



**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: \_\_\_\_\_



1082635

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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# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 129931

Invoice Date: Jan 17, 2012

Voice: (817) 546-7282

Fax: (817) 246-3361

Page: 1

C

**Bill To:**

Carrie Exploration & Development LLC  
210 West 22nd Street  
Hays, KS 67601

Federal Tax I.D.#: 20-8651475

Customer ID	Well Name# or Customer P.O.	Payment Terms	
Carrie	H-Roth #C-1	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-01	Great Bend	Jan 17, 2012	2/16/12

Quantity	Item	Description	Unit Price	Amount
200.00	MAT	Class A Common	16.25	3,250.00
4.00	MAT	Gel	21.25	85.00
7.00	MAT	Chloride	58.20	407.40
211.00	SER	Handling	2.25	474.75
10.00	SER	Mileage	23.21	232.10
1.00	SER	Surface	1,125.00	1,125.00
10.00	SER	Heavy Vehicle Mileage	7.00	70.00
10.00	SER	Light Vehicle Mileage	4.00	40.00
1.00	EQP	8 5/8 Wooden Plug	92.00	92.00
1.00	EQUIP OPER	Bobby Roller		
1.00	OPER ASSIST	Dustin Chambers		
1.00	OPER ASSIST	Jonathon Ploutz		

pd  
1-29-12  
#  
3014

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

\$1257.88

ONLY IF PAID ON OR BEFORE  
Feb 11, 2012

Subtotal	5,776.25
Sales Tax	279.91
Total Invoice Amount	6,056.16
Payment/Credit Applied	
<b>TOTAL</b>	<b>6,056.16</b>

479828



# ALLIED CEMENTING CO., LLC. 042363

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Great Bend KS

DATE <u>1-17-12</u>	SEC. <u>25</u>	TWP. <u>19</u>	RANGE <u>11</u>	CALLED OUT	ON LOCATION	JOB START <u>1145 am</u>	JOB FINISH <u>1215 pm</u>
LEASE <u>H-Roth</u>		WELL # <u>C-1</u>	LOCATION <u>Ellinwood Xs East on 56 to</u>			COUNTY <u>Barton</u>	STATE <u>KS</u>
OLD OR <u>NEW</u> (Circle one)			<u>County line 1 3/4 north west into</u>				

CONTRACTOR <u>Southward Ry #6</u>	OWNER <u>Carve Explorations</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>260</u>
CASING SIZE <u>8 5/8 20#</u>	DEPTH <u>256</u>
TUBING SIZE	DEPTH
DRILL PIPE <u>4 1/2</u>	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <u>15BT</u>	
PERFS.	
DISPLACEMENT <u>Freshwater</u>	
EQUIPMENT	
PUMP TRUCK CEMENTER <u>Bob Roller</u>	
# <u>366</u>	HELPER <u>Dustin C.</u>
BULK TRUCK	
# <u>341</u>	DRIVER <u>Jan P.</u>
BULK TRUCK	
#	DRIVER

CEMENT	
AMOUNT ORDERED <u>200 sq Com 3% cc</u>	
<u>2% gel</u>	

COMMON	<u>200</u>	@	<u>16.25</u>	<u>3250.00</u>
POZMIX		@		
GEL	<u>4</u>	@	<u>21.25</u>	<u>85.00</u>
CHLORIDE	<u>7</u>	@	<u>58.20</u>	<u>407.40</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>211</u>	@	<u>2.25</u>	<u>474.75</u>
MILEAGE	<u>211 x 10 x .11</u>			<u>232.10</u>
				TOTAL <u>4,449.25</u>

REMARKS:

Pipe on bottom break circulation with reg mud. Mix 200 sq Com 3% cc 2% gel shut down Release plug change valves displace with 15.25 bbl Freshwater and shut in.  
Cement did circulate

SERVICE

DEPTH OF JOB	<u>256</u>		
PUMP TRUCK CHARGE			<u>1125.00</u>
EXTRA FOOTAGE		@	
MILEAGE <u>Hvm</u>	<u>10</u>	@	<u>70.00</u>
MANIFOLD		@	
	<u>HVM</u>	<u>10</u>	@ <u>4.00</u> <u>40.00</u>

CHARGE TO: Carve Explorations  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TOTAL 1235.00

PLUG & FLOAT EQUIPMENT

<u>wooden plug</u>	@	<u>92.00</u>	<u>92.00</u>
	@		
	@		
	@		
	@		
TOTAL <u>92.00</u>			

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME & Wesley Pfaff  
SIGNATURE & Wesley Pfaff  
Wesley Pfaff

SALES TAX (If Any)	
TOTAL CHARGES	<u>5,776.25</u>
DISCOUNT	<u>50% 20% 1,326.30</u>
IF PAID IN 30 DAYS	
<u>4,449.95</u>	



# BASIC

energy services, L.P.

## TREATMENT REPORT

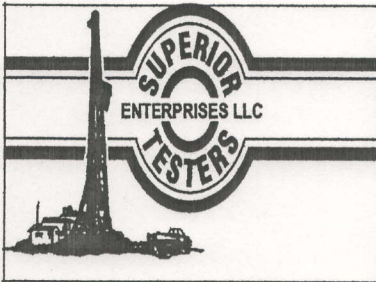
Customer	CARRIE EXPLORATION	Lease No.		Date	1-24-2012		
Lease	H-ROTH	Well #	C-1				
Field Order #	4627	Station	PRATT, Ks.	Casing	5 1/2"	Depth	
Type Job	CNW-5 1/2" L.S.		Formation	TD-3438'		Legal Description	25-19-11
				County	BARTON	State	Ks.

