

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

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> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Coachman Energy Operating Company LLC
Well Name	PENNEY 1-14-15-20
Doc ID	1350929

All Electric Logs Run

Microsensitivity
Dual Induction
Borehole Volume
Borehole Compensated Sonic
Litho Density Neutron

Form	ACO1 - Well Completion
Operator	Coachman Energy Operating Company LLC
Well Name	PENNEY 1-14-15-20
Doc ID	1350929

Tops

Name	Top	Datum
Anhydrite Top	1272	+780
Anhydrite Bottom	1319	+733
Stottler	2857	-805
Tarkio	2901	-849
Topeka	3021	-969
King Hill	3147	-1095
Queen Hill	3208	-1156
Heebner	3293	-1241
Toronto	3312	-1260
Lansing	3338	-1286
Base KC	3582	-1530
Marmaton	3608	-1556
Pawnee	3624	-1572

Form	ACO1 - Well Completion
Operator	Coachman Energy Operating Company LLC
Well Name	PENNEY 1-14-15-20
Doc ID	1350929

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3639-3648	150 Gal 15%	3648



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Coachman Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63518

DST#: 1

ATTN: Charlie Sturdavant/

Test Start: 2017.03.23 @ 20:35:00

GENERAL INFORMATION:

Formation: **Lansing ' C and D' z**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:24:00

Time Test Ended: 02:37:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3322.00 ft (KB) To 3390.00 ft (KB) (TVD)

Reference Elevations: 2052.00 ft (KB)

Total Depth: 3390.00 ft (KB) (TVD)

2044.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8934

Inside

Press@RunDepth: 118.43 psig @ 3328.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.23

End Date:

2017.03.24

Last Calib.:

2017.03.24

Start Time: 20:35:05

End Time:

02:36:59

Time On Btm:

2017.03.23 @ 22:23:45

Time Off Btm:

2017.03.24 @ 00:39:45

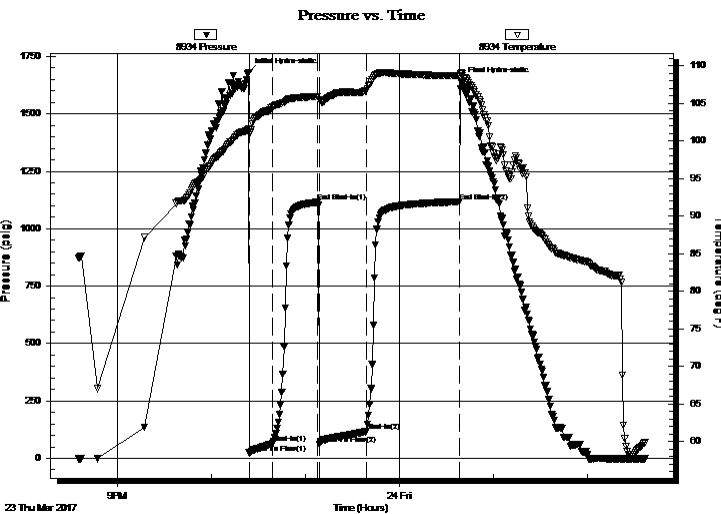
TEST COMMENT:

15-IF-BOB in 5 minutes

30-ISI-Slight Surface Blow Throughout

30-FF-BOB in 30 seconds

60-FSI-Fair Blow Throughout; Built to 4 and 3/4 inches; died back to 4 inches



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1680.58	101.60	Initial Hydro-static
1	23.24	101.03	Open To Flow (1)
16	64.00	104.52	Shut-In(1)
44	1115.44	105.89	End Shut-In(1)
45	60.99	105.47	Open To Flow (2)
75	118.43	106.71	Shut-In(2)
135	1117.56	108.69	End Shut-In(2)
136	1640.51	108.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
12.00	GOCM 5% G 5% O 90% M	0.17
60.00	OCM 5% O 95% M	0.84
30.00	GMO 30% G 20% M 50% O	0.42
120.00	MCO 20% M 80% O	1.68
40.00	OGCM 5% O 35% G 60% M	0.56

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Coachman Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63518

DST#: 1

ATTN: Charlie Sturdavant/

Test Start: 2017.03.23 @ 20:35:00

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
12.00	GOCM 5% G 5%O 90%M	0.168
60.00	OCM 5%O 95%M	0.842
30.00	GMO 30%G 20%M 50%O	0.421
120.00	MCO 20%M 80%O	1.683
40.00	OGCM 5%O 35%G 60%M	0.561

Total Length: 262.00 ft

Total Volume: 3.675 bbl

Num Fluid Samples: 0

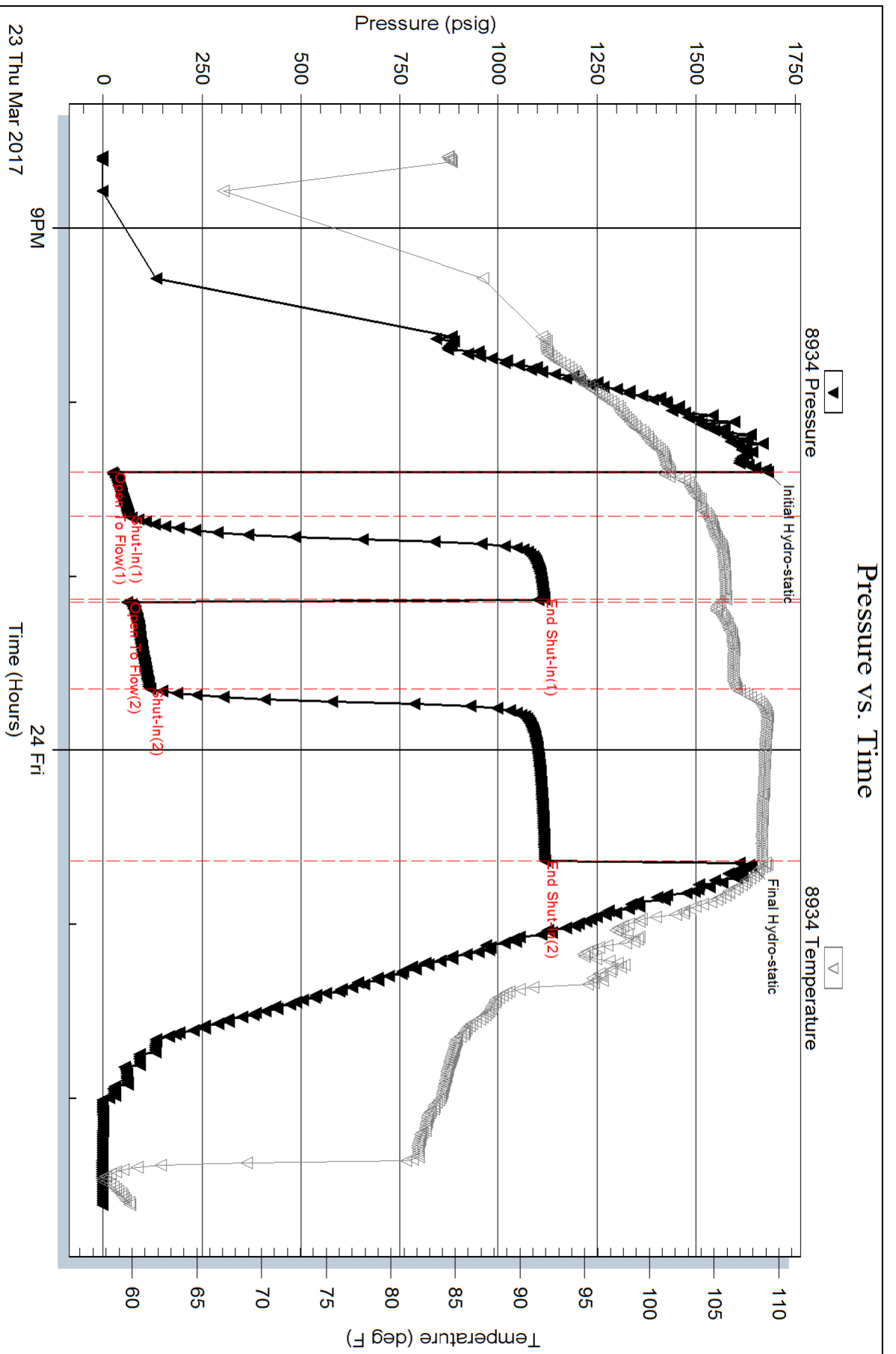
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM



