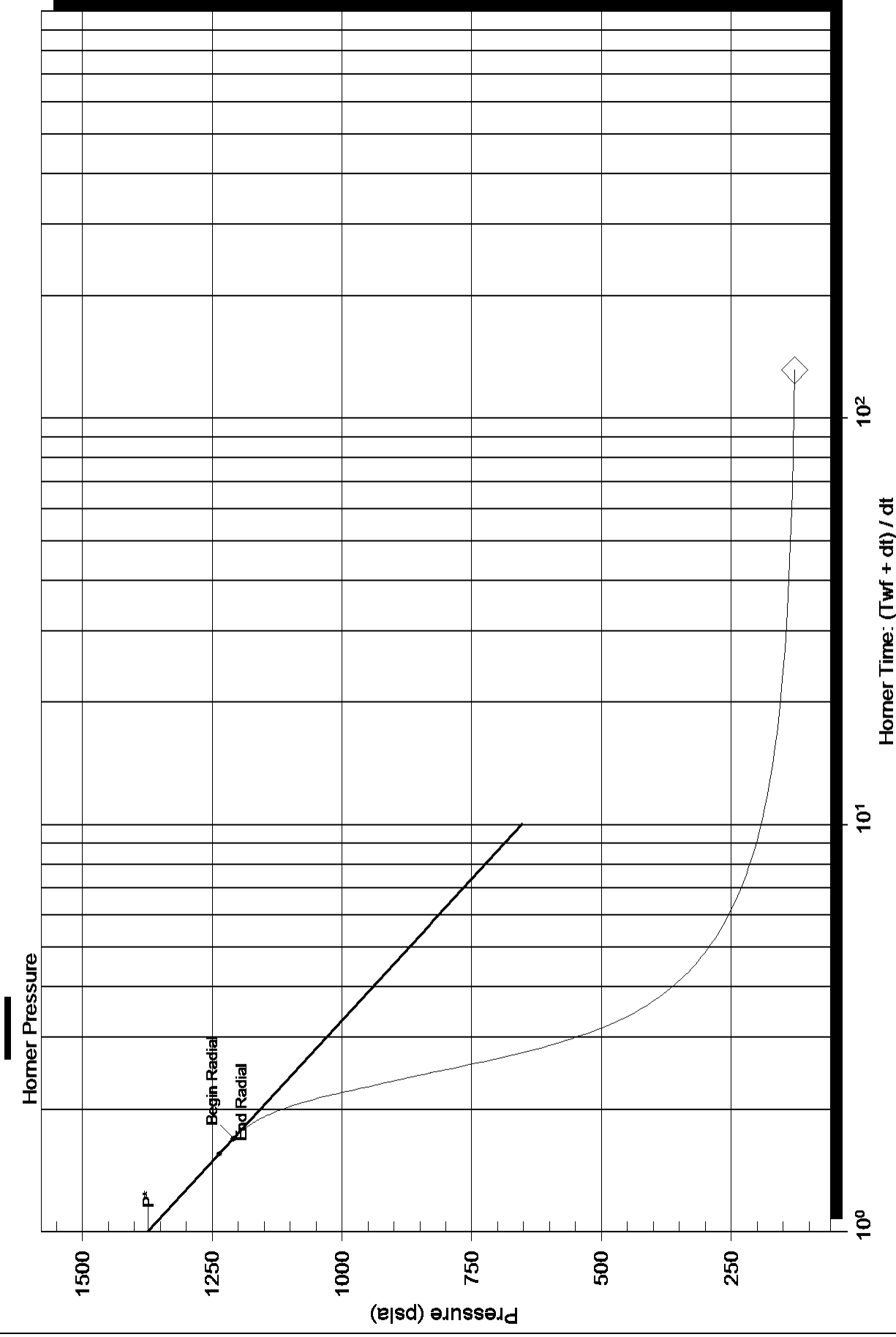


### Horner Plot

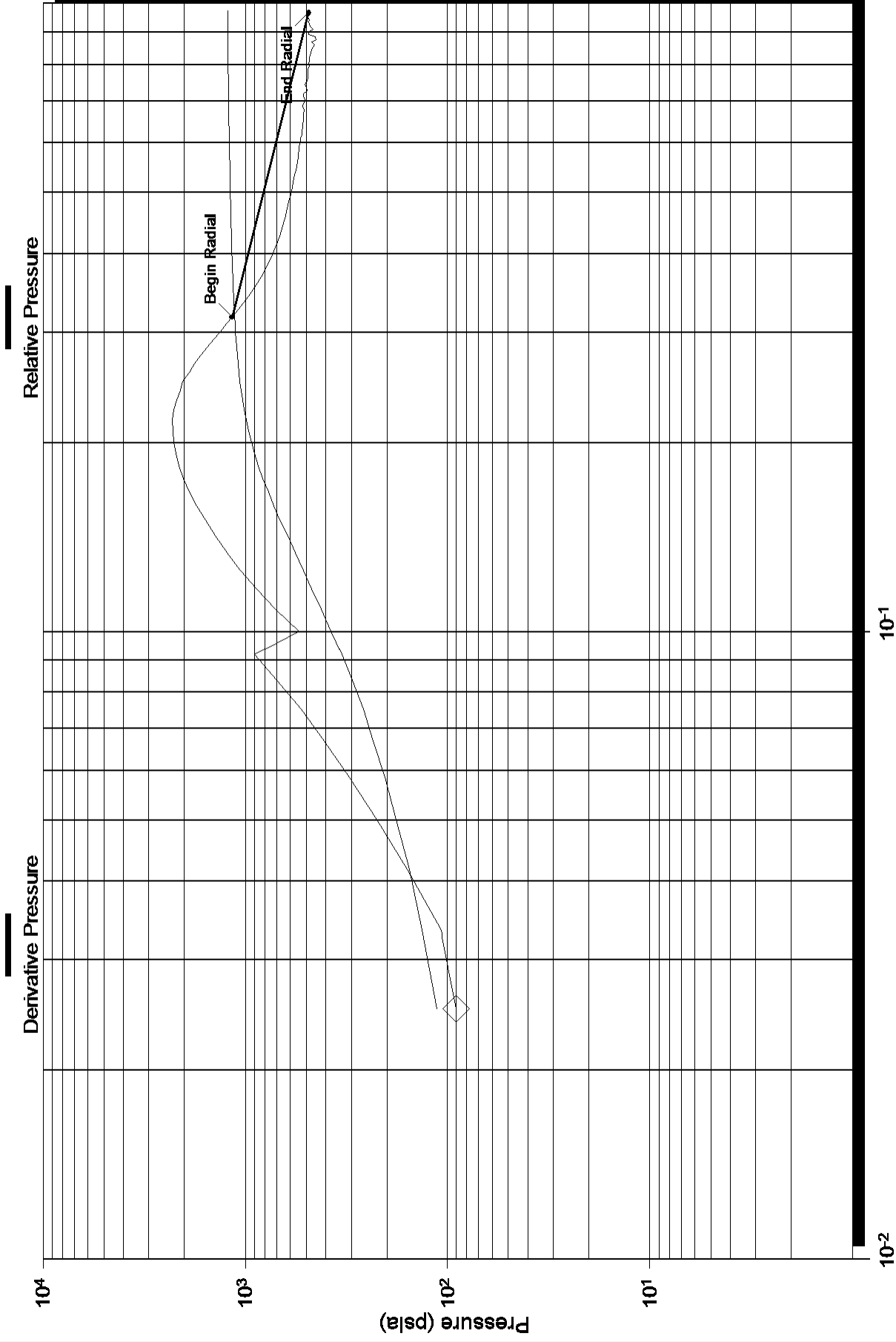




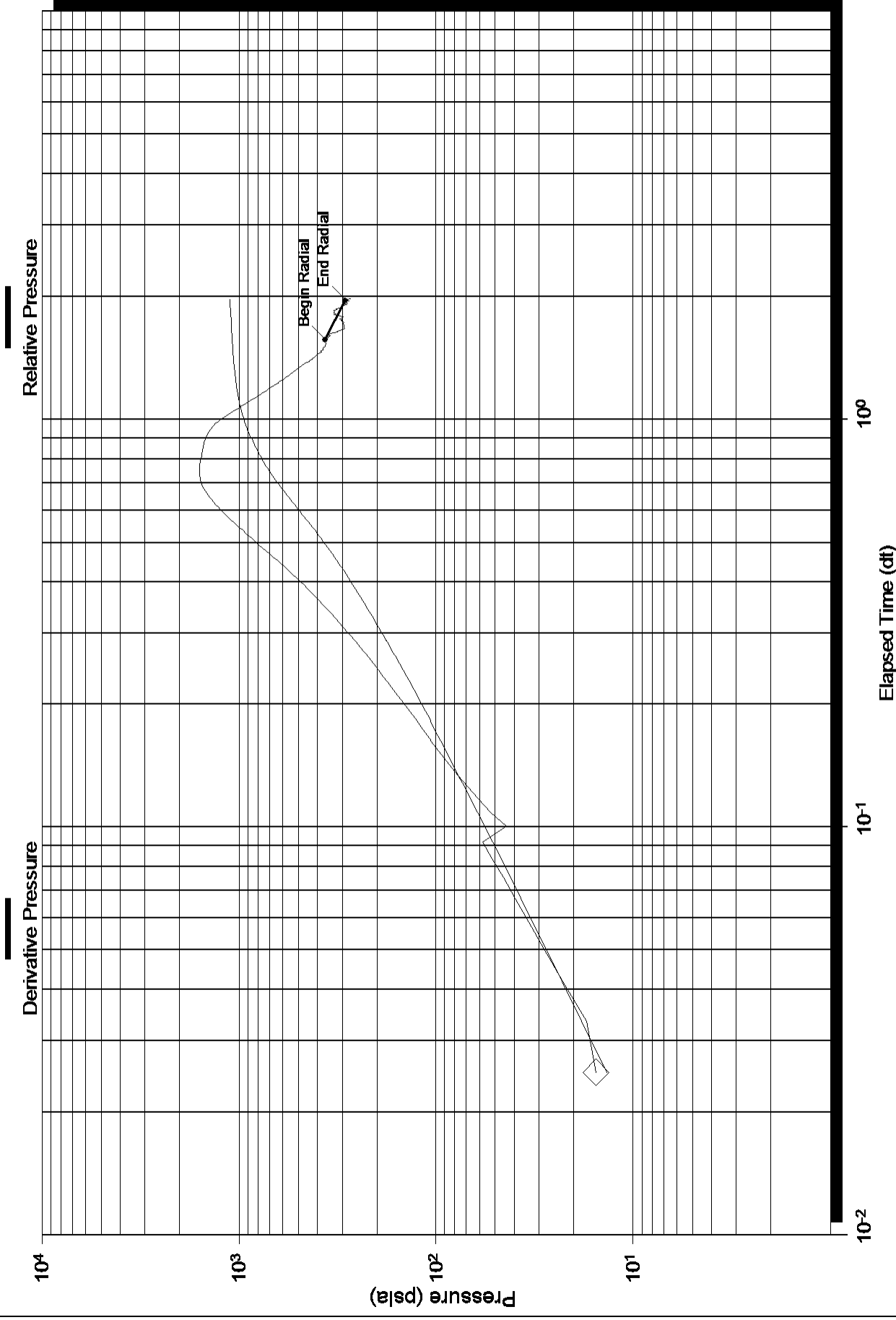
### Horner Plot



# Log-Log and Pseudo-Derivative



# Log-Log and Pseudo-Derivative





## DRILL STEM TEST REPORT

Prepared For: **Captiva**

2717 Canal Blvd. Suite C  
Hays Kansas 67601

ATTN: Charlie Sturdavant

**7/22S/16W Pawnee**

**Eakin Unit # 1-7**

Start Date: 2011.01.20 @ 19:23:00

End Date: 2011.01.21 @ 03:56:08

Job Ticket #: 16019                      DST #: 2

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2011.01.21 @ 04:20:17



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

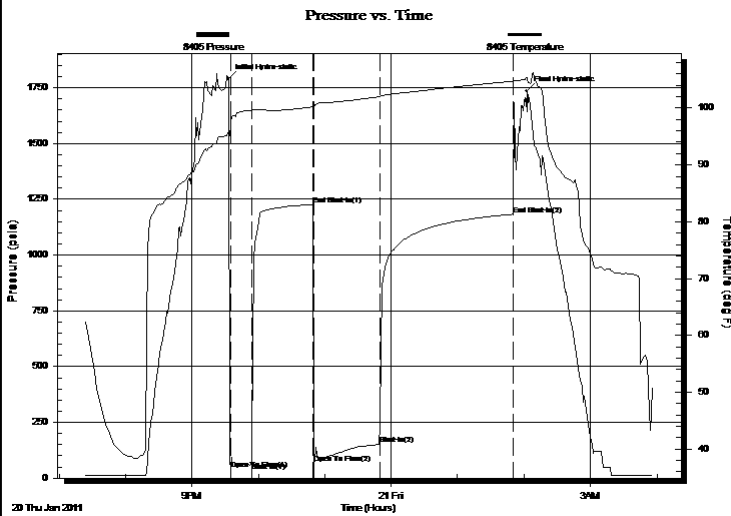
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16019 **DST#: 2**  
 Test Start: 2011.01.20 @ 19:23:00

## GENERAL INFORMATION:

Formation: **LANSING F ZONE**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 21:34:38 Tester: JARED SCHECK  
 Time Test Ended: 03:56:08 Unit No: 3345-GREAT BEND-50  
 Interval: **3605.00 ft (KB) To 3622.00 ft (KB) (TVD)** Reference Elevations: 2018.00 ft (KB)  
 Total Depth: 3322.00 ft (KB) (TVD) 2007.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 11.00 ft

**Serial #: 8405 Inside**  
 Press@RunDepth: 151.46 psia @ 3618.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.20 End Date: 2011.01.21 Last Calib.: 2011.01.21  
 Start Time: 19:23:00 End Time: 03:56:08 Time On Btm: 2011.01.20 @ 21:33:08  
 Time Off Btm: 2011.01.21 @ 02:02:38

**TEST COMMENT:** 15/INITIAL OPEN :WEAK BUT BUILDING BLOW BUILT 3 1/4 INCH INTO WATER IN 15 MINUTES  
 60/INITIAL SHUT IN:1/2 INCH BLOW BACK  
 60/FINAL OPEN :WEAK BLOW BUILT BOTTOM OF BUCKET IN 48 MINUTES  
 120/FINAL SHUT IN :1/4 INCH BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1790.76	95.84	Initial Hydro-static
2	40.46	97.06	Open To Flow (1)
21	69.11	99.58	Shut-In(1)
76	1225.94	100.24	End Shut-In(1)
77	64.74	100.09	Open To Flow (2)
137	151.46	102.00	Shut-In(2)
257	1182.67	104.73	End Shut-In(2)
270	1735.26	105.33	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
260.00	WATER 15%MUD 85%WATER	1.29
0.00	CHLORIDES 43,000	0.00
0.00	RESISTIVITY .2 @73 DEGREES	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

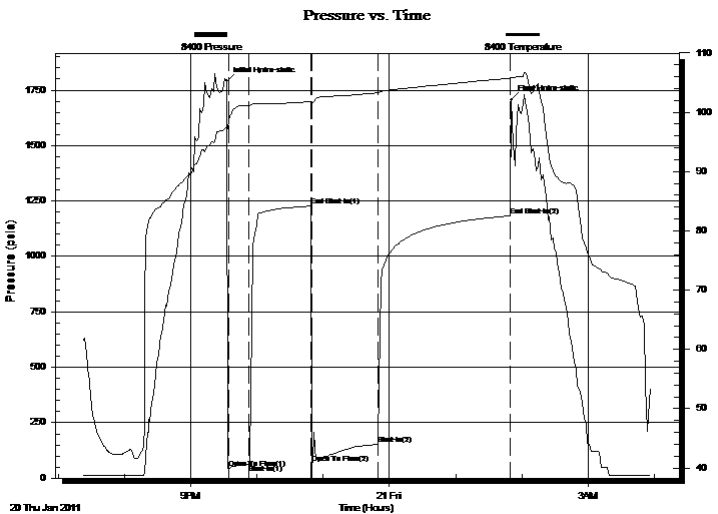
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16019 **DST#: 2**  
 Test Start: 2011.01.20 @ 19:23:00

## GENERAL INFORMATION:

Formation: **LANSING F ZONE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:34:38  
 Time Test Ended: 03:56:08  
 Interval: **3605.00 ft (KB) To 3622.00 ft (KB) (TVD)**  