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME			
Casing Size	5 1/2" x 14"	Tubing Size		Shots/Ft	CMT- Acid	7255SKS AA2	RATE	PRESS	ISIP
Depth	3420'	Depth		From	To	Pre Pad	Max		5 Min.
Volume	83.44 BBL	Volume		From	To	Pad	Min		10 Min.
Max Press	1500	Max Press		From	To	Frac	Avg		15 Min.
Well Connection	P.C.	Annulus Vol.		From	To		HHP Used		Annulus Pressure
Plug Depth	3377.5'	Packer Depth		From	To	Flush	Gas Volume		Total Load

Customer Representative	RON HERALD	Station Manager	D. SCOTT	Treater	K. LESLEY
Service Units	37586	19907	33708	20920	
Driver Names	LESLEY	MAZOUZ			

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
9:00AM					ON LOCATION - SAFETY MEETING
10:45AM					RUN JTS. 5 1/2" x 14" CSG.
					TURBOLIZER - 1, 2, 3, 4, 6, 8, 10, 43
					BASKET - TOP OF #4 @ 42
					PORT COLLAR - TOP OF #4 @ 42
1:00PM					CSG. ON BOTTOM
1:05PM					HOOK UP TO CSG. / BREAK CIRC. W/ RIG
2:04PM	350		20	6	20% KCL H <sub>2</sub> O AHEAD
2:07PM	300		12	6	MUD FLUSH
2:09PM	250		5	6	H <sub>2</sub> O SPACER
2:10PM	200		31	6	MIX 1255SKS AA-2 @ 15.3 PPG
2:15PM					WASH PUMP & LINE / DROP T.R. PLUG
2:18PM	0		0	7	START DISPLACEMENT
2:27PM	300		60	6	LIFT PRESSURE
2:37PM	700		70	5	SLOW RATE
2:40PM	1500		82.4	4	PLUG DOWN - HELD
					CIRC. THRU JWB
					PLUG R.H.
					JOB COMPLETE,
					THANKS -
					KEVEN LESLEY





# DRILL STEM TEST REPORT

Carrie Exploration & Development  
 210 W 22nd Street Hays KS 67601  
 ATTN: Herb Deines

**25-19-11w Barton**  
**H. Roth #c-1**  
 Job Ticket: 18730      **DST#: 1**  
 Test Start: 2012.01.22 @ 12:35:00

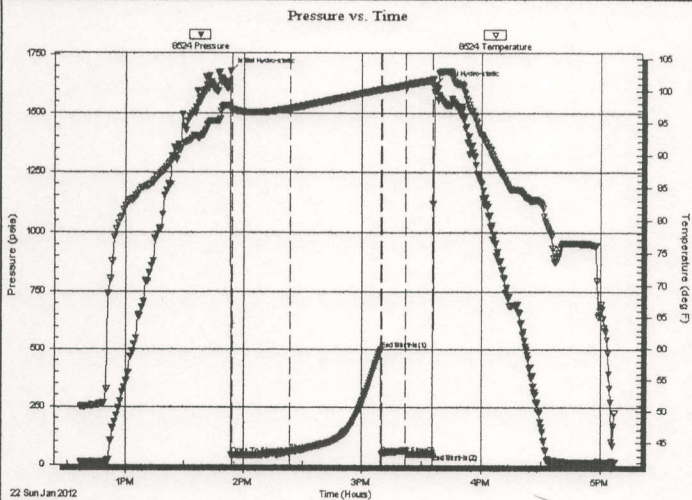
## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 13:54:30  
 Time Test Ended: 17:07:30  
 Interval: **3277.00 ft (KB) To 3311.00 ft (KB) (TVD)**  
 Total Depth: 3311.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jared Scheck  
 Unit No: 3320-GB-  
 Reference Elevations: 1779.00 ft (KB)  
 1771.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8524

Press@RunDepth: 59.85 psia @      ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2012.01.22      End Date: 2012.01.22      Last Calib.: 2012.01.22  
 Start Time: 12:35:00      End Time: 17:07:30      Time On Btm: 2012.01.22 @ 13:53:30  
 Time Off Btm: 2012.01.22 @ 15:36:30

**TEST COMMENT:** 1st Opening 30 Minutes-Weak surface blow built 3/4 inch into water stayed steady throughout open  
 1st Shut-in 45 Minutes-No blow back  
 2nd Opening 20 Minutes-Weak surge did not build flushed tool good surge did not build  
 2nd Shut-in 10 Minutes- No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1676.30	97.40	Initial Hydro-static
1	39.72	97.01	Open To Flow (1)
30	55.95	97.23	Shut-In(1)
76	501.45	100.22	End Shut-In(1)
77	45.30	100.21	Open To Flow (2)
88	59.85	100.89	Shut-In(2)
102	47.47	101.66	End Shut-In(2)
103	1618.83	100.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud spot oil 99% mud 1% oil	0.07

