

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
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------

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	Jaspar Co.
Well Name	CASEMON UNIT 1
Doc ID	1476620

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	3574	3580			
4	3566	3570			
1	3304				
1	3307				
1	3322				
1	3325				
			CIBP Cast Iron Bridge Plug	3540	

Form	ACO1 - Well Completion
Operator	Jaspar Co.
Well Name	CASEMON UNIT 1
Doc ID	1476620

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	263	COMMON	130	NA
Surface	12.25	8.625	23	263	POZ	30	80/20, 3% CC, 2% GEL
Production	7.875	5.5	15.5	3640	QMCD	415	1/4#FLO
Production	7.875	5.5	15.5	3640	COMMON	150	10% SALT, 5%, GIL, 500 GAL MUD CLEAR 48



Scale 1:240 Imperial

Well Name: CASEMON UNIT #1
Surface Location: SW NW SW SW Sec. 21-9S-19W
Bottom Location:
API: 15-163-24397-00-00
License Number: 34903
Spud Date: 8/10/2019 Time: 8:00 AM
Region: ROOKS COUNTY
Drilling Completed: 8/17/2019 Time: 4:15 PM
Surface Coordinates: 935' FSL & 85' FWL
Bottom Hole Coordinates:
Ground Elevation: 2128.00ft
K.B. Elevation: 2133.00ft
Logged Interval: 3950.00ft To: 3650.00ft
Total Depth: 3650.00ft
Formation: LANSING- KANSAS CITY; ARBUCKLE
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

OPERATOR

Company: JASPER CO. INC.
Address: P.O. BOX 1120

Contact Geologist: SHANE VEHIGE
Contact Phone Nbr: (785) 623-6982
Well Name: CASEMON UNIT #1
Location: SW NW SW SW Sec. 21-9S-19W
API: 15-163-24397-00-00
Pool:
State: KANSAS
Field: UNKNOWN
Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: 39.251511
Latitude: -99.456274
N/S Co-ord: 935' FSL
E/W Co-ord: 85' FWL

LOGGED BY

Company:
Address: 2717 HICKORY ST.
HAYS, KS 67601
Phone Nbr: (785)-639-0721
Logged By: Geologist Name: CAMERON BRIN

CONTRACTOR

Contractor: FLEX DRILLING INC.
Rig #: 1

Rig Type: MUD ROTARY
 Spud Date: 8/10/2019
 TD Date: 8/17/2019
 Rig Release: 8/18/2019

Time: 8:00 AM
 Time: 4:15 PM
 Time: 10:00 AM

ELEVATIONS


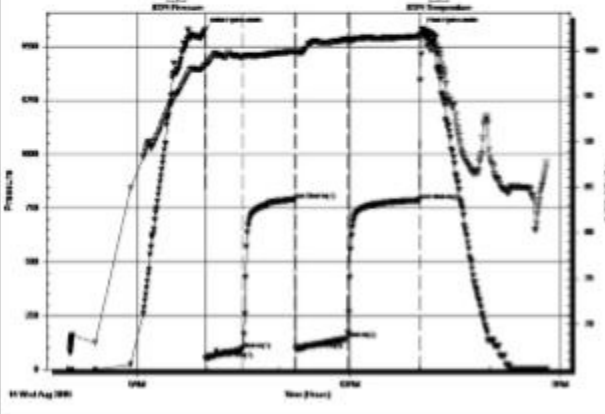
K.B. Elevation: 2133.00ft
 K.B. to Ground: 5.00ft

Ground Elevation: 2128.00ft

NOTES

DUE TO POSITIVE RESULTS ON DST #1 (TOR-LKC A) AND LOG ANALYSIS, DECISION WAS MADE TO RUN 5 1/2" PRODUCTION CASING TO FURTHER EVALUATE THE CASEMON UNIT #1 WELL.

DST #1 (TOR- LKC A)

		DRILL STEM TEST REPORT																																					
Jasper Co		21-9s-19w Rooks,KS																																					
PO Box 1120 Hays KS 67801		Casemon Unit #1 Job Ticket: 65980 DST#: 1 Test Start: 2019.08.14 @ 08:03:02																																					
ATTN: Cameron Brin																																							
GENERAL INFORMATION:																																							
Formation: Toronto - LKC A Deviated: No Whipstock: ft (KB) Time Tool Opened: 09:58:19 Time Test Ended: 14:48:04		Test Type: Conventional Bottom Hole (Initial) Tester: Spencer Staab Unit No: 84																																					
Interval: 3277.00 ft (KB) To 3342.00 ft (KB) (TVD) Total Depth: 3342.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good		Reference Elevations: 2133.00 ft (KB) 2127.00 ft (CF) KB to GR/CF: 6.00 ft																																					
Serial #: 8374 Inside																																							
Press@RunDepth: 143.78 psig @ 3278.00 ft (KB)		Capacity: psig																																					
Start Date: 2019.08.14 End Date: 2019.08.14		Last Calib.: 2019.08.14																																					
Start Time: 08:03:03 End Time: 14:48:04		Time On Btm: 2019.08.14 @ 09:57:34 Time Off Btm: 2019.08.14 @ 13:02:04																																					
TEST COMMENT: IFP - 30 Tool slid 12" - 4 1/2" blow BOB in 12 min built to 22" ISI - 45 Weak blow built to 2" FFP - 45 BOB in 9 min built to 32" FSI - 60 Weak blow built to 9"																																							
Pressure vs. Time		PRESSURE SUMMARY																																					
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Time (Min.)</th> <th>Pressure (psig)</th> <th>Temp (deg F)</th> <th>Annotation</th> </tr> </thead> <tbody> <tr><td>0</td><td>1580.72</td><td>98.34</td><td>Initial Hydro-static</td></tr> <tr><td>1</td><td>51.27</td><td>98.33</td><td>Open To Flow (1)</td></tr> <tr><td>32</td><td>91.84</td><td>99.36</td><td>Shut-In(1)</td></tr> <tr><td>77</td><td>791.23</td><td>99.89</td><td>End Shut-In(1)</td></tr> <tr><td>78</td><td>94.93</td><td>99.84</td><td>Open To Flow (2)</td></tr> <tr><td>121</td><td>143.78</td><td>101.22</td><td>Shut-In(2)</td></tr> <tr><td>183</td><td>787.60</td><td>101.58</td><td>End Shut-In(2)</td></tr> <tr><td>185</td><td>1579.01</td><td>102.38</td><td>Final Hydro-static</td></tr> </tbody> </table>		Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	0	1580.72	98.34	Initial Hydro-static	1	51.27	98.33	Open To Flow (1)	32	91.84	99.36	Shut-In(1)	77	791.23	99.89	End Shut-In(1)	78	94.93	99.84	Open To Flow (2)	121	143.78	101.22	Shut-In(2)	183	787.60	101.58	End Shut-In(2)	185	1579.01	102.38	Final Hydro-static
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0.00	535' GIP	0.00																																					
	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)																																				

DST #2 (LKC C-D)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Jaspar Co

21-9s-19w Rooks,KS

PO Box 1120
Hays KS 67601

Casemon Unit #1

Job Ticket: 65981

DST# 2

ATTN: Cameron Brin

Test Start: 2019.08.14 @ 22:43:00

GENERAL INFORMATION:

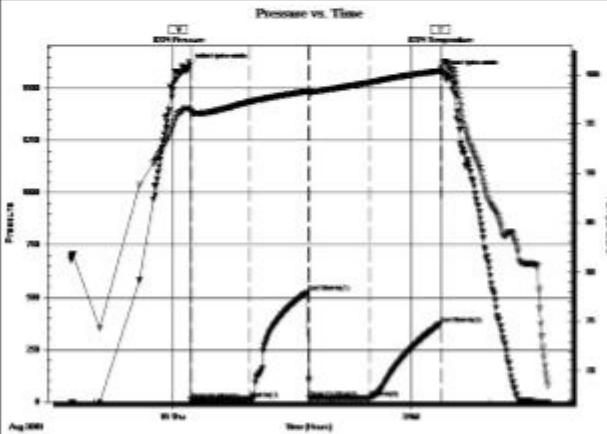
Formation: **LKC 'C - D'**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 00:13:47 Tester: Spencer Staab
 Time Test Ended: 04:44:02 Unit No: 84
 Interval: **3349.00 ft (KB) To 3389.00 ft (KB) (TVD)** Reference Elevations: 2133.00 ft (KB)
 Total Depth: 3389.00 ft (KB) (TVD) 2127.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 6.00 ft

Serial #: 8374

Inside

Press@RunDepth: 19.88 psig @ 3350.00 ft (KB) Capacity: psig
 Start Date: 2019.08.14 End Date: 2019.08.15 Last Calib.: 2019.08.15
 Start Time: 22:43:01 End Time: 04:44:02 Time On Btm: 2019.08.15 @ 00:12:47
 Time Off Btm: 2019.08.15 @ 03:23:17

TEST COMMENT: 45-IF-Weak; Built to 1"
 45-ISI-No Return
 45-FF-No Blow
 45-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1610.46	96.45	Initial Hydro-static
1	11.96	96.15	Open To Flow (1)
48	15.89	97.24	Shut-In(1)
90	524.86	98.29	End Shut-In(1)
91	18.19	98.24	Open To Flow (2)
137	19.88	99.20	Shut-In(2)
190	374.94	100.41	End Shut-In(2)
191	1579.08	100.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bb)
15.00	OSM 100%M	0.22

* Recovery from multiple tests

Gas Rates

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

DST #3 (LKC J-L)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Jaspar Co

21-9s-19w Rooks,KS

PO Box 1120
Hays KS 67601

Casemon Unit #1

Job Ticket: 65982

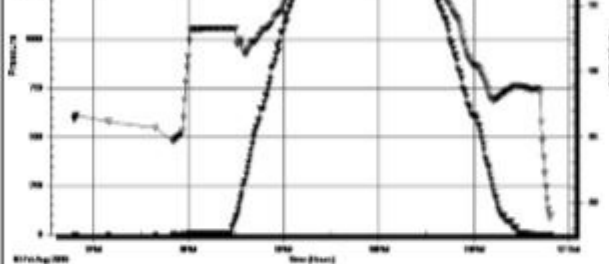
DST# 3

ATTN: Cameron Brin

Test Start: 2019.08.16 @ 02:55:00

GENERAL INFORMATION:

Formation: **LKC 'J - L'**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 04:17:32 Tester: Spencer Staab
 Time Test Ended: 09:02:02 Unit No: 84
 Interval: **3489.00 ft (KB) To 3538.00 ft (KB) (TVD)** Reference Elevations: 2133.00 ft (KB)
 Total Depth: 3538.00 ft (KB) (TVD) 2127.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 6.00 ft



Recovery


Length (ft)	Description	Volume (bb)
220.00	Mud	3.22

* Recovery from multiple tests

Gas Rates

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

DST #5 (ARBUCKLE)



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Jaspar Co **21-9s-19w Rooks,KS**

PO Box 1120 **Casemon Unit #1**
Hays KS 67601

Job Ticket: 65984 **DST#: 5**

ATTN: Cameron Brin **Test Start: 2019.08.17 @ 07:16:00**

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: **Conventional Bottom Hole (Reset)**
 Time Tool Opened: 09:03:32 Tester: **Spencer Staab**
 Time Test Ended: 12:49:02 Unit No: **84**

Interval: **3597.00 ft (KB) To 3608.00 ft (KB) (TVD)** Reference Elevations: **2133.00 ft (KB)**
 Total Depth: **3608.00 ft (KB) (TVD)** **2127.00 ft (CF)**
 Hole Diameter: **7.88 inches**Hole Condition: **Fair** KB to GR/CF: **6.00 ft**

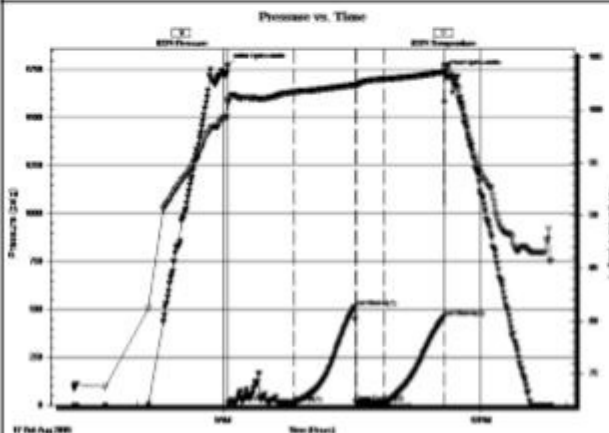
Serial #: 8374 **Inside**

Press@RunDepth: **15.26 psig @ 3598.00 ft (KB)** Capacity: psig

Start Date: **2019.08.17** End Date: **2019.08.17** Last Calib.: 2019.08.17

Start Time: **07:16:01** End Time: **12:49:02** Time On Btm: **2019.08.17 @ 09:03:17**
 Time Off Btm: **2019.08.17 @ 11:34:47**

TEST COMMENT: 45-IF-Weak; Built to 1/4"; Died back to Surface
 45-ISI-No Return
 15-FF-No Blow
 45-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.59	100.04	Initial Hydro-static
1	13.16	100.64	Open To Flow (1)
47	14.01	101.69	Shut-In(1)
89	511.94	102.36	End Shut-In(1)
90	15.19	102.37	Open To Flow (2)
109	15.26	102.95	Shut-In(2)
151	459.77	103.62	End Shut-In(2)
152	1739.21	104.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bb)
10.00	Mud 100%M	0.15

Gas Rates

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

* Recovery from multiple tests

STRUCTURAL COMPARISON SHEET

FORMATION	JASPAR COMPANY, INC.										P&A 12-04				JASPAR COMPANY, INC.				STRATA DRILLING								
	CASEMON UNIT #1					LIZA #1					MAI OIL OPERATIONS				LARRY #1				HINKHOUSE #1								
	SE SW NE NW 20-9-19					2188					E2 SW 21-9-19				W2 SE SE SW 20-9-19				SE SE SE 20-9-19								
	KB	2133	GL	2128	KB	2188	KB	2138	KB	2146	KB	2155	KB	2155	KB	2155	KB	2155	KB	2155							
LOG TOPS		SAMPLE TOPS		LOG		SMPL.		COMP. CARD		LOG		SMPL.		LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.			
DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	1522	611	1530	605	1583	605	+ 6 - 2	1521	617	- 6 - 14		1546	600	+ 11 + 3	1545	610	+ 1 - 7										
BASE	1559	574	1565	568	1620	568	+ 6 + 0	1560	578	- 4 - 10		1585	561	+ 13 + 7													
TOPFKA	3077	-944	3079	-946	3159	-951	+ 7 + 5	3085	-947	+ 3 + 1		3094	-948	+ 4 + 2													
HEBNER SHALE	3280	-1167	3282	-1149	3343	-1155	+ 8 + 6	3288	-1150	+ 3 + 1		3296	-1150	+ 3 + 1	3309	-1154	+ 7 + 5										
TORONTO	3301	-1168	3308	-1175	3362	-1174	+ 8 - 1	3314	-1176	+ 8 + 1		3320	-1174	+ 6 - 1	3328	-1173	+ 5 - 2										
LRC	3320	-1187	3326	-1193	3383	-1193	+ 8 + 2	3330	-1192	+ 5 - 1		3341	-1195	+ 8 + 2	3349	-1194	+ 7 + 1										
BKC	3536	-1403	3538	-1405	3598	-1410	+ 7 + 5	3551	-1413	+ 10 + 8		3557	-1411	+ 8 + 6													
CONGLOMERATE																											
ARBuckle	3573	-1440	3575	-1442	3631	-1443	+ 3 + 1	3570	-1432	- 8 - 10		3582	-1436	- 4 - 6	3614	-1459	+ 19 + 17										
TOTAL DEPTH	3648	-1515	3650	-1517	3701	-1513	- 2 - 4	3640	-1502	- 13 - 15		3599	-1453	- 62 - 64	3640	-1485	- 30 - 32										

