

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	LEIKER 4-25-15-20
Doc ID	1361456

All Electric Logs Run

Gamma Ray / Caliper
Dual Induction
Dual Comp Porosity
Microsensitivity

Form	ACO1 - Well Completion
Operator	Coachman Energy Operating Company LLC
Well Name	LEIKER 4-25-15-20
Doc ID	1361456

Tops

Name	Top	Datum
Anhydrite	1367	+778
Stotler	2949	-804
Tarkio	2997	-852
Topeka	3120	-975
King Hill	3248	-1103
Queen Hill	3308	-1163
Heebner	3398	-1253
Toronto	3420	-1275
Lansing	3442	-1297



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Coachman Energy Operating Co., LLC

25-15S-20W Ellis, KS

1125 17th St.
Suite 410
Denver, CO 80202
ATTN: Jeremy Schwartz

Leiker #4-25-15-20

Job Ticket: 63278

DST#: 1

Test Start: 2017.07.05 @ 08:15:33

GENERAL INFORMATION:

Formation: **LKC "A-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:21:09

Time Test Ended: 17:03:08

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3445.00 ft (KB) To 3526.00 ft (KB) (TVD)

Reference Elevations: 2145.00 ft (KB)

Total Depth: 3526.00 ft (KB) (TVD)

2137.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8524 Outside

Press@RunDepth: 190.28 psig @ 3459.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.05 End Date: 2017.07.05

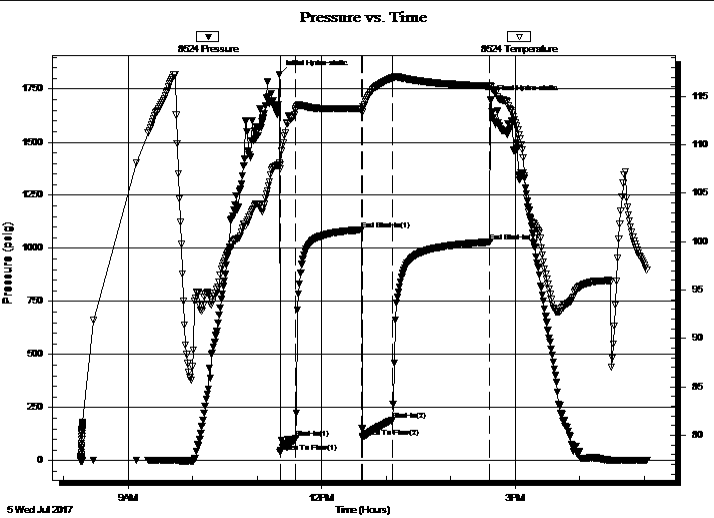
Last Calib.: 2017.07.05

Start Time: 08:15:34 End Time: 17:03:08

Time On Btm: 2017.07.05 @ 11:20:39

Time Off Btm: 2017.07.05 @ 14:37:24

TEST COMMENT: 15- IF- BOB 8mins
60- IS- No blow
30- FF- BOB 11mins
90- FSI- Weak surface blow died in 20mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1819.06	108.12	Initial Hydro-static
1	39.02	107.55	Open To Flow (1)
16	105.11	113.76	Shut-In(1)
77	1087.31	113.79	End Shut-In(1)
78	111.79	113.78	Open To Flow (2)
105	190.28	116.90	Shut-In(2)
196	1030.03	116.07	End Shut-In(2)
197	1698.39	116.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	SOCMW, 5%O 25%M 70%W	0.88
297.00	WOCM, 20%W 15%O 65%M	4.21
0.00	203' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Coachman Energy Operating Co., LLC

25-15S-20W Ellis, KS

1125 17th St.
Suite 410
Denver, CO 80202
ATTN: Jeremy Schwartz

Leiker #4-25-15-20

Job Ticket: 63278

DST#: 1

Test Start: 2017.07.05 @ 08:15:33

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 43.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 9800.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 25 deg API
Water Salinity: 110000 ppm

Recovery Information

Recovery Table

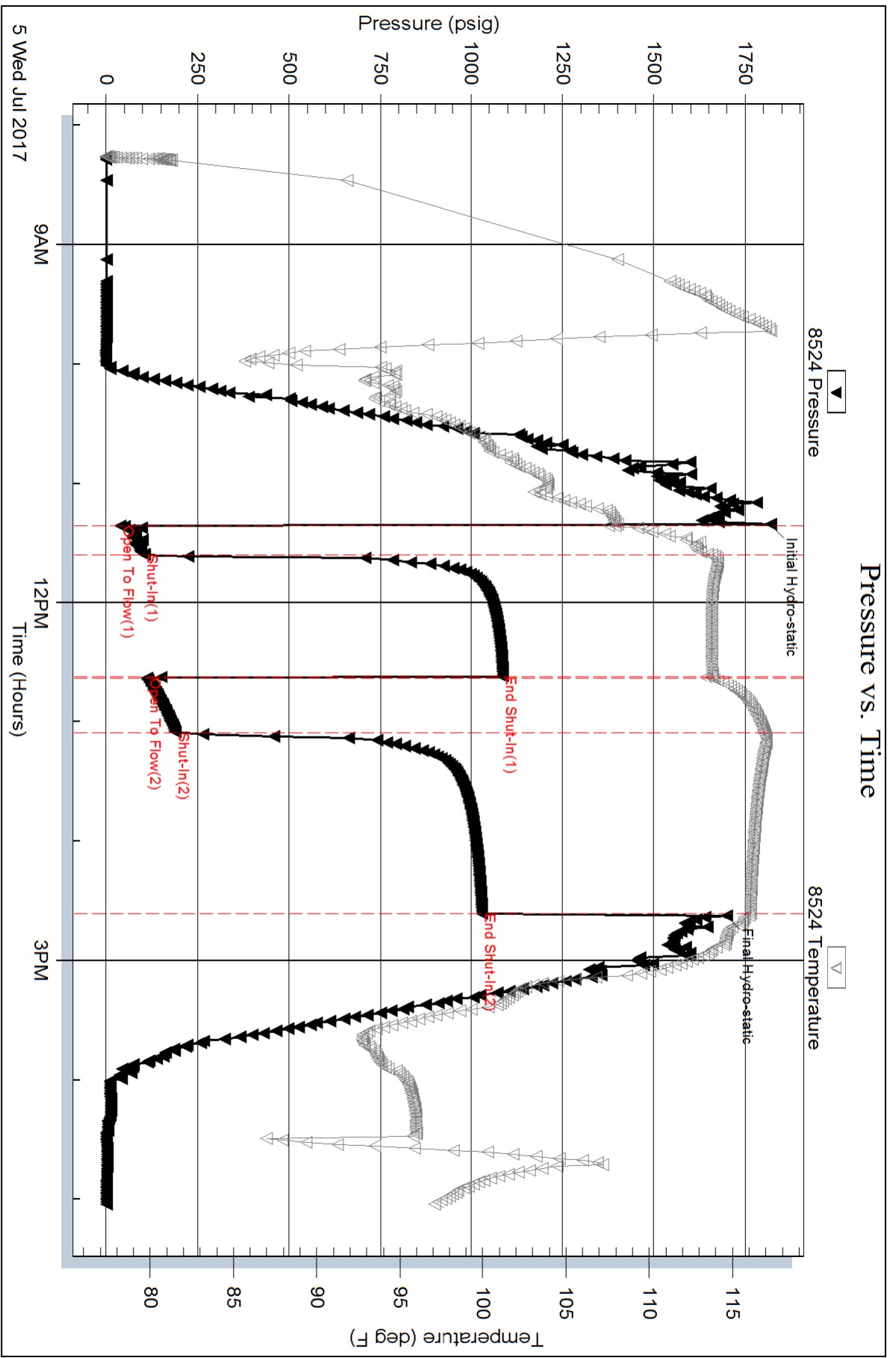
Length ft	Description	Volume bbl
62.00	SOCMW, 5%O 25%M 70%W	0.879
297.00	WOCM, 20%W 15%O 65%M	4.210
0.00	203' GIP	0.000

Total Length: 359.00 ft Total Volume: 5.089 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Sampler: 200mL M, 300mL O, & 1500mL W @ 350 PSI
RW: .05 @ 85deg



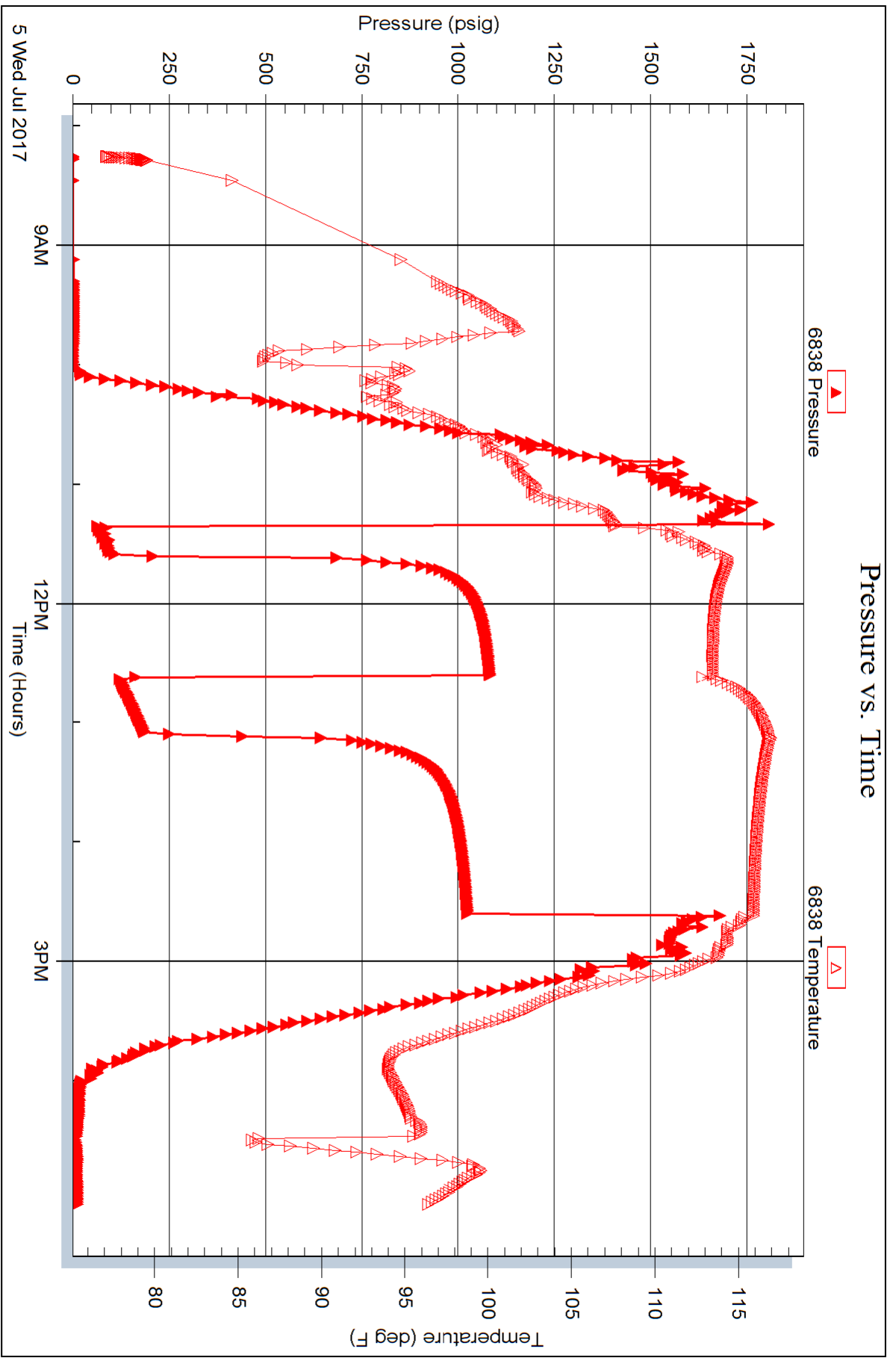
Serial #: 68338

Inside

Coachman Energy Operating Co., LLC

Leiker #4-25-15-20

DST Test Number: 1





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Coachman Energy Operating Co., LLC

