



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1189696
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: _____

1189696

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: <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> _____
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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> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Bernita 1-27
Doc ID	1189696

Tops

Name	Top	Datum
Anhydrite	3122	+107
Anhydrite (base)	3159	+70
Foraker	3723	-494
Topeka	3941	-712
Oread	4062	-833
Lansing/KS City "A"	4158	-929
LKC "B"	4214	-985
LKC "C"	4274	-1045
LKC "D"	4319	-1090
LKC "E"	4364	-1135
LKC "F"	4398	-1169
Pawnee	4546	-1317

WELL FILE

ALLIED OIL & GAS SERVICES, LLC . 061146

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oshtemo KS

DATE <u>10/8/13</u>	SEC. <u>27</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>11:00 a.m.</u>	JOB START <u>3:30 p.m.</u>	JOB FINISH <u>4:00 p.m.</u>
LEASE <u>Hernita 2-27</u>	WELL# <u>1-27</u>	LOCATION <u>McDonald N to Rd W & Follow curves to Rd 5.5 NW 1/4 S into</u>			COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR (NEW) (Circle one)							

CONTRACTOR Beredco 2 OWNER Same

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 306'

CASING SIZE 8 5/8 (24") DEPTH 306'

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 15'

PERFS. _____

DISPLACEMENT 1 1/2 5/8 bbl water

CEMENT AMOUNT ORDERED 225 sks Com 3% CC 2% gel

EQUIPMENT

PUMP TRUCK CEMENTER Paul Beaver

120 HELPER Tyler Flipse

BULK TRUCK # 600 DRIVER Alex (TWS)

BULK TRUCK # _____ DRIVER _____

COMMON	<u>22.5 sks</u>	@ <u>17.90</u>	<u>4027.50</u>
POZMIX		@	
GEL	<u>4 sks</u>	@ <u>23.40</u>	<u>93.60</u>
CHLORIDE	<u>8 sks</u>	@ <u>64.00</u>	<u>512.00</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>243.29 ft³</u>	@ <u>2.48</u>	<u>603.36</u>
MILEAGE	<u>11.10 tons x 50mi x</u>	<u>2.60</u>	<u>1443.00</u>
			TOTAL <u>6179.46</u>

REMARKS:

Mix 225 sks Com 3% CC 2% gel

Displace with water

Cement did circulate.

Thank you!

CHARGE TO: Beredco LLC

STREET _____

CITY _____ STATE _____ ZIP _____

To: Allied Oil & Gas Services, LLC.

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Craig Weeks

SIGNATURE Craig Weeks

SERVICE

DEPTH OF JOB	<u>306'</u>		
PUMP TRUCK CHARGE			<u>1512.25</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>MHV 50</u>	@ <u>7.70</u>	<u>385.00</u>
MANIFOLD	<u>swedge</u>	@ <u>275.00</u>	<u>N/C</u>
	<u>MW 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 8,576.71

DISCOUNT 2,401.47 IF PAID IN 30 DAYS

6,175.23 Net.



CEMENTING LOG

STAGE NO. _____

Date 10/6/13 District Oakley KS Ticket No. 061146
 Company Berenco LLC Rig Bredco 2
 Lease Bernita Well No. 1-27
 County Rawlins State KS
 Location 27-1-36 Field _____
 Mc Donald W to Rd W E follow curves to S.5 2 N 1 W S into

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

Casing Depths: Top KB Bottom 306'

Drill Pipe: Size _____ Weight _____ Collars _____
 Open Hole: Size _____ T.D. 306' ft. P.B. to _____ ft.

CAPACITY FACTORS:
 Casing: Bbls/Lin. ft. .0637 Lin. ft./Bbl. _____
 Open Holes: Bbls/Lin. ft. _____ Lin. ft./Bbl. _____
 Drill Pipe: Bbls/Lin. ft. _____ Lin. ft./Bbl. _____
 Annulus: Bbls/Lin. ft. _____ Lin. ft./Bbl. _____
 Perforations: From _____ ft. to _____ ft. Amt. _____

CEMENT DATA:
 Spacer Type: _____
 Amt. _____ Sks Yield _____ ft³/sk Density _____ PPG

LEAD: Pump Time _____ hrs. Type _____
 Excess _____
 Amt. _____ Sks Yield _____ ft³/sk Density _____ PPG

TAIL: Pump Time _____ hrs. Type Com 3%CC
2% gel Excess _____

Amt. 225 Sks Yield 1.36 ft³/sk Density 15.02 PPG
 WATER: Lead _____ gals/sk Tail _____ gals/sk Total _____ Bbls.

Pump Trucks Used 120 - Tyler
 Bulk Equip. 1000 - Alex

Float Equip: Manufacturer _____
 Shoe: Type _____ Depth _____
 Float: Type _____ Depth _____
 Centralizers: Quantity _____ Plugs Top _____ Btm. _____
 Stage Collars _____
 Special Equip. _____
 Disp. Fluid Type Water Amt. 18.54 Bbls. Weight _____ PPG
 Mud Type _____ Weight _____ PPG

COMPANY REPRESENTATIVE _____ CEMENTER Paul Beaver

TIME AM/PM	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
						Hold Safety meeting
3:30			34.82 bbl	34.82 bbl		Start water Start cement Mix 225 sks Com 3%CC 2% gel weigh cement @ 15.02 # Stop cement
			6.0 bbl	40.82 bbl		wash up pump + lines
			1254 bbl	53.36 bbl		Displace with water
4:00 p.m.						Cement did circulate
						Hold Safety Meeting
						Thank You!

WELL FILE

ALLIED OIL & GAS SERVICES, LLC 061204

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley KS

DATE <u>10/18/13</u>	SEC. <u>27</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>8:00 a.m.</u>	JOB START <u>6:30</u>	JOB FINISH <u>7:30</u>
LEASE <u>Berexco</u>	WELL# <u>1-27</u>	LOCATION <u>McDonald N to Rd W Follow</u>			COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)		Curves to Rd Y, 3N on S. 5 1/2 W on AA.3 into					

CONTRACTOR <u>Breedco 2</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Production 5 1/2</u>	
HOLE SIZE <u>7 7/8</u>	T.D. <u>4600'</u>
CASING SIZE <u>5 1/2</u>	DEPTH <u>4472.58</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT <u>42.42</u>
CEMENT LEFT IN CSG.	<u>42.42</u>
PERFS.	
DISPLACEMENT <u>106.45 bbl (water)</u>	

CEMENT		
AMOUNT ORDERED <u>450 sks ALW 3/4#</u>		
<u>Flo-seal, 250 sks Com 10% salt</u>		
<u>2% gel, 5# Gilsonite</u>		
COMMON <u>250 sks @ 17.90</u>	<u>4475.00</u>	
POZMIX	@	
GEL <u>5 sks @ 23.40</u>	<u>117.00</u>	
CHLORIDE	@	
ALW <u>ALW 450 sks @ 15.95</u>	<u>7177.50</u>	
<u>Salt 26 sks @ 26.35</u>	<u>685.10</u>	
<u>Gilsonite 1250# @ .98</u>	<u>1225.00</u>	
<u>Flo-seal 338# @ 2.97</u>	<u>1,003.86</u>	
<u>WFR-II (super flush) 12 bbl @ 58.70</u>	<u>704.40</u>	
HANDLING <u>825.28 ft³ @ 2.48</u>	<u>2,046.69</u>	
MILEAGE <u>34.33 hrs x 50 mi x 2.60</u>	<u>4462.80</u>	
TOTAL	21,897.45	

EQUIPMENT	
PUMP TRUCK # <u>120</u>	CEMENTER <u>Paul Beaver</u>
BULK TRUCK # <u>600</u>	HELPER <u>Tyler Flipse</u>
BULK TRUCK # <u>566</u>	DRIVER <u>Chris Helpingstine</u>
	DRIVER <u>Brandon Wilkinson</u>

REMARKS:

Break circulation, pump bell through @ #
Mix 12 bbl WFR-II (super flush)
Mix 20 sks Lite in P.H. mix 15 sks Lite in M.H.
Mix 415 sks Lite tailed by 250 sks Com down casing
Displace with 106.45 bbl water
Plug did land @ 2300# Lite pressure 1800#
Cement did circulate, circulated
16 bbl to pit.