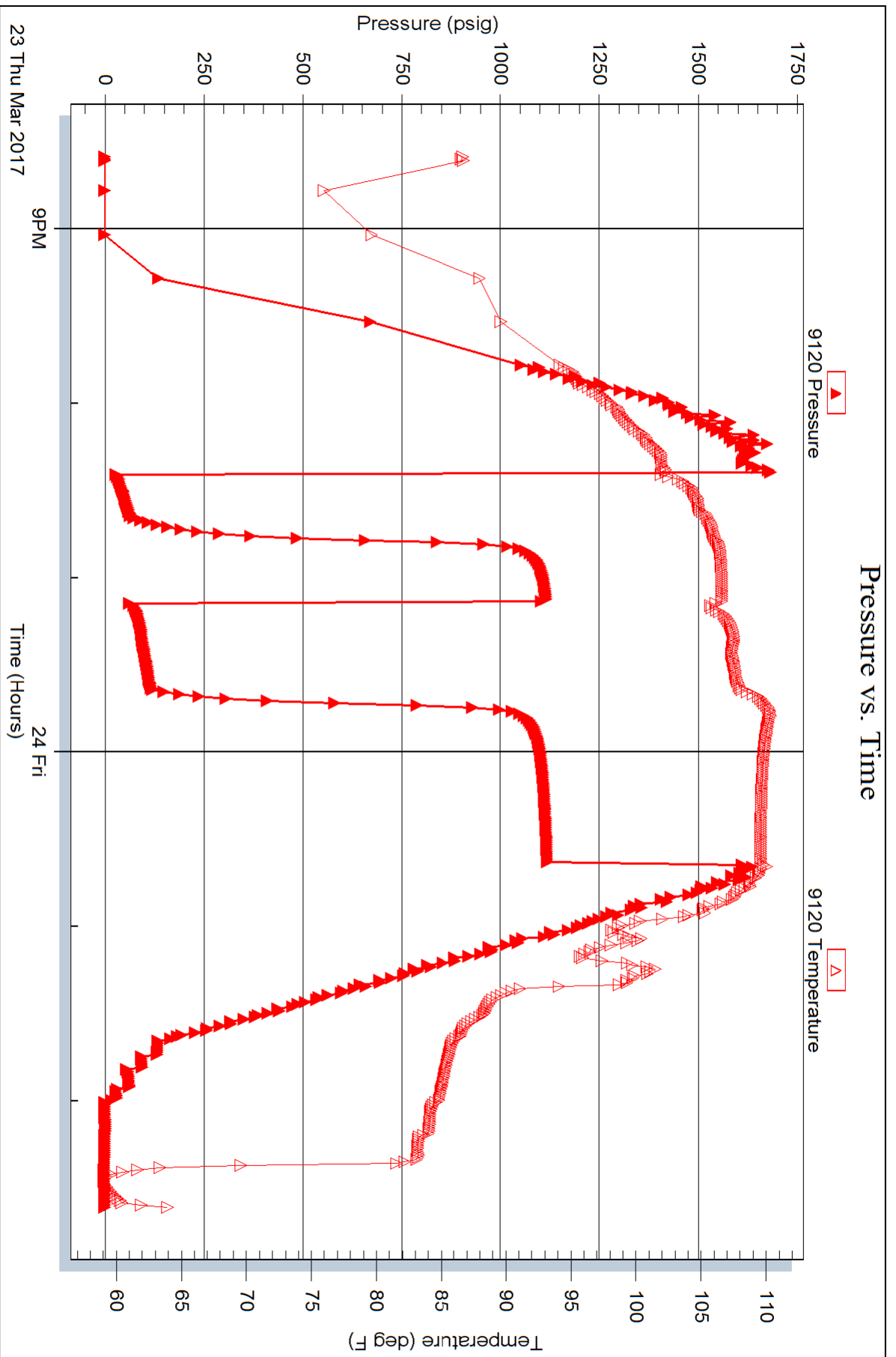
Serial #: 9120

Inside

Coachman Energy LLC

Penny #1-14-15-20

DST Test Number: 1





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63519

DST#: 2

ATTN: Charlie Sturdavant/

Test Start: 2017.03.24 @ 11:32:00

GENERAL INFORMATION:

Formation: **Lansing 'Eand F' zo**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:12:15

Time Test Ended: 17:34:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3390.00 ft (KB) To 3420.00 ft (KB) (TVD)

Reference Elevations: 2052.00 ft (KB)

Total Depth: 3420.00 ft (KB) (TVD)

2044.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8934 Outside

Press@RunDepth: 207.22 psig @ 3391.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.24

End Date:

2017.03.24

Last Calib.:

2017.03.24

Start Time:

11:32:05

End Time:

17:34:14

Time On Btm:

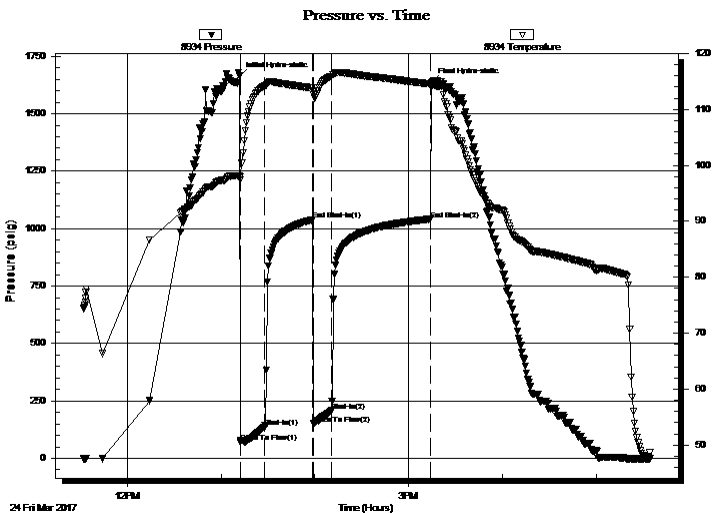
2017.03.24 @ 13:12:00

Time Off Btm:

2017.03.24 @ 15:14:30

TEST COMMENT: 15-IF-BOB in 45 seconds
30-ISI-BOB in 12 minutes
15-FF-BOB instantaneously
60-FSI-BOB in 3 minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1663.21	98.14	Initial Hydro-static
1	70.69	97.44	Open To Flow (1)
16	136.32	114.16	Shut-In(1)
47	1037.55	113.83	End Shut-In(1)
48	150.87	112.55	Open To Flow (2)
59	207.22	115.86	Shut-In(2)
123	1040.34	114.49	End Shut-In(2)
123	1633.09	114.73	Final Hydro-static

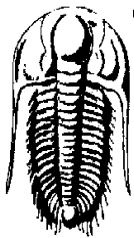
Recovery

Length (ft)	Description	Volume (bbl)
250.00	Gassy Oil 50%G 50%O	3.51
190.00	Gassy Mud Cut Oil 30%G 20%M 50%O	2.67
60.00	MCO 10%M 90%O	0.84
60.00	Gassy Oil 50%G 50%O	0.84

