



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1189980  
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: \_\_\_\_\_

1189980

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
--	---

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

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	Lillie 1-26
Doc ID	1189980

Tops

Name	Top	Datum
Anhydrite	3161	+103
Anhydrite (base)	3192	+72
Foraker	3756	-492
Topeka	3974	-710
Oread	4090	-826
Heebner	4142	-878
Lansing/KS City "A"	4190	-926
LKC "B"	4247	-983
LKC "C"	4306	-1042
LKC "D"	4351	-1087
LKC "E"	4394	-1130
LKC "F"	4433	-1169
RTD	4540	
LTD	4533	-1269



# WELL FILE

## ALLIED OIL & GAS SERVICES, LLC 061369

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:

Oakley, KS

DATE <u>11-8-13</u>	SEC. <u>26</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>10:30 AM</u>	JOB START <u>3:00 PM</u>	JOB FINISH <u>3:30 PM</u>
LEASE <u>Billie</u>	WELL # <u>1-8</u>	<sup>26</sup>	LOCATION <u>Beardsley rd to Rd A &amp; 46050</u>			COUNTY <u>Rauvin</u>	STATE <u>KS</u>
OLD OR NEW (Circle one)							

CONTRACTOR Borexco #2

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 310'

CASING SIZE 8 5/8 DEPTH 310'

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. 15'

PERFS. \_\_\_\_\_

DISPLACEMENT 18 3/4

OWNER same

CEMENT

AMOUNT ORDERED 225 SKS com390cc

290 gal

COMMON	<u>225 SKS @ 17.90</u>	<u>4027.50</u>
POZMIX	@	
GEL	<u>4 SKS @ 23.50</u>	<u>93.50</u>
CHLORIDE	<u>12 SKS @ 6.430</u>	<u>513.60</u>
ASC	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING	<u>243,300 ft @ 2.45</u>	<u>6033.50</u>
MILEAGE	<u>11,104 ton x 50 x 2.60</u>	<u>14435.20</u>
TOTAL		<u>6681.60</u>

EQUIPMENT

PUMP TRUCK CEMENTER Kelly Gabel

# 3734251 HELPER Wayne McElghy

BULK TRUCK

# 3963306 DRIVER Mike McKampson

BULK TRUCK

# \_\_\_\_\_ DRIVER \_\_\_\_\_

REMARKS:

500 up truck, mixed 225 SKS com390 cc 290 gal, displaced with 18 3/4 bbl water, shut in

*J. H. Kelly & Crew*

SERVICE

DEPTH OF JOB	<u>310'</u>	
PUMP TRUCK CHARGE	<u>1512.35</u>	
EXTRA FOOTAGE	@	
MILEAGE	<u>50 @ 7.70</u>	<u>385.00</u>
MANIFOLD	@	
	@	
	@	

TOTAL 1797.35

CHARGE TO: Borexco

STREET \_\_\_\_\_

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

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 \_\_\_\_\_

SIGNATURE JAME ZUNIGA

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 8,578.85

DISCOUNT 2,402.07 IF PAID IN 30 DAYS

6,176.77 Net



# CEMENTING LOG

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

Date 11-8-13 District Miscan Ticket No. 61369  
 Company BEPDEX Rig Bepdex #2  
 Lease 1115e Well No. 1-16  
 County Rawlins State KS  
 Location Bearsley N. to PAAA Field \_\_\_\_\_  
545 Simco

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

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 8 5/8 Type New Weight 24# Collar \_\_\_\_\_

LEAD: Pump Time \_\_\_\_\_ hrs. Type \_\_\_\_\_  
 Excess \_\_\_\_\_  
 Amt. 225 Skys Yield 1.52 ft<sup>3</sup>/sk Density 14.8 PPG

TAIL: Pump Time \_\_\_\_\_ hrs. Type \_\_\_\_\_  
 Excess \_\_\_\_\_  
 Amt. \_\_\_\_\_ Skys Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

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

Casing Depths: Top Ground level Bottom 310'

Pump Trucks Used 323 + 281  
 Bulk Equip. 396 + 306

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

Float Equip: Manufacturer \_\_\_\_\_

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. 10637 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. \_\_\_\_\_  
 Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

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

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

CEMENTER Kelly

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
(AM) PM						
10:30						got to location safety meeting rigged up mixed cement displaced with water
			10	200		
			8 1/2	200		
						Shut in



# ALLIED OIL & GAS SERVICES, LLC WELL FILE 061378

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:

Cady, KS

DATE <u>11-18-13</u>	SEC. <u>26</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>10:00AM</u>	JOB START	JOB FINISH
LEASE # <u>111c</u>	WELL # <u>1-6</u>	LOCATION <u>Beardley N to BAAA to SW</u>			COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)			<u>5 into</u>				

CONTRACTOR Beredco #2 OWNER Jome

TYPE OF JOB Drill  
 HOLE SIZE 7 7/8 T.D. 4540  
 CASING SIZE 5 1/2 DEPTH 4339  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT 42.80  
 CEMENT LEFT IN CSG. 42.80  
 PERFS.  
 DISPLACEMENT 107

CEMENT  
 AMOUNT ORDERED 450 SKS lite 1/4" flt seal  
250 SKS com 10% salt 2" flt 5"  
gilsonite

COMMON	<u>250 SKS @ 17.90</u>	<u>4475.00</u>
POZMIX	@	
GEL	<u>5 SKS @ 23.70</u>	<u>117.00</u>
CHLORIDE	@	
ASC	@	
Lite	<u>450 SKS @ 15.95</u>	<u>7177.50</u>
salt	<u>26 SKS @ 26.35</u>	<u>685.10</u>
Gilsonite	<u>1250# @ .98</u>	<u>1225.00</u>
Flt seal	<u>338# @ 2.97</u>	<u>1003.86</u>
super flush	<u>12 bbl @ 58.20</u>	<u>704.40</u>
	@	
	@	
	@	
HANDLING	<u>825.28 cft @ 2.45</u>	<u>2021.69</u>
MILEAGE	<u>34.33 ton x 50 x 2.50</u>	<u>4462.90</u>
<b>TOTAL</b>		<u>21,897.48</u>

**EQUIPMENT**

PUMP TRUCK CEMENTER Kelly Gabel  
 # 3754281 HELPER Wayne McShigby  
 BULK TRUCK  
 # 8182357 DRIVER Mike McKamden  
 BULK TRUCK  
 # 3964306 DRIVER Juan (TWO)

**REMARKS:**

mixed 20 SKS RH 15 SKS MH  
mixed 420 SKS lite down center,  
tailed in with 250 SKS com.  
released plug & displaced with water  
100 pressure 90# Plug landed @ 150#  
released pressure, float held  
Cement did circulate

*Thank You  
Kelly & crew*

**SERVICE**

DEPTH OF JOB		
PUMP TRUCK CHARGE		<u>2765.25</u>
EXTRA FOOTAGE	@	
MILEAGE	<u>Mi HV 50 @ 7.70</u>	<u>385.01</u>
MANIFOLD Head	@	<u>275.00 NC</u>
Mi LV 50	@	<u>470 NC</u>
	@	

**TOTAL** 3150.76

**PLUG & FLOAT EQUIPMENT**

Industrial Rubber / weatherford		
APU Float shoe	@	<u>232.00</u>
Latchdown Assy / Plug	@	<u>184.00</u>
Centralizers: 11	@	<u>37.00 407.00</u>
reciprocating scrapers	@	<u>46.00 552.00</u>
Basket (w)	@	<u>394.29</u>

**TOTAL** 1769.28

CHARGE TO: Beredco  
 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. HANES

SALES TAX (if Any) \_\_\_\_\_  
 TOTAL CHARGES 26,817.52  
 DISCOUNT 7,013.50 IF PAID IN 30 DAYS  
19,804.01 Net.