 Total Depth: 3322.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3345-GREAT BEND-50  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8400 Outside**  
 Press@RunDepth: 1183.22 psia @ 3619.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.20 End Date: 2011.01.21 Last Calib.: 2011.01.21  
 Start Time: 19:23:00 End Time: 03:56:30 Time On Btm: 2011.01.20 @ 21:33:00  
 Time Off Btm: 2011.01.21 @ 01:50:30

**TEST COMMENT:** 15/INITIAL OPEN :WEAK BUT BUILDING BLOW BUILT 3 1/4 INCH INTO WATER IN 15 MINUTES  
 60/INITIAL SHUT IN:1/2 INCH BLOW BACK  
 60/FINAL OPEN :WEAK BLOW BUILT BOTTOM OF BUCKET IN 48 MINUTES  
 120/FINAL SHUT IN :1/4 INCH BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1789.98	97.36	Initial Hydro-static
2	42.82	98.61	Open To Flow (1)
20	61.55	101.14	Shut-In(1)
76	1226.79	101.81	End Shut-In(1)
77	66.42	101.57	Open To Flow (2)
137	153.02	103.28	Shut-In(2)
257	1183.22	105.77	End Shut-In(2)
258	1705.54	105.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
260.00	WATER 15%MUD 85%WATER	1.29
0.00	CHLORIDES 43,000	0.00
0.00	RESISTIVITY .2 @73 DEGREES	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16019      **DST#: 2**  
 Test Start: 2011.01.20 @ 19:23:00

**Tool Information**

Drill Pipe:	Length: 3350.00 ft	Diameter: 3.80 inches	Volume: 46.99 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 259.00 ft	Diameter: 2.25 inches	Volume: 1.27 bbl	Weight to Pull Loose:	90000.00 lb
			<u>Total Volume: 48.26 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	3605.00 ft			Final	71000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	17.00 ft				
Tool Length:	46.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments: TOOL CHASED 2 FEET TO BOTTOM

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3577.00	
Shut-In Tool	5.00			3582.00	
Hydraulic Tool	5.00			3587.00	
Jars	6.00			3593.00	
Safety Joint	2.00			3595.00	
Packer	5.00			3600.00	29.00      Bottom Of Top Packer
Packer	5.00			3605.00	
Perforations	12.00			3617.00	
Recorder	1.00	8405	Inside	3618.00	
Recorder	1.00	8400	Outside	3619.00	
Bullnose	3.00			3622.00	17.00      Bottom Packers & Anchor

**Total Tool Length: 46.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16019      **DST#: 2**  
 Test Start: 2011.01.20 @ 19:23:00

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 67.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.20 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 8900.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
260.00	WATER 15%MUD 85%WATER	1.288
0.00	CHLORIDES 43,000	0.000
0.00	RESISTIVITY .2 @73 DEGREES	0.000

Total Length: 260.00 ft      Total Volume: 1.288 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