25-15S-20W Ellis, KS

1125 17th St.
Suite 410
Denver, CO 80202
ATTN: Jeremy Schwartz

Leiker #4-25-15-20

Job Ticket: 63279 **DST#: 2**

Test Start: 2017.07.06 @ 04:39:05

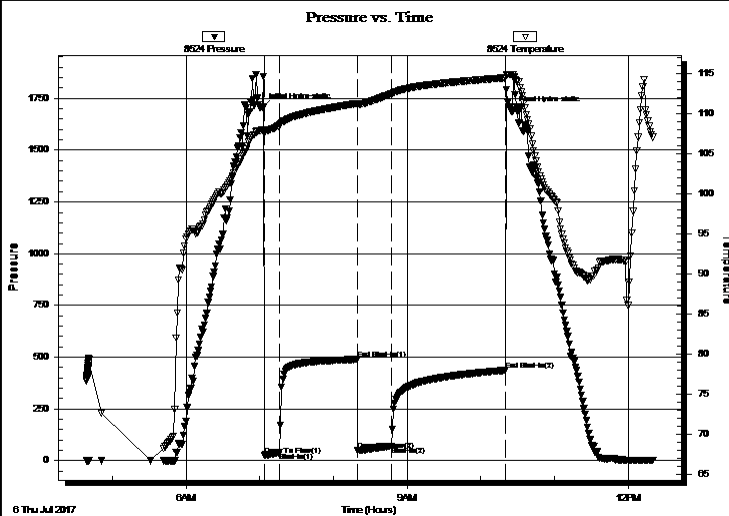
GENERAL INFORMATION:

Formation: **LKC "H&I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:03:41
 Time Test Ended: 12:20:11
 Interval: **3561.00 ft (KB) To 3614.00 ft (KB) (TVD)**
 Total Depth: 3614.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2145.00 ft (KB)
 2137.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8524 Outside

Press@RunDepth: 70.39 psig @ 3579.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.07.06 End Date: 2017.07.06 Last Calib.: 2017.07.06
 Start Time: 04:39:06 End Time: 12:20:11 Time On Btm: 2017.07.06 @ 07:02:26
 Time Off Btm: 2017.07.06 @ 10:25:56

TEST COMMENT: 15- IF- Slow ly built to 3"
 60- IS- No blow
 30- FF- Slow ly built to 2.5"
 90- FSI- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1706.96	107.91	Initial Hydro-static
2	27.79	107.56	Open To Flow (1)
14	39.31	108.56	Shut-In(1)
77	489.62	111.25	End Shut-In(1)
78	48.52	111.07	Open To Flow (2)
105	70.39	112.43	Shut-In(2)
198	436.73	114.44	End Shut-In(2)
204	1688.80	114.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
109.00	MW, 20%W 80%M	1.55

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Coachman Energy Operating Co., LLC

25-15S-20W Ellis, KS

1125 17th St.
Suite 410
Denver, CO 80202
ATTN: Jeremy Schwartz

Leiker #4-25-15-20

Job Ticket: 63279

DST#: 2

Test Start: 2017.07.06 @ 04:39:05

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:

65000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
109.00	MW, 20%W 80%M	1.545

Total Length: 109.00 ft Total Volume: 1.545 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

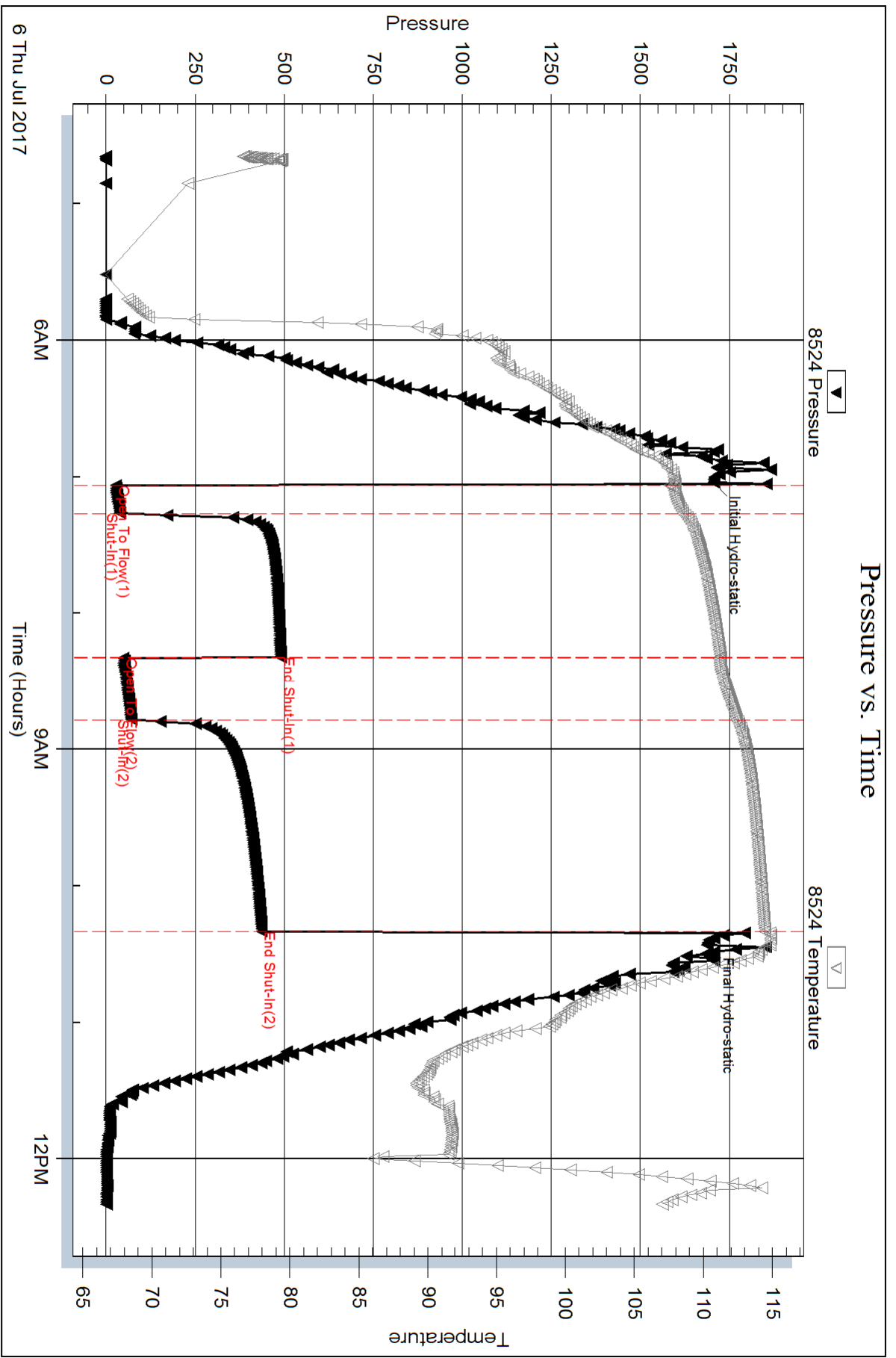
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler: 200mL M & 1800mL W @ 140 PSI

RW: .08 @ 88deg



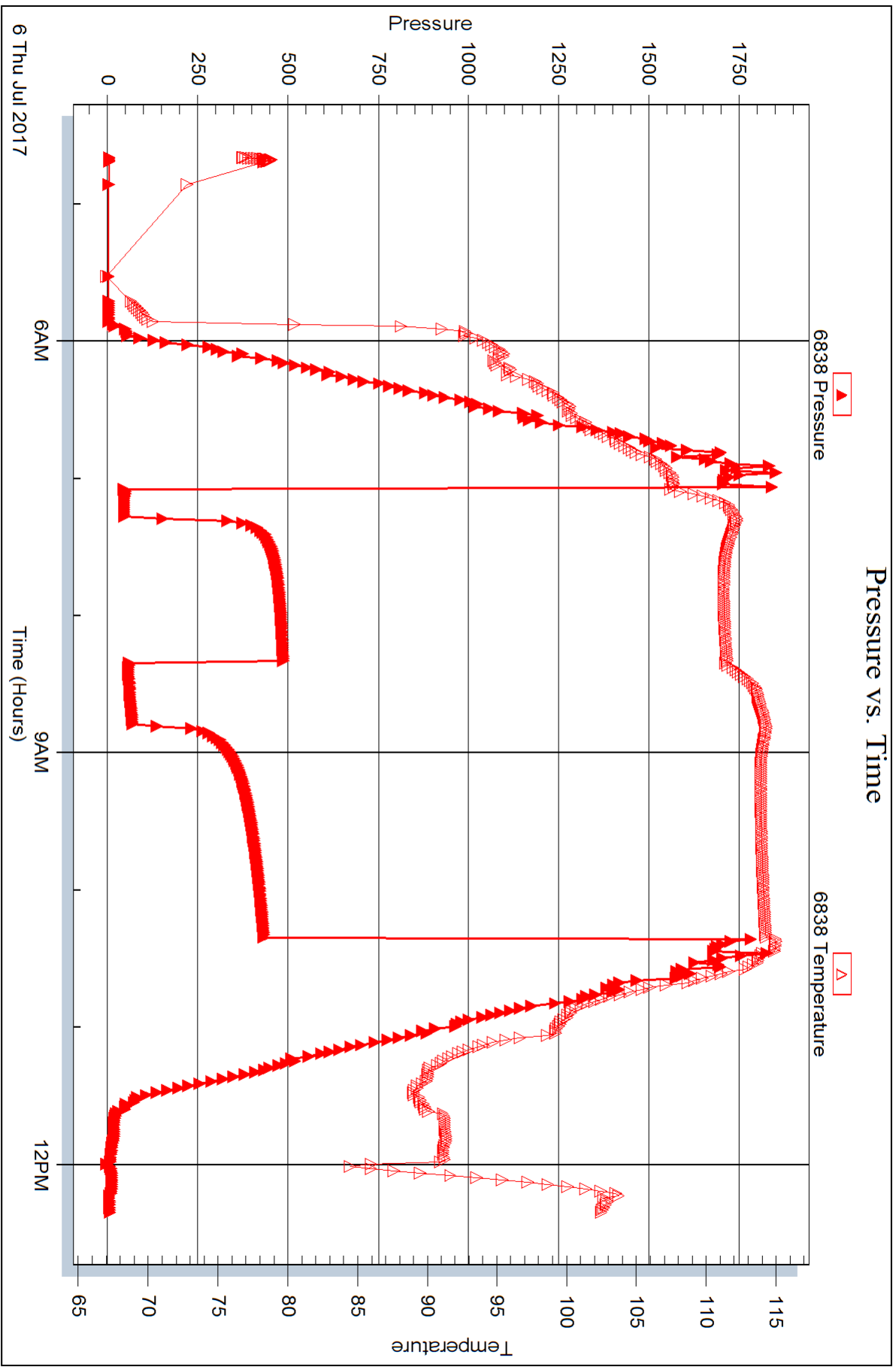
Serial #: 68338

Inside

Coachman Energy Operating Co., LLC

Leiker #4-25-15-20

DST Test Number: 2





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Coachman Energy Operating Co., LLC

