

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1251333  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

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

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

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

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

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

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

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

Total Vertical 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

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

1251333

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

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

**INSTRUCTIONS:** Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

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  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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	SDMS 1-23
Doc ID	1251333

Tops

Name	Top	Datum
Anhydrite	3220	+93
Anhdrite (base)	3252	+61
Foraker	3820	-507
Oread	4146	-833
Lansing A	4254	-941
Lansing B	4310	-997
Lansing C	4370	-1057
Lansing D	4418	-1105
Lansing E	4460	-1147
Lansing F	4496	-1183
RTD	4600	-1287
LTD	4605	-1292



# WELL FILE

## ALLIED OIL & GAS SERVICES, LLC 064679

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:

Oakley

DATE <u>1-31-15</u>	SEC. <u>23</u>	TWP. <u>1s</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>12:30 PM</u>	JOB START <u>1:00 AM</u>	JOB FINISH <u>1:30 AM</u>
LEASE <u>SOM5</u>	WELL # <u>1-23</u>	LOCATION <u>Beardsley N 70 Rd 114</u>			COUNTY <u>Rawlins</u>	STATE <u>Ks</u>	
OLD OR <u>NEW</u> (Circle one)		<u>W 1/2 N+E into</u>					

CONTRACTOR <u>Boreded ID</u>	OWNER <u>SOM5</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>302'</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>292'</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <u>15'</u>	
PERFS.	
DISPLACEMENT <u>17164 BBL</u>	

CEMENT			
AMOUNT ORDERED	<u>225 sks</u>	COIN	<u>30/50</u>
	<u>29/30</u>		
COMMON	<u>125 sks</u>	@	<u>17.90</u>
			<u>4027.50</u>
POZMIX		@	
GEL	<u>42.376</u>	@	<u>1.50</u>
			<u>61.50</u>
CHLORIDE	<u>634#</u>	@	<u>1.10</u>
			<u>697.40</u>
ASC		@	

EQUIPMENT	
PUMP TRUCK # <u>495-281</u>	CEMENTER <u>Andrew Forstner</u>
	HELPER <u>Darren Racette</u>
BULK TRUCK # <u>815</u>	DRIVER <u>George Grant</u>
BULK TRUCK #	DRIVER

<u>Material Total</u>	@	<u>4,936.90</u>
<u>(2021.50/40)</u>	@	
	@	
	@	
	@	
	@	
HANDLING <u>243.3 cu/ft</u>	@	<u>2.48</u>
		<u>603.38</u>
MILEAGE <u>2.25 70/100 mi</u>	@	<u>11.00</u>
		<u>1526.25</u>

REMARKS:

TOTAL

Cement did circulate

Thank you

SERVICE

DEPTH OF JOB	<u>292'</u>		
PUMP TRUCK CHARGE			<u>1512.25</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>50 miles</u>	@	<u>7.70</u>
			<u>385.00</u>
MANIFOLD	<u>Swedge</u>	@	<u>225.00</u>
	<u>Light vehicle</u>	@	<u>4.40</u>
		@	

(181209/453) TOTAL 4,026.88

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	

TOTAL

To: Allied Oil & Gas Services, 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 FRED P GRIMM

SIGNATURE [Signature]

SALES TAX (if Any) \_\_\_\_\_  
TOTAL CHARGES 8,963.28  
DISCOUNT 4,033.47 (45%) IF PAID IN 30 DAYS  
4,929.80 Net



# CEMENTING LOG

STAGE NO. \_\_\_\_\_

Date 1-31-15 District Ogkley Ticket No. 06-46-79  
 Company Berdec Rig Berdec 10  
 Lease S DMS Well No. 1-23  
 County Rawlins State KS  
 Location 23 L 36 Field \_\_\_\_\_  
Beardsley N TO AA WTOSIS N E INTO  
 CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 8.58 Type \_\_\_\_\_ Weight \_\_\_\_\_ Collar \_\_\_\_\_

## CEMENT DATA:

Spacer Type: \_\_\_\_\_  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG \_\_\_\_\_

LEAD: Pump Time \_\_\_\_\_ hrs. Type Com Place  
2096L Excess \_\_\_\_\_  
 Amt. 225 Sks Yield 1.34 ft<sup>3</sup>/sk Density 15.2 PPG

TAIL: Pump Time \_\_\_\_\_ hrs. Type \_\_\_\_\_  
 Excess \_\_\_\_\_

Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

WATER: Lead \_\_\_\_\_ gals/sk Tail \_\_\_\_\_ gals/sk Total \_\_\_\_\_ Bbls.

Pump Trucks Used 485-281  
 Bulk Equip. 818

Casing Depths: Top KB Bottom 292'

Drill Pipe: Size \_\_\_\_\_ Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 12 1/4 T.D. 302 ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. 0.37 Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

Float Equip: Manufacturer \_\_\_\_\_  
 Shoe: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Float: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Centralizers: Quantity \_\_\_\_\_ Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type Water Amt. 1764 Bbls. Weight \_\_\_\_\_ PPG  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG

COMPANY REPRESENTATIVE \_\_\_\_\_ CEMENTER Andrew

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
<u>6:00</u>						<u>start mixing cement cement mixed start Displacement</u>
				<u>10</u>		
				<u>7.64</u>		
	<u>225</u>					<u>Displacement in stop Pump shut in cement did circulate</u>
<u>6:30</u>						



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco LLC  
 2020 N. Bramblewood  
 Wichita, KS, 67206  
 ATTN: Bryan Bynog