ROCK TYPES

	Chtcong		Dolsec		shale, grn		Carbon Sh
	Dolprim		Lmst fw7>		shale, gry		shale, red

ACCESSORIES

MINERAL

- ▲ Chert, dark
- △ Dolomitic
- P Pyrite
- Sandy
- △ Chert White
- ∕ Euhed rhombs of dol or

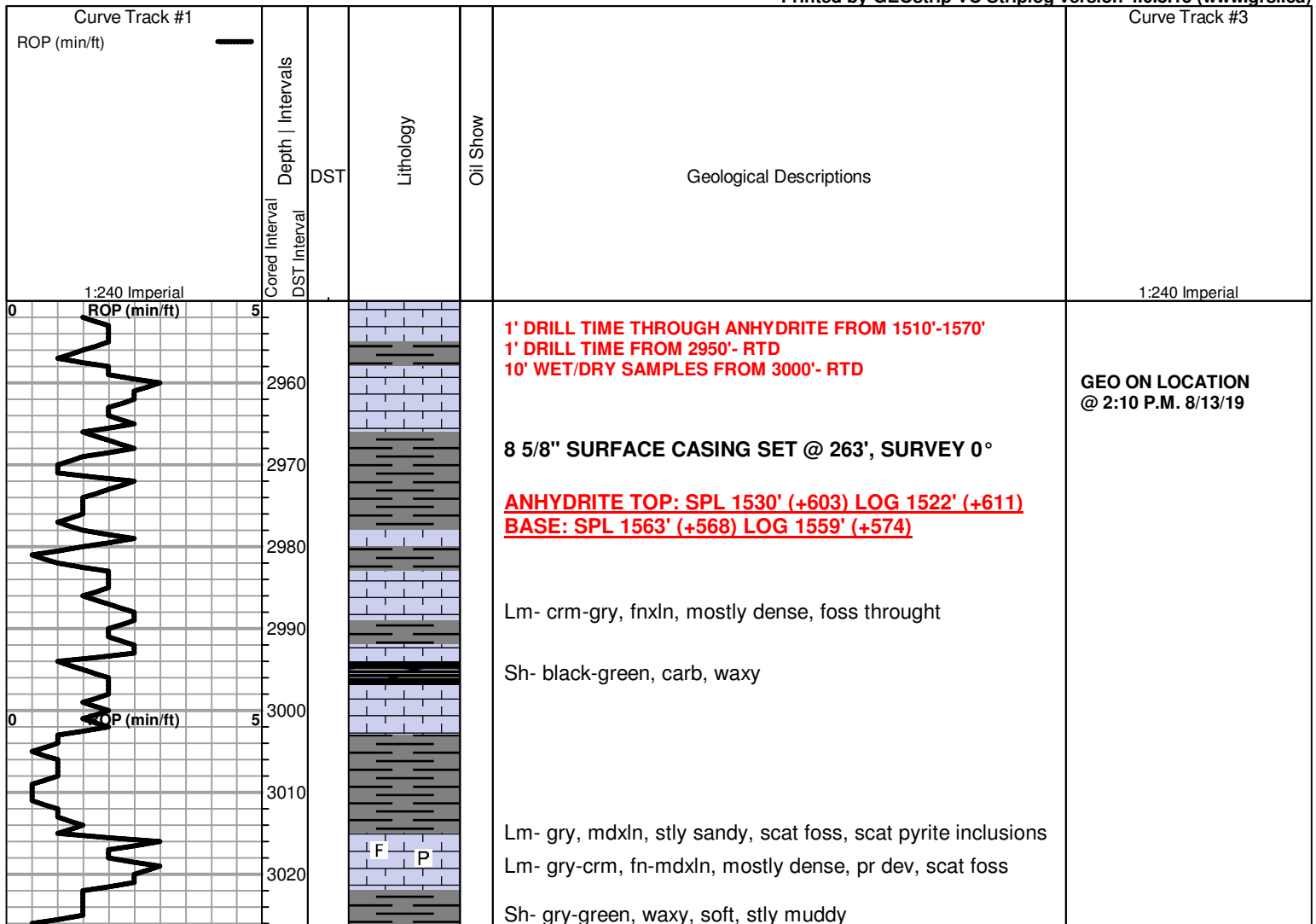
FOSSIL

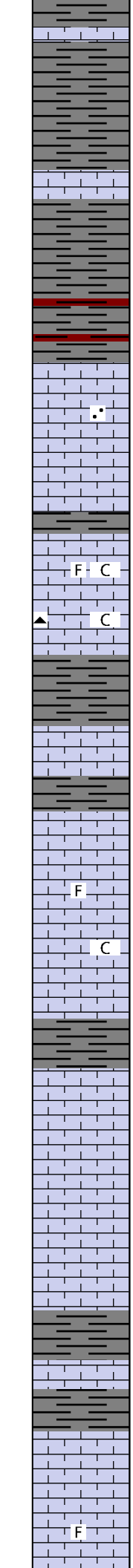
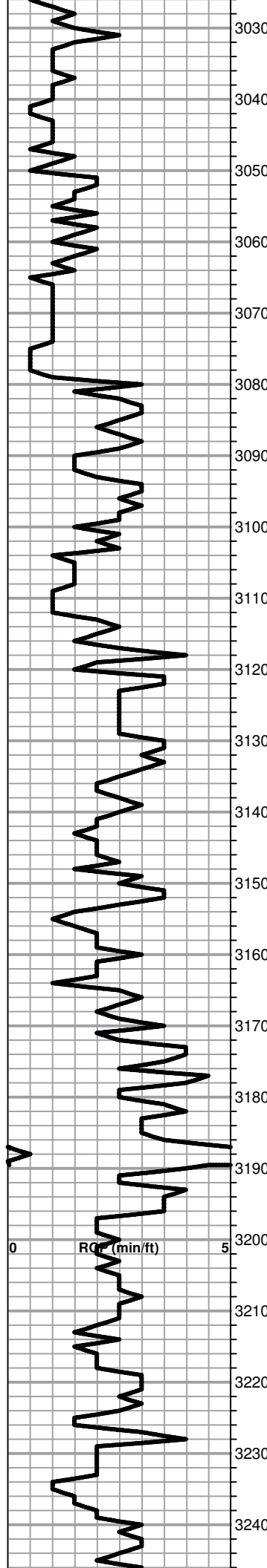
- F Fossils < 20%
- Oolite
- ⊕ Oomoldic

TEXTURE

- C Chalky

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





Sh- gry- green, mostly round, earthy, few scat consolidated ss clusters

Lm- gry-crm, fnxln, mostly brittle, scat foss, scat pyrite

Sh- red-gry, muddy, fairly dense

Topeka: SPL 3079' (-946) 3077' (-944)

Lm- crm-gray, fnxln, fairly dense, fr dev, v. few consolidated ss clusters

Lm- crm- gry, fn-mdxln, few scat chips w/ pr ppt. por, foss, NSO

Lm- crm- drk gry, fnxln, dense, stly chalky, scat foss

Lm- crm-gry, fnxln, barren, chalky, few scat chips of lt brn chert, no vis por

Lm- crm- gry, fnxln, mostly pr dev., stly chalky, v. few scat chips w/ pr-fr inxln por, fr lt brn stn, slit sheen FO upon crush, no odor

Sh- gry-blk, carb, soft

Lm- crm-gry, fnxln, stly cherty, bedded, foss, no vis por

Lm- crm- fnxln, foss throughout, v. few chips w/ pr inxln por, 1 chip w/ pr lt brn stn, slit SFO upon crush, no odor

Lm- crm- fn-mdxln, foss throughout, v. chalky, stly sandy in prt, no vis por, no SO

Lm- A/A, scat chert, scat v. pr inxln por, no SO

Lm- crm- fnxln, mostly dense, stly sandy, no vis por, no SO

Lm- crm- vfn-fnxln, stly chalky, soft

Lm- wt- crm- cherty, chalky in prt, barren

Lm- wt- crm, cherty, barrern, clean, foss in prt

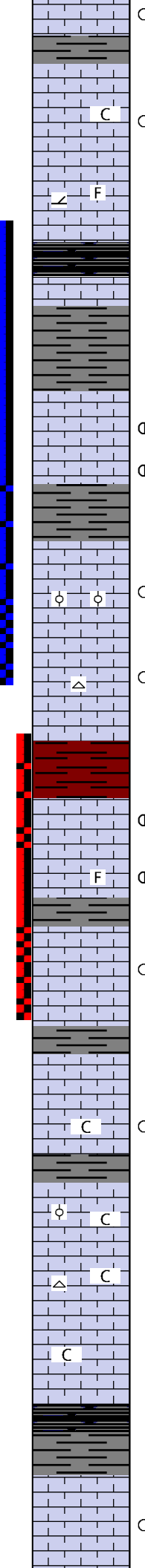
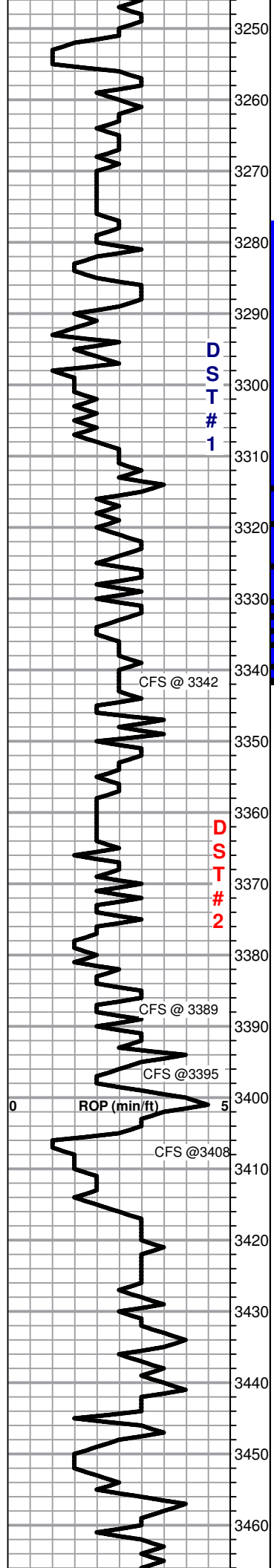
Lm- crm- vfn-fnxln, mostly tight, 6-10 chips w/ pr-fr inxln por, pr lt brn stn, SFO upon crush, fr-gd gassy odor

Lm- crm- fnxln, mostly tight, foss, v. few chips w/ pr-fr inxln- infoss por, pr-fr brn stn, slit SFO, fr-gd odor

Wt 8.3
Vis 63

Wt 8.3
Vis 60

Wt 8.4
Vis 50



Lm- crm- fnxln, fairly tight, scat pr-fr inxln por, pr-fr brn stn, few pcs SFO upon crush, few scat vuggs, fr odor

Lm- crm- fnxln, fairly chalky, scat pr inxln por, 2-3 chips w/ pr inxln por, lt brn stn, stl SFO upon crush, pr- fr odor

Lm- crm- fnxln, dense, stly dolomitic, foss, pyrite

Heebner: SPL 3282' (-1149) 3280' (-1147)
Sh- blk, carb

Sh- various colors, mostly soft, waxy, some dense, blocky

Toronto: SPL 3308' (-1175) 3301' (-1168)
Lm- crm- fnxln, fairly tight, scat pr-fr inxln por, fr v. lt brn stn, slt FO sheen, fr odor

Lm- crm- fnxln, slightly tight, slightly chalky, scat fr-gd inxln por, fr lt brn stn, slt sheen FO, fr odor

LKC: SPL 3326 (-1193) 3320' (-1187)

Lm- crm- vfn-fnxln, oolitic, mostly well consolidated, few pcs w/ pr-fr inoolitic por, pr brn stn, slt SFO, pr-fr odor

Lm- A/A, tight, cherty, few pcs w/ pr inxln- inoolitic ppt por, brn stn in por, slt SFO upon crush, pr-fr odor,

Lm- wt-crm, dense, barren, stly cherty, scat pr vuggy por

Sh- red- gry, muddy, waxy, soft

Lm- crm- vfn-fnxln, fairly tight, scat fr inxln por w/ few scat vugs, fr lt brn stn, trace FO, Gd odor

Lm- crm-fnxln, scat foss, scat fr inxln por w/ few scat inoolitic ppt por, fr lt brn stn, fr SFO fr odor

Lm- crm- fnxln, few scat chips w/ pr inxln por, fr drk brn stn, pr-fr odor

Lm- off wt, tight, few chips w/ v. pr inxln por, pr lt brn stn, NSFO, no odor

Lm- crm- fnxln, stly chalky, mostly tight, scat pr inxln w/ a few fr inxln por, pr-fr brn- blk stn, few chips w/ pr-fr SFO and gas bubbles when heated, no odor

Lm- crm- fnxln, foss, well cemented oolites, v chalky, scat wt/orange chert

Lm- crm-fnxln, scat foss, chalky, dull wt/orange angular chert

Lm- crm- fnxln, chalky, scat foss, scat pr inxln por, chert throughout

Sh- blk carb

Sh- gry, earthy waxy

Lm- crm- brn, fnxln, foss, fairly tight, few scat chips w/ pr inxln mixed w/ v few fr inxln por, pr- fr brn stn, 3-4 chips had FO bubbles from pores, pr odor