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cynosure Energy LLC

1125 17th St Suite 410
Denver Co, 80202

ATTN: Charlie Sturdavant/

S14-15S-20W Ellis Co, KS

Penny #1-14-15-20

Job Ticket: 63519

DST#: 2

Test Start: 2017.03.24 @ 11:32:00

GENERAL INFORMATION:

Formation: **Lansing 'Eand F' zo**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:12:15
 Time Test Ended: 17:34:15
 Interval: **3390.00 ft (KB) To 3420.00 ft (KB) (TVD)**
 Total Depth: 3420.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer J. Staab
 Unit No: 84
 Reference Elevations: 2052.00 ft (KB)
 2044.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 9120

Inside

Press@RunDepth: psig @ 3391.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.24 End Date: 2017.03.24

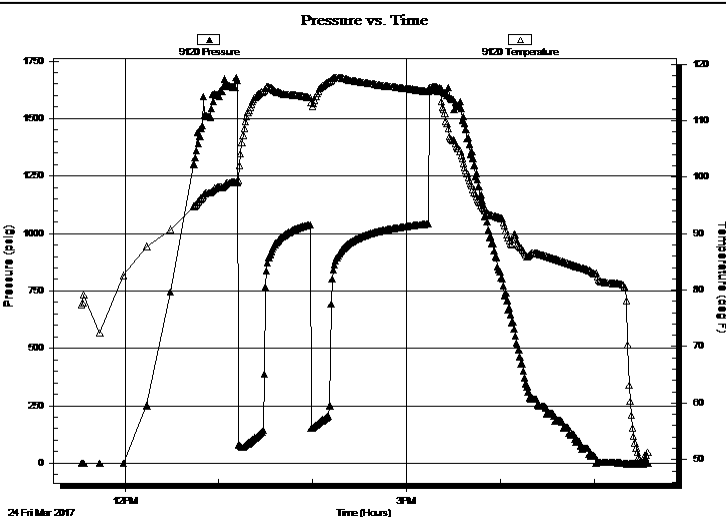
Last Calib.: 2017.03.24

Start Time: 11:32:15 End Time: 17:34:15

Time On Btm:

Time Off Btm:

TEST COMMENT:
 15-IF-BOB in 45 seconds
 30-ISI-BOB in 12 minutes
 15-FF-BOB instantaneously
 60-FSI-BOB in 3 minutes



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
250.00	Gassy Oil 50%G 50%O	3.51
190.00	Gassy Mud Cut Oil 30%G 20%M 50%O	2.67
60.00	MCO 10%M 90%O	0.84
60.00	Gassy Oil 50%G 50%O	0.84

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63519

DST#: 2

ATTN: Charlie Sturdavant/

Test Start: 2017.03.24 @ 11:32:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 10000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
250.00	Gassy Oil 50%G 50%O	3.507
190.00	Gassy Mud Cut Oil 30%G 20%M 50%O	2.665
60.00	MCO 10%M 90%O	0.842
60.00	Gassy Oil 50%G 50%O	0.842

Total Length: 560.00 ft

Total Volume: 7.856 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

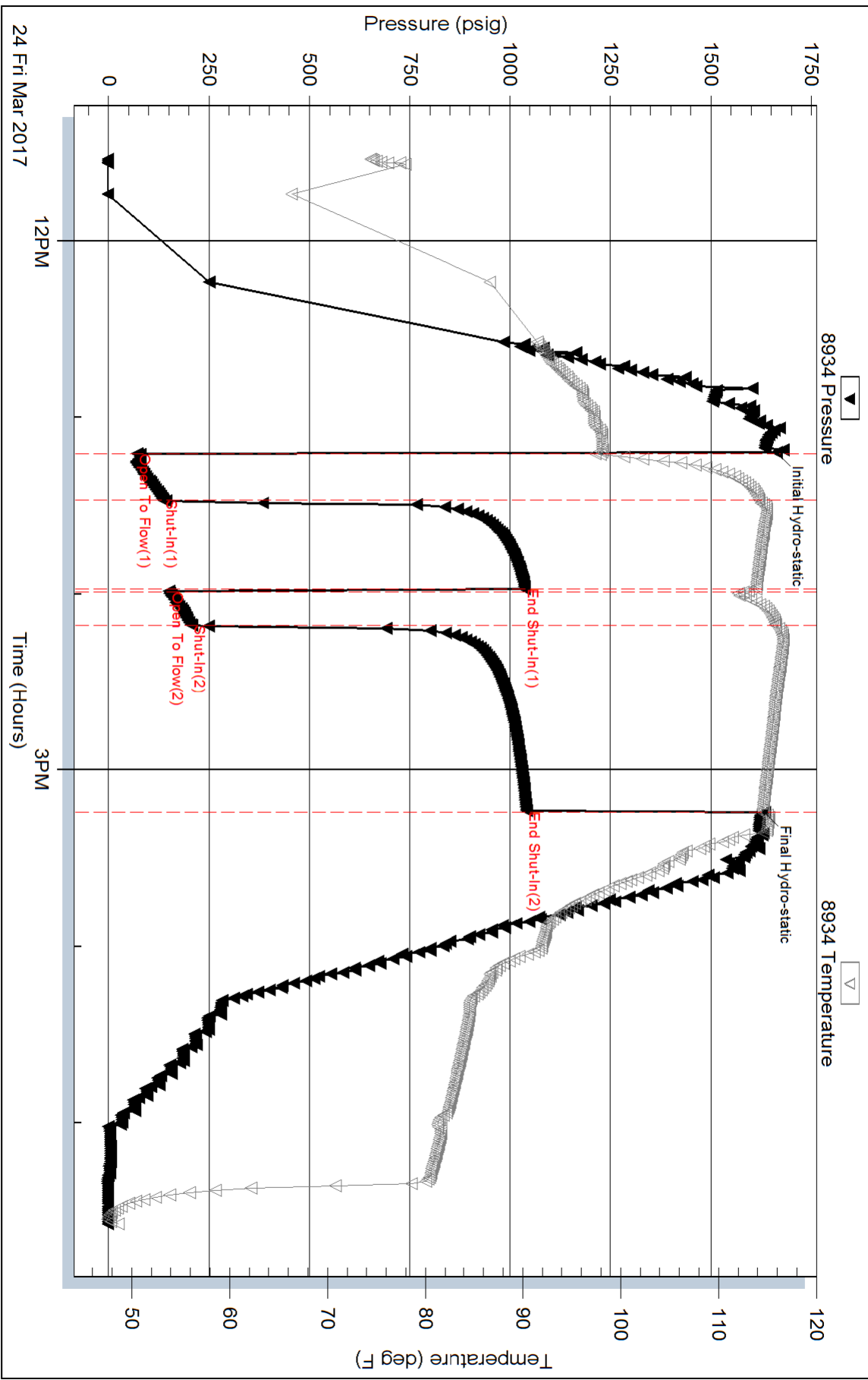
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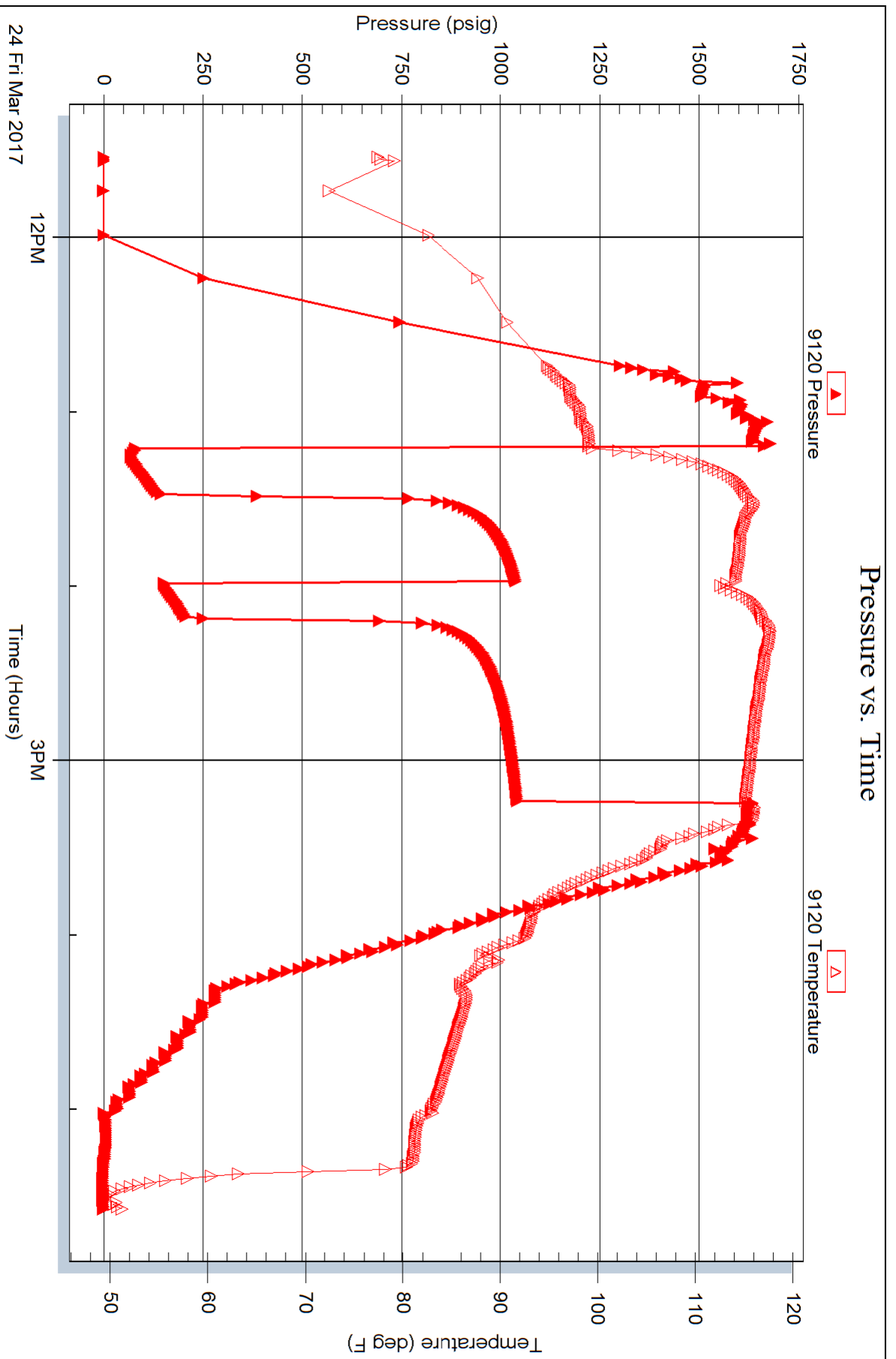
Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM

Pressure vs. Time







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63520

DST#: 3

ATTN: Charlie Sturdavant/

Test Start: 2017.03.25 @ 11:44:00

GENERAL INFORMATION:

Formation: **Lansing 'HI-J-K' zo**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:26:45

Time Test Ended: 19:02:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3456.00 ft (KB) To 3563.00 ft (KB) (TVD)

Reference Elevations: 2052.00 ft (KB)

Total Depth: 3563.00 ft (KB) (TVD)

2044.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8934

Inside

Press@RunDepth: 308.56 psig @ 3463.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.25

End Date:

2017.03.25

Last Calib.:

2017.03.25

Start Time: 11:44:05

End Time:

19:02:29

Time On Btm:

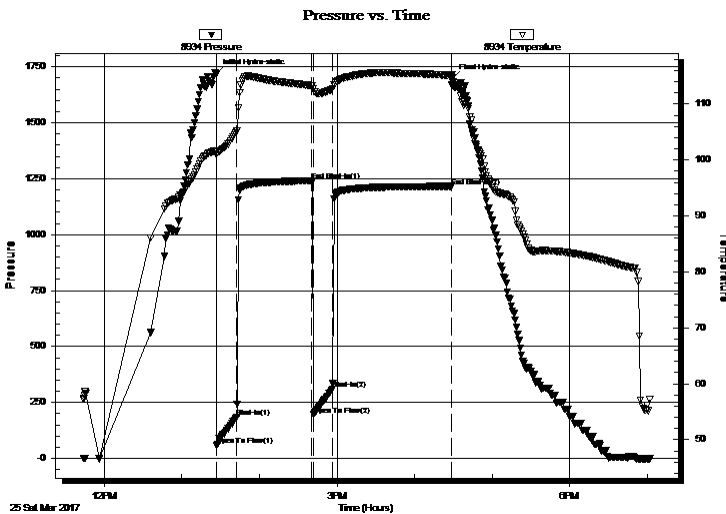
2017.03.25 @ 13:26:30

Time Off Btm:

2017.03.25 @ 16:29:15

TEST COMMENT: 15-IF-BOB in 2 minutes
60-ISI-BOB in 8 minutes
15-FF-BOB instantaneously
90-FSI-BOB in 5 minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1717.98	101.67	Initial Hydro-static
1	58.76	100.99	Open To Flow (1)
16	184.54	105.12	Shut-In(1)
74	1239.99	113.29	End Shut-In(1)
76	195.08	112.74	Open To Flow (2)
90	308.56	112.70	Shut-In(2)
182	1215.90	115.08	End Shut-In(2)
183	1699.19	114.04	Final Hydro-static

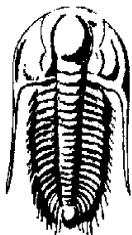
Recovery

Length (ft)	Description	Volume (bbl)
840.00	GMCO 10%M 20%G 70%O	11.78

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63520

DST#: 3

ATTN: Charlie Sturdavant/

Test Start: 2017.03.25 @ 11:44:00

GENERAL INFORMATION:

Formation: **Lansing 'H-I-J-K' zo**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:26:45

Time Test Ended: 19:02:30

Interval: 3456.00 ft (KB) To 3563.00 ft (KB) (TVD)

Total Depth: 3563.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Reference Elevations: 2052.00 ft (KB)

2044.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 9120

Inside

Press@RunDepth: psig @ 3463.00 ft (KB)

Start Date: 2017.03.25

End Date: 2017.03.25

Capacity: 8000.00 psig

Last Calib.: 2017.03.25

Start Time: 11:44:15

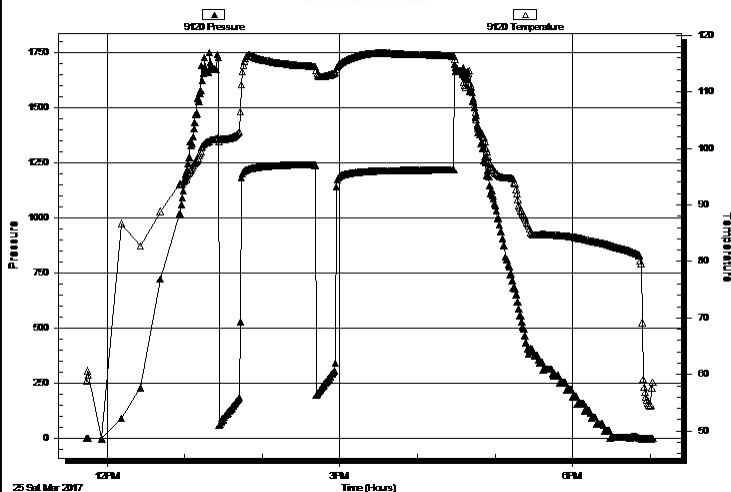
End Time: 19:02:30

Time On Btm:

Time Off Btm:

TEST COMMENT:
15-IF-BOB in 2 minutes
60-ISI-BOB in 8 minutes
15-FF-BOB instantaneously
90-FSI-BOB in 5 minutes