**23-1S-36W / Rawlins**  
**SDMS # 1-23**  
 Job Ticket: 62149 **DST#: 1**  
 Test Start: 2015.02.03 @ 16:57:00

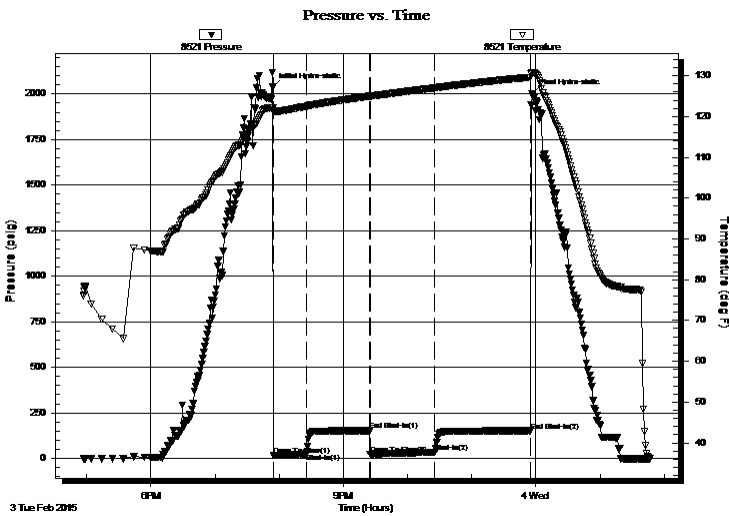
## GENERAL INFORMATION:

Formation: **Oread**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 19:54:30 Tester: Donovan Baumann  
 Time Test Ended: 01:47:00 Unit No: 66  
 Interval: **4110.00 ft (KB) To 4148.00 ft (KB) (TVD)** Reference Elevations: 3313.00 ft (KB)  
 Total Depth: 4148.00 ft (KB) (TVD) 3302.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 11.00 ft

**Serial #: 8521 Inside**  
 Press @ Run Depth: 35.74 psig @ 4111.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.02.03 End Date: 2015.02.04 Last Calib.: 2015.02.04  
 Start Time: 16:57:05 End Time: 01:47:00 Time On Btm: 2015.02.03 @ 19:54:00  
 Time Off Btm: 2015.02.03 @ 23:56:30

**TEST COMMENT:** 30 - IF - No surface blow ( In Diesel )  
 60 - ISI - No return  
 60 - FF - No surface blow  
 90 - FSI - No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2037.48	122.05	Initial Hydro-static
1	17.60	121.14	Open To Flow (1)
31	26.65	122.49	Shut-In(1)
90	152.91	124.97	End Shut-In(1)
91	24.81	124.96	Open To Flow (2)
152	35.74	127.01	Shut-In(2)
241	152.18	129.64	End Shut-In(2)
243	2000.84	130.67	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud - 100M	0.05

## Gas Rates

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



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TESTING, INC.**

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2020 N. Bramblewood  
Wichita, KS, 67206  
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**23-1S-36W / Rawlins**  
**SDMS # 1-23**  
Job Ticket: 62149 **DST#: 1**  
Test Start: 2015.02.03 @ 16:57:00

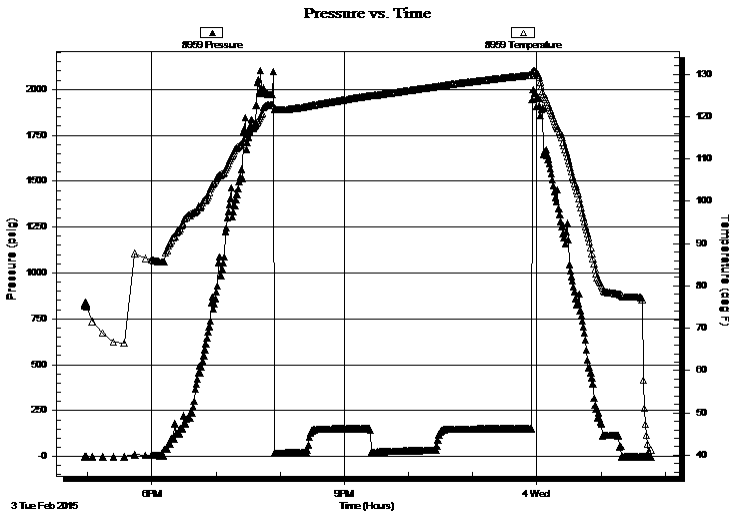
## GENERAL INFORMATION:

Formation: **Oread**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 19:54:30  
Time Test Ended: 01:47:00  
Interval: **4110.00 ft (KB) To 4148.00 ft (KB) (TVD)**  
Total Depth: 4148.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Donovan Baumann  
Unit No: 66  
Reference Elevations: 3313.00 ft (KB)  
3302.00 ft (CF)  
KB to GR/CF: 11.00 ft

**Serial #: 8959 Outside**  
Press @ Run Depth: psig @ 4111.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.02.03 End Date: 2015.02.04 Last Calib.: 2015.02.04  
Start Time: 16:57:05 End Time: 01:47:00 Time On Btm:  
Time Off Btm:

**TEST COMMENT:** 30 - IF - No surface blow ( In Diesel )  
60 - ISI - No return  
60 - FF - No surface blow  
90 - FSI - No return