SHORT TRIP
SURVEY 1/2°
STRAP +0.36

**TOOL SLID -12' TO
BOTTOM**

DST #1 (TOR-LKC A)
3277'-3342'
30-45-45-60

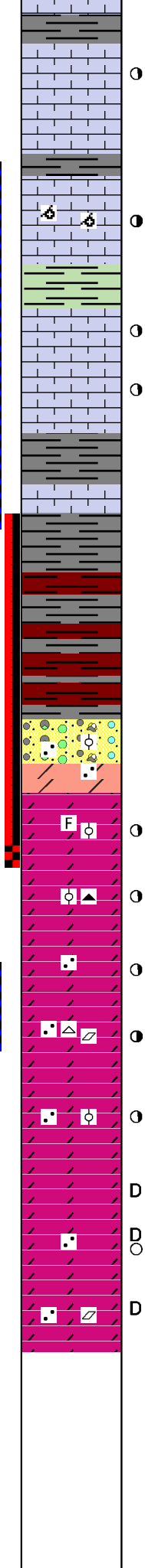
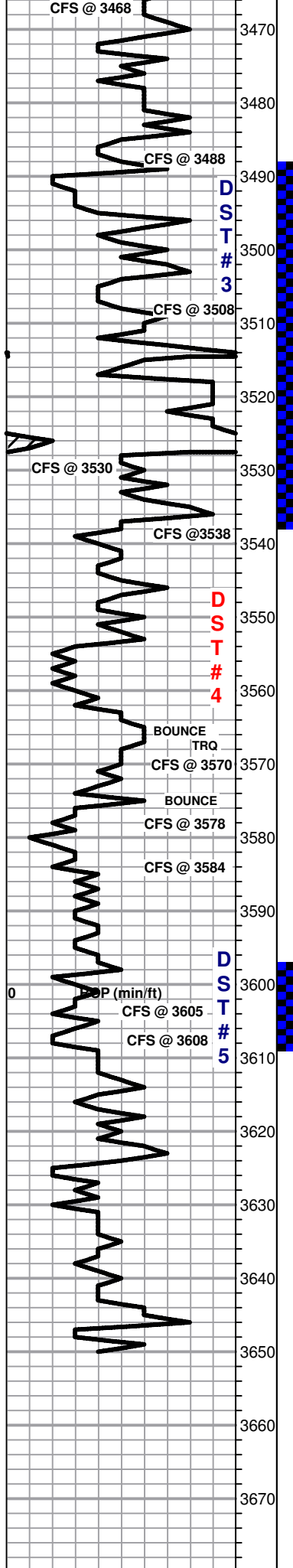
290' TF
64' GSOCM
(20%G,10%O,70%M)
63' GOCM
(20%G,20%O,60%M)
63' GMO
(20%G,40%M,40%O)
100' GO
(30%G,70%O)
535' GIP

IFP: 51-91#
FFP: 94-143#
SIP: 789-787#
BHT: 101°

DST #2 (LKC C-D)
3349'-3389'
45-45-45-45

15' OSM
(100%M)

IFP: 11-15#
FFP: 18-19#
SIP: 524-374#
BHT: 100°



Lm- crm- fnxln, stly chalky in prt, scar pr-fr inxln- ppt por w/ few scat vugs, pr-fr brn-blk stn, tr FO, fr odor, fairly tight, 2-3 chips w/ fr- gd dev
 Lm- crm- fnxln, stly chalky, foss through, clean, barren, pr dev
 Lm- crm-tan- fnxln, oomoldic, fr- gd oomoldic por through most of spl, scat pr-fr inxln por, scat brn stn, few pcs w/ SFO upon crush, fr-gd odor
 Sh- green-gray-red, soft, earthy, clumpy
 Lm- crm- fnxln, stly chalky, scat pr- fr inxln por, few scat vugs, pr-fr brn stn, slt FO sheen, slt odor
 Lm- crm- vfn-fnxln, scar pr-fr inxln por, pr-fr lt brn stn, slt SFO upon crush in few pcs, pr dev w/ few scat chips w/ fr, pr-fr odor
 Lm- crm-gry/brn, fnxln, foss, stly chalky, fairly well consolidated, few scat chips w/ pr inxln por, 2-3 w/ pr brn stn, NSFO, pr odor
BKC: SPL 3538 (-1405) LOG 3536' (-1403)
 Sh- gry, trashy, sandy
 Sh- red, muddy, sandy
 Chert- dolo/Lm, crm fnxln, foss, oolitic, few scat v. pr in oolitic por, tight, 2-3 chips w/ pr brn stn, 1 w/ FO droplets, no odor, few scat sand clusters, well cemented, well rounded, well sorted, fairly pr dev
ARBUCKLE: SPL 3575 (-1442) LOG 3573' (-1440)
 Dolo- crm- wt, foss, oolitic, scat mostly pr inoolitic por w/ a few chips fr-gd, few chips w/ fr brn stn, semi saturated, FO droplets oozing from pores, pr odor
 Dolo- crm- vfn-fnxln, abundant in orange chert, oolitic, v. few chips w/ pr-fr inxln-inoolitic por, v few chips w/ fr brn stn, pr-fr sat, fr SFO droplets upon crush and in pores, pr odor, trashy
 Dolo A/A, few scat sltly sucrosic/ sandy, fr brn stn, w/ 3-4 chips gd blk stn, slt sheen FO in cup, 3-4 chips fr-gd SFO, fr sat, pr odor
 Dolo- crm- fnxln- mdgrn, sandy, stly rhombic in prt, well cemented, fairly tight, scat fr inxln-ingranular por, scar fr blk stn, scat fr-gd sat, sheen & droplets FO in cup and in pores, slt odor, chert wt-orange
 Dolo- crm- fnxln-mdgrn, sandy, sucrosic, oolitic, well cemented,, tight, scat pr-fr inxln-ingrn/oolitic por, scat frn brn stn, fr sat, fr-gd FO sheen, pr-no odor
 Dolo- crm-lt pnk, fnxln, scat sucrosic, scat pr inxln por, dead oil
 Dolo- crm-wt, fnxln w/ few chips fn-mdgrn, sandy, scat pr- fr inxln-ingrn por, 3-4 chips pr brn stn, fr FO sheen in cup, pr odor, scat dead oil
 Dolo- crm-wt, mdgrn, sandy, scat rhombic, pr-fr inxln por, dead oil
RTD: 3650' (-1517) LTD: 3648' (-1515)

SURVEY 1°
DST #3 (LKC J-L)
 3489'-3538'
 30-45-45-60
 325' TF
 200' MW
 40%M, 60%W
 125' WCM
 15%W, 85%M
 IFP: 15-82#
 FFP: 84-162#
 SIP: 841-800#
 BHT: 105°
 CHLOR: 33K
 Wt 8.8
 Vis 46
 LCM 4#
DST #4
ARBUCKLE
 3506'-3584'
MISRUN
 Wt 8.8
 Vis 58
 LCM 4#
DST #5
ARBUCKLE
 3597'- 3608'
 10' MUD
 IFP 13-14#
 FFP 15-15#
 SIP 511-459#
 Wt 8.8
 Vis 50
GEO OFF LOCATION
@ 10:30 8/17/19

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. 537

Date	8-10-19	Sec.	21	Twp.	9	Range	19	County	ROCKS	State	KS	On Location		Finish	11:00pm
Lease								Location		Zorch 1w 1/2w Ento					
Caseman Unit								Well No.		1					
Contractor								Flex Drilling							
Type Job								Surface							
Hole Size								T.D.		264					
Csg.								Depth		263					
Tbg. Size								Depth		Charge To					
Tool								Depth		Jasper Inc					
Cement Left in Csg.								Shoe Joint		Street					
Meas Line								Displace		10'					
EQUIPMENT								Common							
Pumptrk 5								No. Cementer		130					
Bulktrk								No. Helper		30					
Bulktrk 15								No. Driver		3					
JOB SERVICES & REMARKS								Calcium							
Remarks:								6							
Rat Hole								Hulls							
Mouse Hole								Salt							
Centralizers								Flowseal							
Baskets								Kol-Seal							
DV or Port Collar								Mud CLR 48							
8-5/8 on bottom. Est. Circulation.								CFL-117 or CD110 CAF 38							
Mix Water + Displace								Sand							
Cement Circulated								Handling							
								169							
								Mileage							
								FLOAT EQUIPMENT							
								8-5/8 Surge							
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge							
								Surface							
								Mileage							
								33							
X Signature								Tax							
								Discount							
								Total Charge							

Thanks

[Handwritten Signature]

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 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 construed 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.



DRILL STEM TEST REPORT

Prepared For: **Jaspar Co**

PO Box 1120
Hays KS 67601

ATTN: Cameron Brin

Casemon Unit #1

21-9s-19w Rooks,KS

Start Date: 2019.08.14 @ 08:03:02

End Date: 2019.08.14 @ 14:48:04

Job Ticket #: 65980 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.08.19 @ 09:26:36



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65980 **DST#: 1**
Test Start: 2019.08.14 @ 08:03:02

GENERAL INFORMATION:

Formation: **Toronto - LKC A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:58:19
Time Test Ended: 14:48:04
Interval: **3277.00 ft (KB) To 3342.00 ft (KB) (TVD)**
Total Depth: 3342.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer Staab
Unit No: 84
Reference Elevations: 2133.00 ft (KB)
2127.00 ft (CF)
KB to GR/CF: 6.00 ft

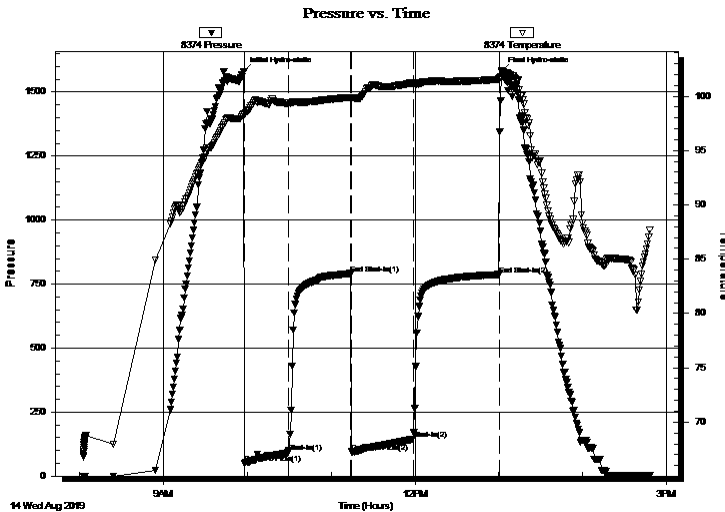
Serial #: 8374

Inside

Press@RunDepth: 143.78 psig @ 3278.00 ft (KB) Capacity: psig
Start Date: 2019.08.14 End Date: 2019.08.14 Last Calib.: 2019.08.14
Start Time: 08:03:03 End Time: 14:48:04 Time On Btm: 2019.08.14 @ 09:57:34
Time Off Btm: 2019.08.14 @ 13:02:04

TEST COMMENT: IFP - 30 Tool slid 12' - 4 1/2" blow BOB in 12 min built to 22"
ISI - 45 Weak blow built to 2"
FFP - 45 BOB in 9 min built to 32"
FSI - 60 Weak blow built to 9"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1580.72	98.34	Initial Hydro-static
1	51.27	98.33	Open To Flow (1)
32	91.84	99.36	Shut-In(1)
77	791.23	99.89	End Shut-In(1)
78	94.93	99.84	Open To Flow (2)
121	143.78	101.22	Shut-In(2)
183	787.60	101.58	End Shut-In(2)
185	1579.01	102.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
64.00	GSOCM 20%G 10%O 70%M	0.94
63.00	GOCM 20%G 20%O 60%M	0.92
63.00	GMO 20%G 40%O 40%M	0.92
100.00	GO 30%G 70%O	1.46
0.00	535' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65980 **DST#: 1**
Test Start: 2019.08.14 @ 08:03:02

Tool Information

Drill Pipe:	Length: 3287.00 ft	Diameter: 3.88 inches	Volume: 48.07 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	81000.00 lb
			<u>Total Volume: 48.07 bbl</u>	Tool Chased	12.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3277.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	65.00 ft				
Tool Length:	86.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3257.00	
Shut In Tool	5.00			3262.00	
Hydraulic tool	5.00			3267.00	
Packer	5.00			3272.00	21.00 Bottom Of Top Packer
Packer	5.00			3277.00	
Stubb	1.00			3278.00	
Recorder	0.00	8374	Inside	3278.00	
Recorder	0.00	8372	Outside	3278.00	
Perforations	2.00			3280.00	
Change Over Sub	1.00			3281.00	
Blank Spacing	32.00			3313.00	
Change Over Sub	1.00			3314.00	
Perforations	25.00			3339.00	
Bullnose	3.00			3342.00	65.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65980 **DST#: 1**
Test Start: 2019.08.14 @ 08:03:02

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 37 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.48 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4.00 ppm		
Filter Cake: inches		

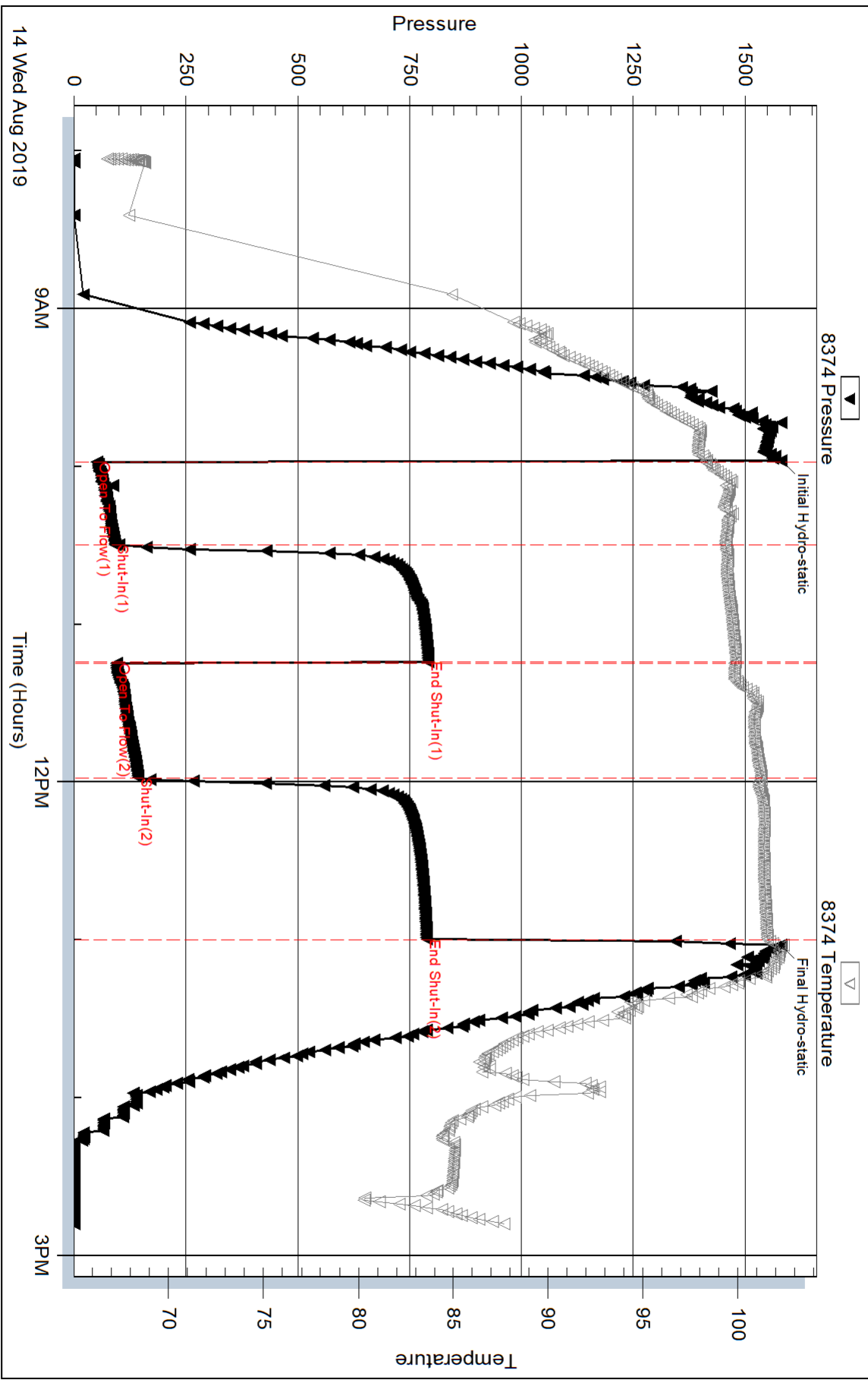
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
64.00	GSOCM 20%G 10%O 70%M	0.936
63.00	GOCM 20%G 20%O 60%M	0.921
63.00	GMO 20%G 40%O 40%M	0.921
100.00	GO 30%G 70%O	1.462
0.00	535' GIP	0.000