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
840.00	GMCO 10%M 20%G 70%O	11.78

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63520

DST#: 3

ATTN: Charlie Sturdavant/

Test Start: 2017.03.25 @ 11:44:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 10000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
840.00	GMCO 10%M 20%G 70%O	11.783

Total Length: 840.00 ft

Total Volume: 11.783 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

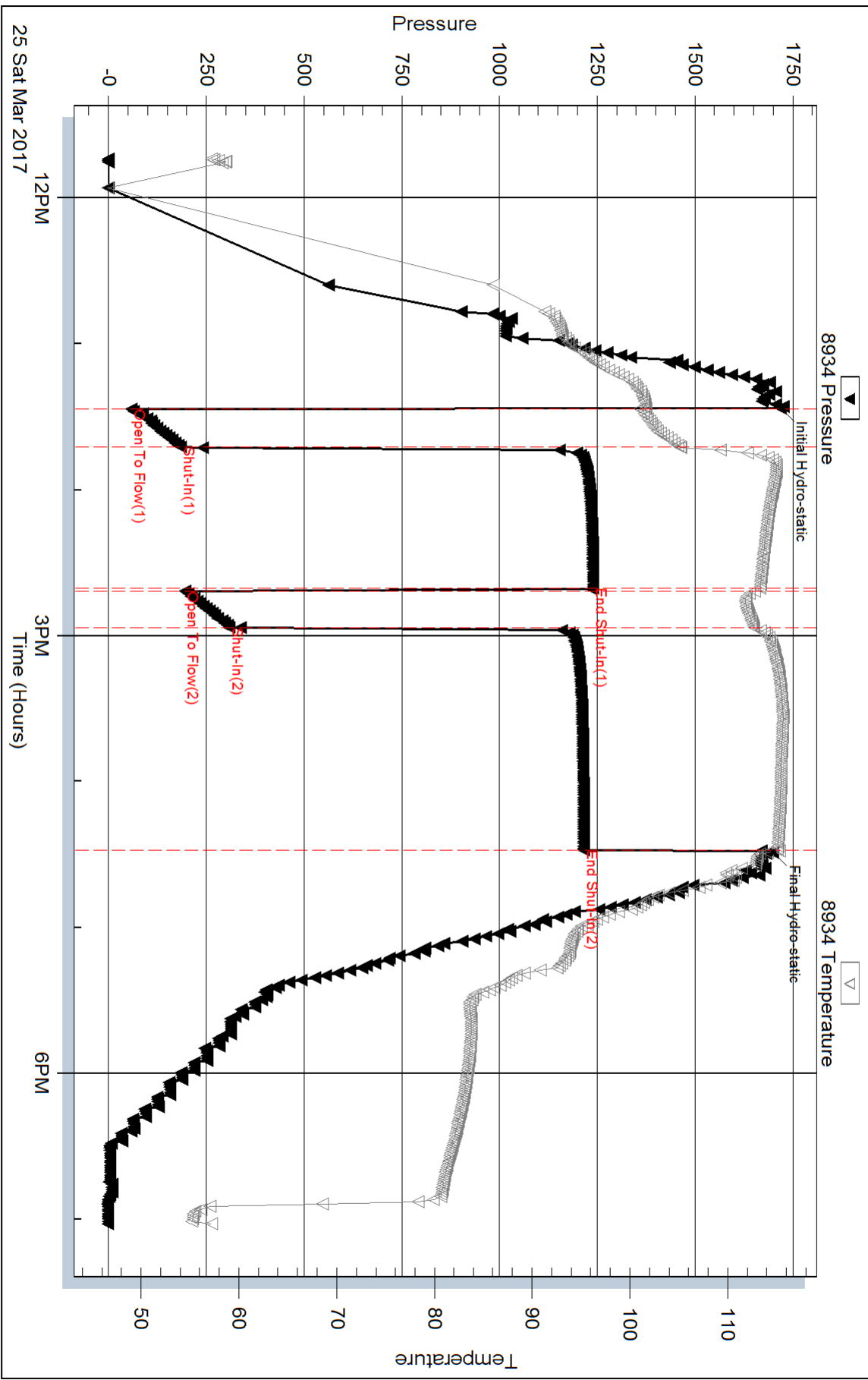
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM

Pressure vs. Time



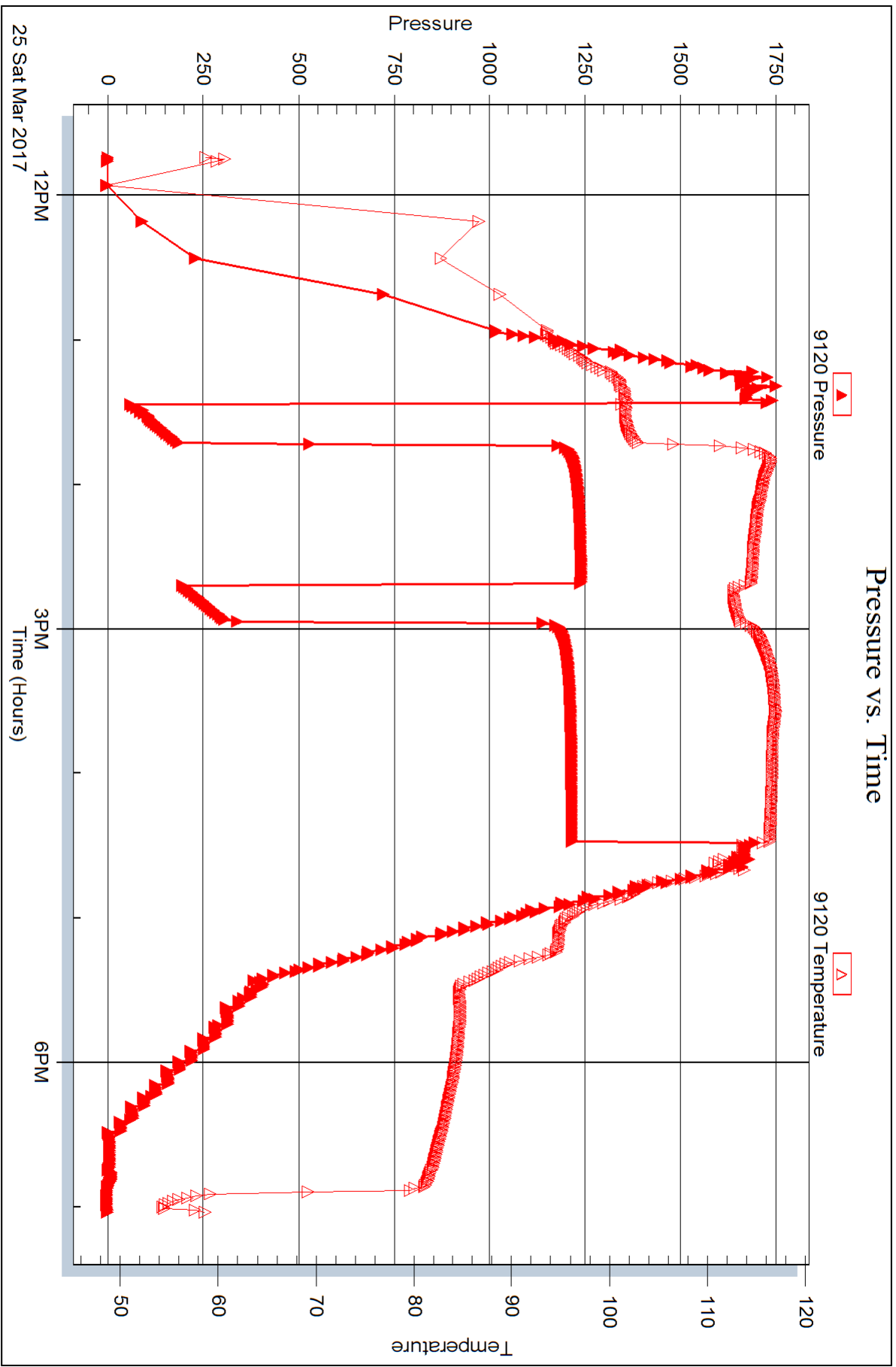
Serial #: 9120

Inside

Cynosure Energy LLC

Penny #1-14-15-20

DST Test Number: 3





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63521

DST#: 4

ATTN: Charlie Sturdavant/

Test Start: 2017.03.26 @ 12:04:00

GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:16:00

Time Test Ended: 17:41:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3646.00 ft (KB) To 3670.00 ft (KB) (TVD)

