Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1210565

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 # 34318
Name: BEREXCO LLC
Address 1: 2020 N. Bramblewood
Address 2:
City: Wichita State: KS Zip: 67206 + 1094
Contact Person: Rodney Reynolds
Phone: (316) 265-3311
CONTRACTOR: License # 34317
Name: BEREDCO LLC
Wellsite Geologist: Pete Volmer
Purchaser: Central Crude Corporation

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 #:

03/21/2014	04/02/2014	05/16/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-153-20983-00-00
Spot Description:
_ - NE - NW - NW Sec. 23 Twp. 1 S. R. 36 ☐ East ☑ West
330 Feet from ☑ North / ☐ South Line of Section
990 Feet from ☐ East / ☑ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW

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

Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84

County: Rawlins
Lease Name: Michael Well #: 2-23
Field Name: East Fork Field
Producing Formation: LKC, Oread
Elevation: Ground: 3289 Kelly Bushing: 3302
Total Vertical Depth: 4536 Plug Back Total Depth: 4483
Amount of Surface Pipe Set and Cemented at: 310 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: 1200 ppm Fluid volume: 1200 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 07/15/2014
☑ **Confidential Release Date:** 07/14/2016
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 07/16/2014

[redacted] 1210565

Operator Name: BEREXCO LLC Lease Name: Michael Well #: 2-23

Sec. 23 Twp. 1 S. R. 36 ☐ East ☑ West County: Rawlins

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Radiation Guard Log
Microresistivity Log

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name: Attached Top: Attached Datum: Attached

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	310	Common	225	3%cc, 2%gel
Production	7.875	5.50	15.5	4530	Lite & Common	700	3/4#floseal,10%salt, 2%gel,4#Gilsonite

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

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 *(Amount and Kind of Material Used)*	Depth
4	4372 - 4376 LKC	500 gals 20% MCA, 3% solvent	4372 - 4376
4	4344 - 4348 LKC	750 gals 20% MCA, 3% solvent	4344 - 4348
4	4128 - 4130 Oread	500 gals 20% MCA, 3% solvent	4128 - 4130

TUBING RECORD: Size: 2.875 Set At: SN @ 4418 Packer At: no pkr 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
	213	0	36		

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☑ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:
4128 - 4376

Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Michael 2-23
Doc ID	1210565

Tops

Name	Top	Datum
Niobrara	1236	+2066
Fort Hays limestone	1748	+1554
Carlyle Sh.	1783	+1519
Dakota	2164	+1138
Cheyenne	2712	+590
Blaine	3050	+252
Stone Corral Anhydrite	3208	+94
Base Anhydrite	3238	+64
Neva	3692	-390
Foraker	3800	-498
Wabaunsee	3960	-658
Topeka	4016	-714
Deer Creek Sand	4054	-752
Oread	4128	-826
Lansing - KS City A	4228	-926
LKC B	4285	-983
LKC C	4344	-1042
LKC D	4390	-1088
LKC E	4433	-1131
LKC F	4474	-1172
RTD	4540	
LTD	4536	-1234

Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Michael 2-23
Doc ID	1210565

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	310	Common	225	3%cc, 2%gel
Production	7.875	5.50	15.5	4530	Lite & Common	700	3/4#floseal ,10%salt, 2%gel,4# Gilsonite

Michael 2-22

WELL FILE

ALLIED OIL & GAS SERVICES, LLC 062520

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley, KS

DATE 3-21-14	SEC. 23	TWP. 7	RANGE 36	CALLED OUT	ON LOCATION 10:00am	JOB START 11:00am	JOB FINISH 11:30am
LEASE Michaels	WELL # 2-22		LOCATION ~~Beardsley~~, N to Rd 12, 4.5W to 5.5 N to BB Wink			COUNTY Rawlins	STATE KS
OLD OR (NEW) (Circle one)							

CONTRACTOR Beredco #2
TYPE OF JOB Surface
HOLE SIZE 12 1/4" T.D. 311'
CASING SIZE 8 5/8 DEPTH 311'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 18.94 bbl

OWNER Same

CEMENT

AMOUNT ORDERED 225 sks com 3% CC 2% gel

		@		
COMMON	225 sks	@	17.80	4027.50
POZMIX		@		
GEL	4 sks	@	23.40	93.60
CHLORIDE	8 sks	@	64.00	512.00
ASC		@		
HANDLING	243.3 ft³	@	2.48	603.38
MILEAGE	11.1 ton X 50	x	2.60	1443.00
			TOTAL	6679.48

EQUIPMENT

PUMP TRUCK # 431 CEMENTER Lakeret Weaft
HELPER Andrew Forslund
BULK TRUCK # 341 DRIVER Brandon Wilkinson
BULK TRUCK # DRIVER

REMARKS:

Mix 225 sks cement
Displace with water
Cement did circulate
30 sks to pit

Thank you

SERVICE

		@		
DEPTH OF JOB				
PUMP TRUCK CHARGE				1512.25
EXTRA FOOTAGE		@		
MILEAGE HEAVY	50	@	7.70	385.00
MANIFOLD Swedge		@	275.00	NC
MILV	50	@	4.40	NC
		@		
			TOTAL	1897.25

CHARGE TO: Berexco
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 Mylo Salinas

SIGNATURE Mylo Salinas

SALES TAX (If Any)
TOTAL CHARGES 8,576.73
DISCOUNT 2,401.48 IF PAID IN 30 DAYS
6,175.24 Net.

DRILL STEM TEST REPORT

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57227 **DST#: 1**

Test Start: 2014.03.28 @ 06:08:00

GENERAL INFORMATION:

Formation: **Oread**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:56:25
Time Test Ended: 15:06:40

Test Type: Conventional Bottom Hole (Initial)
Tester: Will MacLean
Unit No: 72

Interval: 4098.00 ft (KB) To 4148.00 ft (KB) (TVD)
Total Depth: 4148.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

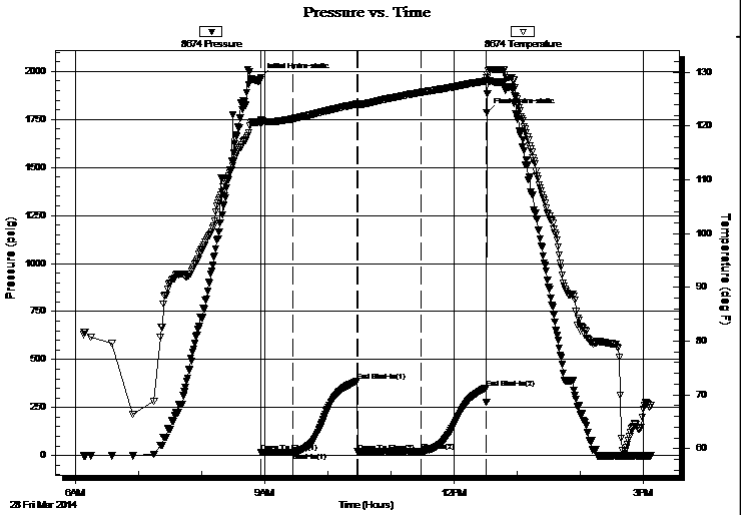
Reference Elevations: 3302.00 ft (KB)
3289.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8674 **Inside**

Press@RunDepth: 21.88 psig @ 4100.00 ft (KB)
Start Date: 2014.03.28 End Date: 2014.03.28
Start Time: 06:08:00 End Time: 15:06:40

Capacity: 8000.00 psig
Last Calib.: 2014.03.28
Time On Btm: 2014.03.28 @ 08:56:10
Time Off Btm: 2014.03.28 @ 12:30:54

TEST COMMENT: IF- Weak Surface Blow 1/2" Died Back to 1/4"
ISI- No Blow
FF- No Blow
FSI- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.36	121.08	Initial Hydro-static
1	17.17	120.36	Open To Flow (1)
31	18.68	121.36	Shut-In(1)
92	387.96	124.11	End Shut-In(1)
92	20.03	123.92	Open To Flow (2)
153	21.88	126.25	Shut-In(2)
215	351.61	128.39	End Shut-In(2)
215	1785.92	128.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	WCM 3%w 97%m with a Skim of Oil on	0.05

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57227 **DST#: 1**

Test Start: 2014.03.28 @ 06:08:00

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:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	4.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	800.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	WCM 3%w 97%m with a Skim of Oil on To	0.049