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 _____
 SIGNATURE Ed Hawes

SERVICE

DEPTH OF JOB	<u>4472.58'</u>
PUMP TRUCK CHARGE	<u>2765.75</u>
EXTRA FOOTAGE	@
MILEAGE MILW <u>50 @ 7.70</u>	<u>385.00</u>
MANIFOLD Head @ <u>275.00</u>	<u>N/C</u>
MILV <u>50 @ 4.40</u>	<u>N/C</u>
	@

TOTAL 3,150.75

PLUG & FLOAT EQUIPMENT

<u>Industrial Rubber 5 1/2</u>	
<u>AFU Float shoe @</u>	<u>232.00</u>
<u>Latchdown Plug Assembly @</u>	<u>184.00</u>
<u>Centralizers 11 @ 37.00</u>	<u>407.00</u>
<u>Scratchers 20 @ 46.00</u>	<u>552.00</u>
	@

TOTAL 1,375.00

SALES TAX (If Any) _____
 TOTAL CHARGES 26,423.20
 DISCOUNT 7,398.49 IF PAID IN 30 DAYS
 = 19,024.70 Net

CEMENTING LOG

STAGE NO. _____

Date 10/18/13 District Oakley KS Ticket No. 061204
 Company Berco Rig Berco 2
 Lease Bernita Well No. 1-27
 County Rawlins State KS
 Location 27-1-36 Field _____

CEMENT DATA:

Spacer Type: WFR-II (super flush) 12 bbl
 Amt. _____ Skys Yield _____ ft³/sk Density _____ PPG _____

LEAD: Pump Time _____ hrs. Type 60/40 8% gel
3/4" Flo-seal Excess _____

Amt. 450 Skys Yield 1.76 ft³/sk Density 12.92 PPG _____

TALL: Pump Time _____ hrs. Type Com 10% salt
5" Gilsomite 2% gel Excess _____

Amt. 250 Skys Yield 1.49 ft³/sk Density 14.56 PPG _____

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

Pump Trucks Used 120 - Tyler
 Bulk Equip. 600 - Chris
566 - Brandon / Adam

Float Equip: Manufacturer Industrial Rubber

Shoe: Type AFU Float shoe Depth 4472.58

Float: Type Latchdown plug assembly Depth 4430.16

Centralizers: Quantity 11 Plugs Top _____ Btm. _____

Stage Collars _____

Special Equip. scratchers (20)

Disp. Fluid Type Water Amt. 106.45 Bbls. Weight _____ PPG _____

Mud Type _____ Weight _____ PPG _____

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

Casing Depths: Top KB Bottom 4472.58

Drill Pipe: Size _____ Weight _____ Collars _____
 Open Hole: Size 7 7/8 T.D. 4400 ft. P.B. to _____ ft.

CAPACITY FACTORS:

Casing: Bbls/Lin. ft. .0238 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. _____

COMPANY REPRESENTATIVE Ed Hayes

CEMENTER Paul Beaver

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
5:25						Hold Safety Meeting
6:30			12.661			Run Pipe / Float equipment
			4.40661	16.4		Break circulation / Drop ball / Ball 400 #
			3.31661	19.71		mix 12 bbl WFR-II down casing
			91.70661	111.41		mix 20 sks in R.H.
						mix 15 sks in m.H
			29.88661	151.29		start cement / mix 415 sks Lite down casing
						weigh cement @ 12.92 #
						Tail with 250 sks Com
						weigh cement @ 14.56 #
			6.0661	157.29		stop cement / unhook from head
						wash-up pump & lines
						haul back up to casing / release plug
						start water displacement (106.45)
			20	177.29		400 # lift
			20	197.29		600 # lift
			20	217.29		900 # lift
			20	237.29		1100 # lift
			10	247.29		1300 # lift
			10	257.29		1500 # lift
			6.45	263.74		1800 # lift
7:30						Plug did land @ 2300 # lift pressure 1800
						Float did hold
						Cement did circulate (16 bbl)
						Hold Safety meeting

FINAL DISP. PRESS: 1800 PSI BUMP PLUG TO 2300 PSI BLEEDBACK 1/2 BBLs. THANK YOU Thank You!



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Berexco L.L.C.
 2020 N. Bramblewood
 Wichita KS.
 67202
 ATTN: BRYAN BYNOG

SEC. 27 - 1 S. - 36 W. - Rawlins co.
Bernita #1-27
 Job Ticket: 54865 **DST#: 1**
 Test Start: 2013.10.12 @ 20:04:00

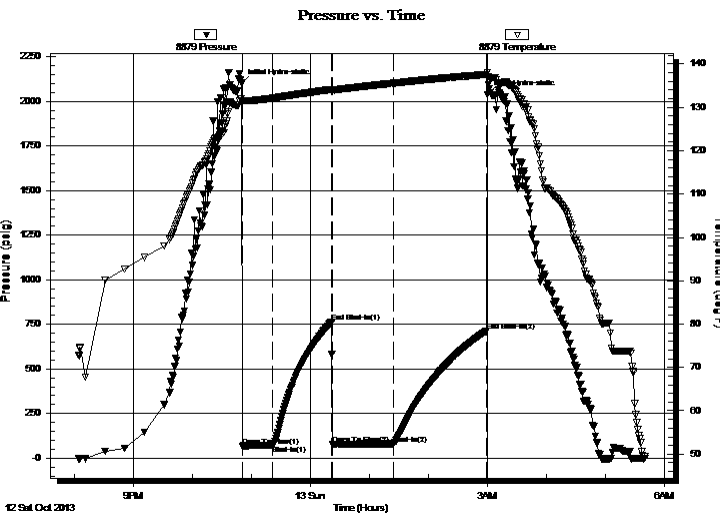
GENERAL INFORMATION:

Formation: " A"
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:50:30
 Time Test Ended: 05:40:15
 Interval: **4080.00 ft (KB) To 4190.00 ft (KB) (TVD)**
 Total Depth: 4190.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Bob Hamel
 Unit No: 44
 Reference Elevations: 3141.00 ft (KB)
 3129.00 ft (CF)
 KB to GR/CF: 12.00 ft

Serial #: 8879

Press @ Run Depth: 79.51 psig @ ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.12 End Date: 2013.10.13 Last Calib.: 2013.10.13
 Start Time: 20:04:05 End Time: 05:40:15 Time On Btm: 2013.10.12 @ 22:50:00
 Time Off Btm: 2013.10.13 @ 02:59:45

TEST COMMENT: I.F. - 30 - 1/4 INT. BLOW DIDN'T BUILD
 I.S.I. - 60 - NO BLOW BACK
 F.F. - 60 - NO BLOW
 F.S.I. - 90 - NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2101.61	132.07	Initial Hydro-static
1	66.61	131.29	Open To Flow (1)
32	72.94	132.09	Shut-In(1)
92	764.91	134.12	End Shut-In(1)
92	75.87	133.87	Open To Flow (2)
154	79.51	135.53	Shut-In(2)
249	713.52	137.57	End Shut-In(2)
250	2037.27	138.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Berexco L.L.C.

