



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1189499
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: _____

1189499

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Michael 5-22
Doc ID	1189499

Tops

Name	Top	Datum
Anhydrite	3122	+143
Anhydrite (base)	3159	+106
Foraker	3756	-491
Topeka	3974	-709
Oread	4083	-818
Heebner	4109	-844
Lansing/KS City B	4245	-980
Lansing/KS City A	4188	-923
Lansing/KS City C	4306	-1041
Lansing/KS City D	4352	-1087
Lansing/KS City E	4397	-1132
Lansing/KS City F	4434	-1169
RTD	4525	
LTD	4516	-1251

Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Michael 5-22
Doc ID	1189499

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	4397-4402 LKC	750 gals 15% MCA, 3% solvent	4397-4402
4	4334-4337 LKC	500 gals 15% MCA, 3% solvent	4334-4337
4	4306-4311 LKC	750 gals 15% MCA, 3% solvent	4306-4311
4	4244-4254 LKC	1500 gals 15% MCA, 3% solvent	4244-4254
4	4187-4191 LCK	750 gals 15% MCA, 3% solvent	4187-4191
4	4083-4093 Oread	1000 gals 15% MCA, 3% solvent	4083-4093

WELL FILE

ALLIED OIL & GAS SERVICES, LLC 061209

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley KS

DATE <u>10/22/13</u>	SEC <u>22</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>6:00 p.m.</u>	JOB START <u>8:45 p.m.</u>	JOB FINISH <u>9:15 p.m.</u>
LEASE <u>Michael</u>	WELL # <u>5-22</u>		LOCATION <u>McDonald N to Rd W</u>		COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)			E. follow curves to S. 5 N to BR h/w N into				

CONTRACTOR <u>Berexco 2</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>310'</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>310'</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>18.79 bbl</u>	

CEMENT	<u>225</u>		
AMOUNT ORDERED	<u>225</u>	skts	Com 3%
	<u>CC</u>	2% gel	

COMMON	<u>225</u>	@	<u>17.90</u>	<u>4027.50</u>
POZMIX		@		
GEL	<u>4</u>	skts	@ <u>23.40</u>	<u>93.60</u>
CHLORIDE	<u>8</u>	skts	@ <u>64.00</u>	<u>512.00</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>243.02</u>	@	<u>2.48</u>	<u>602.69</u>
MILEAGE	<u>11.10</u>	hrs @ <u>50</u>	mix <u>2.00</u>	<u>1443.00</u>
				TOTAL <u>6678.79</u>

EQUIPMENT

PUMP TRUCK # <u>126</u>	CEMENTER <u>Paul Beaver</u>
	HELPER <u>Tyler Flipse</u>
BULK TRUCK # <u>566</u>	DRIVER <u>Brandon Wilkinson</u>
BULK TRUCK #	DRIVER

REMARKS:
Mix 225 skts Com 3% CC 2% gel
Displace with water
Cement did arcuate

Thank you!

CHARGE TO: Berexco

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 Mylo Salinas

SIGNATURE Mylo Salinas

SERVICE

DEPTH OF JOB	<u>310'</u>		
PUMP TRUCK CHARGE			<u>1512.25</u>
EXTRA FOOTAGE		@	
MILEAGE <u>MHV</u>	<u>50</u>	@ <u>7.70</u>	<u>385.00</u>
MANIFOLD <u>sw cde</u>		@	<u>N/C</u>
<u>M LV</u>	<u>50</u>	@ <u>4.40</u>	<u>N/C</u>
		@	
TOTAL <u>1897.25</u>			

PLUG & FLOAT EQUIPMENT

	@		
	@		
	@		
	@		
	@		
TOTAL _____			

SALES TAX (If Any) _____

TOTAL CHARGES 8,576.04

DISCOUNT 2,401.29 IF PAID IN 30 DAYS

6,174.74 Net.

ALLIED OIL & GAS SERVICES, LLC 061365

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:
Oakley, KS

DATE <u>11-2-13</u>	SEC. <u>22</u>	TWP. <u>15</u>	RANGE <u>36W</u>	CALLED OUT	ON LOCATION <u>7:50 AM</u>	JOB START <u>4:30 AM</u>	JOB FINISH <u>5:30 AM</u>
LEASE <u>Michael</u>	WELL# <u>5-22</u>	LOCATION <u>Beardley N to R 04A W to Rd 7 1/2 W</u>			COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR Berexco #2
 TYPE OF JOB Prod
 HOLE SIZE 7 7/8 T.D. 4525
 CASING SIZE 5 1/2 DEPTH 4513
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. 42, 49
 PERFS. _____
 DISPLACEMENT 106 1/4

OWNER same
 CEMENT
 AMOUNT ORDERED 450 SKS LITE 3/4" Flo-seal
250 SKS COM 1090 salt + 290 gel 5" Gilsonite
 COMMON 250 SKS @ 17.90 4475.00
 POZMIX _____ @ _____
 GEL 5 SKS @ 23.40 117.00
 CHLORIDE _____ @ _____
 ASC _____ @ _____
Lite 450 SKS @ 15.95 7177.50
Gilsonite 1250# @ 1.98 1225.00
Flo-seal 337# @ 2.97 1000.89
Salt 26 SKS 1300# @ 26.35 6851.00
Superflush 126# @ 58.70 7044.00
 HANDLING 817.40 @ 2.48 2027.15
 MILEAGE 31.1 tan x 50 x 2.50 4043.00
 TOTAL 21,455.04

EQUIPMENT

PUMP TRUCK CEMENTER Kelly O'Neil
 # 422 HELPER Wayne McPhay
 BULK TRUCK
 # 386 & 310 DRIVER Chris Helpingstone
 BULK TRUCK
 # 566 & 595 DRIVER Adam Brandon
Flax W. Kinzen

REMARKS:

safety meeting, rigged.
Circulation on bottom for hrs
pumped flush, mixed 30 SKS Rd 15 MH
mixed 400 SKS LITE 3/4" Flo-seal tail in
with 250 SKS COM 1090 salt + 290 gel 5" Gilsonite
released Plug & displaced with 1000 gal
water lost returns with 500 gal out
Thank you Kelly crew

SERVICE

DEPTH OF JOB 4525
 PUMP TRUCK CHARGE 2765.75
 EXTRA FOOTAGE _____ @ _____
 MILEAGE Mi HV 50 @ 7.70 385.00
 MANIFOLD Head @ 2.75 NC

CHARGE TO: Berexco
 STREET _____
 CITY _____ STATE _____ ZIP _____

TOTAL 3150.75

5 1/2

PLUG & FLOAT EQUIPMENT

AFU float shoe @ 232.00
1 catch can/w/ plug @ 241.00
11 centralizers @ 37.00 407.00
20 reciprocating screws @ 4.60 920.00
(w) 1 basket @ 178.00

TOTAL 1978.00

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.

SALES TAX (If Any) _____
 TOTAL CHARGES 26,583.79
 DISCOUNT 6,889.62 IF PAID IN 30 DAYS
19,694.16 Net

PRINTED NAME _____
 SIGNATURE Ed Lewis



CEMENTING LOG

STAGE NO. _____

Date 11-2-13 District Midcom Ticket No. 61365
 Company Berexco Rig Beredco #2
 Lease Micrael Well No. 5-22
 County Rawlins State K5
 Location Bearsley N to RAAW Field _____
to R271N 2 1/2 W

CEMENT DATA:

Spacer Type: super flush
 Amt. 12001 Skys Yield _____ ft³/sk Density _____ PPG

LEAD: Pump Time _____ hrs. Type _____
 Excess _____
 Amt. 450 SKS Skys Yield 2.1 ft³/sk Density 147-125 PPG

TAIL: Pump Time _____ hrs. Type _____
 Excess _____
 Amt. 250 SKS Skys Yield 1.42 ft³/sk Density 145 PPG

WATER: Lead _____ gals/sk Tail _____ gals/sk Total _____ Bbls.

Pump Trucks Used 422
 Bulk Equip. 3869310, 566 + 595

CASING DATA: Conductor PTA Squeeze Misc
 Surface Intermediate Production Liner
 Size 5 1/2 Type New Weight 15.5 # Collar _____

Casing Depths: Top Ground level Bottom 4513

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

CAPACITY FACTORS:
 Casing: Bbls/Lin. ft. 10238 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. _____

Float Equip: Manufacturer Industrial Rubber
 Shoe: Type AFU Depth _____
 Float: Type Flapper Depth _____
 Centralizers: Quantity 11 Plugs Top _____ Btm. _____
 Stage Collars _____
 Special Equip. _____
 Disp. Fluid Type Water Amt 106 1/4 Bbls. Weight _____ PPG
 Mud Type _____ Weight _____ PPG

COMPANY REPRESENTATIVE _____

CEMENTER Rilly

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
<u>7:00</u>						<u>got to location</u>
						<u>rigged up</u>
						<u>pumped flush</u>
						<u>mixed 30 SK PH</u>
						<u>20 SKS MH</u>
						<u>mixed 400 SKS lite</u>
						<u>250 com 20 gal 10% salt + 5% gilsonite</u>
						<u>released plug</u>
						<u>displaced with water</u>
		<u>200</u>	<u>10</u>			
		<u>200</u>	<u>10</u>			
		<u>200</u>	<u>10</u>			
		<u>200</u>	<u>10</u>			
		<u>400</u>	<u>10</u>			
		<u>400</u>	<u>10</u>			
		<u>700</u>	<u>10</u>			
		<u>1000</u>	<u>10</u>			
		<u>1100</u>	<u>10</u>			
		<u>1400</u>	<u>10</u>			
		<u>2000</u>	<u>106 1/4</u>			<u>Plug landed</u>



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

BEREXCO L.L.C.

SEC.22 - 1S. - 36W RAWLINS CO.