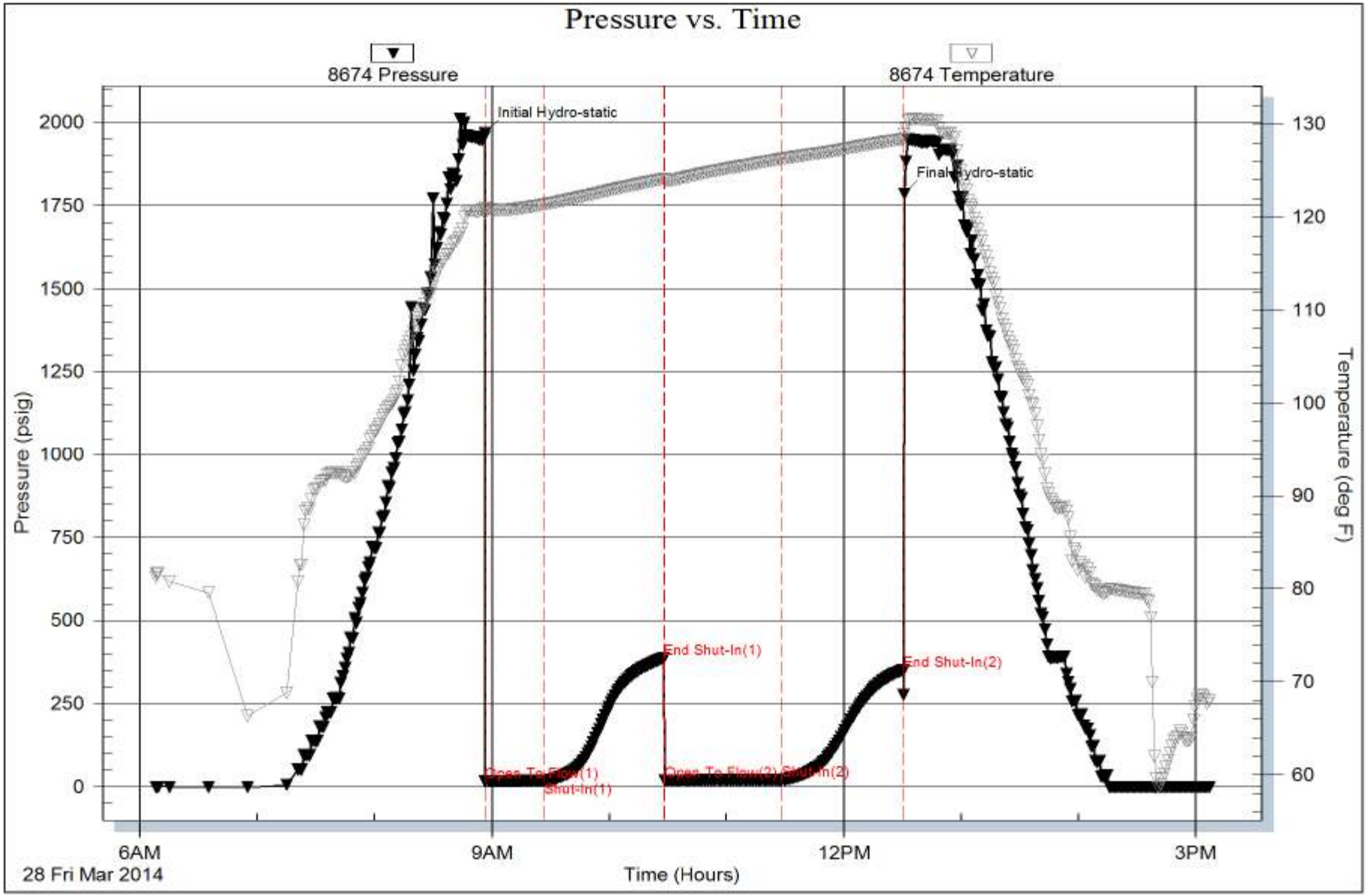
Total Length: 10.00 ft Total Volume: 0.049 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8674 **Inside** Berexco LLC. Michael # 2-23 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 57227 Printed: 2014.03.28 @ 16:50:03

DRILL STEM TEST REPORT

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57228 **DST#: 2**

Test Start: 2014.03.29 @ 02:52:00

GENERAL INFORMATION:

Formation: **LKC " A "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:57:10
Time Test Ended: 14:24:10

Test Type: Conventional Bottom Hole (Reset)
Tester: Will MacLean
Unit No: 72

Interval: 4180.00 ft (KB) To 4270.00 ft (KB) (TVD)
Total Depth: 4270.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

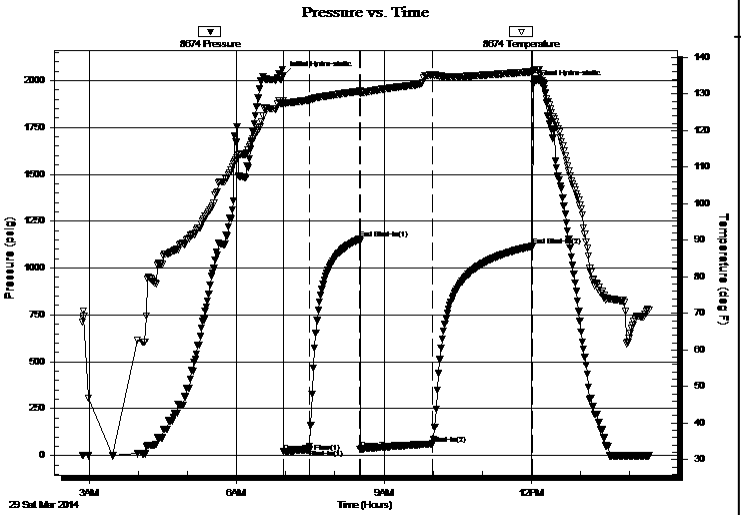
Reference Elevations: 3302.00 ft (KB)
3289.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8674 **Inside**

Press@RunDepth: 62.43 psig @ 4182.00 ft (KB)
Start Date: 2014.03.29 End Date: 2014.03.29
Start Time: 02:52:00 End Time: 14:24:10

Capacity: 8000.00 psig
Last Calib.: 2014.03.29
Time On Btm: 2014.03.29 @ 06:56:55
Time Off Btm: 2014.03.29 @ 12:02:10

TEST COMMENT: IF- Weak Surface Blow Built to 3/4"
ISI- No Blow
FF- Weak Surface Blow after 20min Built to 1/2"
FSI- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2028.03	128.08	Initial Hydro-static
1	20.28	127.29	Open To Flow (1)
32	31.94	128.32	Shut-In(1)
94	1154.66	130.74	End Shut-In(1)
94	35.21	130.24	Open To Flow (2)
183	62.43	135.09	Shut-In(2)
305	1116.24	136.06	End Shut-In(2)
306	1980.24	136.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
98.00	WCM 2%w 98%m with Oil Spots	0.48

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57228 **DST#: 2**

Test Start: 2014.03.29 @ 02:52:00

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:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	4.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	800.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
98.00	WCM 2%w 98%m with Oil Spots	0.482