## Gas Rates

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



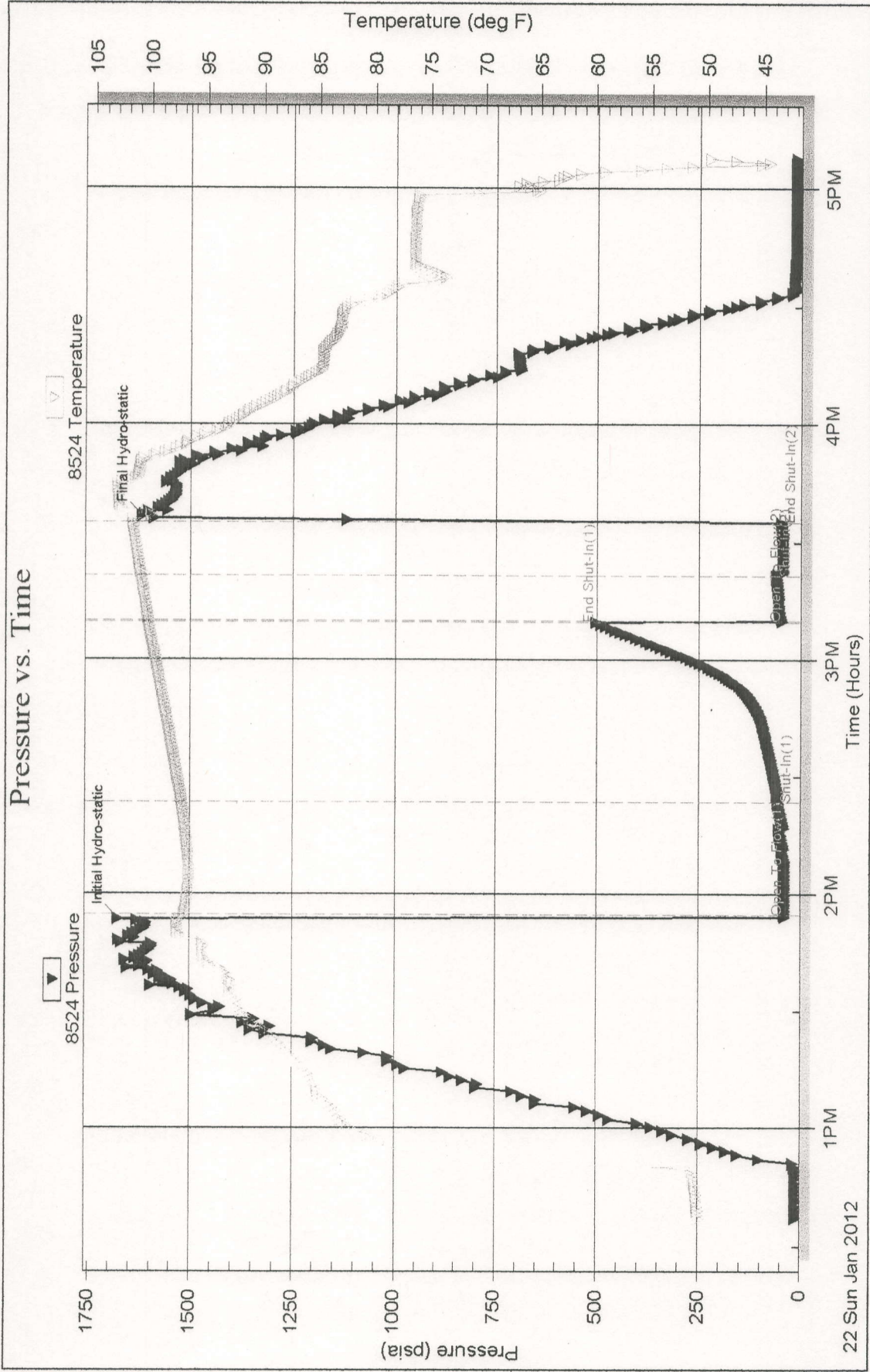
Serial #: 8524

Carrie Exploration & Development

H. Roth #c-1

DST Test Number: 1

### Pressure vs. Time

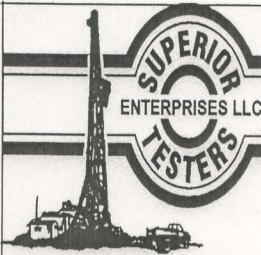


Printed: 2012.01.22 @ 17:23:04

Ref. No: 18730

Superior Testers Enterprises LLC





# DRILL STEM TEST REPORT

Carrie Exploration & Development  
 210 W 22nd Street Hays KS 67601  
 ATTN: Herb Deines

**25-19-11w Barton**  
**H. Roth #c-1**  
 Job Ticket: 18731      **DST#: 2**  
 Test Start: 2012.01.23 @ 11:30:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 12:56:00  
 Time Test Ended: 17:03:30

Test Type: Conventional Straddle (Initial)  
 Tester: Jared Scheck  
 Unit No: 3320-GB- 40