2020 N. BRAMBLEWOOD
WICHITA KS. 67202

MICHEAL #5-22

Job Ticket: 54870

DST#: 1

ATTN: PETE VOLLYMEYER

Test Start: 2013.10.26 @ 17:10:00

GENERAL INFORMATION:

Formation: **"OREAD - LIMESTONE"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:13:40

Time Test Ended: 04:41:19

Test Type: Conventional Bottom Hole (Initial)

Tester: BOB HAMEL

Unit No: 41

Interval: 4008.00 ft (KB) To 4122.00 ft (KB) (TVD)

Reference Elevations: 3265.00 ft (KB)

Total Depth: 4122.00 ft (KB) (TVD)

3252.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 13.00 ft

Serial #: 6752

Press @ Run Depth: 686.76 psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.26

End Date: 2013.10.27

Last Calib.: 2013.10.27

Start Time: 17:10:01

End Time: 04:41:19

Time On Btm: 2013.10.26 @ 20:13:10

Time Off Btm: 2013.10.27 @ 00:52:09

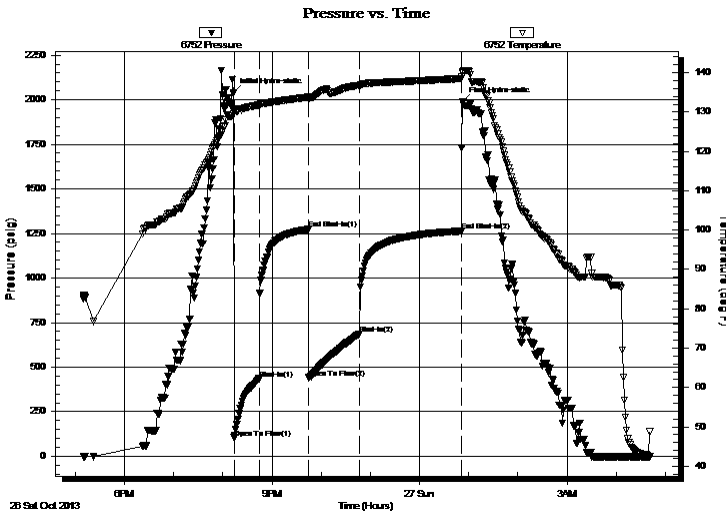
TEST COMMENT: I.F. - 30 - 1/2 INT. BLOW BUILT TO B.O.B. IN 4 1/2 MIN.

I.S.I. - 60 - NO B.B.

F.F. - 60 - 1/4 INT. BLOW BUILT TO 4" THEN STARTED TO DIE OFF TO 1 1/2 IN 60 MIN.

F.S.I. - 120 - NO B.B.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2039.30	129.63	Initial Hydro-static
1	103.56	130.09	Open To Flow (1)
31	434.38	131.78	Shut-In(1)
92	1273.47	133.80	End Shut-In(1)
92	441.05	133.46	Open To Flow (2)
154	686.76	136.79	Shut-In(2)
279	1262.28	138.52	End Shut-In(2)
279	1990.34	140.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	SOSWCGM 5%OIL 15%WATER 20%GAS 60.91%MUD	
372.00	SOCGM 10%OIL 20%GAS 70%MUD	2.14
186.00	SMCGO 5%MUD 15%GAS 80%OIL	2.61
857.00	CO 100%CLEAN OIL	12.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

BEREXCO L.L.C.

SEC.22 - 1S. - 36W RAWLINS CO.

2020 N. BRAMBLEWOOD
WICHITA KS. 67202

MICHEAL #5-22

Job Ticket: 54870

DST#: 1

ATTN: PETE VOLLYMEYER

Test Start: 2013.10.26 @ 17:10:00

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:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
186.00	SOSWCGM 5%OIL 15%WATER 20%GAS 60%	0.915
372.00	SOCGM 10%OIL 20%GAS 70%MUD	2.139
186.00	SMCGO 5%MUD 15%GAS 80%OIL	2.609
857.00	CO 100%CLEAN OIL	12.021

Total Length: 1601.00 ft

Total Volume: 17.684 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

BEREXCO L.L.C.

SEC.22 - 1S. - 36W RAWLINS CO.

2020 N. BRAMBLEWOOD
WICHITA KS. 67202

MICHEAL #5-22

Job Ticket: 54870

DST#: 1

ATTN: PETE VOLLYMEYER

Test Start: 2013.10.26 @ 17:10:00

Gas Rates Information

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

Gas Rates Table

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

BEREXCO L.L.C.

SEC.22 - 1S. - 36W RAWLINS CO.

2020 N. BRAMBLEWOOD
WICHITA KS. 67202

Michael #5-22

Job Ticket: 54871

DST#: 2

ATTN: PETE VOLLYMEYER

Test Start: 2013.10.27 @ 17:33:00

GENERAL INFORMATION:

Formation: **KC. " A"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 19:53:00
 Tester: BOB HAMEL
 Time Test Ended: 03:59:19
 Unit No: 41
 Interval: **4110.00 ft (KB) To 4222.00 ft (KB) (TVD)**
 Reference Elevations: 3265.00 ft (KB)
 Total Depth: 4122.00 ft (KB) (TVD)
 3252.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 13.00 ft

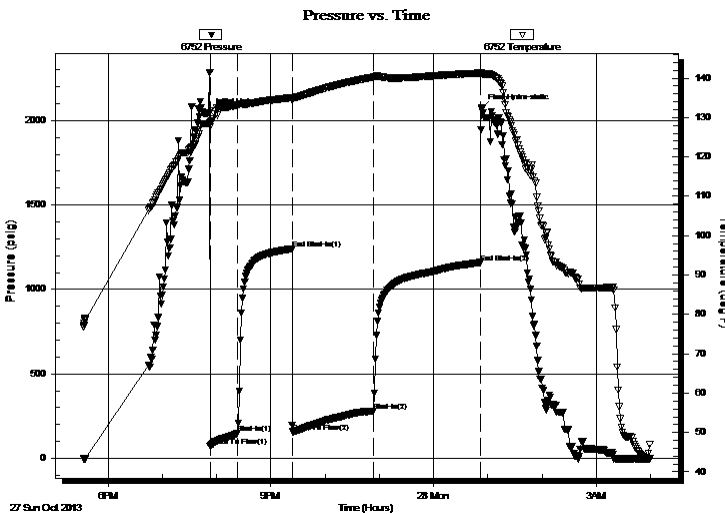
Serial #: 6752

Inside

Press @ Run Depth: 281.39 psig @ 4208.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.27 End Date: 2013.10.28 Last Calib.: 2013.10.28
 Start Time: 17:33:01 End Time: 03:59:19 Time On Btm: 2013.10.27 @ 19:51:50
 Time Off Btm: 2013.10.28 @ 00:53:00

TEST COMMENT: I.F. - 30 - 1/4 INT. BLOW BUILT TO B.O.B. IN 27 1/2 MIN.
 I.S.I. - 60 - W.S.B.B. STARTED @ 7 MIN. BUILT TO 1/2" IN 60 MIN.
 F.F. - 90 - 1/4 INT. BLOW BUILT TO B.O.B. IN 30 MIN.
 F.S.I. - 120 - W.S.B.B. STARTED @ 5 MIN. BUILT TO 4" IN 120 MIN.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2047.12	128.48	Initial Hydro-static
2	70.42	127.64	Open To Flow (1)
32	149.08	133.18	Shut-In(1)
92	1240.52	135.05	End Shut-In(1)
93	156.95	134.87	Open To Flow (2)
183	281.39	140.29	Shut-In(2)
301	1159.40	141.29	End Shut-In(2)
302	2070.44	141.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
93.00	S,G,H,M,C,O, 5%GAS 35%MUD 60%OIL	0.46
93.00	G,C,O, 10%GAS 90%OIL	0.46
392.00	CLEAN OIL 100%	2.42

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

BEREXCO L.L.C.

SEC.22 - 1S. - 36W RAWLINS CO.

2020 N. BRAMBLEWOOD
WICHITA KS. 67202

Michael #5-22

Job Ticket: 54871

DST#: 2

ATTN: PETE VOLLYMEYER

Test Start: 2013.10.27 @ 17:33:00

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
93.00	S,G,H,M,C,O, 5%GAS 35%MUD 60%OIL	0.457
93.00	G,C,O, 10%GAS 90%OIL	0.457
392.00	CLEAN OIL 100%	2.420

