



KANSAS CORPORATION COMMISSION 1072082  
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 # 31652  
Name: Norstar Petroleum, Inc.  
Address 1: 88 INVERNESS CIR E. Unit F104  
Address 2: \_\_\_\_\_  
City: ENGLEWOOD State: CO Zip: 80112 + \_\_\_\_\_  
Contact Person: Clark D. Parrott  
Phone: ( 303 ) 925-0696  
CONTRACTOR: License # 4958  
Name: Mallard, J. V., Inc.  
Wellsite Geologist: M. Bradford Rine  
Purchaser: NCRA

Designate Type of Completion:  
 New Well     Re-Entry     Workover  
 Oil     WSW     SWD     SLOW  
 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 #: \_\_\_\_\_  
8/19/2011    8/28/2011    10/24/2011  
Spud Date or    Date Reached TD    Completion Date or  
Recompletion Date       Recompletion Date

API No. 15 - 15-083-21722-00-00  
Spot Description: \_\_\_\_\_  
SW SE NW NE Sec. 4 Twp. 22 S. R. 23  East  West  
1046 Feet from  North /  South Line of Section  
1777 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE     NW     SE     SW  
County: Hodgeman  
Lease Name: Phillips-Denny Well #: 1-4  
Field Name: Fossil Ridge  
Producing Formation: Cherokee  
Elevation: Ground: 2302 Kelly Bushing: 2307  
Total Depth: 4700 Plug Back Total Depth: 4638  
Amount of Surface Pipe Set and Cemented at: 257 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set: 1582 Feet  
If Alternate II completion, cement circulated from: 1582  
feet depth to: 0 w/ 165 sx cmt.

Drilling Fluid Management Plan  
(Data must be collected from the Reserve Pit)  
Chloride content: 11000 ppm Fluid volume: 800 bbls  
Dewatering method used: Evaporated  
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: 01/19/2012

Confidential Release Date: \_\_\_\_\_

Wireline Log Received

Geologist Report Received

UIC Distribution

ALT  I  II  III Approved by: Deanna Carrico Date: 01/26/2012



1072082

Operator Name: Norstar Petroleum, Inc. Lease Name: Phillips-Denny Well #: 1-4  
 Sec. 4 Twp. 22 S. R. 23  East  West County: Hodgeman

**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 (Attach Additional Sheets)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Anhydrite	1554	752
Electric Log Run	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Heebner	3866	-1559
Electric Log Submitted Electronically (If no, Submit Copy)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pawnee	4392	-2085
List All E. Logs Run: <b>Attached</b>		Ft. Scott	4456	-2149
		Cherokee Shale	4482	-2175
		Cherokee Sand	4561	-2253
		Mississippi	4606	-2299

CASING RECORD <input type="checkbox"/> New <input checked="" 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
Surface	12.25	8.625	23	257	Class A	150	2% cc, 3% gel
Production	7.875	4.5	10.5	4699	EA-2	100	

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input checked="" type="checkbox"/> Plug Off Zone	4564-4571	common	50	
	-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	4564-4571	500 g 15% MCA, (cmt sqz 50 sx)	4564
6	4568-4571		4568
4	4565.5-4571.5	250 g 15% Reax	4565.5

TUBING RECORD: Size: <u>2.375</u> Set At: <u>4610</u> Packer At:		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>11/12/2011</u>		Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. <u>16</u>	Gas Mcf <u>9</u>	Water Bbls. <u>34</u>
		Gas-Oil Ratio	Gravity <u>34</u>

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease (If vented, Submit ACO-1B.)	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled (Submit ACO-5) <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <u>4568-4571.5</u>
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Form	ACO1 - Well Completion
Operator	Norstar Petroleum, Inc.
Well Name	Phillips-Denny 1-4
Doc ID	1072082

All Electric Logs Run

CNL/CDL
DIL
Micro
Sonic

# SWIFT Services, Inc.

DATE 8-30-11 PAGE NO. 1

STAR PETROLEUM

WELL NO. 1-4

LEASE PHILIPS - DENNING

JOB TYPE 4 1/2" LONGSTROKE

TICKET NO. 21023

CHART NO.	TIME	RATE (BPM)	VOLUME (BBLS) GALS	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1600							ON LOCATION
	1815							START 4 1/2" CASING IN WELL
								TD- 4700' SET = 4699
								TP- 4703' 4 1/2" * 10 1/2
								ST- 41'
								CONNECTIONS - 1, 3, 5, 7, 74, 76
								CMT BSRS - 6, 75
								PORT COLLAR 1580' TORST * 75
	2055							DROP BALL - CIRCULATE ROTATE
	2135	6	12		✓		400	PUMP .500 GAL MUDFLUSH "
	2137	6	20		✓		400	PUMP 20 BBL KCL-FLUSH "
	2142		7-5					PLUG BH - MH (30 SKS - 20 SKS)
	2152	4	24		✓		200	MIX GRUNT - 100 SKS EA-2 @ 15.4 PPG "
	2200							WASH OUT PUMP - LINES
	2200							RELEASE LATCH DOWN PLUG
	2205	8	0		✓			DISPLACE PLUG "
		8	64				650	SHUT OFF ROTATING
	2215	6	74.1				1500	PLUG DOWN - PSE UP WATCHING PLUG
	2218							OK RELEASE PSE - HELD
								WASH TRUCK
	2300							JOB COMPLETE

THANK YOU  
WAYNE, DON L., ROB

JOB LOG

SWIFT Services, Inc.

DATE 13 Jan 12 PAGE NO. 1

CUSTOMER NORSTAR WELL NO. 1-4 LEASE P.H. Wells - Denny JOB TYPE cement port collar TICKET NO. 22617

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								235 SMD 1/4" floater 2 3/4" plug 4000' port collar 1582'
	0930							on loc TRK 114
	1015		24					circulate out from well 24 bbl - flood to surface
		4	68			400		
	1035					1250	1250	test plug 1250 psi - hold
	1040		8					spt 1 ok sand pull up to port collar
	1235					1000	1000	Retest - hold
	1240					400		Open port collar
		3 #				300		Start passing drilling mud flood to surface
	1805	3	75			400		75 bbl mixed pump mix SMD w/ 1/4" floater @ 11.2 ppg
	1310							immediate circulation
		3				600		count to surface 165 <del>400</del> mix up junks top it
								close port collar
	1335					1000	1000	test to 1000 - hold
	1350							Run 5 joints
	1355		15					Reverse hole clean 2 cement plugs Run joints to the plug Wash up truck
	1450		105					wash sand from plug rig up to suit
	1540							Rick up job complete
								Plunks Blaine, Wayne, Dave's gone

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

December 14, 2011

Norstar Petroleum, Inc.  
88 Inverness Circle E, Unit F104  
Englewood, Colorado 80112  
Attn: Clark D. Parrott

RE: **Alternate II Extension**  
**Phillips-Denny # 1-4**  
**SEWNNE sec 4-22-23W**  
**Hodgeman County, Kansas**  
**API # 15-083-21722-00-00**

Dear Mr. Parrot,

This letter is to inform you that based on your written request dated December 8, 2011, and the recommendation of the KCC District 1 (Dodge City) office, you have been granted an additional thirty (30) day extension of time to complete Alternate II cementing requirement on captioned well.

According to KCC records, your original 120 days for completion will expire on December 17, 2011. Based on the extension request to evaluate subject well for commercial potential, this extension is granted until **January 17, 2012**. I urge you to make every effort to complete the cementing within this time frame. Extension of this time frame, pursuant to K.A.R. 82-3-106, automatically extends the period for filing the ACO-1, pursuant to K.A.R. 82-3-130. Before completing the cementing of subject well, please contact the Dodge City District office at 620-225-8888.

If you have any questions in this regard, please do not hesitate to contact me.

Sincerely,

Doug Louis

Director, Conservation Division

cc: Steve Durrant - District 1

Steve Bond - Production Supervisor

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

January 19, 2012

Clark D. Parrott  
Norstar Petroleum, Inc.  
88 INVERNESS CIR E. Unit F104  
ENGLEWOOD, CO 80112

Re: ACO1  
API 15-083-21722-00-00  
Phillips-Denny 1-4  
NE/4 Sec.04-22S-23W  
Hodgeman 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.

Extension beyond 120 day was granted. Work was completed within the extension period.

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

Respectfully,  
Clark D. Parrott

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 207B  
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

January 20, 2012

Clark D. Parrott  
Norstar Petroleum, Inc.  
88 INVERNESS CIR E. Unit F104  
ENGLEWOOD, CO 80112

Re: ACO-1  
API 15-083-21722-00-00  
Phillips-Denny 1-4  
NE/4 Sec.04-22S-23W  
Hodgeman County, Kansas

Dear Clark D. Parrott:

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 8/19/2011 and the ACO-1 was received on January 19, 2012 (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



# M. Bradford Rine

## Consulting Geologist, Licensed and Certified

Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: PHILLIPS-DENNY #1-4  
Location: SE - NW - NE, Section 04 - T22S - R23W  
License Number: API: 15-083-21722-00-00  
Spud Date: August 19, 2011  
Surface Coordinates: 1046' FNL & 1777' FEL  
Region: Hodgeman Co, Kansas  
Drilling Completed: August 30, 2011  
Bottom Hole Vertical Well 4-1/2" Casing Set  
Coordinates: "Fossil Ridge" Field  
Ground Elevation (ft): 2302 K.B. Elevation (ft): 2307  
Logged Interval (ft): 3800 To: 4700 Total Depth (ft): RTD 4700, LTD 4701  
Formation: Pennsylvanian (Topeka) to Mississippian (Meramecian?)  
Type of Drilling Fluid: Chemical

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### Operator

Company: NORSTAR PETROLEUM, INC.  
Address: 88 Inverness Circle, Unit F104  
Englewood, Colorado 80112

### Geologist

Name: M. Bradford Rine  
Company: Consulting Geologist, Kansas Lic. #204, Wyo #189, AAPG Cert. #2647  
Address: 100 South Main, Suite #415  
Wichita, Kansas 67202

### Remarks

Based on sample observations, preliminary core review, drill stem test results, and electric log evaluation, it was the decision of the Operator to, set production casing for further testing on the, "Phillips-Denny #1-4", on August 30, 2011.