## PRESSURE SUMMARY



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

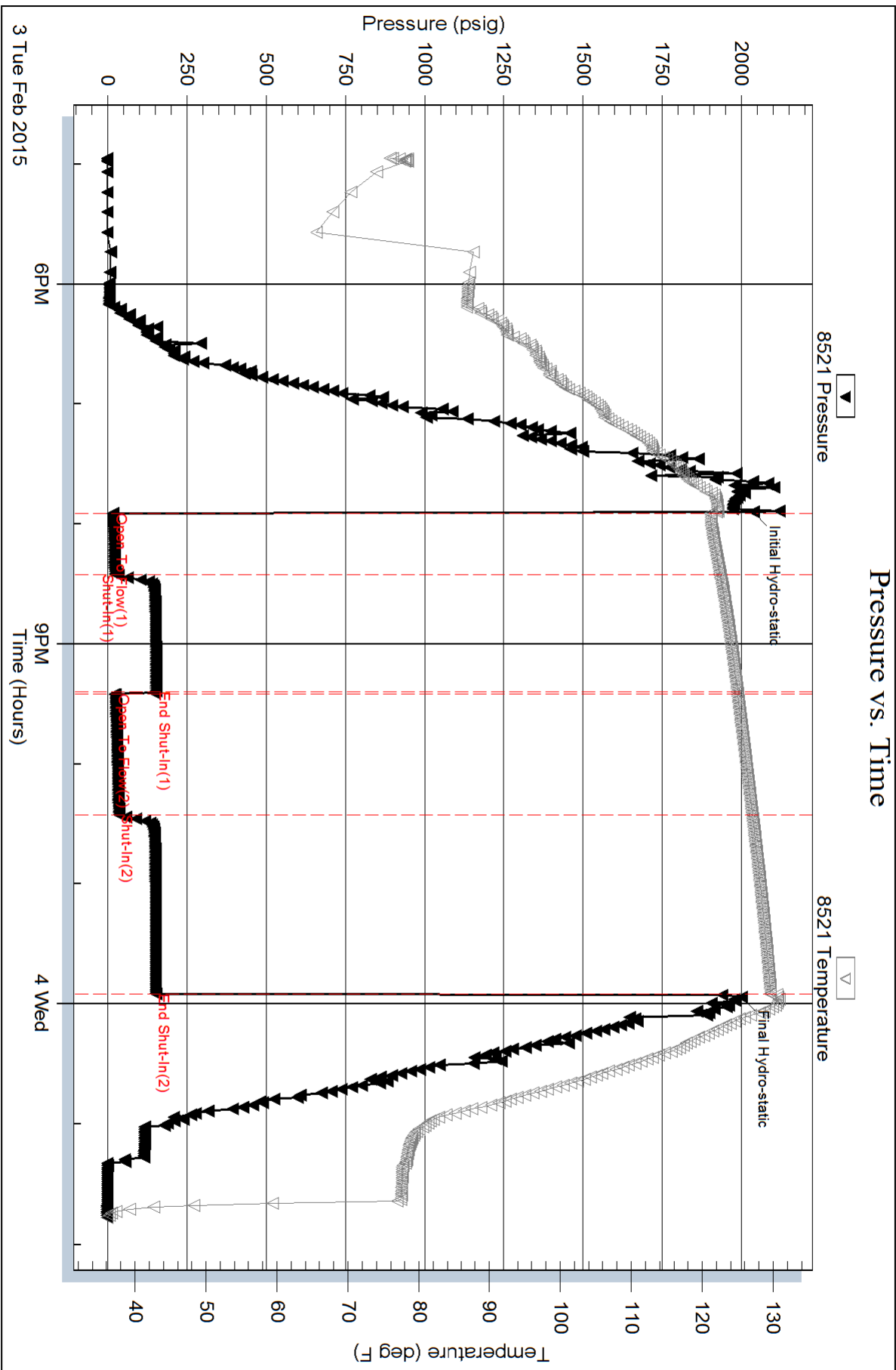
## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud - 100M	0.05

