

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	Cholla Production, LLC
Well Name	ZIMMERMAN-ELMORE UNIT 1-3
Doc ID	1529746

All Electric Logs Run

Gamma Ray
Dual Induc
Comp Neutron
Micro Res
Bond Log

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. 1389

Date	9-5-20	Sec.	3	Twp.	16	Range	20	County	Rush	State	KS	On Location		Finish	11:30 AM
Location								Schoenchen 9w 1s 3/4w							

Lease	Zimmerman Emure	Well No.	1-3	Owner	To Quality Oilwell Cementing, Inc.
Contractor	Southern #3	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job	Production String	Charge To	Cholla Production LLC		
Hole Size	7/8	T.D.	3838	Street	
Csg.	5/2	Depth	3462.	City	State
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered	NO Q-Proc
Cement Left in Csg.	39.52	Shoe Joint	39.52	10% Salt 5% Gelsonite 50 gal	
Meas Line		Displace	86 1/4 BL	Common	170

EQUIPMENT

Pumptrk	5	No.	Cement Helper		Poz. Mix
Bulktrk		No.	Driver	Tim	Gel.
Bulktrk	15	No.	Driver	Doug	Calcium

JOB SERVICES & REMARKS

Remarks:		Hulls	
Rat Hole	30SK	Salt	13
Mouse Hole		Flowseal	
Centralizers		Kol-Seal	650#
Baskets		Mud CLR 48	500 gal
D/V or Port Collar		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	189
		Mileage	

FLOAT EQUIPMENT

		Guide Shoe	
		Centralizer	7
		Baskets	1
		AFU Inserts	
		Float Shoe	1
		Latch Down	6

Pumptrk Charge	Prod String	Tax	
Mileage	31	Discount	
Signature		Total Charge	

Thanks

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

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

No. 2049

Date	8-29-2020	Sec.	3	Twp.	16	Range	20	County	Rush	State	Kansas	On Location		Finish	11:15pm
Location								Ellis St Clair 3E Sinto							

Lease	Zimmerman-Elmore Unit No. 1-3	Owner	To Quality Oilwell Cementing, Inc.
Contractor	Southwind Drilling	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Type Job	Surface	Charge To	Cholla Production LLC
Hole Size	12 1/4	T.D.	1391
Csg.	8 5/8	Depth	1391
Tbg. Size		Street	
Tool		City	State
Cement Left in Csg.	30	Shoe Joint	30'
Meas Line	Displace 86.5	Cement Amount Ordered	525 ⁸⁰ / ₃₀ 342

EQUIPMENT

Pumptrk	5	No.	Cementer David	Helper	Tim	Common	420
Bulktrk	15	No.	Driver Doug	Driver		Poz. Mix	105
Bulktrk	9	No.	Driver Tom	Driver		Gel.	
						Calcium	18

JOB SERVICES & REMARKS

Remarks:	Hulls	10
Rat Hole	Salt	
Mouse Hole	Flowseal	
Centralizers	Kot-Seal	
Baskets	Mud CLR 48	
D/V or Port Collar	CFL-117 or CD110 CAF 38	
	Sand	
	Handling	553
	Mileage	

FLOAT EQUIPMENT

	Guide Shoe	
	Centralizer	3
	Baskets	
	AFU Inserts	
	Float Shoe	
	Latch Down	
	1-Baffle plate	
	1-Rubber plug	
	Pumptrk Charge	Long Surface Job
	Mileage	31

Cement Did Circulate		Tax	
		Discount	
		Total Charge	

x Signature *Frank J. Rowe*

THANKS

Cholla Production, LLC

10390 Bradford Rd, Suite 201 Littleton, CO 80127

Zimmerman Elmore Unit No. 1-3

95' FNL & 1300' FEL

Sec. 3-T16S-R20W

Rush County, Kansas

KB = 2166'