Serial #: 8405

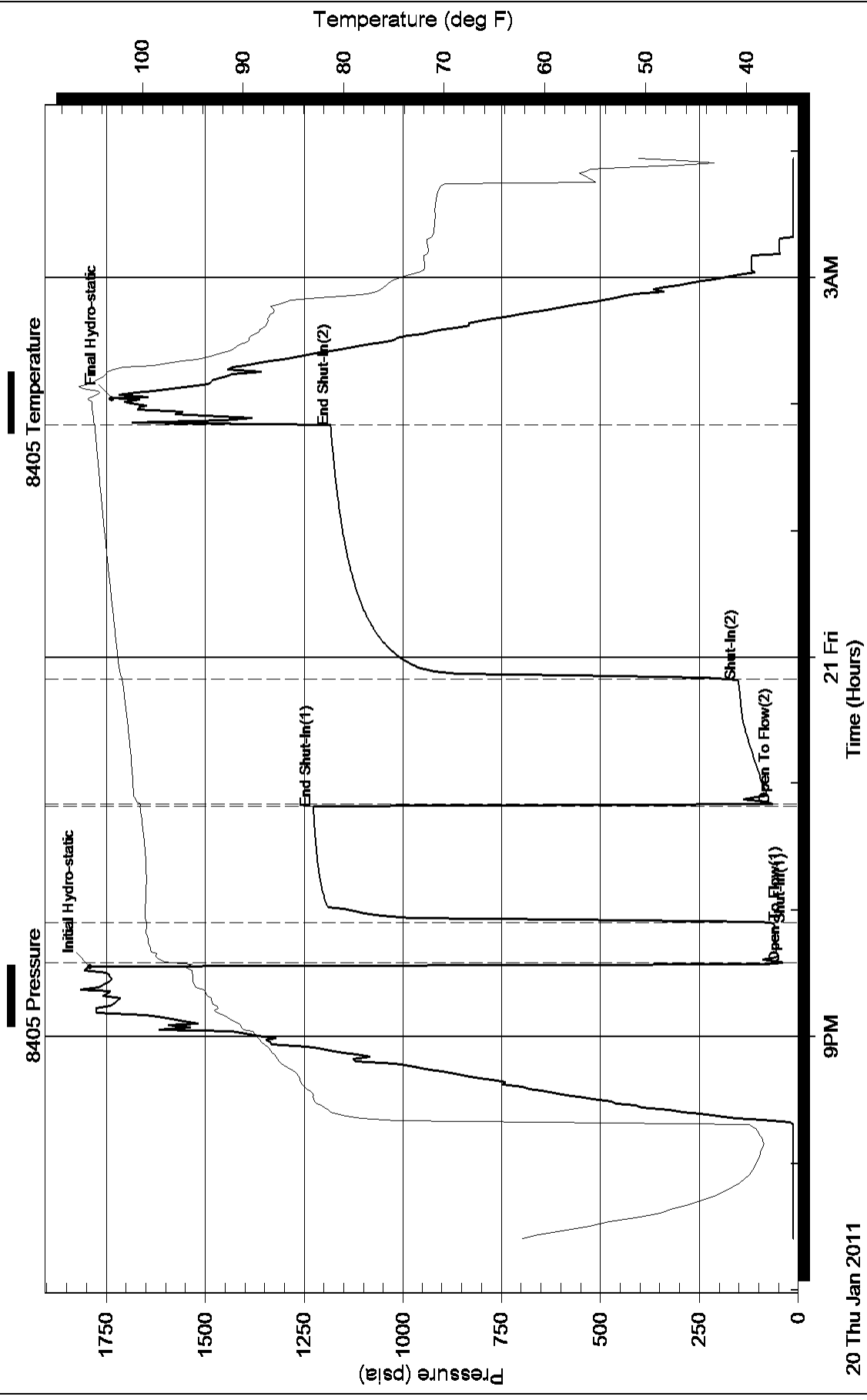
Inside

Captiva

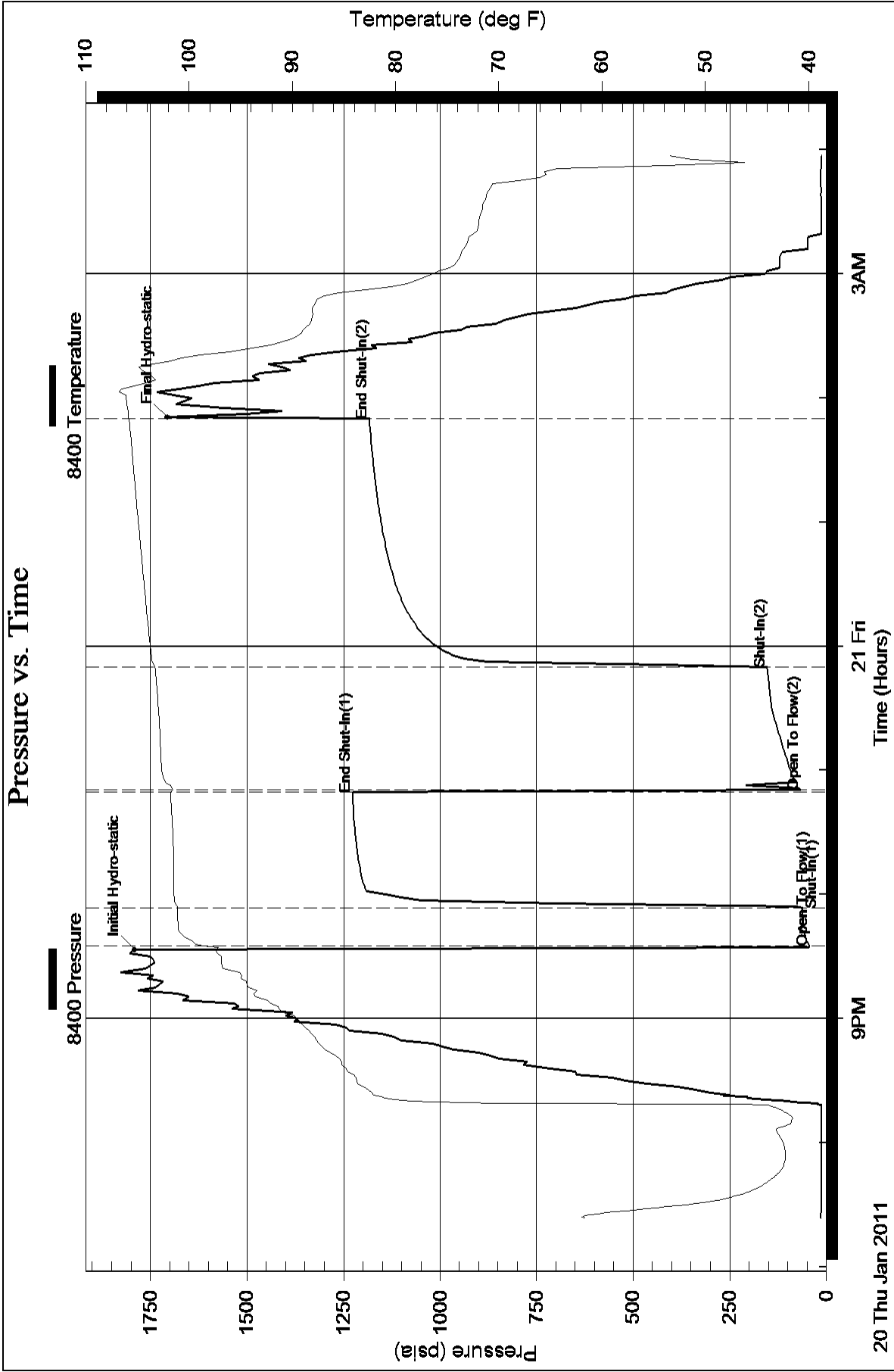
7/22S/16W Paw nee

DST Test Number: 2

### Pressure vs. Time



### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Captiva**

2717 Canal Blvd. Suite C  
Hays Kansas 67601

ATTN: Charlie Sturdavant

**7/22S/16W Pawnee**

**Eakin Unit # 1-7**

Start Date: 2011.01.21 @ 14:16:00

End Date: 2011.01.21 @ 21:15:07

Job Ticket #: 16020                      DST #: 3

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2011.01.21 @ 21:32:51

Captiva      Eakin Unit # 1-7      7/22S/16W Pawnee      DST # 3      LANSING H ZONE      2011.01.21



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

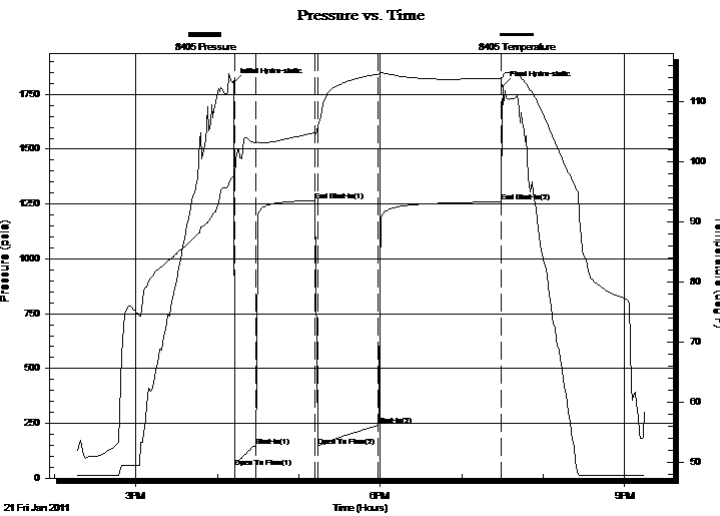
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16020 **DST#: 3**  
 Test Start: 2011.01.21 @ 14:16:00

## GENERAL INFORMATION:

Formation: **LANSING H ZONE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:12:37  
 Time Test Ended: 21:15:07  
 Interval: **3660.00 ft (KB) To 3678.00 ft (KB) (TVD)**  
 Total Depth: 3678.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3345-GREAT BEND-50  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8405 Inside**  
 Press@RunDepth: 240.67 psia @ 3674.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.21 End Date: 2011.01.21 Last Calib.: 2011.01.21  
 Start Time: 14:16:00 End Time: 21:15:07 Time On Btm: 2011.01.21 @ 16:12:07  
 Time Off Btm: 2011.01.21 @ 19:30:07

**TEST COMMENT:** 15/INITIAL OPEN:FAIR BLOW BUILT BOTTOM OF BUCKET IN 12 MINUTES  
 45/INITIAL SHUT IN:VERY WEAK SURFACE BLOW  
 45/FINAL OPEN:FAIR BLOW BUILT BOTTOM OF BUCKET IN 16 MINUTES  
 90/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1804.02	97.50	Initial Hydro-static
1	48.23	97.14	Open To Flow (1)
16	146.64	103.13	Shut-In(1)
60	1265.38	104.87	End Shut-In(1)
62	146.30	105.88	Open To Flow (2)
106	240.67	114.62	Shut-In(2)
197	1260.12	113.87	End Shut-In(2)
198	1788.41	114.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
360.00	WATER 15%MD 85%WATER	2.69
0.00	CHLORIDES 50,000	0.00
0.00	RESISTIVITY .2 @ 70 DEGREES	0.00

## Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

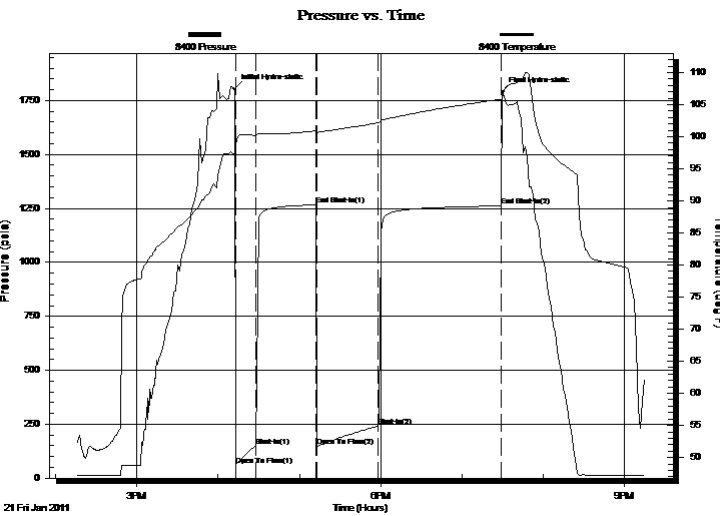
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16020 **DST#: 3**  
 Test Start: 2011.01.21 @ 14:16:00

## GENERAL INFORMATION:

Formation: **LANSING H ZONE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:12:37  
 Time Test Ended: 21:15:07  
 Interval: **3660.00 ft (KB) To 3678.00 ft (KB) (TVD)**  
 Total Depth: 3678.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3345-GREAT BEND-50  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8400 Outside**  
 Press@RunDepth: 1260.92 psia @ 3675.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.21 End Date: 2011.01.21 Last Calib.: 2011.01.21  
 Start Time: 14:16:00 End Time: 21:15:30 Time On Btm: 2011.01.21 @ 16:12:00  
 Time Off Btm: 2011.01.21 @ 19:30:00