**BEREXCO LLC**

**LILLIE 1-26**

**NW NW SEC 26 T1S R36W**

**RAWLINS COUNTY, KANSAS**

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## SUMMARY

The Berexco LLC Lillie 1-26 in Rawlins County, Kansas spud November 8, 2013 and reached a total depth of 4540' on November 17, 2013. The test drilled below the below the Lansing-Kansas City F zone for wireline and completion rathole but did not penetrate the Pennsylvanian Pawnee. Wellsite geological supervision commenced at 3000'. The primary objective was the Pennsylvanian Missourian Lansing-Kansas City carbonate benches, which are productive in nearby wells. A secondary zone of interest was the Virgilian Oread Limestone. The Lillie 1-26 was drilled using seismic and nearby well control.

Evaluation of the primary zones of interest was by drill stem testing after sample analysis and correlation. Five DSTs were run based on sample shows.

### Lansing-Kansas City

DST 1 in the Oread recovered 595 ft of oil and 1090 ft of gassy oil and mud cut water. Samples were fossiliferous and oolitic grainstone with fair interparticle porosity, scattered oil staining, and good cuts.

DST 2 in the Lansing A was based on scattered vuggy and interparticle porosity with good spotty black oil in cuttings. Recovery was 45 ft of mud. The Lansing A exhibited poor flow pressures and wireline logs confirmed the lack of porosity.

The Lansing B grainstone exhibited trace to poor porosity, abundant live black oil stain, and very good cuts. DST 3 recovered 175 ft of oil and oil cut mud with poor flow pressures. The thick black Lansing B oil was 17 gravity. Wireline logs show 3 ft of porosity.

DST 4 in the Lansing C was based on good oil stain and cuts in a lime grainstone. Recovery was 717 ft of oil and oil cut mud with 565 ft of gas in the drill pipe.

Cuttings showed the Lansing D was a tight mudstone with very poor sample shows and porosity. The decision was made to drill ahead into the Lansing E and run a DST over the combined D and E zones. The Lansing E samples were mudstone to packstone with scattered heavy oil specks and stain. DST 5 of the combined D and E recovered 270 ft of gassy oil and oil cut mud. Wireline logs show fair porosity in the E.

The Lansing F was nonporous limestone with no sample shows.

Structurally the Lillie 1-26 ran 8 ft high to the nearby Bernita 1-27 in the Oread, but intervals gradually became thicker and the Lansing-Kansas City F was 10 ft low to the Bernita 1-27. Wireline logs did not confirm this reversal in structural position. The drilling time may have been incorrect deeper in the well.

### Oil Well Completion

After wireline logs the Lillie 1-26 was cased with 5 ½" production casing for completion as an oil producer.

Peter J. Vollmer  
Consulting Wellsite Geologist, WPG #3369  
November 2013

Berexco LLC  
Lillie 1-26

## WELL DATA

OPERATOR: Berexco LLC  
2020 North Bramblewood Drive  
Wichita, Kansas 67206

WELL NAME: Lillie 1-26

SURFACE LOCATION: 330' FNL & 420' FWL  
NW NW NW Sec. 26, T1S, R36W  
Rawlins County, Kansas

LATITUDE & LONGITUDE: 39.9436393, -101.3342138

BOTTOM HOLE LOCATION: Vertical Hole

ELEVATIONS: 3251' GL 3264' KB

API NUMBER: 15-153-20958

BASIN: Mid-Continental Arch

FIELD: Wildcat

HOLE SIZE: 12 1/4" to 299'; 7 7/8" to 4540'

CASING: 8 5/8" J-55 24# STC set to 299' KB

SPUD DATE: November 8, 2013

TOTAL DEPTH DATE: November 17, 2013

TOTAL DEPTH: 4540' Rig TD 4533' Log TD

LAST FORMATION: Lansing-Kansas City F

WELL STATUS: Ran 5 1/2" production casing for oil well completion

OPERATOR REPRESENTATIVE: Dana Wreath - Vice President

WELLSITE GEOLOGIST: Peter J. Vollmer

**FORMATION TOPS**

Formation	Sample Top	Log Top	Log TVD	Log Datum
KB				3264
Pierre Sh	Cased	Cased	N/A	N/A
Niobrara Fm	N/A	1178	1178	+2086
Fort Hays Ls Mbr	N/A	1697	1697	+1567
Carlile Sh	N/A	1743	1743	+1521
Dakota	N/A	2136	2136	+1128
Cheyenne	N/A	2634	2634	+630
Blaine	N/A	2998	2998	+266
Anydrite	3162	3161	3161	+103
Base Anydrite	3196	3192	3192	+72
Foraker	3760	3756	3756	-492
Topeka	3970	3974	3974	-710
Oread	4089	4090	4090	-826
Heebner Sh	4141	4142	4142	-878
Lansing-Kansas City				
"A"	4193	4190	4190	-926
"B"	4248	4247	4247	-983
"C"	4309	4306	4306	-1042
"D"	4354	4351	4351	-1087
"E"	4403	4394	4394	-1130
"F"	4439	4433	4433	-1169
TD Driller	4540			
TD Logger		4533	4533	-1269

## LITHOLOGY AND SHOWS

The following descriptions are interpretive. Rig crew members collected unlagged samples from 3500' to 4540' TD. Depths are rig depths except where noted as wireline.

3500' - 3642'	SHALE: red, firm, blocky, very silty, sandy in part, non calcareous, trace Limestone stringers, trace Gypsum/Anhydrite.
3642' - 3648'	LIMESTONE: white to light gray, firm to hard, chalky, fossil fragment, tight, no shows.
3648' - 3684'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty.
3684' - 3760'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty, with interbedded LIMESTONE: white to light gray, firm to hard, cryptocrystalline, fossil fragments, tight, no shows.
FORAKER	SAMPLE TOP: 3760'      LOG TOP: 3756'      SUBSEA: -492'
3760' - 3768'	LIMESTONE: white to light gray, firm to hard, cryptocrystalline, chalky, fossil fragment, trace black asphalt material (dead oil), tight, no shows.
3768' - 3792'	SHALE: gray, firm, blocky, non to slightly calcareous, fossil fragments.
3792' - 3804'	LIMESTONE: white to light gray, firm to hard, cryptocrystalline, chalky, fossil fragments, tight, no shows.
3804' - 3874'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty.
3874' - 3892'	SHALE: dark gray to black, firm, fissile to blocky, non calcareous, carbonaceous in part.
3892' - 3970'	SHALE: reddish brown, soft to firm, blocky, non to slightly calcareous, interbedded LIMESTONE: white to light gray, hard, cryptocrystalline, fossil fragment, tight, no shows.
TOPEKA	SAMPLE TOP: 3970'      LOG TOP: 3974'      SUBSEA: -710'
3970' - 3992'	LIMESTONE: light gray to white, hard to firm, cryptocrystalline, fossil fragment, sparry calcite fill, thin brownish red Shale partings, trace black dead oil, tight, no shows.