Scale 1:240 Imperial	
Well Name:	Zimmerman Elmore Unit #1-3
Surface Location:	95' FNL, 1300' FEL, Sec 3-T16S-R20W
Bottom Location:	Rush County, KS
API:	15-165-22173-00-00
License Number:	
Spud Date:	8/28/2020
Region:	Rush County
Drilling Completed:	9/4/2020
Time:	3:15 PM
Surface Coordinates:	
Bottom Hole Coordinates:	
Ground Elevation:	2157.00ft
K.B. Elevation:	2166.00ft
Logged Interval:	2950.00ft To: 3838.00ft
Total Depth:	3838.00ft
Formation:	Lansing-Kansas City
Drilling Fluid Type:	Chemical/Fresh Water Gel

OPERATOR	
Company:	Cholla Production, LLC
Address:	10390 Bradford Rd, Suite 201 Littleton, CO 80127
Contact Geologist:	Bill Goff
Contact Phone Nbr:	303-823-4565
Well Name:	Zimmerman Elmore Unit #1-3
Location:	95' FNL, 1300' FEL, Sec 3-T16S-R20W
API:	15-165-22173-00-00
State:	Kansas
Field:	District 30
Country:	USA

LOGGED BY	
Company:	Charlie Sturdavant Consulting
Address:	920 12th Street Golden, CO 80121
Phone Nbr:	303-907-2295
Logged By:	Geologist Name: Charlie Sturdavant

NOTES

The Cholla Production, LLC Zimmerman Elmore Unit No. 1-3 was drilled to an RMD of 3838' and LTD of 3836', bottoming in the Pre-Cambrian Quartzite. The geologist was on location, examining samples at 2000'. Sample shows of oil were noted in the Lansing, C, D, E, F, G, and I zones, as well as minor shows in the Pawnee.

Two DST's were conducted in the Lansing, with rather mixed results. DST #1 covering Lansing C zone, recovered 20' Gassy Oil (80% oil), 40' WCM (85% mud), and 60' MOW (80% water). Shut in pressures showed signs of reservoir depletion at 270-267'. DST #2 covering Lansing zones D, E, F and G recovered 20' Mud with SIP 978-9759'. Examination of well cuttings indicated little porosity in general, oil gas rocks throughout the Lansing-Kansas City section, with the C zone being the lone exception.

Based on the sample examinations, DST results, and log analysis, it was determined by all parties involved that the Lansing C zone should be further tested through production casing.

The samples were saved and will be available for review at the Kansas Geological Survey well sample library, located in Wichita, Kansas.

Respectfully submitted,
Charlie Sturdavant
Consulting Geologist

Well Comparison Sheet

DRILLING WELL		COMPARISON WELL				COMPARISON WELL			
Cholla Production, LLC Zimmerman Elmore No. 1-3 95' FNL & 1300' FEL, Sec. 3-T16S-R20W Rush County, KS		2173 KB Cholla Zimmerman Well #1-3 792 FNL & 2285 FEL Sec. 3-T16S-R20W Rush County, KS				2147 KB Sawston Colinger # B-1 CNE Sec. 3-T16S-R20W Rush County, KS			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Log
Archeic	1374	292	1368	298	1398	792	298	1398	792
Bottom Anhyd.	1421	745	1409	757	1428	738	7	1395	752
Stoller	2370	1094	2360	1094	2378	8	14	2292	355
Tarkio	3019	-849	3010	-844	3024	-859	9	3000	-893
Topeka	3174	-988	3130	-964	3145	-979	11	3121	-974
King Hill	3260	-1094	3260	-1094	3275	-1106	12	3260	-1103
Ouren Hill	3323	-1157	3322	-1156	3336	-1170	13	3314	-1167
Hebner	3412	-1246	3410	-1244	3426	-1256	14	3401	-1257
Toronto	3430	-1264	3430	-1264	3445	-1278	15	3425	-1278
Lansing	3466	-1290	3465	-1289	3470	-1304	14	3446	-1301
Blanc/KC	3564	-1492	3564	-1492	3571	-1509	13	3546	-1501
Pharos	3704	-1638	3698	-1632	3718	-1650	12	3694	-1647
Cherokee Shale	3760	-1704	3756	-1700	3771	-1716	11	3745	-1710
Pre-Cambrian	3802	-1738	3804	-1736	3813	-1744	8	3745	-1738
Total Depth	3838	-1872	3838	-1872	3847	-1877	9	3745	-1848