Respectfully submitted,  
M. Bradford Rine, Ks Lic.#204  
Geologist and Petroleum Consultant

### Drilling Information

Rig: Mallard JV, Inc. #2  
Pump: Emsco D-375, 6 x 14  
Drawworks: Emsco BDW  
Collars: 486' 2-1/4" x 6-1/4"  
Drillpipe: 4-1/2" XH  
Toolpusher: Lavon Urban

Mud: Mudco (Justin Whiting)  
Gas Detector: None  
Drill Stem Tests: Trilibite (Will MacLean)  
Coring: Devilbiss (Jerry Stapleton)  
Core Retrieval: Weatherford  
Logs: Log-Tech (K.Bange)  
Water: Area farm pond

Company Representatives:  
Office: Clark Parrott  
Field: Dave Pauly

### Daily Drilling Status

Date:	Operations/Depth/Comments:
08-19-11	MIRT, RU, Spud. Set Surface casing.
08-20-11	Drilling plug and 30' cement
08-21-11	Drig @ 1802'
08-22-11	Drig @ 2700'
08-23-11	Drig @ 3261', Displaced and Mud up @ 3591'.
08-24-11	Drig @ 3877'
08-25-11	Stuck in hole at 4187' while making conn. at 4229'
08-26-11	Prepare to TBIH on wiper trip at 4481 ft.
08-27-11	TOOH with Core Tools @ 4554'
08-28-11	Drig @ 4676' RTD 4700 at 7:00 AM
08-29-11	Prepare to TBIH for DST #2
08-30-11	On Bank with DST #3 @ 4700 at 7:00 AM, Run production casing late, plug down @ 10:15 PM

**Casing Record, Bit Record, Deviation Surveys**

**CASING:**

Conductor: None

**Surface:**

6 joints, 8-5/8"-23#, set @ 257 ft. Cement with 150 sx Class A Cement, 2% gel, 3% CaCl. Cement did circulate.

**Production:**

Ran 113 jts, 4-1/2" - 10-1/2# used csg, set @ 4699 ft. (Swift) Cement with 100 sx EA-2. Plug down @ 10:15 PM, 08-30-2011

**BITS:**

No.	Size	Make	Model	Depth In	Depth Out	Feet	Hours
1	12-1/4"	Rr	RT	0	257	257	4
2	7-7/8"	Smith	F27	257	4700	4443	116

**DEVIATION SURVEYS:**

Deviation:	Depth:	Deviation:	Depth:
1/4*	257'		
1/4*	4525'		
1/2*	4700'		

Norstar Petroleum, Inc.					Nortstar "Bamberger-Phillips 1-4"
KB 2307 Ft. Section 04 - T22S - R23W					Section 04 - T22S - R23W
Formation:	Sample Top:	Datum:	Log Top:	Datum:	Comparison:
Anhydrite	1551	756	1554	752	Flat
B/Anhydrite	1581	726	1580	727	(-5)
Heebner	3863	(-1556)	3866	(-1559)	(+ 3)
Toronto	3883	(-1576)	3886	(-1579)	(+ 1)
Lansing	3920	(-1613)	3921	(-1614)	(+ 2)
Stark Sh	4186	(-1879)	4185	(-1878)	(+ 2)
B/Kansas City	4293	(-1986)	4295	(-1988)	(- 1)
Pawnee	4392	(-2085)	4392	(-2085)	(+ 1)
Fort Scott	4456	(-2149)	4456	(-2149)	(+ 1)
Cherokee Sh	4481	(-2174)	4482	(-2175)	(- 1)
Basal Penn Lime	4525	(-2218)	4529	(-2222)	(- 4)
Cherokee Sd	4560	(-2253)	4561	(-2253)	(-18)
Mississippi	4606	(-2299)	4606	(-2299)	(- 33)
Total Depth	4700	(-2393)	4701	(-2394)	N/A

**Core(s)**

Contractor: Devilbiss Coring Service (Operator-Jerry Stapleton)  
 Core #: 1 & 2  
 Formation: Cherokee-Mississippian Unconformity Incisement  
 Core Interval: From: 4525 Cut: 34.5'  
 To: 4569.5 Recovered: 34' +/-  
 Bit type: PDC  
 Size: 7-27/32  
 Coring Time: 15.5 hrs





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Norstar Petroleum Inc  
88 - Inverness Cir E. Unit F104  
Englewood CO 80112  
ATTN: Brad Rine

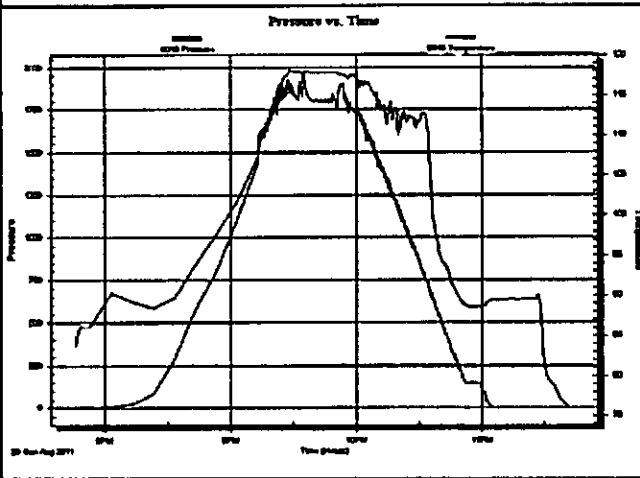
Phillips-Denny #1-4  
04-22-23 Hodgeman Co  
Job Ticket: 43670      DST#: 1  
Test Start: 2011.08.28 @ 19:46:00

### GENERAL INFORMATION:

Formation: **Cherokee**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened:  
Time Test Ended: **23:44:00**  
Test Type: **Conventional Straddle**  
Tester: **Will MacLean**  
Unit No: **37**  
Interval: **4503.00 ft (KB) To 4573.00 ft (KB) (TVD)**  
Reference Elevations: **2307.00 ft (KB)**  
Total Depth: **4700.00 ft (KB) (TVD)**      **2302.00 ft (CF)**  
Hole Diameter: **7.88 Inches** Hole Condition: **KB to GR/CF: 5.00 ft**

Serial #: **8018**      Inside  
Press@RunDepth:      psig @ **4513.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2011.08.28**      End Date: **2011.08.28**      Last Cell.: **2011.08.29**  
Start Time: **19:46:02**      End Time: **23:44:00**      Time On Btm  
Time Off Btm

TEST COMMENT: **Mis-run - Hit Bridge 8 Stands From Bottom Couldn't Get Through !!**



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)

### Gas Rates

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Norstar Petroleum Inc  
88 -Inverness Cir E Unit F104  
Englewood CO 80112

Phillips- Denny #1-4  
04-22-23 Hodgeman Co  
Job Ticket: 43672      DST#: 3  
Test Start: 2011.08.29 @ 19:50:02

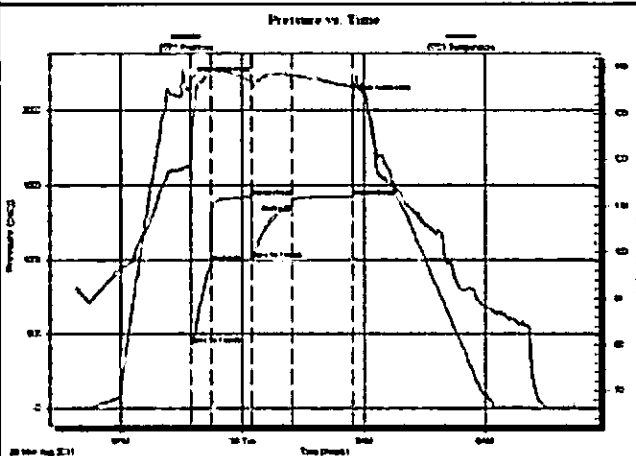
ATTN: Brad Rine

### GENERAL INFORMATION:

Formation: Cherokee  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 22:43:40  
Time Test Ended: 08:13:30  
Interval: 4503.00 ft (KB) To 4573.00 ft (KB) (TVD)  
Total Depth: 4700.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Straddle  
Tester: Wā MacLean  
Unit No: 37  
Reference Elevations: 2307.00 ft (KB)  
2302.00 ft (CF)  
KB to GR/CF: 5.00 ft

Serial #: 6751      Outside  
Press@RunDepth: 1368.09 psig @ 4513.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.08.29      End Date: 2011.08.30      Last Calib: 2011.08.30  
Start Time: 19:50:02      End Time: 08:13:30      Time On Btm: 2011.08.29 @ 22:43:19  
Time Off Btm: 2011.08.30 @ 02:44:00

**TEST COMMENT:** F- Bottom of Bucket in 1min  
IS- Surface Blow Built to 2 1/4" Died Back to 1"  
FF- Bottom of Bucket in 1min 15sec Died Back to 9"  
FSI- Weak Surface Blow Died in 8 min



### PRESSURE SUMMARY

Time (Min)	Pressure (psig)	Temp (deg F)	Annotation
0	2207.50	118.75	Initial Hydro-static
1	432.14	118.25	Open To Flow (1)
30	978.08	139.18	Shut-in(1)
90	1420.25	137.07	End Shut-in(1)
90	1005.50	136.83	Open To Flow (2)
151	1368.09	138.28	Shut-in(2)
241	1421.23	135.87	End Shut-in(2)
241	2081.88	136.22	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
310.00	5%w 20%g 25%m 50%oil	2.14
558.00	10%g 20%oil 30%w 40%m	7.83
1178.00	10%m 15%g 70%oil	18.52
1504.00	10%g 20%m 70%oil	21.10

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcfd)

### Rock Types

Anhy	Clyst	Gyp	Mrlst	Shgy
Bent	Coal	Igne	Salt	Sltst
Brec	Congl	Lmst	Shale	Ss
Cht	Dol	Meta	Shcol	Till

### Accessories

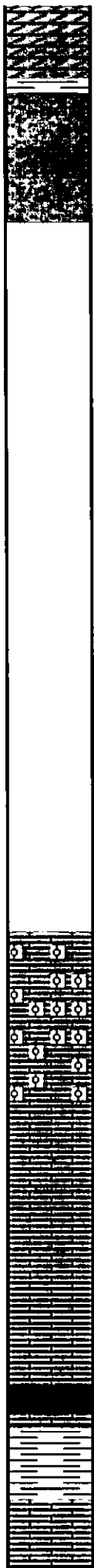
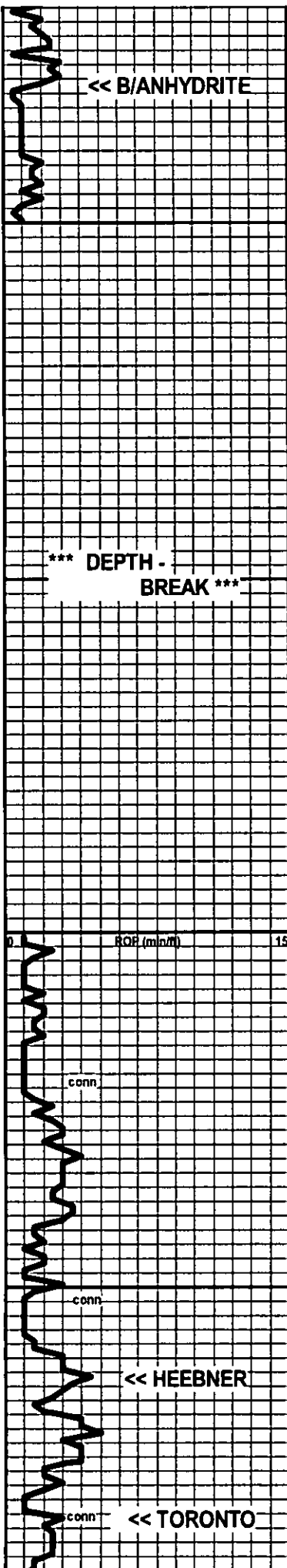
<b>MINERAL</b>	Gyp	<b>FOSSIL</b>	Ostra	Sltstrg
Anhy	Hvymin	Algae	Pelec	Ssstrg
Arggrn	Kaol	Amph	Pellet	<b>TEXTURE</b>
Arg	Marl	Belm	Pisolite	Boundst
Bent	Minxl	Bioclst	Plant	Chalky
Bit	Nodule	Brach	Strom	Cryxln
Brecfrag	Phos	Bryozoa	<b>STRINGER</b>	Earthy
Calc	Pyr	Cephal	Anhy	Finexln
Carb	Salt	Coral	Arg	Grainst
Chtdk	Sandy	Crin	Bent	Lithogr
Chtlt	Silt	Echin	Coal	Microxln
Dol	Sil	Fish	Dol	Mudst
Feldspar	Sulphur	Foram	Gyp	Packst
Ferrpel	Tuff	Fossil	Ls	Wackst
Ferr		Gastro	Mrst	
Glau		Oolite		