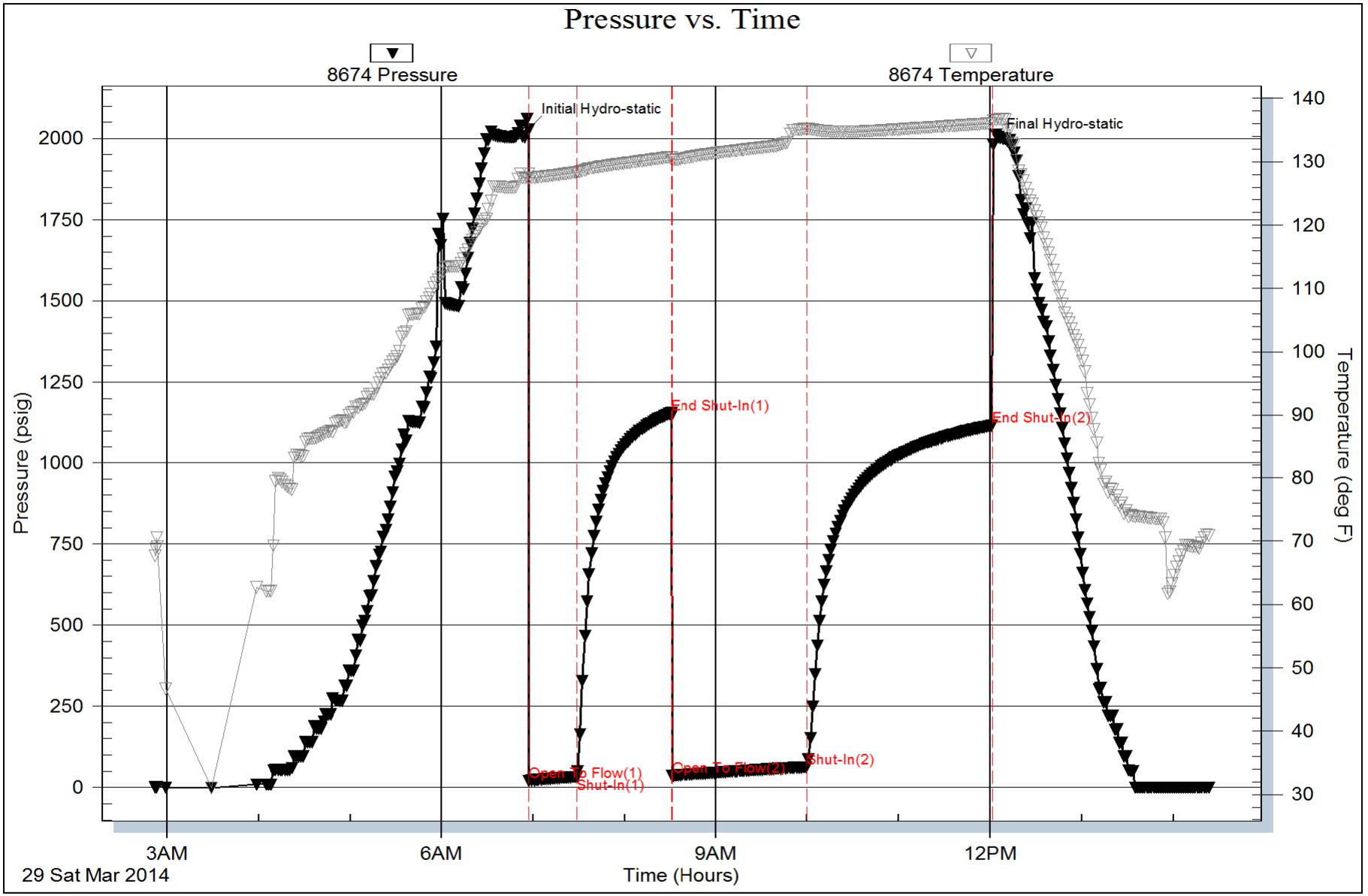
Total Length: 98.00 ft Total Volume: 0.482 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8674 **Inside** Berexco LLC. Michael # 2-23 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 57228 Printed: 2014.03.29 @ 23:21:18

DRILL STEM TEST REPORT

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57229 **DST#: 3**

Test Start: 2014.03.30 @ 01:20:00

GENERAL INFORMATION:

Formation: **LKC " B "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:58:40
Time Test Ended: 12:30:25

Test Type: Conventional Bottom Hole (Reset)
Tester: Will MacLean
Unit No: 72

Interval: 4254.00 ft (KB) To 4318.00 ft (KB) (TVD)
Total Depth: 4318.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

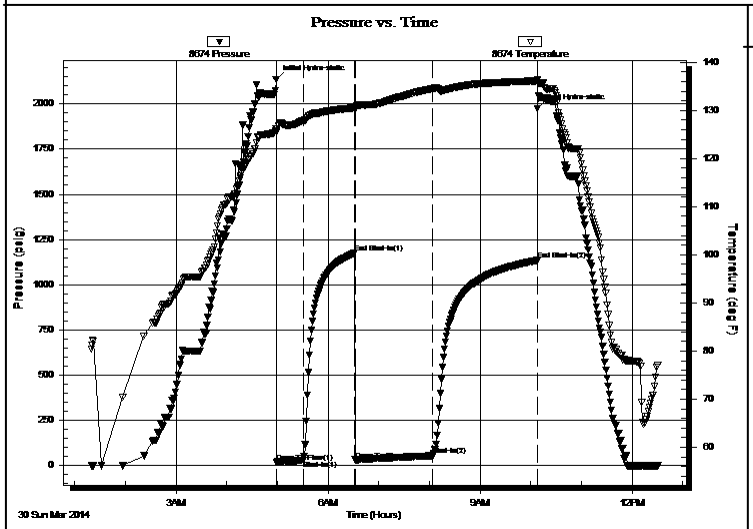
Reference Elevations: 3302.00 ft (KB)
3289.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8674 **Inside**

Press@RunDepth: 55.12 psig @ 4256.00 ft (KB)
Start Date: 2014.03.30 End Date: 2014.03.30
Start Time: 01:20:00 End Time: 12:30:25

Capacity: 8000.00 psig
Last Calib.: 2014.03.30
Time On Btm: 2014.03.30 @ 04:58:25
Time Off Btm: 2014.03.30 @ 10:07:55

TEST COMMENT: IF- Weak Surface Blow Built to 1"
ISI- No Blow
FF- Weak Surface Blow after 40min Built to 1/4"
FSI- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.19	126.25	Initial Hydro-static
1	19.63	125.49	Open To Flow (1)
32	29.47	127.83	Shut-In(1)
93	1174.58	130.52	End Shut-In(1)
94	31.56	130.16	Open To Flow (2)
186	55.12	134.54	Shut-In(2)
310	1134.93	136.13	End Shut-In(2)
310	1975.67	136.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
92.00	WCM 43%w 57%m with a Skim of Oil	0.45

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57229 **DST#: 3**

Test Start: 2014.03.30 @ 01:20:00

GENERAL INFORMATION:

Formation: **LKC " B "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:58:40
Time Test Ended: 12:30:25

Test Type: Conventional Bottom Hole (Reset)
Tester: Will MacLean
Unit No: 72

Interval: 4254.00 ft (KB) To 4318.00 ft (KB) (TVD)
Total Depth: 4318.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

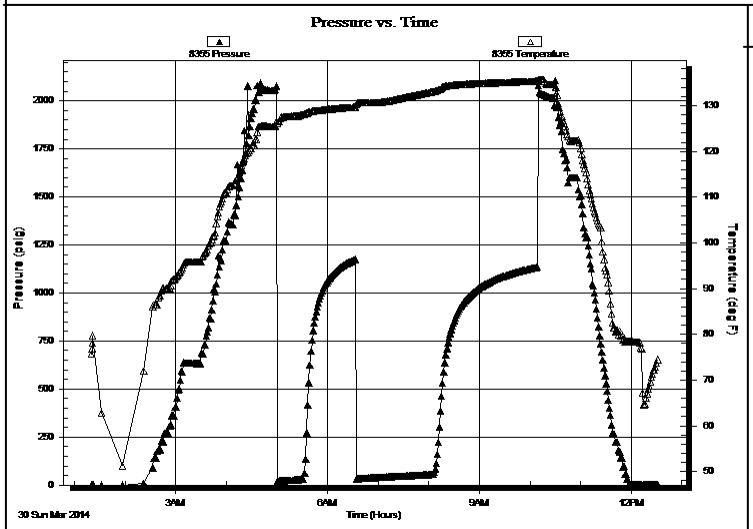
Reference Elevations: 3302.00 ft (KB)
3289.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8355 **Outside**

Press@RunDepth: psig @ 4256.00 ft (KB)
Start Date: 2014.03.30 End Date: 2014.03.30
Start Time: 01:20:05 End Time: 12:32:30

Capacity: 8000.00 psig
Last Calib.: 2014.03.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow Built to 1"
ISI- No Blow
FF- Weak Surface Blow after 40min Built to 1/4"
FSI- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
92.00	WCM 43%w 57%m with a Skim of Oil o	0.45

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57229 **DST#: 3**

Test Start: 2014.03.30 @ 01:20:00

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:	25500 ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	4.80 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	800.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
92.00	WCM 43%w 57%m with a Skim of Oil on T	0.452