Total Length: 578.00 ft

Total Volume: 3.334 bbl

Num Fluid Samples: 0

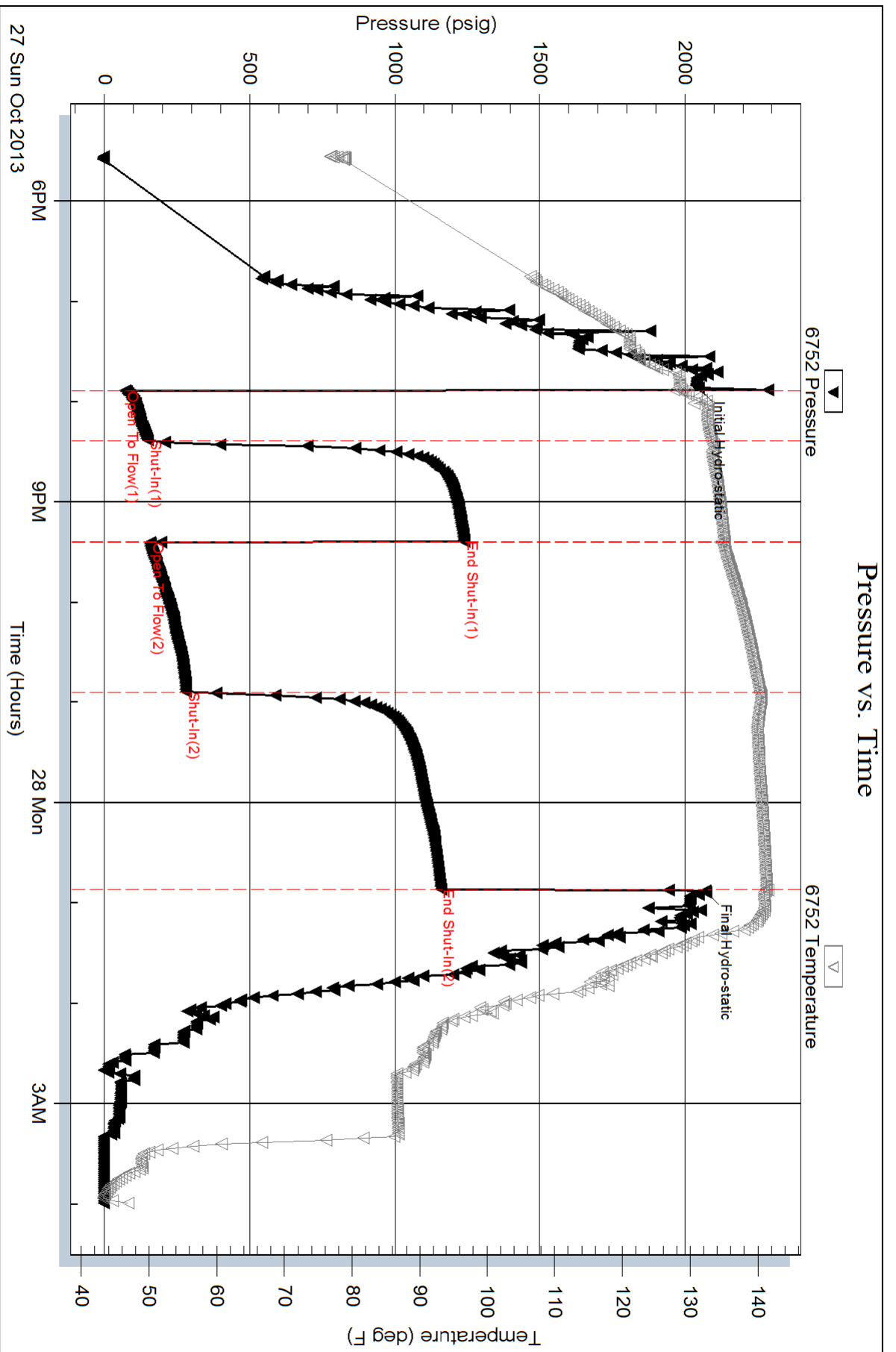
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

BEREXCO L.L.C.

SEC.22 - 1S. - 36W RAWLINS CO.

2020 N. BRAMBLEWOOD
WICHITA KS. 67202

MICHEAL #5-22

Job Ticket: 54872

DST#: 3

ATTN: PETE VOLLYMEYER

Test Start: 2013.10.28 @ 14:18:00

GENERAL INFORMATION:

Formation: **L.K.C. " B "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:54:10

Time Test Ended: 00:27:10

Test Type: Conventional Bottom Hole (Reset)

Tester: BOB HAMEL

Unit No: 41

Interval: 4208.00 ft (KB) To 4252.00 ft (KB) (TVD)

Reference Elevations: 3265.00 ft (KB)

Total Depth: 4122.00 ft (KB) (TVD)

3252.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 6752

Press @ RunDepth: 146.98 psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.28

End Date: 2013.10.29

Last Calib.: 2013.10.29

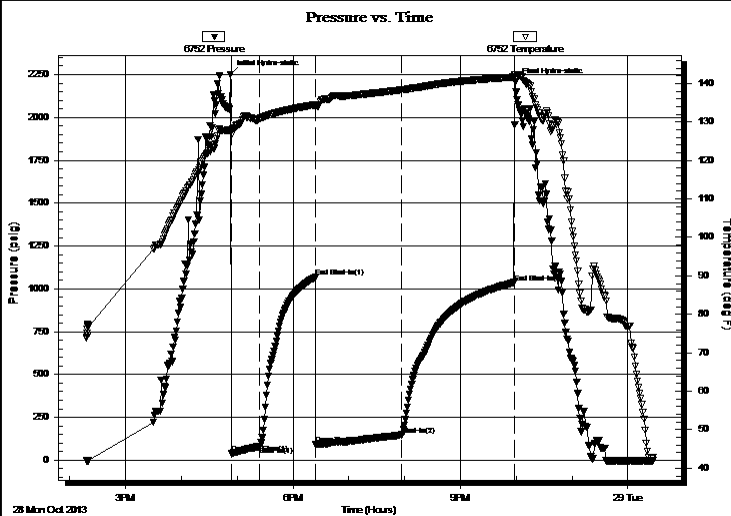
Start Time: 14:18:01

End Time: 00:27:10

Time On Btm: 2013.10.28 @ 16:52:50

Time Off Btm: 2013.10.28 @ 21:59:09

TEST COMMENT: I.F. - 30 - 1/4 INT. BLOW BUILT TO 4" IN 30 MIN.
I.S.I. - 60 - NO B.B.
F.F. - 90 - W.S.B. STARTED @ 10 MIN. BUILT TO 6" IN 90 MIN.
F.S.I. - 120 - NO B.B.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2250.85	128.04	Initial Hydro-static
2	38.48	127.95	Open To Flow (1)
32	80.24	130.87	Shut-In(1)
91	1066.60	134.45	End Shut-In(1)
92	93.18	134.17	Open To Flow (2)
185	146.98	138.30	Shut-In(2)
305	1037.14	141.65	End Shut-In(2)
307	2205.32	142.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	OCM 15%OIL 85%MUD	0.91
93.00	CLEAN OIL 100%	0.46

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

BEREXCO L.L.C.

SEC.22 - 1S. - 36W RAWLINS CO.

2020 N. BRAMBLEWOOD
WICHITA KS. 67202

MICHEAL #5-22

Job Ticket: 54872

DST#: 3

ATTN: PETE VOLLYMEYER

Test Start: 2013.10.28 @ 14:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 72.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	OCM 15%OIL 85%MUD	0.915
93.00	CLEAN OIL 100%	0.457

Total Length: 279.00 ft Total Volume: 1.372 bbl

Num Fluid Samples: 0

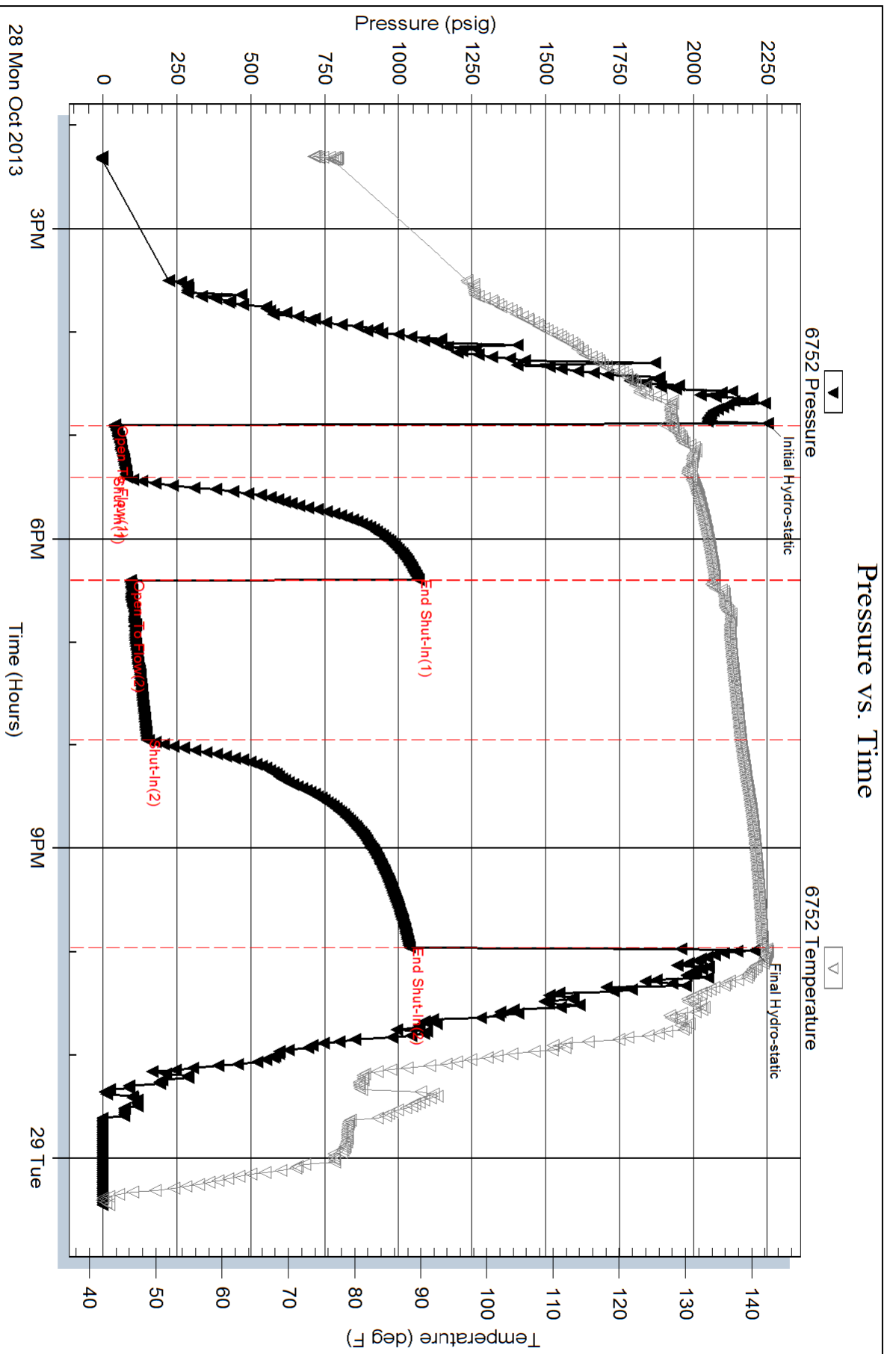
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