25-15S-20W Ellis, KS

1125 17th St.
Suite 410
Denver, CO 80202
ATTN: Jeremy Schwartz

Leiker #4-25-15-20

Job Ticket: 63280

DST#: 3

Test Start: 2017.07.07 @ 10:53:56

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:18:47

Time Test Ended: 17:40:47

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3685.00 ft (KB) To 3760.00 ft (KB) (TVD)

Reference Elevations: 2145.00 ft (KB)

Total Depth: 3760.00 ft (KB) (TVD)

2137.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8524 Outside

Press@RunDepth: 105.40 psig @ 3694.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.07

End Date:

2017.07.07

Last Calib.:

2017.07.07

Start Time: 10:53:57

End Time:

17:40:47

Time On Btm:

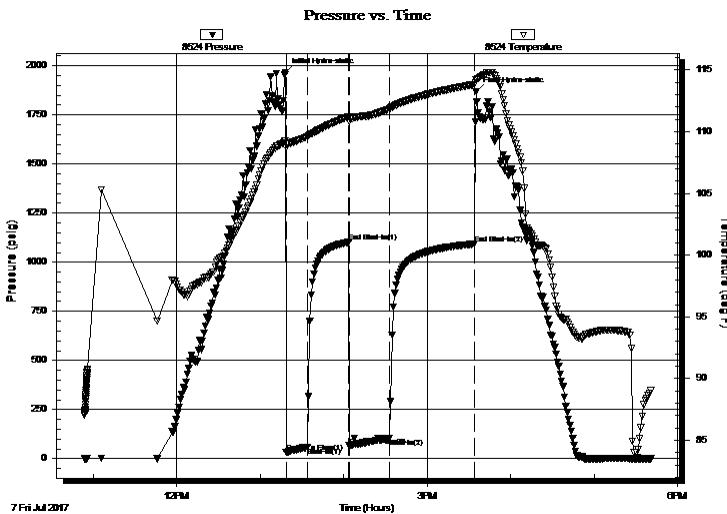
2017.07.07 @ 13:18:17

Time Off Btm:

2017.07.07 @ 15:35:17

TEST COMMENT: 15- IF- Slow ly built to 5.5"
30- IS- No blow
30- FF- Slow ly built to 7.5"
60- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1965.81	109.28	Initial Hydro-static
1	32.50	108.70	Open To Flow (1)
16	57.72	109.57	Shut-In(1)
46	1102.43	111.22	End Shut-In(1)
46	65.84	110.81	Open To Flow (2)
75	105.40	111.82	Shut-In(2)
136	1093.11	113.81	End Shut-In(2)
137	1868.71	114.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
172.00	M(Very sandy)	2.44

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Coachman Energy Operating Co., LLC

25-15S-20W Ellis, KS

1125 17th St.
Suite 410
Denver, CO 80202
ATTN: Jeremy Schwartz

Leiker #4-25-15-20

Job Ticket: 63280

DST#: 3

Test Start: 2017.07.07 @ 10:53:56

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 11300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
172.00	M (Very sandy)	2.438

Total Length: 172.00 ft Total Volume: 2.438 bbl

Num Fluid Samples: 0

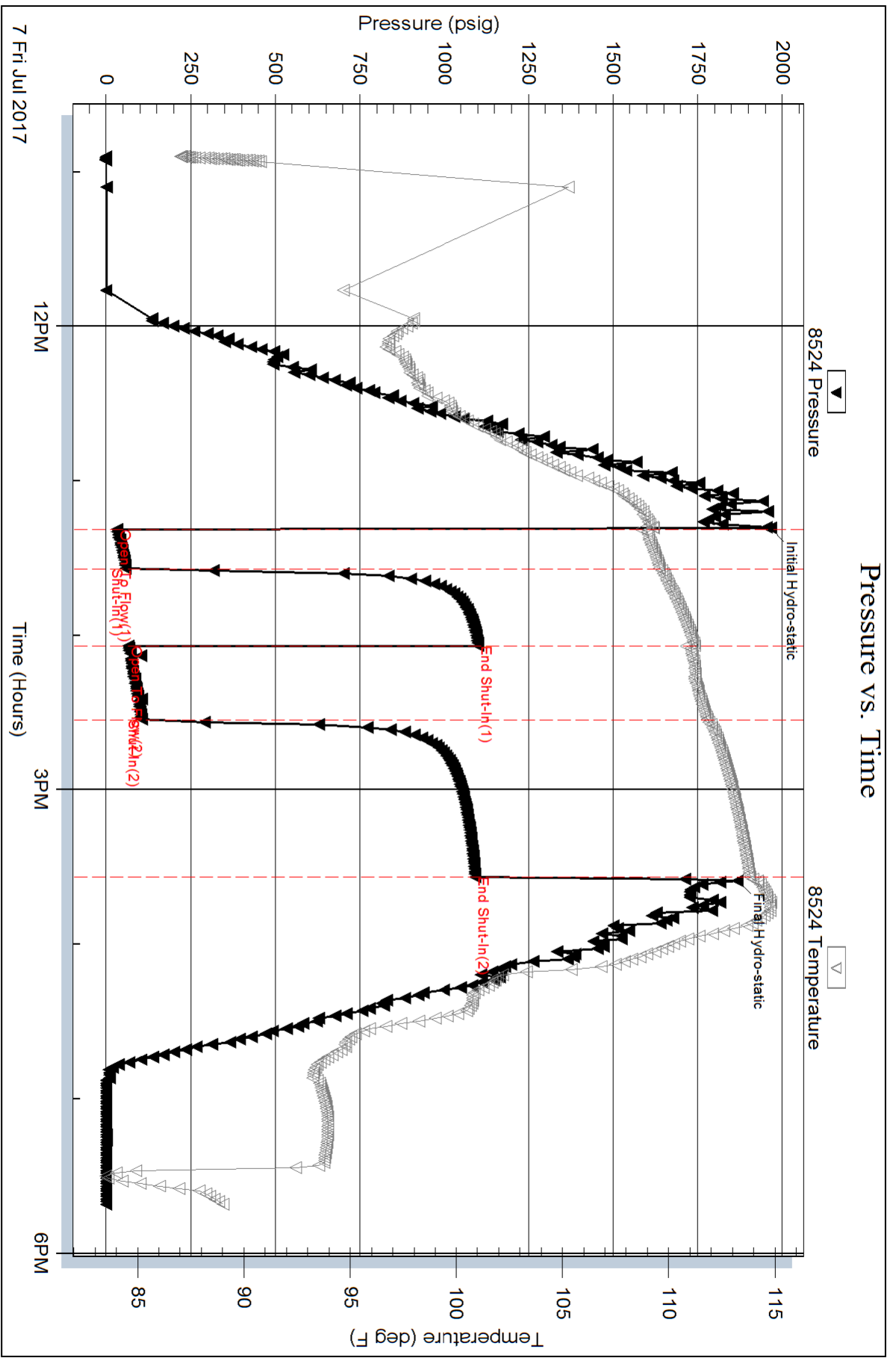
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler: 2000mL M @ 245 PSI