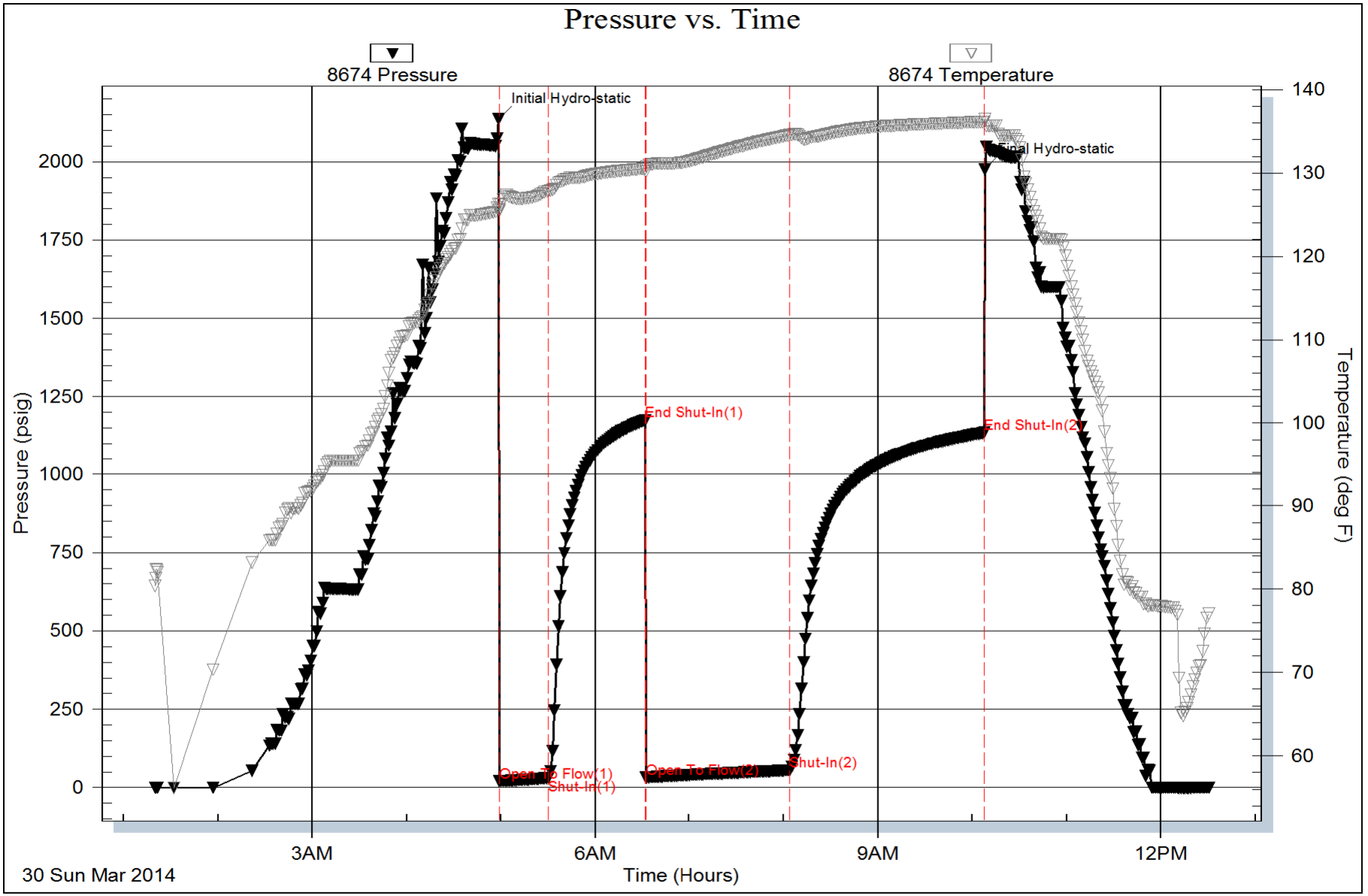
Total Length: 92.00 ft Total Volume: 0.452 bbl

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

Laboratory Name: Laboratory Location:

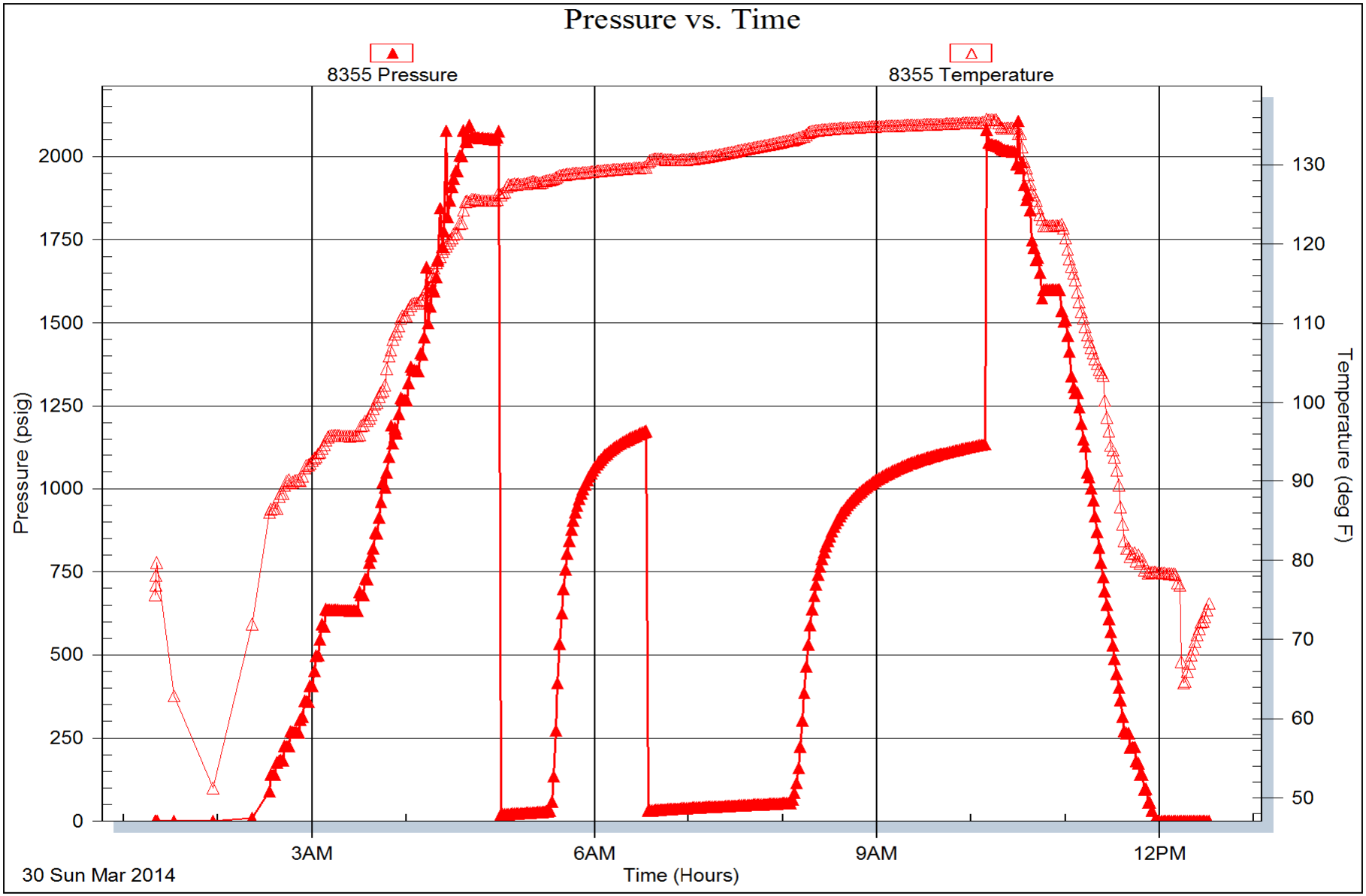
Recovery Comments: RW is .238 @ 77f = 25500

Serial #: 8674 **Inside** Berexco LLC. Michael # 2-23 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 57229 Printed: 2014.03.30 @ 17:47:32

Serial #: 8355 **Outside** Berexco LLC. Michael # 2-23 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 57229 Printed: 2014.03.30 @ 17:47:32

DRILL STEM TEST REPORT

Berexco LLC.