**TEST COMMENT:** 15/INITIAL OPEN:FAIR BLOW BUILT BOTTOM OF BUCKET IN 12 MINUTES  
 45/INITIAL SHUT IN:VERY WEAK SURFACE BLOW  
 45/FINAL OPEN:FAIR BLOW BUILT BOTTOM OF BUCKET IN 16 MINUTES  
 90/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

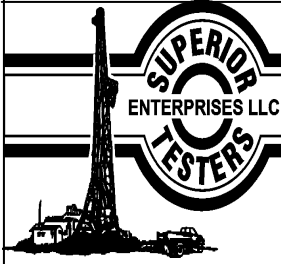
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1804.48	97.24	Initial Hydro-static
1	60.33	98.79	Open To Flow (1)
16	146.99	100.20	Shut-In(1)
60	1266.10	100.92	End Shut-In(1)
61	146.79	100.68	Open To Flow (2)
106	242.22	102.19	Shut-In(2)
197	1260.92	105.84	End Shut-In(2)
198	1790.01	106.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
360.00	WATER 15%MD 85%WATER	2.69
0.00	CHLORIDES 50,000	0.00
0.00	RESISTIVITY .2 @ 70 DEGREES	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16020      **DST#: 3**  
 Test Start: 2011.01.21 @ 14:16:00

**Tool Information**

Drill Pipe:	Length: 3383.00 ft	Diameter: 3.80 inches	Volume: 47.45 bbl	Tool Weight: 1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 259.00 ft	Diameter: 2.25 inches	Volume: 1.27 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 48.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3660.00 ft			Final 71500.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3632.00	
Shut-In Tool	5.00			3637.00	
Hydraulic Tool	5.00			3642.00	
Jars	6.00			3648.00	
Safety Joint	2.00			3650.00	
Packer	5.00			3655.00	29.00      Bottom Of Top Packer
Packer	5.00			3660.00	
Perforations	13.00			3673.00	
Recorder	1.00	8405	Inside	3674.00	
Recorder	1.00	8400	Outside	3675.00	
Bullnose	3.00			3678.00	18.00      Bottom Packers & Anchor

**Total Tool Length: 47.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16020      **DST#: 3**  
 Test Start: 2011.01.21 @ 14:16:00

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.40 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 7800.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
360.00	WATER 15%MD 85%WATER	2.690
0.00	CHLORIDES 50,000	0.000
0.00	RESISTIVITY .2 @ 70 DEGREES	0.000

Total Length: 360.00 ft      Total Volume: 2.690 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: CHLORIDES 50,000