## LITHOLOGY AND SHOWS

3992' - 4006'	LIMESTONE: light gray to white, hard to firm, cryptocrystalline, fossil fragments, clear calcareous fill in vugs, opaque chert, trace black asphalt material, tight to poor porosity, no shows.
4006' - 4017'	SHALE: gray, firm, platy, non to slightly calcareous, subwaxy, plant remains.
4018' - 4035'	SANDSTONE: light gray to grayish brown, friable to soft, very fine grained, well rounded, well sorted, calcareous, clay filled, plant remains, no visible porosity, no show.
4035' - 4042'	SHALE: reddish brown, firm, soft, sub blocky, non to slightly calcareous.
4042' - 4052'	LIMESTONE: light gray to light brown, firm, cryptocrystalline, slightly argillaceous, black dead oil, tight, no show.
4052' - 4090'	SHALE: reddish brown, maroon, gray, mottled in part, soft to firm, blocky, non calcareous, moderately to very silty in part.

### OREAD

SAMPLE TOP: 4089'      LOG TOP: 4090'      SUBSEA: -826'

4089' - 4108'	LIMESTONE: cream to white, firm to hard, wackestone to grainstone, oolites occluded with micrite mud, chalky in part, fossil fragments, tight to trace interparticle porosity, scattered black to dark brown live oil stain, good milky cut, show decreases with depth.
4108' - 4117'	LIMESTONE: white to cream, very hard, cryptocrystalline, slightly siliceous, fossil fragments, trace sandy, very tight, no shows.
4117' - 4150'	SHALE: gray, firm, platy, non to slightly calcareous.
4150' - 4154'	SHALE: grayish black to dark gray, firm, sub fissile, carbonaceous, non to very slightly calcareous.
4154' - 4193'	SHALE: reddish brown, gray, firm, blocky, non to slightly calcareous, with thin LIMESTONE stringers.

### LANSING- KANSAS CITY "A"

SAMPLE TOP: 4193'      LOG TOP: 4190'      SUBSEA: -926'

4193' - 4216'	LIMESTONE: white to cream, firm to hard, mudstone to packstone, occasional interclasts, fossil fragments, abundant scattered heavy black oil stain, trace to poor interparticle porosity, bright yellowish white fluorescence, instant blooming yellowish white cuts with moderately streaming cuts, good show, show and porosity
---------------	---



## LITHOLOGY AND SHOWS

decrease with depth.

4217' - 4224' SANDSTONE: light reddish brown to white, hard to friable, very fine grained, well rounded, well sorted, calcareous cement, pyrite, clay filled, predominant very tight, no show.

4224' - 4248' SHALE: red, soft, blocky, noncalcareous, silty.

### LANSING- KANSAS CITY "B"

SAMPLE TOP: 4248' LOG TOP: 4247' SUBSEA: -983'

4248' - 4256' LIMESTONE: white, firm, grainstone, oolites, fossils(Crinoids, Fusulinids), poor intergranular porosity to poor vuggy porosity, even to spotty live heavy black oil, free oil, dull yellowish white cut, good show.

4256' - 4260' SHALE: dark gray, firm, platy, slightly carbonaceous.

4260' - 4268' LIMESTONE: white to light gray, firm, cryptocrystalline, dark gray Shale partings, sandy in part, tight, no show.

4268' - 4308' SHALE: dark gray to gray to reddish brown, firm, platy, slightly calcareous, dull, fossil fragments, Limestone partings.

### LANSING- KANSAS CITY "C"

SAMPLE TOP: 4309' LOG TOP: 4306' SUBSEA: -1042'

4308' - 4326' LIMESTONE: white, firm, grainstone, fossil fragment (Fusulinids), rare oolites, slightly chalky, poor intergranular and vuggy porosity, spotty live black oil stain, blooming bright yellowish white cuts, free oil.

4326' - 4354' SHALE: dark gray to gray, firm, platy to fissile, slightly calcareous, dull, fossil fragment (Brachiopod), light brown Limestone partings.

### LANSING- KANSAS CITY "D"

SAMPLE TOP: 4354' LOG TOP: 4351' SUBSEA: -1087'

4354' - 4364' LIMESTONE: white to light tan, firm, packstone to mudstone, fossil fragments, tight to trace vuggy porosity, trace heavy black oil specks, dull yellowish white cut,

## LITHOLOGY AND SHOWS

poor show.

4364' - 4382' SHALE: dark gray to gray, firm, platy to fissile, slightly calcareous, light brown Limestone partings.

4382' - 4388' LIMESTONE: light brown to tan, firm, argillaceous, fossil fragments, tight.

4388' - 4403' SHALE: dark reddish brown, firm, blocky, slightly to non calcareous, Limestone partings.

### LANSING- KANSAS CITY "E"

SAMPLE TOP: 4403' LOG TOP: 4394' SUBSEA: -1130'

4403' - 4414' LIMESTONE: white to cream, hard to firm, mudstone to packstone, very chalky, fossil fragment, tight to poor vuggy porosity, trace dark brown to black oil specks and stain, fair yellowish white cuts.

4414' - 4416' SHALE: dark gray, firm, sub fissile, non calcareous, slightly carbonaceous.

4416' - 4439' SHALE: gray, firm, platy, non to slightly calcareous, rare fossil, dull.

### LANSING- KANSAS CITY "F"

SAMPLE TOP: 4439' LOG TOP: 4433' SUBSEA: -1169'

4439' - 4438' LIMESTONE: cream to white, firm to hard, mudstone, trace fossil fragments, clean, dense, tight, no shows.

4438' - 4456' SHALE: dark gray, firm, platy, non to very slightly calcareous, fossil fragments.

4456' - 4472' LIMESTONE: cream to white, firm to hard, mudstone, chalky, clean, dense, dark gray Shale partings, tight, no shows.

4472' - 4494' SHALE: dark gray, firm, platy, non to very slightly calcareous.

4494' - 4518' LIMESTONE: cream to white, firm to hard, mudstone, chalky, dense, with interbedded dark gray Shale partings, tight, no shows.

4518' - 4540' TD SHALE: dark gray, firm, platy, non to very slightly calcareous, fossil fragments, interbedded white chalky Limestone.

**SERVICES**

CONTRACTOR:	Beredco Drilling Inc., Rig 2	
Toolpusher:	Milo Salinas	
DRILLING FLUIDS:	Morgan Mud, Inc.	McCook, ND
Mud Type:	Freshwater Chemical	308-340-5946
Engineer:	Troy Van Pelt, Dave Lines	
MUD LOGGING:	None	
WELLSITE GEOLOGY:	T. M. McCoy & Co., Inc.	Wilson, WY
	Peter J. Vollmer	307-733-4332
DRILL STEM TESTING:	Trilobite Testing, Inc.	Hays, KS
	Tester: James Winder	785- 625-4778
	DST 1: 4008' - 4100' Oread	
	DST 2: 4116' - 4230' Lansing-KC "A"	
	DST 3: 4210' - 4256' Lansing-KC "B"	
	DST 4: 4264' - 4326' Lansing-KC "C"	
	DST 5: 4326' - 4414' Lansing-KC "D" & "E"	
DIRECTIONAL DRILLING:	None	
WIRELINE LOGS:	Pioneer Wireline Services	Hays, KS
	RAG: 3100' - TD	785-625-3858
	Micro: Surface casing to TD	
	Engineer: Jerrod Long	



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Berexco, LLC

26/1s/36w Rawlins KS

2020 N. Bramblewood  
Wichita, KS 67206

Lillie #1-26

Job Ticket: 55017

DST#: 1

ATTN: Pete Vollmer

Test Start: 2013.11.12 @ 18:37:00

## GENERAL INFORMATION:

Formation: Oread

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:15:00

Time Test Ended: 06:23:00

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 150

Interval: 4048.00 ft (KB) To 4100.00 ft (KB) (TVD)

Reference Elevations: 3264.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

3251.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 8671

Inside

Press@RunDepth: 861.50 psig @ 4049.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.12 End Date: 2013.11.13