## Gas Rates

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



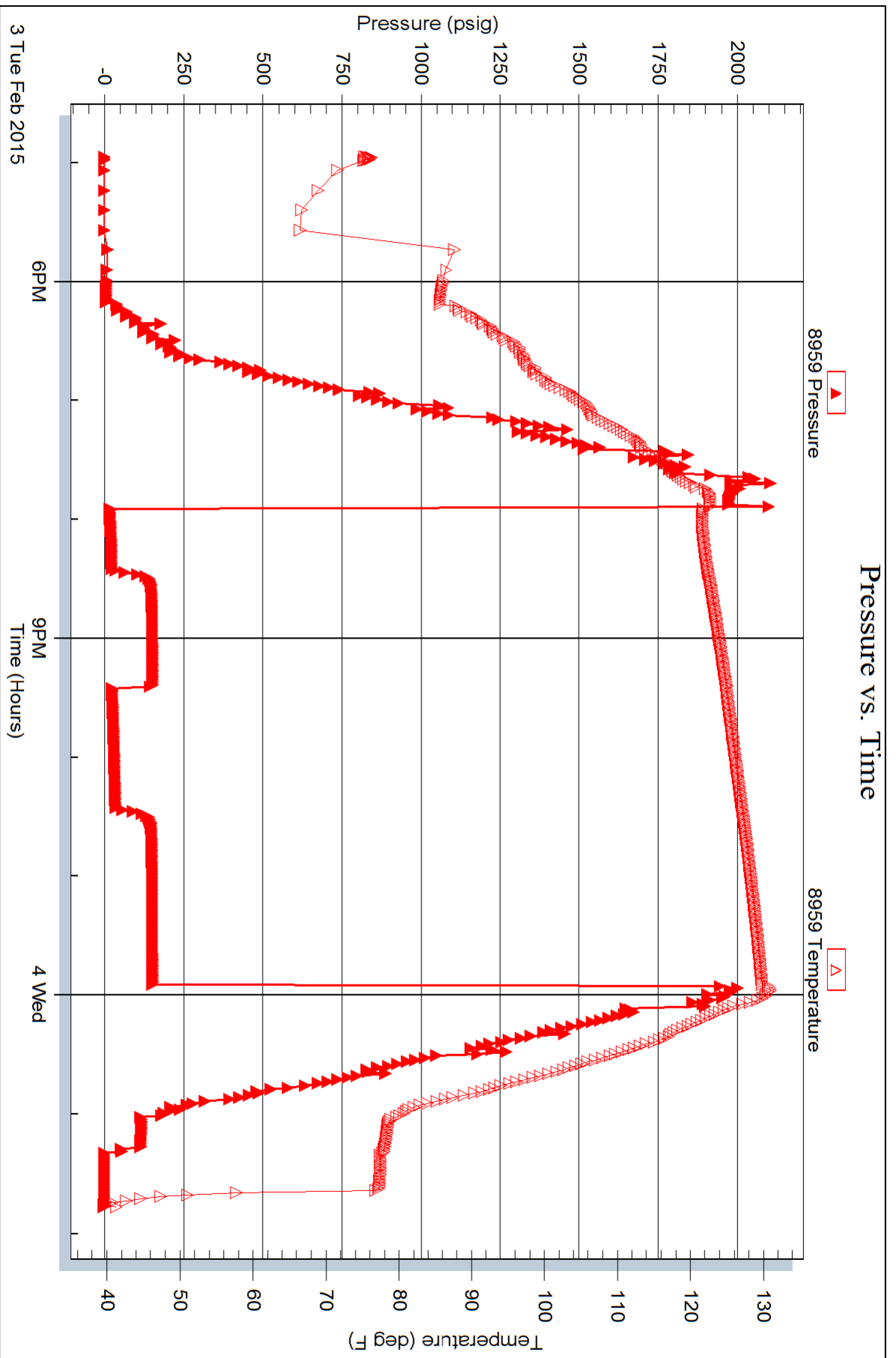


Serial #: 8959

Outside Berexco LLC

SDMS #1-23

DST Test Number: 1





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Berexco LLC  
2020 N. Bramblewood  
Wichita, KS, 67206  
ATTN: Bryan Bynog

**23-1S-36W / Rawlins KS**

**SDMS # 1-23**

Job Ticket: 60808

**DST#: 2**

Test Start: 2015.02.04 @ 22:10:00

## GENERAL INFORMATION:

Formation: **LKC "B"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:08:00  
 Time Test Ended: 09:02:00  
 Interval: **4260.00 ft (KB) To 4340.00 ft (KB) (TVD)**  
 Total Depth: 4340.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Robert Zodrow  
 Unit No: 66  
 Reference Elevations: 3313.00 ft (KB)  
 3302.00 ft (CF)  
 KB to GR/CF: 11.00 ft

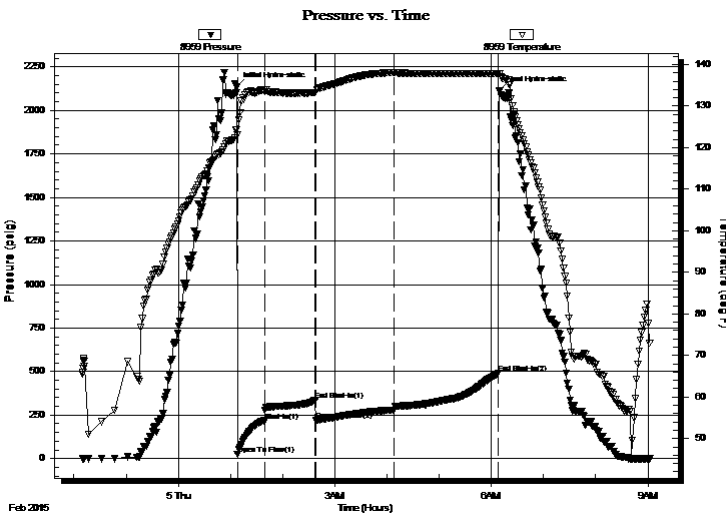
## Serial #: 8959

Inside

Press@RunDepth: 279.30 psig @ 4261.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.02.04 End Date: 2015.02.05 Last Calib.: 2015.02.05  
 Start Time: 22:10:05 End Time: 09:02:00 Time On Btm: 2015.02.05 @ 01:07:30  
 Time Off Btm: 2015.02.05 @ 06:09:30

TEST COMMENT: 30-IF- Bob in 15 mins  
 60-ISI- No return  
 90-FF- Bob in 45 mins  
 120-FSI- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2134.25	124.37	Initial Hydro-static
1	25.72	123.05	Open To Flow (1)
32	216.62	133.94	Shut-In(1)
90	336.84	133.22	End Shut-In(1)
91	218.40	133.19	Open To Flow (2)
181	279.30	138.10	Shut-In(2)
301	490.67	137.85	End Shut-In(2)
302	2112.47	137.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	OCMW 2%O 12%M 86%W	0.59
240.00	OCWM 3%O 17%W 80%M	1.18
180.00	OCM 10%O 90%M	2.21
30.00	MCO 40%M 60%O	0.44

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Berexco LLC

**23-1S-36W / Rawlins KS**

2020 N. Bramblewood  
Wichita, KS, 67206

**SDMS # 1-23**

Job Ticket: 60808

**DST#: 2**

ATTN: Bryan Bynog

Test Start: 2015.02.04 @ 22:10:00

### 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:

38000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	OCMW 2%O 12%M 86%W	0.590
240.00	OCWM 3%O 17%W 80%M	1.180
180.00	OCM 10%O 90%M	2.205
30.00	MCO 40%M 60%O	0.439

Total Length: 570.00 ft      Total Volume: 4.414 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