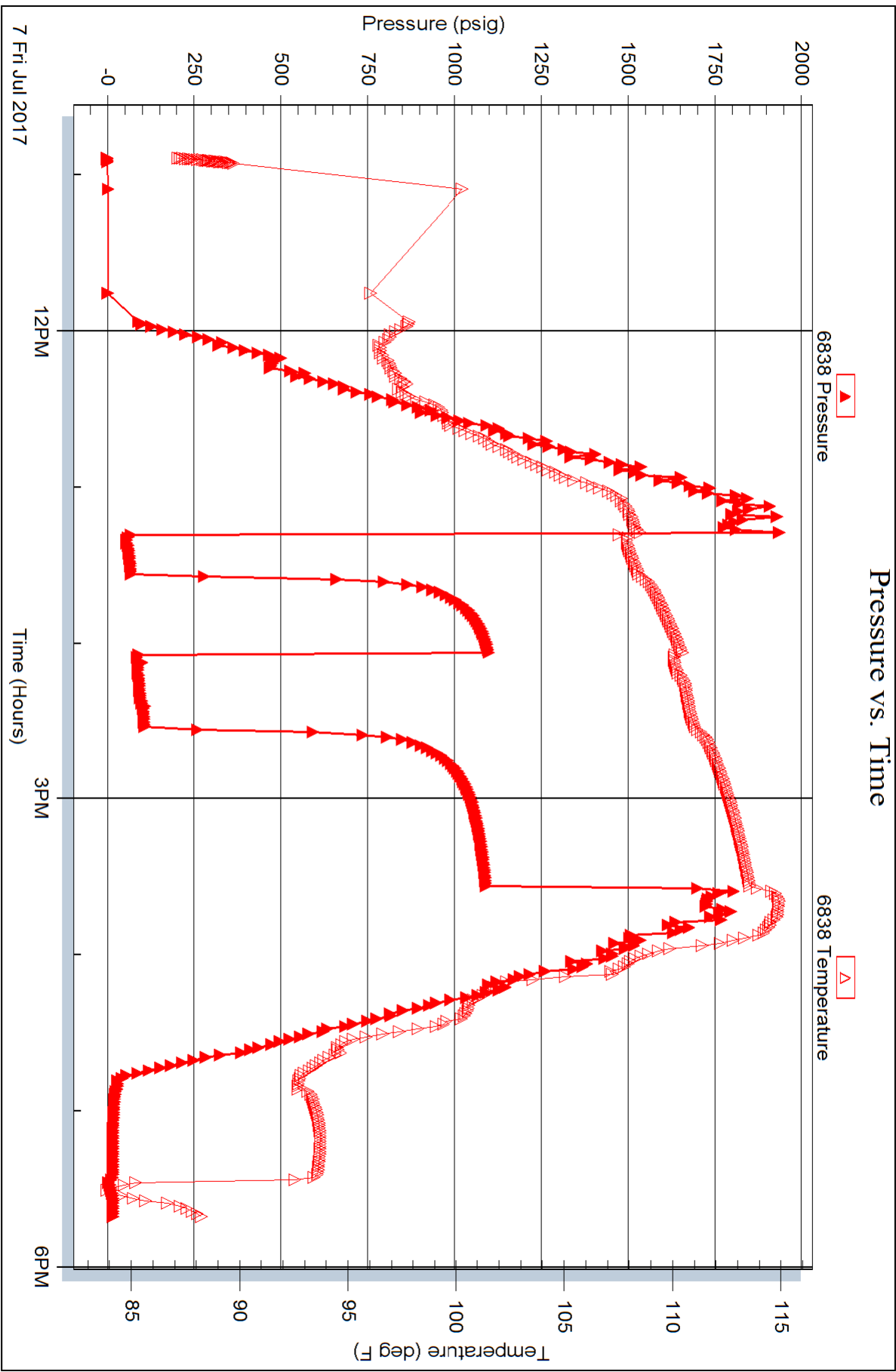
Serial #: 6838

Inside

Coachman Energy Operating Co., LLC

Leiker #-4-25-15-20

DST Test Number: 3





Scale 1:240 Imperial

Well Name: Leiker #4-25-15-20
Surface Location: 133' FSL, 1285' FWL, Sec. 25-T15S-R20W
Bottom Location:
API: 15-051-26884-00-00
License Number: 1349692
Spud Date: 6/30/2017 Time: 3:15 PM
Region: Ellis County
Drilling Completed: 7/8/2017 Time: 5:15 AM
Surface Coordinates:
Bottom Hole Coordinates:
Ground Elevation: 2137.00ft
K.B. Elevation: 2145.00ft
Logged Interval: 2900.00ft To: 3850.00ft
Total Depth: 3850.00ft
Formation: Lansing Kansas-City
Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: Cynosure Energy, LLC
Address: 1125 17th St., Suite 410
Denver, CO 80202

Contact Geologist: Gene Davis
Contact Phone Nbr: 720-272-9620 / 720-476-3678
Well Name: Leiker #4-25-15-20
Location: 133' FSL, 1285' FWL, Sec. 25-T15S-R20W
API: 15-051-26884-00-00
Pool: Kansas Field: Post Rock South
State: Kansas Country: USA

LOGGED BY

Company: Mile High Exploration, LLC
Address: 675 Loveland St
Golden, CO 80401

Phone Nbr: 203-671-6034
Logged By: Geologist Name: Jeremy Schwartz

NOTES

The Cynosure Energy, LLC Leiker #4-25-15-20 was drilled to a total depth of 3850', bottoming in the Precambrian.

Three DST's were conducted throughout the Lansing-Kansas City and Conglomerate zones during the drilling of this well. The DST Reports can be found at the bottom of this log.

Due to negative DST Results, sample shows, and log analysis it was determined by all parties involved to run casing for a future injection well. The dry samples were saved and will be available for further review at the Kansas Geological Society Well Sample Library, located in Wichita, KS.

Respectfully Submitted,
Jeremy Schwartz
Geologist

CONTRACTOR

Contractor: Duke Drilling
Rig #: 2

Rig Type: Mud Rotary
 Spud Date: 6/30/2017
 TD Date: 7/8/2017
 Rig Release:

Time: 3:15 PM
 Time: 5:15 AM
 Time:

ELEVATIONS









K.B. Elevation: 2145.00ft
 K.B. to Ground: 8.00ft

Ground Elevation: 2137.00ft

DATE	DEPTH	ACTIVITY
Tuesday, July 04, 2017	2965'	Geologist Jeremy Schwartz on location @0030hrs, ~2960', drlg ahead through Tarkio, Topeka, King Hill, Queen Hill, Heebner, Toronto, Lansing,
Wednesday, July 05, 2017	3526'	CFS @ 3526', conduct short trip, CTCH 1hr, drop survey, strap out for DST #1 in the Lansing "A-F", successful test, trip back in hole, CTCH 2.5hrs (work on mud pump), Resume drlg ahead through Lansing,
Thursday, July 06, 2017	3614' 3641'	CFS @ 3614', trip out of hole to conduct DST #2 in the Lansing "H-I", successful test Resume drlg ahead through Lansing, Rig down for repairs (work on mud pump)
Friday, July 07, 2017	3683' 3760'	Resume drlg, Rig down for repairs (work on mud pump), Resume drlg, CFS @ 3746', resume drlg, CFS @ 3760' trip out of hole to conduct DST #3 in the Conglomerate, successful test, resume drlg ahead to TD
Saturday, July 08, 2017	3850'	TD of 3850' reached @ 0515hrs, CFS 1hr, drop survey, trip out of hole for logs Conduct Logging operations, logging operations complete @ 1045hrs, Waiting on orders, decision made to set casing for future injection well Geologist Jeremy Schwartz off location @ 1600hrs

FORMATION	Cynosure Energy, LLC																	
	Leiker #4-25-15-20					Leiker #3-25-15-20					Leiker #2-25-15-20							
	KB		2145			KB		2149			KB		2131					
	LOG TOPS		SAMPLE TOPS			COMP. CARD		LOG		SMPL.	COMP. CARD		LOG		SMPL.			
DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.			
Anhydrite Top	1366	779	1367	778	1376	773			+	6	+	5	1363	768	+	11	+	10
Anhydrite Base	1410	735	1408	737	1418	731			+	4	+	6	1403	728	+	7	+	9
Stotler	2951	-806	2949	-804	2958	-809			+	3	+	5	2932	-801	-	5	-	3
Tarkio	2996	-851	2997	-852	3000	-851			+	0	-	1	2976	-845	-	6	-	7
Topeka	3120	-975	3120	-975	3124	-975			+	0	+	0	3100	-969	-	6	-	6
King Hill	3247	-1102	3248	-1103	3250	-1101			-	1	-	2	3226	-1095	-	7	-	8
Queen Hill	3307	-1162	3308	-1163	3310	-1161			-	1	-	2	3286	-1155	-	7	-	8
Heebner	3398	-1253	3398	-1253	3396	-1247			-	6	-	6	3375	-1244	-	9	-	9
Toronto	3420	-1275	3420	-1275	3418	-1269			-	6	-	6	3396	-1265	-	10	-	10
Lansing	3442	-1297	3442	-1297	3442	-1293			-	4	-	4	3422	-1291	-	6	-	6
Muncie Creek	3570	-1425	3567	-1422	3568	-1419			-	6	-	3	3546	-1415	-	10	-	7
Stark	3640	-1495	3639	-1494	3641	-1492			-	3	-	2	3620	-1489	-	6	-	5
BKC	3687	-1542	3692	-1547	3688	-1539			-	3	-	8	3666	-1535	-	7	-	12
Marmaton	3722	-1577	3722	-1577	3727	-1578			+	1	+	1	3695	-1564	-	13	-	13
Conglomerate	3752	-1607	3752	-1607	3764	-1615			+	8	+	8						
Cong. Sand	3755	-1610	3753	-1608	3790	-1641			+	31	+	33	3747	-1616	+	6	+	8
Pre-Cambrian	3794	-1649	3792	-1647	3804	-1655			+	6	+	8	3758	-1627	-	22	-	20
RTD			3850	-1705	3865	-1716					+	11	3800	-1669				36
LTD	3853	-1708			3863	-1714			+	6			3799	-1668	-	40		

ROCK TYPES

 Chtcong	 shale, grn	 Carbon Sh	 Ss
 Lmst fw<7	 shale, gry	 shale, red	 Ignebasic

ACCESSORIES

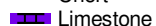

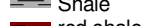
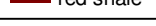
MINERAL

△ Chert White
 ∴ Varicolored chert

FOSSIL










∩ Bioclastic or Fragmental
 F Fossils < 20%

STRINGER

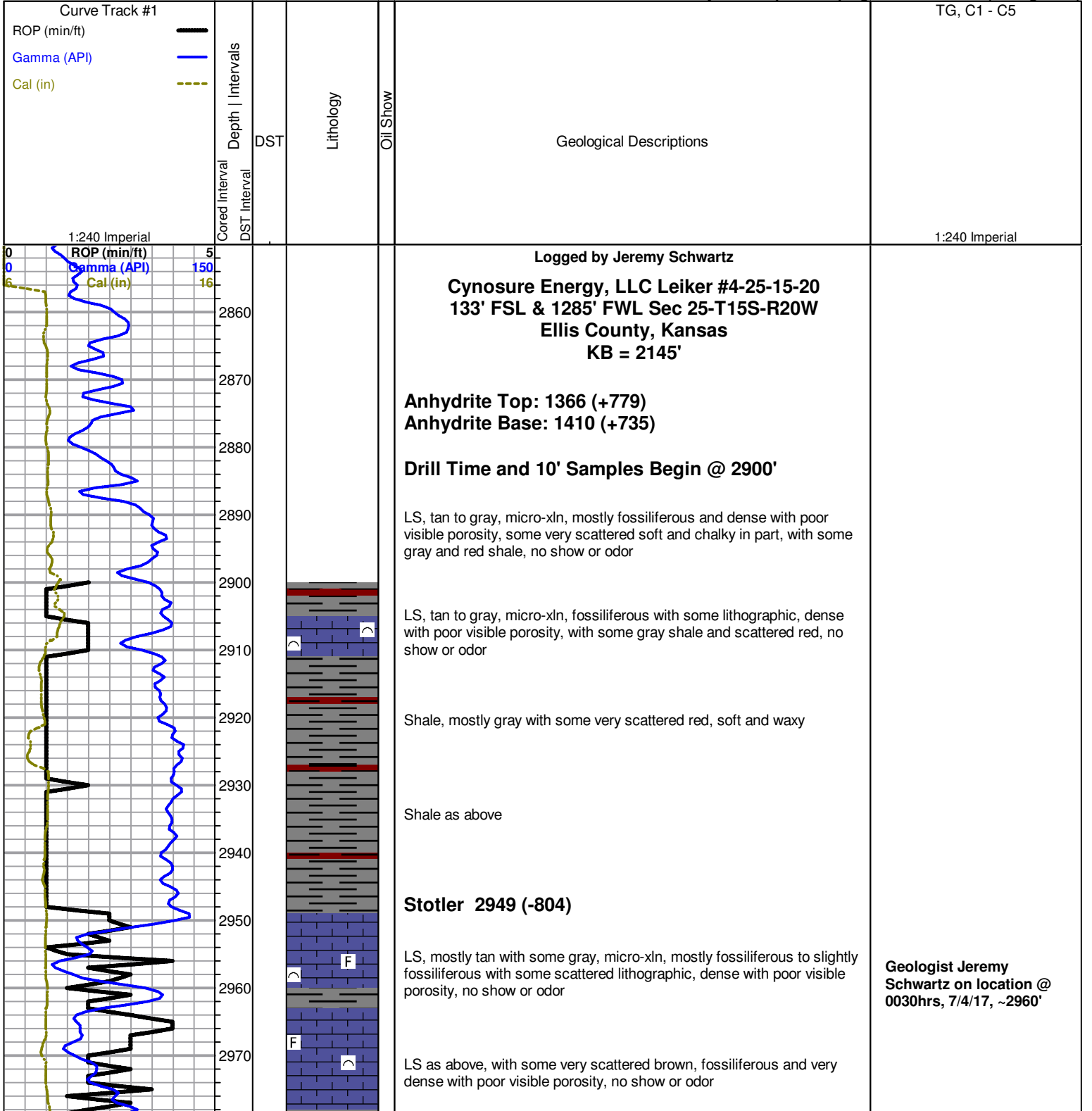
∩ Chert
 Limestone
 Sandstone
 Shale
 red shale