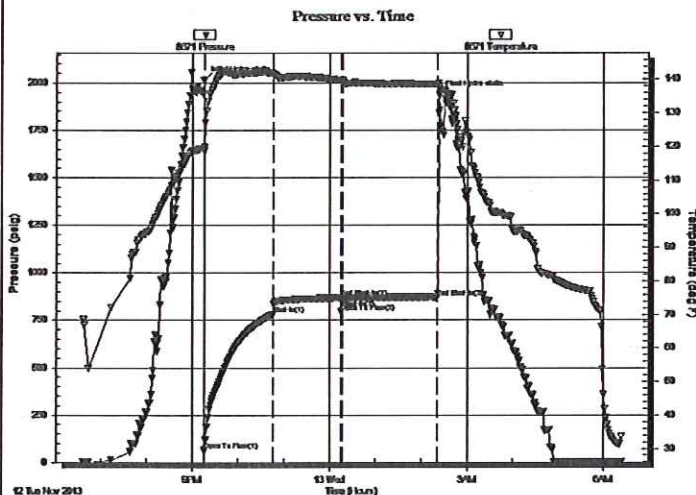
Last Calib.: 2013.11.13

Start Time: 18:37:05 End Time: 06:23:00

Time On Btm: 2013.11.12 @ 21:14:45

Time Off Btm: 2013.11.13 @ 02:23:30

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 3 min.  
60 - IS: Bled off for 4 min., Blow back built to BOB at 8 min.  
90 - FF: Blow built slowly to 7 1/2"  
120 - FS: Blow back built to 5 1/2"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2014.51	119.48	Initial Hydro-static
1	62.91	118.70	Open To Flow (1)
91	784.76	141.92	Shut-In(1)
181	868.33	139.77	End Shut-In(1)
181	796.19	139.76	Open To Flow (2)
183	861.50	139.57	Shut-In(2)
306	871.46	138.66	End Shut-In(2)
309	1936.91	138.21	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
265.00	SMCW w/OS 92%w, 6%m, 2%o	1.30
545.00	GOMCW 61%w, 19%m, 12%g, 8%o mix	5.23
375.00	OCGWM 44%m, 31%w, 18%g, 7%o mix	5.26
565.00	SMCGO 76%o, 19%g, 5%m	7.93
30.00	SMCO 91%o, 6%m, 3%g	0.42
0.00	GIP = 345'	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Berexco, LLC

26/1s/36w Rawlins KS

2020 N. Bramblewood  
Wichita, KS 67206

Lillie #1-26

Job Ticket: 55017

DST#: 1

ATTN: Pete Vollmer

Test Start: 2013.11.12 @ 18:37:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
265.00	SMCW w/OS 92%w, 6%m, 2%o	1.303
545.00	GOMCW 61%w, 19%m, 12%g, 8%o mix	5.231
375.00	OCGWM 44%m, 31%w, 18%g, 7%o mix	5.260
565.00	SMCO 76%o, 19%g, 5%m	7.925
30.00	SMCO 91%o, 6%m, 3%g	0.421
0.00	GIP = 345'	0.000

Total Length: 1780.00 ft      Total Volume: 20.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 10#LCM

Gravity is too low to check at this temp - I'll try again when I come back

RW = .163 ohms @ 55 deg F

Fluids with o mix has an oil mixture (mud, oil, & salt?) (not clean oil)



Serial #: 8671

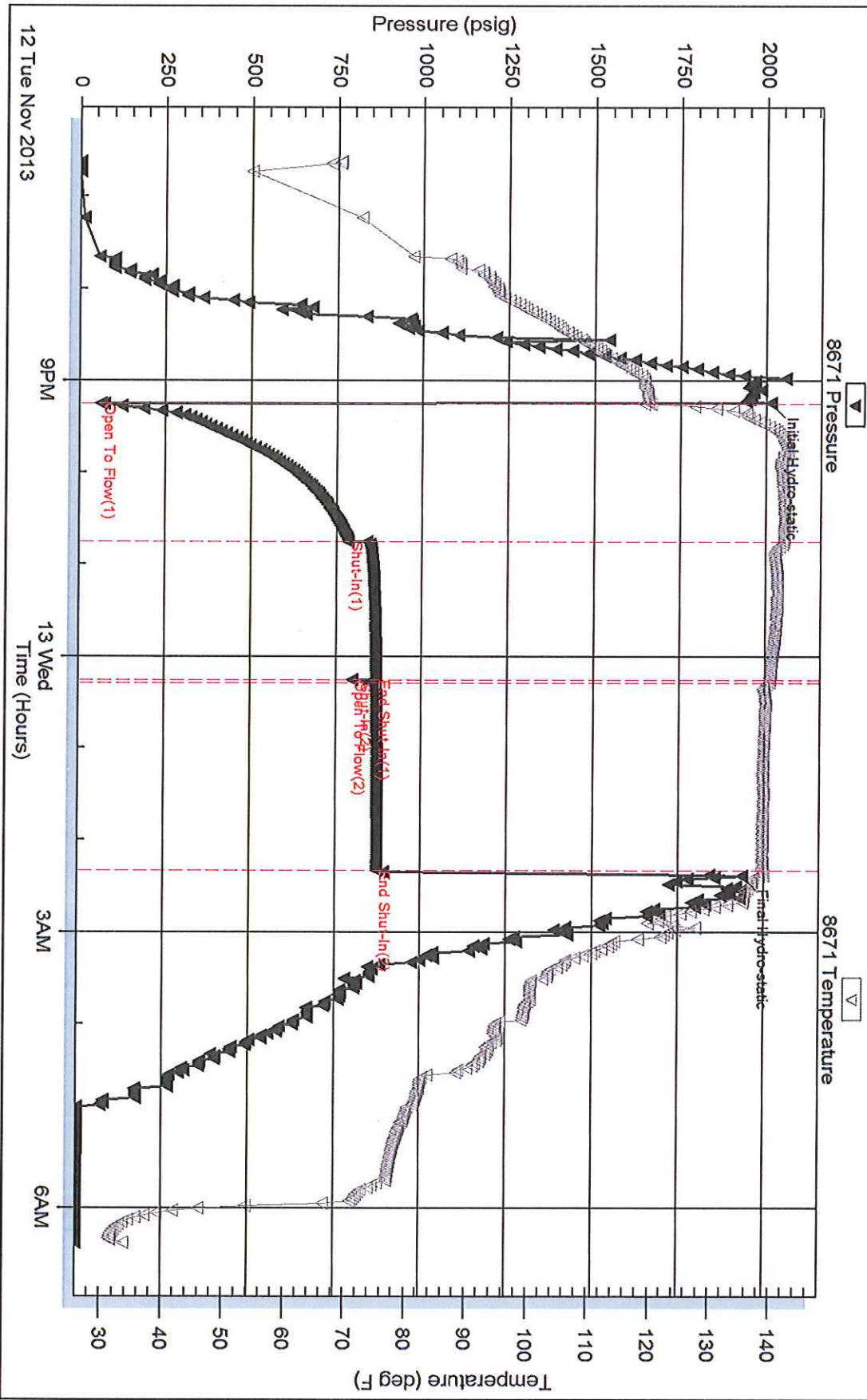
Inside

Berexco, LLC

Lille #1-26

DST Test Number: 1

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 55017

Printed: 2013.11.13 @ 08:20:38



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Berexco, LLC

**26/1s/36w Rawlins KS**

2020 N. Bramblewood  
Wichita, KS 67206

**Lillie #1-26**

Job Ticket: 55018

**DST#: 2**

ATTN: Pete Vollmer

Test Start: 2013.11.13 @ 20:37:00

## GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:30:15

Time Test Ended: 07:17:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 150

**Interval: 4116.00 ft (KB) To 4230.00 ft (KB) (TVD)**

Reference Elevations: 3264.00 ft (KB)