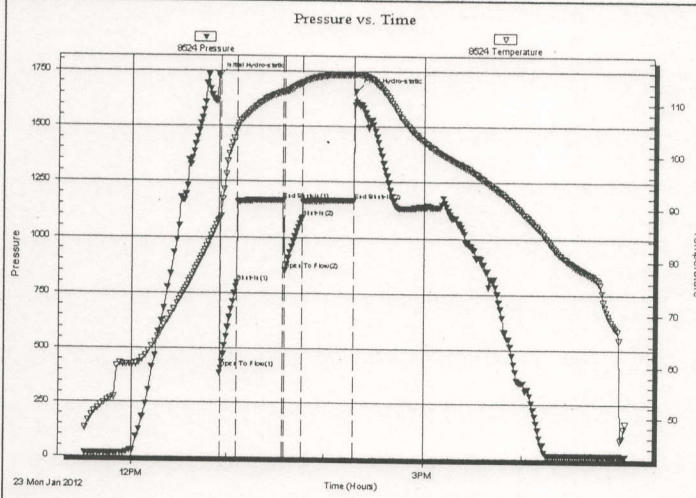
Interval: **3310.00 ft (KB) To 3335.00 ft (KB) (TVD)**  
 Total Depth: 3438.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair

Reference Elevations: 1779.00 ft (KB)  
 1771.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8524

Press@RunDepth: 1086.80 psia @ 3438.00 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2012.01.23      End Date: 2012.01.23      Last Calib.: 2012.01.24  
 Start Time: 11:30:00      End Time: 17:03:30      Time On Btm: 2012.01.23 @ 12:55:00  
 Time Off Btm: 2012.01.23 @ 14:19:00

TEST COMMENT: 1st Opening 10 Minutes-Strong blow built bottom of bucket less then 1 minute  
 1st Shut-in 30 Minutes-Very weak surface blow died off  
 2nd Opening 10 Minutes-Strong blow built bottom of bucket in less then 1 minute  
 2nd Shut-in 30 Minutes-No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1721.14	87.67	Initial Hydro-static
10	410.37	88.00	Open To Flow (1)
30	11	795.56	Shut-In(1)
40	1166.19	112.23	End Shut-In(1)
10	41	850.41	Open To Flow (2)
51	1086.80	113.94	Shut-In(2)
30	83	1164.71	End Shut-In(2)
84	1658.10	115.61	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2280.00	Water	31.98
0.00	Chlorides 23,000	0.00
0.00	Resistivity 20 @45 Degrees	0.00