Reference Elevations: 2052.00 ft (KB)

Total Depth: 3670.00 ft (KB) (TVD)

2044.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8934 Outside

Press@RunDepth: 27.66 psig @ 3651.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.26 End Date: 2017.03.26

Last Calib.: 2017.03.26

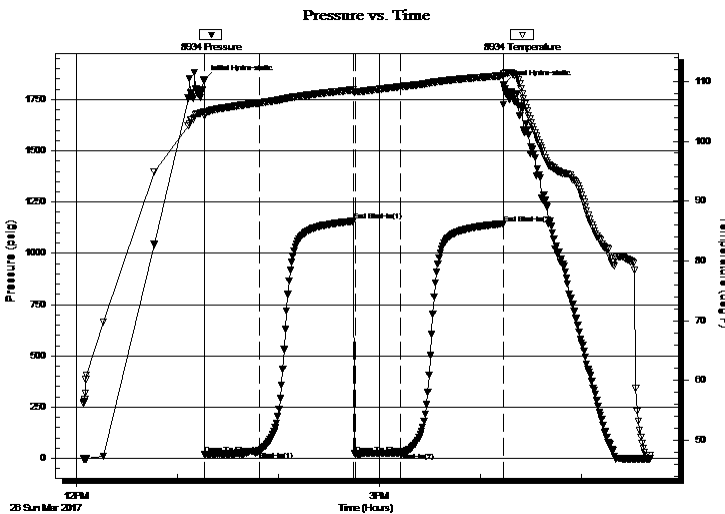
Start Time: 12:04:05 End Time: 17:41:14

Time On Btm: 2017.03.26 @ 13:15:45

Time Off Btm: 2017.03.26 @ 16:14:00

TEST COMMENT: 30-IF-Weak Blow ; Built from a Surface Blow to 3 and 1/4 inches
60-ISI-Weak Surface Blow Back
30-FF-Weak Blow ; Built from a 1/4 inch Blow to 4 and 1/2 inches
60-FSI-No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1844.66	104.96	Initial Hydro-static
1	19.53	104.22	Open to Flow (1)
33	37.40	106.40	Shut-In(1)
89	1156.73	108.59	End Shut-In(1)
90	20.04	108.31	Open To Flow (2)
117	27.66	109.12	Shut-In(2)
178	1144.15	110.96	End Shut-In(2)
179	1823.20	111.25	Final Hydro-static

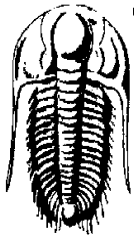
Recovery

Length (ft)	Description	Volume (bbl)
10.00	MCO 10%M 90%O	0.14
30.00	MCO 25%M 75%O	0.42

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cynosure Energy LLC

1125 17th St Suite 410
Denver Co, 80202

ATTN: Charlie Sturdavant/

S14-15S-20W Ellis Co, KS

Penny #1-14-15-20

Job Ticket: 63521

DST#: 4

Test Start: 2017.03.26 @ 12:04:00

GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:16:00

Time Test Ended: 17:41:15

Interval: 3646.00 ft (KB) To 3670.00 ft (KB) (TVD)

Total Depth: 3670.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Reference Elevations: 2052.00 ft (KB)

2044.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 9120 Inside

Press@RunDepth: psig @ 3651.00 ft (KB)

Start Date: 2017.03.26

End Date: 2017.03.26

Start Time: 12:04:15

End Time: 17:41:15

Capacity: 8000.00 psig

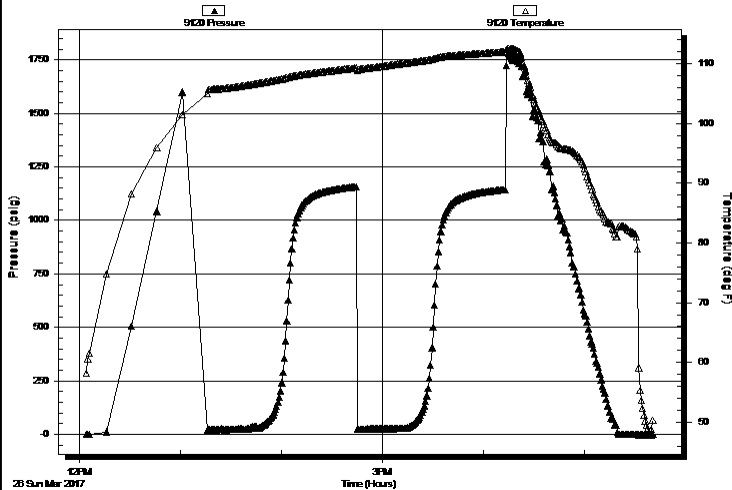
Last Calib.: 2017.03.26

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-Weak Blow ; Built from a Surface Blow to 3 and 1/4 inches
60-ISI-Weak Surface Blow Back
30-FF-Weak Blow ; Built from a 1/4 inch Blow to 4 and 1/2 inches
60-FSI-No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MCO 10%M 90%O	0.14
30.00	MCO 25%M 75%O	0.42

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63521

DST#: 4

ATTN: Charlie Sturdavant/

Test Start: 2017.03.26 @ 12:04:00

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 12100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	MCO 10%M 90%O	0.140
30.00	MCO 25%M 75%O	0.421