Daily Drilling Report

Company:	Charlie Sturdavant Consulting	Well:	Zimmerman Elmore Unit #1-3
Operator Contacts:	Bill Goff: 303-823-4565; Kelly Braum: 785-324-1414; Website Geologist: Charlie Sturdavant; Cell: 303-907-2295	Location:	95' FNL & 1300' FEL, Sec. 3-T16S-R20W
Drilling Contractor:	Southwind Drilling Co. Rig #3; Tool Pusher: Frank Rome; cell: 820-566-7324	Elevation:	GL: 2157, KB: 2166
Well Type:	Vertical	Field:	District 30
Longitude:	-95.515409	Surface Casing:	8.5" set @ 13
Latitude:	38.69387	API No.:	15-165-22173-00-00
N/S Co-ord:			
E/W Co-ord:			

DATE	7:00 AM DEPTH	REMARKS
8/28/2020	0 ft.	Spud @ 1815 hrs.
8/29/2020	1000 ft.	Drilling ahead. Conduct DST #1: 3460-3485', Rec: 20' GO (80% oil), 40' WCM (85% mud), 60' MOW (80% water). Mud rotary. WOC. Drill plug out @ 1115 hrs.
8/31/2020	1391 ft.	Drilling ahead. Geologist on location @ 2315 hrs.
9/1/2020	2200 ft.	Drilling ahead.
9/1/2020	2910 ft.	Drilling ahead.
9/2/2020	3468 ft.	Drilling ahead. Conduct DST #1: 3460-3485', Rec: 20' GO (80% oil), 40' WCM (85% mud), 60' MOW (80% water). Mud rotary. WOC. Drill plug out @ 1115 hrs.
9/3/2020	3568 ft.	Drilling ahead. Conduct DST #1: 3460-3485', Rec: 20' GO (80% oil), 40' WCM (85% mud), 60' MOW (80% water). Mud rotary. WOC. Drill plug out @ 1115 hrs.
9/4/2020	3760 ft.	Drilling ahead. Reached RTD of 3838' @ 1218 hrs. Midwell Wireline on location at 1700 hrs. Completed logging operations @ 2030 hrs.

SURFACE CO-ORDINATES	
Well Type:	Vertical
Longitude:	-95.515409
Latitude:	38.69387
N/S Co-ord:	
E/W Co-ord:	

CONTRACTOR	
Contractor:	Southwind Drilling, Inc.
Rig #:	3
Rig Type:	mud rotary
Spud Date:	8/28/2020
TD Date:	9/4/2020
Time:	3:15 PM
Time:	12:18 PM

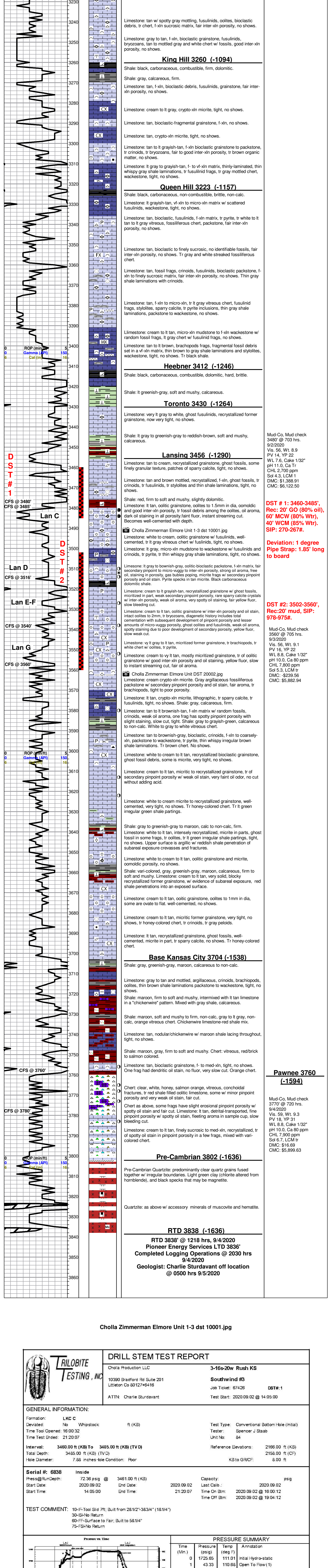
ELEVATIONS	
K.B. Elevation:	2166.00ft
K.B. to Ground:	9.00ft
Ground Elevation:	2157.00ft