### Other Symbols

OIL SHOW Even	Spotted	Dead	<b>INTERVAL</b>	Dst
Even	Ques		Core	

ROP (min/ft)	Depth	Lithology	Geological Descriptions	Remarks
<p>ROP (min/ft) ———</p>	1500		<p>&lt;&lt; ANHYDRITE</p> <p>Anhydrite interval: Based on drill time only!</p>	<p>* See "header" Section for Log Tops!</p> <p>&lt; 1551 (+756)</p>





LS cr, packed ool in dns & firm cem to chalky and soft cem, foss in pt

LS cr-tan, fn xln, dns, foss

LS wh-cr, fn xln, chalky in pt, pr vis xln por in pt, scatt vugs, foss

SH black, carb

LS cr, fn xln, dns

SH gy-gm-bk

LS cr-tan, fn xln, mostly dns, foss

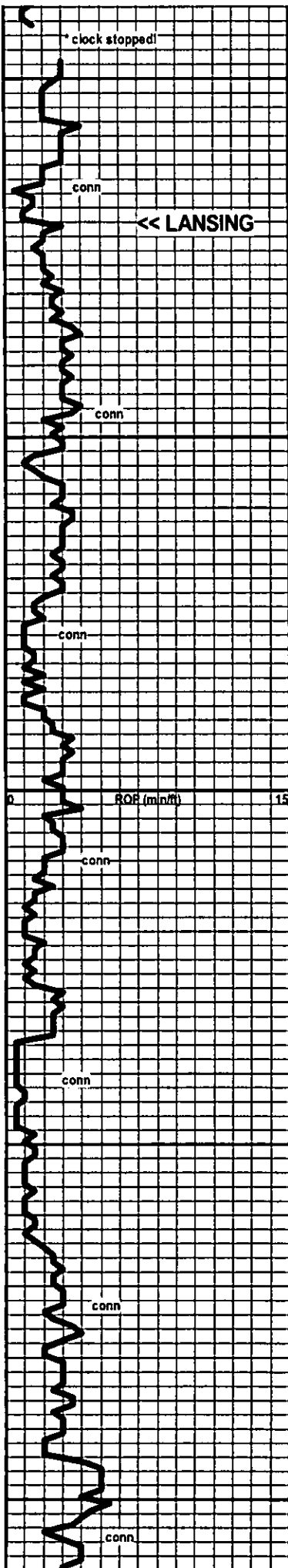
< 1581 (+726)

Above: Displace and Mud up @ 3591 ft.

< 3863 (1556)

7:00 AM, August 24, 2011. Drtg @ 3877 ft.

< 3883 (-1576)



3900

SH gy-gmish-maroon, subsilty-calc text in pt

< 3920 (-1613)

conn

<< LANSING

LS wh-cr-tan, fn xln, pr xln por in pt, dns in pt, foss

conn

SH gy-gmish-gm, silty text in pt

3950

LS wh-cr-tan, fn xln, pr xln por to dns, foss

conn

SH gy-gmish

LS wh-cr, fn xln, pr-fr xln por, foss

ROE (min/hr)

15

4000

SH gy-blk

LS wh-cr-tan, fn xln, subchalky in pt, foss

conn

SH gy-gm, susilty text in pt

LS wh-cr, fn xln, pr vis xln por, scatt pp por, foss

conn

SH gy-gm

LS cr-tan, packed ool in pt, oom in pt, pr-gd oom por, scatt pr-fr inter-ool xln por

4050

conn

LS cr-tan, vfn-fn xln, dns, sil foss in pt

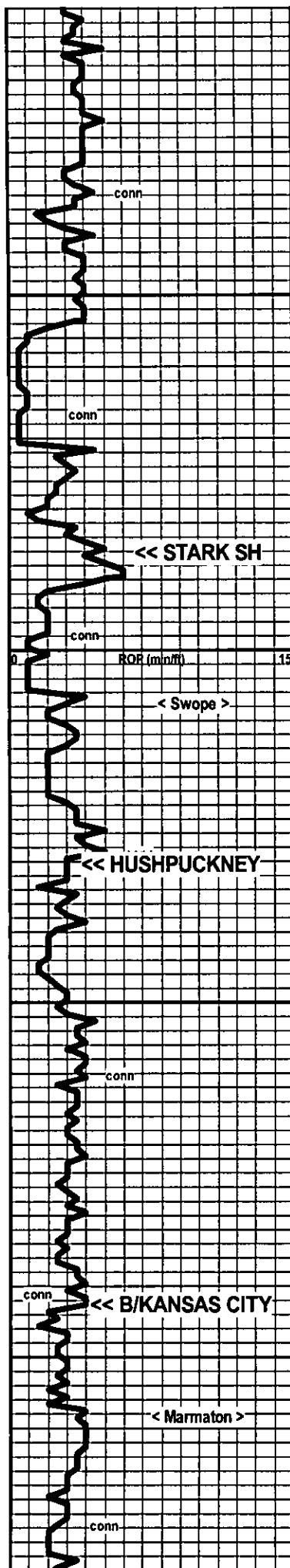
SH gy-black, carb in pt

4100

LS cr-tan, fn xln, dns, foss in pt

conn

Mud Check @ 4097 ft, Drig.:  
 Vs Wt WL LCM PV YP  
 47 9.1 10.4 0 13 12  
 Chl Hd pH  
 5400 20 9.0

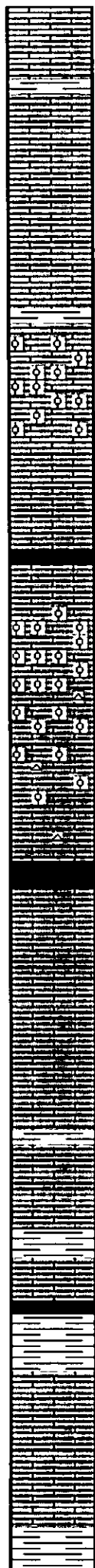


4150

4200

4250

4300



SH gy

LS wh-cr, fn xln, dns to pr vis xln por, foss

\* (spls very high shale percentage)

SH gy

LS wh-cr, fn xln, ool-packed ool, fr-gd crush

LS wh-cr, fn xln, dns in pt, chalky in pt, foss

SH black, carb

LS wh-cr, packed ool and oom, pr-fr oom por in patches and pcs, chert: fresh, wh, subtransl.

LS wh-cr, fn xln, ool in pt, cherty as above

SH black, carb

LS cr-tan-gy, fn xln, vfn-fn xln, dns, some chalky, foss

LS wh-cr-tan, fn xln, chalky in pt, scatt pr vis xln por, foss

SH gy-dk gy-gmish

LS cr-tan, fn xln, dns, foss

SH gy

SH gy-dk gy-blk-maroon, calc in pt

LS cr-tan-bm, fn xln, dns, foss

[No Show]

SH gy-dk gy-gmish

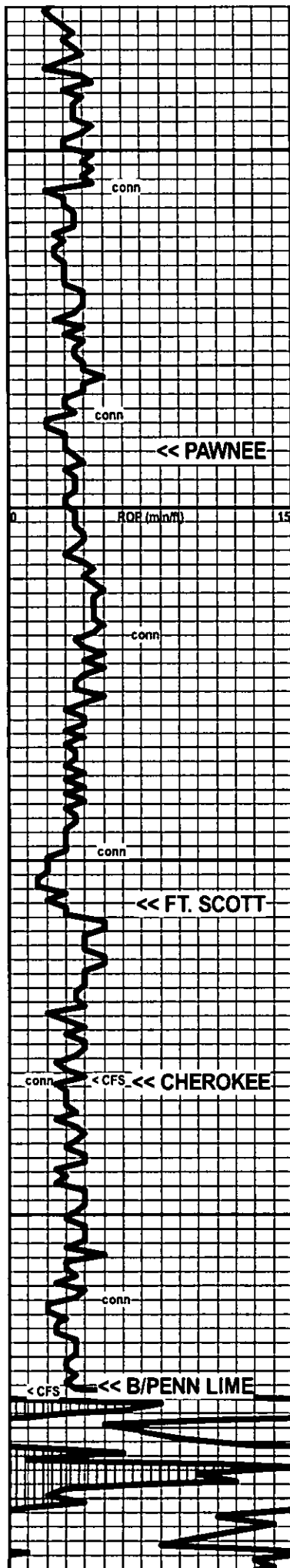
< 4186 (-1879)

\* STUCK at approx 4187' (11:20 pm 08-24) while pulled up 42' on connection & rig check at 4229'. Have circulation. Spot 60 bbls lease crude at 2:00 am, 08-25-11. Attempt to free: 3:05 am, 4:05 am, 5:05 am, 6:00 am, 7:00 am, 8:00 am, 11:00 am. At 12:45 pm attempt to free successful-drill string freed! Down 13.5 hours with stuck pipe. Back to drilling at 1:00 pm

Mud Check @ 4241' Drig:

Vis	Wt	WL	LCM	PV	YP
52	9.4	11.2	Tr	11	13
Chl	Hd	pH			
5800	100	7.5			

< 4293 (-1986)



4350

4400

4450

4500

4550

LS wh-cr-tan-brn, vfn-fn xln, dns, chalky in pt, foss

[No Show]

SH pl gy-gy-gmish

LS wh-cr-tan, vfn-fn xln, dns, sli foss in pt

[No Show]

SH black-gy-dk gy, carb in pt

< 4392 (-2085)

LS wh-cr, vfn-fn xln, dns

[No Show]

LS wh-cr-tan, vfn-fn xln, dns, Rr Scatt calcite patches

LS wh-cr-tan, vfn-fn xln, dns

SH black, carb

< 4456 (-2149)

LS cr-tan-pl gy, vfn-fn xln, dns, foss in pt

[No Show]

Pipe Strap @ 4481': .25 ft long.