Serial #: 8405

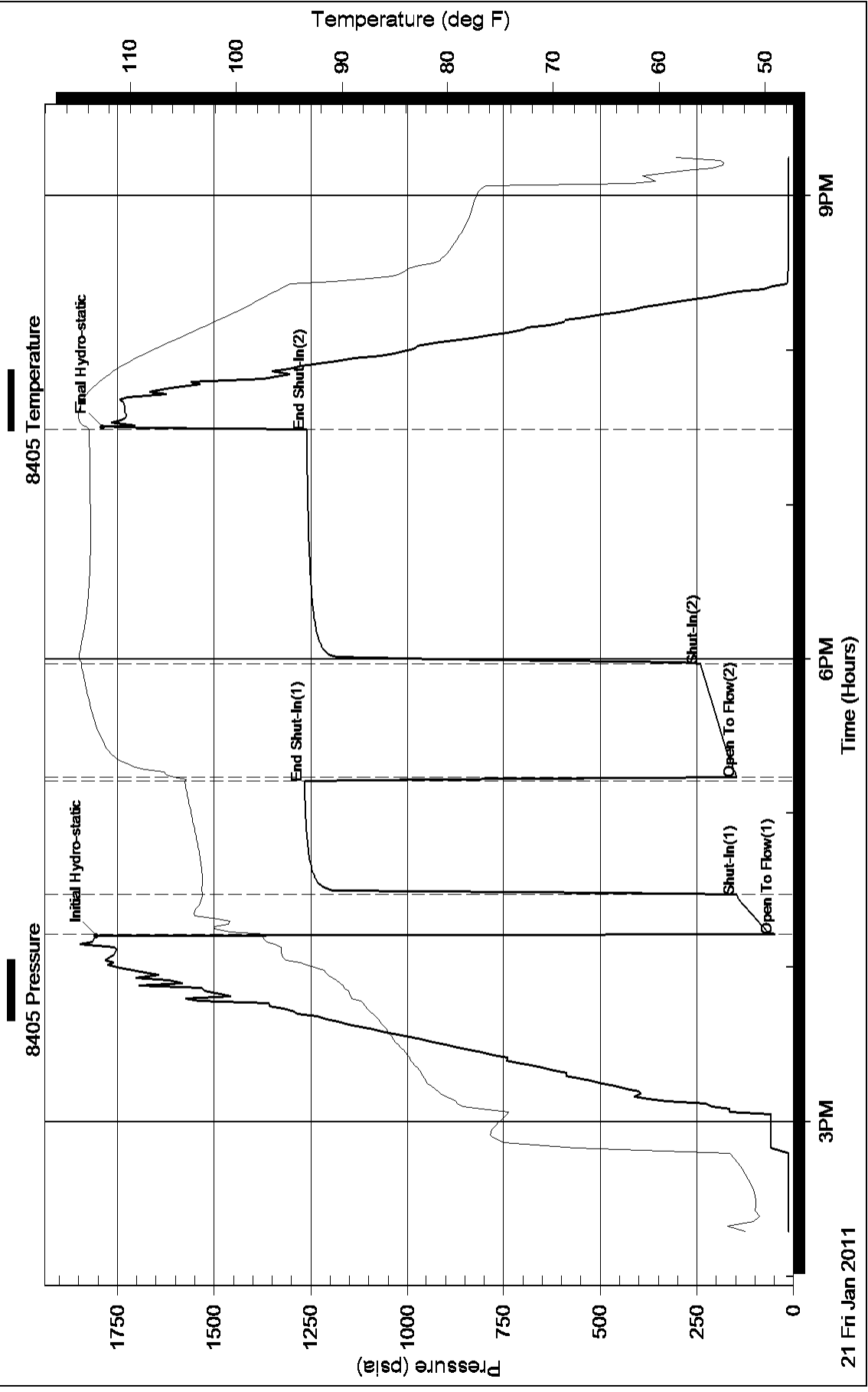
Inside

Captiva

7/22S/16W Paw nee

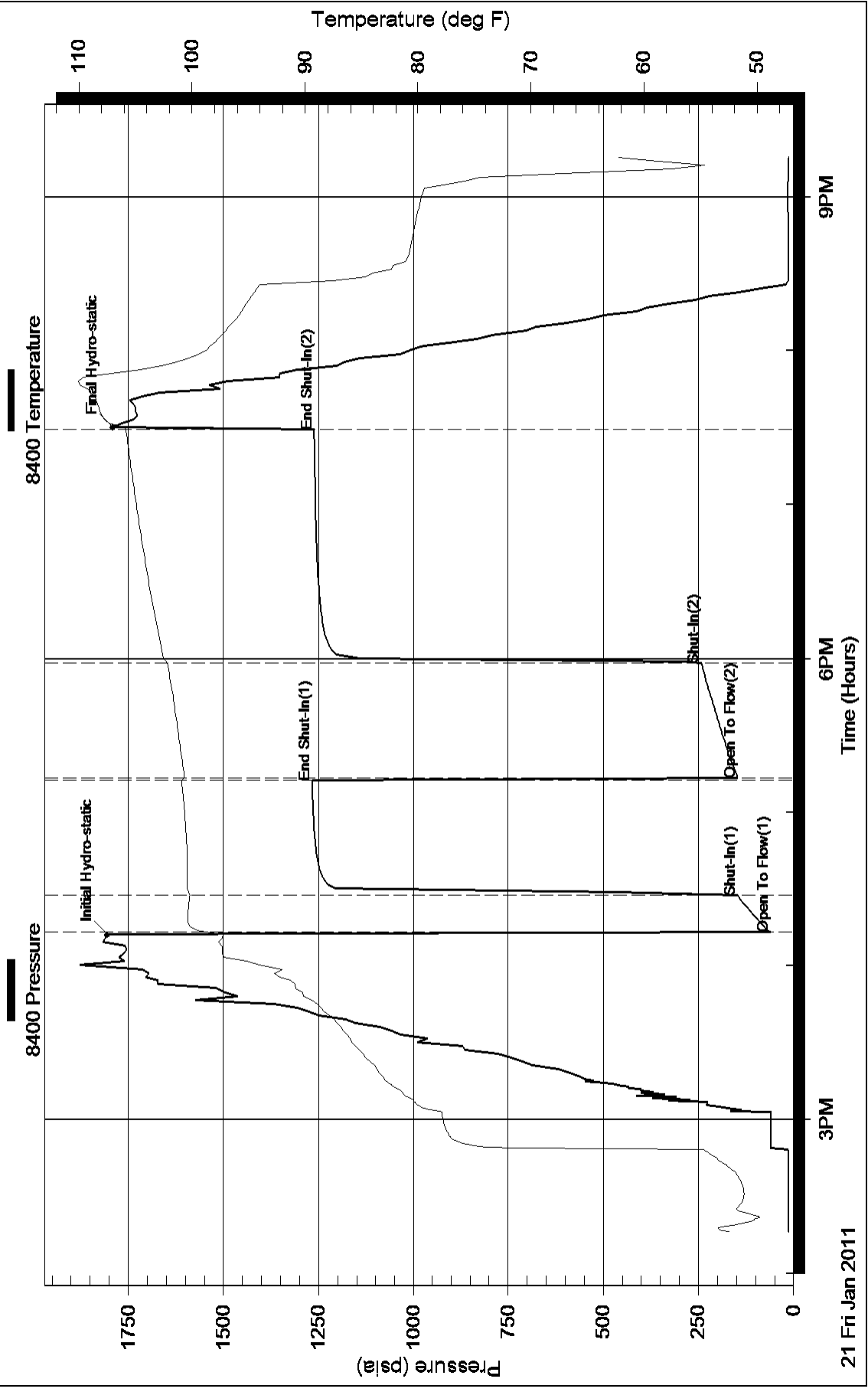
DST Test Number: 3

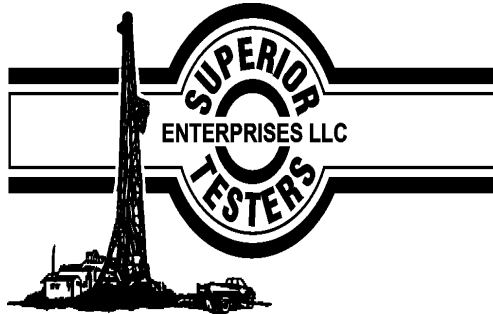
### Pressure vs. Time





# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Captiva**

2717 Canal Blvd. Suite C  
Hays Kansas 67601

ATTN: Charlie Sturdavant

**7/22S/16W Pawnee**

**Eakin Unit # 1-7**

Start Date: 2011.01.22 @ 23:25:00

End Date: 2011.01.23 @ 07:12:06

Job Ticket #: 16021                      DST #: 4

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2011.01.23 @ 07:30:03

Captiva  
Eakin Unit # 1-7  
7/22S/16W Pawnee  
DST # 4  
ARBUCKLE  
2011.01.22



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

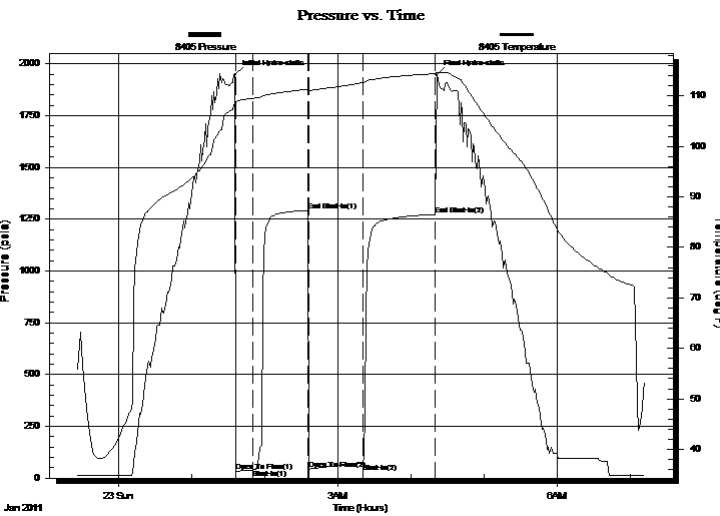
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16021 **DST#: 4**  
 Test Start: 2011.01.22 @ 23:25:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 01:36:06 Tester: JARED SCHECK  
 Time Test Ended: 07:12:06 Unit No: 3320-GREAT BEND-50  
 Interval: **3888.00 ft (KB) To 3896.00 ft (KB) (TVD)** Reference Elevations: 2018.00 ft (KB)  
 Total Depth: 3896.00 ft (KB) (TVD) 2007.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

**Serial #: 8405 Inside**  
 Press@RunDepth: 72.60 psia @ 3892.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.22 End Date: 2011.01.23 Last Calib.: 2011.01.23  
 Start Time: 23:25:00 End Time: 07:12:06 Time On Btm: 2011.01.23 @ 01:35:36  
 Time Off Btm: 2011.01.23 @ 04:21:06

TEST COMMENT: 15/INITIAL OPEN:WEAK BUT BUILDING BLOW BUILT 5 INCHES INTO WATER IN 15 MINUTES  
 45/INITIAL SHUT IN:NO BLOW BACK  
 45/FINAL OPEN:FAIR BLOW BUILT BOTTOM OF BUCKET IN 20 MINUTES  
 60/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1947.00	108.52	Initial Hydro-static
1	34.99	108.41	Open To Flow (1)
15	40.02	109.49	Shut-In(1)
60	1291.86	111.33	End Shut-In(1)
61	42.87	111.09	Open To Flow (2)
105	72.60	112.62	Shut-In(2)
165	1273.67	114.39	End Shut-In(2)
166	1946.79	114.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
420.00	GAS IN PIPE	3.53
130.00	CLEAN GASSEY OIL 10%GAS 90%OIL	1.82
0.00		0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

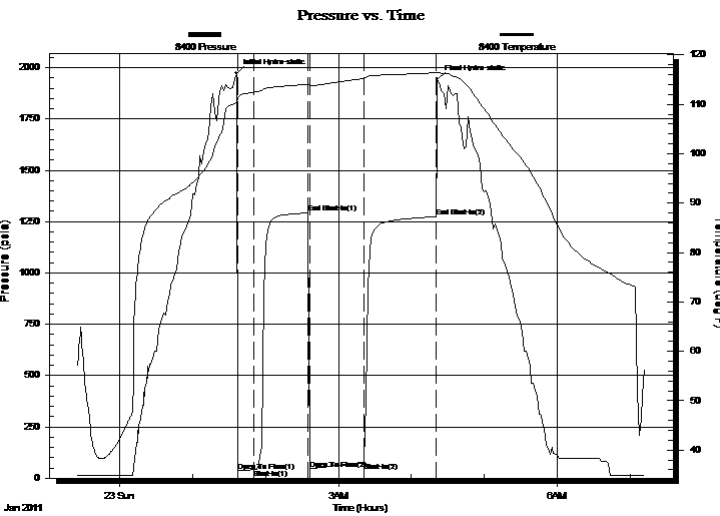
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16021 **DST#: 4**  
 Test Start: 2011.01.22 @ 23:25:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:36:06  
 Time Test Ended: 07:12:06  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3320-GREAT BEND-50  
 Interval: **3888.00 ft (KB) To 3896.00 ft (KB) (TVD)**  
 Reference Elevations: 2018.00 ft (KB)  
 Total Depth: 3896.00 ft (KB) (TVD) 2007.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

**Serial #: 8400 Outside**  
 Press@RunDepth: 1273.83 psia @ 3893.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.22 End Date: 2011.01.23 Last Calib.: 2011.01.23  
 Start Time: 23:25:00 End Time: 07:13:00 Time On Btm: 2011.01.23 @ 01:36:00  
 Time Off Btm: 2011.01.23 @ 04:21:30

**TEST COMMENT:** 15/INITIAL OPEN:WEAK BUT BUILDING BLOW BUILT 5 INCHES INTO WATER IN 15 MINUTES  
 45/INITIAL SHUT IN:NO BLOW BACK  
 45/FINAL OPEN:FAIR BLOW BUILT BOTTOM OF BUCKET IN 20 MINUTES  
 60/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1973.24	110.50	Initial Hydro-static
1	35.57	111.27	Open To Flow (1)
14	40.60	112.47	Shut-In(1)
59	1291.93	114.10	End Shut-In(1)
61	44.55	113.80	Open To Flow (2)
105	75.24	115.27	Shut-In(2)
164	1273.83	116.39	End Shut-In(2)
166	1942.32	116.45	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
420.00	GAS IN PIPE	3.53
130.00	CLEAN GASSEY OIL 10%GAS 90%Oil	1.82
0.00		0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16021      **DST#: 4**  
 Test Start: 2011.01.22 @ 23:25:00

**Tool Information**

Drill Pipe:	Length: 3629.00 ft	Diameter: 3.80 inches	Volume: 50.91 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 259.00 ft	Diameter: 2.25 inches	Volume: 1.27 bbl	Weight to Pull Loose:	90000.00 lb
			<u>Total Volume: 52.18 bbl</u>	Tool Chased	5.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial	75000.00 lb
Depth to Top Packer:	3888.00 ft			Final	76000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	8.00 ft				
Tool Length:	37.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3860.00	
Shut-In Tool	5.00			3865.00	
Hydraulic Tool	5.00			3870.00	
Jars	6.00			3876.00	
Safety Joint	2.00			3878.00	
Packer	5.00			3883.00	29.00      Bottom Of Top Packer
Packer	5.00			3888.00	
Perforations	3.00			3891.00	
Recorder	1.00	8405	Inside	3892.00	
Recorder	1.00	8400	Outside	3893.00	
Bullnose	3.00			3896.00	8.00      Bottom Packers & Anchor

**Total Tool Length: 37.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16021      **DST#: 4**  
 Test Start: 2011.01.22 @ 23:25:00

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 69.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.40 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 7700.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
420.00	GAS IN PIPE	3.532
130.00	CLEAN GASSEY OIL 10%GAS 90%OIL	1.824
0.00		0.000

Total Length: 550.00 ft      Total Volume: 5.356 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: TOOL CHASED 5 FEET TO BOTTOM