Total Depth: 4230.00 ft (KB) (TVD)

3251.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

**Serial #: 8671**

**Inside**

Press@RunDepth: 49.52 psig @ 4117.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.13

End Date:

2013.11.14

Last Calib.:

2013.11.14

Start Time: 20:37:05

End Time:

07:17:45

Time On Btm:

2013.11.13 @ 23:29:45

Time Off Btm:

2013.11.14 @ 04:35:15

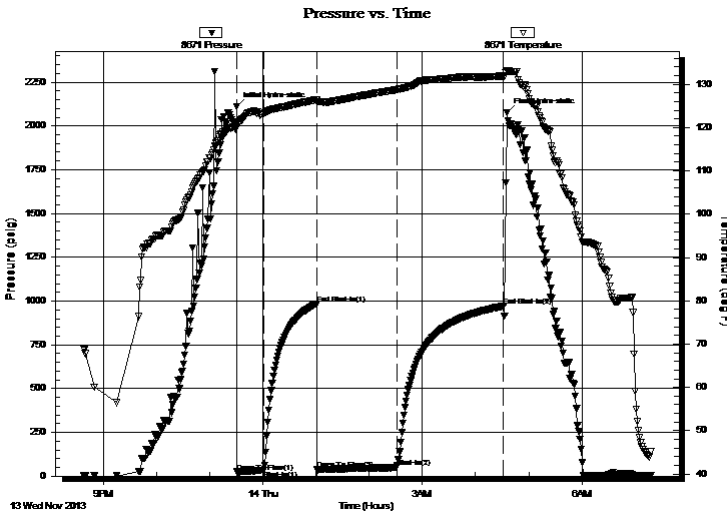
**TEST COMMENT:** 30 - IF: 1/4" Blow at open, built slightly then died back, dead at 21 min.

60 - IS: No blow back

90 - FF: No blow

120 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2112.03	121.14	Initial Hydro-static
1	23.58	121.24	Open To Flow (1)
31	33.08	123.31	Shut-In(1)
91	985.33	126.38	End Shut-In(1)
91	36.42	125.85	Open To Flow (2)
181	49.52	128.74	Shut-In(2)
302	971.32	131.92	End Shut-In(2)
306	2076.45	133.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%	0.22

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Berexco, LLC

**26/1s/36w Rawlins KS**

2020 N. Bramblewood  
Wichita, KS 67206

**Lillie #1-26**

Job Ticket: 55018

**DST#: 2**

ATTN: Pete Vollmer

Test Start: 2013.11.13 @ 20:37:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	Mud 100%	0.221

Total Length: 45.00 ft      Total Volume: 0.221 bbl

Num Fluid Samples: 0

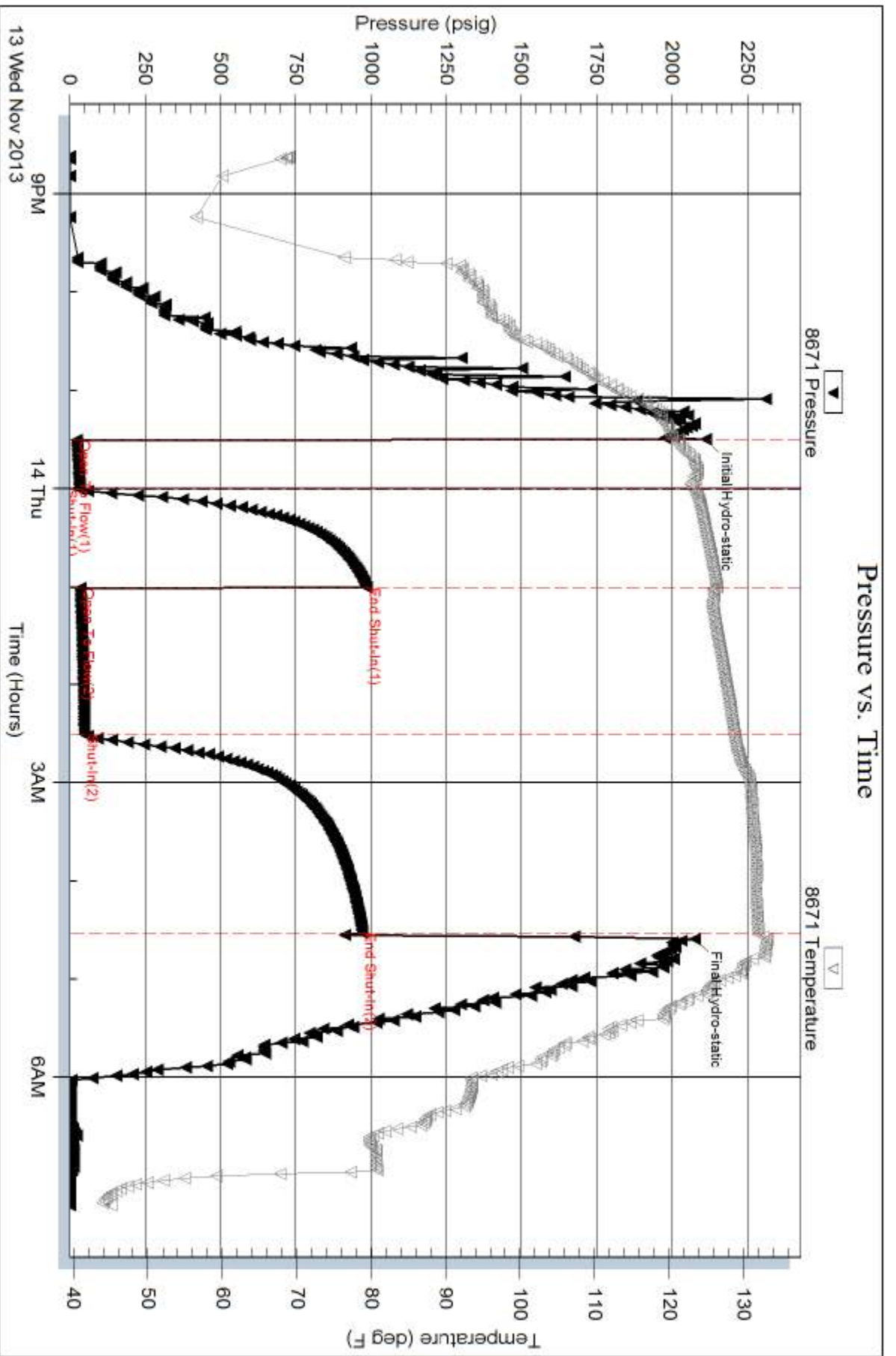
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Berexco, LLC

**26/1s/36w Rawlins KS**

2020 N. Bramblewood  
Wichita, KS 67206

**Lillie #1-26**

Job Ticket: 55019

**DST#: 3**

ATTN: Pete Vollmer

Test Start: 2013.11.14 @ 18:40:00

## GENERAL INFORMATION:

Formation: **LKC "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:29:30

Time Test Ended: 05:20:15

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 150

**Interval: 4210.00 ft (KB) To 4256.00 ft (KB) (TVD)**

Reference Elevations: 3264.00 ft (KB)

Total Depth: 4256.00 ft (KB) (TVD)

3251.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

**Serial #: 8671**

**Inside**

Press@RunDepth: 99.27 psig @ 4211.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.14

End Date:

2013.11.15

Last Calib.: 2012.11.15

Start Time: 18:40:05

End Time:

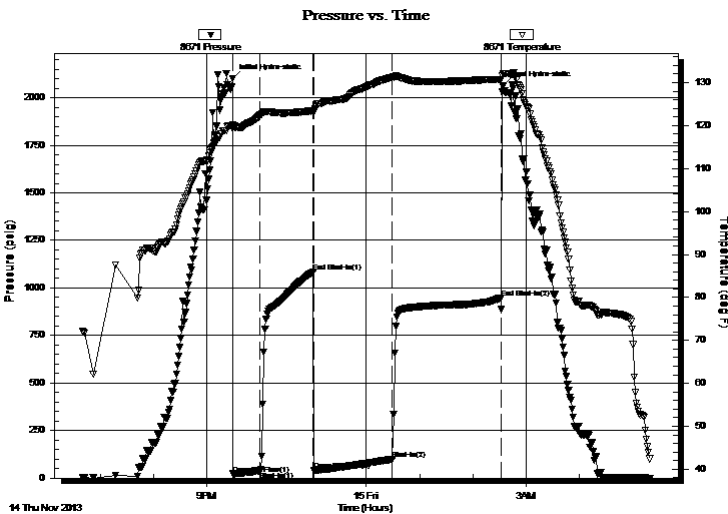
05:20:15

Time On Btm: 2013.11.14 @ 21:29:15

Time Off Btm: 2013.11.15 @ 02:34:15

**TEST COMMENT:** 30 - IF: Blow built to 2"  
60 - ISI: No blow back  
90 - FF: Blow started at 15 min., built to 5 1/4"  
120 - FSI: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2102.34	120.09	Initial Hydro-static
1	22.13	119.34	Open To Flow (1)
31	37.65	122.40	Shut-In(1)
91	1083.26	123.45	End Shut-In(1)
92	41.38	122.96	Open To Flow (2)
180	99.27	131.19	Shut-In(2)
303	948.61	130.76	End Shut-In(2)
305	2062.97	132.02	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
155.00	OCM 83% m, 14% o, 3% g	0.76
20.00	SMCO 91% o, 8% m, 1% g	0.10

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Berexco, LLC

**26/1s/36w Rawlins KS**

2020 N. Bramblewood  
Wichita, KS 67206

**Lillie #1-26**

Job Ticket: 55019

**DST#: 3**

ATTN: Pete Vollmer

Test Start: 2013.11.14 @ 18:40:00

### 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:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
155.00	OCM 83% <i>m</i> , 14% <i>o</i> , 3% <i>g</i>	0.762
20.00	SMCO 91% <i>o</i> , 8% <i>m</i> , 1% <i>g</i>	0.098

Total Length: 175.00 ft      Total Volume: 0.860 bbl

Num Fluid Samples: 0

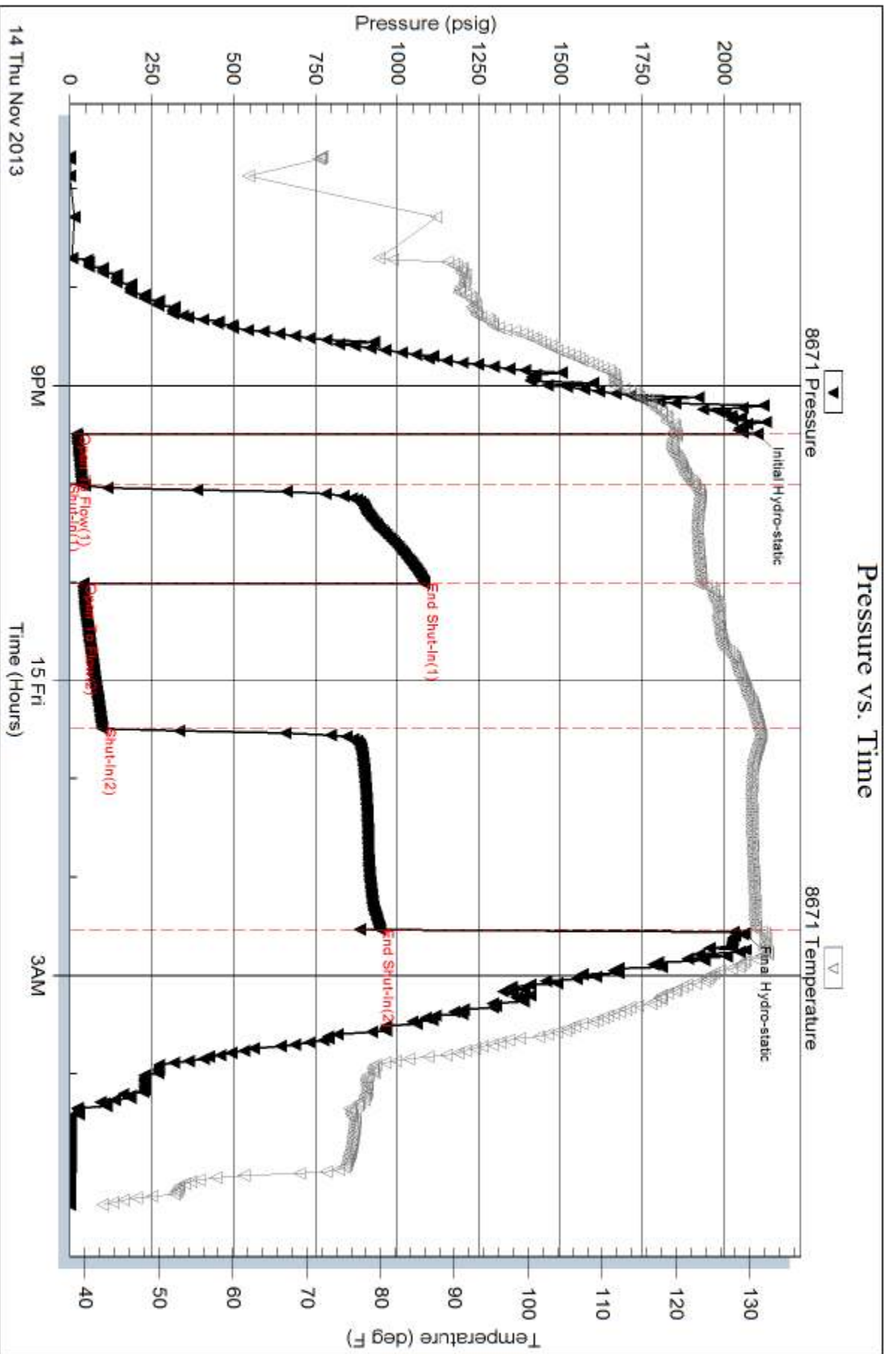
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Too cold to check gravity - I'll try again when I come back for next test





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco, LLC  
2020 N. Bramblewood  
Wichita, KS 67206  
ATTN: Pete Vollmer

**26/1s/36w Rawlins KS**  
**Lillie #1-26**  
Job Ticket: 55020 **DST#: 4**  
Test Start: 2013.11.15 @ 16:40:00

## GENERAL INFORMATION:

Formation: **LKC "C"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 19:12:30  
Time Test Ended: 03:33:00  
Interval: **4264.00 ft (KB) To 4326.00 ft (KB) (TVD)**  
Total Depth: 4326.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: James Winder  
Unit No: 150  
Reference Elevations: 3264.00 ft (KB)  
3251.00 ft (CF)  
KB to GR/CF: 13.00 ft