Total Length: 290.00 ft Total Volume: 4.240 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time

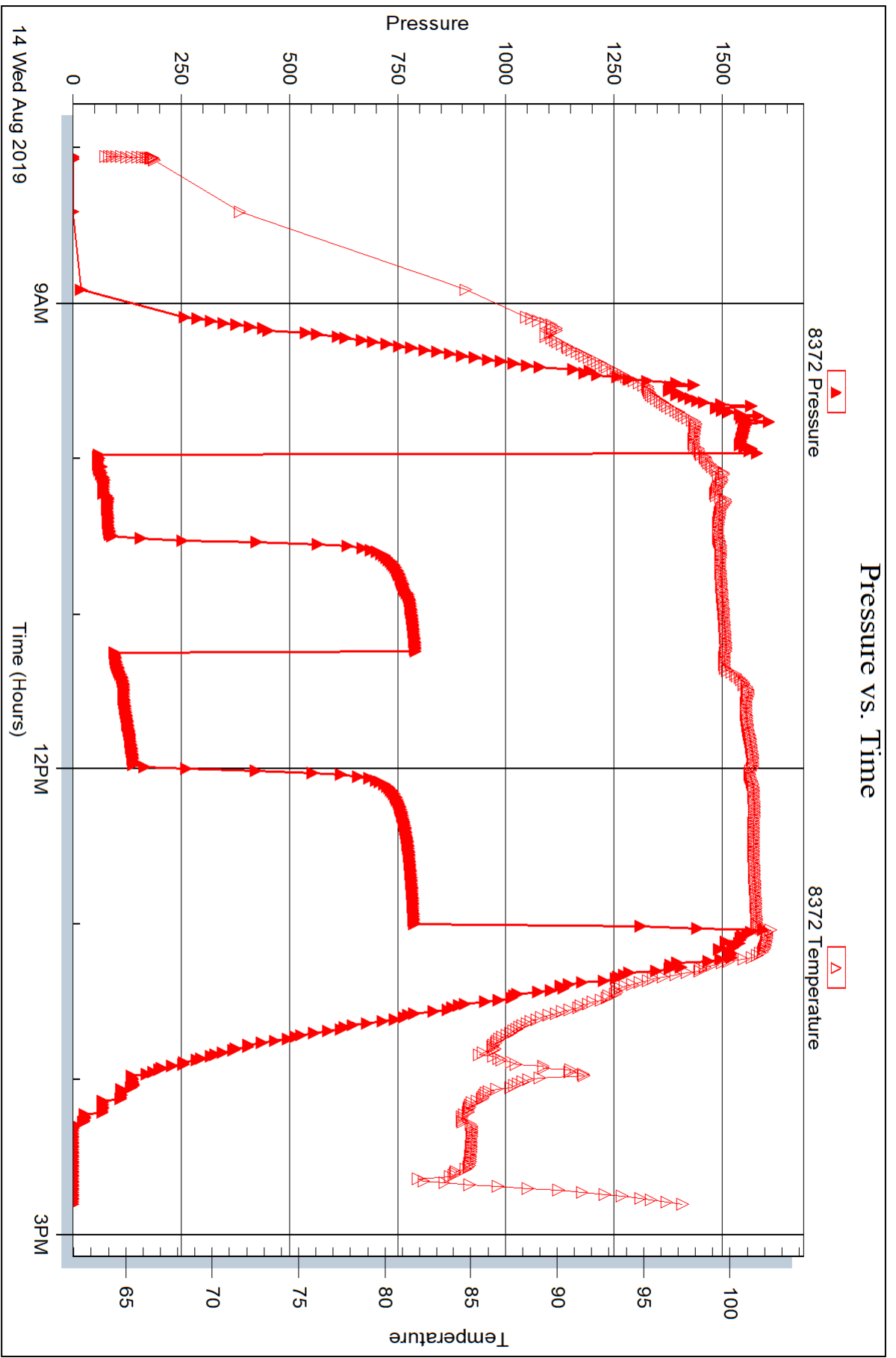


Serial #: 8372

Outside Jasper Co

Casemon Unit #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Jaspar Co**

PO Box 1120
Hays KS 67601

ATTN: Cameron Brin

Casemon Unit #1

21-9s-19w Rooks,KS

Start Date: 2019.08.14 @ 22:43:00

End Date: 2019.08.15 @ 04:44:02

Job Ticket #: 65981 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.08.19 @ 09:26:10

Jaspar Co
21-9s-19w Rooks,KS
Casemon Unit #1
DST # 2
LKC-C-D
2019.08.14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
 Job Ticket: 65981 **DST#: 2**
 Test Start: 2019.08.14 @ 22:43:00

GENERAL INFORMATION:

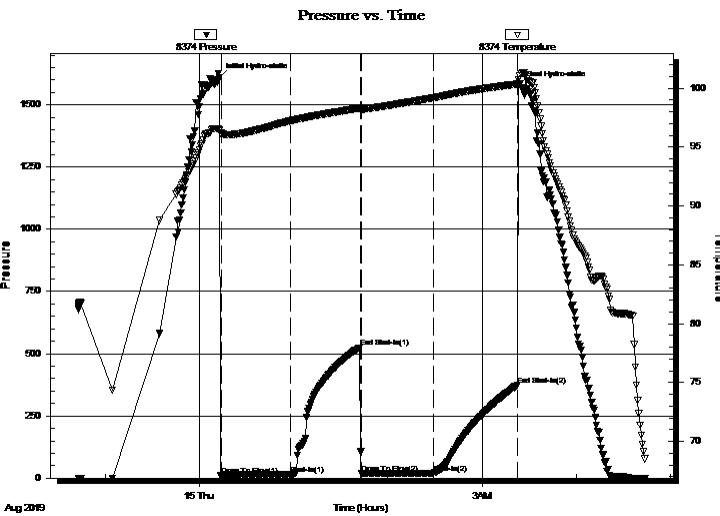
Formation: **LKC 'C - D'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:13:47
 Time Test Ended: 04:44:02
 Interval: **3349.00 ft (KB) To 3389.00 ft (KB) (TVD)**
 Total Depth: 3389.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer Staab
 Unit No: 84
 Reference Elevations: 2133.00 ft (KB)
 2127.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8374

Inside

Press@RunDepth: 19.88 psig @ 3350.00 ft (KB) Capacity: psig
 Start Date: 2019.08.14 End Date: 2019.08.15 Last Calib.: 2019.08.15
 Start Time: 22:43:01 End Time: 04:44:02 Time On Btm: 2019.08.15 @ 00:12:47
 Time Off Btm: 2019.08.15 @ 03:23:17

TEST COMMENT: 45-IF-Weak; Built to 1"
 45-ISI-No Return
 45-FF-No Blow
 45-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1610.46	96.45	Initial Hydro-static
1	11.96	96.15	Open To Flow (1)
46	15.89	97.24	Shut-In(1)
90	524.86	98.29	End Shut-In(1)
91	18.19	98.24	Open To Flow (2)
137	19.88	99.20	Shut-In(2)
190	374.94	100.41	End Shut-In(2)
191	1579.08	100.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 100%M	0.22

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65981 **DST#: 2**
Test Start: 2019.08.14 @ 22:43:00

Tool Information

Drill Pipe:	Length: 3352.00 ft	Diameter: 3.88 inches	Volume: 49.02 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 49.02 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3349.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	61.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3329.00	
Shut In Tool	5.00			3334.00	
Hydraulic tool	5.00			3339.00	
Packer	5.00			3344.00	21.00 Bottom Of Top Packer
Packer	5.00			3349.00	
Stubb	1.00			3350.00	
Recorder	0.00	8374	Inside	3350.00	
Recorder	0.00	8372	Inside	3350.00	
Perforations	2.00			3352.00	
Change Over Sub	1.00			3353.00	
Drill Pipe	32.00			3385.00	
Change Over Sub	1.00			3386.00	
Bullnose	3.00			3389.00	40.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65981 **DST#: 2**
Test Start: 2019.08.14 @ 22:43:00

Mud and Cushion Information

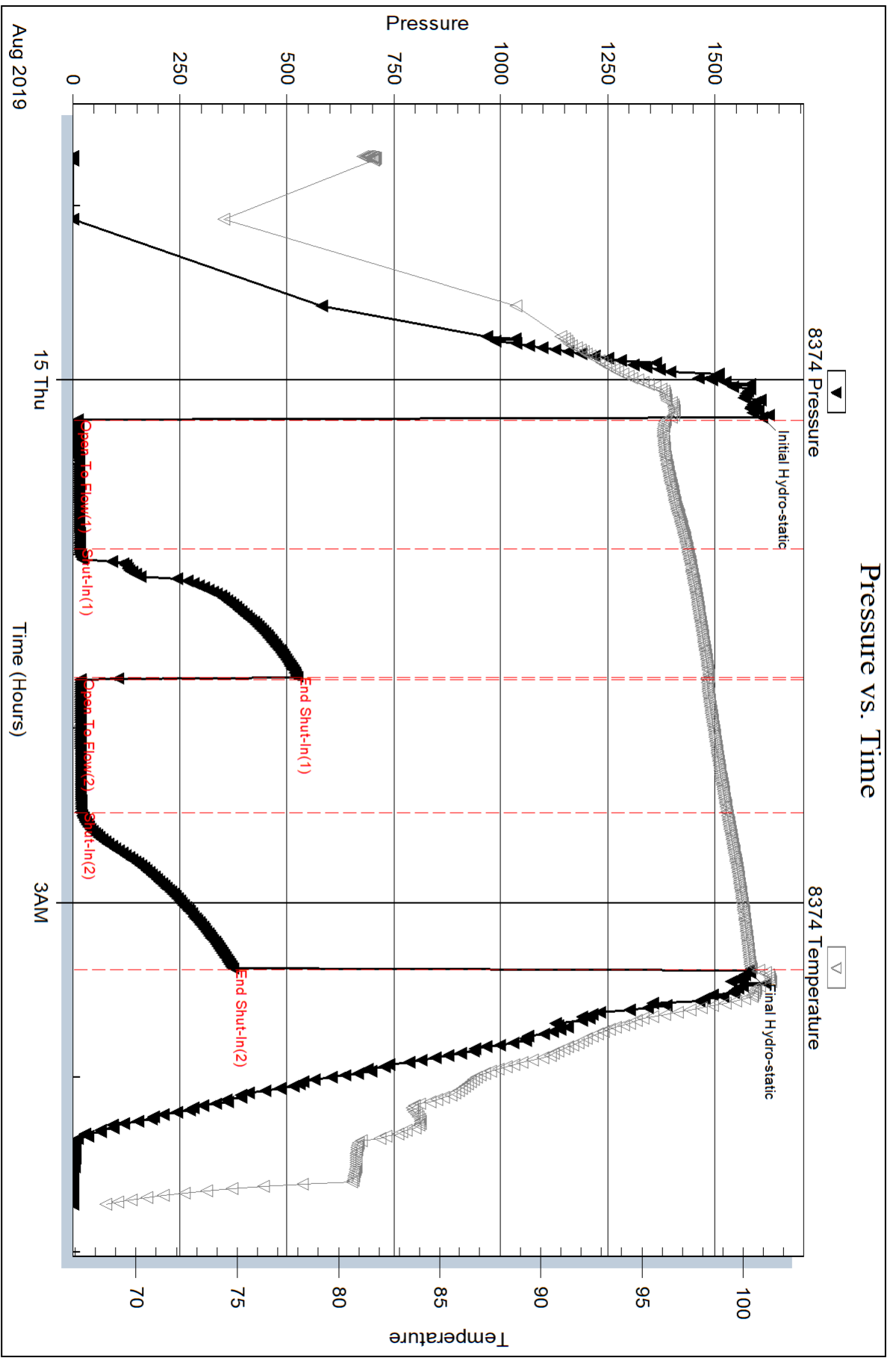
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	OSM 100%M	0.219

Total Length: 15.00 ft Total Volume: 0.219 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 3&1/2#LCM