SEC. 27 - 1 S. - 36 W. - Rawlins co.

2020 N. Bramblewood
Wichita KS.
67202

Bernita #1-27

Job Ticket: 54865

DST#: 1

ATTN: BRYAN BYNOG

Test Start: 2013.10.12 @ 20:04:00

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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	MUD	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

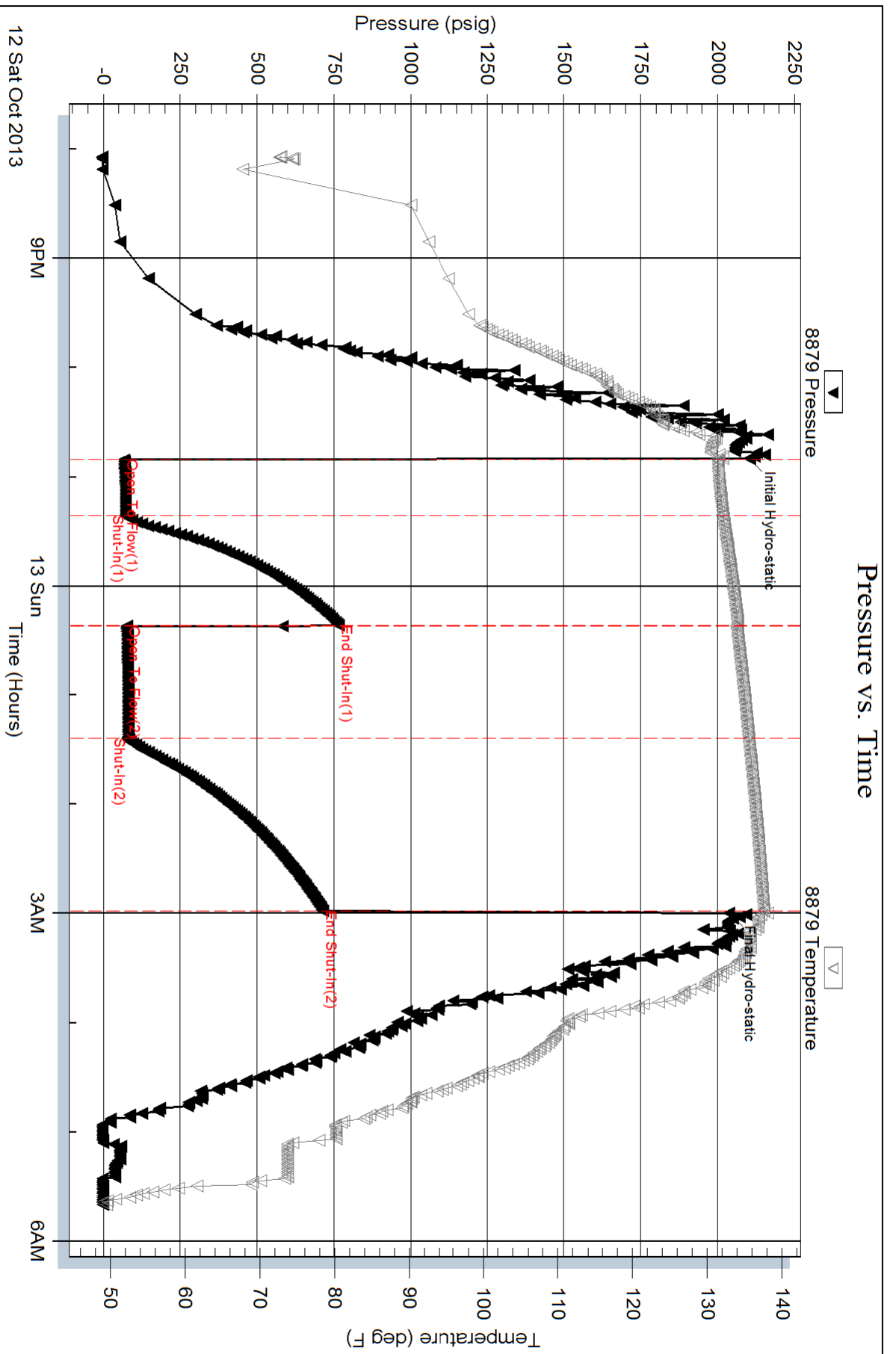
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Berexco L.L.C.
2020 N. Bramblewood
Wichita KS.
67202
ATTN: BRYAN BYNOG

SEC. 27 - 1 S. - 36 W. - Rawlins co.

Bernita #1-27

Job Ticket: 54866 **DST#: 2**
Test Start: 2013.10.13 @ 13:36:00

GENERAL INFORMATION:

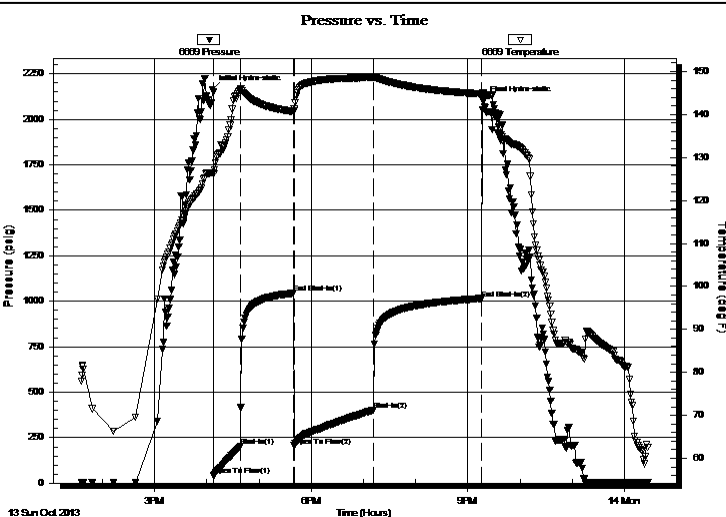
Formation: **L.K.C. "B"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:08:00
Time Test Ended: 00:27:30
Interval: **4170.00 ft (KB) To 4220.00 ft (KB) (TVD)**
Total Depth: 4190.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Reference Elevations: 3141.00 ft (KB)
3129.00 ft (CF)
KB to GR/CF: 12.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Bob Hamel
Unit No: 44

Serial #: 6669

Outside

Press @ RunDepth: 401.77 psig @ 4217.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.10.13 End Date: 2013.10.14 Last Calib.: 1899.12.30
Start Time: 13:36:05 End Time: 00:27:30 Time On Btm: 2013.10.13 @ 16:06:30
Time Off Btm: 2013.10.13 @ 21:17:15

TEST COMMENT: I.F. - 30 - 1/2 INT. BLOW B.O.B. 16 MIN.
I.S.I. - 60 - NO BLOW BACK
F.F. - 90 - NO INT. BLOW B.O.B. 23 MIN
F.S.I. - 120 - NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2164.44	126.46	Initial Hydro-static
2	40.97	126.22	Open To Flow (1)
32	200.92	145.75	Shut-In(1)
93	1043.39	140.72	End Shut-In(1)
94	204.54	140.94	Open To Flow (2)
185	401.77	148.59	Shut-In(2)
309	1015.11	144.80	End Shut-In(2)
311	2100.48	145.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
242.00	WATER W/ FEW OIL SPECS	1.19
186.00	O,C,M, 14% OIL 86%MUD	0.91
372.00	M,C,O, 20% MUD 80%OIL	4.34
130.00	C/OIL 100%	1.82

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. 27 - 1 S. - 36 W. - Rawlins co.