BEREXCO L.L.C.
2020 N. BRAMBLEWOOD
WICHITA KS. 67202
ATTN: PETE VOLLMER

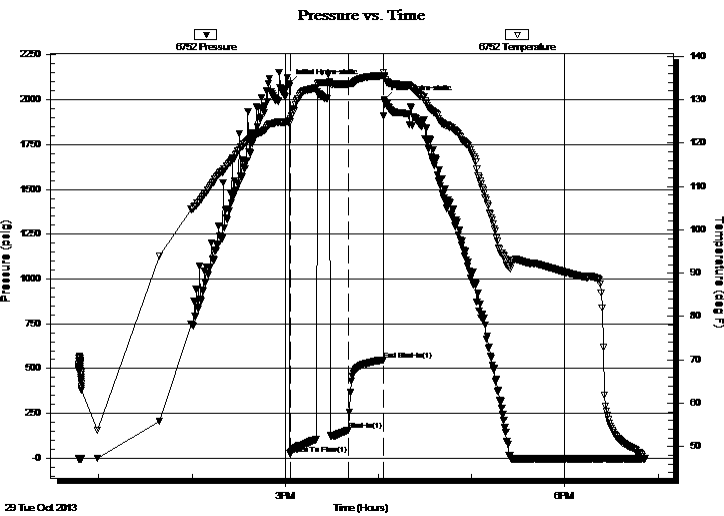
SEC.22 - 1S. - 36W RAWLINS CO.
MICHAEL #5-22
Job Ticket: 55143 **DST#: 4**
Test Start: 2013.10.29 @ 12:47:00

GENERAL INFORMATION:

Formation: **LKC " C "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:03:00
Time Test Ended: 18:51:20
Interval: **4256.00 ft (KB) To 4322.00 ft (KB) (TVD)**
Total Depth: 4322.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Ryan Nichols
Unit No: 41
Reference Elevations: 3265.00 ft (KB)
3252.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 6752 Inside
Press @ Run Depth: 156.75 psig @ 4257.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.10.29 End Date: 2013.10.29 Last Calib.: 2013.10.29
Start Time: 12:47:01 End Time: 18:51:20 Time On Btm: 2013.10.29 @ 15:02:50
Time Off Btm: 2013.10.29 @ 16:03:50

TEST COMMENT: IF - 1" blow built to BoB @ 14 mins
ISI - Surface blow @ 10 mins built to 2 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.32	125.29	Initial Hydro-static
1	24.26	124.86	Open To Flow (1)
38	156.75	133.64	Shut-In(1)
61	548.92	135.53	End Shut-In(1)
61	2002.79	135.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	GOCM - 25%G - 35%o - 40%M	0.54
250.00	GO - 25%G - 75%o	1.23

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

BEREXCO L.L.C.
2020 N. BRAMBLEWOOD
WICHITA KS. 67202
ATTN: PETE VOLLMER

SEC.22 - 1S. - 36W RAWLINS CO.
MICHAEL #5-22
Job Ticket: 55143 **DST#: 4**
Test Start: 2013.10.29 @ 12:47:00

Mud and Cushion Information

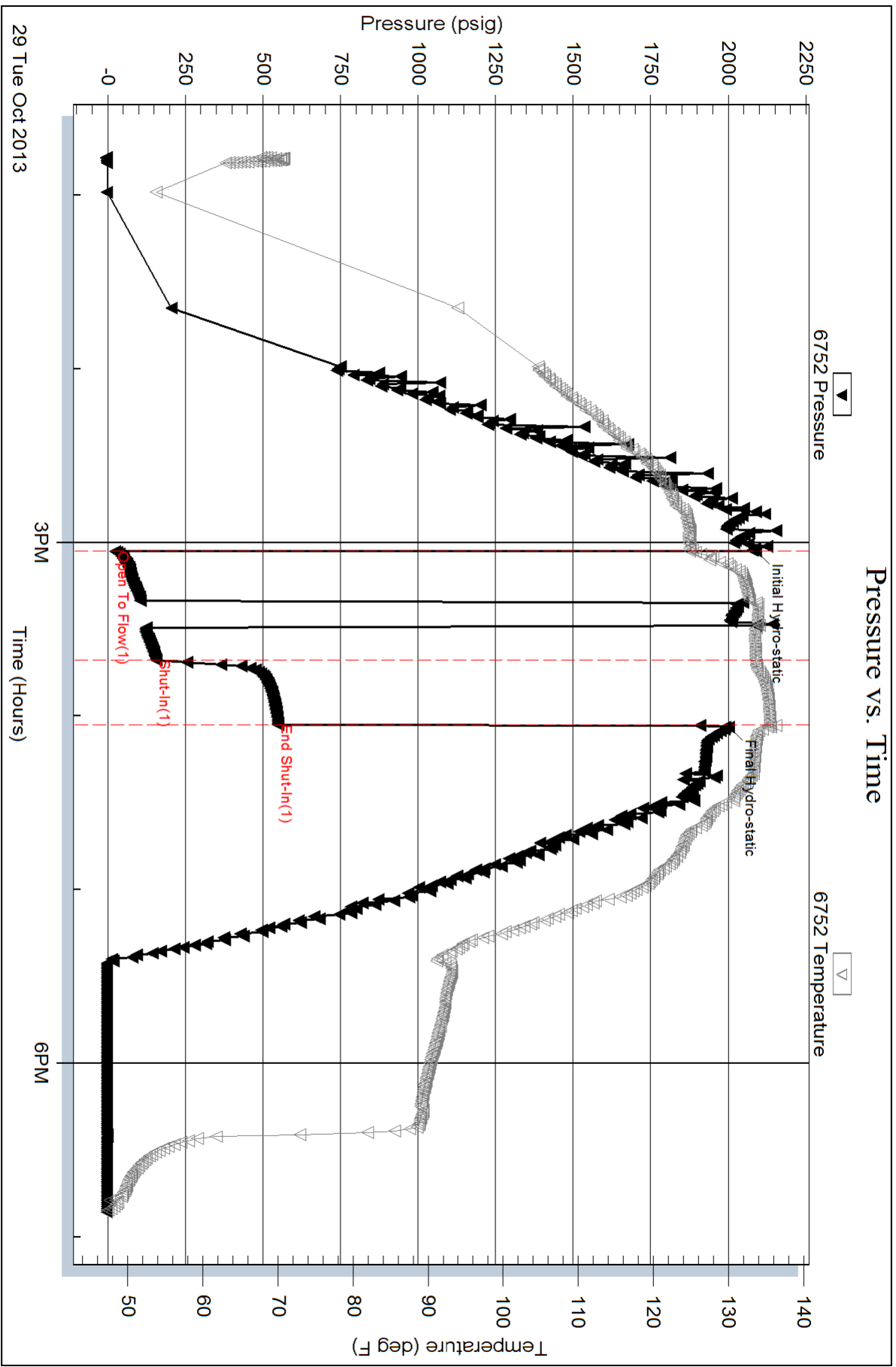
Mud Type: Gel Chem	Cushion Type:	Oil API: 31.4 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.79 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 500.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
110.00	GOCM - 25%G - 35%o - 40%M	0.541
250.00	GO - 25%G - 75%o	1.229

Total Length: 360.00 ft Total Volume: 1.770 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: OIL API = 32 @ 66 DEG F = 31.4 COR 60 DEG F