Total Length: 40.00 ft

Total Volume: 0.561 bbl

Num Fluid Samples: 0

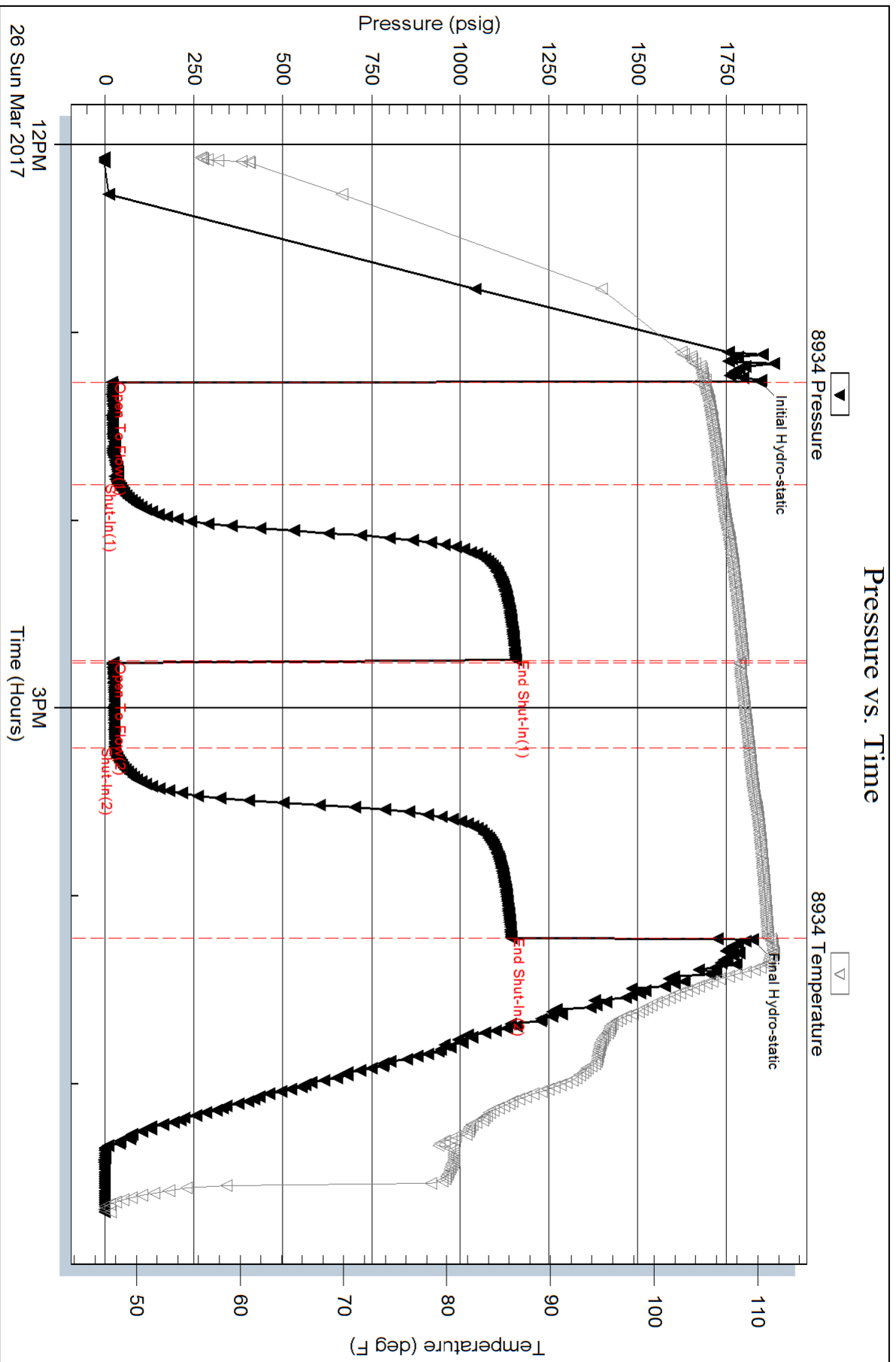
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM



Serial #: 9120

Inside

Cynosure Energy LLC

Penny #1-14-15-20

DST Test Number: 4





BP 1473

Date: 4/12/2017
Invoice # 20

QUALITY OILWELL CEMENTING, INC.
PO Box 32 - 740 WEST WICHITA AVE, RUSSELL KS 67665
PHONE:785-324-1041 FAX:785-483-1087
EMAIL: cementing@ruraltel.net

P.O.#:
Due Date: 3/14/2017
Division: Russell



Invoice

Contact:
CYNOSURE ENERGY LLC
Address/Job Location:

1125 17th Street, Suite 410
DENVER CO 80113

Reference:
PENNEY 1-14

Description of Work:
PORT COLLAR JOB

APPROVED
By Bob Plante at 10:02 pm, Apr 19, 2017



Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 601.97	No				
Multi Density- 80/20	265	\$ 3,128.92	Yes				
Flo Seal	400	\$ 539.76	Yes				
Bulk Truck Matl-Material Service Charge	800	\$ 539.76	No				
Pump Truck Mileage-Job to Nearest Camp	22	\$ 66.80	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$ 51.95	No				

Invoice Terms:

Net 30

SubTotal: \$ 4,929.15

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (123.23)

SubTotal for Taxable Items: \$ 3,576.96

SubTotal for Non-Taxable Items: \$ 1,228.96

Total: \$ 4,805.92

Tax: \$ 250.39

7.00% Ellis County Sales Tax

Amount Due: \$ 5,056.31

Applied Payments:

Balance Due: \$ 5,056.31

Thank You For Your Business!

Past Due Invoices are subject to a service charge (annual rate of 24%)

This does not include any applicable taxes unless it is listed.

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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 201

Date	4-12-17	Sec.	Twp.	Range	County	State	On Location	Finish
					Ellis	KS		1:30pm
Lease	Penney				Location		Antonine W 180 Rd 35 1w	
Contractor	Express				Well No.	1-14		
Type Job	Port Collar				Owner			
Hole Size	7 7/8				To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Csg.	5 1/2				T.D.	Charge To		
Tbg. Size	2 3/8				Depth	To Coachman		
Tool	Port Collar				Depth	1286		
Cement Left in Csg.					Shoe Joint	The above was done to satisfaction and supervision of owner agent or contractor.		
Meas Line					Displace	800 8 1/2 20 QMDC 1/2 * Flo		
EQUIPMENT					Common			
Pumptrk	5	No.	Cement	Helper	Cm g			
Bulktrk	21	No.	Driver	Driver	Brett			
Bulktrk	19	No.	Driver	Driver	Doug			
JOB SERVICES & REMARKS					Hulls			
Remarks:	Quality Opening Tool				Salt			
Rat Hole					Flowseal			
Mouse Hole	KCC Port Search				Kol-Seal			
Centralizers					Mud CLR 48			
Baskets					CFL-117 or CD110 CAF 38			
D/V or Port Collar					Sand			
Test 5 1/2 to 1000* Spot mud to Tool. Open tool & Pump 80 BL mud & get Circulation. Mix 2 1/2 5K & cement Circulate. Close Tool & Test to 1000* Run 5 joints & Wash Clean.					Handling			
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> U SRD 265 SK </div>					Mileage			
					FLOAT EQUIPMENT			
					Guide Shoe			
					Centralizer			
					Baskets			
					AFU Inserts			
					Float Shoe			
					Latch Down			
					Pumptrk Charge			
					Mileage			
					Tax			
					Discount			
					Total Charge			
Signature: Bob Plank								



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

RECEIVED

Date: 3/28/2017
 Invoice # 131

APR 05 2017

P.O.#:
 Due Date: 4/27/2017
 Division: Russell

Invoice

Contact:
 CYNOSURE ENERGY LLC
Address/Job Location:

1125 17th Street, Suite 410
 DENVER CO 80113

Reference:
 PENNEY 1-14-15-20

Description of Work:
 PROD STRING

APPROVED

By Bob Plante at 6:00 pm, Apr 12, 2017



Services / Items Included:

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 601.97	No	Pump Truck Mileage-Job to Nearest Camp	22	\$66.80	No
Common-Class A	200	\$ 2,240.00	Yes	Flo Seal	40	\$53.98	Yes
Cement Port Collar, 5 1/2"	1	\$ 1,754.22	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$51.95	No
Gilsonite	850	\$ 860.24	Yes				
5 1/2" Basket	3	\$ 566.75	Yes				
5 1/2" Turbolizer	10	\$ 485.78	Yes				
Mud Clear	500	\$ 249.64	Yes				
Auto Fill Float Shoe, 5 1/2"	1	\$ 226.70	Yes				
Latch Down Plug & Baffle, 5 1/2"	1	\$ 179.47	Yes				
Salt (Fine)	17	\$ 150.26	Yes				
Bulk Truck Matl-Material Service Charge	225	\$ 151.81	No				

Invoice Terms:

Net 30

~~Discount Available ONLY if Invoice is Paid & Received~~
 within listed terms of invoice: \$ (190.99)

SubTotal: \$ 7,639.55

SubTotal for Taxable Items: \$ 6,597.85

SubTotal for Non-Taxable Items: \$ 850.71

Total: \$ 7,448.56

Tax: \$ 461.85

7.00% Ellis County Sales Tax

Amount Due: \$ 7,910.41

Applied Payments:

Balance Due: \$ ~~7,910.41~~

Thank You For Your Business!

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.