## Gas Rates

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

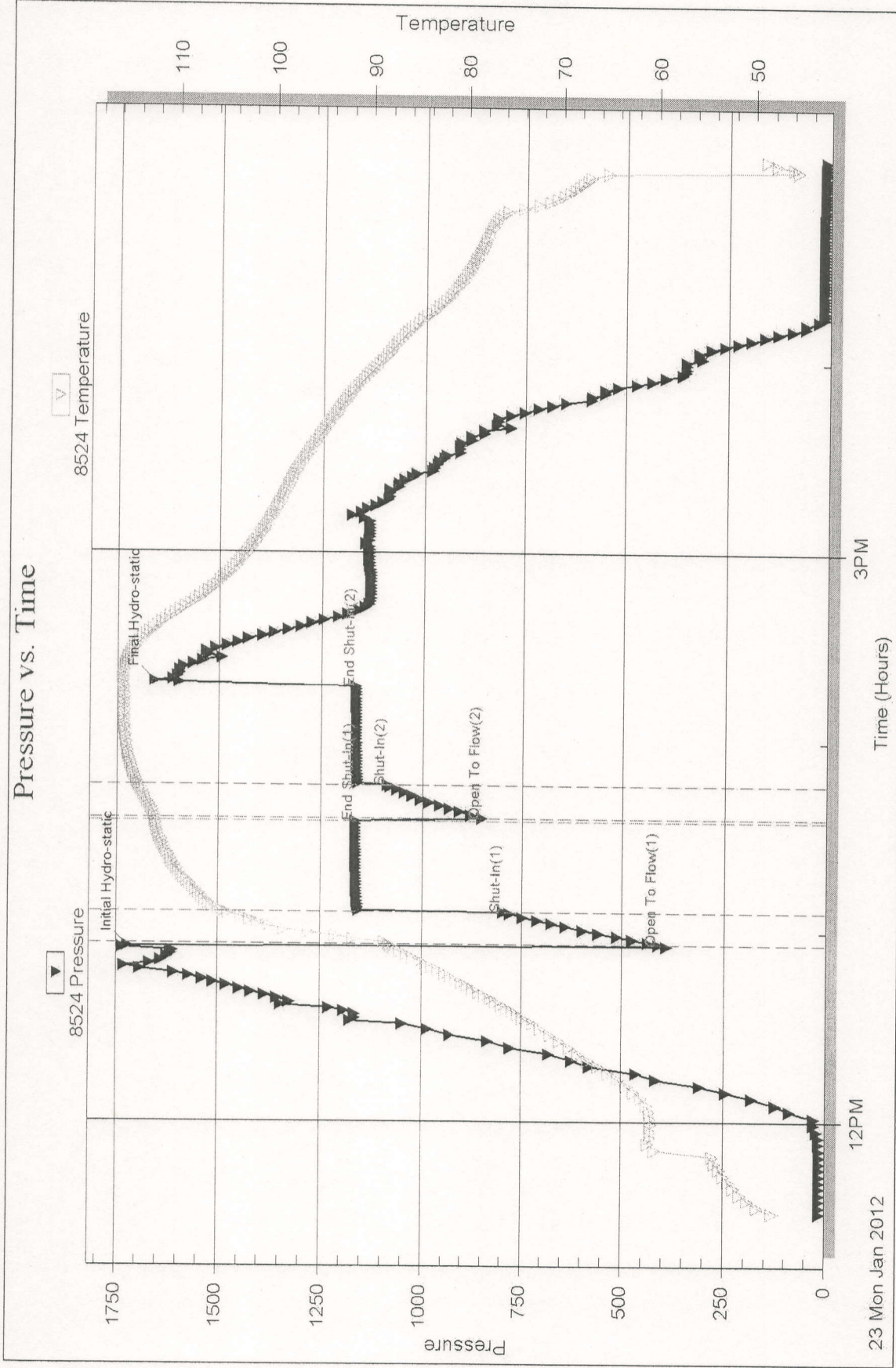


Serial #: 8524

Carrie Exploration & Development

H. Roth #c-1

DST Test Number: 2

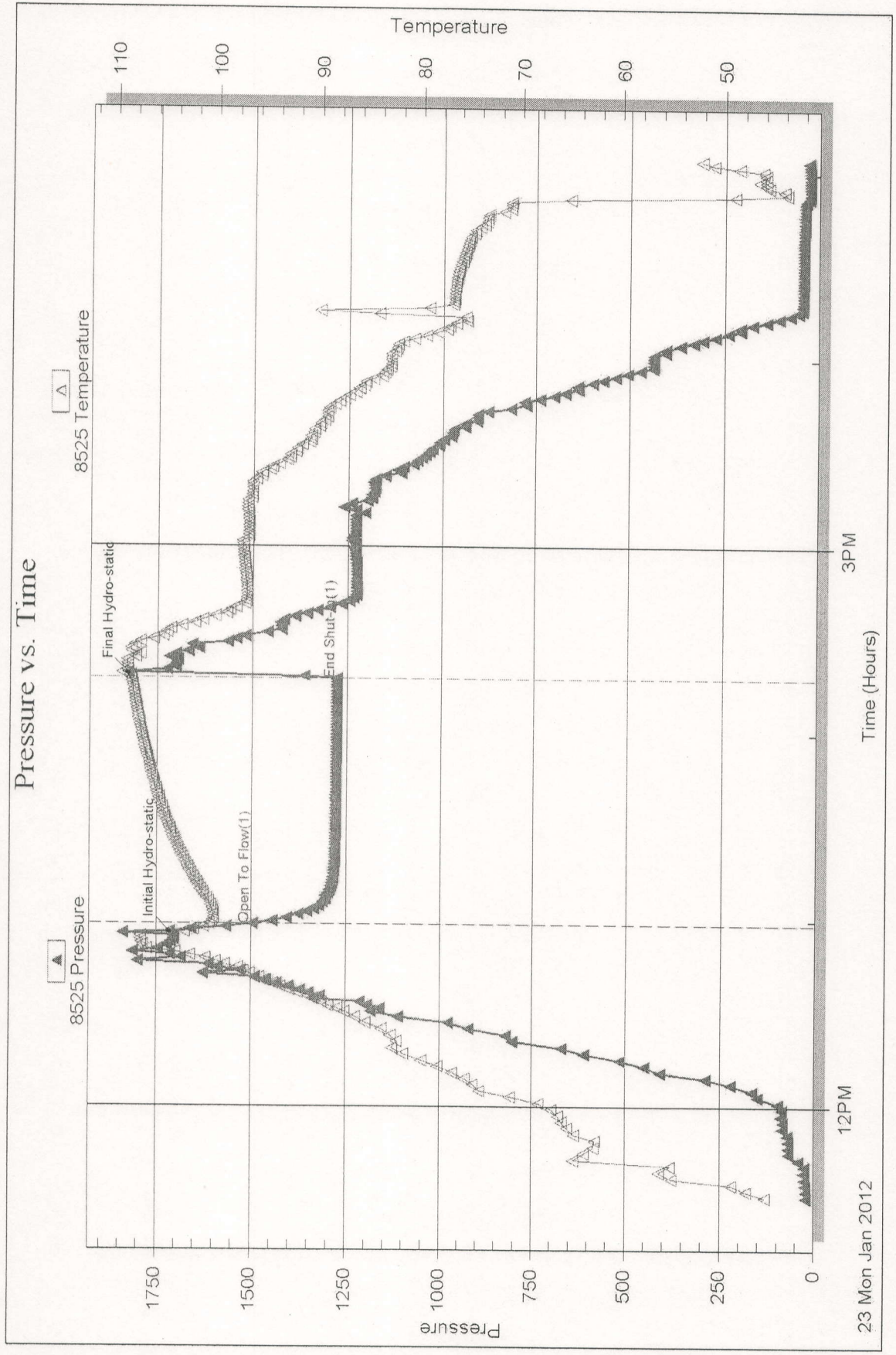


Serial #: 8525

Carrie Exploration & Development

H. Roth #c-1

DST Test Number: 2



Printed: 2012.01.24 @ 03:17:44

Ref. No: 18731

Superior Testers Enterprises LLC





# DRILL STEM TEST REPORT

Carrie Exploration & Development  
 210 W 22nd Street Hays KS 67601  
 ATTN: Herb Deines

**25-19-11w Barton**

**H. Roth #c-1**

Job Ticket: 18732

**DST#: 3**

Test Start: 2012.01.23 @ 17:57:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:26:00

Time Test Ended: 02:59:00

Interval: **3077.00 ft (KB) To 3438.00 ft (KB) (TVD)**

Total Depth: 3438.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Initial)