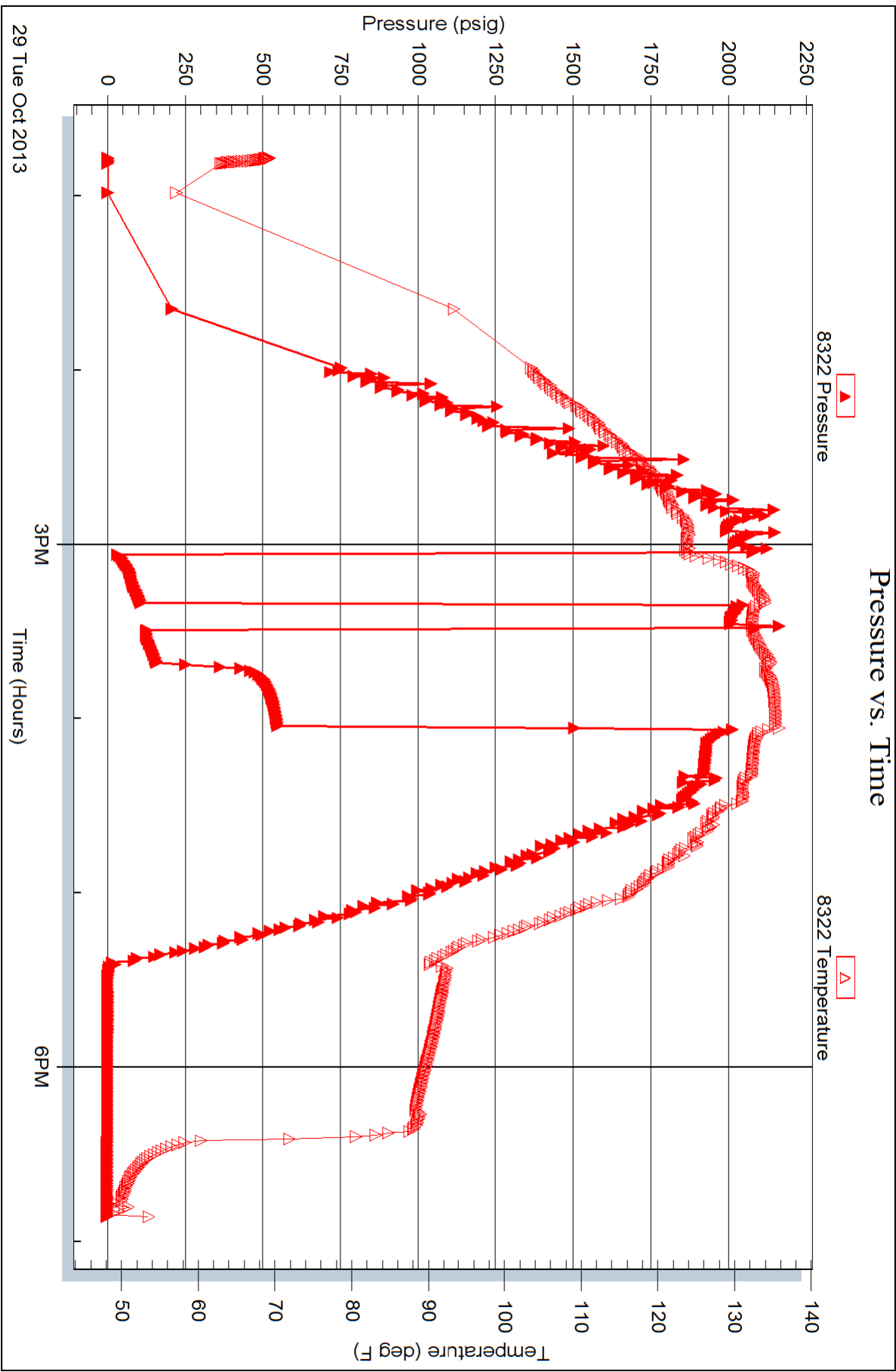


Serial #: 8322

Outside BEREKOL L.L.C.

MICHAEL #5-22

DST Test Number: 4





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

BEREXCO L.L.C.

SEC.22 - 1S. - 36W RAWLINS CO.

2020 N. BRAMBLEWOOD
WICHITA KS. 67202

MICHAEL #5-22

Job Ticket: 55144

DST#: 5

ATTN: PETE VOLLMER

Test Start: 2013.10.30 @ 11:08:20

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	GOCM - 20%G - 30%o - 50%M	0.443
180.00	GO - 40%G - 60%o	0.885
60.00	GO - 50%G - 50%o	0.295

Total Length: 330.00 ft Total Volume: 1.623 bbl

Num Fluid Samples: 0

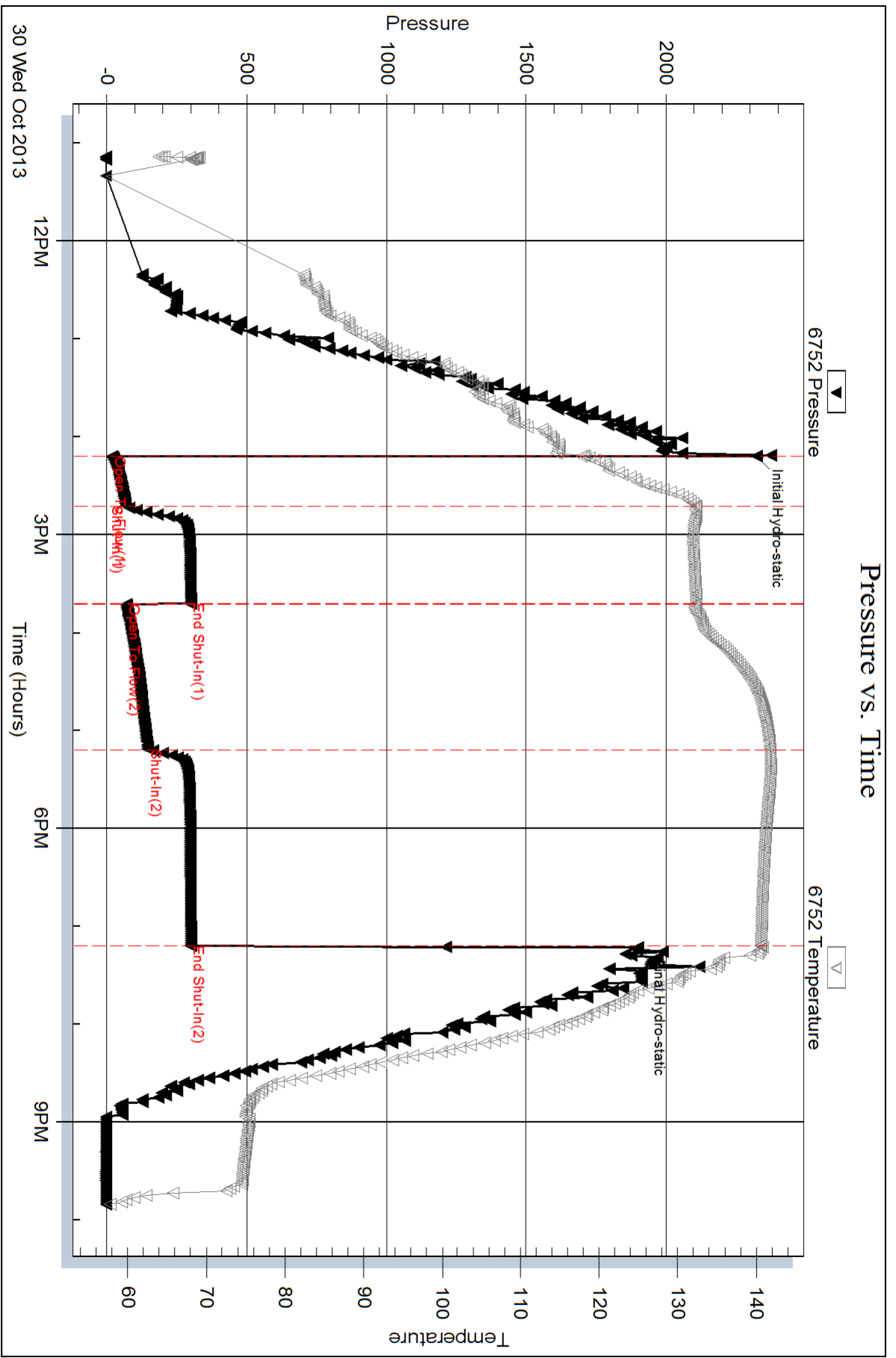
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: OIL API = 28 @ 70 DEG F = 27 COR 60 DEG F





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Berexco LLC
2020 N. Bramblewood
Wichita KS 67202
ATTN: Pete Vollmer

.22-1s-36w Rawlins,KS
Michael #5-22
Job Ticket: 55145 **DST#: 6**
Test Start: 2013.10.31 @ 05:05:00

GENERAL INFORMATION:

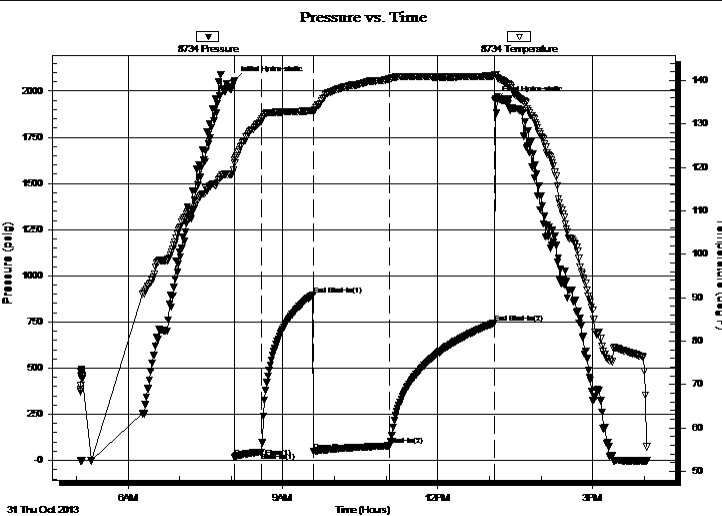
Formation: **LKC " D "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:04:10
Time Test Ended: 16:03:10
Interval: **4342.00 ft (KB) To 4366.00 ft (KB) (TVD)**
Total Depth: 4366.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Ryan Nichols
Unit No: 41
Reference Elevations: 3265.00 ft (KB)
3252.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8734

Inside

Press @ Run Depth: 80.08 psig @ 4343.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.10.31 End Date: 2013.10.31 Last Calib.: 2013.10.31
Start Time: 05:05:01 End Time: 16:03:10 Time On Btm: 2013.10.31 @ 08:04:00
Time Off Btm: 2013.10.31 @ 13:06:30

TEST COMMENT: 30 IF - Surface blow built to 2"
60 ISI - No return
90 FF - No blow
120 FSI - No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2054.89	121.60	Initial Hydro-static
1	19.18	121.12	Open To Flow (1)
31	45.37	130.62	Shut-In(1)
91	897.47	133.05	End Shut-In(1)
92	48.93	132.80	Open To Flow (2)
181	80.08	140.41	Shut-In(2)
302	744.37	141.02	End Shut-In(2)
303	1947.99	141.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	MCW - 20%M - 80%W	0.44
20.00	Mud w/oil spots	0.10

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

.22-1s-36w Rawlins,KS

2020 N. Bramblewood
Wichita KS 67202

Michael #5-22

Job Ticket: 55145

DST#: 6

ATTN: Pete Vollmer

Test Start: 2013.10.31 @ 05:05:00

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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	MCW - 20%M - 80%W	0.443
20.00	Mud w /oil spots	0.098

Total Length: 110.00 ft Total Volume: 0.541 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