TEXTURE

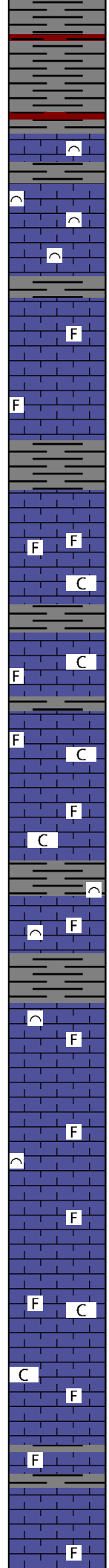
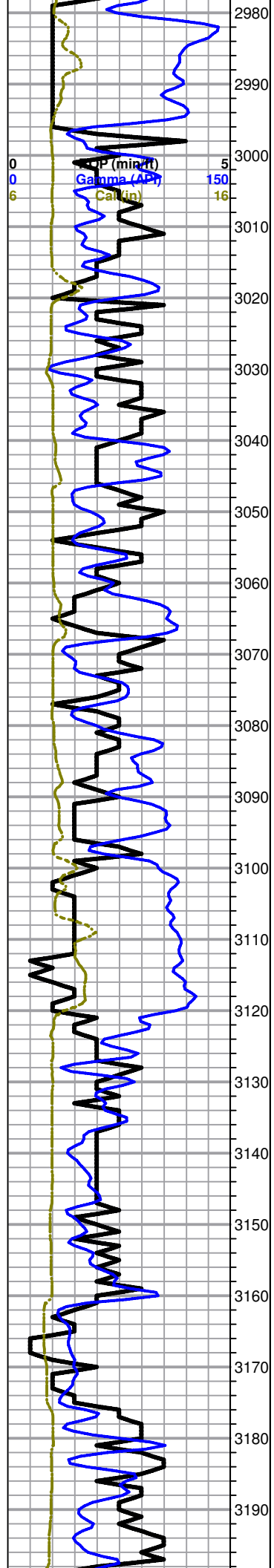
C Chalky

- MISC**
-  Daily Report
 -  Digital Photo
 -  Document
 -  Folder
 -  Link
 -  Vertical Log File
 -  Horizontal Log File
 -  Core Log File
 -  Drill Cuttings Rpt

- DST**
-  DST Int
 -  DST alt



Geologist Jeremy Schwartz on location @ 0030hrs, 7/4/17, ~2960'



Shale, gray with trace red, mostly soft and waxy

Tarkio 2997 (-852)

LS, tan to gray with some very scattered brown, micro-xln, mostly fossiliferous and dense with poor visible porosity, some scattered lithographic, no show or odor

LS as above, no show or odor

LS, tan to gray with some very scattered brown, micro-xln, slightly fossiliferous to lithographic, no show or odor

LS as above, no show or odor

LS, mostly gray to brown with some scattered tan, mostly lithographic and dense with poor visible porosity, some scattered slightly fossiliferous, no show or odor

LS, tan to cream with some gray, micro-xln, mostly lithographic with poor visible porosity, some very scattered slightly fossiliferous, with some scattered soft and chalky in part, no show or odor

LS, mostly tan to cream, micro-xln, lithographic with poor visible porosity, some scattered soft and chalky in part, with some scattered gray, slightly fossiliferous and dense with poor visible porosity, no show or odor

LS, tan to cream and gray, micro-xln, some lithographic, some fossiliferous, mostly dense with poor visible porosity, slightly chalky, no show or odor

LS, mostly gray to brown, fossiliferous and dense with poor visible porosity, with some scattered cream to tan, lithographic to slightly fossiliferous with poor visible porosity, no show or odor

LS, mostly gray to brown with some scattered cream, micro-xln, lithographic to fossiliferous with poor visible porosity, no show or odor

Topeka 3120 (-975)

LS, cream to gray, micro-xln, mostly lithographic with poor visible porosity, also with some dark gray to dark brown, lithographic and very dense with poor visible porosity, no show or odor

LS, gray to cream, micro-xln, some fossiliferous, some lithographic, overall mostly dense with poor visible porosity, no show or odor

LS, mostly same as above, mostly lithographic, some scattered slightly fossiliferous, poor visible porosity, no show or odor

LS, gray with some scattered cream, micro-xln, mostly lithographic and dense with poor visible porosity, some very scattered slightly fossiliferous, no show or odor

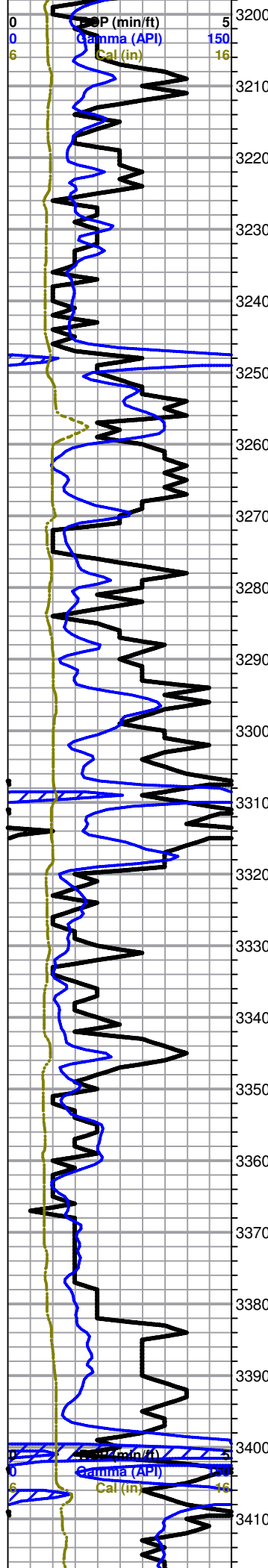
LS, cream with some scattered gray, micro-xln, mostly lithographic to slightly fossiliferous with poor visible porosity, some soft and chalky in part, also with some scattered with poor to fair visible pinpoint porosity, chips fairly friable, some chalky in part, no show or odor

LS, cream with some scattered gray, micro-xln, mostly lithographic with poor visible porosity, some very scattered slightly fossiliferous, no show or odor

LS as above, no show or odor

LS, cream to gray, micro-xln, lithographic to fossiliferous, mostly poor

Mud-Co Mud chk
 3198'
 7/04/17
 Vis: 43 Wt: 9.1
 PV: 14 YP: 19
 WL: 7.2
 Cake: 1/32



LS, cream to gray, micro-xln, lithographic to fossiliferous, mostly poor visible porosity, with some very scattered chips cream with mostly poor visible pinpoint porosity, few chips with fair porosity, barren, some soft and chalky in part, no show or odor

LS as above, no show or odor

LS, gray to cream, micro-xln, mostly fossiliferous and dense with poor visible porosity, no show or odor

LS as above, no show or odor

LS, gray to cream with some scattered brown, micro-xln, mostly fossiliferous and dense with poor visible porosity, with some scattered cream, lithographic, soft and chalky in part, fairly chalky sample, no show or odor

King Hill 3248 (-1103)

Shale, black carbonaceous

LS, cream to light gray, crypto-micro xln, mostly lithographic and dense with poor visible porosity, few scattered chips micro-xln with re-crystallized edges with poor visible porosity, also with trace tan chert, fresh and sharp, no show or odor

LS with trace chert as above, no show or odor

LS, mostly cream, crypto-xln and lithographic with poor visible porosity, some soft and chalky in part, with some scattered micro-xln, slightly fossiliferous and trace tan to brown chert, no show or odor

LS, cream to gray, micro-xln, mostly lithographic with some scattered slightly fossiliferous and some soft and chalky in part, overall poor visible porosity, no show or odor

LS as above, fairly chalky, no show or odor

Queen Hill 3308 (-1163)

Shale, black carbonaceous

LS, gray to cream, micro-xln, mostly lithographic with some scattered fossiliferous and gray mottled, dense with poor visible porosity, no show or odor

LS as above, fairly chalky, no show or odor

LS, mostly cream, micro-xln and soft and chalky in part, poor visible porosity, very chalky sample, no show or odor

LS as above, very chalky, no show or odor

LS as above, with slight influx brown, micro-xln, fossiliferous and dense with poor visible porosity, very chalky, no show or odor

LS, mostly cream with some scattered gray and brown, lithographic to fossiliferous, overall poor visible porosity, fairly chalky, no show or odor

LS as above, slightly less chalky, no show or odor

LS, cream to light gray, micro-xln, mostly lithographic with some scattered slightly fossiliferous, mostly dense with poor visible porosity, slightly chalky, no show or odor

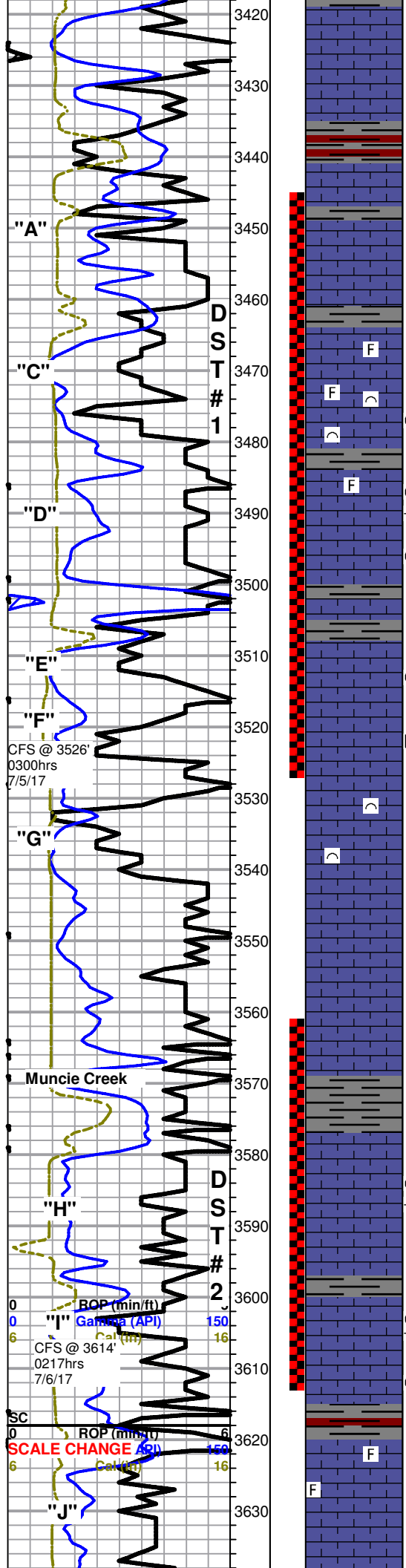
Heebner 3398 (-1253)