SH black, carb

< 4481 (-2174)

At 4481 ft. ran wiper run up to collars to condition hole for coring and testing.

7:00 AM, August 26, 2011, 4481 ft prepare to go back to bottom after wiper run.

LS wh-cr-tan, fn xln, dns, some subchalky pcs, foss

Coring with PDC Style Bit, 4525'-4569':

WOB 8000

RPM 45

PP 800

SPM 50

SH gy, calc in pt

< 4525 (-2218)

LS cr-tan, vfn-fn xln, dns, sli foss in pt

Catching spls every 30-min:

SH gy-gm-red-maroon, subslty text in pt, Rr scatt fn xln pyrite patches

(limestone and shales, varies from pred. ls to pred. shales, Rr sdy Shale, Rr cherty, found a cluster of dns ad early in coring interval)

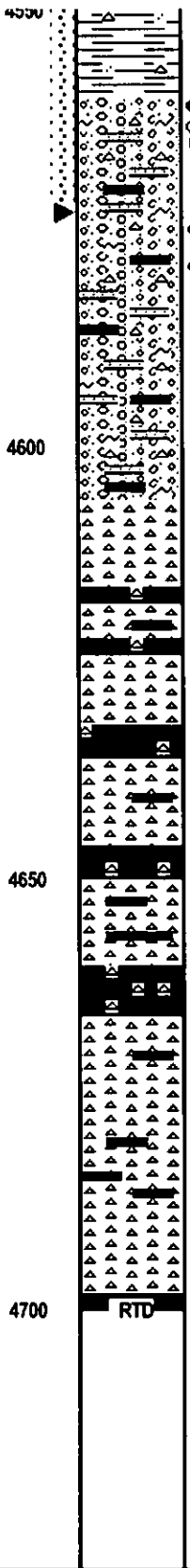
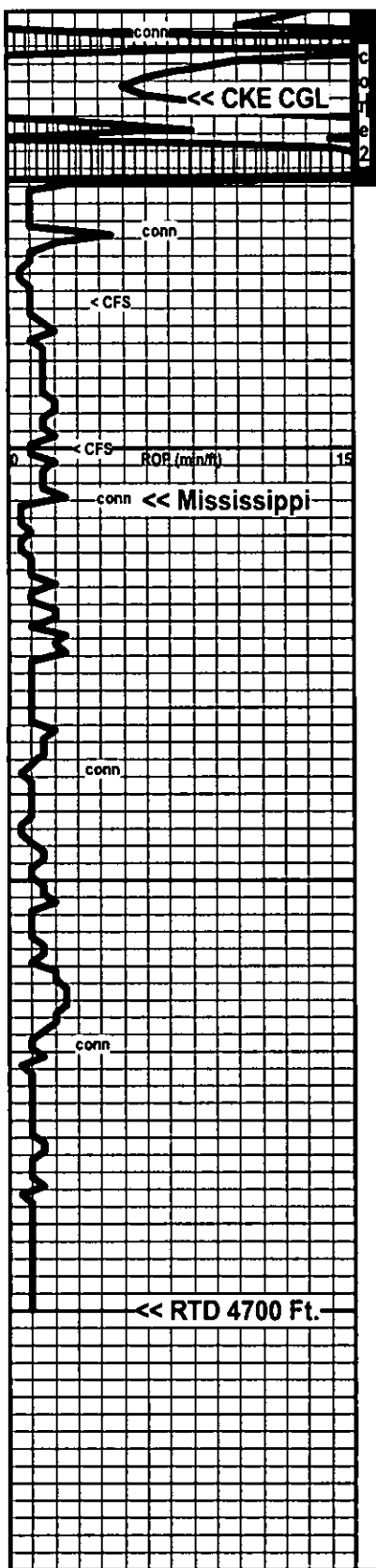
Shales: gy-red-gm-yellow-lavender, subwaxy

LS wh-cr-tan, vfn-fn xln, dns, Rr pcs fresh transl tan chert

(same as above down to 4553' spl)

DST#1: 4503-4573 Cherokee (Straddle)  
Misrun: could not get to bottom!

DST#2: 4503-4573 Cherokee (Straddle)  
Misrun: could not get tool to bottom!



See core-pieces description, below on next track.

Spls mostly various colored shales: red-gy-pl gm-gm-yellow, rarely sil sdy shale, Rr pyritic, Rr foss. Rr Trace of sand clusters: fn-crs gm, mostly poorly sorted. Few pcs are half sd and half chert bound together. Abund glauc in Sd clusters. Noticeable amt of chert: fresh, wh-cr, trans to subtr, spiculitic in pt

[Few sand clusters had trace show of lt FO, few clusters had trace show of DO, few clusters barren]

Cgl in pt/Mix of abund chert: wh-cr, trans-opaq, fresh-weath'd, & Sd: cr-yell, md-crs gm, subanglr, pr-gd intergmtr por, pr-fr sort, fr-gd fri, glauc (spls 60% shales as above)

[Fnt Odor, Abund brt speck'd flour, sli-fr show tan-brn FO in Sd, Brn Str-tt str, some clusters barren]

70% Shale red-gy-gm-yell, 25% Chert, fresh to fresh-subvitrous, wh-cr, trans-opaq, foss-ool-spic, 05% Sd, mostly crs loose gms, subrd-subang

[Some blk resid strn on loose sd gms]

4620' spl: 60% various pale colored shales, 30% chert: fresh-subvitrous, wh-cr, trans-opaq, some md gm loose sd gms and clusters, subrd, gd fri, glauc

[scatt blk flakey resid strn in sd, some barren]

4640' spl: 40% VC shales, 50% chert: fresh-subvitr, trans-opaq, foss in pt, Trace of Sd as above, Trace of Dol: cr, fn xln, sucrosic, gd crush

[No Show in Dol.]

4660' spl: 40% Shales as above, 30% Chert: fr-subvitr, wh-cr-tan, trans-opaq, 30% Dol, wh-cr, fn xln, sucrosic, fr xln por, fr-gd crush

[No Show]

4660' spl: 30% shales of various pale colors, 30% chert, fr-sli subvitr, trans-opaq, 30% + Dol, wh-cr-tan, fn xln, sucrosic text, fr-gd xln por, scatt vugs, 10% ls&sd

[No Show]

4700' spl: 10% shales, 45% chert, wh-cr, trans-opaq, fresh-subvitrous, 45% Dol, wh-cr, fn xln, dns, fr-gd xln por, scatt vugs, gd crush

[No Show]

core barrel jammed and quit drilling at 4554 ft!

7:00 AM, August 27, 2011, Trip Out with core tools.

< 4560 (-2253)

\* Measurement/TD discrepancy at end of Core #1. Drilled 31' to Kelly. Therefore, TD should be 4556'. Geolograph indicates drilled 29'. Therefore, TD should be 4554'.  
Core barrel measurement indicates we cored 22' which would indicate a TD of 4547'.

Core #2 jammed at 4569.5

Mud Check @ 4557', Coring:

Vs	Wt	WL	LCM	PV	YP
44	8.5	18.4	0	10	12

Chi Hd pH  
8400 160 8.5

< 4606 (-2299)

DST#3: 4503-4573 Cherokee (Straddle)

Times: 30-60-60-90

Initial Blow: Stg, b.o.b. 1 min, 2-1/4"bb

Final Blow: Stg, b.o.b. 1-1/4 min, wk surf bb-died in 18 min

Rec: 3550 Ft Total Fluid

1504' gmco (10%g-70%o-20%m)

1178' smgco (15%g-70%o-10%m)

558' wogcm (10%g-20%o-30%w-40%m)

310' mgwco (20%g-50%o-05%w-25%m)

IHP 2207 FHP 2081

IFP 432-978 FFP 1005-1368

ISIP 1420 FSIP 1421

BHT 135 \* Oil Grav 31 \* API

Chi/Wtr 34,000 ppm

Core #1, 4525-4554, Description:

4528': Shale pl gy, sil, sandy thruout, fn gm.

4531': Shale gy, sil Foss-some pyritized foss.

4534': Shale variegated red&gy with wh silty partings.

4537': Shale gmish gy with reddish mineral patches.

4540': Shale blueish gy, subwaxy text.

4543': Shale blueish gy with Rr scatt pyrite specks, subwaxy text.

4547': Shale blueish gy-dk gy, subwaxy text.

Core #2, 4554-4569.5, Description:

4551': Ls nodule (dolom?) wh, vfn xln, dns, reacts mildly to mild HCL

4554': Shale gy, smooth

4557': Shale gy-blueish gy, smooth

4560': Shale gmish gy-blueish gy

4565': Chert nodule, foss, spiculitic

4569' +/-: Cgl 1/4"-3" cobbles cem with sand: fn-crs gm, subangular, pr-gd inter-gmtr por, sli odor, sli string in pt with sli show of oil, Some of sandy cem reacts mildly to HCL. Some apparent Dol in sdy matrix.

\* See image of core at 4569' in header section!

7:00 AM, August 28, 2011, RTD 4700 at 7:00 am

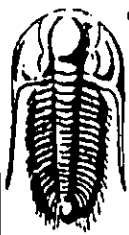
7:00 AM, August 29, 2011, TBH for DST 2

Mud Check @ 4700, TOOH at RTD:

Vs	Wt	WL	LCM	PV	YP
56	9.1	16	0	12	16

Chi Hd pH  
7400 100 9.0

\* Pipe Strap @ 4700 ft. .23' long.