2020 N. Bramble
Wichita KS 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins,KS

Michael #2-23

Job Ticket: 57230 **DST#: 4**

Test Start: 2014.03.30 @ 23:08:00

GENERAL INFORMATION:

Formation: **LKC " C "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:04:55
Time Test Ended: 10:23:55

Test Type: Conventional Bottom Hole (Reset)
Tester: Will MacLean
Unit No: 72

Interval: 4310.00 ft (KB) To 4398.00 ft (KB) (TVD)
Total Depth: 4398.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

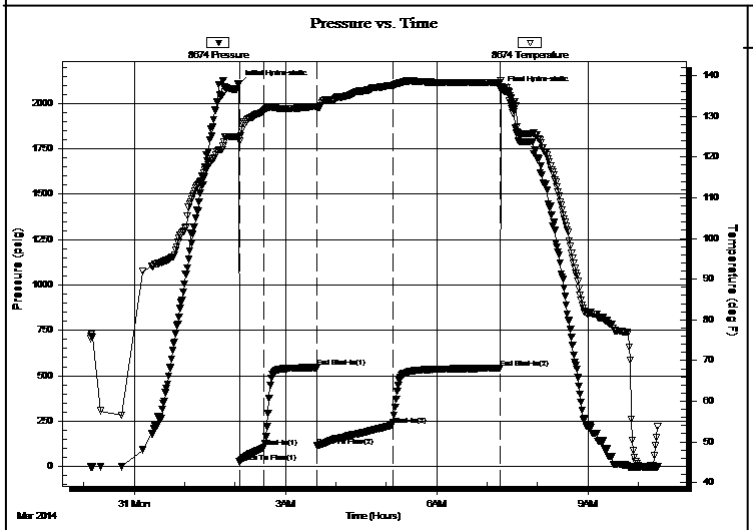
Reference Elevations: 3302.00 ft (KB)
3289.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8674 **Inside**

Press@RunDepth: 226.55 psig @ 4313.00 ft (KB)
Start Date: 2014.03.30 End Date: 2014.03.31
Start Time: 23:08:00 End Time: 10:23:55

Capacity: 8000.00 psig
Last Calib.: 2014.03.31
Time On Btm: 2014.03.31 @ 02:04:40
Time Off Btm: 2014.03.31 @ 07:16:09

TEST COMMENT: IF- Weak Surface Blow Built to 4"
ISI- No Blow
FF- Weak Surface Blow Built to BOB in 76min
FSI- Weak Surface Blow in 20min Built to 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2105.33	124.96	Initial Hydro-static
1	25.72	123.89	Open To Flow (1)
30	105.24	131.49	Shut-In(1)
93	545.57	132.42	End Shut-In(1)
93	113.39	132.26	Open To Flow (2)
183	226.55	137.57	Shut-In(2)
311	541.91	138.31	End Shut-In(2)
312	2073.21	138.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
94.00	OGCM 9%oil 34%g 57%m	0.46
94.00	GOCM 14%g 22%oil 64%m	0.46
94.00	GMCO 20%g 34%m 46%oil	0.46
94.00	GMCO 19%g 22%m 59%oil	0.46
188.00	GO 11%g 89%oil	0.92
0.00	282' of GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Berexco LLC.

2020 N. Bramble
Wichita KS 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins,KS

Michael #2-23

Job Ticket: 57230 **DST#: 4**

Test Start: 2014.03.30 @ 23:08:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	30 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	4.80 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 bbl
94.00	OGCM 9%oil 34%g 57%m	0.462
94.00	GOCM 14%g 22%oil 64%m	0.462
94.00	GMCO 20%g 34%m 46%oil	0.462
94.00	GMCO 19%g 22%m 59%oil	0.462
188.00	GO 11%g 89%oil	0.925
0.00	282' of GIP	0.000

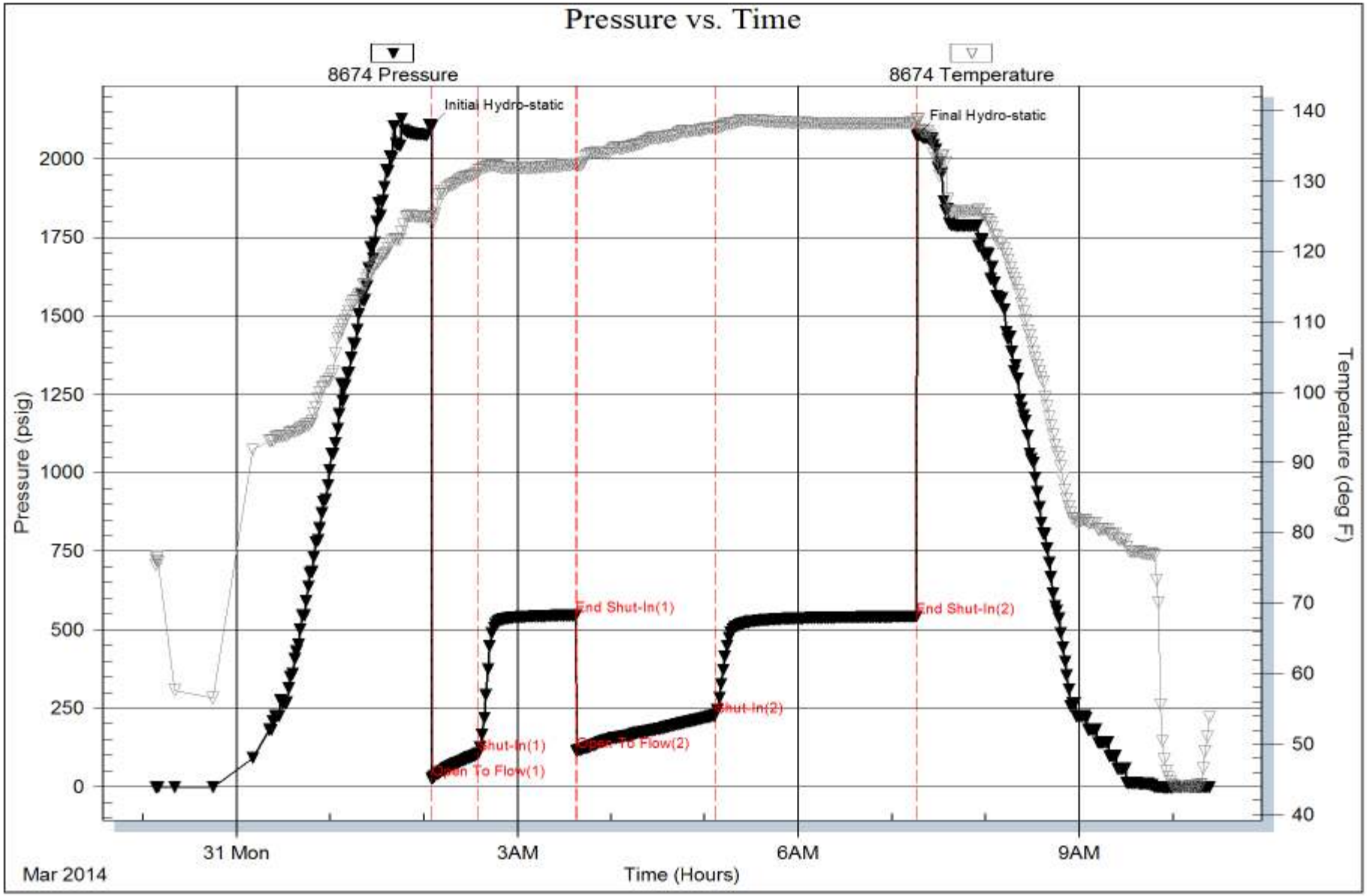
Total Length: 564.00 ft Total Volume: 2.773 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: API is 29 @ 50f = 30

Serial #: 8674 **Inside** Berexco LLC. Michael #2-23 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 57230 Printed: 2014.03.31 @ 11:04:12

DRILL STEM TEST REPORT

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57231 **DST#: 5**

Test Start: 2014.03.31 @ 22:20:00

GENERAL INFORMATION:

Formation: **LKC " E"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:04:10
Time Test Ended: 08:01:25

Test Type: Conventional Bottom Hole (Reset)
Tester: Will MacLean
Unit No: 72

Interval: 4412.00 ft (KB) To 4470.00 ft (KB) (TVD)
Total Depth: 4470.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