Shale, black carbonaceous

Shale, gray, soft and waxy

Toronto 3420 (-1275)

Ca: Tr
 CHL: 9,800ppm
 Sol: 5.2 LCM: 2
 DMC: \$1,109.16
 CMC: \$5,938.15



LS, white to cream with some scattered light gray, micro-xln with some scattered crypto-xln, lithographic and mostly dense with poor visible porosity, no show or odor

Lansing 3442 (-1297)

Coachman Leiker 4-25-15-20 dst 1.jpg

LS, cream to gray, micro-xln, mostly lithographic with some very scattered slightly fossiliferous, dense with poor visible porosity, some scattered chips re-crystallized with poor visible porosity, upon break chips show poor inter-xln porosity, barren, no show, fluor., or odor

~3450' LS as above, with slight influx cream to light gray, micro-xln, oolitic with poor visible porosity, no show, fluor., or odor

LS, cream to gray, micro-xln, mostly lithographic with some scattered oolitic as above and very scattered slightly fossiliferous, overall poor visible porosity, no show, fluor., or odor

LS as above, also with some brown, fossiliferous and very dense with poor visible porosity, no show, fluor., or odor

LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, also with some very scattered cream (<5%), slightly fossiliferous to oolitic with mostly poor very scattered inter-fossil stain between fragments or oolites, upon break most chips show poor inter-xln porosity with mostly poor very spotty inter-xln stain and VSSFO (1-2heavy droplets), very weak cut with dull yellow to milky white fluor., NSFO in tray, no odor

~3490' LS, mostly cream, lithographic and dense with poor visible porosity, some (~10%) with scattered poor to fair visible pinpoint porosity and scattered to very scattered stain in and around porosity only, few chips with scattered free oil pooling up on surface around porosity, upon break some chips show fair inter-xln porosity and staining with fair show free oil and very slight show gas bubbles, slow streaming cut with milky white fluor., few chips increase to mostly saturated light golden brown stain when left under lamp for several minutes, SSFO in tray, fair odor

~3500' LS, cream, micro-xln, lithographic with some scattered oolitic and fossiliferous, mostly dense and barren with poor visible porosity, few very scattered chips with very scattered poor pinpoint porosity and poor stain around porosity only, upon break few have VSSFO and show poor inter-xln porosity and stain, SSFO in tray, no fluor., poor fleeting odor

~3510' LS, cream, micro-xln, lithographic to oolitic with some scattered fossiliferous, mostly dense and barren with poor visible porosity, few chips (<5%) with very scattered poor inter-fossil or inter-oolite stain, upon break most show poor visible inter-xln porosity and NSFO to VSSFO, no odor

See Sidebar for CFS samples

~3530' LS, cream to gray with some scattered white to off-white, micro-xln, mostly lithographic with some oolitic and fossiliferous, dense with poor visible porosity, with some scattered soft and chalky in part, no show, fluor., or odor

~3540' LS, cream to white, micro-xln, mostly lithographic with poor visible porosity, some scattered soft and chalky in part as well as some scattered oolitic, no show, fluor., or odor

~3550' LS as above, with slight influx light gray to light brown, lithographic and dense with poor visible porosity, no show, fluor., or odor

LS, cream to brown, micro-xln, lithographic and dense with poor visible porosity, with some very scattered slightly fossiliferous, no show, fluor., or odor

Coachman Leiker 4-25-15-20 dst 2.jpg

LS, cream to light gray with some light brown, micro-crypto xln, lithographic and dense with poor visible porosity, no show, fluor., or odor

~3590' LS, mostly same as above, with few very scattered chips (<5%) cream, micro-xln, lithographic with some scattered poor to fair visible pinpoint porosity and stain around porosity only, chips show dull to bright yellow fluor., upon break VSSFO (very light brown to opaque droplets) and few very scattered gas bubbles in few with poor to fair visible inter-xln porosity and fair inter-xln stain, when left under lamp for several minutes stain increases throughout matrix to mostly saturated light golden brown stain, slow streaming cut, VSSFO in tray, very poor fleeting odor in wet cup

~3600' LS, cream to white, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered chips (~15%) with some scattered poor to fair visible pinpoint porosity to slightly vuggy and re-crystallized with stain in and around porosity as well as fair show gas bubbles, upon break some chips show fair to good show free oil and scattered poor to fair inter-xln stain and porosity, some chips too dense to break but when agitated have good show free oil, few very scattered small chips re-crystallized with fair vuggy porosity and mostly saturated stain, SSFO in tray, poor odor

See sidebar for CFS samples

~3620' LS, gray to cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some scattered slightly fossiliferous, no show or odor

~3630' LS, cream to white with some gray, micro-xln, mostly same as above, with some scattered soft and chalky in part, no show or odor

DST #1 3445'-3526'
LKC "A-F"
15-60-30-90
Recovered: 203' GIP,
62' SOCMW (5%O/25% M/70%W)
297' WOCM (20% W/15%O/65%M)
SIP: 1087-1030#

3526' 30" LS, cream to light gray, micro-xln, lithographic to oolitic, mostly dense and barren with poor visible porosity, trace lithographic with scattered poor pinpoint porosity on edges only with poor stain in porosity only, upon break NSFO and poor visible inter-xln porosity, NSFO in tray, no fluor., or odor

3526' 60" Mostly same as above, with trace oolitic with very scattered dead gilsonitic inter-oolite stain, NSFO in tray, no odor

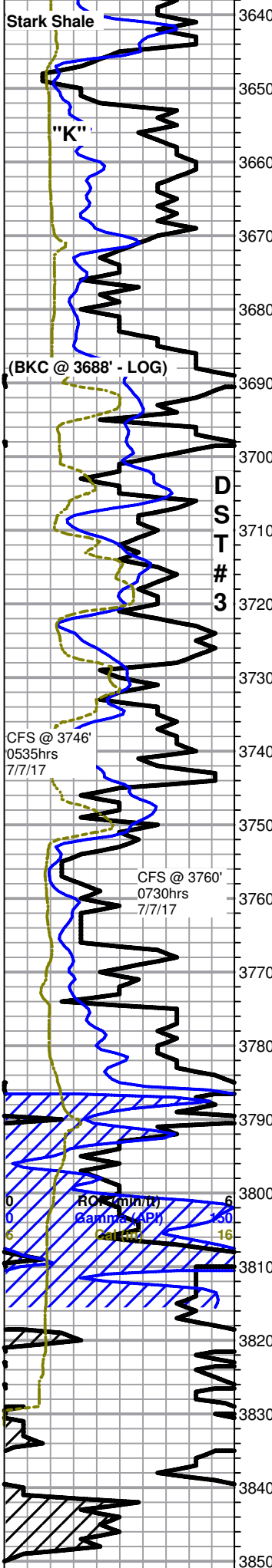
Survey @ 3526' = 1Deg Strap 1.70LTB

Mud-Co Mud chk
 3526'
 7/5/17
 Vis: 55 Wt: 9.1
 PV: 14 YP: 26
 WL: 6.8
 Cake: 1/32
 pH: 11.0
 Ca: Tr
 CHL: 6,600ppm
 Sol: 5.4 LCM: 2
 DMC: \$340.10
 CMC: \$6,278.25

3614' 30" LS, light gray to white, micro-xln, mostly lithographic and dense with poor visible porosity, few very scattered chips (<5%) with some scattered mostly poor edge pinpoint porosity and stain in and around porosity only, most too dense to break, also with few small chips with very scattered areas of fair vuggy porosity and stain confined to areas of porosity, SSFO in tray, poor odor

3614' 60" LS as above with shows mostly dropping out, with slight influx oolitic, few chips have scattered inter-oolite staining, fairly dense with poor visible porosity, when agitated and eventually broken chips have fair to good show free oil, SSFO in tray, poor odor

DST #2 3561'-3614'
LKC "H-I"
15-60-30-90



Stark Shale

(BKC @ 3688' - LOG)

CFS @ 3746'
0535hrs
7/7/17

CFS @ 3760'
0730hrs
7/7/17

RO (min/m)
Gamma (API)
Porosity

LS as above, no show or odor

LS, cream to white, micro-xln, lithographic to oolitic and dense with poor visible porosity, with some soft and chalky in part, no show or odor

LS, light brown to gray with some cream to white, micro-xln, fossiliferous to lithographic and mostly dense with poor visible porosity, some scattered oolitic as well as some soft and chalky in part, no show or odor

LS as above, no show or odor

LS, light brown to white with some scattered cream and gray, micro-xln, mostly lithographic with some very scattered oolitic, dense with poor visible porosity, also with some scattered soft and chalky in part, no show or odor

BKC 3692 (-1547)

Shale, red and gray, soft and waxy

LS, gray to cream, micro-xln, lithographic and dense with poor visible porosity, no show or odor

LS, cream to gray, micro-xln, lithographic to slightly fossiliferous and dense with poor visible porosity, no show or odor

Marmaton 3722 (-1577)

LS, gray to cream with some scattered brown, mostly lithographic with some fossiliferous, dense with poor visible porosity, no show or odor

3746' 30" Mostly maroon to red and gray shale, with some LS, gray to cream, micro-xln, lithographic to slightly fossiliferous and dense with poor visible porosity, with trace red to orange chert, also with few very scattered quartz SS grains in bottom of tray, fine grained, sub-rounded to rounded, grains appear barren, no show or odor

3746' 60" Same as above, also with few very scattered SS clusters, f-med grained, gray to green, sub-rounded to sub-angular and poorly sorted, most well cemented and dense, few fairly friable, no show or odor

Coachman Leiker 4-25-15-20 dst 3.jpg

3760' 30" LS, cream, micro-xln, re-crystallized and mostly dense, some fairly friable, some with mostly poor visible vf pinpoint to inter-xln porosity, most appear barren, some gassy, some also slowly bleed free oil droplets to surface, upon break some chips with good show free oil and mostly poor to some scattered fair inter-xln porosity with free oil and gas bubbles slowly bleeding from porosity, slow to instant streaming cut, also with slight influx white chert with some very scattered tan to opaque, with some scattered loose SS grains in bottom of tray, fine grained, sub-rounded to sub-angular, appear barren, good show free oil in tray, poor odor

3760' 60" Mostly same as above, with noticeably less shows and VSSFO in tray, no odor

~3762 Mixed red and gray shales with varicolored orange/red to tan/brown and opaque cherts, most fresh and sharp, few pieces with very slightly poor tripolitic edge with poor tarry, black stain, with scattered cream to gray and white LS, also with some vf-f and coarse quartz ss grains in bottom of tray, most sub-rounded to rounded, clear and barren, no show or odor

~3770' Conglomerate as above, with abundant vf-f quartz ss grains in bottom of tray, sub-rounded to rounded, clear and barren, no shows or odor

~3780' Conglomerate as above, with slight influx ss clusters, clear to dirty reddish-brown, mostly fine grained and well cemented, sub-rounded to sub-angular and poorly sorted, barren, also with some scattered quartzite, most reddish-brown with some clear, with pyrite/magnetite inclusions, no shows or odor