2020 N. Bramblewood
Wichita KS.
67202

Bernita #1-27

Job Ticket: 54866

DST#: 2

ATTN: BRYAN BYNOG

Test Start: 2013.10.13 @ 13:36:00

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: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
242.00	WATER W/ FEW OIL SPECS	1.190
186.00	O,C,M, 14% OIL 86%MUD	0.915
372.00	M,C,O, 20% MUD 80%OIL	4.344
130.00	C/OIL 100%	1.824

Total Length: 930.00 ft

Total Volume: 8.273 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

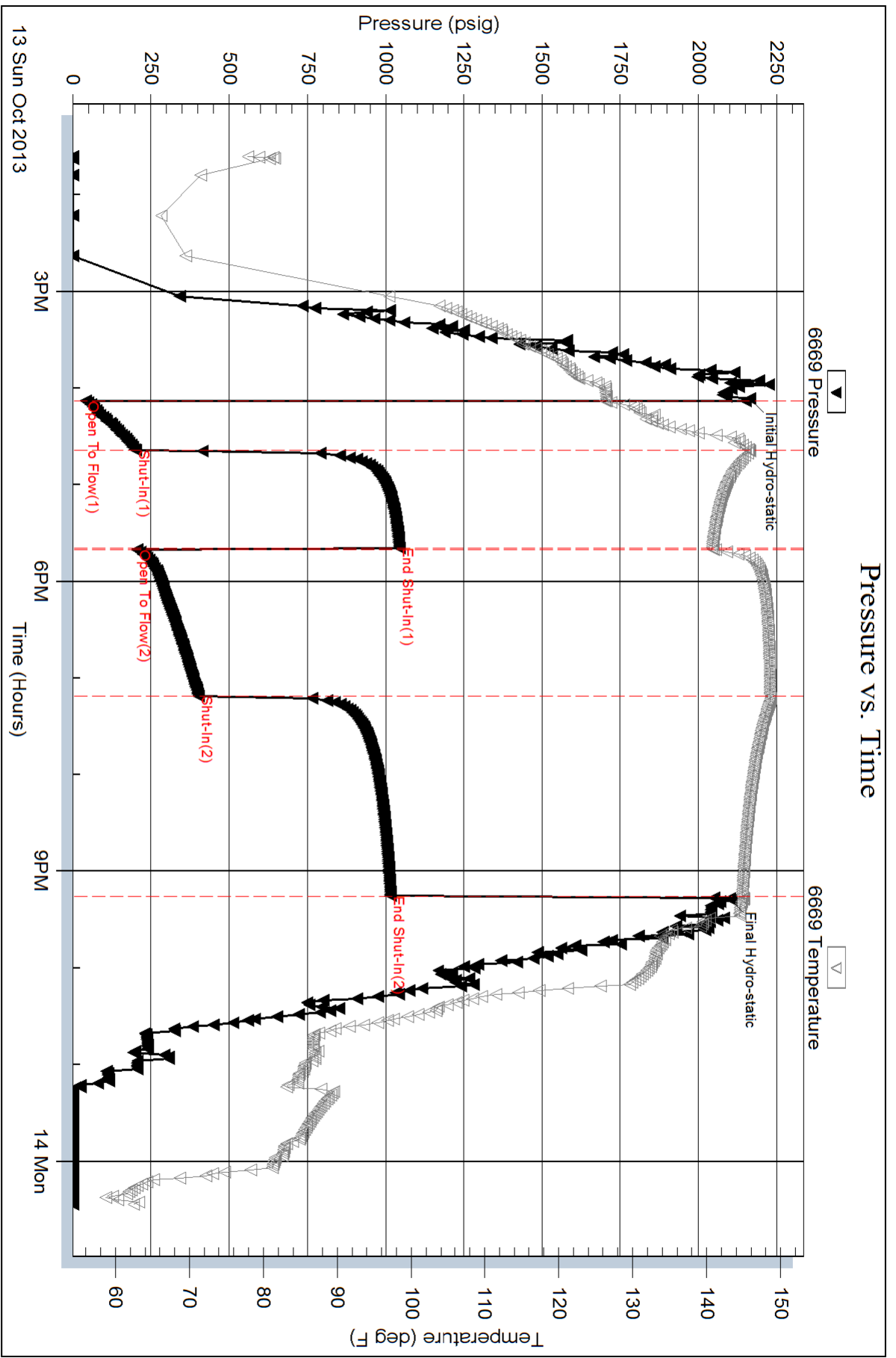
Recovery Comments:

Serial #: 6669

Outside Berexco L.L.C.

Berlita #1-27

DST Test Number: 2





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Berexco L.L.C.
 2020 N. Bramblewood
 Wichita KS.
 67202
 ATTN: BRYAN BYNOG

SEC. 27 - 1 S. - 36 W. - Rawlins co.
Bernita #1-27
 Job Ticket: 54867 **DST#: 3**
 Test Start: 2013.10.14 @ 11:50:00

GENERAL INFORMATION:

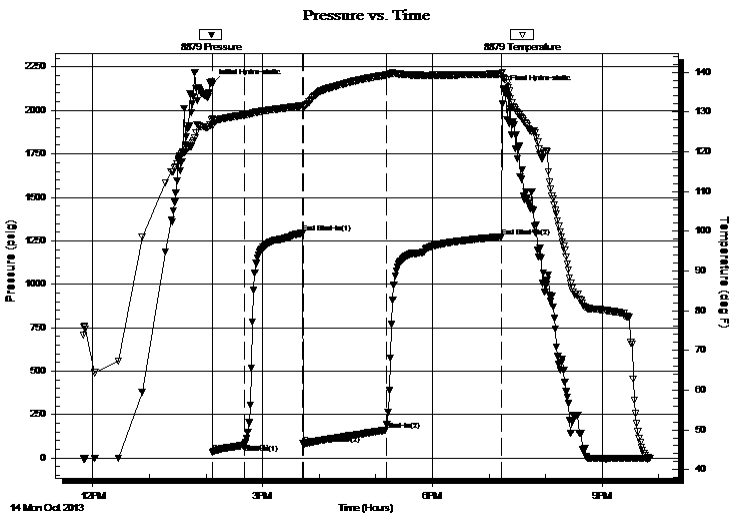
Formation: **L.K.C. "C"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 14:07:00
 Tester: Bob Hamel
 Time Test Ended: 21:51:15
 Unit No: 44
 Interval: **4230.00 ft (KB) To 4300.00 ft (KB) (TVD)**
 Reference Elevations: 3141.00 ft (KB)
 Total Depth: 4190.00 ft (KB) (TVD) 3129.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 12.00 ft

Serial #: 8879

Press @ RunDepth: 160.16 psig @ ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.14 End Date: 2013.10.14 Last Calib.: 2013.10.14
 Start Time: 11:50:05 End Time: 21:51:15 Time On Btm: 2013.10.14 @ 14:06:45
 Time Off Btm: 2013.10.14 @ 19:15:45

TEST COMMENT: I.F. - 30 - 1/4 INT. BLOW BUILT TO 11" IN 30 MIN.
 I.S.I - 60 - NO B.B.
 F.F. - 90 - NO INT BLOW BUILT TO B.O.B. IN 45 MIN.
 F.S.I. - 120 - NO B.B.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2151.80	128.16	Initial Hydro-static
1	33.58	126.61	Open To Flow (1)
35	76.22	129.23	Shut-In(1)
96	1293.09	131.55	End Shut-In(1)
96	81.90	131.20	Open To Flow (2)
184	160.16	139.27	Shut-In(2)
307	1272.76	139.56	End Shut-In(2)
309	2118.41	138.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SMCO 15%MUD 85%OIL	0.02
387.00	CLEAN OIL 100%	1.90

* 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. 27 - 1 S. - 36 W. - Rawlins co.