Tester: Jared Scheck

Unit No: 3320-GB-40

Reference Elevations: 1779.00 ft (KB)

1771.00 ft (CF)

KB to GR/CF: 8.00 ft

## Serial #: 8159

Press@RunDepth: 387.28 psia @ ft (KB)

Start Date: 2012.01.23

End Date:

2012.01.24

Start Time: 17:57:00

End Time:

02:59:00

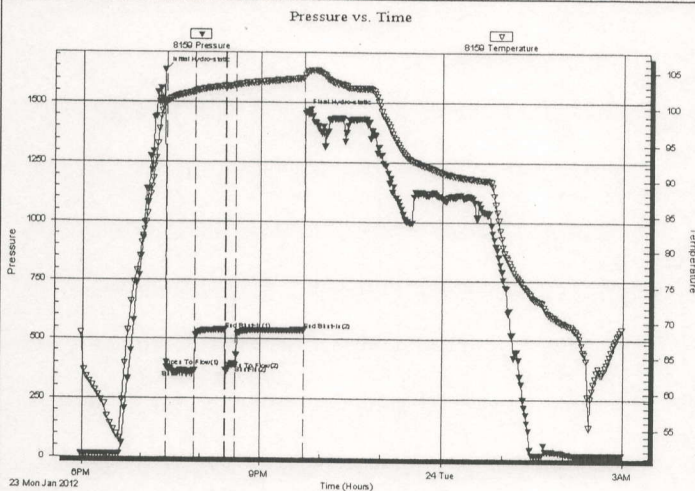
Capacity: 5000.00 psia

Last Calib.: 2012.01.24

Time On Btm: 2012.01.23 @ 19:24:00

Time Off Btm: 2012.01.23 @ 21:45:00

TEST COMMENT: 1st Opening 30 Minutes-Strong blow built bottom of bucket in 8 sec Gas to surface 8 minutes see gas report  
 1st Shut-in 30 Minutes-Yes blow back  
 2nd Opening 12 Minutes-Strong blow built bottom of bucket in 8 sec  
 2nd Shut-in 60 Minutes-Yes blow back



## PRESSURE SUMMARY

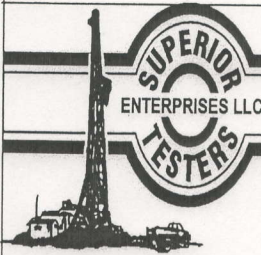
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1632.51	100.70	Initial Hydro-static
30 2	378.15	100.84	Open To Flow (1)
30 31	366.08	102.28	Shut-In(1)
30 61	538.39	103.06	End Shut-In(1)
10 62	365.44	103.01	Open To Flow (2)
10 72	387.28	103.19	Shut-In(2)
60 140	537.76	104.19	End Shut-In(2)
60 141	1455.93	104.55	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Gassy oil cut muddy water	0.84
0.00	10%gas 60%oil 30%mud 5%w ater	0.00
60.00	Muddy oil 10%gas 10%oil 80% mud	0.84
120.00	Mudy oil cut w ater	1.68
0.00	15%gas 15%oil 50%mud 205w ater	0.00
0.00	Chlorides 30,000	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	38.50	1106.83
Last Gas Rate	1.00	38.50	1106.83



# DRILL STEM TEST REPORT

GAS RATES

Carrie Exploration & Development  
210 W 22nd Street Hays KS 67601  
ATTN: Herb Deines

25-19-11w Barton  
H. Roth #c-1  
Job Ticket: 18732      DST#: 3  
Test Start: 2012.01.23 @ 17:57:00

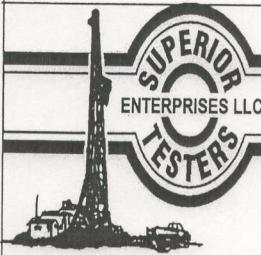
## Gas Rates Information

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)
1	30	1.00	38.50	1106.83
2	10	1.00	38.50	1106.83





# DRILL STEM TEST REPORT

GAS RATES

Carrie Exploration & Development  
210 W 22nd Street Hays KS 67601  
ATTN: Herb Deines

25-19-11w Barton  
H. Roth #c-1  
Job Ticket: 18732      DST#: 3  
Test Start: 2012.01.23 @ 17:57:00