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Norstar Petroleum Inc  
88 -Inverness Cir E. Unit F104  
Englewood CO 80112  
ATTN: Brad Rine

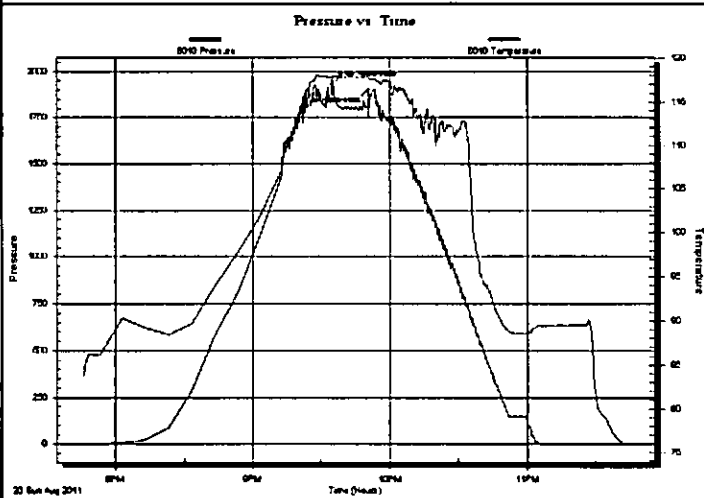
**Phillips- Denny #1-4**  
**04-22-23 Hodgeman Co**  
Job Ticket: 43670      **DST#: 1**  
Test Start: 2011.08.28 @ 19:46:00

### GENERAL INFORMATION:

Formation: **Cherokee**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened:  
Time Test Ended: 23:44:00  
Interval: **4503.00 ft (KB) To 4573.00 ft (KB) (TVD)**  
Total Depth: 4700.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches      Hole Condition:  
Test Type: Conventional Straddle  
Tester: Will MacLean  
Unit No: 37  
Reference Elevations: 2307.00 ft (KB)  
2302.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8018**      **Inside**  
Press@RunDepth:      psig @ 4513.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.08.28      End Date: 2011.08.28      Last Calib.: 2011.08.29  
Start Time: 19:46:02      End Time: 23:44:00      Time On Btm: 2011.08.28 @ 21:35:00  
Time Off Btm: 2011.08.28 @ 21:50:50

**TEST COMMENT:** Ms-run -- Hit Bridge 8 Stands From Bottom Couldn't Get Through it



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1927.86	117.86	Initial Hydro-static
16	1903.97	117.84	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)

### Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Norstar Petroleum Inc  
 88 - Inverness Cir E. Unit F104  
 Englewood CO 80112  
 ATTN: Brad Rine

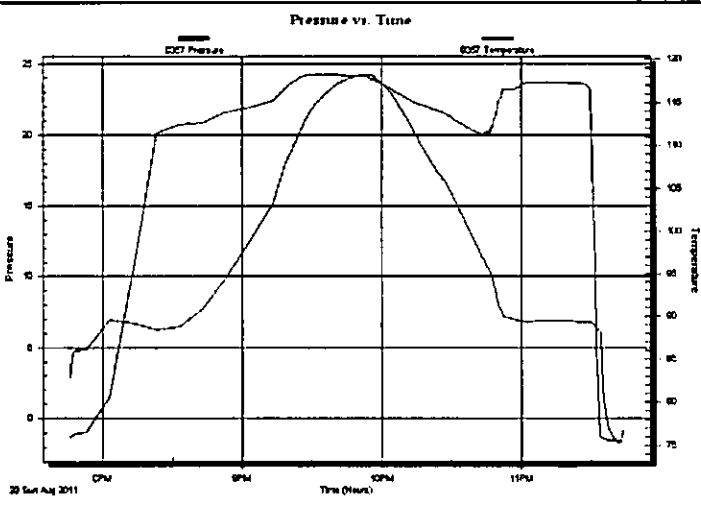
**Phillips- Denny #1-4**  
**04-22-23 Hodgeman Co**  
 Job Ticket: 43670      **DST#: 1**  
 Test Start: 2011.08.28 @ 19:46:00

### GENERAL INFORMATION:

Formation: **Cherokee**  
 Deviated: No      Whipstock:      ft (KB)  
 Test Type: Conventional Straddle  
 Time Tool Opened:  
 Tester: Will MacLean  
 Time Test Ended: 23:44:00  
 Unit No: 37  
 Interval: 4503.00 ft (KB) To 4573.00 ft (KB) (TVD)  
 Reference Elevations: 2307.00 ft (KB)  
 Total Depth: 4700.00 ft (KB) (TVD)  
 2302.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: KB to GR/CF: 5.00 ft

Serial #: 8357      Below (Straddle)  
 Press@RunDepth:      psig @ 4576.00 ft (KB)  
 Capacity: 8000.00 psig  
 Start Date: 2011.08.28      End Date: 2011.08.28      Last Calib.: 2011.08.29  
 Start Time: 19:46:05      End Time: 23:43:45      Time On Btm:  
    Time Off Btm

TEST COMMENT: Ms-run -- Hit Bridge 8 Stands From Bottom Couldn't Get Through It



PRESSURE SUMMARY			
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)

Gas Rates			
	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Norstar Petroleum Inc  
88 - Inverness Cir E. Unit F104  
Englewood CO 80112

**Phillips- Denny #1-4**  
**04-22-23 Hodgeman Co**  
Job Ticket: 43670      **DST#: 1**  
Test Start: 2011.08.28 @ 19:46:00

ATTN: Brad Rine

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 56.00 sec/qt  
Water Loss: 15.93 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 7400.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl

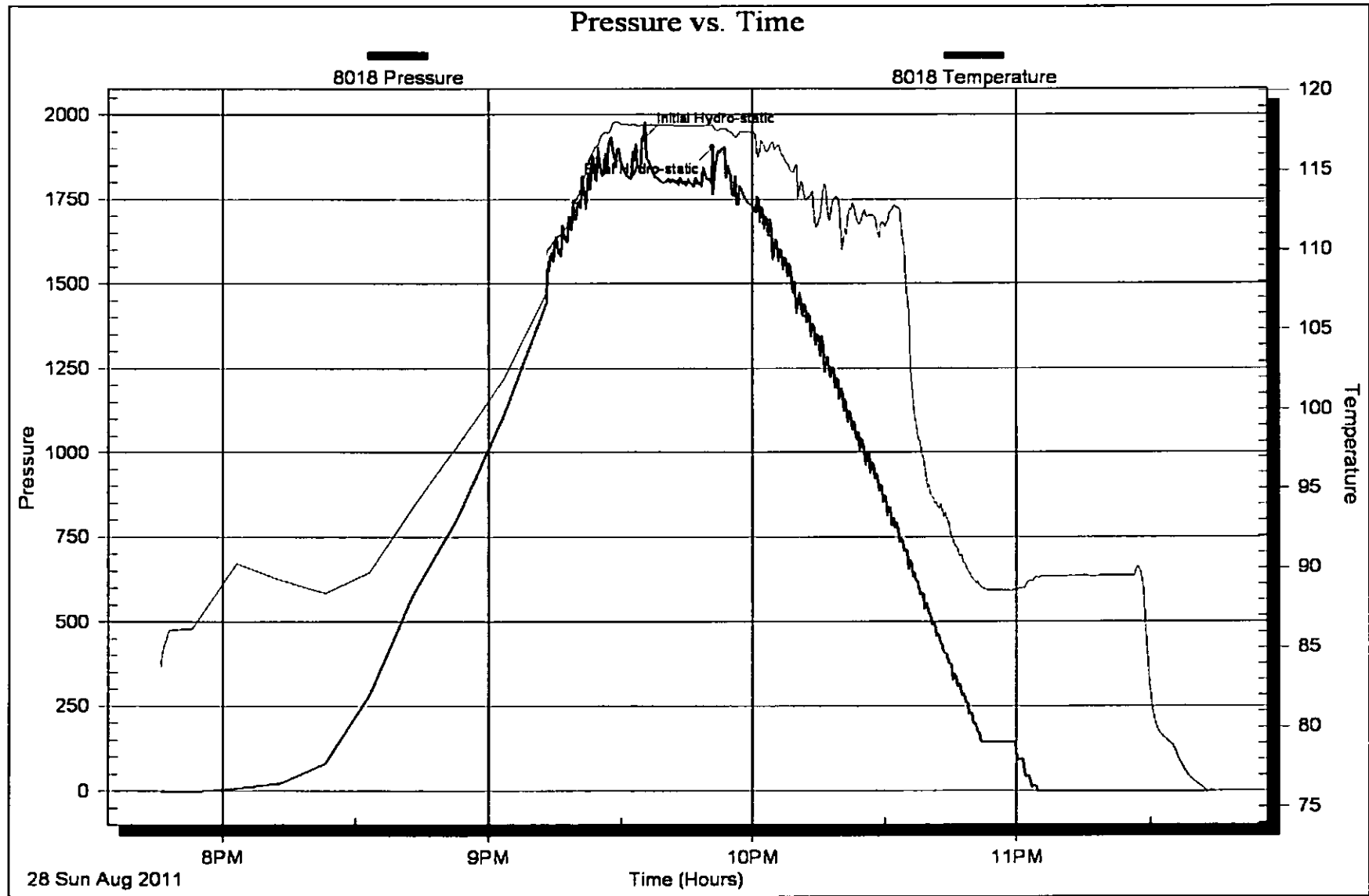
Total Length: ft      Total Volume: bbl

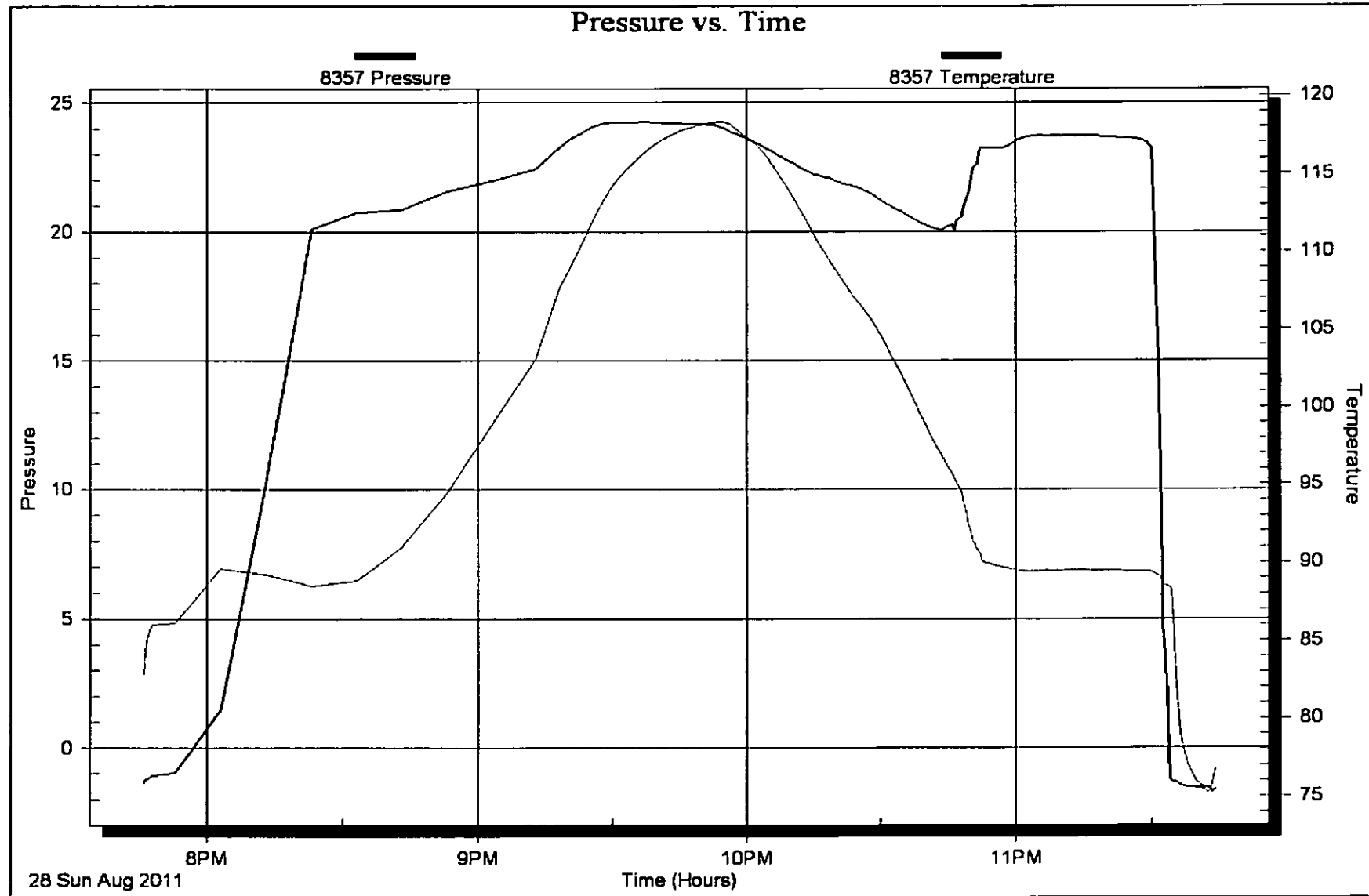
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:









**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Norstar Petroleum Inc  
 88 -Inverness Cir E. Unit F104  
 Englewood CO 80112  
 ATTN: Brad Rine

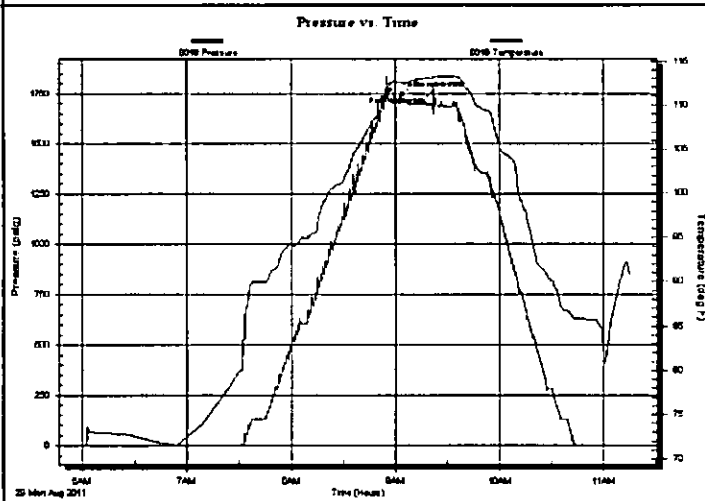
**Phillips- Denny #1-4**  
**04-22-23 Hodgeman Co**  
 Job Ticket: 43671      DST#: 2  
 Test Start: 2011.08.29 @ 06:02:02

## GENERAL INFORMATION:

Formation: **Cherokee**  
 Deviated: No      Whipstock:      ft (KB)  
 Test Type: Conventional Straddle  
 Time Tool Opened:  
 Tester: Will MacLean  
 Time Test Ended: 11:14:50      Unit No: 37  
 Interval: 4503.00 ft (KB) To 4573.00 ft (KB) (TVD)      Reference Elevations: 2307.00 ft (KB)  
 Total Depth: 4700.00 ft (KB) (TVD)      2302.00 ft (CF)  
 Hole Diameter: 7.88 inches      Hole Condition: Good      KB to GR/CF: 5.00 ft

**Serial #: 8018**      Inside  
 Press@RunDepth:      psig @ 4513.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2011.08.29      End Date: 2011.08.29      Last Calib.: 2011.08.29  
 Start Time: 06:02:02      End Time: 11:14:49      Time On Btm: 2011.08.29 @ 09:03:10  
 Time Off Btm: 2011.08.29 @ 09:22:00

TEST COMMENT: Mis-run Couldn't Get to Bottom



## PRESSURE SUMMARY

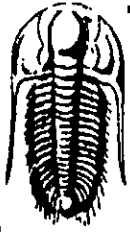
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1736.23	112.54	Initial Hydro-static
19	1766.09	113.23	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Norstar Petroleum Inc  
88 -Inverness Cir E. Unit F104  
Englewood CO 80112  
ATTN: Brad Rine

**Phillips- Denny #1-4**  
**04-22-23 Hodgeman Co**  
Job Ticket: 43671 **DST#: 2**  
Test Start: 2011.08.29 @ 06:02:02

**GENERAL INFORMATION:**

Formation: **Cherokee**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened:  
Time Test Ended: 11:14:50

Test Type: Conventional Straddle  
Tester: Will MacLean  
Unit No: 37

Interval: **4503.00 ft (KB) To 4573.00 ft (KB) (TVD)**  
Total Depth: 4700.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches  
Hole Condition: Good

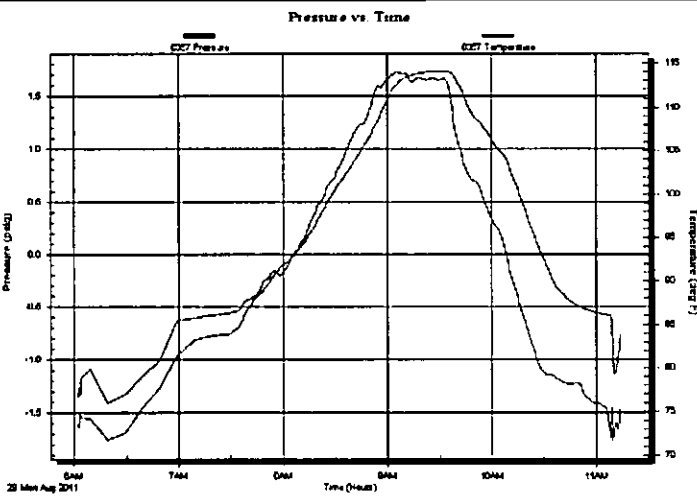
Reference Elevations: 2307.00 ft (KB)  
2302.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8357 Below (Straddle)**

Press@RunDepth: psig @ 4576.00 ft (KB)  
Start Date: 2011.08.29 End Date:  
Start Time: 06:02:05 End Time:

Capacity: 8000.00 psig  
Last Calib.: 2011.08.29  
Time On Btrr:  
Time Off Btrr:

TEST COMMENT: Ms-run Couldn't Get to Bottom



**PRESSURE SUMMARY**

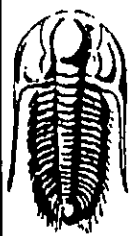
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)

**Gas Rates**

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Norstar Petroleum Inc  
88 - Inverness Cir E Unit F104  
Englewood CO 80112  
ATTN: Brad Rine

**Phillips- Denny #1-4**  
**04-22-23 Hodgeman Co**  
Job Ticket: 43671      **DST#: 2**  
Test Start: 2011.08.29 @ 06:02:02

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 56.00 sec/qt  
Water Loss: 15.91 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 7400.00 ppm  
Filter Cake: 2.00 inches

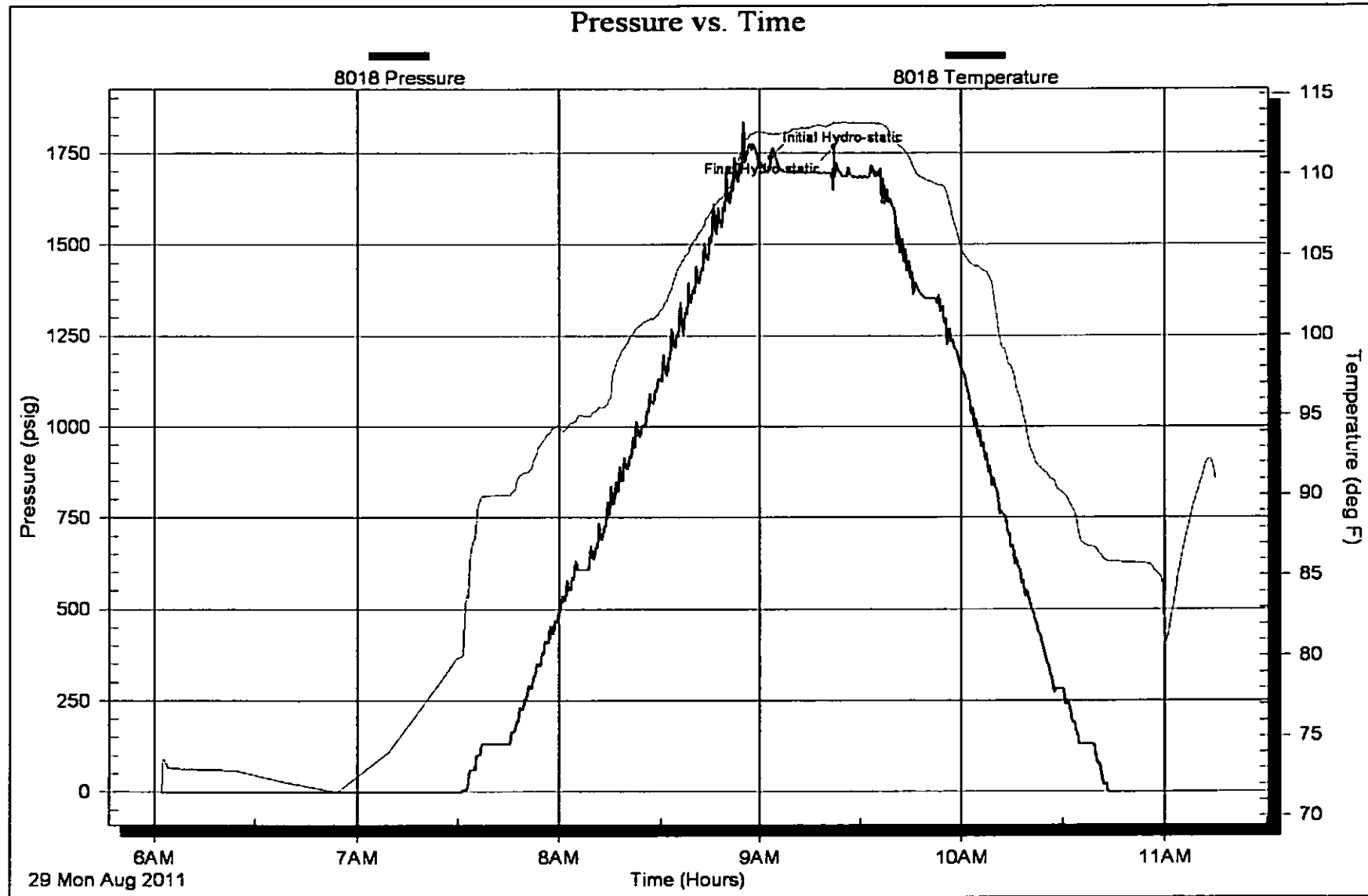
Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig  
Oil API: deg API  
Water Salinity: ppm