2020 N. Bramblewood
Wichita KS.
67202

Bernita #1-27

Job Ticket: 54867

DST#: 3

ATTN: BRYAN BYNOG

Test Start: 2013.10.14 @ 11:50:00

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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	SMCO 15%MUD 85%OIL	0.025
387.00	CLEAN OIL 100%	1.903

Total Length: 392.00 ft Total Volume: 1.928 bbl

Num Fluid Samples: 0

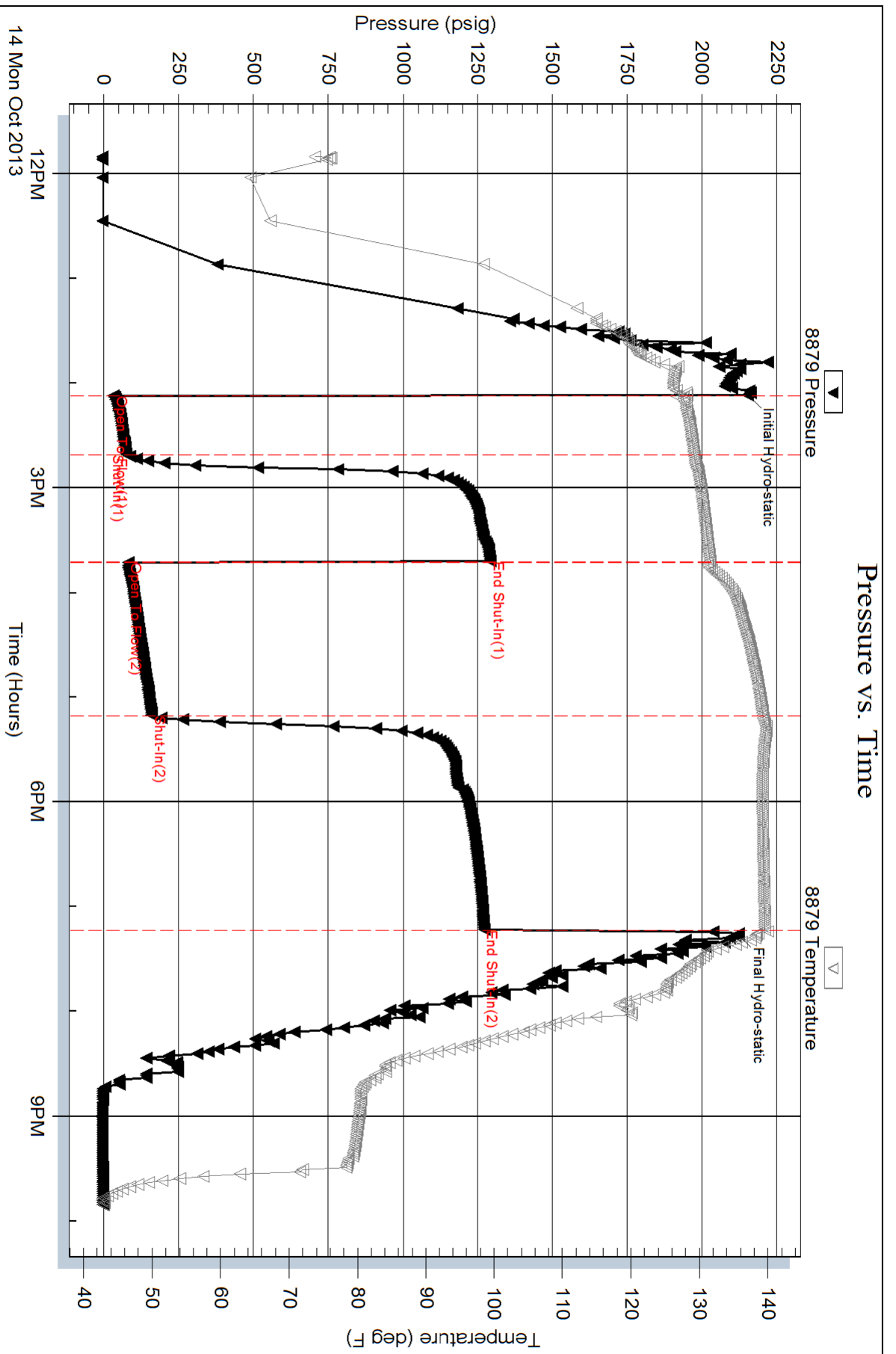
Num Gas Bombs: 0

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: BRYAN BYNOG

SEC. 27 - 1 S. - 36 W. - Rawlins co.

Bernita #1-27

Job Ticket: 54868

DST#: 4

Test Start: 2013.10.15 @ 09:30:00

GENERAL INFORMATION:

Formation: **L.K.C. " D"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 12:06:45
 Tester: Bob Hamel
 Time Test Ended: 17:48:30
 Unit No: 44
 Interval: **4294.00 ft (KB) To 4344.00 ft (KB) (TVD)**
 Reference Elevations: 3141.00 ft (KB)
 Total Depth: 4190.00 ft (KB) (TVD)
 3129.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 12.00 ft

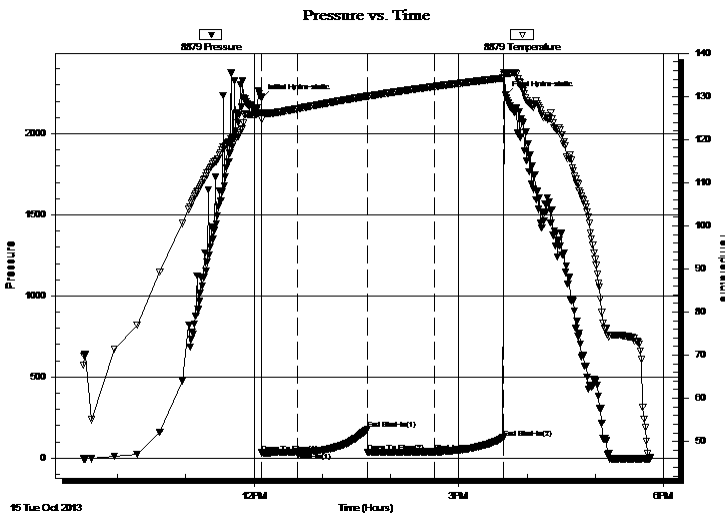
Serial #: 8879

Inside

Press @ Run Depth: 37.70 psig @ 4341.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.15 End Date: 2013.10.15 Last Calib.: 2013.10.15
 Start Time: 09:30:05 End Time: 17:48:29 Time On Btm: 2013.10.15 @ 12:06:30
 Time Off Btm: 2013.10.15 @ 15:40:45

TEST COMMENT: I.F. - 30 - W.S.B. NO BUILD
 I.S.I. - 60 - NO B.B.
 F.F. - 60 - NO BLOW
 F.S.I. - 60 - NO B.B.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2218.80	126.26	Initial Hydro-static
1	32.43	124.69	Open To Flow (1)
32	36.35	127.15	Shut-In(1)
93	179.28	130.05	End Shut-In(1)
94	35.69	129.99	Open To Flow (2)
153	37.70	132.28	Shut-In(2)
213	125.28	134.22	End Shut-In(2)
215	2236.83	135.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	MUD W/ FEW OIL SPECS	0.01