Serial #: 8405

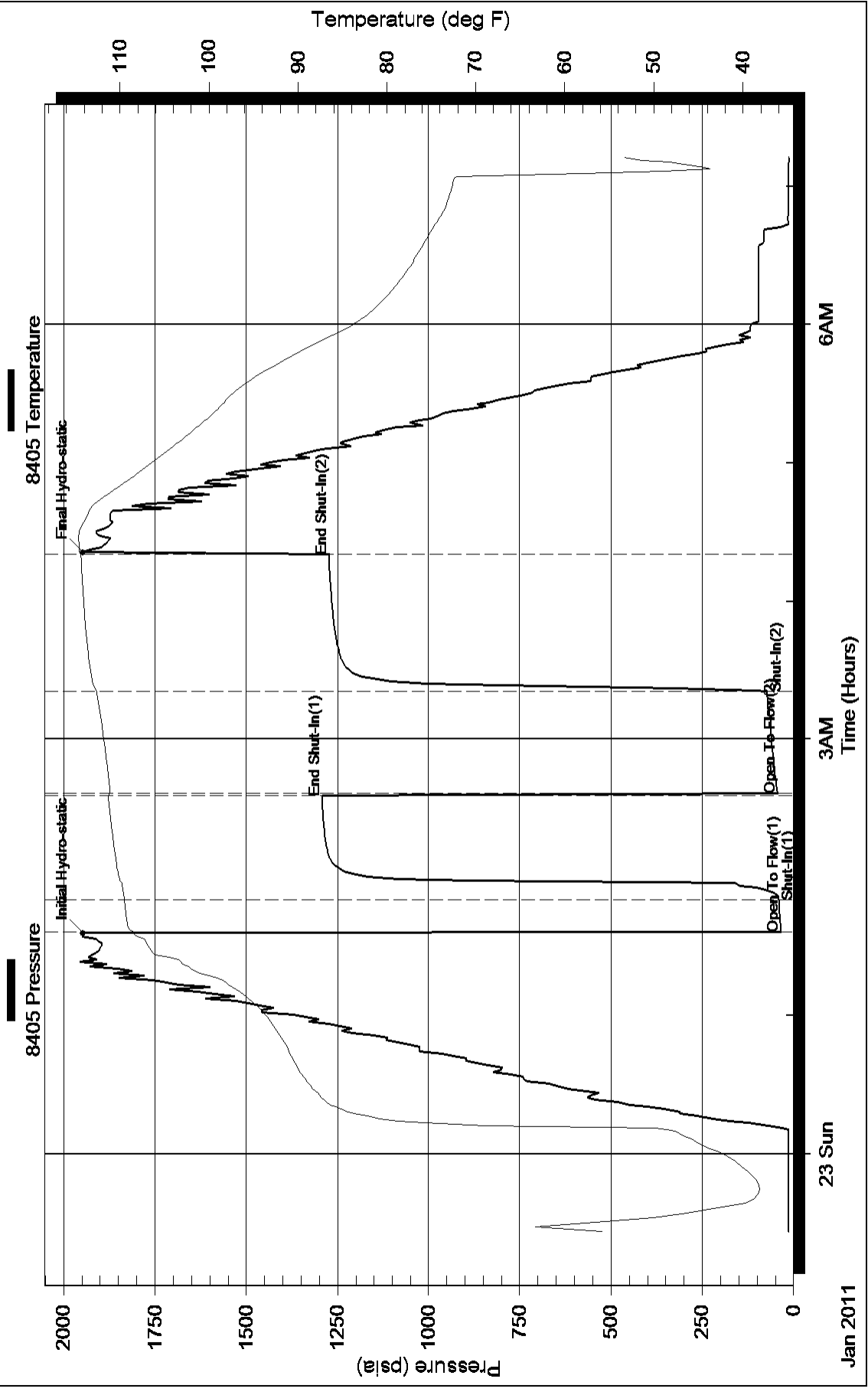
Inside

Captiva

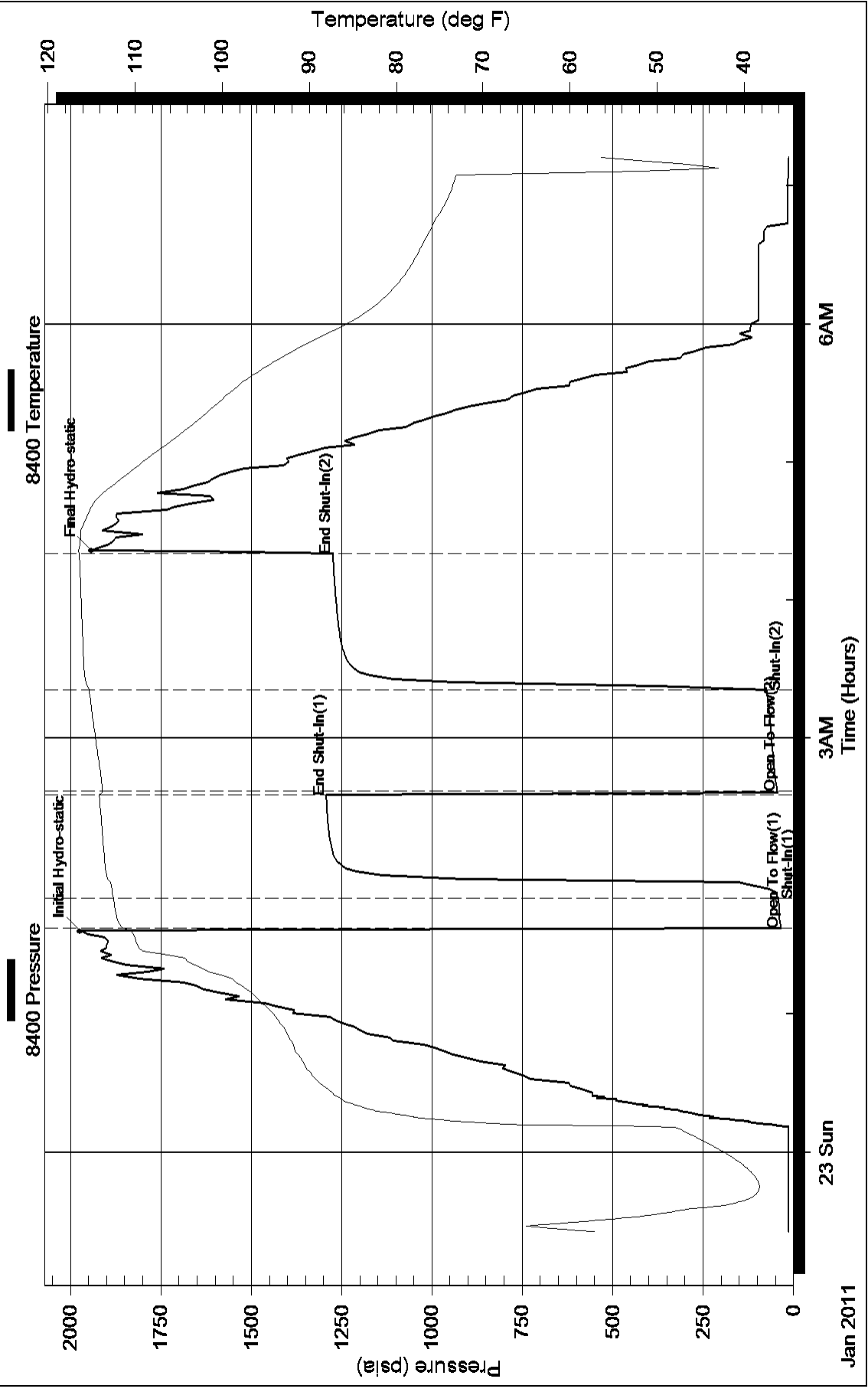
7/22S/16W Paw nee

DST Test Number: 4

### Pressure vs. Time



### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Captiva**

2717 Canal Blvd. Suite C  
Hays Kansas 67601

ATTN: Charlie Sturdavant

**7/22S/16W Pawnee**

**Eakin Unit # 1-7**

Start Date: 2011.01.23 @ 14:45:00

End Date: 2011.01.23 @ 22:19:35

Job Ticket #: 16022                      DST #: 5

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2011.01.23 @ 22:46:38

Captiva  
Eakin Unit # 1-7  
7/22S/16W Pawnee  
DST # 5  
ARBCKLE  
2011.01.23



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

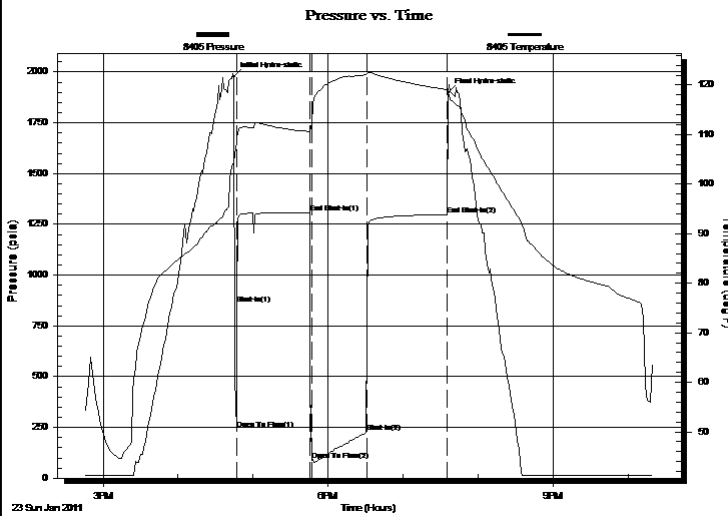
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16022 **DST#: 5**  
 Test Start: 2011.01.23 @ 14:45:00

## GENERAL INFORMATION:

Formation: **ARBCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 16:46:35 Tester: JARED SCHECK  
 Time Test Ended: 22:19:35 Unit No: 3320-GREAT BEND-50  
 Interval: **3897.00 ft (KB) To 3906.00 ft (KB) (TVD)** Reference Elevations: 2018.00 ft (KB)  
 Total Depth: 3906.00 ft (KB) (TVD) 2007.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 11.00 ft

**Serial #: 8405 Inside**  
 Press@RunDepth: 224.23 psia @ 3902.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.23 End Date: 2011.01.23 Last Calib.: 2011.01.23  
 Start Time: 14:45:00 End Time: 22:19:35 Time On Btm: 2011.01.23 @ 16:44:35  
 Time Off Btm: 2011.01.23 @ 19:36:05

**TEST COMMENT:** 15/INITIAL OPEN:WEAK BLOW BUILT 2 1/4 INCHES INTO BUCKET WATER DIED OFF AFTER 8 MINUTES  
 45/INITIAL SHUT IN :NO BLOW BACK  
 45/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET WATER IN 2 MINUTES  
 60/FINAL SHUT IN:BLOW BACK BOTTOM OF BUCKET



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1977.50	104.27	Initial Hydro-static
2	242.44	108.37	Open To Flow (1)
3	857.88	109.55	Shut-In(1)
61	1306.46	110.63	End Shut-In(1)
62	88.09	112.30	Open To Flow (2)
106	224.23	122.08	Shut-In(2)
171	1298.11	119.08	End Shut-In(2)
172	1897.72	118.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	SLIGHTLEY GASSEY MUD CUT OIL	0.30
0.00	2%GAS 10%MUD 88%OIL	0.00
420.00	CLEAN GASSY OIL 15%GAS 85%OIL	4.08
0.00	2280 GAS IN PIPE	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

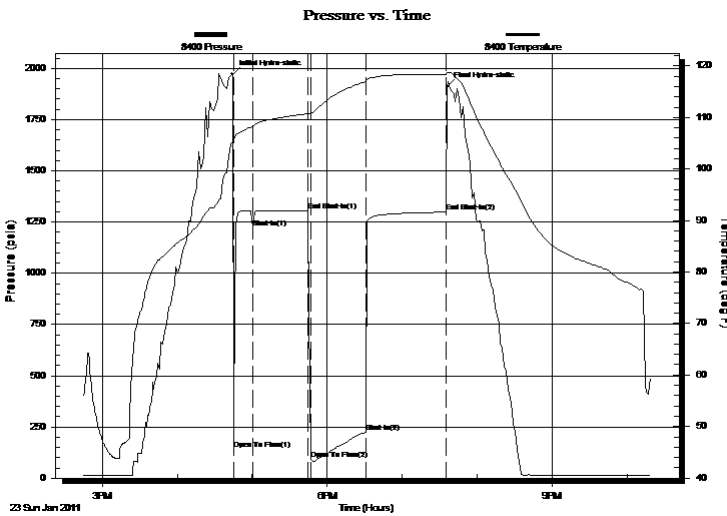
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16022      **DST#: 5**  
 Test Start: 2011.01.23 @ 14:45:00

## GENERAL INFORMATION:

Formation: **ARBCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 16:46:35  
 Tester: JARED SCHECK  
 Time Test Ended: 22:19:35  
 Unit No: 3320-GREAT BEND-50  
 Interval: **3897.00 ft (KB) To 3906.00 ft (KB) (TVD)**  
 Reference Elevations: 2018.00 ft (KB)  
 Total Depth: 3906.00 ft (KB) (TVD) 2007.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 11.00 ft

**Serial #: 8400 Outside**  
 Press@RunDepth: 1298.55 psia @ 3903.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.23 End Date: 2011.01.23 Last Calib.: 2011.01.23  
 Start Time: 14:45:00 End Time: 22:19:30 Time On Btm: 2011.01.23 @ 16:44:00  
 Time Off Btm: 2011.01.23 @ 19:36:00