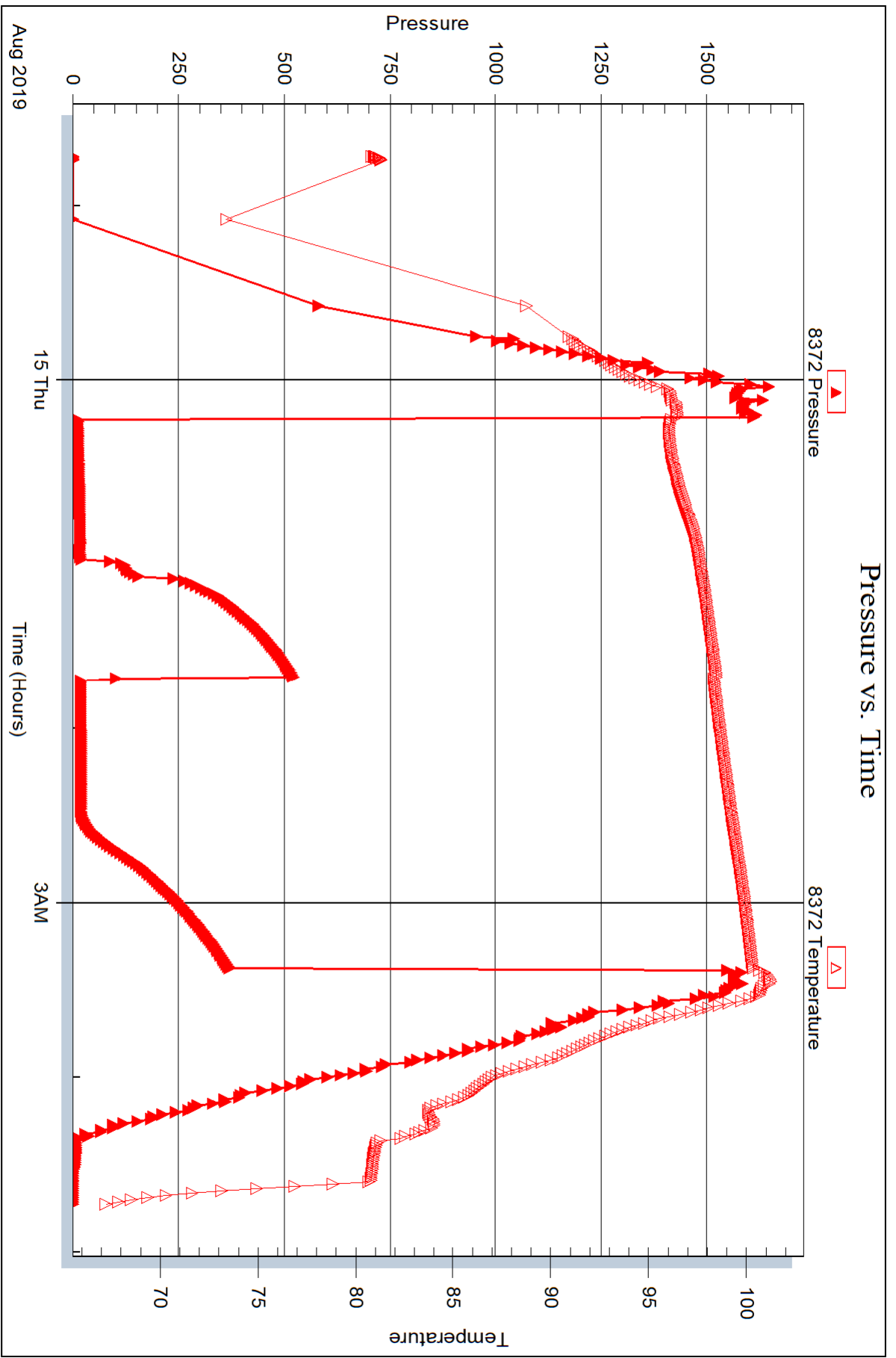


Serial #: 8372

Inside Jasper Co

Casemon Unit #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 65981

Printed: 2019.08.19 @ 09:26:11



DRILL STEM TEST REPORT

Prepared For: **Jaspar Co**

PO Box 1120
Hays KS 67601

ATTN: Cameron Brin

Casemon Unit #1

21-9s-19w Rooks,KS

Start Date: 2019.08.16 @ 02:55:00

End Date: 2019.08.16 @ 09:02:02

Job Ticket #: 65982 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.08.19 @ 09:25:44

Jaspar Co
21-9s-19w Rooks,KS
Casemon Unit #1
DST # 3
LKC 'J - L'
2019.08.16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
 Job Ticket: 65982 **DST#: 3**
 Test Start: 2019.08.16 @ 02:55:00

GENERAL INFORMATION:

Formation: **LKC 'J - L'**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 04:17:32 Tester: Spencer Staab
 Time Test Ended: 09:02:02 Unit No: 84
 Interval: **3489.00 ft (KB) To 3538.00 ft (KB) (TVD)** Reference Elevations: 2133.00 ft (KB)
 Total Depth: 3538.00 ft (KB) (TVD) 2127.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 6.00 ft

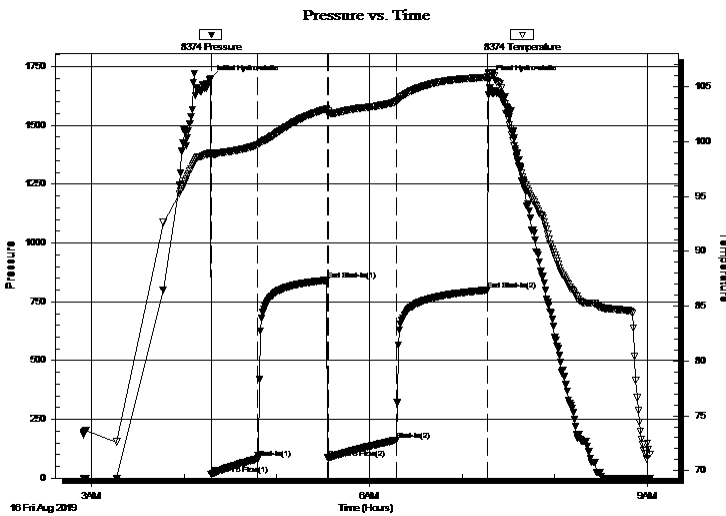
Serial #: 8374

Inside

Press@RunDepth: 162.31 psig @ 3490.00 ft (KB) Capacity: psig
 Start Date: 2019.08.16 End Date: 2019.08.16 Last Calib.: 2019.08.16
 Start Time: 02:55:01 End Time: 09:02:02 Time On Btm: 2019.08.16 @ 04:17:17
 Time Off Btm: 2019.08.16 @ 07:17:32

TEST COMMENT: 30-IF-BOB 18 min; Built to 12"
 45-ISI-Weak Surface
 45-FF-BOB 24 min; Built to 13"
 60-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1697.07	98.97	Initial Hydro-static
1	15.29	98.71	Open To Flow (1)
31	82.29	99.71	Shut-In(1)
76	841.15	102.94	End Shut-In(1)
76	84.99	102.76	Open To Flow (2)
121	162.31	103.64	Shut-In(2)
180	800.11	105.87	End Shut-In(2)
181	1693.81	106.27	Final Hydro-static

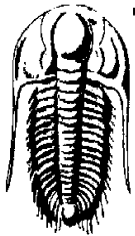
Recovery

Length (ft)	Description	Volume (bbl)
200.00	MW 40%M 60%W	2.92
125.00	WCM 15%W 85%M	1.83

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Cameron Brin

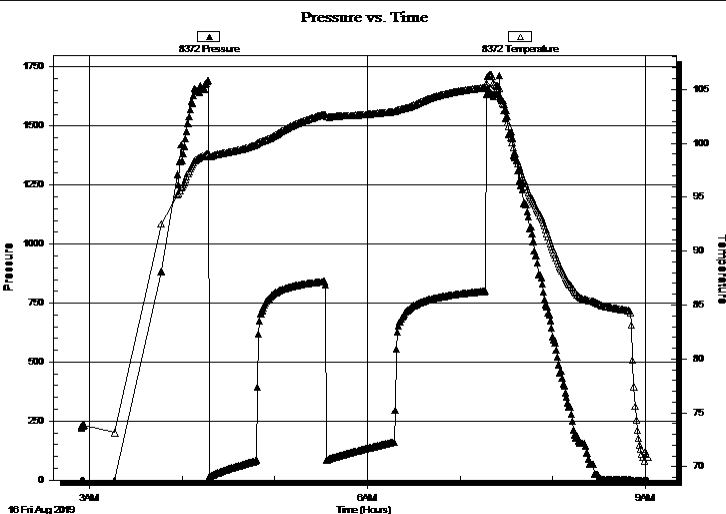
21-9s-19w Rooks,KS
Casemon Unit #1
 Job Ticket: 65982 **DST#: 3**
 Test Start: 2019.08.16 @ 02:55:00

GENERAL INFORMATION:

Formation: **LKC 'J - L'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:17:32
 Time Test Ended: 09:02:02
 Interval: **3489.00 ft (KB) To 3538.00 ft (KB) (TVD)**
 Total Depth: 3538.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer Staab
 Unit No: 84
 Reference Elevations: 2133.00 ft (KB)
 2127.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8372 Outside
 Press@RunDepth: psig @ 3490.00 ft (KB) Capacity: psig
 Start Date: 2019.08.16 End Date: 2019.08.16 Last Calib.: 2019.08.16
 Start Time: 02:55:01 End Time: 09:02:02 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30-IF-BOB 18 min; Built to 12"
 45-ISI-Weak Surface
 45-FF-BOB 24 min; Built to 13"
 60-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
200.00	MW 40%M 60%W	2.92
125.00	WCM 15%W 85%M	1.83

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65982 **DST#: 3**
Test Start: 2019.08.16 @ 02:55:00

Tool Information

Drill Pipe:	Length: 3477.00 ft	Diameter: 3.88 inches	Volume: 50.85 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 50.85 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3489.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3469.00	
Shut In Tool	5.00			3474.00	
Hydraulic tool	5.00			3479.00	
Packer	5.00			3484.00	21.00 Bottom Of Top Packer
Packer	5.00			3489.00	
Stubb	1.00			3490.00	
Recorder	0.00	8374	Inside	3490.00	
Recorder	0.00	8372	Outside	3490.00	
Perforations	2.00			3492.00	
Change Over Sub	1.00			3493.00	
Blank Spacing	32.00			3525.00	
Change Over Sub	1.00			3526.00	
Perforations	9.00			3535.00	
Bullnose	3.00			3538.00	49.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65982 **DST#: 3**
Test Start: 2019.08.16 @ 02:55:00

Mud and Cushion Information

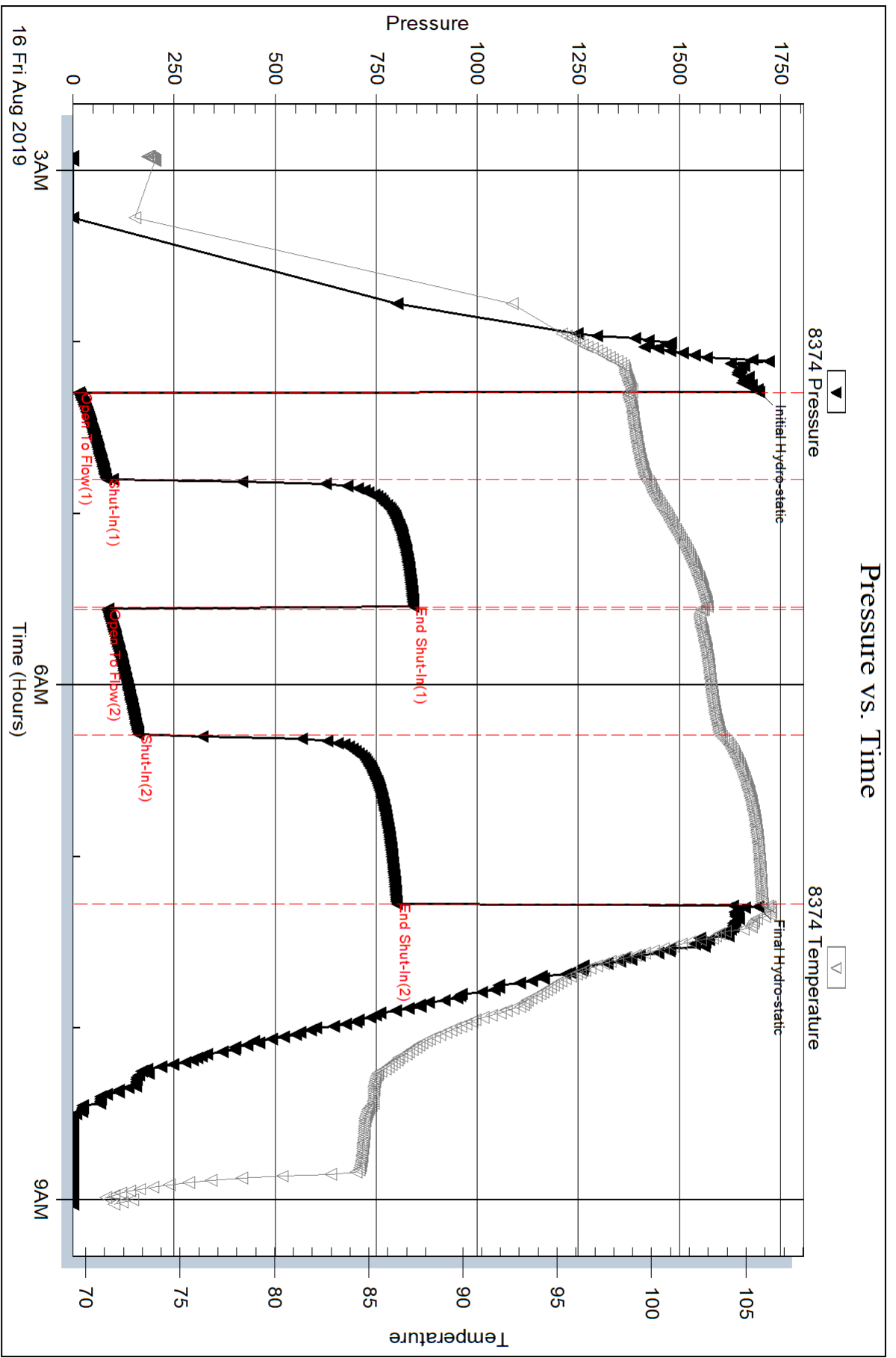
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	33000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	MW 40%M 60%W	2.925
125.00	WCM 15%W 85%M	1.828

Total Length: 325.00 ft Total Volume: 4.753 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 2&1/2#
 RW=.213@70F