* 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: BRYAN BYNOG

SEC. 27 - 1 S. - 36 W. - Rawlins co.
Bernita #1-27
Job Ticket: 54868 **DST#: 4**
Test Start: 2013.10.15 @ 09:30:00

Mud and Cushion Information

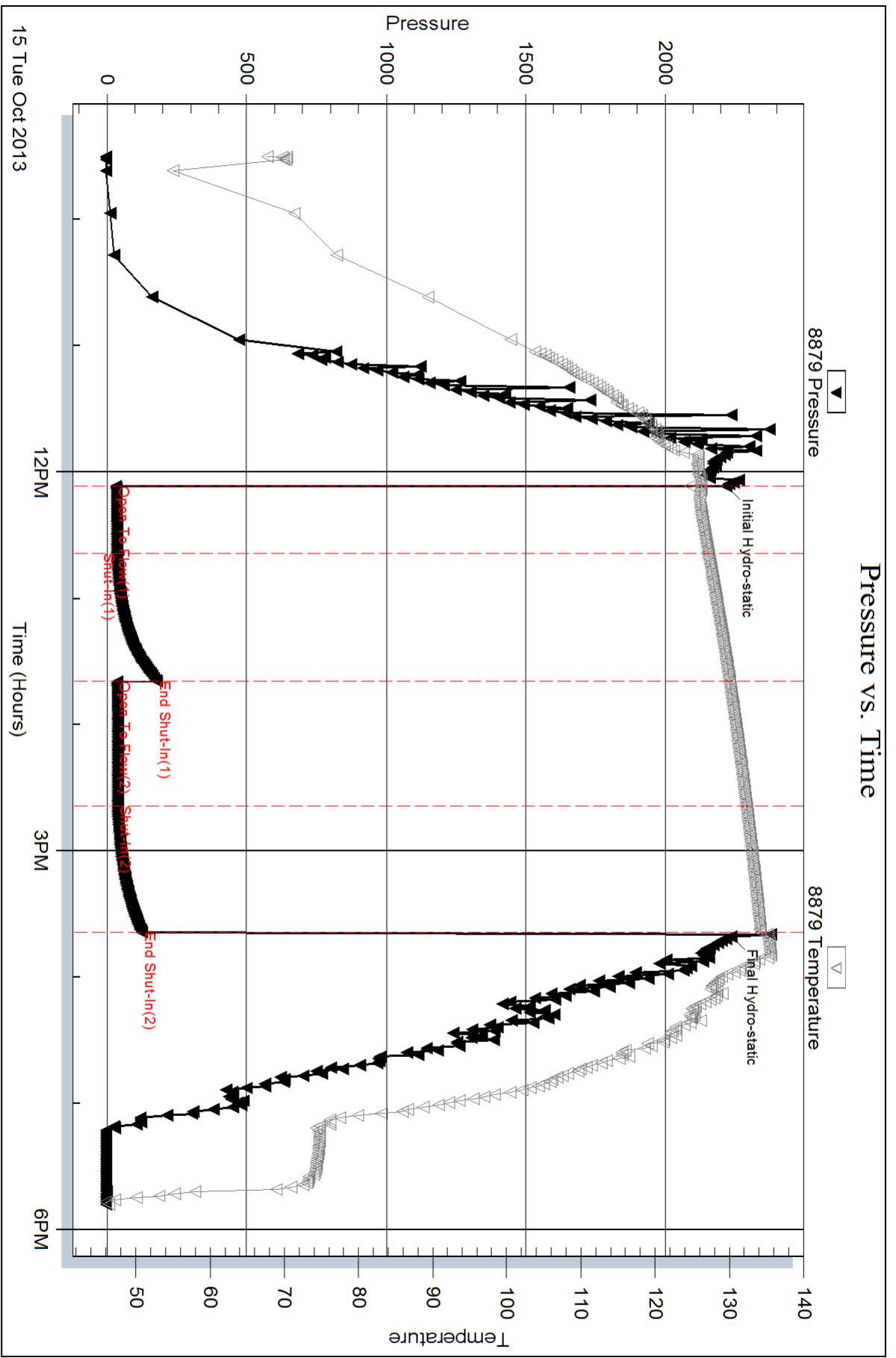
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 67.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.40 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 800.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	MUD W/ FEW OIL SPECS	0.015

Total Length: 3.00 ft Total Volume: 0.015 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: BRYAN BYNOG

SEC. 27 - 1 S. - 36 W. - Rawlins co.

Bernita #1-27

Job Ticket: 54869

DST#: 5

Test Start: 2013.10.16 @ 04:07:00

GENERAL INFORMATION:

Formation: **L.K.C. "E"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:11:30
 Time Test Ended: 14:54:00
 Interval: **4330.00 ft (KB) To 4380.00 ft (KB) (TVD)**
 Total Depth: 4380.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Bob Hamel
 Unit No: 44
 Reference Elevations: 3141.00 ft (KB)
 3129.00 ft (CF)
 KB to GR/CF: 12.00 ft

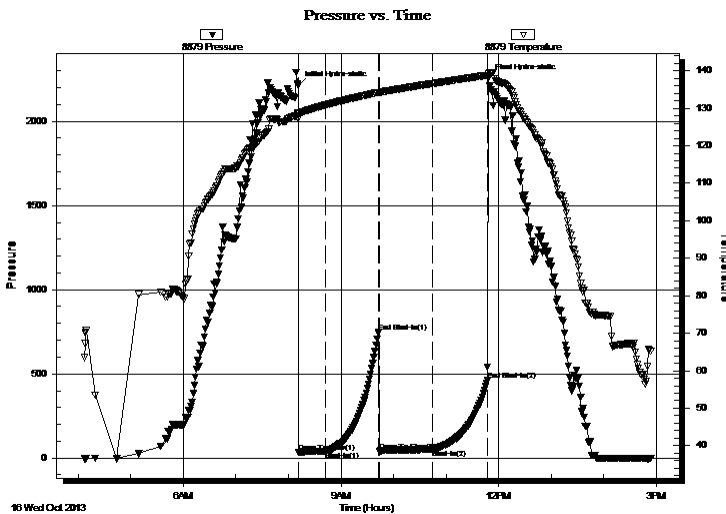
Serial #: 8879

Inside

Press @ Run Depth: 50.28 psig @ 4377.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.16 End Date: 2013.10.16 Last Calib.: 2013.10.16
 Start Time: 04:07:05 End Time: 14:54:00 Time On Btm: 2013.10.16 @ 08:11:00
 Time Off Btm: 2013.10.16 @ 11:48:45

TEST COMMENT: I.F. - 30 - W.S.B. DIED IN 9 MIN.
 I.S.I. - 60 - NO B.B.
 F.F. - 60 - NO BLOW
 F.S.I. - 60 - NO B.B.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2213.55	128.71	Initial Hydro-static
1	33.14	127.32	Open To Flow (1)
32	40.45	130.90	Shut-In(1)
92	748.68	134.24	End Shut-In(1)
93	40.56	134.13	Open To Flow (2)
154	50.28	136.56	Shut-In(2)
216	460.13	138.79	End Shut-In(2)
218	2255.67	139.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SGOCM GAS,5% OIL,15% MUD,80%	0.02

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. 27 - 1 S. - 36 W. - Rawlins co.