**TEST COMMENT:** 15/INITIAL OPEN:WEAK BLOW BUILT 2 1/4 INCHES INTO BUCKET WATER DIED OFF AFTER 8 MINUTES  
 45/INITIAL SHUT IN :NO BLOW BACK  
 45/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET WATER IN 2 MINUTES  
 60/FINAL SHUT IN:BLOW BACK BOTTOM OF BUCKET



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1970.70	105.15	Initial Hydro-static
1	142.67	105.27	Open To Flow (1)
17	1221.15	108.20	Shut-In(1)
61	1306.91	110.75	End Shut-In(1)
63	91.27	110.55	Open To Flow (2)
107	226.23	116.99	Shut-In(2)
171	1298.55	118.27	End Shut-In(2)
172	1910.99	118.67	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	SLIGHTLEY GASSEY MUD CUT OIL	0.30
0.00	2%GAS 10%MUD 88%OIL	0.00
420.00	CLEAN GASSY OIL 15%GAS 85%OIL	4.08
0.00	2280 GAS IN PIPE	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16022      **DST#: 5**  
 Test Start: 2011.01.23 @ 14:45:00

**Tool Information**

Drill Pipe:	Length: 3629.00 ft	Diameter: 3.80 inches	Volume: 50.91 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 259.00 ft	Diameter: 2.25 inches	Volume: 1.27 bbl	Weight to Pull Loose:	86000.00 lb
			<u>Total Volume: 52.18 bbl</u>	Tool Chased	6.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	74000.00 lb
Depth to Top Packer:	3897.00 ft			Final	75500.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	9.00 ft				
Tool Length:	38.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: TOOL CHASED 6 FEET TO BOTTOM / 15 STANDS OUT OF HOLE HIT GAS/

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3869.00	
Shut-In Tool	5.00			3874.00	
Hydraulic Tool	5.00			3879.00	
Jars	6.00			3885.00	
Safety Joint	2.00			3887.00	
Packer	5.00			3892.00	29.00      Bottom Of Top Packer
Packer	5.00			3897.00	
Perforations	4.00			3901.00	
Recorder	1.00	8405	Inside	3902.00	
Recorder	1.00	8400	Outside	3903.00	
Bullnose	3.00			3906.00	9.00      Bottom Packers & Anchor

**Total Tool Length: 38.00**



# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16022      **DST#: 5**  
 Test Start: 2011.01.23 @ 14:45:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 48 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.80 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psia	
Salinity: 7400.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	SLIGHTLEY GASSEY MUD CUT OIL	0.295
0.00	2%GAS 10%MUD 88%OIL	0.000
420.00	CLEAN GASSY OIL 15%GAS 85%OIL	4.079
0.00	2280 GAS IN PIPE	0.000

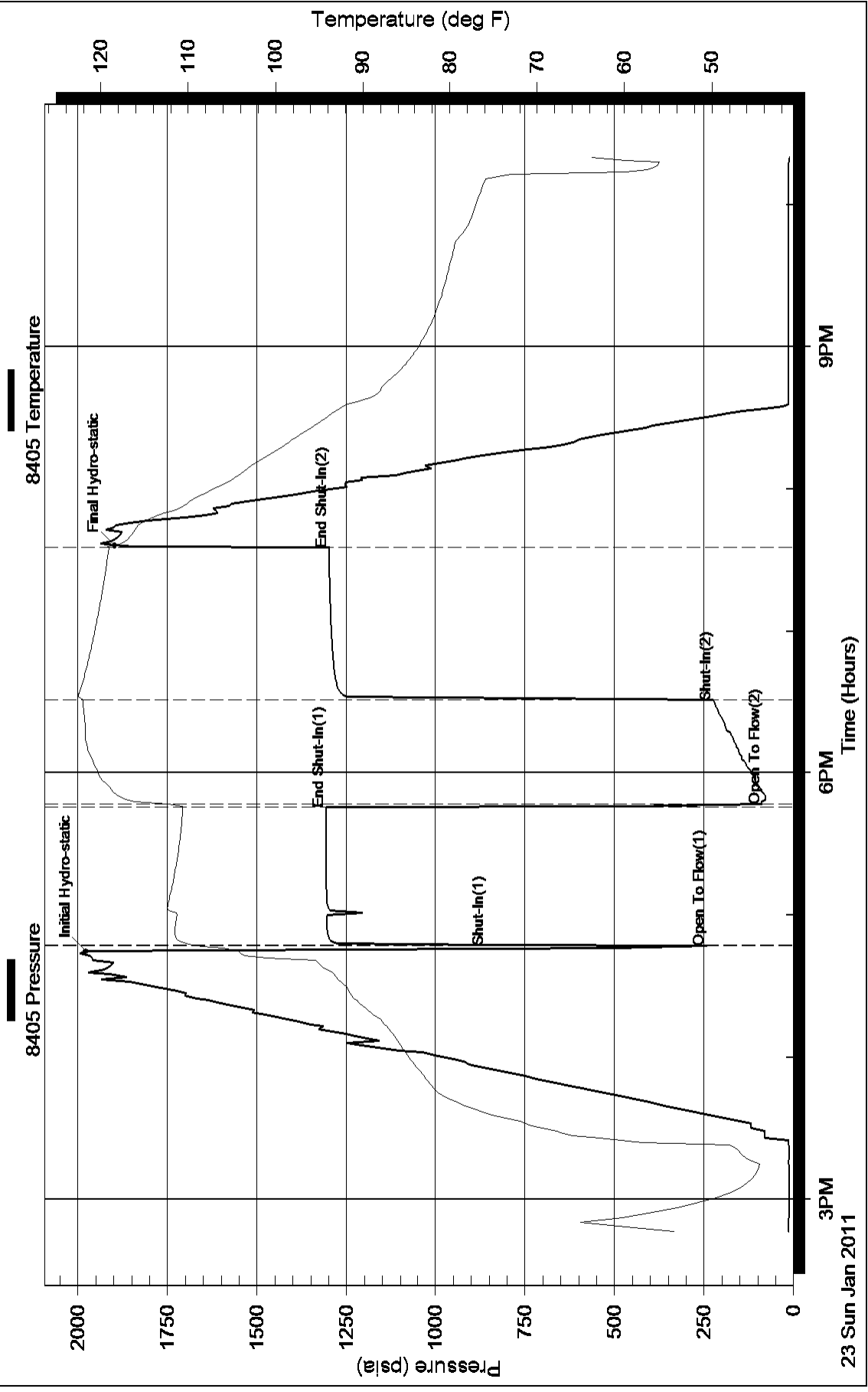
Total Length: 480.00 ft      Total Volume: 4.374 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: TOOL CHASED 6 FEET TO BOTTOM / 15 STANDS OUT OF HOLE HIT GAS/ GRAVITY OIL 48

### Pressure vs. Time



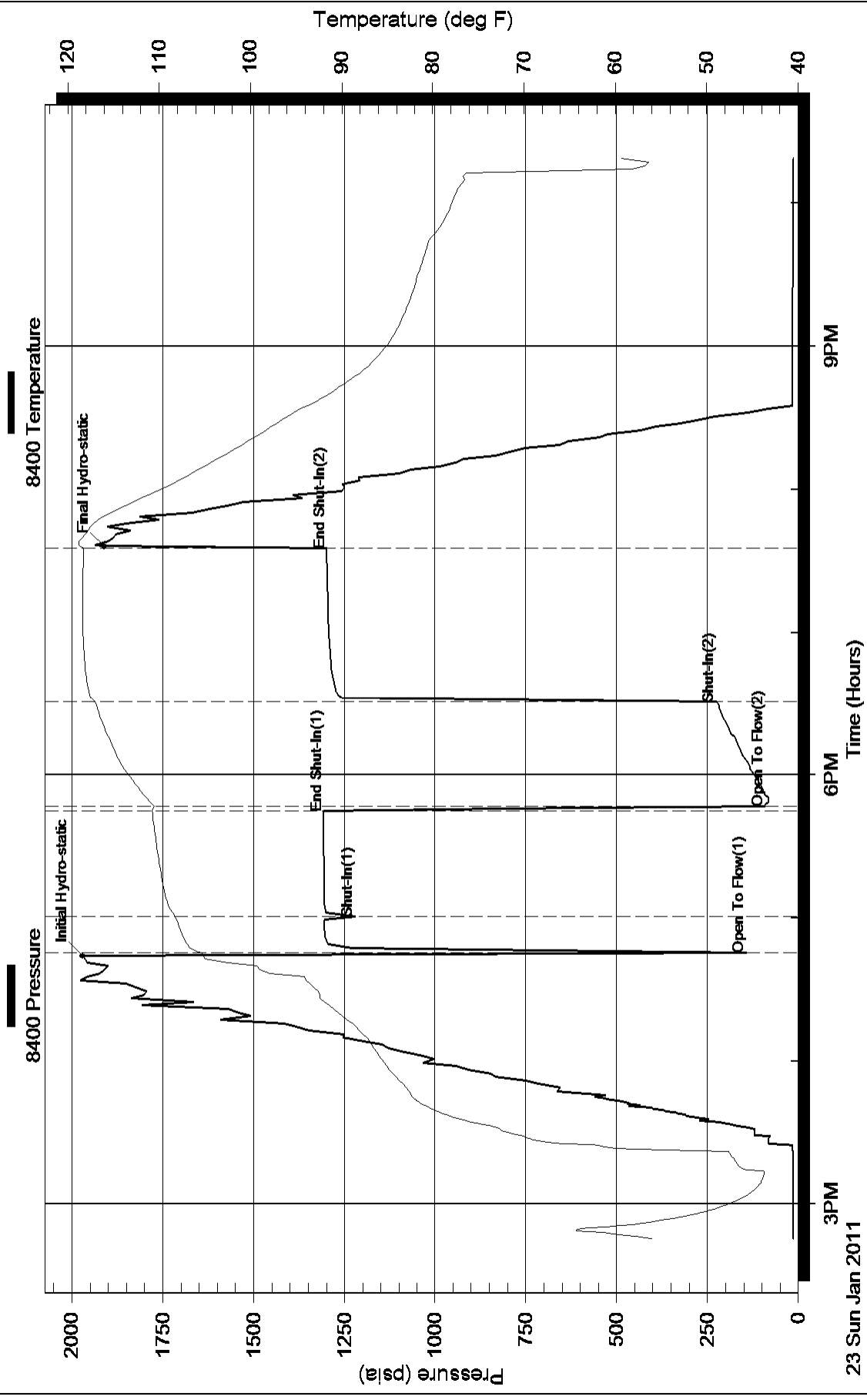
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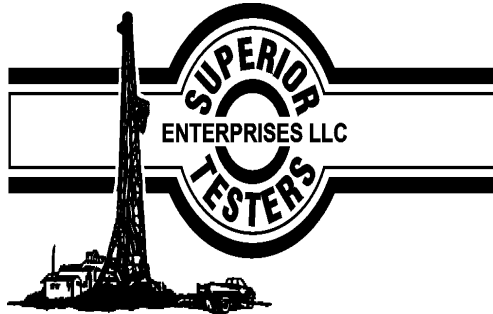
Outside Captiva