Pre-Cambrian Quartzite 3792' (-1647)

Quartzite, most reddish-brown with abundant pyrite/magnetite inclusions, no show or odor

Quartzite, mostly reddish-brown to pink, with abundant pyrite and magnetite inclusions, some scattered clear

Quartzite as above, some scattered mostly black due to abundant mineral inclusions

Recovered: 109' WM
(20%W/80%M)
SIP: 490-437#

Mud-Co Mud chk
3614'
7/6/17
Vis: 49 Wt: 9.2
PV: 15 YP: 21
WL: 7.4
Cake: 1/32
pH: 10.5
Ca: 20ppm
CHL: 9,800ppm
Sol: 5.9 LCM: 2
DMC: \$17.11
CMC: \$6,295.36

Mud-Co Mud chk
3760'
7/7/17
Vis: 51 Wt: 9.3
PV: 17 YP: 24
WL: 7.8
Cake: 1/32
pH: 10.5
Ca: Tr
CHL: 11,300ppm
Sol: 5.7 LCM: 2
DMC: \$855.12
CMC: \$7,150.48

DST #3 3685'-3760'
Pawnee
15-30-30-60
Recovered: 172'M
(Very Sandy)
SIP: 1102-1093#

Mud-Co Mud chk
3850'
7/8/17
Vis: 57 Wt: 9.4
PV: 19 YP: 27
WL: 8.0
Cake: 1/32
pH: 10.5
Ca: Tr
CHL: 10,800ppm
Sol: 7.2 LCM: 2
DMC: \$732.80
CMC: \$7,883.28

Survey @ 3850' = 3/4Deg

Coachman Leiker 4-25-15-20 dst 1.jpg

DRILL STEM TEST REPORT

Coachman Energy Operating Co., LLC

25-15S-20W Ellis, KS

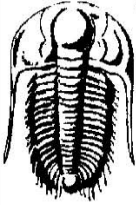
1125 17th St.
Suite 410
Denvr, CO 80202
ATTN: Jeremy Schwartz

Leiker #4-25-15-20

Job Ticket: 63278

DST#: 1

Test Start: 2017.07.05 @ 08:15:33



TRILOBITE
TESTING, INC

GENERAL INFORMATION:

Formation: **LKC "A-F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:21:09
 Time Test Ended: 17:03:08

Test Type: Conventional Bottom Hole (Initial)
 Tester: Brannan Lonsdale
 Unit No: 73

Interval: **3445.00 ft (KB) To 3526.00 ft (KB) (TVD)**
 Total Depth: 3526.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2145.00 ft (KB)
 2137.00 ft (CF)
 KB to GR/CF: 8.00 ft

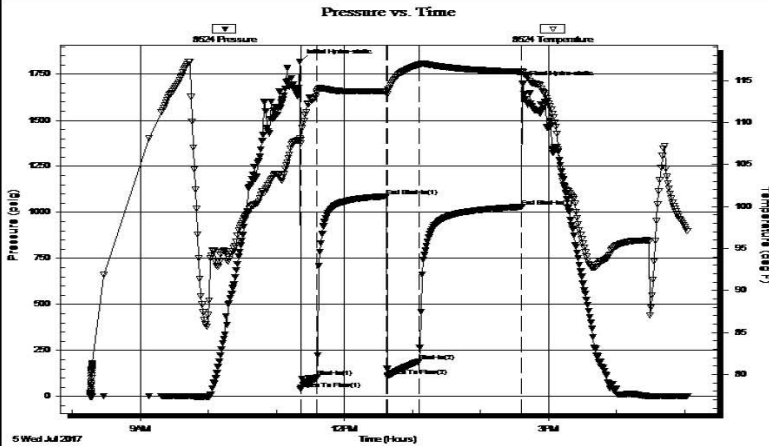
Serial #: 8524

Outside

Press@RunDepth: 190.28 psig @ 3459.00 ft (KB)
 Start Date: 2017.07.05 End Date: 2017.07.05
 Start Time: 08:15:34 End Time: 17:03:08

Capacity: 8000.00 psig
 Last Calib.: 2017.07.05
 Time On Btm: 2017.07.05 @ 11:20:39
 Time Off Btm: 2017.07.05 @ 14:37:24

TEST COMMENT: 15- IF- BOB 8mins
 60- IS- No blow
 30- FF- BOB 11mins
 90- FS- Weak surface blow died in 20mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1819.06	108.12	Initial Hydro-static
1	39.02	107.55	Open To Flow (1)
16	105.11	113.76	Shut-In(1)
77	1087.31	113.79	End Shut-In(1)
78	111.79	113.78	Open To Flow (2)
105	190.28	116.90	Shut-In(2)
196	1030.03	116.07	End Shut-In(2)
197	1698.39	116.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	SOCMW, 5%O 25%M 70%W	0.88
297.00	WOCM, 20%W 15%O 65%M	4.21
0.00	203' GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Coachman Energy Operating Co., LLC
 1125 17th St.
 Suite 410
 Denver, CO 80202
 ATTN: Jeremy Schwartz

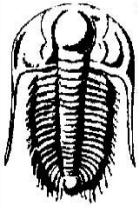
25-15S-20W Ellis, KS

Leiker #4-25-15-20

Job Ticket: 63279

DST#: 2

Test Start: 2017.07.06 @ 04:39:05



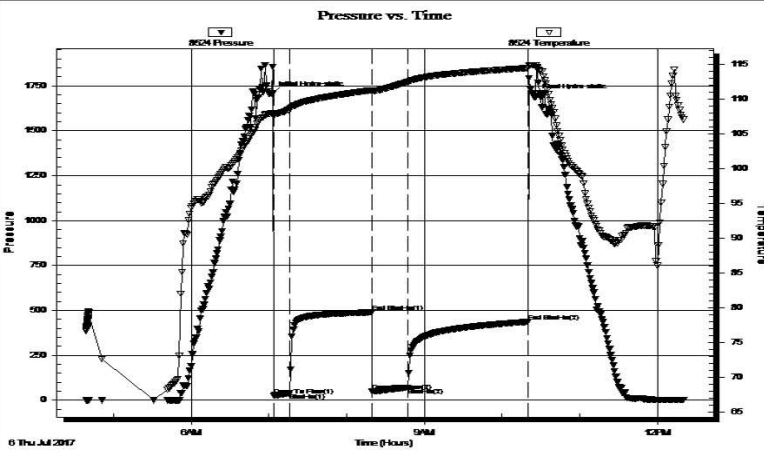
TRILOBITE TESTING, INC.

GENERAL INFORMATION:

Formation: **LKC "H&I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:03:41
 Time Test Ended: 12:20:11
 Interval: **3561.00 ft (KB) To 3614.00 ft (KB) (TVD)**
 Total Depth: 3614.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2145.00 ft (KB)
 2137.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: **8524** Outside
 Press@RunDepth: 70.39 psig @ 3579.00 ft (KB)
 Start Date: 2017.07.06 End Date: 2017.07.06
 Start Time: 04:39:06 End Time: 12:20:11
 Capacity: 8000.00 psig
 Last Calib.: 2017.07.06
 Time On Btm: 2017.07.06 @ 07:02:26
 Time Off Btm: 2017.07.06 @ 10:25:56

TEST COMMENT: 15- IF- Slow ly built to 3"
 60- IS- No blow
 30- FF- Slow ly built to 2.5"
 90- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1706.96	107.91	Initial Hydro-static
2	27.79	107.56	Open To Flow (1)
14	39.31	108.56	Shut-In(1)
77	489.62	111.25	End Shut-In(1)
78	48.52	111.07	Open To Flow (2)
105	70.39	112.43	Shut-In(2)
198	436.73	114.44	End Shut-In(2)
204	1688.80	114.86	Final Hydro-static

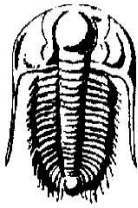
Recovery

Length (ft)	Description	Volume (bbl)
109.00	MWV, 20%VW 80%M	1.55

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Coachman Energy Operating Co., LLC

25-15S-20W Ellis, KS

1125 17th St.
Suite 410
Denver, CO 80202
ATTN: Jeremy Schwartz

Leiker #4-25-15-20

Job Ticket: 63280

DST#: 3

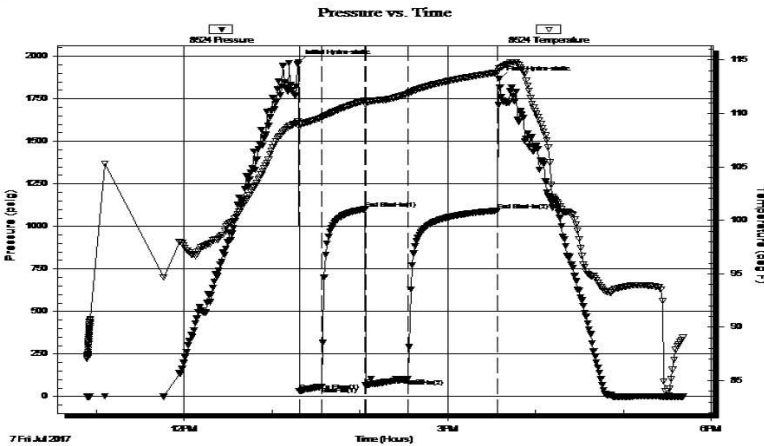
Test Start: 2017.07.07 @ 10:53:56

GENERAL INFORMATION:

Formation: **Pawnee**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 13:18:47
 Tester: Brannan Lonsdale
 Time Test Ended: 17:40:47
 Unit No: 73
Interval: 3685.00 ft (KB) To 3760.00 ft (KB) (TVD)
 Reference Elevations: 2145.00 ft (KB)
 Total Depth: 3760.00 ft (KB) (TVD)
 2137.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 8524 Outside
 Press@RunDepth: 105.40 psig @ 3694.00 ft (KB)
 Capacity: 8000.00 psig
 Start Date: 2017.07.07
 End Date: 2017.07.07
 Last Calib.: 2017.07.07
 Start Time: 10:53:57
 End Time: 17:40:47
 Time On Btm: 2017.07.07 @ 13:18:17
 Time Off Btm: 2017.07.07 @ 15:35:17

TEST COMMENT: 15- IF- Slow ly built to 5.5"
 30- IS- No blow
 30- FF- Slow ly built to 7.5"
 60- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1965.81	109.28	Initial Hydro-static
1	32.50	108.70	Open To Flow (1)
16	57.72	109.57	Shut-In(1)
46	1102.43	111.22	End Shut-In(1)
46	65.84	110.81	Open To Flow (2)
75	105.40	111.82	Shut-In(2)
136	1093.11	113.81	End Shut-In(2)
137	1868.71	114.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
172.00	M (Very sandy)	2.44

* Recovery from multiple tests

Gas Rates

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

RECEIVED

JUL 13 2017

JHW

Date: 7/9/2017
Invoice # 1887

P.O.#:

Due Date: 8/8/2017

Division: Russell



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

Invoice

APPROVED

By Bob Plante at 11:34 am, Jul 20, 2017

Contact:
CYNOSURE ENERGY LLC
Address/Job Location:

1125 17th Street, Suite 410
DENVER CO 80113

Reference:

~~LEIKER 4-25-15-20~~

Description of Work:
PROD STRING

Services / Items Included:

Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor	\$ 185.05	No	Pump Truck Mileage-Job to Nearest Camp	21	\$58.80	No
Common-Class A	\$ 2,307.20	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	21	\$45.73	No
Cement Port Collar, 5 1/2"	\$ 1,617.78	Yes				
Gilsonite	\$ 793.33	Yes				
5 1/2" Basket	\$ 522.67	Yes				
5 1/2" Turbolizer	\$ 492.80	Yes				
Mud Clear	\$ 230.22	Yes				
Auto Fill Float Shoe, 5 1/2"	\$ 209.07	Yes				
Latch Down Plug & Baffle, 5 1/2"	\$ 165.51	Yes				
Salt (Fine)	\$ 122.27	Yes				
Bulk Truck Matl-Material Service Charge	\$ 126.31	No				

Invoice Terms:

Net 30

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (171.92)

SubTotal: \$ 6,876.74

SubTotal for Taxable Items: \$ 6,299.32

SubTotal for Non-Taxable Items: \$ 405.50

Total: \$ 6,704.82

Tax: \$ 440.95

7.00% Ellis County Sales Tax

Amount Due: \$ 7,145.77

Applied Payments:

Balance Due: \$ 7,145.77

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

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

No. 1887

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-9-17	25	15	20	Ellis	KS		10:30 PM

Location Schoenchen 9 1/2 W Sinto

Lease Leiter Well No. 4-25-15-20 Owner

Contractor Duke #2 To Quality Oilwell Cementing, Inc.

Type Job Production String - Bottom Stage 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 T.D. Charge To Coachman

Csg. Depth Street

Tbg. Size Depth City State

Tool ~~Part~~ Collar Depth 1374" The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 18.91 Shoe Joint 18.91 Cement Amount Ordered 180 com 10% salt 5% Gilsonite

Meas Line Displace 91 bbl ~~380 400 420 440 460 480 500~~ Q-Pro

EQUIPMENT

Pumptrk 5 No. Cementer Helper Brett Common 180 pro.c

Bulktrk No. Driver Driver Poz. Mix

Bulktrk No. Driver Driver Gel.

Bulktrk No. Driver Driver Calcium Jordan

JOB SERVICES & REMARKS

Remarks: Hulls

Rat Hole 30sx Salt 15

Mouse Hole Flowseal 850 #

Centralizers - 1-10 + 60, 78 Mud CLR 48 - 500 Gal

Baskets - 2, 94 + 79 CFL-117 or CD110 CAF 38

~~PC @ 1374'~~ Sand

Handling 203

Ran 93 J15 @ 3843' + Est circulation Mileage

5 1/2 **FLOAT EQUIPMENT**

Plugged Rat Hole Guide Shoe

Mixed 150 sx down 5 1/2 Centralizer - 11

Displaced 91 bbl H2O Baskets - 3

Lift pressure @ 600 lbs AFU Inserts

Landed @ 1500 lbs Float Shoe - 1

Plug held! Latch Down - 1

Part collar - 1

Pumptrk Charge prod string

Mileage 21

Signature Bob P. [Signature]

Tax	
Discount	
Total Charge	



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: 7/14/2017
 Invoice # 1591

P.O.#:
 Due Date: 8/13/2017
 Division: Russell

Invoice



Contact:
 CYNOSURE ENERGY LLC
 Address/Job Location:

1125 17th Street, Suite 410
 DENVER CO 80113

APPROVED

By Bob Plante at 10:23 am, Jul 20, 2017

Reference:
 LEIKER 4-25

Description of Work:
 PORT COLLAR JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 501.64	No				
Multi Density- 80/20	150	\$ 1,771.08	Yes				
Bulk Truck Matl-Material Service Charge	400	\$ 269.88	No				
Flo Seal	100	\$ 134.94	Yes				
Pump Truck Mileage-Job to Nearest Camp	21	\$ 63.76	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	21	\$ 49.59	No				

Invoice Terms:

Net 30

SubTotal: \$ 2,790.89
 Discount Available ONLY if Invoice is Paid & Received
 within listed terms of invoice: \$ (69.77)

SubTotal for Taxable Items:	\$ 1,858.37
SubTotal for Non-Taxable Items:	\$ 862.75
Total:	\$ 2,721.12
Tax:	\$ 130.09

7.00% Ellis County Sales Tax

Thank You For Your Business!

Amount Due: \$ 2,851.21
Applied Payments:
Balance Due: \$ 2,851.21

Past Due Invoices are subject to a service charge (annual rate of 24%)
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 1591

Cell 785-324-1041

Date	7-14-17	Sec.	Twp.	Range	County	State	On Location	Finish
					Ellis	KS		1:00 p.m.

Location Schoenchen 9 1/2 W Ninto

Lease	Leiker	Well No.	4-25	Owner	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.
Contractor	Express			Charge To	Coachman
Type Job	Port Collar			Street	
Hole Size	7 7/8	T.D.		City	State
Csg.	5 1/2	Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tbg. Size	2 7/8	Depth		Cement Amount Ordered	400 # 20 QMDC 1/4 # Flo
Tool	Port Collar	Depth	1383-1344		
Cement Left in Csg.		Shoe Joint			

Meas Line	Displace	633CL	used	150
EQUIPMENT			Common	150 # 20 Qm DC
Pumptrk	No.	Cement Helper	Craig	Poz. Mix
Bulktrk	No.	Driver	Brett	Gel.
Bulktrk	No.	Driver	Tony	Calcium

JOB SERVICES & REMARKS		Hulls
Remarks:	KCC Pat Staab	Salt
Rat Hole		Flowseal 100 #
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
Test 5 1/2 to 800ft	Open Tool x Pump 800ft mud	Handling 400
Mix 150 SK x Cement	Circulate	Mileage

Close Tool test to 800ft		FLOAT EQUIPMENT
Run 5 joints x wash clean		Guide Shoe
		Centralizer
		Baskets
		AFU Inserts
		Float Shoe
		Latch Down

Signature	Bob Martz	Pumptrk Charge	Port Collar
		Mileage	
		Tax	
		Discount	
		Total Charge	

RECEIVED

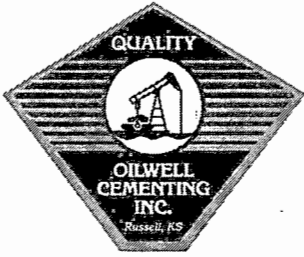
JUL 06 2017

Date: 6/30/2017
Invoice # 1579

P.O.#:

Due Date: 7/30/2017

Division: Russell



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

Invoice



APPROVED

By Bob Plante at 8:37 pm, Jul 07, 2017

Contact:
CYNOSURE ENERGY LLC
Address/Job Location:

1125 17th Street, Suite 410
DENVER CO 80113

Reference:
LEIKER 4 SEC 25-15-20

Description of Work:
SURFACE JOB

8200.210

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 601.97	No				
Common-Class A	140	\$ 1,568.00	Yes				
Calcium Chloride	6	\$ 226.70	Yes				
POZ Mix-Standard	35	\$ 165.30	Yes				
Bulk Truck Matl-Material Service Charge	184	\$ 124.14	No				
Pump Truck Mileage-Job to Nearest Camp	21	\$ 63.76	No				
Premium Gel (Bentonite)	3	\$ 58.70	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	21	\$ 49.59	No				

Invoice Terms:

Net 30

SubTotal: \$ 2,858.16

~~Discount Available ONLY if Invoice is Paid & Received~~
within listed terms of invoice: \$ (71.45)

SubTotal for Taxable Items: \$ 1,968.23

SubTotal for Non-Taxable Items: \$ 818.47

Total: \$ 2,786.71

Tax: \$ 137.78

7.00% Ellis County Sales Tax

Thank You For Your Business!

Amount Due: \$ 2,924.49

Applied Payments:

Balance Due: \$ 2,924.49

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

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

No. 1579

Cell 785-324-1041

Date	6-30-17	Sec.	25	Twp.	15	Range	20	County	Ellis	State	KS	On Location		Finish	10:00 PM
------	---------	------	----	------	----	-------	----	--------	-------	-------	----	-------------	--	--------	----------

Location *Schoenchen 9 1/2 W*

Lease	<i>Leiker</i>	Well No.	<i>4</i>	Owner	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.
Contractor	<i>Dike</i>			Charge To	<i>Coachmen Energy</i>
Type Job	<i>Surface</i>			Street	
Hole Size	<i>12 1/4</i>	T.D.	<i>220</i>	City	
Csg.	<i>8 5/8</i>	Depth	<i>219</i>	State	
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered	<i>175 89/20 3 1/4 2 1/2 GEL</i>
Cement Left in Csg.	<i>10'</i>	Shoe Joint			
Meas Line		Displace	<i>1336</i>		

EQUIPMENT

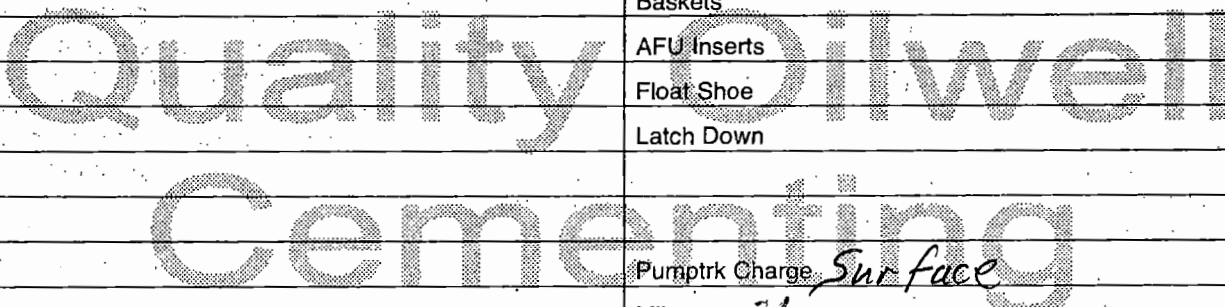
Pumptrk	<i>5</i>	No. Cementer	<i>Craig</i>	Common	<i>140</i>
		No. Helper	<i>BYTT</i>	Poz. Mix	<i>35</i>
Bulktrk		No. Driver	<i>David</i>	Gel.	<i>3</i>
Bulktrk	<i>14</i>	No. Driver		Calcium	<i>6</i>

JOB SERVICES & REMARKS

Remarks:	
Rat Hole	
Mouse Hole	
Centralizers	
Baskets	
D/V or Port Collar	
	<i>8 5/8 on bottom. Est. Circulation.</i>
	<i>Mix 175 SK + D's Nac</i>
	<i>Cement did circulate</i>

FLOAT EQUIPMENT

Guide Shoe	<i>8 5/8 Swage</i>
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	<i>Surface</i>
Mileage	<i>21</i>



X Signature	<i>Bob Phant</i>	Tax	
		Discount	
		Total Charge	