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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 131

Date	Sec.	Twp.	Range	County	State	On Location	Finish
3-28-17	14	15	20	Ellis	KS		9:30 AM

Location Antonino W 180 RD 35 W W to Ry

Lease Permy 1-14-15-20 Well No. _____ Owner _____

Contractor Duke #8 To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Type Job Production String

Hole Size 7 7/8 T.D. 3770 Charge To Coachman Cynsure

Csg. 5 1/2 Depth 3766.50 Street _____

Tbg. Size _____ Depth _____ City _____ State _____

Tool Part Collar Depth 1286 The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 19.92 Shoe Joint 19.92 Cement Amount Ordered 200 10 1/2 SALT 57-Gilsonite

Meas Line _____ Displace 89 1/4 BBL 500 gal mud clear 1/4 fl

EQUIPMENT

Pumptrk 5 No. Cementer Greg Common 200 Q pro-c
Helper Brett Poz. Mix _____

Bulktrk _____ No. Driver _____ Gel. _____

Bulktrk 14 No. Driver Dave Calcium _____

JOB SERVICES & REMARKS

Remarks: _____ Hulls _____

Rat Hole 325K Salt 17

Mouse Hole 155K Flowseal 40

Centralizers _____ Kol-Seal 850 #

Baskets _____ Mud CLR 48 500 gal

D/V or Port Collar _____ CFL-117 or CD110.CAF 38

_____ Sand _____

5 1/2 set @ 3769.50 B-110 @ 3750 Handling 725

Est. Circulation Pump 500 gal mud clear Mileage _____

Plug Rathole & mousehole **FLOAT EQUIPMENT** 5 1/2

Cement 5 1/2 with 1555K Guide Shoe _____

Clear lines Displace Plug Centralizer 10

Plug landed @ 1000 ft Baskets 3

Release Pressure by AF Inserts Part Collar

Float Shoe 1

Latch Down 1

_____ Pumptrk Charge prod string

_____ Mileage 22

_____ Tax _____

_____ Discount _____

_____ Total Charge _____

X Signature Bob Plante

DEFINITIONS: In these terms and conditions, "Quality" shall mean Quality Oilwell Cementing, Inc., and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract, "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

TERMS: Unless satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "QUALITY" before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, "CUSTOMER" agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing in no event shall this Contract provide for interest exceeding the maximum rate of interest that "CUSTOMER" may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the "CUSTOMER" or at the option of "QUALITY," refunded directly to "CUSTOMER." For purposes of this paragraph, QUALITY and CUSTOMER agree that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

- ATTORNEY FEES: In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the term of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limit to, a reasonable sum as and attorney's fees.

- PRICES AND TAXES: All merchandise listed in "QUALITY'S" current price shall schedule are F.O.B. QUALITY'S local station and are subject to change without notice. All prices are exclusive of any federal, state, local, or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by QUALITY shall be added to the quoted prices charged to CUSTOMER.

- TOWING CHARGES: QUALITY will make a reasonable attempt to get to and from each job site using its own equipment. Should QUALITY be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by QUALITY, will be charged to and paid by CUSTOMER.

- PREPARATION CHARGES: If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay QUALITY for the expenses incurred by QUALITY as a result of the cancellation.

- DEADHAUL CHARGES: Unless otherwise specified on the front of this Contract, a deadhaul charges as set forth in QUALITY'S current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

- SERVICE CONDITIONS AND LIABILITIES: 1. QUALITY carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond QUALITY'S control, QUALITY shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless QUALITY, its officers, agents and employees, from and against any and all claims or suits for:

(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with QUALITY'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of QUALITY or its employees.

2. With respect to any of QUALITY'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to QUALITY at the landing, CUSTOMER shall either recover the lost item without cost to QUALITY or reimburse QUALITY the current replacement cost of the item unless the loss or damage results from the sole negligence of QUALITY or its employees.

3. QUALITY does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

WARRANTIES: 1. QUALITY warrants all merchandise manufactured or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. QUALITY'S obligation under this warranty is expressly limited to repair replacement, or allowance for credit, at its option, for any merchandise which is determined by QUALITY to be defective. THIS IS THE SOLE WARRANTY OF QUALITY AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESS OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, CUSTOMER'S sole and only remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein provided, and QUALITY shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.

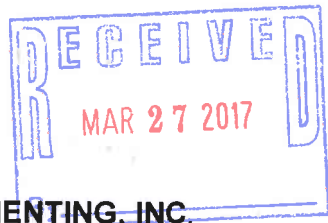
2. More specifically:

(A) Nothing in this contract shall be constructed as a warranty by QUALITY of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.

(B) Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by QUALITY or any interpretation of test, meter readings, chart information, analysis or research, or recommendations made by QUALITY, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of QUALITY or its employees in the preparation or furnishing of such facts, information or data. (C) Work done by QUALITY shall be under the direct supervision and control of the CUSTOMER or his agent and QUALITY will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.



BP
1473



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 3/19/2017
 Invoice # 1556
 P.O.#:
 Due Date: 4/18/2017
 Division: Russell

Invoice



APPROVED
By Bob Plante at 8:50 pm, Mar 29, 2017

Contact:
 CYNOSURE ENERGY LLC
Address/Job Location:
 1125 17th Street, Suite 410
 DENVER CO 80113

Reference:
 PENNEY 1-14 SEC 14-15-20

Description of Work:
 SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 489.84	No				
Common-Class A	136	\$ 1,487.36	Yes				
Calcium Chloride	7	\$ 258.26	Yes				
Bulk Truck Matl-Material Service Charge	180	\$ 118.59	No				
Pump Truck Mileage-Job to Nearest Camp	22	\$ 65.22	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$ 50.73	No				
Premium Gel (Bentonite)	3	\$ 57.32	Yes				
				POZ Mix-Standard	34	\$156.80	Yes

Invoice Terms:

Net 30

SubTotal:	\$ 2,684.11
Discount Available <u>ONLY</u> if Invoice is Paid & Received within listed terms of invoice:	\$ (67.10)
SubTotal for Taxable Items:	\$ 1,910.74
SubTotal for Non-Taxable Items:	\$ 706.27
Total:	\$ 2,617.01
Tax:	\$ 133.75
Amount Due:	\$ 2,750.76
Applied Payments:	
Balance Due:	\$ 2,750.76

7.00% Ellis County Sales Tax

Thank You For Your Business!

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Home Office P.O. Box 32 Russell, KS 67665

No. 1556

Date	3-19-17	Sec.	14	Twp.	15	Range	20	County	Ellis	State	KS	On Location	Finish	4:45 AM
------	---------	------	----	------	----	-------	----	--------	-------	-------	----	-------------	--------	---------

Location Antonino W to 180 35 1W

Lease Penny	Well No. 1-14	Owner W through 3 cattle guards
Contractor Duke #8		To Quality Oilwell Cementing, Inc. Sinto
Type Job Surface		You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Hole Size 12 1/4	T.D. 228'	Charge To Coachman / Cynosure
Csg. 8 5/8	Depth 228'	Street
Tbg. Size	Depth	City
Tool	Depth	State
Cement Left in Csg. 20'	Shoe Joint	The above was done to satisfaction and supervision of owner agent or contractor.
Meas Line	Displace 13 1/4 bbl	Cement Amount Ordered 170 80/20 3% cc 2% bbl

EQUIPMENT

Pumptrk 5	No.	Cementer Helper Brett	Common 105
Bulktrk 15	No.	Driver Tim	Poz. Mix 65
Bulktrk	No.	Driver	Gel. 3
Bulktrk	No.	Driver	Calcium 7

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling 180

Mix 170 sx 80/20 3% cc 2% bbl
Displaced 13 1/4 bbl

FLOAT EQUIPMENT

Guide Shoe	Mileage
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Cement did circulate!

Quality Oilwell Cementing

Pumptrk Charge Surface	Tax
Mileage 22	Discount

X Signature **Bob Plank**

Total Charge	
--------------	--