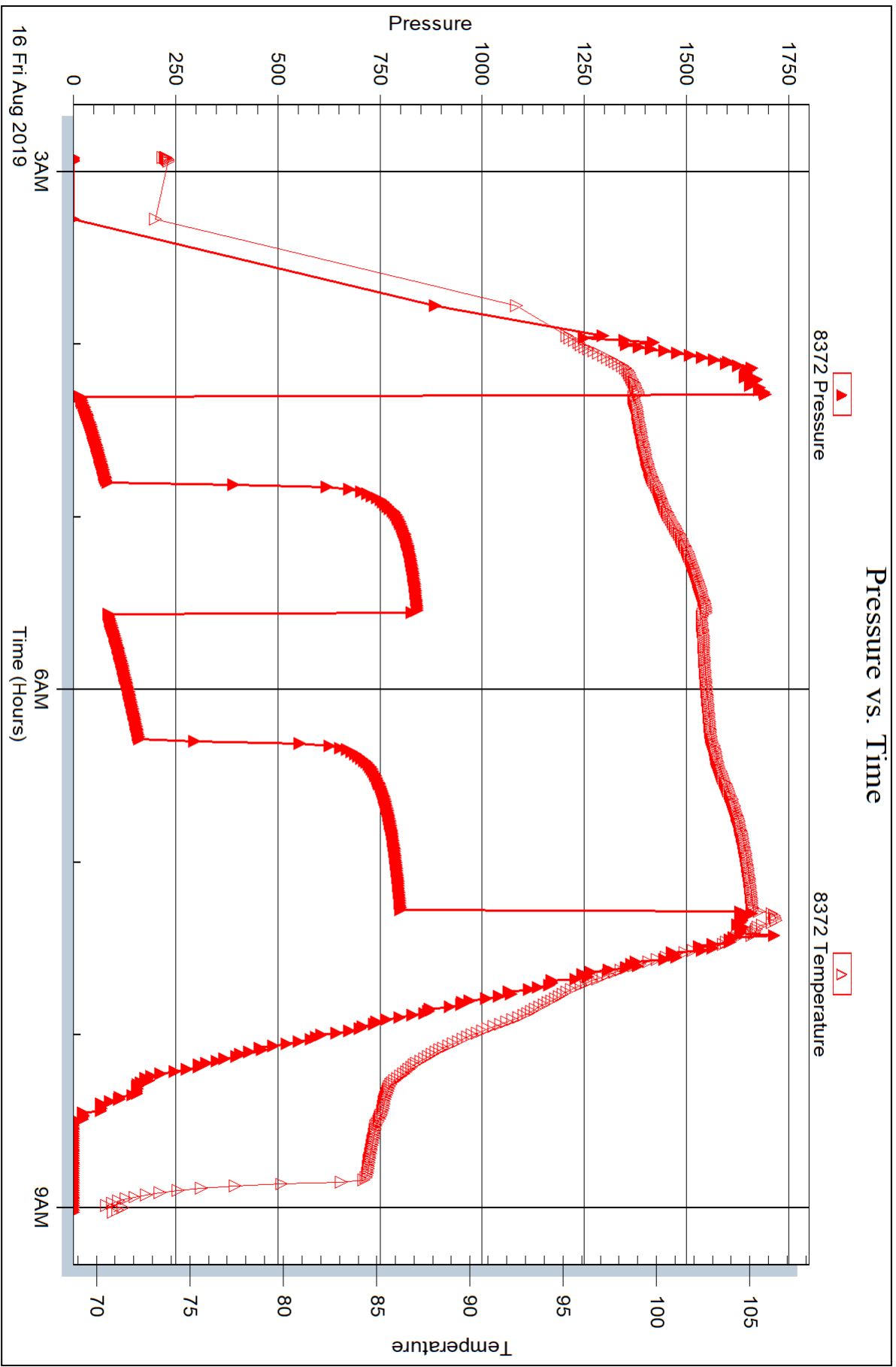


Serial #: 8372

Outside Jasper Co

Casemon Unit #1

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Jaspar Co**

PO Box 1120
Hays KS 67601

ATTN: Cameron Brin

Casemon Unit #1

21-9s-19w Rooks,KS

Start Date: 2019.08.16 @ 18:48:00

End Date: 2019.08.16 @ 23:49:02

Job Ticket #: 65983 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.08.19 @ 09:25:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Cameron Brin

21-9s-19w Rooks, KS
Casemon Unit #1
 Job Ticket: 65983 **DST#: 4**
 Test Start: 2019.08.16 @ 18:48:00

GENERAL INFORMATION:

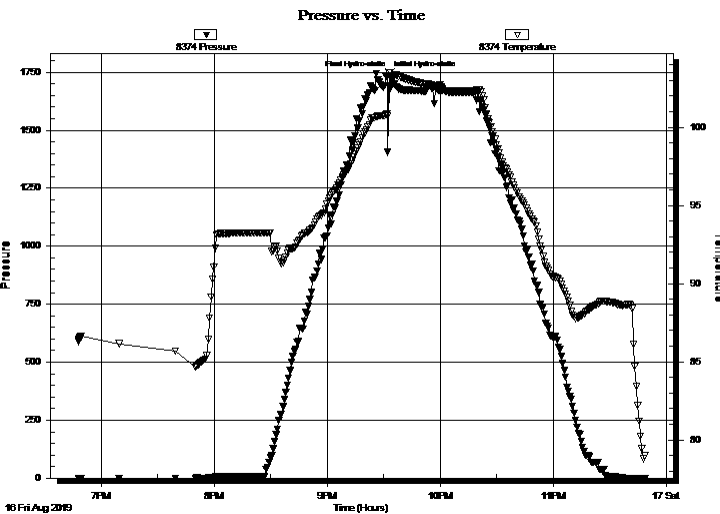
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened:
 Time Test Ended: 23:49:02
Interval: 3536.00 ft (KB) To 3584.00 ft (KB) (TVD)
 Total Depth: 3584.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer Staab
 Unit No: 84
 Reference Elevations: 2133.00 ft (KB)
 2127.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8374

Inside

Press@RunDepth: psig @ 3539.00 ft (KB) Capacity: psig
 Start Date: 2019.08.16 End Date: 2019.08.16 Last Calib.: 2019.08.16
 Start Time: 18:48:01 End Time: 23:49:02 Time On Btm: 2019.08.16 @ 21:31:47
 Time Off Btm: 2019.08.16 @ 21:34:32

TEST COMMENT: Packer Failure



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1734.19	100.86	Initial Hydro-static
3	1733.46	102.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
220.00	Mud	3.22

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
PO Box 1120
Hays KS 67601

ATTN: Cameron Brin

21-9s-19w Rooks,KS

Casemon Unit #1

Job Ticket: 65983

DST#: 4

Test Start: 2019.08.16 @ 18:48:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 23:49:02

Interval: 3536.00 ft (KB) To 3584.00 ft (KB) (TVD)

Total Depth: 3584.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer Staab

Unit No: 84

Reference Elevations: 2133.00 ft (KB)

2127.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8372

Inside

Press@RunDepth: psig @ 3539.00 ft (KB)

Start Date: 2019.08.16

End Date:

2019.08.16

Start Time: 18:48:01

End Time:

23:49:02

Capacity: psig

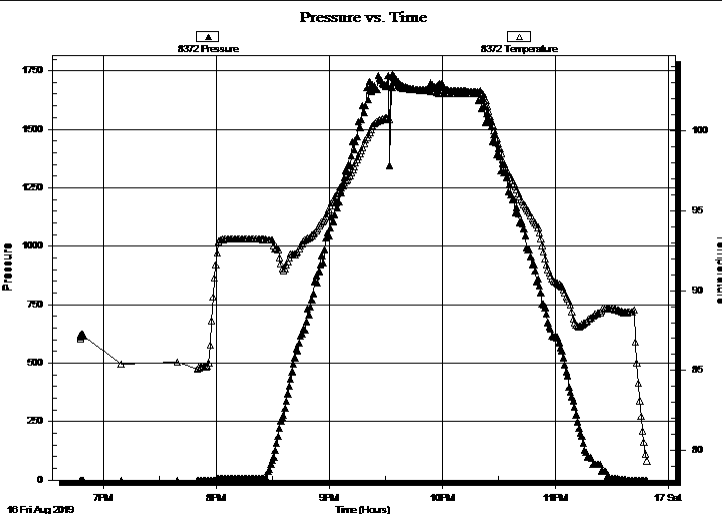
Last Calib.:

2019.08.16

Time On Btm:

Time Off Btm:

TEST COMMENT: Packer Failure



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
220.00	Mud	3.22

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65983 **DST#: 4**
Test Start: 2019.08.16 @ 18:48:00

Tool Information

Drill Pipe:	Length: 3540.00 ft	Diameter: 3.88 inches	Volume: 51.77 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	62000.00 lb
			<u>Total Volume: 51.77 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3536.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	48.00 ft				
Tool Length:	69.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3516.00	
Shut In Tool	5.00			3521.00	
Hydraulic tool	5.00			3526.00	
Packer	5.00			3531.00	21.00 Bottom Of Top Packer
Packer	5.00			3536.00	
Stubb	1.00			3537.00	
Perforations	1.00			3538.00	
Change Over Sub	1.00			3539.00	
Recorder	0.00	8374	Inside	3539.00	
Recorder	0.00	8372	Inside	3539.00	
Blank Spacing	32.00			3571.00	
Change Over Sub	1.00			3572.00	
Perforations	9.00			3581.00	
Bullnose	3.00			3584.00	48.00 Bottom Packers & Anchor

Total Tool Length: 69.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65983 **DST#: 4**
Test Start: 2019.08.16 @ 18:48:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
220.00	Mud	3.217

Total Length: 220.00 ft Total Volume: 3.217 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 3#LCM