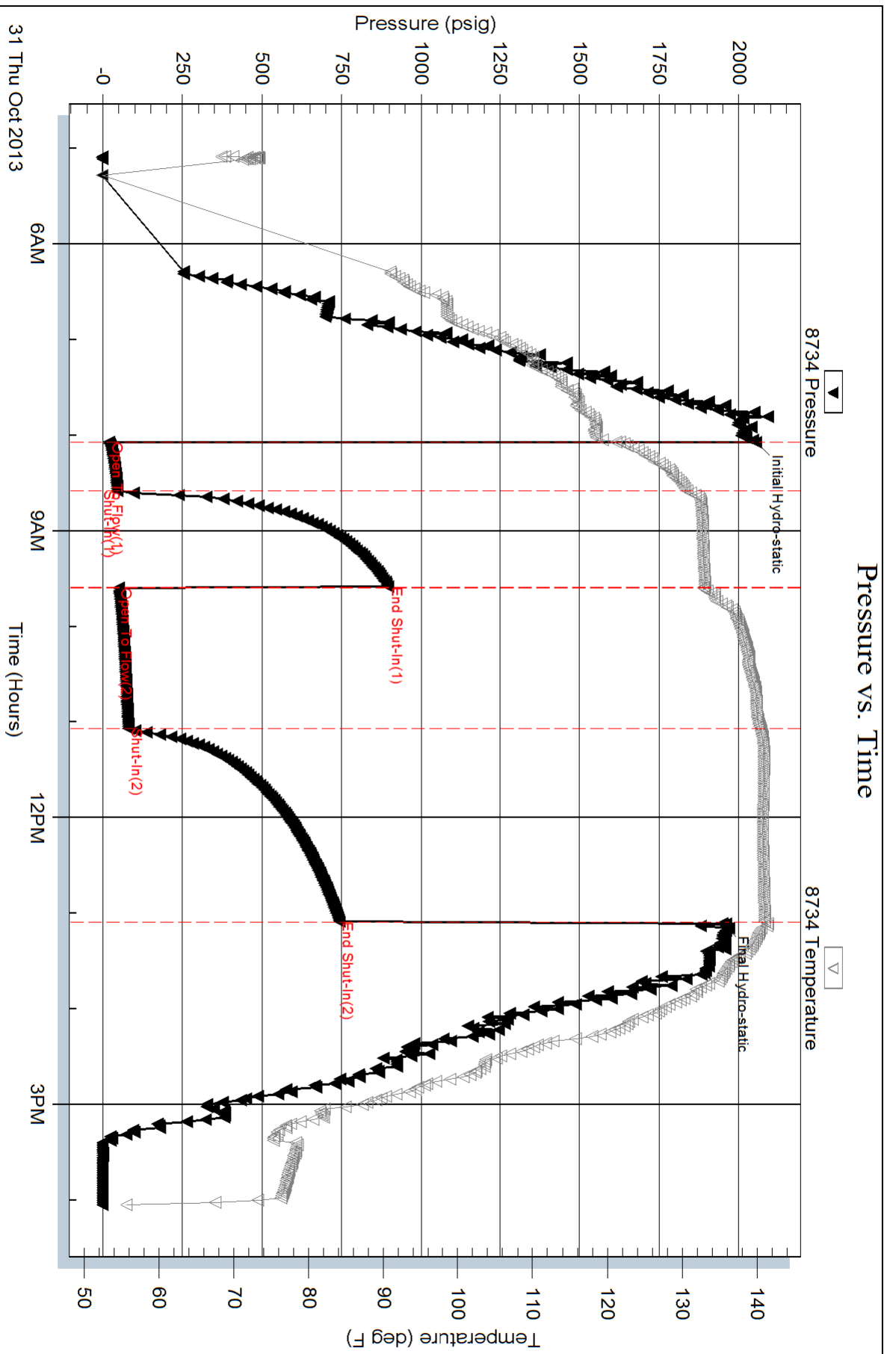
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .378 @ 61 DEG F

CHLORIDES = 24,000 PPM

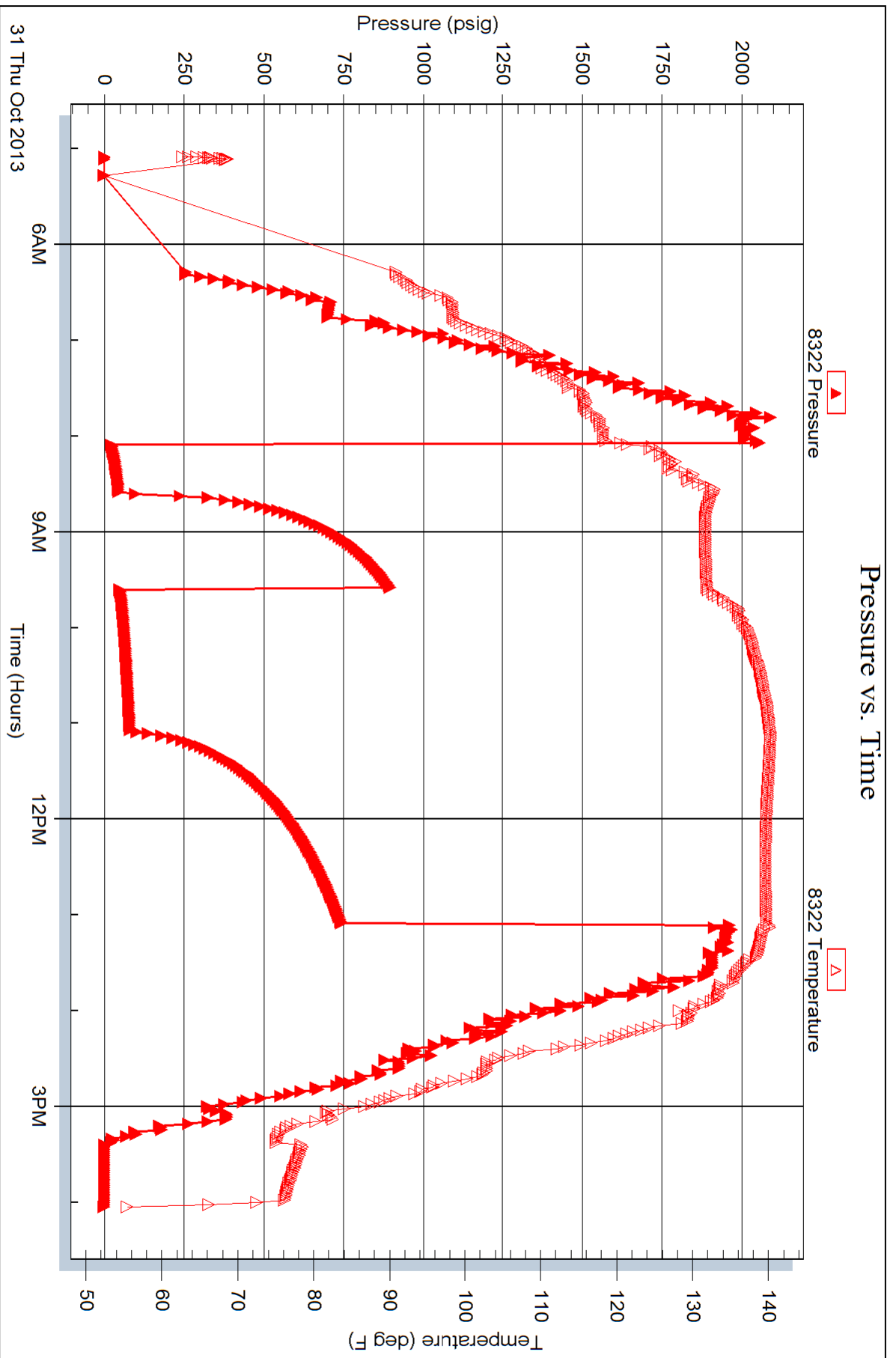


Serial #: 8322

Outside Berexco LLC

Michael #5-22

DST Test Number: 6



Triobite Testing, Inc

Ref. No: 55145

Printed: 2013.10.31 @ 18:27:17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Berexco LLC
 2020 N. Bramblewood
 Wichita KS 67202
 ATTN: Pete Vollmer

.22-1s-36w Rawlins,KS
Michael #5-22
 Job Ticket: 55146 **DST#: 7**
 Test Start: 2013.11.01 @ 03:45:00

GENERAL INFORMATION:

Formation: **LKC " E "**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 06:35:40 Tester: Ryan Nichols
 Time Test Ended: 14:30:00 Unit No: 41
Interval: 4360.00 ft (KB) To 4416.00 ft (KB) (TVD)
 Reference Elevations: 3265.00 ft (KB)
 Total Depth: 4416.00 ft (KB) (TVD) 3252.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

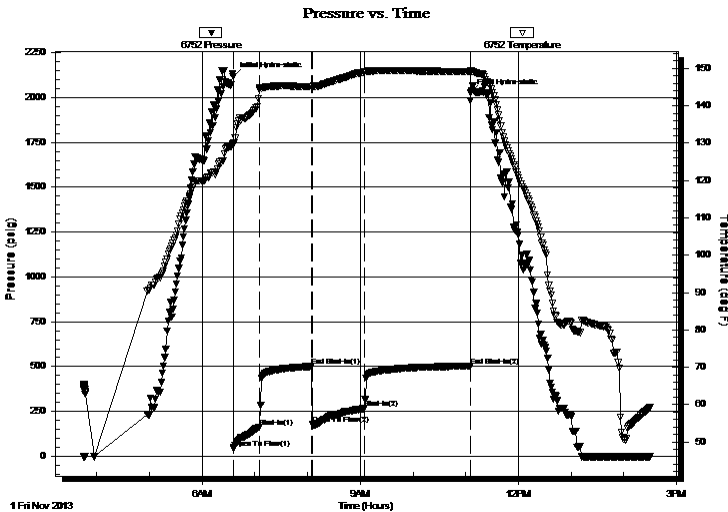
Serial #: 6752

Inside

Press @ Run Depth: 266.81 psig @ 4397.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.11.01 End Date: 2013.11.01 Last Calib.: 2013.11.01
 Start Time: 03:45:01 End Time: 14:30:00 Time On Btm: 2013.11.01 @ 06:35:10
 Time Off Btm: 2013.11.01 @ 11:05:30