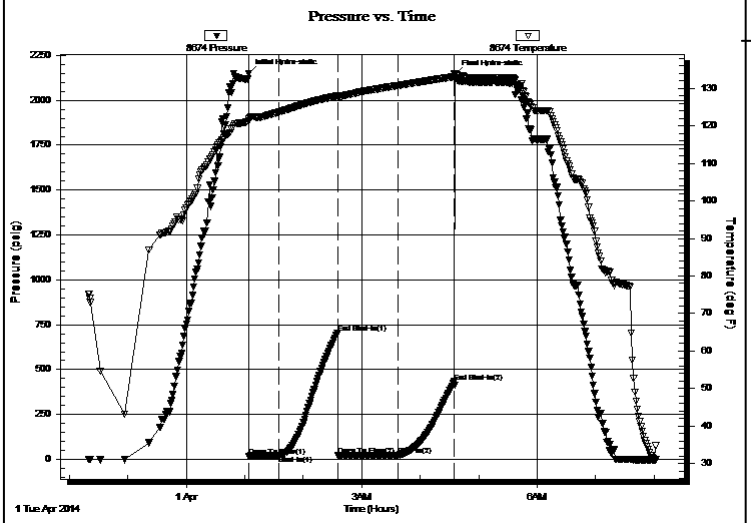
Reference Elevations: 3302.00 ft (KB)
3289.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8674 **Inside**

Press@RunDepth: 24.13 psig @ 4413.00 ft (KB)
Start Date: 2014.03.31 End Date: 2014.04.01
Start Time: 22:20:00 End Time: 08:01:25

Capacity: 8000.00 psig
Last Calib.: 2014.04.01
Time On Btm: 2014.04.01 @ 01:03:55
Time Off Btm: 2014.04.01 @ 04:35:24

TEST COMMENT: IF- Weak Surface Blow 1/2" Built to 3/4" Slid 4' to Bottom
ISI- No Blow
FF- Weak Surface Blow Died in 28min
FSI- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2148.16	121.93	Initial Hydro-static
1	19.37	121.26	Open To Flow (1)
31	21.24	123.63	Shut-In(1)
92	703.95	128.00	End Shut-In(1)
92	22.53	127.61	Open To Flow (2)
153	24.13	130.70	Shut-In(2)
211	432.42	133.09	End Shut-In(2)
212	2141.84	133.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	WCM 2%w 98%m with a Few Oil Spots	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Berexco LLC.

2020 N. Bramble
Wichita KS. 67206

ATTN: Pete Vollmer

23-1s-36w Rawlins Co. KS

Michael # 2-23

Job Ticket: 57231 **DST#: 5**

Test Start: 2014.03.31 @ 22:20:00

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:	49.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	5.60 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 bbl
10.00	WCM 2%w 98%m with a Few Oil Spots	0.049

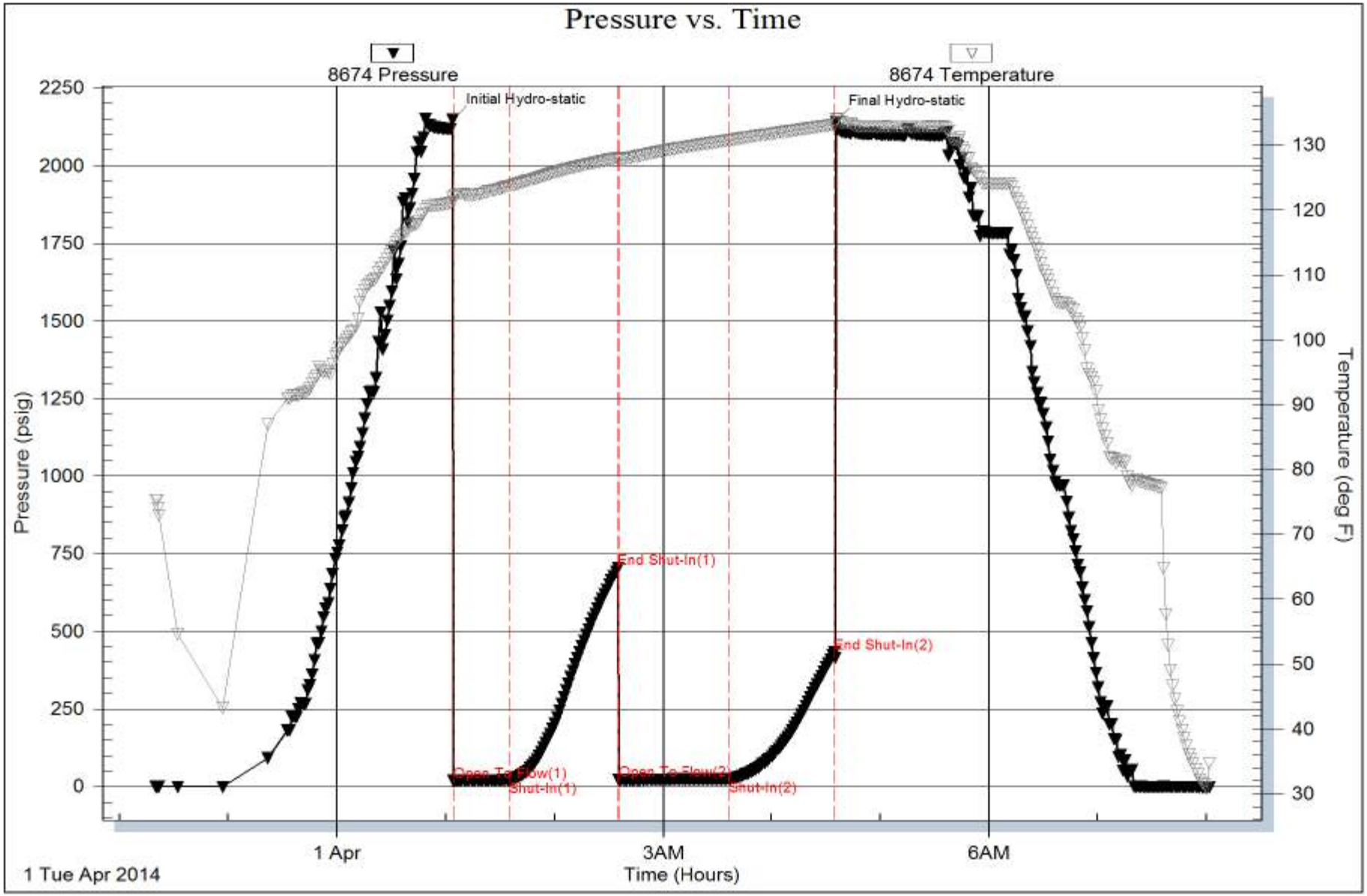
Total Length: 10.00 ft Total Volume: 0.049 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8674 **Inside** Berexco LLC. Michael # 2-23 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 57231 Printed: 2014.04.01 @ 09:32:30

WELL FILE

ALLIED OIL & GAS SERVICES, LLC 063377

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Dodge KS

DATE 4/2/14	SEC. 23	TWP. 1	RANGE 36	CALLED OUT	ON LOCATION	JOB START 8:00pm	JOB FINISH 9:00p
LEASE Michael	WELL # 2-23	LOCATION Beaudy N to AA W to S.S				COUNTY Hamilton	STATE KS
OLD OR NEW (Circle one)		N to BB W to					

CONTRACTOR Beredco 2
TYPE OF JOB Prod.
HOLE SIZE 7 7/8 T.D.
CASING SIZE 5 1/2 DEPTH 4585
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT 42
CEMENT LEFT IN CSG. 42'
PERFS.
DISPLACEMENT 107 BBL H2O

OWNER Same

CEMENT
AMOUNT ORDERED 450 ALW 3/4 FloSeal
250 Co-10% Salt 2% Gel 5# Gilsonite

EQUIPMENT

PUMP TRUCK CEMENTER Alan Ryan
#423-281 HELPER Kevin Ryan
BULK TRUCK
386 DRIVER Alex (TWS)
BULK TRUCK
566 DRIVER Juan M (TWS)

COMMON	250 SK	@ 17.80	4475.00
POZMIX		@	
GEL	5	@ 23.40	117.00
CHLORIDE		@	
~~ASC~~ ALW	450 SK	@ 15.25	2212.50
		@	
Salt	26 SK	@ 26.25	682.50
		@	
Gilsonite	1250 lb	@ .98	1225.00
		@	
FloSeal	338 lb	@ 2.22	1003.86
		@	
		@	.23
HANDLING	824.89 CF	@ 2.40	2045.60
MILEAGE 2¢ per mile	34.22 ton		4461.60
2870		TOTAL	21190.81

REMARKS:

Ran Csg, Circulate Mix 150 SK RH 10 SK RH
Mix 425 SK ALW 3/4 Flo Tail w/ 250 sx 60/40 Poz
2% Gel 5# Gilsonite, Wash up Truck, Drop plug
Disp w/ 107 BBL H2O w/ 1500 PSI
Lift Land Plug @ 2000 PSI
Cost Circ to Pit - 20 BBL out
Full 90 BBL out
Cement Did not Circulate Thank You
Alex, Kevin, Juan