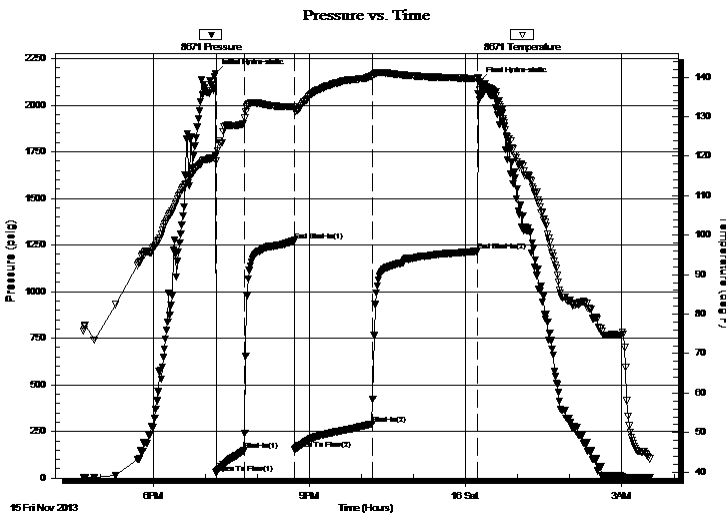
## Serial #: 8671

Inside

Press @ Run Depth: 289.99 psig @ 4265.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.11.15 End Date: 2013.11.16 Last Calib.: 2013.11.16  
Start Time: 16:40:05 End Time: 03:33:00 Time On Btm: 2013.11.15 @ 19:12:15  
Time Off Btm: 2013.11.16 @ 00:16:15

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 15 min.  
60 - IS: Blow back built to 5 1/2"  
90 - FF: Blow built to BOB in 21 min.  
120 - FS: Blow back built to 10"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2167.50	120.05	Initial Hydro-static
1	27.79	118.87	Open To Flow (1)
33	146.95	128.24	Shut-In(1)
91	1274.50	132.47	End Shut-In(1)
91	153.66	131.72	Open To Flow (2)
181	289.99	140.27	Shut-In(2)
302	1216.54	139.62	End Shut-In(2)
304	2127.45	135.47	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	GOCM 60% <i>m</i> , 26% <i>g</i> , 14% <i>o</i>	0.89
537.00	CGO 83% <i>o</i> , 15% <i>g</i> , 2% <i>m</i>	4.34
0.00	GIP = 565'	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Berexco, LLC

**26/1s/36w Rawlins KS**

2020 N. Bramblewood  
Wichita, KS 67206

**Lillie #1-26**

Job Ticket: 55020

**DST#: 4**

ATTN: Pete Vollmer

Test Start: 2013.11.15 @ 16:40:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31.6 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	GOCM 60% <i>m</i> , 26% <i>g</i> , 14% <i>o</i>	0.885
537.00	CGO 83% <i>o</i> , 15% <i>g</i> , 2% <i>m</i>	4.344
0.00	GIP = 565'	0.000

Total Length: 717.00 ft      Total Volume: 5.229 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

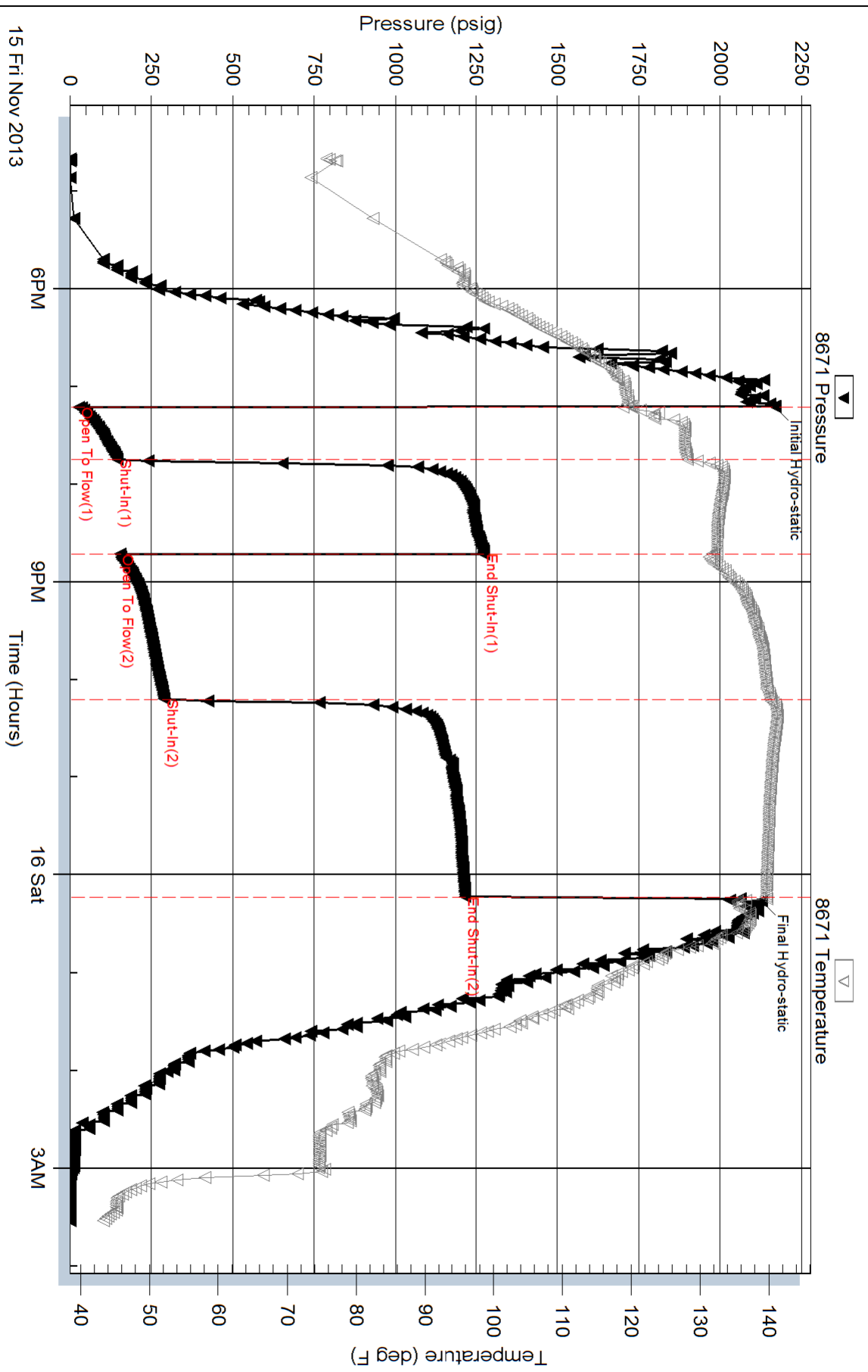
Laboratory Location:

Recovery Comments: LCM 6#

Gravity = 30.2 api @ 46 deg F

Corrected Gravity = 31.6 api

# Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco, LLC  
2020 N. Bramblewood  
Wichita, KS 67206  
ATTN: Pete Vollmer

**26/1s/36w Rawlins KS**  
**Lillie #1-26**  
Job Ticket: 55021 **DST#: 5**  
Test Start: 2013.11.16 @ 16:20:00

## GENERAL INFORMATION:

Formation: **LKC "D-E"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 19:06:45  
Time Test Ended: 03:07:30  
Test Type: Conventional Bottom Hole (Reset)  
Tester: James Winder  
Unit No: 150  
Interval: **4326.00 ft (KB) To 4414.00 ft (KB) (TVD)**  
Reference Elevations: 3264.00 ft (KB)  
Total Depth: 4414.00 ft (KB) (TVD) 3251.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 13.00 ft