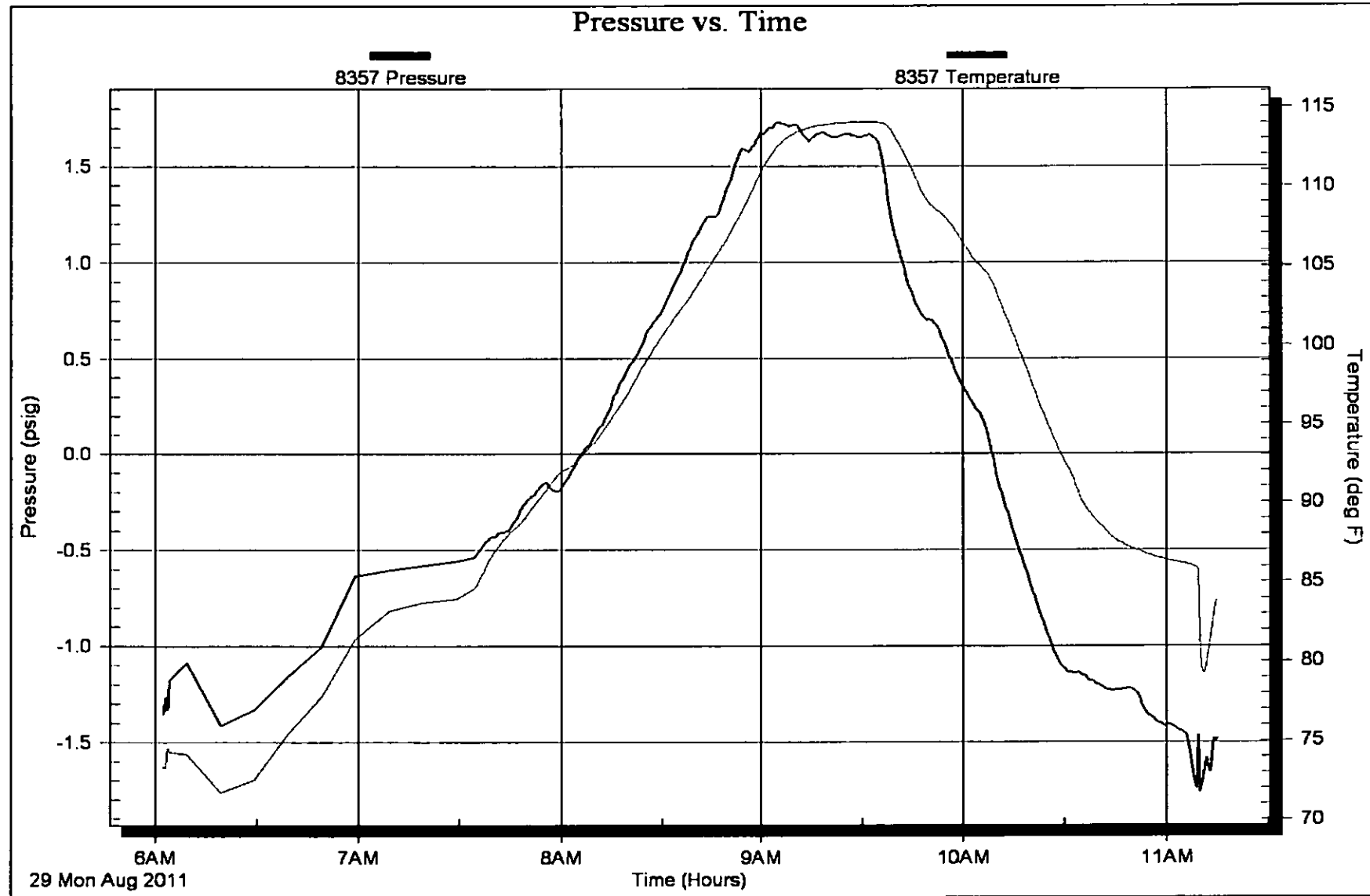
### Recovery Information

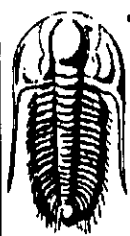
Recovery Table

Length ft	Description	Volume bbl

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







**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Norstar Petroleum Inc  
 88 -Inverness Cir E. Unit F104  
 Englewood CO 80112  
 ATTN: Brad Rine

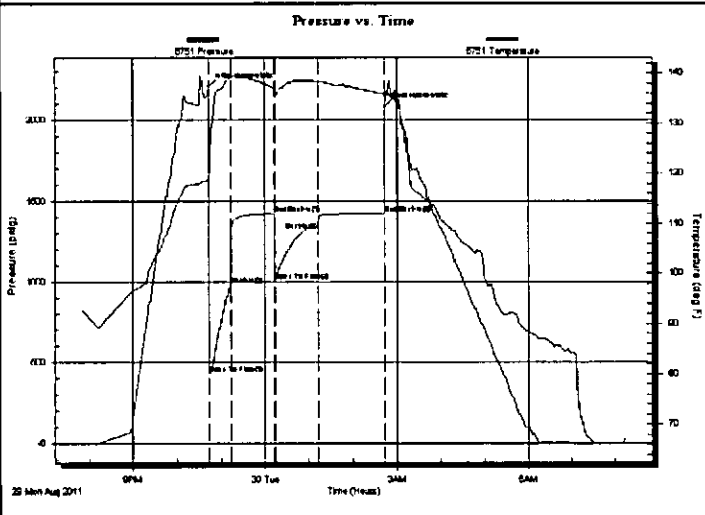
**Phillips- Denny #1-4**  
**04-22-23 Hodgeman Co**  
 Job Ticket: 43672      DST#: 3  
 Test Start: 2011.08.29 @ 19:50:02

### GENERAL INFORMATION:

Formation: **Cherokee**  
 Deviated: **No Whipstock**      ft (KB)  
 Test Type: **Conventional Straddle**  
 Time Tool Opened: 22:43:40      Tester: **Will MacLean**  
 Time Test Ended: 08:13:30      Unit No: **37**  
 Interval: **4503.00 ft (KB) To 4573.00 ft (KB) (TVD)**      Reference Elevations: **2307.00 ft (KB)**  
 Total Depth: **4700.00 ft (KB) (TVD)**      **2302.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Good**      KB to GR/CF: **5.00 ft**

**Serial #: 6751      Outside**  
 Press@RunDepth: **1368.09 psig @ 4513.00 ft (KB)**      Capacity: **8000.00 psig**  
 Start Date: **2011.08.29**      End Date: **2011.08.30**      Last Calib.: **2011.08.30**  
 Start Time: **19:50:02**      End Time: **08:13:30**      Time On Btm: **2011.08.29 @ 22:43:19**  
 Time Off Btm: **2011.08.30 @ 02:44:00**

**TEST COMMENT:** IF- Bottom of Bucket in 1min  
 IS- Surface Blow Built to 2 1/4" Died Back to 1"  
 FF- Bottom of Bucket in 1min 15sec Died Back to 9"  
 FS- Weak Surface Blow Died in 8 min



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2207.50	118.75	Initial Hydro-static
1	432.14	118.25	Open To Flow (1)
30	978.06	139.18	Shut-in(1)
90	1420.25	137.07	End Shut-in(1)
90	1005.50	136.83	Open To Flow (2)
151	1368.09	138.28	Shut-in(2)
241	1421.23	135.87	End Shut-in(2)
241	2081.88	136.22	Final Hydro-static

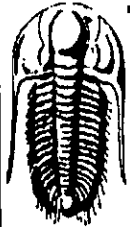
### Recovery

Length (ft)	Description	Volume (bbl)
310.00	5%w 20%g 25%m 50%oil	2.14
558.00	10%g 20%oil 30%w 40%m	7.83
1178.00	10%m 15%g 70%oil	16.52
1504.00	10%g 20%m 70%oil	21.10

### Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Norstar Petroleum Inc  
 88 -Inverness Cir E. Unit F104  
 Englewood CO 80112  
 ATTN: Brad Rine

**Phillips- Denny #1-4**  
**04-22-23 Hodgeman Co**  
 Job Ticket: 43672     **DST#: 3**  
 Test Start: 2011.08.29 @ 19:50:02

**GENERAL INFORMATION:**

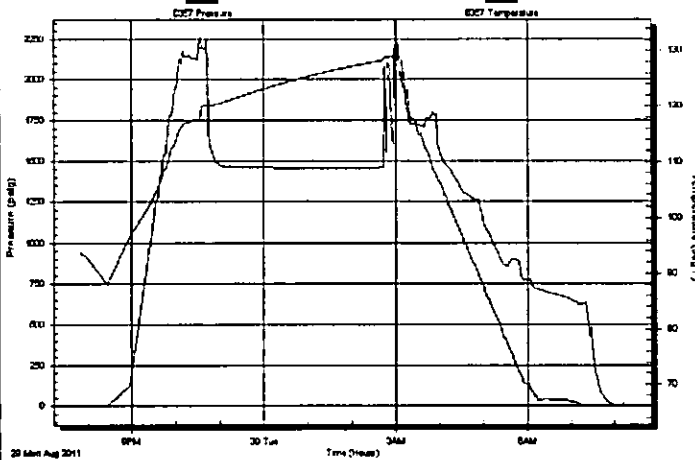
Formation: **Cherokee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:43:40  
 Time Test Ended: 08:13:30  
 Interval: **4503.00 ft (KB) To 4573.00 ft (KB) (TVD)**  
 Total Depth: 4700.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Straddle  
 Tester: Will MacLean  
 Unit No: 37  
 Reference Elevations: 2307.00 ft (KB)  
 2302.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8357 Below (Straddle)**  
 Press@RunDepth: psig @ 4598.00 ft (KB)  
 Start Date: 2011.08.29     End Date: 2011.08.30     Capacity: 8000.00 psig  
 Start Time: 19:50:05     End Time: 08:13:15     Last Calib.: 2011.08.30  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF- Bottom of Bucket in 1min  
 IS- Surface Blow Built to 2 1/4" Died Back to 1"  
 FF- Bottom of Bucket in 1min 15sec Died Back to 9"  
 FS- Weak Surface Blow Died in 8 min

**Pressure vs. Time**



**PRESSURE SUMMARY**

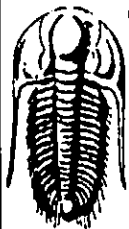
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
310.00	5%w 20%g 25%m 50%oil	2.14
558.00	10%g 20%oil 30%w 40%m	7.83
1178.00	10%m 15%g 70%oil	16.52
1504.00	10%g 20%m 70%oil	21.10

**Gas Rates**

Choke (inches)	Pressure (psig)	Gas Rate (Mc/d)



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Norstar Petroleum Inc

**Phillips- Denny #1-4**

88 - Inverness Cir E. Unit F104  
Englewood CO 80112

**04-22-23 Hodgeman Co**

Job Ticket: 43672

**DST#: 3**

ATTN: Brad Rine

Test Start: 2011.08.29 @ 19:50:02

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

34000 ppm

Viscosity: 43.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 16.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8300.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
310.00	5%w 20%g 25%m 50%oil	2.144
558.00	10%g 20%oil 30%w 40%m	7.827
1178.00	10%m 15%g 70%oil	16.524
1504.00	10%g 20%m 70%oil	21.097