2020 N. Bramblewood
Wichita KS.
67202

Bernita #1-27

Job Ticket: 54869

DST#: 5

ATTN: BRYAN BYNOG

Test Start: 2013.10.16 @ 04:07:00

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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	SGOCM GAS,5% OIL,15% MUD,80%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

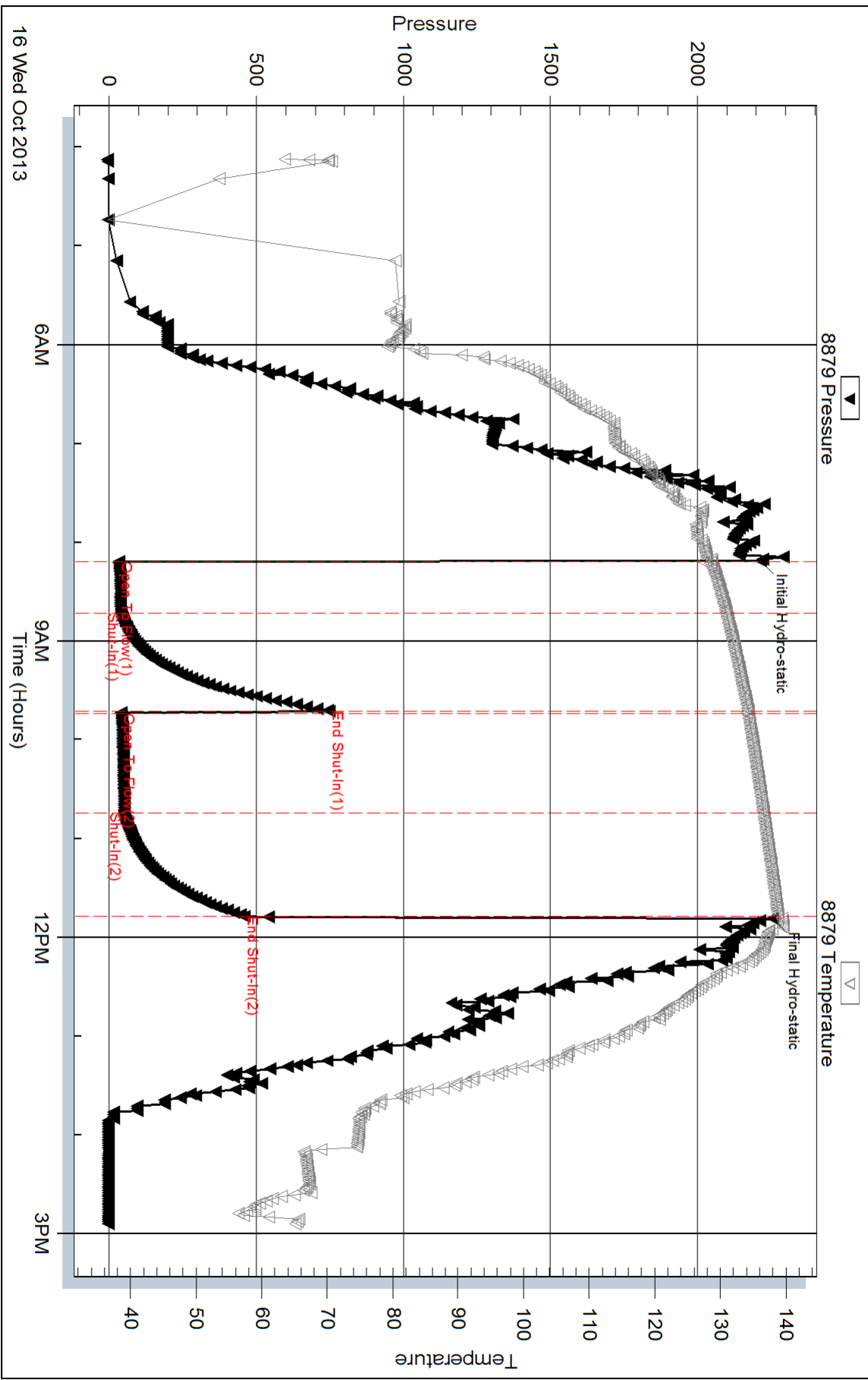
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



BEREXCO LLC

BERNITA 1-27

NE NE SEC 27 T1S R36W

RAWLINS COUNTY, KANSAS

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DRILL STEM TESTS	9
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SUMMARY

The Berexco, LLC Bernita 1-27 in Rawlins County, Kansas spud October 8, 2013 and reached a total depth of 4600' on October 17, 2013. The test drilled into the Pennsylvanian Pawnee Member at total depth. Wellsite geological supervision commenced at 3000'. The primary objective was the Pennsylvanian Missourian Lansing-Kansas City carbonate benches, which are productive in nearby wells. Secondary zones of interest were the Virgilian Oread Limestone and Pennsylvanian Pawnee Carbonate. The Bernita 1-27 test was drilled using seismic and nearby well control.

Lansing-Kansas City

The evaluation of the primary zones of interest was by drill stem testing after sample analysis and correlation. Five drill stem tests were run based on sample shows. DST 1 in the Lansing "A" was run after moldic porosity with spotty black oil was observed in cuttings. The DST recovered 10 ft of mud with an oil scum. Electric logs confirmed the lack of porosity. The Lansing "B" exhibited limestone grainstone with fair to good porosity, live brown oil stain, and very good cuts. DST 2 recovered 680 ft of oil and oil cut mud with good flow pressures. Electric logs revealed a porous 2-ft interval. DST 3 in the Lansing "C" Zone was based on good sample shows and porosity similar to the Lansing "B" zone. DST 3 recovered 387 ft of oil and 5 ft of mud. Electric logs revealed a thin interval with marginal porosity. DST 4 in the Lansing "D" zone was based on nearby wells and a very poor oil show with very limited pinpoint vuggy porosity. Recovery of 3 ft of oil-specked mud indicating only limited porosity was confirmed by electric logs. The Lansing "E" samples revealed a limestone wackestone containing scattered oil specks and rare pin-point vuggy porosity. DST 5 over the "E" zone recovered only 5 ft of gas and oil cut mud with very poor flow pressures. Electric logs confirmed the "E" zone was nonporous. The Lansing "F" limestone was a nonporous limestone with no sample shows. The secondary Pawnee Limestone exhibited a nonporous limestone with no sample shows.

Subsequent to electric logs the Bernita 1-27 was cased with 5.5" production casing for completion as an oil producer. Drill cuttings were shipped to the State of Kansas.

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

Berexco LLC
Bernita 1-27

WELL DATA

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

WELL NAME: Bernita 1-27

SURFACE LOCATION: 440' FNL & 340' FEL
NE NE Section 27, T1S, R36E
Rawlins County, Kansas

LATITUDE & LONGITUDE: 39.9433539 N, -101.3369201 W

BOTTOM HOLE LOCATION: Vertical Hole

ELEVATIONS: 3216' GL 3229' KB

API NUMBER: 15-153-20951

BASIN: Mid-Continental Arch

FIELD: Wildcat

HOLE SIZE: 12 ¼" to 310'; 7 7/8" to 4600'

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

SPUD DATE: October 8, 2013

TOTAL DEPTH DATE: October 17, 2013

TOTAL DEPTH: 4600' Rig TD 4599' Log TD

LAST FORMATION: Pennsylvanian Pawnee

WELL STATUS: Ran 5 ½" 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				3229
Pierre Sh	Cased	Cased	N/A	N/A
Niobrara Fm	N/A	1131	1131	+2098
Fort Hays Ls Mbr	N/A	1616	1616	+1613
Carlile Sh	N/A	1710	1710	+1519
Anydrite	3137	3122	3122	+107
Base Anydrite	3175	3159	3159	+70
Foraker	3740	3723	3723	-494
Topeka	3942	3941	3941	-712
Oread	4044	4062	4062	-833
Lansing-Kansas City				
"A"	4158	4158	4158	-929
"B"	4214	4214	4214	-985
"C"	4274	4274	4274	-1045
"D"	4320	4319	4319	-1090
"E"	4367	4364	4364	-1135
"F"	4401	4398	4398	-1169
Pawnee	4550	4546	4546	-1317
TD Driller	4600			
TD Logger		4599	4599	-1370

LITHOLOGY AND SHOWS

The following descriptions are interpretive. Rig crew members collected unlagged samples from 3500' to 4600'. Depths are rig depths except where noted as wireline.