7/22S/16W Pawnee

DST Test Number: 5

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Captiva**

2717 Canal Blvd. Suite C  
Hays Kansas 67601

ATTN: Charlie Sturdavant

**7/22S/16W Pawnee**

**Eakin Unit # 1-7**

Start Date: 2011.11.23 @ 19:23:00

End Date: 2011.11.24 @ 02:57:35

Job Ticket #: 16023                      DST #: 6

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2011.01.25 @ 03:30:15





# DRILL STEM TEST REPORT

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

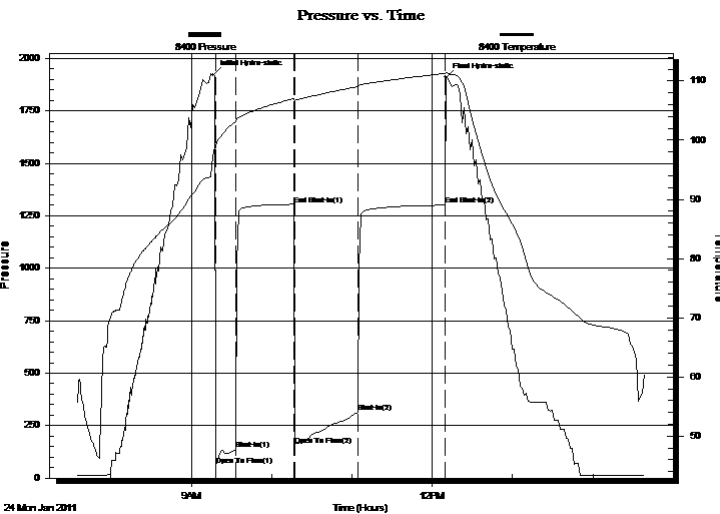
**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16023 **DST#: 6**  
 Test Start: 2011.11.23 @ 19:23:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:34:05  
 Time Test Ended: 02:57:35  
 Interval: **3910.00 ft (KB) To 3918.00 ft (KB) (TVD)**  
 Total Depth: 3918.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3345-GREAT BEND-50  
 Reference Elevations: 2018.00 ft (KB)  
 2007.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8400 Outside**  
 Press@RunDepth: 1300.66 psia @ 3915.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2011.01.24 End Date: 2011.01.24 Last Calib.: 2011.01.25  
 Start Time: 07:35:00 End Time: 14:39:00 Time On Btm: 2011.01.24 @ 09:16:30  
 Time Off Btm: 2011.01.24 @ 12:10:00

**TEST COMMENT:** 15/INITIAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 2 MINUTES  
 45/INITIAL SHUT IN:BOTTOOM OF BUCKET  
 45/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 2 MINUTES  
 60/FINAL SHUT IN:BOTTOOM OF BUCKET BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1920.94	97.83	Initial Hydro-static
2	60.09	98.81	Open To Flow (1)
17	136.28	103.10	Shut-In(1)
60	1304.82	107.00	End Shut-In(1)
61	159.03	106.72	Open To Flow (2)
108	313.27	109.03	Shut-In(2)
173	1300.66	111.31	End Shut-In(2)
174	1910.08	111.47	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Oil Cut Muddy Water	0.59
0.00	5%Gas 10%Oil 30%Mud 55%Water	0.00
60.00	Oil and Gas cut muddy w ater	0.30
0.00	10%Gas 10%Oil 30%Mud 50%Water	0.00
60.00	Clean gassy oil 15% gas 85%Oil	0.30
550.00	Clean Gassy Oil 10%Gas 90% Oil	7.54

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16023 **DST#: 6**  
 Test Start: 2011.11.23 @ 19:23:00

**Tool Information**

Drill Pipe:	Length: 3629.00 ft	Diameter: 3.80 inches	Volume: 50.91 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 259.00 ft	Diameter: 2.25 inches	Volume: 1.27 bbl	Weight to Pull Loose:	105000.0 lb
			<u>Total Volume: 52.18 bbl</u>	Tool Chased	6.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial	74000.00 lb
Depth to Top Packer:	3910.00 ft			Final	76000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	8.00 ft				
Tool Length:	37.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: chased tool 6 feet to bottom

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3882.00	
Shut-In Tool	5.00			3887.00	
Hydraulic Tool	5.00			3892.00	
Jars	6.00			3898.00	
Safety Joint	2.00			3900.00	
Packer	5.00			3905.00	29.00 Bottom Of Top Packer
Packer	5.00			3910.00	
Perforations	3.00			3913.00	
Recorder	1.00	8405	Inside	3914.00	
Recorder	1.00	8400	Outside	3915.00	
Bullnose	3.00			3918.00	8.00 Bottom Packers & Anchor

**Total Tool Length: 37.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Captiva  
 2717 Canal Blvd. Suite C  
 Hays Kansas 67601  
 ATTN: Charlie Sturdavant

**Eakin Unit # 1-7**  
**7/22S/16W Pawnee**  
 Job Ticket: 16023      **DST#: 6**  
 Test Start: 2011.11.23 @ 19:23:00

### Mud and Cushion Information

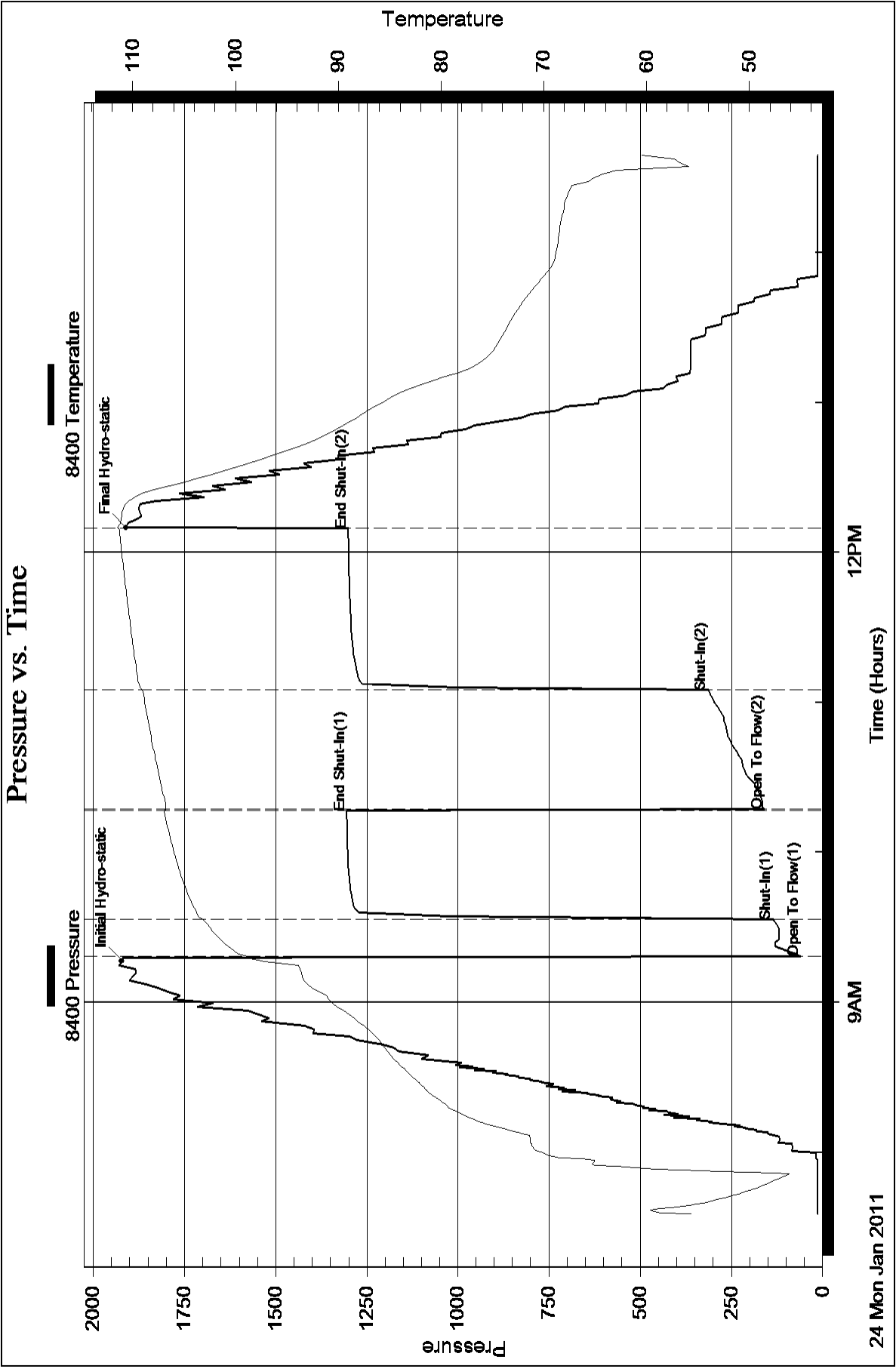
Mud Type: Gel Chem	Cushion Type:	Oil API: 47 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.77 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psia	
Salinity: 7400.00 ppm		
Filter Cake: 1.00 inches		

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Oil Cut Muddy Water	0.590
0.00	5%Gas 10%Oil 30%Mud 55%Water	0.000
60.00	Oil and Gas cut muddy water	0.295
0.00	10%Gas 10%Oil 30%Mud 50%Water	0.000
60.00	Clean gassy oil 15% gas 85%Oil	0.295
550.00	Clean Gassy Oil 10%Gas 90% Oil	7.542
0.00	2880 Gas in the pipe	0.000
0.00	Chlorides 18000	0.000
0.00	Resistivity .2 @ 78000	0.000
0.00	Gravity 47 Corrected	0.000

Total Length: 790.00 ft      Total Volume: 8.722 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: chased tool 6 feet to boottom



Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

November 11, 2011

Chris Gottschalk  
Shelby Resources LLC  
445 Union Boulevard  
Suite 208  
LAKEWOOD, CO 80228

Re: ACO1  
API 15-145-21625-00-00  
Eakin Unit #1-7  
SE/4 Sec.07-22S-16W  
Pawnee County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Chris Gottschalk

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

November 14, 2011

Chris Gottschalk  
Shelby Resources LLC  
445 Union Boulevard  
Suite 208  
LAKEWOOD, CO 80228

Re: ACO-1  
API 15-145-21625-00-00  
Eakin Unit #1-7  
SE/4 Sec.07-22S-16W  
Pawnee County, Kansas

Dear Chris Gottschalk:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 01/14/2011 and the ACO-1 was received on November 11, 2011 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department