TEST COMMENT: 30 IF - 1/2" blow built to BoB @ 14 mins
 60 ISI - Surface blow started @ 1 min built to 2 1/2"
 60 FF - Surface blow built to BoB @ 18 mins
 120 FSI - Surface blow built to 4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2115.19	129.76	Initial Hydro-static
1	42.77	129.55	Open To Flow (1)
31	163.93	144.79	Shut-In(1)
90	500.74	145.10	End Shut-In(1)
91	177.91	145.15	Open To Flow (2)
150	266.81	149.06	Shut-In(2)
270	503.04	149.12	End Shut-In(2)
271	2024.34	149.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
270.00	GOCM - 15%G - 25%o - 60%M	1.33
360.00	GO - 30%G - 70%o	2.74
0.00	120 GIP	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

.22-1s-36w Rawlins,KS

2020 N. Bramblewood
Wichita KS 67202

Michael #5-22

Job Ticket: 55146

DST#: 7

ATTN: Pete Vollmer

Test Start: 2013.11.01 @ 03:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33.2 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	GOCM - 15%G - 25%o - 60%M	1.328
360.00	GO - 30%G - 70%o	2.736
0.00	120 GIP	0.000

Total Length: 630.00 ft Total Volume: 4.064 bbl

Num Fluid Samples: 0

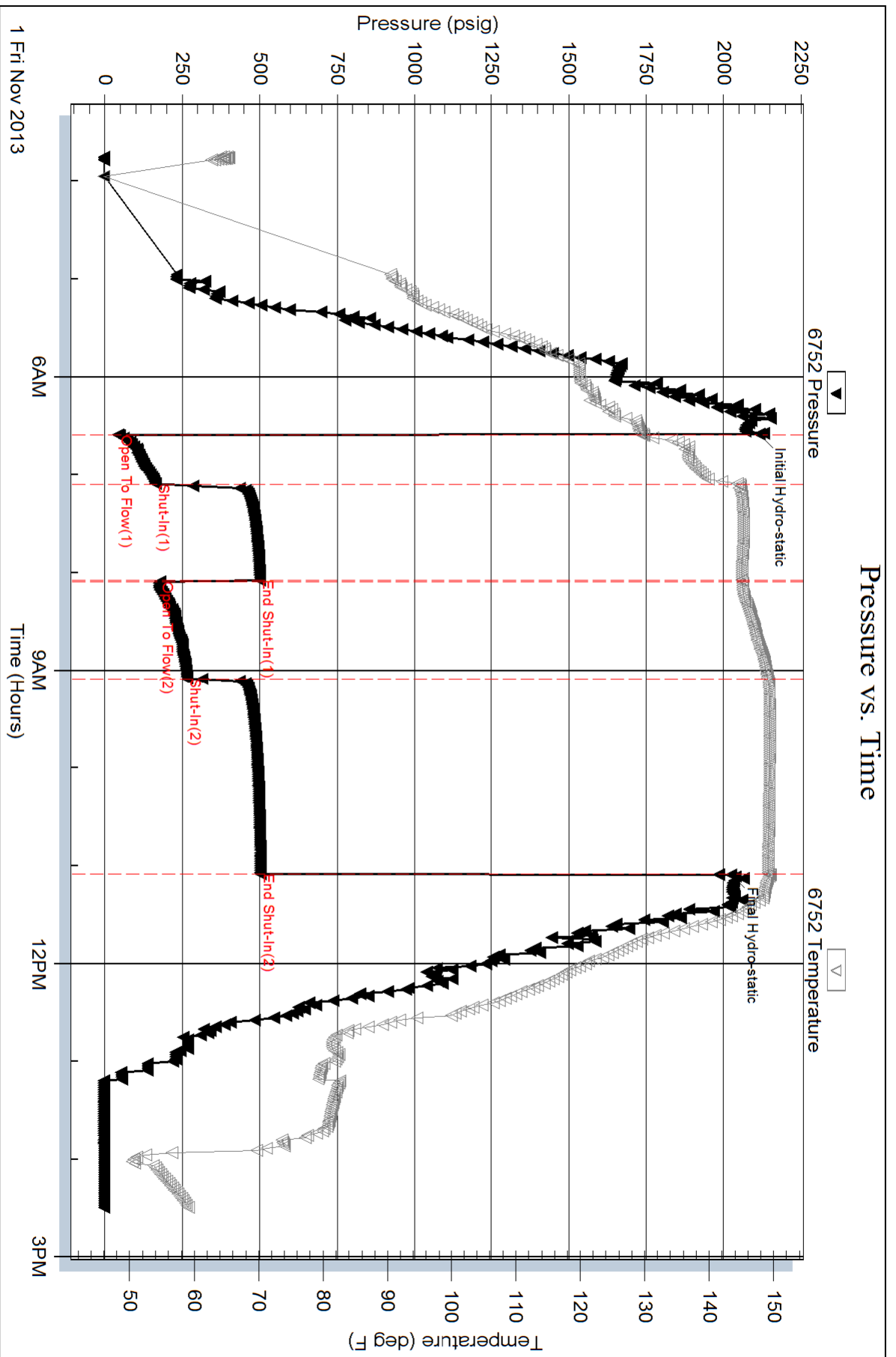
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: OIL API = 34 @ 68 DEG F = 33.2 COR 60 DEG F



BEREXCO LLC

MICHAEL 5-22

SE NE SEC 22 T1S R36W

RAWLINS COUNTY, KANSAS

SUMMARY	1
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DRILL STEM TESTS	10
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SUMMARY

The Berexco LLC Michael 5-22 in Rawlins County, Kansas spud October 22, 2013 and reached a total depth of 4525' on October 31, 2013. The test drilled below the below the Lansing-Kansas City F zone for 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 Michael 5-22 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. Seven DSTs were run based on sample shows.

Lansing-Kansas City

DST 1 in the Oread recovered 857 ft of clean oil and 858 ft of gassy oil and mud with very little water. Samples were fossiliferous grainstone with fair interparticle porosity, scattered oil staining, and good cuts.

DST 2 in the Lansing A was run after moldic porosity with spotty black oil was observed in cuttings. Recovery was 465 ft of gassy clean oil and 73 ft of gassy mud cut oil. The Lansing A exhibited good flow pressures. Wireline logs confirmed the good porosity.

The Lansing B exhibited grainstone with fair to good porosity, live brown oil stain, and very good cuts. DST 3 recovered 93 ft of oil and oil cut mud with good flow pressures. Wireline logs show 2 ft of porosity.

DST 4 in the Upper Lansing C was based on good sample shows of oil and good cuts in a grainstone. DST 4 was curtailed early after a 30-min flow and 20-min shut-in. During the initial flow the hole would not stay full; after pumping was stopped the DST tool was pulled. Nearly 300 B of mud were lost but the test recovered 360 ft of oil and oil cut mud.

The wellbore was deepened 21 ft and DST 5 was run over the Lower Lansing C porosity. The Lower C porosity was a fossiliferous grainstone with fair intergranular porosity, spotty live black oil staining, and a good milky cut. DST 5 recovered 240 ft of oil and oil cut mud. Flow pressures were low.

Another 24 ft of drilling revealed the Lansing D was a tight mudstone with poor sample shows. DST 6 recovered 110 ft of oil-specked watery mud indicating slight porosity that was confirmed by electric logs.

Lansing E samples revealed a grainstone with scattered oil specks along with poor intergranular and poor vuggy porosity. DST 7 recovered 360 ft of gassy oil and oil cut mud. Electric logs showed fair porosity.

The Lansing F limestone was tight with no sample shows.

Oil Well Completion

After wireline logs the Michael 5-22 was cased with 5 ½" production casing for completion as an oil producer.

Berexco LLC
Michael 5-22

WELL DATA

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

WELL NAME: Michael 5-22

SURFACE LOCATION: 1650' FNL & 330' FEL
SE NE Sec. 22, T1S, R36E
Rawlins County, Kansas

LATITUDE & LONGITUDE: 39.9545514, -101.3370057

BOTTOM HOLE LOCATION: Vertical Hole

ELEVATIONS: 3252' GL 3265' KB

API NUMBER: 15-153-20955

BASIN: Mid-Continental Arch

FIELD: Wildcat

HOLE SIZE: 12 ¼" to 310'; 7 7/8" to 4525'

CASING: 8 5/8" J-55 24# STC set to 310' KB

SPUD DATE: October 22, 2013

TOTAL DEPTH DATE: October 31, 2013

TOTAL DEPTH: 4525' Rig TD 4516' Log TD

LAST FORMATION: Lansing-Kansas City F

WELL STATUS: Ran 5 ½" 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				3265
Pierre Sh	Cased	Cased	N/A	N/A
Niobrara Fm	N/A	1131	1131	+2134
Fort Hays Ls Mbr	N/A	1616	1616	+1649
Carlile Sh	N/A	1710	1710	+1555
Dakota	N/A	2222	2222	+1043
Cheyenne	N/A	2550	2550	+715
Anydrite	3166	3122	3122	+143
Base Anydrite	3200	3159	3159	+106
Foraker	3758	3756	3756	-491
Topeka	3984	3974	3974	-709
Oread	4086	4083	4083	-818
Lansing-Kansas City				
"A"	4189	4188	4188	-923
"B"	4247	4245	4245	-980
"C"	4308	4306	4306	-1041
"D"	4352	4352	4352	-1087
"E"	4397	4397	4397	-1132
"F"	4437	4434	4434	-1169
TD Driller	4525			
TD Logger		4516	4516	-1251

LITHOLOGY AND SHOWS

The following descriptions are interpretive. Rig crew members collected unlagged samples from 3500' to 4525' TD. Depths are rig depths except where noted as wireline.