## Gas Rates Information

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

Gas Rates Table

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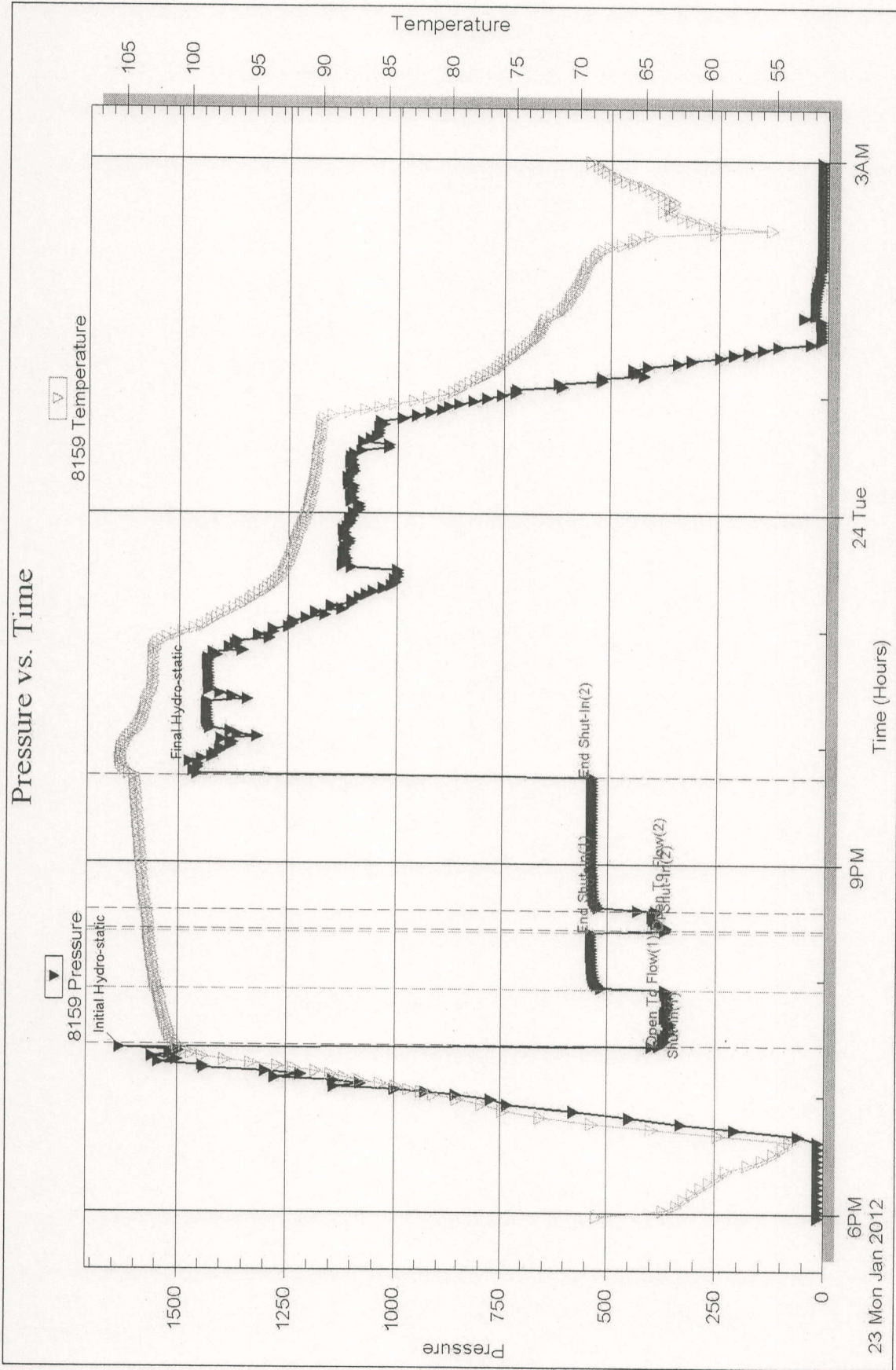
Serial #: 8159

Carrie Exploration & Development

H. Roth #c-1

DST Test Number: 3

### Pressure vs. Time





**HERB DENES**  
CONSULTING GEOLOGIST  
PH: 785-625-3880  
HAYS, KS 67601

108 W. 35th ST.

COMPANY: Cherokee Exploration & Development  
WELL: H. R. 274 #C-1  
FIELD: Chase-Silica STATE: Kansas

LOCATION: Barfield COUNTY: Barfield

LOGGING BY: DLG/FAL & 1900/FEL SEC: 25 TWP: 19S RGE: 11W KB: 177N DF: 177E GL: 177W

Log Tech: DLG/FAL & 1900/FEL

1. Dual Induction Log  
2. Dual Compensated Resistivity Log  
3. Resistivity Log

Contractor: Shawmut Drilling Inc. R-2-6  
Contracted: 1-16-2012 Completed: 1-24-2012  
RTD: 3438 LTD: 3438

Production casing 5 1/2" set to 3430' in 155 hrs. MA. RTD 3438' 1550'

Drilling Time	RTD	Summaries	LTD
2500'	RTD	2200'	RTD

DATE	DEPTH	ACTIVITY	DATE	DEPTH	ACTIVITY
1-16	250'	Rm. Stud			
1-17	250'	Log. Set			
1-18	250'	Log. Set			
1-19	250'	Log. Set			
1-20	250'	Log. Set			
1-21	250'	Log. Set			
1-22	250'	Log. Set			
1-23	250'	Log. Set			
1-24	250'	Log. Set			

REMARKS: Recommendation To Ann. casing To 5.000' Test + develop LKC based on Assu/T's of DST's.