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			2765.75
EXTRA FOOTAGE		@	
MILEAGE	50	@	385.00
MANIFOLD		@	
		@	
		@	
2870		TOTAL	3150.75

CHARGE TO: Beredco
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

Alw Float Shoe		@	232.00
Latch Down		@	184.00
10 Cent		@ 32.00	320.00
20 Scratchers		@ 46.00	920.00
		@	
090		TOTAL	1706.00

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 26,047.56
DISCOUNT 6,815.63 (28%) IF PAID IN 30 DAYS
19,231.92 Net

PRINTED NAME
SIGNATURE Ed Hanes

BEREXCO LLC

MICHAEL 2-23

NE NW NW SEC 23 T1S R36W

RAWLINS COUNTY, KANSAS

SUMMARY

The Berexco LLC Michael 2-23 in Rawlins County, Kansas spud March 21, 2014 and reached a total depth of 4540' on April 1, 2014. Wellsite geological supervision commenced at 3000'. The primary objective was the Pennsylvanian Missourian Lansing-Kansas City carbonate benches, which produce in the East Fork field. A secondary zone of interest was the Oread Limestone. The Michael 2-23 was drilled using seismic and nearby well control.

Evaluation of the primary zones of interest was by drill stem testing after sample analysis. Five DSTs were run.

Foraker and Wabaunsee

The Foraker Limestone was tight with a trace of black dead oil. There were no shows in the Wabaunsee.

Oread and Lansing-Kansas City

DST 1 in the Oread recovered 10 ft of mud with an oil skim and poor flow pressures. Samples were predominantly mudstone with locally fossiliferous wackestone to grainstone displaying very poor interparticle porosity, good scattered oil staining, and instant blooming cuts.

DST 2 in the Lansing A recovered 98 ft of mud with oil spots and very poor flow pressures. Samples displayed occasional free heavy black oil with no to trace porosity in cuttings.

DST 3 in the Lansing B recovered 92 ft of water cut mud with an oil skim. The poor flow pressures indicated a non-porous B zone, also reflected on wireline logs. Samples exhibited fossiliferous grainstone and mudstone with trace to poor interparticle porosity, good live black oil staining, and good cuts.

DST 4 in the Lansing C recovered 188 ft of clean gassy oil and 376 ft of mud cut oil with 282 ft of gas in the drill pipe. Samples were grainstone with poor interparticle and vuggy porosity with abundant live black oil staining and excellent fluorescence and cuts.

The Lansing D samples were non-porous chalky limestone with no shows. No drill stem testing was warranted in the D zone and the decision was made to drill through the E zone. Packers were placed in the lower D zone to test only the E zone. The Lansing E was predominately non-porous with traces of vuggy porosity and a poor scattered show of black oil stain and hydrocarbon cuts. DST 5 of the E zone recovered 10 ft of mud with oil spots.

The Lansing F was non-porous chalky limestone with no sample shows.

Oil Well Completion

5 ½" production casing was run to complete the Michael 2-23 as an oil producer.

Peter J. Vollmer
Consulting Wellsite Geologist, WPG #3369
April 2014

WELL DATA

OPERATOR:	Berexco LLC 2020 North Bramblewood Drive Wichita, Kansas 67206
WELL NAME:	Michael 2-23
SURFACE LOCATION:	330’ FNL & 990’ FWL NE NW NW Sec. 23, T1S, R36W Rawlins County, Kansas
LATITUDE & LONGITUDE:	39.9581441, -101.3323351 (From State, calculated from footages)
BOTTOM HOLE LOCATION:	Vertical hole
ELEVATIONS:	3289’ GL 3302’ KB
API NUMBER:	15-153-20983
BASIN:	Mid-Continental Arch
FIELD:	East Fork
HOLE SIZE:	12 ¼” to 310’; 7 7/8” to 4540’
CASING:	8 5/8” J-55 24# STC set to 311’ KB
SPUD DATE:	March 21, 2014
TD DATE:	April 1, 2014
TOTAL DEPTH:	4540’ Rig TD 4536’ Log TD
LAST FORMATION:	Pennsylvanian Lansing-Kansas City
WELL STATUS:	Ran 5 1/2” production casing
OPERATOR REPRESENTATIVE:	Dana Wreath - Vice President
WELLSITE GEOLOGIST:	Peter J. Vollmer

FORMATION TOPS

Formation	Sample Top	Log Top	Log TVD	Log Datum
KB				3302
Pierre Sh	Cased	Cased	N/A	N/A
Niobrara Fm	N/A	1236	1236	+2066
Fort Hays Ls Mbr	N/A	1748	1748	+1554
Carlile Sh	N/A	1783	1783	+1519
Dakota	N/A	2164	2164	+1138
Cheyenne	N/A	2712	2712	+590
Blaine	N/A	3050	3050	+252
Stone Corral Anhydrite	3216	3208	3208	+94
Base Anhydrite	3251	3238	3238	+64
Neva	3704	3692	3692	-390
Foraker	3816	3800	3800	-498
Wabaunsee	3972	3960	3960	-658
Topeka	4028	4016	4016	-714
Deer Creek Sand	4062	4054	4054	-752
Oread	4132	4128	4128	-826
Lansing-Kansas City				
"A"	4240	4228	4228	-926
"B"	4298	4285	4285	-983
"C"	4358	4344	4344	-1042
"D"	4405	4390	4390	-1088
"E"	4448	4433	4433	-1131
"F"	4486	4474	4474	-1172
TD Driller	4540			
TD Logger		4536	4536	-1234

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’ - 3594’	SHALE: reddish orange, firm to soft, fissile to blocky, very silty, sandy in part, non to slightly calcareous, trace light tan Limestone.
3594’ - 3642’	SHALE: reddish orange, firm to soft, fissile to blocky, very silty, sandy in part, non to slightly calcareous, trace light tan Limestone.
3642’ - 3694’	SHALE: reddish orange to reddish brown, firm to hard, fissile to blocky, very silty, occasional sandy stringers, non to slightly calcareous, trace light tan Limestone.
3694’ - 3704’	SANDSTONE: white to light gray to red brown, friable to firm, very fine grained grading to silt, sub rounded to rounded, well sorted, calcareous cement, occasional clay filled, no visible porosity, no shows.

NEVA	SAMPLE TOP: 3704’	LOG TOP: 3692’	SUBSEA: -390’

3704’ - 3712’	LIMESTONE: white to light gray, firm to hard, chalky, fossil fragment, tight, no shows.
3712’ - 3774’	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty, with interbedded LIMESTONE: white to light gray, firm to hard, cryptocrystalline, tight, no shows.
3774’ - 3792’	LIMESTONE: light gray, hard, cryptocrystalline, very slightly sandy, reddish brown SHALE stringers, tight, no shows.
3792’ - 3816’	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty.

FORAKER	SAMPLE TOP: 3816’	LOG TOP: 3800’	SUBSEA: -498’

3816’ - 3824’	LIMESTONE: white to very light gray, firm to hard, cryptocrystalline, chalky, fossil fragment, clean, tight, no show.
3824’ - 3834’	SHALE: dark gray, firm, blocky, non to slightly calcareous, fossil fragments.
3834’ - 3848’	LIMESTONE: white to light gray, firm to hard, cryptocrystalline, chlky, fossil fragment, algal stain, slightly sandy at base, trace black dead oil, tight to trace intercrystalline porosity, no shows.

LITHOLOGY AND SHOWS

3848’ - 3862’	SANDSTONE: very light gray to white, friable, very fine grained, subangular to subrounded, well sorted, calcareous cement, clay fill, black specks, tight to trace porosity, no shows.
3862’ - 3918’	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty, occasional light gray Limestone stringers.
3918’ - 3938’	SHALE: dark gray to gray to black, firm, fissile to blocky, non calcareous, slightly carbonaceous in part, fossil fragments (Brachiopod).
3938’ - 3972’	LIMESTONE: white to light gray, hard, microcrystalline, occasional slightly chalky, tight, no shows.