TOTAL DEPTH	
Measurement Type:	7:00 AM DEPTH
Measurement Depth:	0.00
TVD:	0.00

ROCK TYPES	
<ul style="list-style-type: none"> CHL well Lmat fw<7 Lmat fw> 	<ul style="list-style-type: none"> shale, gm shale, br shale, red shale, gr lignite quartz

ACCESSORIES	
<ul style="list-style-type: none"> Bioclastic or Fragmental Brachiopod Bryozoa Crinoids Fusulinid Coliite Dolomite Euhed rhombs of dol or Heavy, dark minerals Mica Pyrite 	<ul style="list-style-type: none"> Stylolites Whitney Carbonaceous Nonuniformity Argillaceous Limestone Shale green shale red shale

OTHER SYMBOLS	
<ul style="list-style-type: none"> DST DST Int DST all 	<ul style="list-style-type: none"> Vertical Log File Horizontal Log File Core Log File Drill Cuttings Rpt



Cholla Zimmerman Elmore Unit 1-3 DST 2002.09.02

DRILL STEM TEST REPORT																																					
Cholla Production LLC 10390 Bradford Rd Suite 201 Littleton Co 80127#4618																																					
3-16S-20W Rush KS																																					
Job Ticket:	67426																																				
DST#:	#1																																				
Test Start:	2020.09.02 @ 14:05:00																																				
GENERAL INFORMATION: Formation: LKC C Deviated: No Whiptock: ft (KB) Time Tool Opened: 16:03:22 Time Test Ended: 15:35:27 Interval: 3460.00 ft (KB) To 3485.00 ft (KB) (TV D) Total Depth: 3485.00 ft (KB) (TV D) Hole Diameter: 7.88 inches-Ive Condition: Poor Reference Elevation: 2168.00 ft (KB) Hole Depth: 3485.00 ft (KB) (TV D) Hole Diameter: 7.88 inches-Ive Condition: Poor KB to GRDC: 8.00 ft																																					
Serial #: 8838	Inside																																				
Press @ Run Depth:	72.36 psig @ 3461.00 ft (KB)																																				
Start Date:	2020.09.02																																				
Start Time:	14:05:00																																				
Capacity:	psig																																				
Last Date:	2020.09.02																																				
Last Time:	15:35:27																																				
Last Call:	2020.09.02 @ 16:02:12																																				
Last Chk In:	2020.09.02 @ 16:02:12																																				
Last Chk Out:	2020.09.02 @ 16:02:12																																				
Time Off Btm:	2020.09.02 @ 16:02:12																																				
TEST COMMENT: 10'-16" Tool Sid Ft. Built from 2812'-3834' (18314') 30-Side Return: Built to 5814' 60'-FF-Surface: Built to 5814' 75'-FS-N Return																																					
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>9725.85</td><td>111.91</td><td>Initial Hydro-static</td></tr> <tr><td>1</td><td>43.33</td><td>110.63</td><td>Open To Flow (1)</td></tr> <tr><td>11</td><td>40.49</td><td>112.34</td><td>Shut-In (1)</td></tr> <tr><td>44</td><td>270.16</td><td>111.83</td><td>End Shut-In (1)</td></tr> <tr><td>44</td><td>47.51</td><td>111.73</td><td>Open To Flow (2)</td></tr> <tr><td>105</td><td>226.56</td><td>115.97</td><td>Shut-In (2)</td></tr> <tr><td>165</td><td>1624.69</td><td>115.47</td><td>End Shut-In (2)</td></tr> <tr><td>165</td><td>1624.69</td><td>115.47</td><td>Final Hydro-static</td></tr> </tbody> </table>		Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	0	9725.85	111.91	Initial Hydro-static	1	43.33	110.63	Open To Flow (1)	11	40.49	112.34	Shut-In (1)	44	270.16	111.83	End Shut-In (1)	44	47.51	111.73	Open To Flow (2)	105	226.56	115.97	Shut-In (2)	165	1624.69	115.47	End Shut-In (2)	165	1624.69	115.47	Final Hydro-static
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Cholla Zimmerman Elmore Unit DST 2002.09.02