3500' - 3630'	SHALE: red, firm, very silty, sandy in part.
3630' - 3692'	LIMESTONE: pale gray, firm, chalky, poor porosity, no shows.
3692' - 3740'	SHALE: red, firm, silty as above.
FORAKER	SAMPLE TOP: 3740' LOG TOP: 3723' SUBSEA: -494'
3740' - 3786'	LIMESTONE: white, soft, very sandy, very chalky, poor porosity, spotty black dead stain with thin SHALE as above.
3786' - 3846'	LIMESTONE: pale gray, buff, firm, chalky, poor porosity, no shows.
3846' - 3912'	SHALE: red, soft, silty with thin LIMESTONE as above.
3912' - 3942'	LIMESTONE white, pale gray, firm, chalky in part poor porosity, no shows.
TOPEKA	SAMPLE TOP: 3942' LOG TOP: 3941' SUBSEA: -712'
3942' - 3960'	LIMESTONE: pale yellow, buff, hard, dense, slightly oolitic, blocky, poor porosity, no shows.
3960' - 4016'	LIMESTONE: white, firm, chalky, poor porosity, no shows with interbedded SHALE as above
4016' - 4044'	SHALE: maroon, red, green, soft, blocky.
OREAD	SAMPLE TOP: 4044' LOG TOP: 4062' SUBSEA: -833'
4044' - 4076'	LIMESTONE: white, firm, very chalky, poor visible porosity, no shows.

LITHOLOGY AND SHOWS

4076' - 4086' LIMESTONE: white, buff, hard, dense, chalky in part, no shows, trace orange Chert.
4086' - 4110' LIMESTONE: pale gray, buff, hard, dense.
4110' - 4116' SHALE: grayish black, black, fissile, carbonaceous, gas odor.
4116' - 4158' SHALE: red, green, gray, firm, fissile with thin LIMESTONE: brown, very hard, very dense.

LANSING- KANSAS CITY "A"

SAMPLE TOP: 4158' LOG TOP: 4158' SUBSEA: -929'

4158' - 4162' LIMESTONE: buff, firm, slightly fossiliferous, poor moldic porosity, spotty live thick black stain, good cut, no free oil.
4162' - 4178' LIMESTONE: buff, very hard, very dense, blocky, no shows.
4178' - 4190' SANDSTONE white, pale red, friable, very fine grained, clay filled, poor to fair intergranular porosity, no shows
4190' - 4214' SHALE: red, firm, sub blocky.

LANSING- KANSAS CITY "B"

SAMPLE TOP: 4214' LOG TOP: 4214' SUBSEA: -985'

4214' - 4220' GRAINSTONE: white, firm, oolitic, fair to good intergranular porosity, spotty live brown stain, very good cut, fair show, free oil, fair odor.
4220' - 4274' LIMESTONE: white, pale gray, slightly hard, chalky, no shows.

LANSING- KANSAS CITY "C"

SAMPLE TOP: 4274' LOG TOP: 4274' SUBSEA: -1045'

4274' - 4286' GRAINSTONE: white, firm, oolitic, slightly chalky, fair intergranular and vuggy porosity, spotty live brown stain, good cut, good show, free oil.
4286' - 4300' SHALE red, maroon, occasional light gray, firm, blocky, noncalcareous

LITHOLOGY AND SHOWS

LANSING- KANSAS CITY "D"

SAMPLE TOP: 4320' LOG TOP: 4319' SUBSEA: -1090'

- 4300' - 4328' LIMESTONE: white to cream, firm, very chalky, no visible porosity, trace black oil specks, slow streaming cut, pulverized sample.
- 4328' - 4332' PACKSTONE to WACKESTONE: white to cream, firm, very chalky, fossil fragments, tight to trace poor to poor vuggy porosity, trace brown to black oil stain, good milky cut.
- 4332' - 4346' SHALE: dark gray, firm, blocky.
- 4346' - 4366' SHALE: dark reddish brown, firm, blocky, noncalcareous, silty.

LANSING- KANSAS CITY "E"

SAMPLE TOP: 4367' LOG TOP: 4364' SUBSEA: -1135'

- 4366' - 4378' MUDSTONE to WACKESTONE: white to cream, firm, very chalky, fossil fragment, occasional interclasts, tight to trace poor to poor vuggy porosity, scattered to patchy dark brown to black oil specks and stain, fair milky cut.
- 4378' - 4390' SHALE: gray to greenish gray, firm, platy, waxy, noncalcareous.
- 4390' - 4402' SHALE: dark reddish brown, firm, blocky, noncalcareous, silty.

LANSING- KANSAS CITY "F"

SAMPLE TOP: 4401' LOG TOP: 4398' SUBSEA: -1169'

- 4402' - 4414' LIMESTONE: cream to white to buff, firm to hard, mudstone to wackestone, scattered fossil fragment, clean, dense, tight, no shows.
- 4414' - 4440' SHALE: dark gray, firm, platy, noncalcareous, with interbedded LIMESTONE: cream to white, firm to hard, mudstone, clean, dense, tight, no shows.
- 4440' - 4472' SHALE: dark gray, firm, platy, non to very slightly calcareous, fossil fragments with interbedded LIMESTONE: cream to white, firm to hard, mudstone, chalky, clean, dense, tight, no shows.
- 4472' - 4504' SHALE: gray to reddish brown to maroon to brown, firm, blocky, silty in part, non to moderately calcareous, thin Limestone stringers.

LITHOLOGY AND SHOWS

4504' - 4520'	LIMESTONE: grayish brown to light gray, firm, mudstone, argillaceous, tight, no shows.
4520' - 4550'	SHALE: dark gray, firm, platy, non to very slightly calcareous, thin Limestone partings.
PAWNEE	SAMPLE TOP: 4550' LOG TOP: 4546' SUBSEA: -1317'
4550' - 4576'	LIMESTONE: white to very light gray, hard, mudstone, rare fossil fragment, clean, tight, no shows.
4576' - 4590'	SHALE: dark gray, firm, platy, non to very slightly calcareous.
4590' - 4600' TD	LIMESTONE: light gray to very light gray, hard, mudstone, slightly argillaceous in part, tight, no shows.

SERVICES

CONTRACTOR: Toolpusher:	Beredco Drilling Inc., Rig 2 Milo Salinas	
DRILLING FLUIDS: Mud Type: Engineer:	Morgan Mud, Inc. Freshwater Chemical Troy Van Pelt	McCook, ND
MUD LOGGING:	None	
WELLSITE GEOLOGY:	T. M. McCoy & Co., Inc. Peter J. Vollmer	Wilson, WY 307-733-4332
DRILL STEM TESTING: Tester:	Trilobite Testing, Inc. Bob Hamel	Hays, KS
DIRECTIONAL DRILLING:	None	
WIRELINE LOGS:	Pioneer Wireline Services RAG 3100' - TD Micro Surface casing to TD Engineer: Chris Desaire	Hays, KS