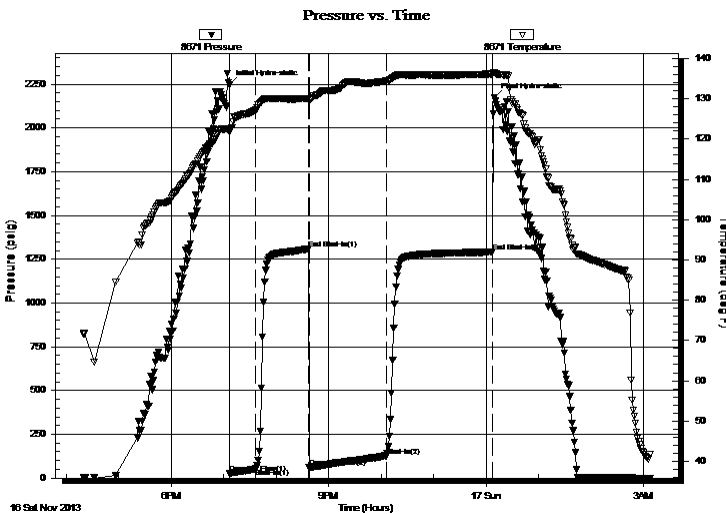
## Serial #: 8671

Inside

Press @ Run Depth: 127.27 psig @ 4327.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.11.16 End Date: 2013.11.17 Last Calib.: 2013.11.17  
Start Time: 16:20:05 End Time: 03:07:30 Time On Btm: 2013.11.16 @ 19:06:30  
Time Off Btm: 2013.11.17 @ 00:09:30

TEST COMMENT: 30 - IF: Blow built to 7"  
60 - IS: No blow back  
90 - FF: Blow built to BOB (11") in 51 min.  
120 - FS: Blow back built to 3/4" then died back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2244.89	122.64	Initial Hydro-static
1	26.43	121.71	Open To Flow (1)
31	53.38	127.21	Shut-In(1)
91	1309.12	130.07	End Shut-In(1)
92	59.04	129.69	Open To Flow (2)
180	127.27	134.42	Shut-In(2)
301	1290.66	136.21	End Shut-In(2)
303	2172.30	136.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	GOCM 72%o, 16%g, 12%g	0.44
90.00	SMCGO 82%o, 10%g, 8%m	0.44
90.00	CGO 80%o, 20%g	0.44
0.00	GIP = 355'	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Berexco, LLC

**26/1s/36w Rawlins KS**

2020 N. Bramblewood  
Wichita, KS 67206

**Lillie #1-26**

Job Ticket: 55021

**DST#: 5**

ATTN: Pete Vollmer

Test Start: 2013.11.16 @ 16:20:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
90.00	GOCM 72% <sub>m</sub> , 16% <sub>o</sub> , 12% <sub>g</sub>	0.443
90.00	SMCGO 82% <sub>o</sub> , 10% <sub>g</sub> , 8% <sub>m</sub>	0.443
90.00	CGO 80% <sub>o</sub> , 20% <sub>g</sub>	0.443
0.00	GIP = 355'	0.000

Total Length: 270.00 ft      Total Volume: 1.329 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

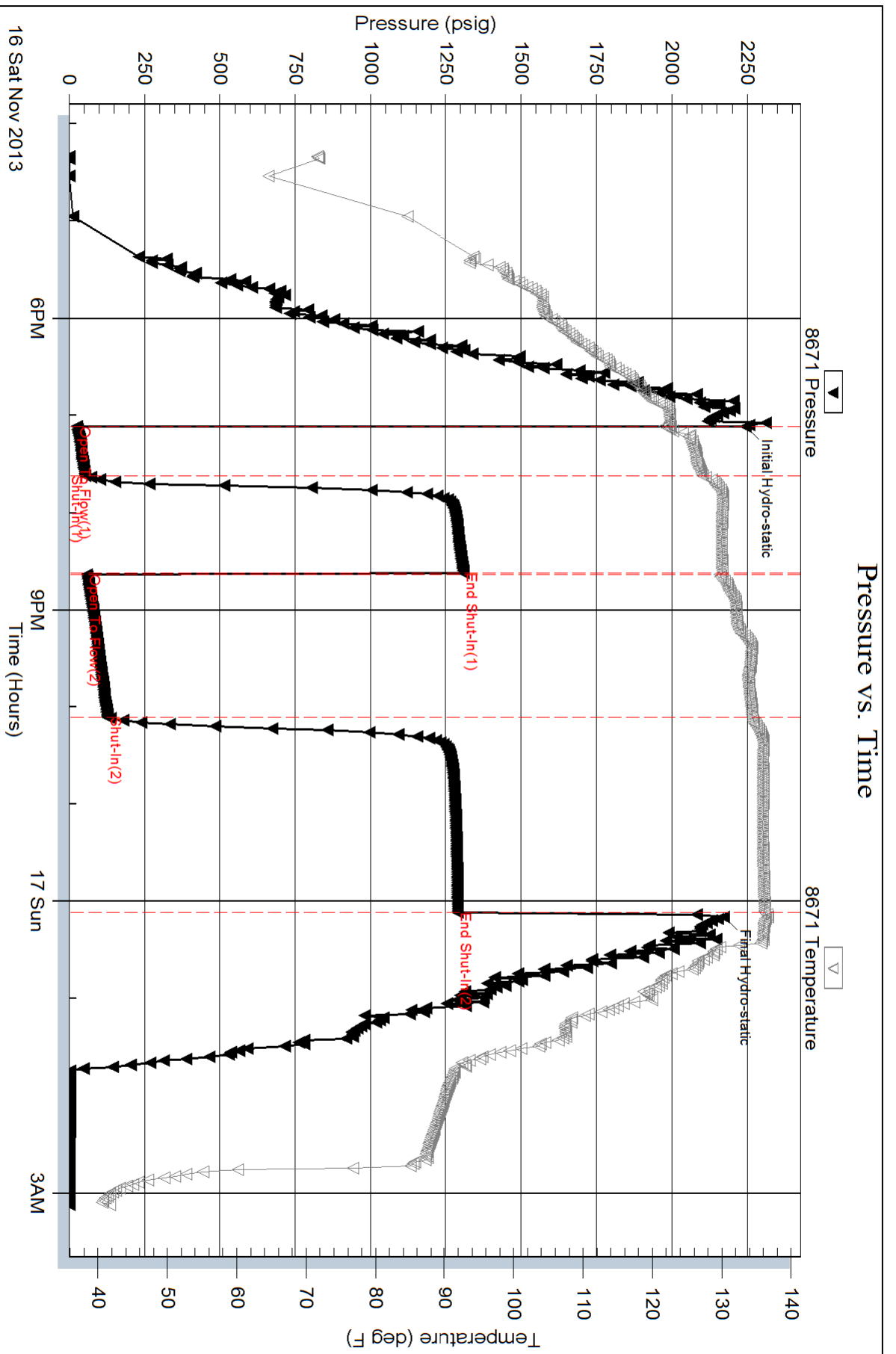
Laboratory Name:

Laboratory Location:

Recovery Comments: LCM 8#

Gravity = 30.4 api @ 46 deg F

Corrected Gravity = 31.8 api





# BEREXCO LLC.

## INTER-OFFICE

**DATE:** November 4, 2013  
**TO:** Lillie 1-26 well file  
**CC:**  
**FROM:** Danish Tarar  
**SUBJECT:** Elevation Change

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During building of location, the elevation at the stake was cut down 1'. Therefore the revised elevation is 3251' ground, 3264' KB. The original staked location was 3252' ground level.

The location remained unchanged.