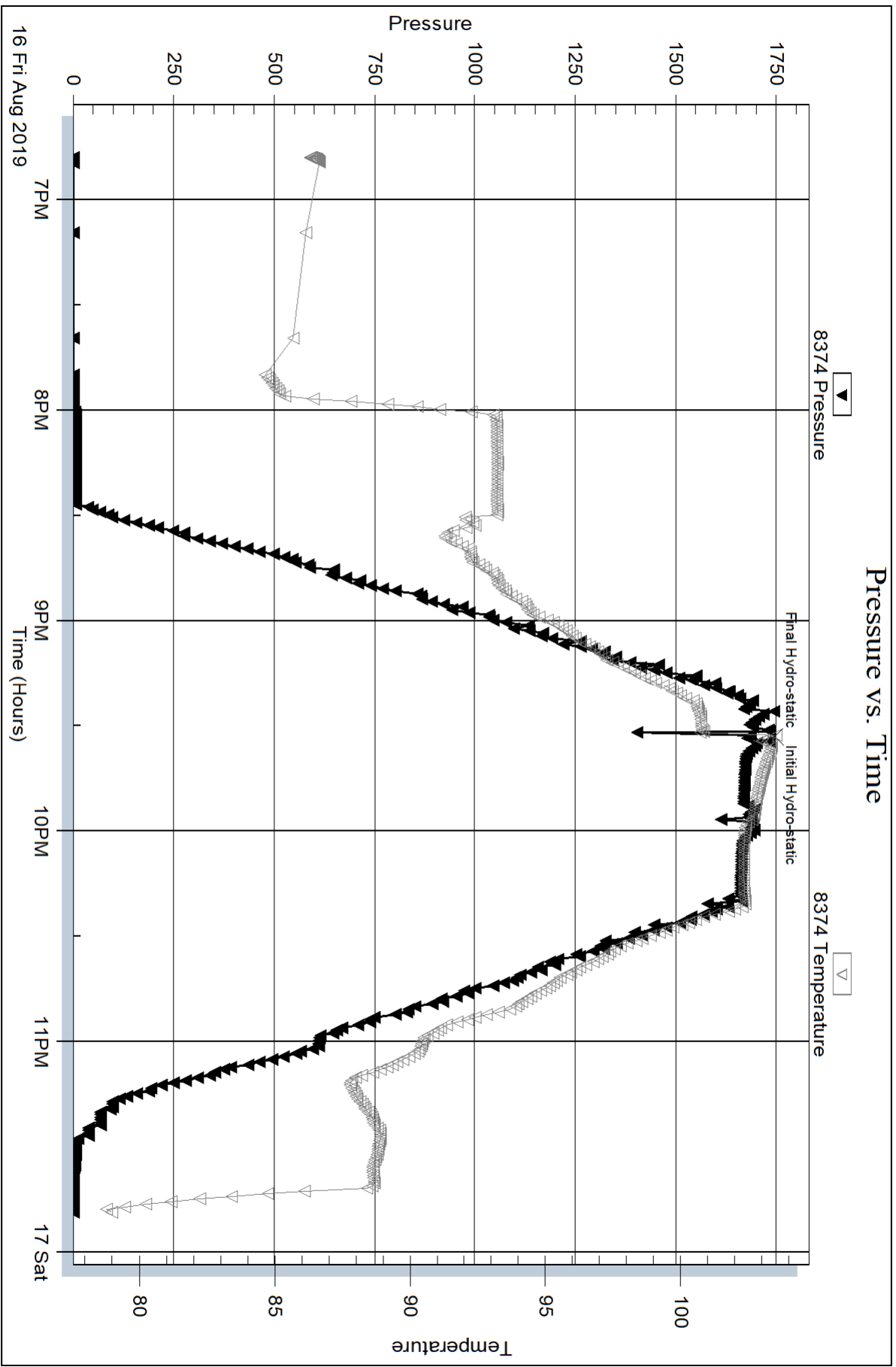
Serial #: 8374

Inside

Jaspar Co

Casemon Unit #1

DST Test Number: 4

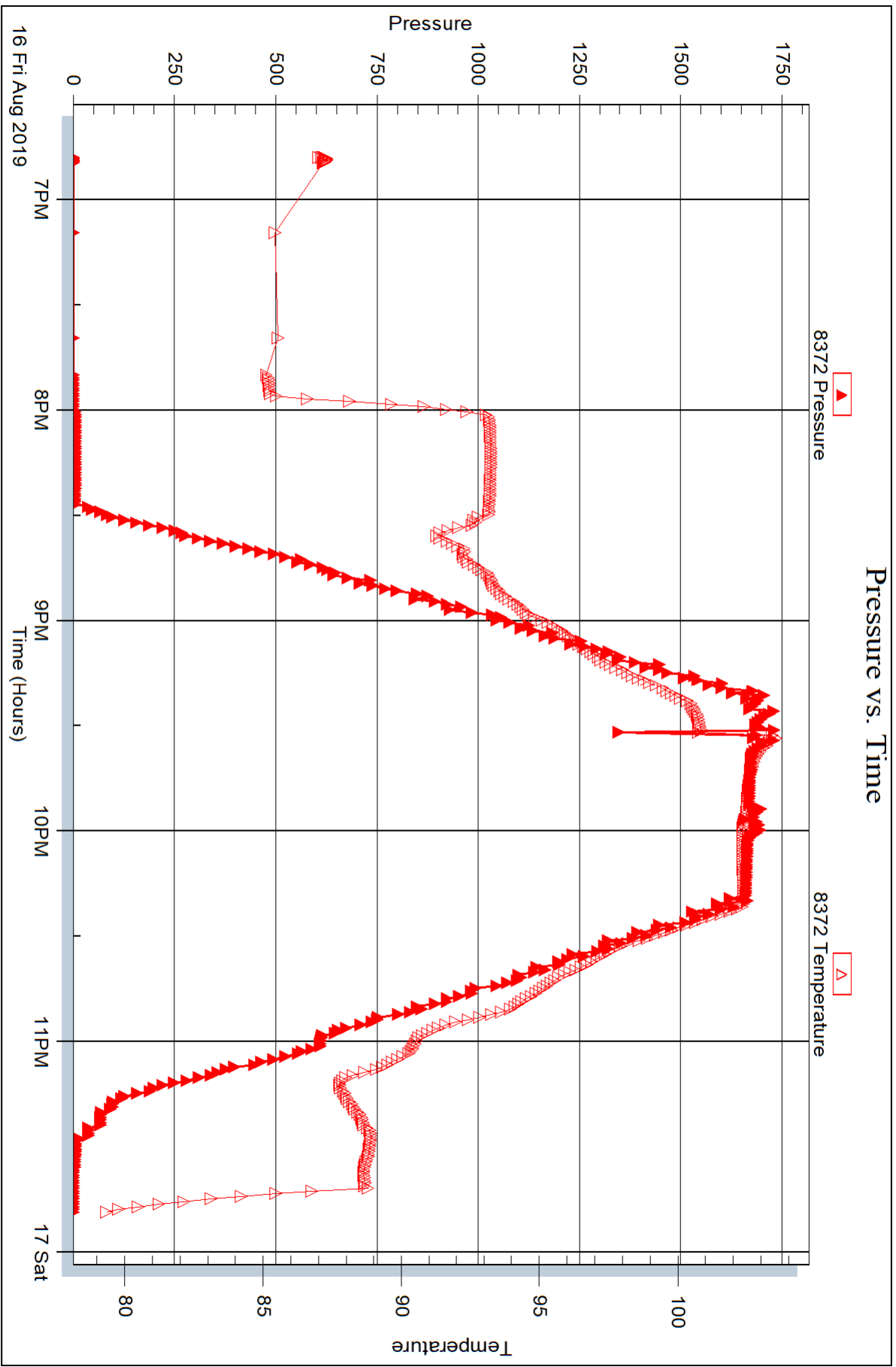


Serial #: 8372

Inside Jasper Co

Casemon Unit #1

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Jaspar Co**

PO Box 1120
Hays KS 67601

ATTN: Cameron Brin

Casemon Unit #1

21-9s-19w Rooks,KS

Start Date: 2019.08.17 @ 07:16:00

End Date: 2019.08.17 @ 12:49:02

Job Ticket #: 65984 DST #: 5

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.08.19 @ 09:24:51



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Cameron Brin

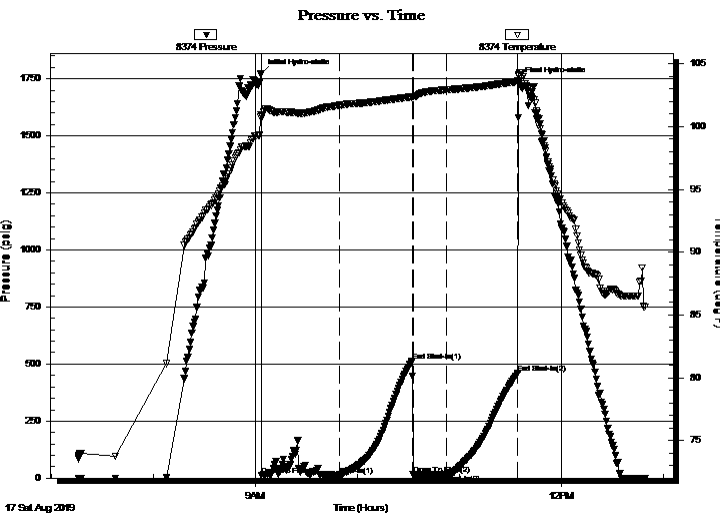
21-9s-19w Rooks,KS
Casemon Unit #1
 Job Ticket: 65984 **DST#: 5**
 Test Start: 2019.08.17 @ 07:16:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:03:32
 Time Test Ended: 12:49:02
 Interval: **3597.00 ft (KB) To 3608.00 ft (KB) (TVD)**
 Total Depth: 3608.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer Staab
 Unit No: 84
 Reference Elevations: 2133.00 ft (KB)
 2127.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8374 **Inside**
 Press@RunDepth: 15.26 psig @ 3598.00 ft (KB) Capacity: psig
 Start Date: 2019.08.17 End Date: 2019.08.17 Last Calib.: 2019.08.17
 Start Time: 07:16:01 End Time: 12:49:02 Time On Btm: 2019.08.17 @ 09:03:17
 Time Off Btm: 2019.08.17 @ 11:34:47

TEST COMMENT: 45-IF-Weak; Built to 1/4"; Died back to Surface
 45-ISI-No Return
 15-FF-No Blow
 45-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.59	100.94	Initial Hydro-static
1	13.16	100.64	Open To Flow (1)
47	14.01	101.69	Shut-In(1)
89	511.94	102.36	End Shut-In(1)
90	15.19	102.37	Open To Flow (2)
109	15.26	102.95	Shut-In(2)
151	459.77	103.62	End Shut-In(2)
152	1739.21	104.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100%M	0.15

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Cameron Brin

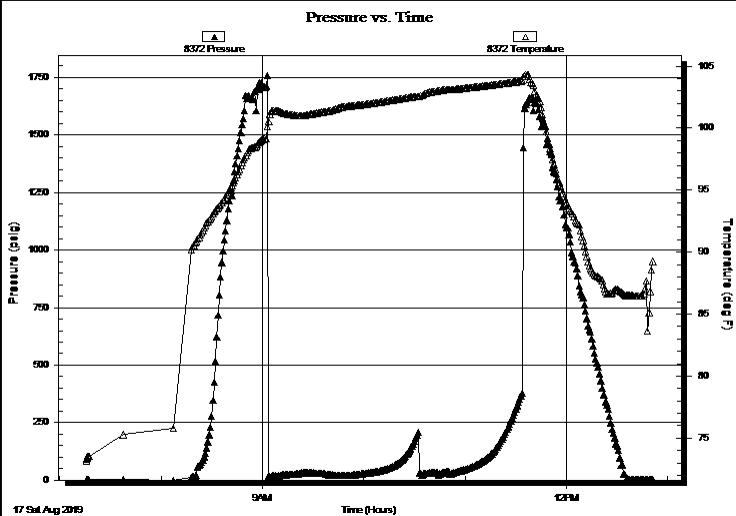
21-9s-19w Rooks, KS
Casemon Unit #1
 Job Ticket: 65984 **DST#: 5**
 Test Start: 2019.08.17 @ 07:16:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:03:32
 Time Test Ended: 12:49:02
Interval: 3597.00 ft (KB) To 3608.00 ft (KB) (TVD)
 Total Depth: 3608.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer Staab
 Unit No: 84
 Reference Elevations: 2133.00 ft (KB)
 2127.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8372 **Outside**
 Press@RunDepth: psig @ 3598.00 ft (KB) Capacity: psig
 Start Date: 2019.08.17 End Date: 2019.08.17 Last Calib.: 2019.08.17
 Start Time: 07:16:01 End Time: 12:51:02 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45-IF-Weak; Built to 1/4"; Died back to Surface
 45-ISI-No Return
 15-FF-No Blow
 45-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100%M	0.15

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65984 **DST#: 5**
Test Start: 2019.08.17 @ 07:16:00

Tool Information

Drill Pipe:	Length: 3601.00 ft	Diameter: 3.88 inches	Volume: 52.66 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 52.66 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3597.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	32.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3577.00	
Shut In Tool	5.00			3582.00	
Hydraulic tool	5.00			3587.00	
Packer	5.00			3592.00	21.00 Bottom Of Top Packer
Packer	5.00			3597.00	
Stubb	1.00			3598.00	
Recorder	0.00	8374	Inside	3598.00	
Recorder	0.00	8372	Outside	3598.00	
Perforations	7.00			3605.00	
Bullnose	3.00			3608.00	11.00 Bottom Packers & Anchor
Total Tool Length:	32.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Cameron Brin

21-9s-19w Rooks,KS
Casemon Unit #1
Job Ticket: 65984 **DST#: 5**
Test Start: 2019.08.17 @ 07:16:00

Mud and Cushion Information

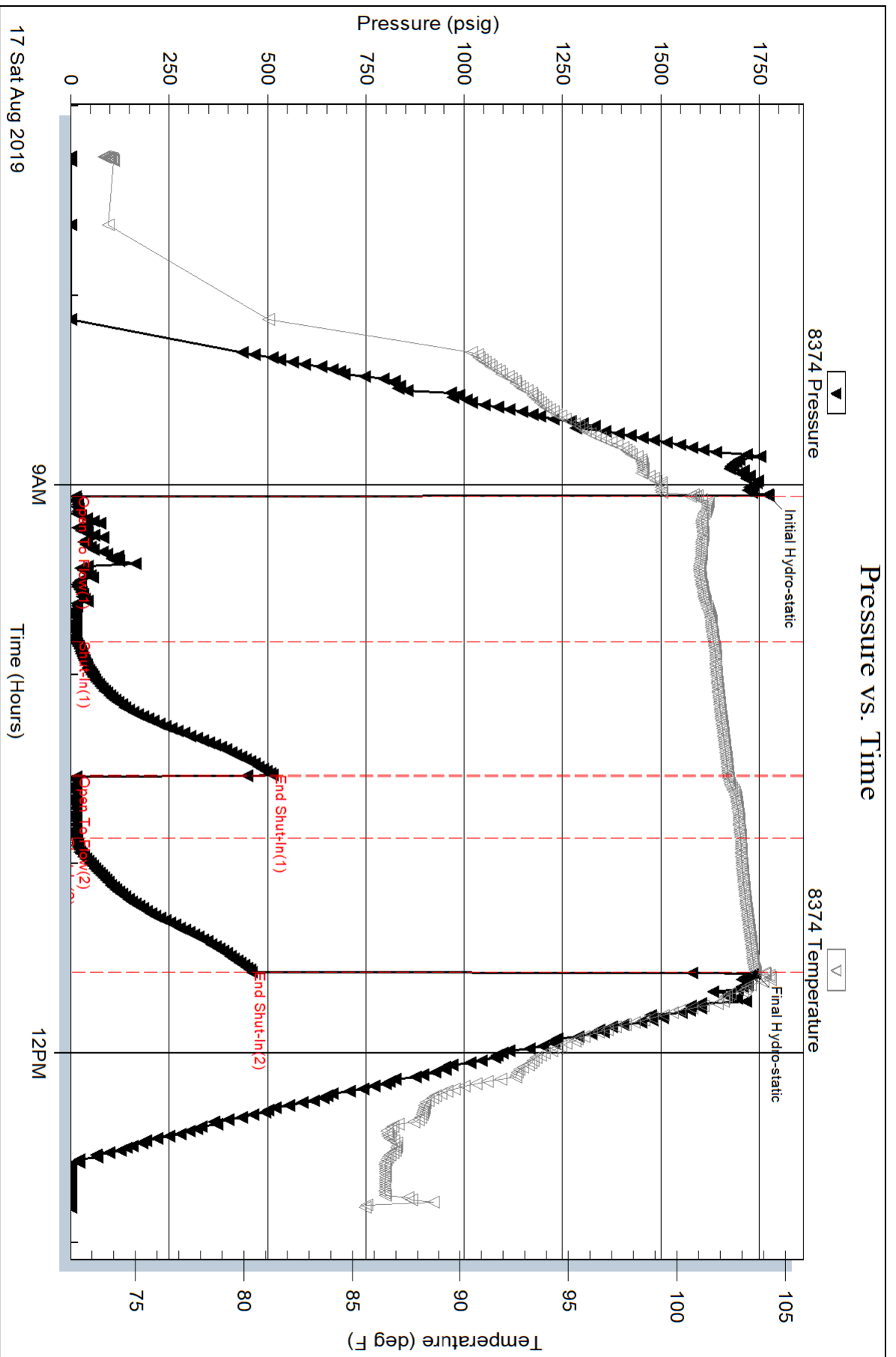
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: inches			

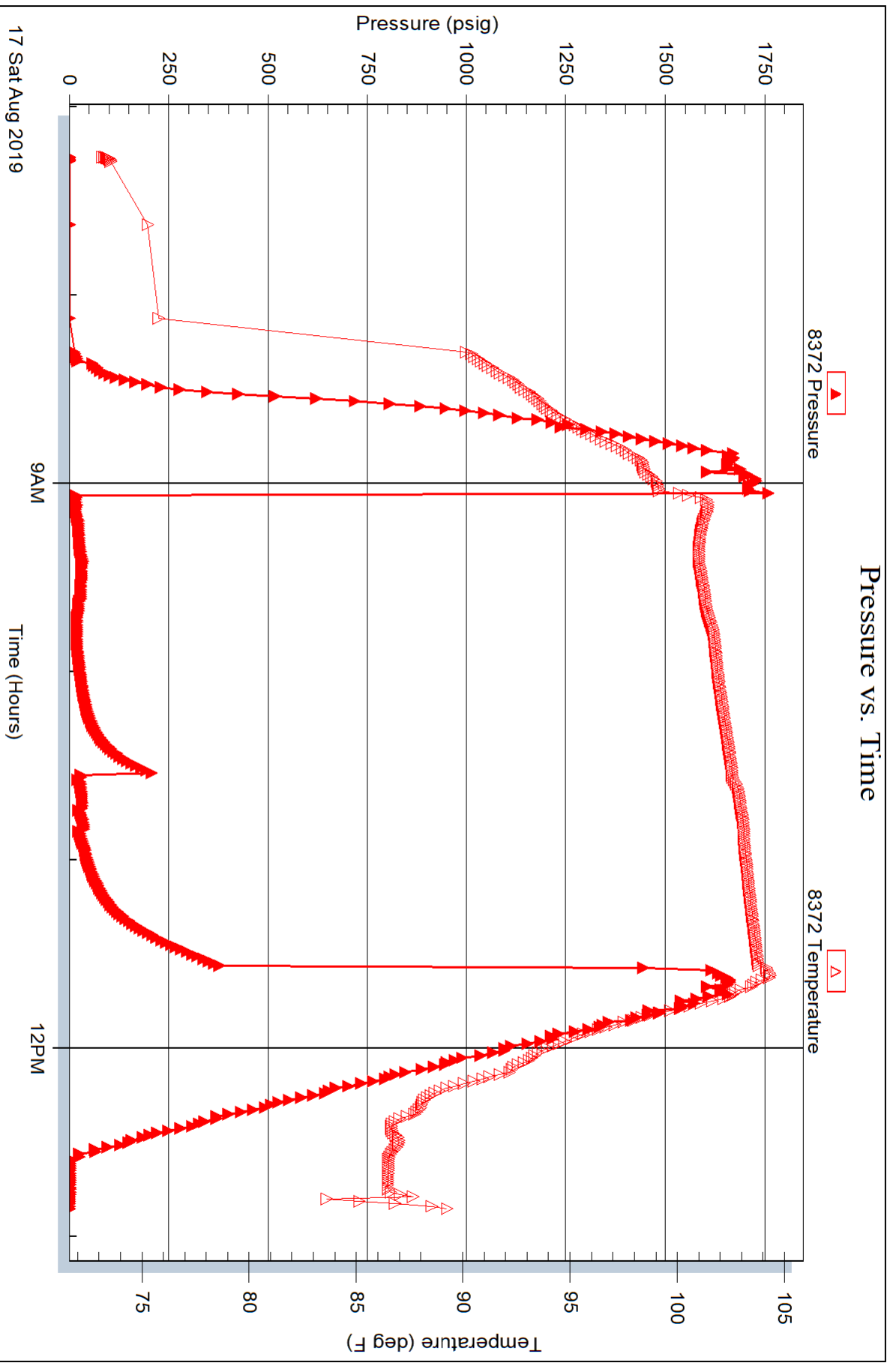
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100%M	0.146

Total Length: 10.00 ft Total Volume: 0.146 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 3#LCM







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65980

NO.