Total Length: 3550.00 ft

Total Volume: 47.592 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

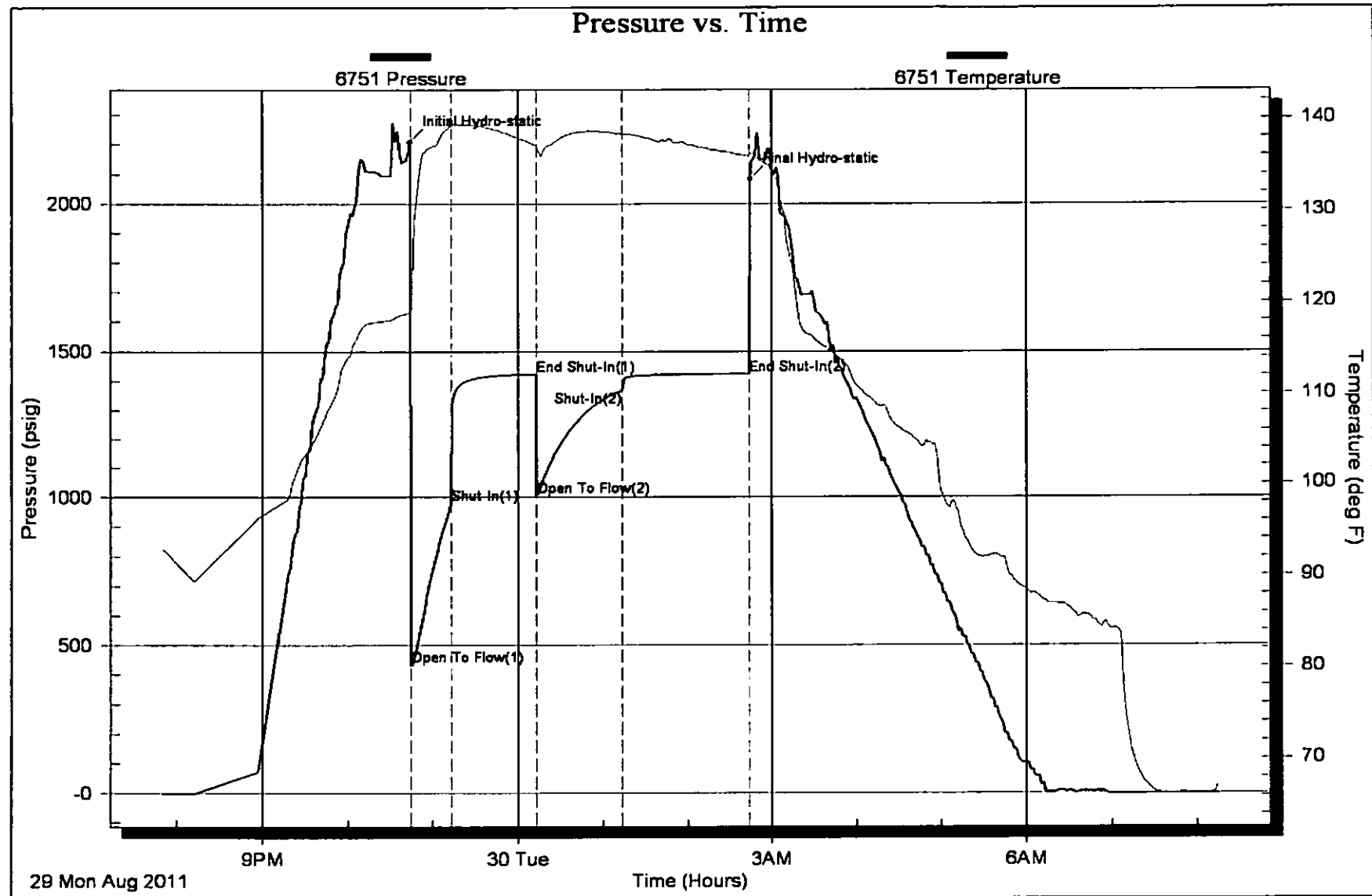
Serial #:

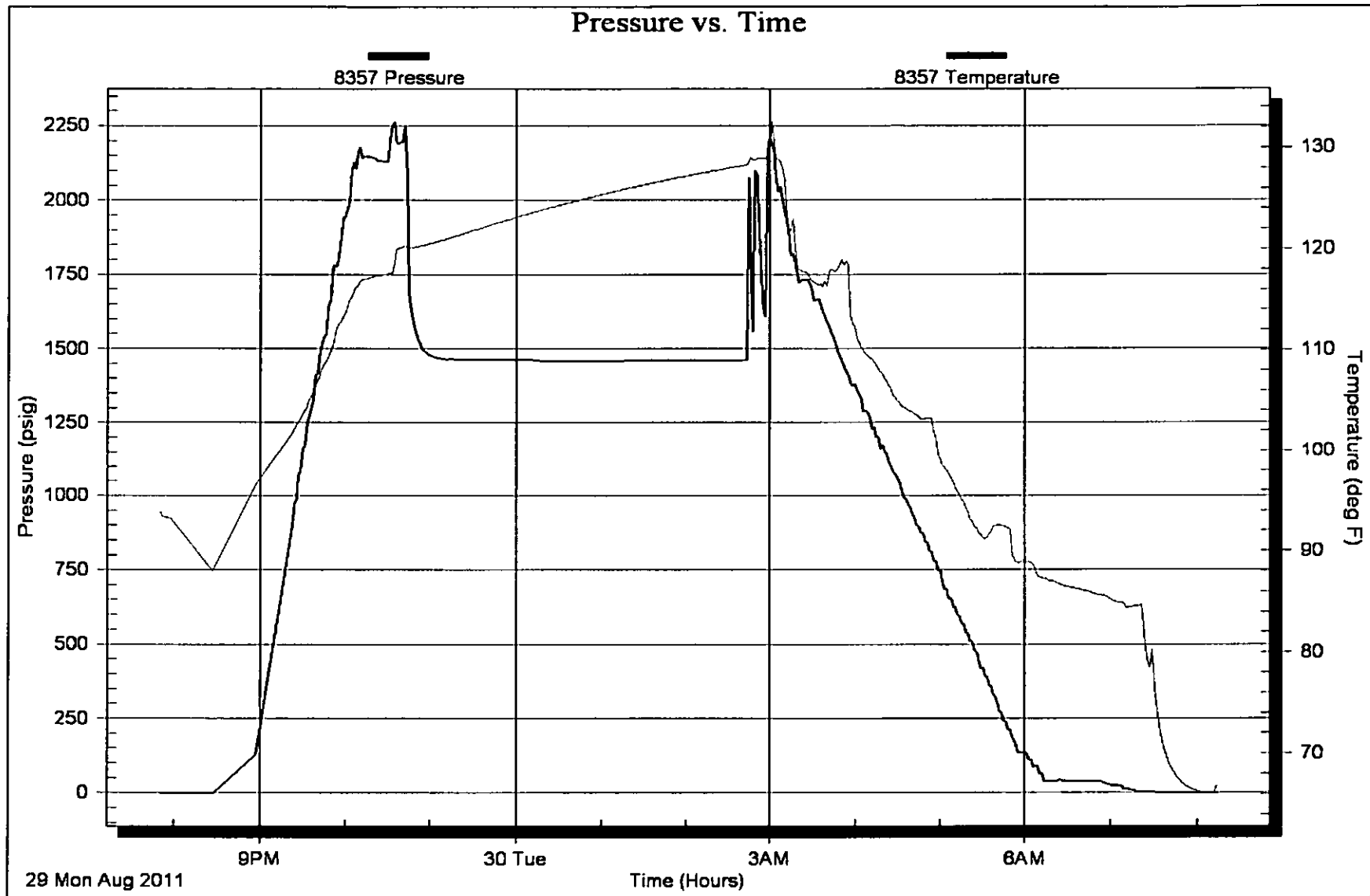
Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .261 @ 69f =34000

API 31 @ 60f =31





# ALLIED CEMENTING CO., LLC. 037383

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

VICE POINT:  
*West Road, KS*

DATE <u>8-19-11</u>	SEC. <u>4</u>	TWP. <u>22S</u>	RANGE <u>22W</u>	CALLED OUT	ON-LOCATION	JOB START <u>10:00 AM</u>	JOB FINISH <u>10:20 AM</u>
LEASE <u>Deputy</u>	WELL # <u>1-4</u>	LOCATION <u>Tellico to North to Road's</u>		COUNTY <u>Hogman</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one) <u>d/2 EAST</u>				South into			

CONTRACTOR <u>Walters #1</u>	OWNER <u>Norstar Petroleum, Inc</u>
TYPE OF JOB <u>Surface</u>	CEMENT
HOLE SIZE <u>13 1/4</u> I.D.	AMOUNT ORDERED <u>150 sks Class A</u>
CASING SIZE <u>9 5/8</u> O.D.	<u>3% CC. 2.7% gel</u>
TUBING SIZE _____ DEPTH _____	
DRILL PIPE _____ DEPTH _____	
TOOL _____ DEPTH _____	
PRES. MAX _____ MINIMUM _____	
MEAS. LINE _____ SHOE JOINT _____	
CEMENT LEFT IN CSG. <u>12 ft</u>	
PERFS. _____	
DISPLACEMENT _____	

COMMON <u>150</u>	@ <u>16.25</u>	<u>2,437.50</u>
POZMIX _____	@ _____	_____
GEL <u>3</u>	@ <u>21.25</u>	<u>63.75</u>
CHLORIDE <u>5</u>	@ <u>58.20</u>	<u>291.00</u>
ASC _____	@ _____	_____
HANDLING <u>15%</u>	@ <u>2.25</u>	<u>355.50</u>
MILEAGE <u>158.530 x .11</u>		<u>347.58</u>
TOTAL		<u>3,495.00</u>

EQUIPMENT

PUMP TRUCK	CEMENTER <u>Gregg</u>
# <u>266</u>	HELPER <u>Deug</u>
BULK TRUCK	
# <u>341</u>	DRIVER <u>Teob</u>
BULK TRUCK	
# _____	DRIVER _____

REMARKS:  
Dip on bottom - Break circulation  
with big mud mix 150 sks  
Clear 3% P/O CC 2.7% gel  
Shut down release plug and  
fill area with 15.7% 18%  
Displacement - Shut in  
Cement and circulate

SERVICE

DEPTH OF JOB <u>257</u>		
PUMP TRUCK CHARGE		<u>1125.00</u>
EXTRA FOOTAGE _____	@ _____	_____
MILEAGE Hum <u>40</u>	@ <u>7.00</u>	<u>280.00</u>
MANIFOLD _____	@ _____	_____
Hum <u>40</u>	@ <u>4.00</u>	<u>160.00</u>
TOTAL		<u>1565.00</u>

CHARGE TO: Norstar Petroleum, Inc

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

<u>16" sand Plug</u>	@ <u>94.00</u>	<u>94.00</u>
_____	@ _____	_____
_____	@ _____	_____
TOTAL		_____

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  Kyle Juergensen

SIGNATURE  Kyle Juergensen

*Thank You!*

SALES TAX (If Any) _____	
TOTAL CHARGES <u>5.15%</u>	<u>33</u>
DISCOUNT <u>2%</u>	<u>1424.41</u>
IF PAID IN 30 DAYS	
<u>3729.58</u>	