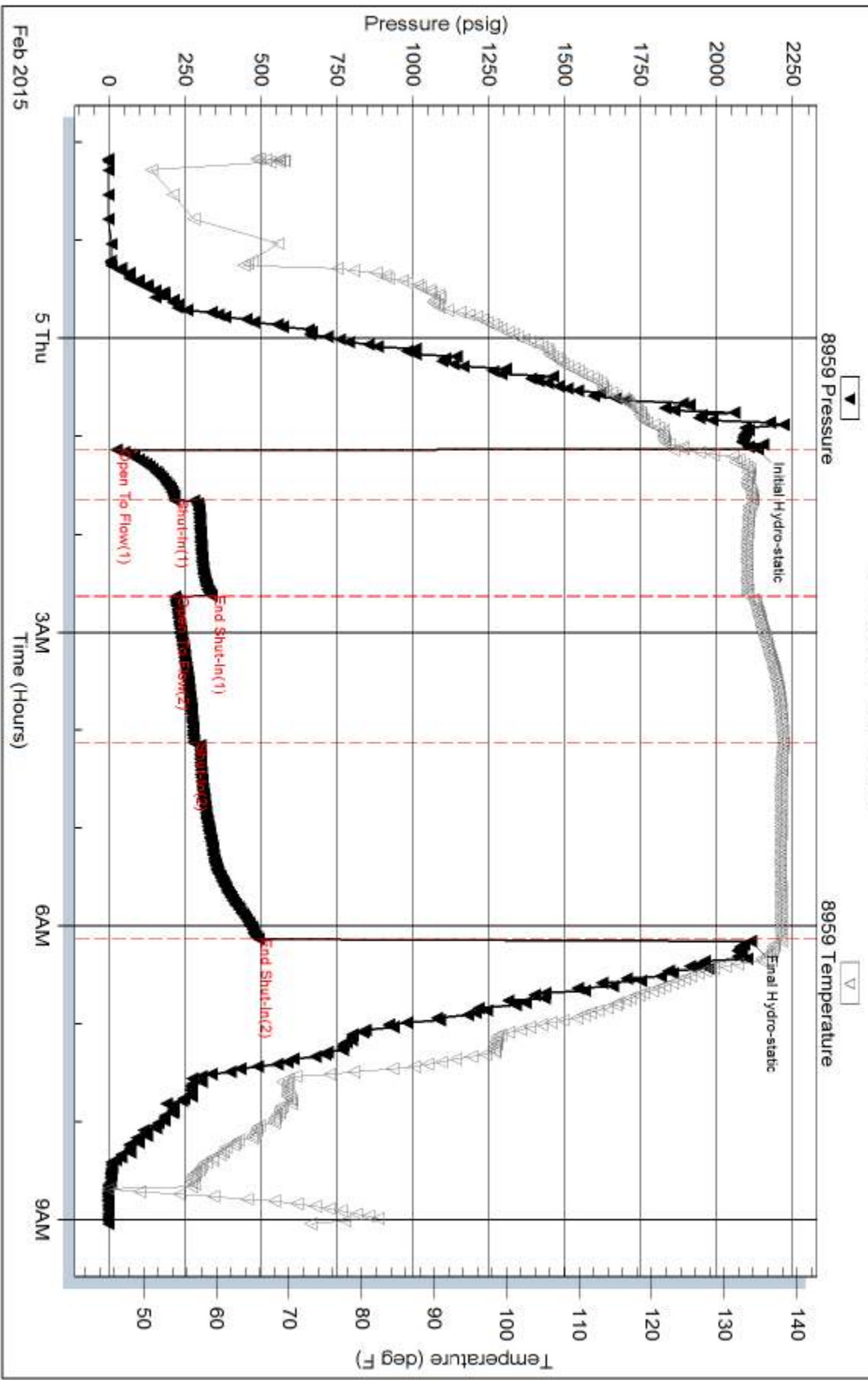
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .286 @ 49 Deg F = 38000

### Pressure vs. Time





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Berexco LLC  
2020 N. Bramblewood  
Wichita, KS, 67206  
ATTN: Bryan Bynog

**23-1S-36W / Rawlins KS**

**SDMS # 1-23**

Job Ticket: 60809

**DST#: 3**

Test Start: 2015.02.06 @ 02:40:00

## GENERAL INFORMATION:

Formation: **LKC "C,D&E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:17:30

Time Test Ended: 12:59:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 66

**Interval: 4318.00 ft (KB) To 4470.00 ft (KB) (TVD)**

Reference Elevations: 3313.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3302.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8959**

**Inside**

Press@RunDepth: 252.30 psig @ 4319.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.02.06

End Date:

2015.02.06

Last Calib.:

2015.02.06

Start Time: 02:40:05

End Time:

12:59:00

Time On Btm:

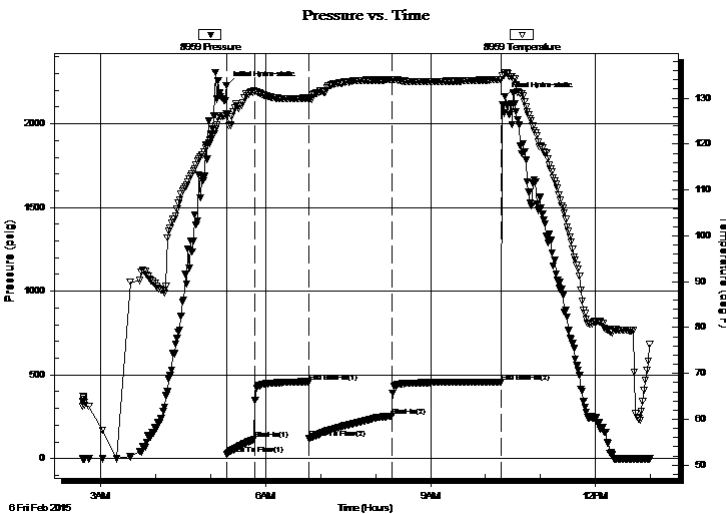
2015.02.06 @ 05:17:00

Time Off Btm:

2015.02.06 @ 10:21:30

**TEST COMMENT:** 30-IF- Blow built to 7 1/2"  
60-IS- No return  
90-FF- Blow built to 8 1/4"  
120-FS- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2228.63	126.66	Initial Hydro-static
1	24.95	126.27	Open To Flow (1)
31	114.75	131.52	Shut-In(1)
90	457.60	130.07	End Shut-In(1)
91	119.67	129.97	Open To Flow (2)
181	252.30	134.05	Shut-In(2)
300	457.61	134.12	End Shut-In(2)
305	2162.41	135.65	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	WM 20%W 80%M	0.59
340.00	Mud 100%M	1.67

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Berexco LLC

**23-1S-36W / Rawlins KS**

2020 N. Bramblewood  
Wichita, KS, 67206

**SDMS # 1-23**

Job Ticket: 60809

**DST#: 3**

ATTN: Bryan Bynog

Test Start: 2015.02.06 @ 02:40:00

### 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:

36000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.60 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	WM 20%W 80%M	0.590
340.00	Mud 100%M	1.672

Total Length: 460.00 ft      Total Volume: 2.262 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