Well Name & No. Cameron Unit #1 Test No. 1 Date 08/14/2019
 Company Jasper Co. Elevation 2133 KB 2127 GL
 Address PO BOX 1120 Hays KS 67601 +1120
 Co. Rep / Geo. Cameron Brim Rig Flex #1
 Location: Sec. 21 Twp 9S Rge. 19W Co. Rooks State KS

Interval Tested 3277'-3342' Zone Tested Top - LRC 'A'
 Anchor Length 65' Drill Pipe Run 3287' Mud Wt. 8.6
 Top Packer Depth 3272' Drill Collars Run — Vis 6.5
 Bottom Packer Depth 3277' Wt. Pipe Run — WL 7.6
 Total Depth 3342 Chlorides 4000 ppm System LCM 4#

Blow Description 77- BOB 12 mins; Tool slid 12ft; started @ 4 1/2"; Built to 2"
77- BOB 9 mins; Built to 32"
78- Fair; Built to 9"

Rec <u>64</u>	Feet of <u>GSOCM</u>	<u>20</u> %gas	<u>10</u> %oil	<u>70</u> %water	<u>70</u> %mud
Rec <u>63</u>	Feet of <u>GOCM</u>	<u>20</u> %gas	<u>20</u> %oil	<u>60</u> %water	<u>60</u> %mud
Rec <u>63'</u>	Feet of <u>GMO</u>	<u>20</u> %gas	<u>40</u> %oil	<u>40</u> %water	<u>40</u> %mud
Rec <u>100'</u>	Feet of <u>GO</u>	<u>30</u> %gas	<u>70</u> %oil	<u>—</u> %water	<u>—</u> %mud
Rec <u>—</u>	Feet of <u>535' GIP</u>	<u>100</u> %gas	<u>—</u> %oil	<u>—</u> %water	<u>—</u> %mud

Rec Total 290' BHT 101' Gravity 37° API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1578 Test 1200 T-On Location 06:48
 (B) First Initial Flow 51 Jars — T-Started 08:03
 (C) First Final Flow 91 Safety Joint — T-Open 09:55
 (D) Initial Shut-In 789 Circ Sub — T-Pulled 12:55
 (E) Second Initial Flow 94 Hourly Standby — T-Out 14:46
 (F) Second Final Flow 143 Mileage 7627 76 Comments —
 (G) Final Shut-In 787 Sampler —
 (H) Final Hydrostatic 1579 Straddle — EM Tool —

Initial Open 30 Shale Packer — Ruined Shale Packer —
 Initial Shut-In 45 Extra Packer — Ruined Packer —
 Final Flow 45 Extra Recorder — Extra Copies —
 Final Shut-In 60 Day Standby — Sub Total 0
 Accessibility — Total 1276
 Sub Total 1276 MP/DST Disc't —

Approved By _____ Our Representative Spencer J. Staal Thanks!
 TriLOBITE TESTING INC. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the note shall be paid for at cost by the party for whom the test is made.

785-259-0056



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65981

NO.

Well Name & No. Cameron Unit #1 Test No. 2 Date 08/14/2019
 Company Jasper Co Elevation 2133 KB 2127 GL
 Address PO BOX 1120 Hays, KS 67601 + 1120
 Co. Rep / Geo. Cameron Brin Rig Floor #1
 Location: Sec. 21 Twp 9s Rge. 19w Co. Rooks State Ks

Interval Tested 3349' - 3389' Zone Tested LKC 'C+D'
 Anchor Length 40' Drill Pipe Run _____ Mud Wt. 8.8
 Top Packer Depth 3344' Drill Collars Run — Vis 50
 Bottom Packer Depth 3349' Wt. Pipe Run — WL 7.6
 Total Depth 3389' Chlorides 2500 ppm System LCM 3 1/2 #

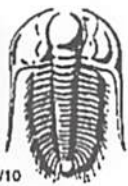
Blow Description 77- Weak; Built to 1"
75D - No Return
77 - No Blow
75D - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>15'</u>	<u>OSM</u>			<u>100</u>	
_____	_____				
_____	_____				
_____	_____				

Rec Total 15' BHT 100° Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm
 (A) Initial Hydrostatic 1610 Test 1200 T-On Location 22:28
 (B) First Initial Flow 11 Jars _____ T-Started 22:43
 (C) First Final Flow 15 Safety Joint _____ T-Open 00:10 08/15/2019
 (D) Initial Shut-In 524 Circ Sub _____ T-Pulled 03:10
 (E) Second Initial Flow 18 Hourly Standby _____ T-Out 04:42
 (F) Second Final Flow 19 Mileage 7627 76 Comments _____
 (G) Final Shut-In 374 Sampler _____
 (H) Final Hydrostatic 1579 Straddle _____ EM Tool _____
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 0
 Accessibility _____ Total 1276
 Sub Total 1276 MP/DST Disc't _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45

Approved By _____ Our Representative Spencer J. Staal Thanks!
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785-259-0056



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65982

NO.

Well Name & No. Casemon Unit #1 Test No. 3 Date 08/15/2019
 Company Jasper Co Elevation 2133 KB 2127 GL
 Address PO BOX 1120 Hays KS 67601 + 1120
 Co. Rep / Geo. Cameron Brin Rig Flev #1
 Location: Sec. 21 Twp 9S Rge. 19W Co. Hooks State KS

Interval Tested 3489'-3538' Zone Tested LKC 'J-L'
 Anchor Length 49' Drill Pipe Run 3477' Mud Wt. 8.8
 Top Packer Depth 3484' Drill Collars Run - Vis 50
 Bottom Packer Depth 3489' Wt. Pipe Run - WL 8.0
 Total Depth 3538' Chlorides 4500 ppm System LCM 2 1/2#

Blow Description 7- BOB 18 min; Built to 12"
DSJ - Weak Surface
77- BOB 24 min; Built to 13"
78- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>900'</u>	<u>WCM MN</u>		<u>65</u>	<u>30</u>	
<u>885'</u>	<u>WCM</u>		<u>65</u>	<u>35</u>	

Rec Total 325 BHT 105° Gravity - API RW 213 @ 70 ° F Chlorides 33,000 ppm

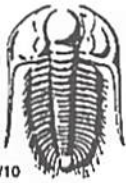
(A) Initial Hydrostatic 1697 Test 1200 T-On Location 23:50
 (B) First Initial Flow 15 Jars - T-Started 02:55 08/16
 (C) First Final Flow 82 Safety Joint - T-Open 04:07
 (D) Initial Shut-In 841 Circ Sub - T-Pulled 07:07
 (E) Second Initial Flow 84 Hourly Standby - T-Out 08:52
 (F) Second Final Flow 162 Mileage 7627 76
 (G) Final Shut-In 800 Sampler -
 (H) Final Hydrostatic 1693 Straddle - EM Tool -
 Shale Packer - Ruined Shale Packer -
 Extra Packer - Ruined Packer -
 Extra Recorder - Extra Copies -
 Day Standby - Sub Total 0
 Accessibility - Total 1276

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60
 Sub Total 1276 MP/DST Disc't -

Approved By _____ Our Representative Spencer J. Stuck Trunks

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785-259-0056



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65983

NO.

Well Name & No. Cameron Unit #1 Test No. 4 Date 08/16/2019
 Company Jasper Co Elevation 2133 KB 2127 GL
 Address PO BOX 1120 Hays Ks 67601 +1120
 Co. Rep / Geo. Cameron Brin Rig Flex #1
 Location: Sec. 21 Twp 9S Rge. 19W Co. Hooks State Ks

Interval Tested 3536' - 3584' Zone Tested Arbuckle
 Anchor Length 48' Drill Pipe Run 3540' Mud Wt. 8.9
 Top Packer Depth 3531' Drill Collars Run - Vis 47
 Bottom Packer Depth 3536' Wt. Pipe Run - WL 8.0
 Total Depth 3584' Chlorides 5500 ppm System LCM 3#

Blow Description 7- Packer Failure
7.5
7.7
7.8

Rec	Feet of	%gas	%oil	%water	%mud
<u>220</u>	<u>Mud</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 220 BHT Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1734 Test 950 T-On Location 18:31
 (B) First Initial Flow - Jars T-Started 18:48
 (C) First Final Flow - Safety Joint T-Open 21:30
 (D) Initial Shut-In - Circ Sub T-Pulled -
 (E) Second Initial Flow - Hourly Standby T-Out 23:47
 (F) Second Final Flow - Mileage 7627 76 Comments -
 (G) Final Shut-In - Sampler -
 (H) Final Hydrostatic 1733 Straddle - EM Tool -
 Shale Packer - Ruined Shale Packer -
 Extra Packer - Ruined Packer -
 Extra Recorder - Extra Copies -
 Day Standby - Sub Total 0
 Accessibility - Total 1026
 Sub Total 1026 MP/DST Disc't -

Approved By _____ Our Representative Spencer J. Steele Thanks!
 TriLOBITE TESTING Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

785-259-0056



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65984

NO.

Well Name & No. Cameron Unit #1 Test No. 5 Date 08/17/2019
 Company Jasper Co Elevation 2133 KB 2127 GL
 Address PO BOX 1120 Hays Ks 67601 + 1120
 Co. Rep / Geo. Cameron Brim Rig Flex #1
 Location: Sec. 21 Twp 9S Rge. 19W Co. Rooks State Ks

Interval Tested 3597' - 3608' Zone Tested Arbuckle
 Anchor Length 11' Drill Pipe Run 3601' Mud Wt. 8.9
 Top Packer Depth 3592' Drill Collars Run — Vis 47
 Bottom Packer Depth 3597' Wt. Pipe Run — WL 8.0
 Total Depth 3608' Chlorides 5500 ppm System LCM 3#

Blow Description 77-Weak; Built to 4"; died back to surface
DSD - No Return
77 - No Blow
7SD - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10' BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1773</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>07:01</u>
(B) First Initial Flow <u>13</u>	<input type="checkbox"/> Jars _____	T-Started <u>07:16</u>
(C) First Final Flow <u>14</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>09:00</u>
(D) Initial Shut-In <u>511</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>11:30</u>
(E) Second Initial Flow <u>15</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>12:48</u>
(F) Second Final Flow <u>15</u>	<input checked="" type="checkbox"/> Mileage <u>76.87x2</u> <u>152</u>	Comments <u>loaded @</u>
(G) Final Shut-In <u>459</u>	<input type="checkbox"/> Sampler _____	<u>23:00 08/17/2019</u>
(H) Final Hydrostatic <u>1735</u>	<input type="checkbox"/> Straddle _____	

Initial Open <u>45</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> EM Tool _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Ruined Packer _____
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Accessibility _____	Sub Total <u>0</u>
	Sub Total <u>1602</u>	Total <u>1602</u>

Approved By _____ Our Representative Spencer J. Stahl Thanks! MP/DST Disc't _____

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785-259-0056

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. 1497

Date	8-18-19	Sec.	21	Twp.	9	Range	19	County	Rooks	State	Ks	On Location		Finish	10:15 AM
Lease								Location		Zurich - 1W, 1 1/2 N, E Hinto					
Contractor								Well No.		Owner					
Type Job										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.					
Hole Size								T.D.		Charge To					
Csg.								Depth		Street					
Tbg. Size								Depth		City					
Tool								Depth		State					
Cement Left in Csg.								Shoe Joint		The above was done to satisfaction and supervision of owner agent or contractor.					
Meas Line								Displace		Cement Amount Ordered					
EQUIPMENT										Common					
Pumptrk								No.		Poz Mix					
Bulktrk								No.		Gel.					
Bulktrk								No.		Calcium					
JOB SERVICES & REMARKS										Hulls					
Remarks:										Salt					
Rat Hole										Flowseal					
Mouse Hole										Kol-Seal					
Centralizers										Mud CLR 48					
Baskets										CFL-117 or CD110 CAF 38					
D/V or Port Collar										Sand					
Circulation pump										Handling					
Plug Rathole + Mousehole										Mileage					
Casing + mix										FLOAT EQUIPMENT					
failed by										Guide Shoe					
washpump + lines										Centralizer					
w/ 85 1/2 BLS of H2O										Baskets					
Released + held										AFU Inserts					
Lift pressure										Float Shoe					
Land plug to										Latch Down					
Cement Did Circulate															
Signature										Pumptrk Charge					
Signature										Mileage					
Signature										Tax					
Signature										Discount					
Signature										Total Charge					

86

unit

Caseman

Flex #1

Longstring

7 7/8"

5 1/2" 15. Set New

Well No. 1

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.

Charge To Jasper

T.D. 3650'

Depth 3640'

Shoe Joint 42.09

Cement Amount Ordered 460 80% QmDC 1/4# Flowseal

Displace 85 1/2 BLS

150 Com 10% Salt 5% Gilsomite - 500 gal mud CLR 48

EQUIPMENT

Pumptrk	20	No.	Cementor	Rick
			Helper	David
Bulktrk	19	No.	Driver	Doug
			Driver	Lance
Bulktrk	15	No.	Driver	Lance
			Driver	

Common 150
Poz Mix 460 80% QmDC
Gel.
Calcium

JOB SERVICES & REMARKS

Remarks:
Rat Hole 305x
Mouse Hole 155x
Centralizers 1, 3, 9, 15, 42, 51, 62
Baskets 2, 4, 10, 16, 43
D/V or Port Collar pipe on bottom break
Circulation pump 500 gal mud CLR 48
Plug Rathole + Mousehole Hook to 5 1/2"
Casing + mix 415 Sx QmDC 80% 1/4# Flowseal
failed by 150 Com 10% S%. Shut down
washpump + lines. Displaced plug
w/ 85 1/2 BLS of H2O. Released + held
Lift pressure 1000 #
Land plug to 2000 #

Hulls
Salt 13
Flowseal 115#
Kol-Seal 750#
Mud CLR 48 500 gal
CFL-117 or CD110 CAF 38
Sand
Handling 631
Mileage

FLOAT EQUIPMENT

Guide Shoe
Centralizer 7
Baskets 5
AFU Inserts
Float Shoe 1
Latch Down 1

Cement Did Circulate

Pumptrk Charge prod string
Mileage 33

Signature
Signature
Signature

Thanks

Tax
Discount
Total Charge

GENERAL TERMS AND CONDITIONS

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 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 construed 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.