*Herb Denes*

Formation	Sample	Log	Datum	%	Formation	Sample	Log	Datum	%
Tepaka	2621	2618	-839						
Heakven Shale	2883	2880	-1101						
Toronto	2908	2902	-1183						
Doughty Shale	2916	2910	-1131						
Brown Lime	3005	3002	-1223						
LKC	3028	3030	-1251						
BKC	3228	3276	-1497						
A buckle	3304	3302	-1523						
RTD	3438	3438	-1659						
LTD									

\* Structural Position to:

LEGEND

Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool. Lime	Chert	Dolomite

SCALE " = 100'

DEPTH	Sample Description	Remarks, drill stem tests, etc.
2500		Mud System - Gel Chemical Andy's Mud + Chemical
10		
20		
30		
40		
50		
60		
70		
80	Lm LT-dark brown Fux/N Foss - Fossiliferous	
90		
2600	Sh LT-med gray soft blocky	
10		
20		
30	Lm Cam-brown-gayish brown Fux/N w/ sh- Chalk in part	
40		
50	Lm LT-med brown Fux/N foss	
60		
70	Lm LT-med brown Fux/N-gayish w/ Chalk in part - US	
80		
90	Lm LT-med brown Fux/N Sh Foss in part	
2700	Lm LT-med brown Fux/N	
10	Sh gray - blk carb	
20		
30	Lm LT-brown-gayish brown Fux/N	
40	Sh gray, green blocky	
50	Lm LT-med brown Fux/N-gayish	
60		
70	Lm LT-med brown Fux/N	
80		
90	Sh gray - blk carb	
2800	Lm LT-med brown Fux/N	
10	Lm LT-brown Fux/N Fossiliferous w/ trace oil stain	
20		
30	Lm LT-med brown Fux/N	
40		
50	Lm LT-med brown-gay Fux/N Sh Foss	
60	Lm Cam - LT-brown Fux/N Sh- Chalk	
70		
80	Sh blk carb	
90	Lm LT-med brown Fux/N	
2900	Sh LT-gray - bluish soft blocky	
10	Lm Cam Fux/N Fossiliferous w/ trace oil stain partly developed	
20	Sh LT-med gray soft, blocky	
30		
40		
50	Sh LT-med gray soft, blocky	
60	SS V. Ex. gray, partly sand, gray soft - soft stain, McFarrell No. 1	Big Poppins - down 11.5 hrs Pulled DP to collars
70		
80		
90	Sh LT-gray soft	
3000		
10	Lm med-dark brown Foss	
20	Sh LT-gray, med. brown	
30	Lm Cam-LT-brown Fux/N	
40	Lm LT-med brown Fux/N	
50		
60	Lm Cam-LT-brown-gayish brown Fux/N w/ sh- Chalk	
70		
80	Lm LT-dark brown Fux/N sh + Lm - med. gray in part	DST #3 Standlle Test 3077' - 3105' 30-30-10-60 Pre: GTS 8" Gauge 1106.83 MCF 60' GCMW - 10%G, 60%O 30%M, 5%W 60' md. oil - 10%G, 10%O 80%M 120' m. cov - 15%G, 15%O 50%M, 20%W CL 30,000 ppm ISIP: 538" FSIP: 538" FP: 378-366, 365-387 1st Open: String BOB 8 sec. Blow back: BOB 2nd Open: String BOB 8 sec Spray of oil, mud 40i Blow back: BOB Gas sample collected for Lab tests
90	Lm LT-med brown Fux/N w/ chalk in part	
3100	Lm LT-med brown Fux/N sh gray pyritic	
10	Lm Cam-gayish brown Fux/N	
20	Lm LT-med brown Fux/N w/ chalk in part	
30	Lm LT-brown Fux/N soft - grayish Lm - chalk US	
40	Lm med brown Fux/N w/ sh- Chalk	
50	Sh gray - blk pyritic	
60		
70	Lm LT-brown oolitic in part No nodules - cherty	
80	Lm LT-med brown-gayish brown Fux/N	
90	Lm LT-med brown Fux/N	
3200		
10	Lm LT-med brown mostly Fux/N w/ chalk Fossiliferous - oolitic - conchoidal - w/ sh	
20	Lm grayish brown Fux/N - thin pyritic	
30	Lm soft - cherty w/ w/ Lm Fossiliferous - oolitic - conchoidal - w/ sh No nodules - cherty	
40		
50	Lm Cam-LT-gray Fux/N w/ sh- Chalk in part	DST #1 3277'-3311' 30-45-20-10 Pre: 5' med w/ spots of oil in mud ISIP: 501 FSIP: 47 FP: 39-55, 45-59 1st Open: Weak Surface blow No blow back 2nd Open: No blow, Flushed Tool No blow back
60	Lm Cam - med brown Fux/N w/ chalk	
70	Lm brown-gayish brown	
80	Sh med. brown blocky	
90	Lm classic mix	
3300	Sh med. gray - pyritic silty	
10	Dal LT-brown Fux/N LT stain Fossiliferous - oolitic - conchoidal - w/ sh No nodules	DST #2 Standlle Test 3310' - 3335' 10-30-10-30 Pre: 220' soft water CL: 23,000 ppm Pre: 20.45" ISIP: 1166" FSIP: 1165" FP: 410-796, 850-1087 1st Open: String - BOB < 1 min Blow back: weak Surface blow 2nd Open: String BOB < 1 min No blow back
20	Dal cam-LT-brown mostly Fux/N	
30	Dal cam-LT-brown mostly Fux/N Chert - brownish - sandy - gray - shaly	
40	Dal cam-wht Fux/N oolitic in part No nodules	
50		
60	Dal cam-LT-brown Fux/N soft - silty - cherty	
70	Dal LT-brown mostly Fux/N soft - silty - cherty	
80	Dal LT-brown Fux/N soft - silty - cherty	
90		
3400	Dal LT-brown Fux/N	
10		
20	Dal LT-brown Fux/N soft - silty - cherty	
30		
40	Dal LT-brown Fux/N	
50		

LOG 7703