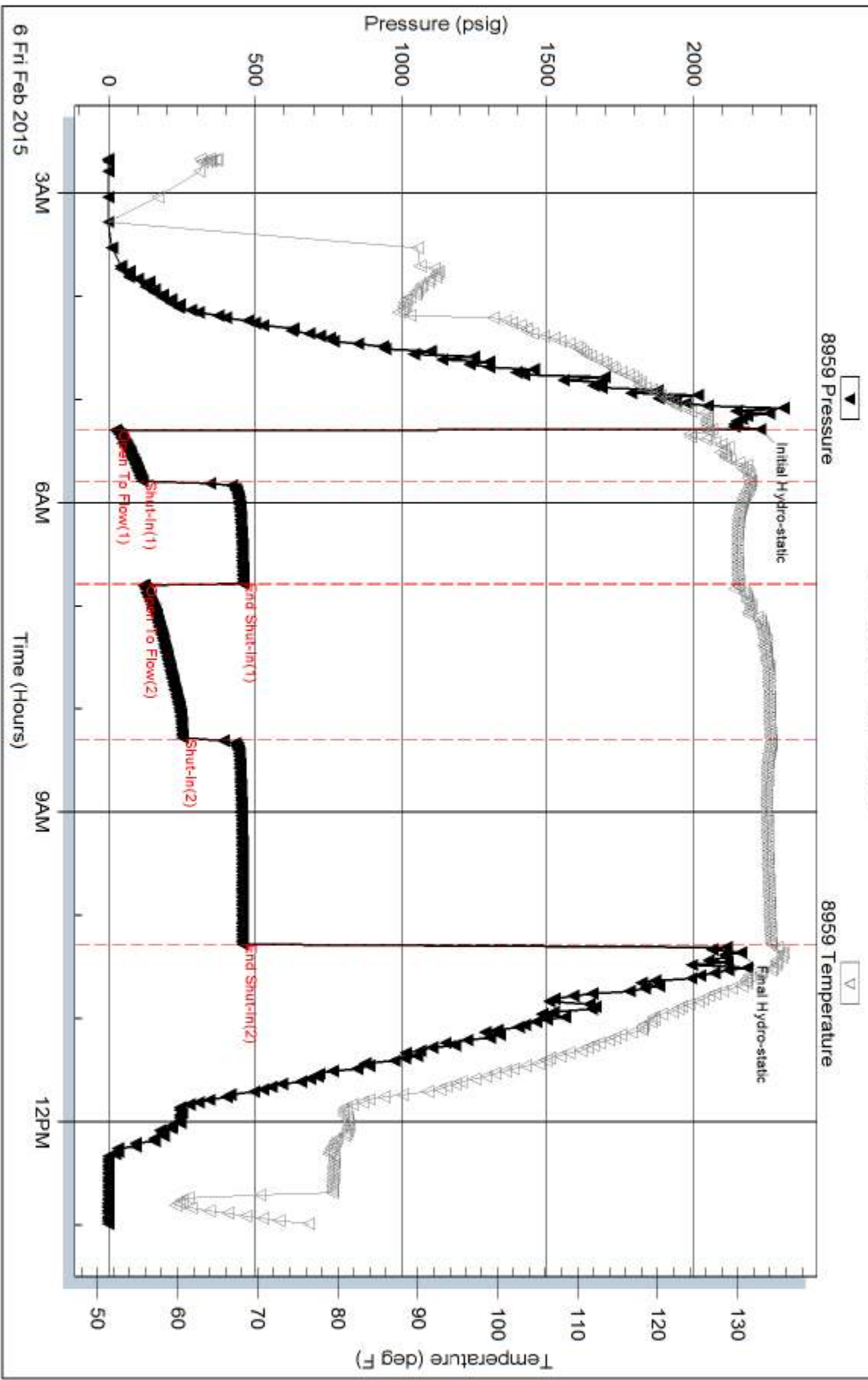
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .280 @ 51 Deg F = 36000

### Pressure vs. Time





**BEREXCO, LLC.  
SDMS #1-23  
SWSWSE SECTION 23 1S-36W  
RAWLINS COUNTY, KANSAS**

**GEOLOGIST  
WILLIAM B. BYNOG**

## RESUME

OPERATOR: BEREXCO, LLC.

WELL NAME & NUMBER: SDMS #1-23

LOCATION: SWSWSE 23-1S-36W

COUNTY: RAWLINS

STATE: KANSAS

SPUD DATE: 1-30-2015 COMPLETION DATE: 2-7-2015

ELEVATIONS: GL: 3302 KB: 3313

CONTRACTOR: BEREDCO RIG 10

LOGS: LOG TECH TYPES: RAG, MICROLOG

WELLSITE ENGINEER: NONE

MUD COMPANY: MORGAN MUD

MUD TYPE & ENGINEER: FRESH CHEMICAL

GEOLOGIST: WILLIAM B. BYNOG

HOLE SIZE: 7 7/8

MUD LOGGING BY: NONE

DRILL STEM TEST COMPANY: TRILOBITE

DRILL STEM TEST: DST # 1 4110-4148, DST #2 4260-4340,  
DST #3 4318-4470

WELL STATUS: RAN 4 1/2" PRODUCTION CASING

## DISCUSSION

SDMS # 1-23 SWSWSE SECTION 1S-36W was drilled a total depth of 4,600 feet testing the Lansing Kansas City in Rawlins County, Kansas. This well was drilled with the help of seismic data and well control.

Structurally, SDMS #1-23 came in 17 feet low to the prognosis and low to productive wells in the area.

As a result of running low there were poor sample shows of dead oil stain and poor porosity development in the Foraker.

The Oread was the first quality live oil show, tested on drill stem test #1 recovering only 10 feet of mud and low pressures. The Lansing A zone had no shows so drilling continued to the B zone. The B zone was associated with a good drilling break and good sample shows. Drill stem test # 2 on the B zone recovered 570 feet of total fluid, 30 feet mud cut oil, 180 feet of oil cut mud, 240 feet of oil and water cut mud and 120 feet of oil and mud cut water. The C, D and E zones all had no live oil shows and tested 460 feet of total fluid, 340 feet of mud and 120 feet of watery mud.

Logs agreed with sample evaluation recording fair porosity development but low resistive, porous zones indicating water or depleted reservoirs.