WABAUNSEE	SAMPLE TOP: 3972’	LOG TOP: 3960’	SUBSEA: -658’

3972’ - 3994’	LIMESTONE: white to light gray with light brown mottled, hard to firm, cryptocrystalline, chalky texture, light reddish brown SHALE partings and interbeds, rare fossil fragment, tight, no shows.
3994’ - 4028’	SHALE: light reddish brown to light gray orange, soft to firm, sub blocky to lumpy, non calcareous, clayey, occasional silty, thin gray Limestone partings.

TOPEKA	SAMPLE TOP: 4028’	LOG TOP: 4016’	SUBSEA: -714’

4028’ - 4032’	LIMESTONE: light gray to white, hard to firm, cryptocrystalline, fossil fragment, sparry calcareous, tight, no shows.
4032’ - 4044’	SHALE: gray, firm, sub blocky, non to slightly calcareous, dull.
4044’ - 4062’	LIMESTONE: light gray to white, hard to firm, cryptocrystalline, fossil fragment, clear calcareous fill in vugs, clear to opaque chert, tight, no shows.

DEER CREEK SAND	SAMPLE TOP: 4062’	LOG TOP: 4054’	SUBSEA: -752’

4062’ - 4080’	SANDSTONE: light gray to very light gray, very friable to soft, very fine grained, well rounded, well sorted, weak calcareous cement, clay filled, plant remains, abundant loose grains, trace to poor porosity, no show.

LITHOLOGY AND SHOWS

4080’ - 4132’	SHALE: reddish brown, brown maroon, gray, mottled in part, soft to firm, blocky, occasional slightly calcareous, non to slightly silty in part, clayey to sticky in part.

OREAD	SAMPLE TOP: 4132’	LOG TOP: 4128’	SUBSEA: -826’

4132’ - 4148’	LIMESTONE: cream to white, firm to hard, wackstone to grainstone, abundant fossil fragment, occasional oolites and peloids, interclasts, scattered black to dark brown live oil stain, tight to trace interparticle and moldic porosity, bright yellowish white fluorescence, immediate blooming yellowish white cuts, with slow streaming cuts, good show.
4148’ - 4160’	LIMESTONE: light gray to white, hard, mudstone, chalky, fossil fragment, tight, no shows.
4160’ - 4168’	SHALE: dark gray to black, firm, fissile, slightly to very carbonaceous, n to slightly calcareous, fossil fragments (Brachiopod).
4168’ - 4202’	LIMESTONE: gray to light gray, firm to hard, mudstone, rare fossil, very chalky texture, light brown to opaque chert, clear calcareous crystals, tight, no show.
4202’ - 4212’	SHALE: gray to dark gray, firm, blocky, non to slightly calcareous.
4212’ - 4240’	SHALE: gray to light maroon to reddish brown, firm, blocky, non to slightly calcareous, occasional subwaxy, occasional soft and clayey, Limestone stringers.

LANSING- KANSAS CITY “A”	SAMPLE TOP: 4240’	LOG TOP: 4228’	SUBSEA: -926’

4240’ - 4259’	LIMESTONE: white to cream, firm to hard, mudstone to wackestone, occasional interclasts and peloids, fossil fragment, occasional free black heavy oil, predominantly tight to trace intparticle porosity, bright yellowish white fluorescence, instant blooming yellowish white cuts, with fast streaming yellowish white cuts, good show, heavy oil left in spot plate.
4259’ - 4269’	SANDSTONE: white to light gray to light brown, firm to friable, very fine grained, well rounded, well sorted, calcareous cement, clay filled, clean, tight to poor porosity, no show.
4269’ - 4284’	LIMESTONE: light gray, firm, mudstone, slightly argillaceous, gray shale partings, moderately to very silty and sandy in part, tight.
4284’ - 4298’	SHALE: gray to dark gray, firm, platy to fissile, slightly to moderately calcareous, slightly carbonaceous in part, dull, thin Limestone partings.

LITHOLOGY AND SHOWS

LANSING- KANSAS CITY "B"	SAMPLE TOP: 4298'	LOG TOP: 4285'	SUBSEA: -983'

4298' - 4314'	LIMESTONE: white, firm, packstone to wackstone, fossil fragment, pyrite, patchy live heavy black oil, tight to trace interparticle porosity, bright yellowish white fluorescence, instant blooming bright yellowish white cuts, good oil show.
4314' - 4328'	SHALE: gray to dark gray, firm, platy to fissile, slightly carbonaceous in part, non to slightly calcareous.
4328' - 4334'	LIMESTONE: white to very light gray, firm to hard, cryptocrystalline, gray Shale partings, fossil fragment, slightly to moderately argillaceous in part, tight, no show.
4334' - 4358'	SHALE: brownish red to light gray to maroon, firm to soft, platy, slightly calcareous, sandy/silty in part.

LANSING- KANSAS CITY "C"	SAMPLE TOP: 4358'	LOG TOP: 4344'	SUBSEA: -1042'

4358' - 4374'	LIMESTONE: white to light tan, firm, mudstone to grainstone, abundant fossil fragment, abundant patchy black heavy oil, poor intergranular and pin point vuggy porosity, bright yellowish white fluorescence, instant blooming yellowish white cuts, with rapid streaming yellowish white cuts, good show.
4374' - 4386'	SHALE: gray to dark gray, firm, sub blocky, non to slightly calcareous, fossil fragment, Limestone stringers.
4386' - 4390'	LIMESTONE: white to gray, mottled in part, hard to firm, mudstone to wackestone, fossil, trace black heavy oil stain, tight to trace porosity, occasional bright yellowish white fluorescence, occasional blooming yellowish white cuts, poor show.
4390' - 4405'	SHALE: dark gray to gray, firm, blocky, white Limestone partings.

LANSING- KANSAS CITY "D"	SAMPLE TOP: 4405'	LOG TOP: 4390'	SUBSEA: -1088'

4405' - 4414'	LIMESTONE: light gray to white, firm, grainstone to mudstone, fossil fragment, chalky texture, no visible porosity, no show.
4414' - 4430'	SHALE: dark gray to gray, firm, fissile to blocky, white Limestone partings, fossil fragments.

LITHOLOGY AND SHOWS

4430’ - 4448’	SHALE: dark reddish brown to gray, firm, blocky to platy, non calcareous, occasional silty, pyrite, thin Limestone stringers.

LANSING- KANSAS CITY “E”	SAMPLE TOP: 4448’	LOG TOP: 4433’	SUBSEA: -1131’

4448’ - 4466’	LIMESTONE: white to light gray to very light brown, hard to firm, mudstone to packstone, predominant chalky texture, occasional fossil, patchy black oil specks and stain, tight to trace vuggy porosity, bright yellowish white fluorescence, blooming yellowish white cut, poor to fair show.
4466’ - 4486’	SHALE: dark gray to black to gray, firm, blocky to subfissile, non to slightly calcareous, fossils, slightly carbonaceous in part, pyrite.

LANSING- KANSAS CITY “F”	SAMPLE TOP: 4486’	LOG TOP: 4474’	SUBSEA: -1172’

4486’ - 4498’	LIMESTONE: cream to white to light gray, firm to hard, mudstone to wackestone, chalky, occasional fossil fragments, clean, very tight, no shows.
4498’ - 4508’	SHALE: gray to dark gray to black, firm, blocky, calcareous, fossil (Brachiopod), moderately to very carbonaceous in part, pyrite.
4508’ - 4518’	LIMESTONE: cream to white to light gray, firm to hard, mudstone, fossil fragment, very chalky, dense, with interbedded thin dark gray Shale partings, tight, no shows.
4518’ - 4540’ TD	SHALE: gray to dark gray, firm, platy to blocky, non to very slightly calcareous, fossil fragment, interbedded white to light gray 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:	Dave Lines	
MUD LOGGING:	None	
WELLSITE GEOLOGY:	T. M. McCoy & Co., Inc. Peter J. Vollmer	Wilson, WY 307-733-4332
DRILL STEM TESTING:	Trilobite Testing, Inc. Will MacLean DST 1: 4098’ - 4148’ Oread DST 2: 4180’ - 4270’ LKC “A” DST 3: 4254’ - 4318’ LKC “B” DST 4: 4310’ - 4398’ LKC “C” DST 5: 4412’ - 4470’ LKC “E”	Hays, KS 785- 625-4778
DIRECTIONAL DRILLING:	None	
WIRELINE LOGS:	Pioneer Wireline Services RAG: Surface casing - TD Micro: 3500’ - TD Engineer: Jerrod Long	Hays, KS 785-625-3858