3500' - 3650'	SHALE: red, firm, very silty, sandy in part.
3650' - 3655'	LIMESTONE: gray to dark gray, firm, black algal stain, chalky, trace porosity no shows.
3655' - 3675'	SHALE: greenish gray, firm, platy, non calcareous, fossil fragment
3675' - 3712'	SHALE: red, grayish green, firm, silty, limestone stringers
3712' - 3725'	LIMESTONE: tan, white, firm, cryptocrystalline, fossil fragment, tight.
3725' - 3758'	SHALE: red, firm, silty, limestone stringers.
FORAKER	SAMPLE TOP: 3758' LOG TOP: 3756' SUBSEA: -491'
3758' - 3774'	LIMESTONE white, soft, very sandy, very chalky, fossil fragments, poor porosity, spotty black dead stain with thin SHALE: gray to dark gray, firm, blocky, calcareous.
3774' - 3796'	LIMESTONE: light gray, firm, chalky, sandy, fossil fragment, poor porosity, no show.
3796' - 3805'	SANDSTONE: white, fine grain, rounded, well sorted, calcareous cement, fair porosity, no show.
3805' - 3878'	SHALE: red, gray, soft, silty with thin LIMESTONE: white, firm chalky.
3878' - 3938'	SHALE: gray, firm, platy, with LIMESTONE: very light brown, grayish brown, tan hard, cryptocrystalline, argillaceous, fossil fragments, tight, no shows.
3938' - 3952'	LIMESTONE: light yellowish brown, tan, packstone, oolites, algal material, fossil fragments, occasional poor porosity, no show.
3952' - 3984'	SHALE: red, grayish green, maroon, mottled, soft, blocky, non calcareous.

LITHOLOGY AND SHOWS

TOPEKA	SAMPLE TOP: 3984' LOG TOP: 3974' SUBSEA: -709'
3984' - 3996'	LIMESTONE: white, firm, chalky, poor porosity, no shows with interbedded SHALE as above.
3996' - 4012'	LIMESTONE white, occasional light pink, light orange, soft, very chalky, fossil fragments, algal material, poor porosity, spotty black dead oil stain with thin SHALE: red, firm, blocky, calcareous.
4012' - 4030'	SANDY LIMESTONE: white to light tan, friable to hard, dense, with nodular Sandstone inclusions, SANDSTONE: light gray, very fine grained, rounded, calcareous cement/matrix, tight, no shows.
4030' - 4050'	SHALE: reddish brown, firm, blocky, non calcareous, silty to sandy in part.
4050' - 4055'	LIMESTONE: white to light orange, hard, cryptocrystalline, trace orange chert, tight, no shows.
4055' - 4085'	SHALE: maroon, reddish brown, firm, blocky, non calcareous, silty to sandy in part.
OREAD	SAMPLE TOP: 4086' LOG TOP: 4083' SUBSEA: -818'
4085' - 4089'	LIMESTONE: cream to white, firm to hard, mudstone to wackestone, very chalky, algal stain, no visible porosity, no show.
4089' - 4109'	LIMESTONE: cream to white, firm to hard, predominant chalky and tight, occasional wackestone to grainstone, fossils (Crinoids, Brachiopods), tight to rare poor interparticle porosity, rare black to dark brown live oil stain, good milky cut (two pieces).
4109' - 4118'	SHALE: dark gray to black, firm, fissile, carbonaceous, gas odor.
4118' - 4156'	SHALE red, green, gray, firm, blocky, with thin LIMESTONE brown, very hard, very dense.
4156' - 4170'	LIMESTONE: white to reddish brown, mottled, firm to hard, argillaceous, interbedded red silty Shale.
4170' - 4190'	SHALE: gray to dark gray, firm, platy, non calcareous.

LITHOLOGY AND SHOWS

LANSING- KANSAS CITY "A"

SAMPLE TOP: 4189' LOG TOP: 4188' SUBSEA: -923'

- 4190' - 4198' LIMESTONE: white, light gray, firm, mudstone to grainstone, locally abundant fossils, fair moldic porosity, spotty live thick black oil, good milky yellow cut, free black heavy oil.
- 4198' - 4210' LIMESTONE: white, light gray, firm, mudstone to packstone, scattered fossils, black algal material, trace moldic porosity, spotty live thick black oil, good milky yellow cut, free black heavy oil.
- 4210' - 4218' SANDSTONE: light brown to reddish brown, friable, very fine grained, well rounded, clay fill, calcareous, no visible porosity, no show
- 4220' - 4232' SHALE: red, soft, blocky, non calcareous, silty.
- 4232' - 4238' ARGILLACEOUS LIMESTONE: light gray to reddish brown, firm, cryptocrystalline, argillaceous, dead oil, tight, red Shale partings.
- 4238' - 4247' SHALE: red, maroon, firm, blocky.

LANSING- KANSAS CITY "B"

SAMPLE TOP: 4247' LOG TOP: 4245' SUBSEA: -980'

- 4247' - 4258' LIMESTONE: white, firm, grainstone, oolites, fossil, fair intergranular and pin-point vuggy porosity, even to spotty live black oil, free oil, dull yellowish white cut, good show.
- 4258' - 4268' SHALE: dark gray, firm, blocky to fissile.
- 4268' - 4310' SHALE: red, gray, firm, blocky, slightly calcareous, thin white chalky Limestone partings, locally sandy/silty.

LANSING- KANSAS CITY "C"

SAMPLE TOP: 4308' LOG TOP: 4306' SUBSEA: -1041'

- 4310' - 4322' LIMESTONE: white, firm, grainstone, very fossil, fair intergranular and pinpoint vuggy porosity, spotty live black oil, free oil, dull yellowish white cut, good show.
- 4322' - 4326' SHALE: dark gray, firm, blocky.
- 4326' - 4342' LIMESTONE: white to dark gray, mottled in part, hard to firm, grainstone, fossiliferous, gray argillaceous inclusion at top, fair intergranular porosity, spotty

LITHOLOGY AND SHOWS

live black oil, free oil, good milky cut, fair to good show.

4342' - 4352'

SHALE: red, dark gray, firm, blocky, slightly calcareous.

LANSING-
KANSAS CITY "D"

SAMPLE TOP: 4352' LOG TOP: 4352' SUBSEA: -1087'

4352' - 4362'

LIMESTONE: white, firm, grainstone to mudstone, fossil fragment (Crinoid), poor to trace intergranular porosity, trace spotty black oil, dull yellowish white cut, poor show.

4362' - 4376'

SHALE: dark gray, firm, blocky, white Limestone partings.

4376' - 4397'

SHALE: dark reddish brown grayish green, maroon, firm, blocky, non calcareous, silty, pyrite.

LANSING-
KANSAS CITY "E"

SAMPLE TOP: 4397' LOG TOP: 4397' SUBSEA: -1132'

4397' - 4408'

LIMESTONE: white, firm, mudstone to grainstone, very fossiliferous in part, secondary clear calcareous crystals in vugs, trace intergranular and occasional poor vuggy porosity, scattered black oil specks and stain, dull milky cut, poor to fair show.

4408' - 4414'

LIMESTONE: white, hard, chalky, tight, no shows.

4414' - 4426'

SHALE: dark gray to black, firm, blocky, calcareous, fossil (Brachiopod), carbonaceous in part.

4426' - 4437'

SHALE: dark reddish brown to maroon, greenish gray to gray, mottled in part, firm, blocky, non calcareous, silty.

LANSING-
KANSAS CITY "F"

SAMPLE TOP: 4437' LOG TOP: 4434' SUBSEA: -1169'

4437' - 4452'

LIMESTONE: cream to white, firm to hard, mudstone to wackestone, scattered fossil fragment, clean, dense, tight, no shows

LITHOLOGY AND SHOWS

4452' - 4486'	SHALE: dark gray, firm, blocky, slightly to non calcareous, fossil fragment, w/LIMESTONE: gray to white, firm to hard, mudstone, occasional fossil fragment, clear calcareous fill in vugs, argillaceous in part, tight, no show.
4486' - 4494'	LIMESTONE: white to light gray, firm, mudstone, fossil fragment, tight, no shows.
4494' - 4525' TD	SHALE: reddish brown, firm, platy, non to very slightly calcareous, thin Limestone partings

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	
MUD LOGGING:	None	
WELLSITE GEOLOGY:	T. M. McCoy & Co., Inc. Peter J. Vollmer	Wilson, WY 307-733-4332
DRILL STEM TESTING:	Trilobite Testing, Inc.	Hays, KS
Tester:	Bob Hamel, Ryan Nichols DST 1: 4008' - 4122' Oread DST 2: 4110' - 4222' Lansing-KC "A" DST 3: 4208' - 4252' Lansing-KC "B" DST 4: 4256' - 4322' Lansing-KC "C" DST 5: 4322' - 4343' Lansing-KC "C" DST 6: 4342' - 4366' Lansing-KC "D" DST 7: 4360' - 4416' Lansong-KC "E"	785- 625-4778
DIRECTIONAL DRILLING:	None	
WIRELINE LOGS:	Pioneer Wireline Services RAG: 3100' - TD Micro: Surface casing to TD Engineer: Robert Barnhard	Hays, KS 785-625-3858

BEREXCO LLC.

INTER-OFFICE

DATE: October 17, 2013
TO: Michael 5-22 well file
CC:
FROM: Danish Tarar
SUBJECT: Elevation Change

During building of location, the elevation at the stake was cut down 2'. Therefore the revised elevation is 3252' ground, 3265' KB. The original staked location was 3254' ground level.

The location remained unchanged.