A decision was made to set 4 ½" production casing based on the Lansing B zone drill stem test and to dispose of the water in a nearby water disposal well.

SDMS #1-23.SAMPLE DESCRIPTIONS

3800-14 SHALE red,firm,chalky,argillaceous

3814-20 LIMESTONE white,firm,slightly oolitic,chalky,poor to fair vis porosity,spotty black dead stain,no free oil

3824-30 SHALE gray green,firm,waxy

FORAKER

3830-44 LIMESTONE gray,tan,very hard,dense,fossils in part,abundant Chert orange

3844-62 LIMESTONE buff,firm,very sandy,very fine grained,blocky,poor porosity,no shows

3862-76 SHALE red,slightly hard,very silty

3876-92 LIMESTONE buff, hard,blocky,slightly fossils,poor porosity,no shows

3892-3962 SHALE red,soft,very argillaceous

3962-4006 SHALE as above with thin LIMESTONE buff,very hard,dense,blocky,poor porosity,no shows

TOPEKA

4006-20 LIMESTONE white,firm,chalky,sandy in part,poor vis porosity,no shows

4020-32 SHALE red,soft,very argillaceous

## SDMS #1-23.SAMPLE DESCRIPTIONS

4032-50 LIMESTONE buff,hard,dense,blocky,poor porosity,no shows

4050-70 SHALE as above with thin LIMESTONE as above

4070-86 LIMESTONE white,firm,shchky,slightly fossils,sandy in part,poor vis porosity,no shows

4086-4139 SHALE red,maroon,green,firm,very silty with thin LIMESTONE buff,very hard,dense,blocky,no shows

OREAD

4139-4144 LIMESTONE white,firm,oolitic,chalky in part,fair intergranular vuggy porosity,very spotty live light brown stain,good cut,no free oil

4144-60 LIMESTONE white,very soft,very chalky,poor vis porosity,no shows

4160-4202 LIMESTONE buff,pale gray,very hard,dense,blocky, soem Chert orange

4202-26 LIMESTONE pale gray,hard,dense,blocky with thin SHALE green,soft,argillaceous,sandy in part

4226-48 SHALE red,very soft,very argillaceous

LANSING A

4248-52 LIMESTONE buff,hard,slightly fossils,chalky in part,poor visisble porosity,no shows

## SDMS #1-23.SAMPLE DESCRIPTIONS

4252-70 LIMESTONE buff,vhd,very dense,blocky,crptoxln,no shows

4270-75 SANDSTONE green,firm,very fine grained,argillaceous,calcareous,no vis porosity,no shows

4275-4302 SHALE red,very soft,very argillaceous with thin LIMESTONE buff,very hard,dense,crptoxln,trace black dead stain

### B ZONE

4302-06 GRAINSTONE white,firm,fossils,oolitic,fuss,slightly chalky,fair intergranular porosity,spotty to even live brown stain,very good fast cut,good show free oil

4306-14 LIMESTONE white,buff,slightly fossils,chalky in part,poor to fair pinpoint vuggy and moldic porosity,very spotty live light brown stain,gd fast cut,poor show free oil

4314-18 LIMESTONE buff,very hard,dense,blocky,crptoxln,no shows

4316-40 SHALE green,firm,silty in part with thin LIMESTONE buff,very hard,dense,crptoxln,no shows

4340-64 SHALE red,green,firm,fissile

### C ZONE

4364-78 LIMESTONE cream,slightly hard,microcrystalline,slightly fossils,chalky in part,poor vis porosity,no shows

## SDMS #1-23.SAMPLE DESCRIPTIONS

4378-4410 SHALE red,green,firm,fissile with thin LIMESTONE buff,very hard,dense,crptoxln,no shows

### D ZONE

4410-20 LIMESTONE cream,slightly hard,slightly fossils,chalky in part,poor microcrystalline porosity,no shows

4420-30 SHALE green,firm,fissile, with thin LIMESTONE buff,pale gray,very hard,dense,blocky,no shows

4430-40 SHALE green,red,firm,fissile,waxy in part

4440-54 SHALE red,soft,very argillaceous,gummy

### E ZONE

4454-62 LIMESTONE cream,hard,very fnly microcrystalline,slightly fossils, blocky,poor vis porosity,trace rare black dead stain,no free oil

4462-72 LIMESTONE white,firm,very chalky,poor vis porosity,no shows

4462-90 SHALE red,firm,silty

### F ZONE

4490-4500 LIMESTONE cream,buff,very hard,dense,blocky,crptoxln,no shows

## SDMS #1-23.SAMPLE DESCRIPTIONS

4500-54 SHALE red,soft,very argillaceous with interbedded LIMESTONE buff,palegy,very hard,dense,crptoxlm,no shows

4554-4600 SHALE red brown,slightly hard,some silty in part

RTD 4600'

LTD 4605'



# WELL FILE

## ALLIED OIL & GAS SERVICES, LLC 064817

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Oakley KS

DATE <u>12-8-15</u>	SEC. <u>23</u>	TWP. <u>1S</u>	RANGE <u>3low</u>	CALLED OUT	ON LOCATION <u>9:00 p.m.</u>	JOB START <u>1:00 a.m.</u>	JOB FINISH <u>2:00 a.m.</u>
LEASE <u>SDMS</u>	WELL# <u>1-23</u>	LOCATION <u>Beardsley, N to AA, N to S.S.</u>			COUNTY <u>Rawlins</u>	STATE <u>K.S.</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>1/2" N, E into</u>			

CONTRACTOR Beredes IO  
 TYPE OF JOB Production  
 HOLE SIZE 7 7/8 T.D. 4600'  
 CASING SIZE 4 1/2 (11.6") DEPTH 4580'  
 TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT 44'  
 CEMENT LEFT IN CSG. 44'  
 PERFS. \_\_\_\_\_  
 DISPLACEMENT 70.31 bbl H<sub>2</sub>O

OWNER Same

CEMENT  
 AMOUNT ORDERED 350 sks lite (60/4/8)  
3/4" Flo-seal, 200 sks Com 10% salt,  
5" gilsonite, 2% gel

COMMON	<u>200 sks</u>	@ <u>17.90</u>	<u>3580.00</u>
POZMIX		@	
GEL	<u>376 #</u>	@ <u>1.50</u>	<u>188.00</u>
CHLORIDE		@	
ASC		@	
Lite (60/40/8)	<u>350 sks</u>	@ <u>19.89</u>	<u>6961.50</u>
Salt	<u>1040 #</u>	@ <u>.68</u>	<u>707.20</u>
Gilsonite	<u>1000 #</u>	@ <u>.98</u>	<u>980.00</u>
Flo-seal	<u>263 #</u>	@ <u>2.97</u>	<u>781.11</u>
Industrial Tubing		@	
(5 938.92/458)		@	
		@	
		@	
HANDLING	<u>648.55 #</u>	@ <u>2.48</u>	<u>1608.40</u>
MILEAGE	<u>27 hrs x 50 mi x</u>	<u>2.75</u>	<u>3712.50</u>
TOTAL			

EQUIPMENT

PUMP TRUCK # <u>431</u>	CEMENTER <u>Paul Beaver</u>
	HELPER <u>Brandon Wilkinson</u>
BULK TRUCK # <u>818/287</u>	DRIVER <u>George Grant</u>
BULK TRUCK # <u>890/241</u>	DRIVER <u>Wayne Messallie</u>

REMARKS:  
Run Pipe / Float equip / Drop ball  
pumped ball through shoe @ 400 #  
Mix 300 sks lite, fail w/ 200  
skts Com, Release plug, Displace  
w/ water, plug did land @ 1100 #, Lift  
1600 # cement did set.  
Mix 30 sks in RA, mix 20 sks in m.H.  
 Thank you -  
 Paul + crew

CHARGE TO: Dorexco llc  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To: Allied Oil & Gas Services, 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 \_\_\_\_\_  
 SIGNATURE E. Jones

SERVICE

DEPTH OF JOB	<u>4580'</u>
PUMP TRUCK CHARGE	<u>2765.75</u>
EXTRA FOOTAGE	@
MILEAGE MI HV	<u>50 @ 7.70</u> <u>385.00</u>
MANIFOLD Head	@ <u>NIC</u>
M/LV	<u>50 @ 4.40</u> <u>NIC</u>
	@
(3812.25/458)	
TOTAL	<u>8,471.65</u>

PLUG & FLOAT EQUIPMENT

<u>4 1/2 Industrial / weatherford</u>	
(3) AFV Float shoe	@ <u>217.00</u>
(w) Latch down plug Assy	@ <u>155.00</u>
(w) Centralizers	<u>5 @ 35.00</u> <u>175.00</u>
(I) Centralizers	<u>5 @ 35.00</u> <u>175.00</u>
(I) Recept scrapers	<u>20 @ 35.00</u> <u>700.00</u>
(639.91/458)	
TOTAL	<u>1,422.00</u>

SALES TAX (if Any) \_\_\_\_\_  
 TOTAL CHARGES 2,309.42  
 DISCOUNT 10,391.13 (45%) IF PAID IN 30 DAYS  
12,700.28 Net.

Date 2-8-15 District Osage, KS Ticket No. 44817  
 Company Berco 10 Rig Berco 10  
 Lease 3DMS Well No. 1-23  
 County Rawlins State KS  
 Location 23-1s-36w Field \_\_\_\_\_

CEMENT DATA:  
 Spacer Type: \_\_\_\_\_  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG \_\_\_\_\_

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 4 1/2 Type New Weight 11.6 Collar \_\_\_\_\_

LEAD: Pump Time \_\_\_\_\_ hrs. Type 60/40 8 1/2 gel  
3/4" Flo-seal Excess \_\_\_\_\_  
 Amt. 300 Sks Yield 1.90 ft<sup>3</sup>/sk Density 121.5 PPG \_\_\_\_\_  
 TAIL: Pump Time \_\_\_\_\_ hrs. Type Com 10 1/2 self  
5 1/2 gals/sk 2 1/2 gel Excess \_\_\_\_\_  
 Amt. 200 Sks Yield 1.56 ft<sup>3</sup>/sk Density 14.5 PPG \_\_\_\_\_  
 WATER: Lead 10.9 gals/sk Tail 6.97 gals/sk Total \_\_\_\_\_ Bbls. \_\_\_\_\_

Casing Depths: Top KB Bottom 4580'

Pump Trucks Used 431-Brandon  
 Bulk Equip. 818/287-George Grant  
890/211-Wayne Messelle

Drill Pipe: Size \_\_\_\_\_ Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size \_\_\_\_\_ T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

Float Equip: Manufacturer Industrial Rubber  
 Shoe: Type AFU Float shoe Depth \_\_\_\_\_  
 Float: Type Latexdown plug Assy Depth \_\_\_\_\_  
 Centralizers: Quantity 10 Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. 20 receipt scratchers  
 Disp. Fluid Type water Amt. 70 Bbls. Weight \_\_\_\_\_ PPG \_\_\_\_\_  
 Mud Type 40 vts Weight \_\_\_\_\_ PPG \_\_\_\_\_

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. .0155 Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

COMPANY REPRESENTATIVE \_\_\_\_\_

CEMENTER Paul Beaver

TIME AM/PM	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
						Hold Safety meeting Run Pipe / Float equip Drop ball, pumped ball through @ 400# Circ thro
1:00	0		5.0	5.0	4	mix 30 sks in R.H
	0		3.0	8.0	4	mix 20 sks in m.H
	300		78.0	86.0	6	mix 300 sks like @ 12.5#
	300		33.0	119.0	6	Tail w/ 200 sks Com @ 14.5#
	300		20	139.0	4	Washup to pit / release plug
	500		20	159.0	6	Displace w/ water
	1000		10	169.0	6	
	1200		10	179.0	6	
2:00	1600		10	189.0	6	plug did land @ 2100# lift pressure 1600# Float did hold cement did not circulate