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Last Chk In:	2020.09.03 @ 16:02:12																																				
Last Chk Out:	2020.09.03 @ 16:02:12																																				
Time Off Btm:	2020.09.03 @ 16:02:12																																				
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TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Cholla Production LLC
 10390 Bradford Rd Suite 201
 Littleton Co 80127+6416
 ATTN: Charlie Sturdavant

3-16s-20w Rush KS
Southwind #3
 Job Ticket: 67426 **DST#: 1**
 Test Start: 2020.09.02 @ 14:05:00

GENERAL INFORMATION:

Formation: **LKC C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:00:32
 Time Test Ended: 21:20:07
 Interval: **3460.00 ft (KB) To 3485.00 ft (KB) (TVD)**
 Total Depth: 3485.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Spencer J Staab
 Unit No: 84
 Reference Elevations: 2166.00 ft (KB)
 2158.00 ft (CF)
 KB to GR/CF: 8.00 ft

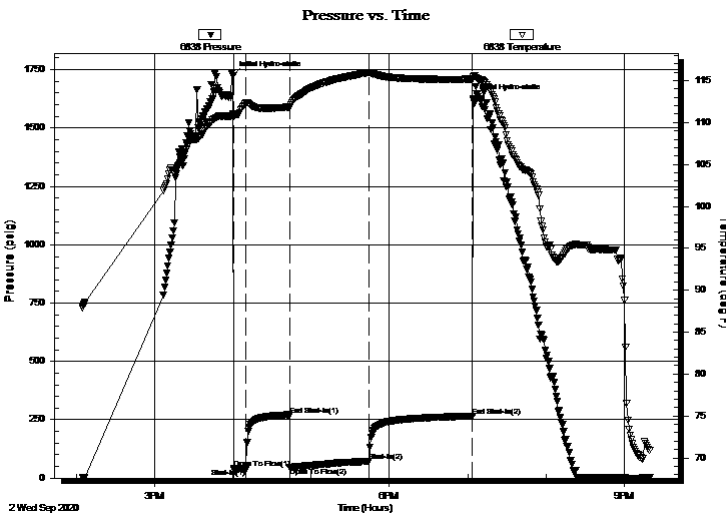
Serial #: 6838

Inside

Press@RunDepth: 72.36 psig @ 3461.00 ft (KB) Capacity: psig
 Start Date: 2020.09.02 End Date: 2020.09.02 Last Calib.: 2020.09.02
 Start Time: 14:05:01 End Time: 21:20:07 Time On Btm: 2020.09.02 @ 16:00:12
 Time Off Btm: 2020.09.02 @ 19:04:12

TEST COMMENT: 10-IF-Tool Slid 7ft; Built from 2&1/2"-3&3/4" (1&1/4")
 30-ISI-No Return
 60-FF-Surface to Fair; Built to 5&1/4"
 75-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1725.65	111.01	Initial Hydro-static
1	43.33	110.68	Open To Flow (1)
11	40.49	112.34	Shut-In(1)
44	270.16	111.83	End Shut-In(1)
44	47.51	111.78	Open To Flow (2)
105	72.36	115.97	Shut-In(2)
184	265.56	115.18	End Shut-In(2)
185	1624.89	115.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCW 20%M 80%W	0.85
40.00	WCM 15%W 85%M	0.57
20.00	GO 20%G 80%O	0.28
0.00	Sampler 500ml O 1700ML W	0.00
0.00	@110PSI	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cholla Production LLC

3-16s-20w Rush KS

10390 Bradford Rd Suite 201
Littleton Co 80127+6416

Southwind #3

Job Ticket: 67426

DST#: 1

ATTN: Charlie Sturdavant

Test Start: 2020.09.02 @ 14:05:00

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:

67000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	MCW 20%M 80%W	0.851
40.00	WCM 15%W 85%M	0.567
20.00	GO 20%G 80%O	0.284
0.00	Sampler 500ml O 1700ML W	0.000
0.00	@110PSI	0.000

Total Length: 120.00 ft Total Volume: 1.702 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1#LCM

Sampler 500ml O 1700ml Water @ 110PSI

RW= .115@72F

Serial #: 6838

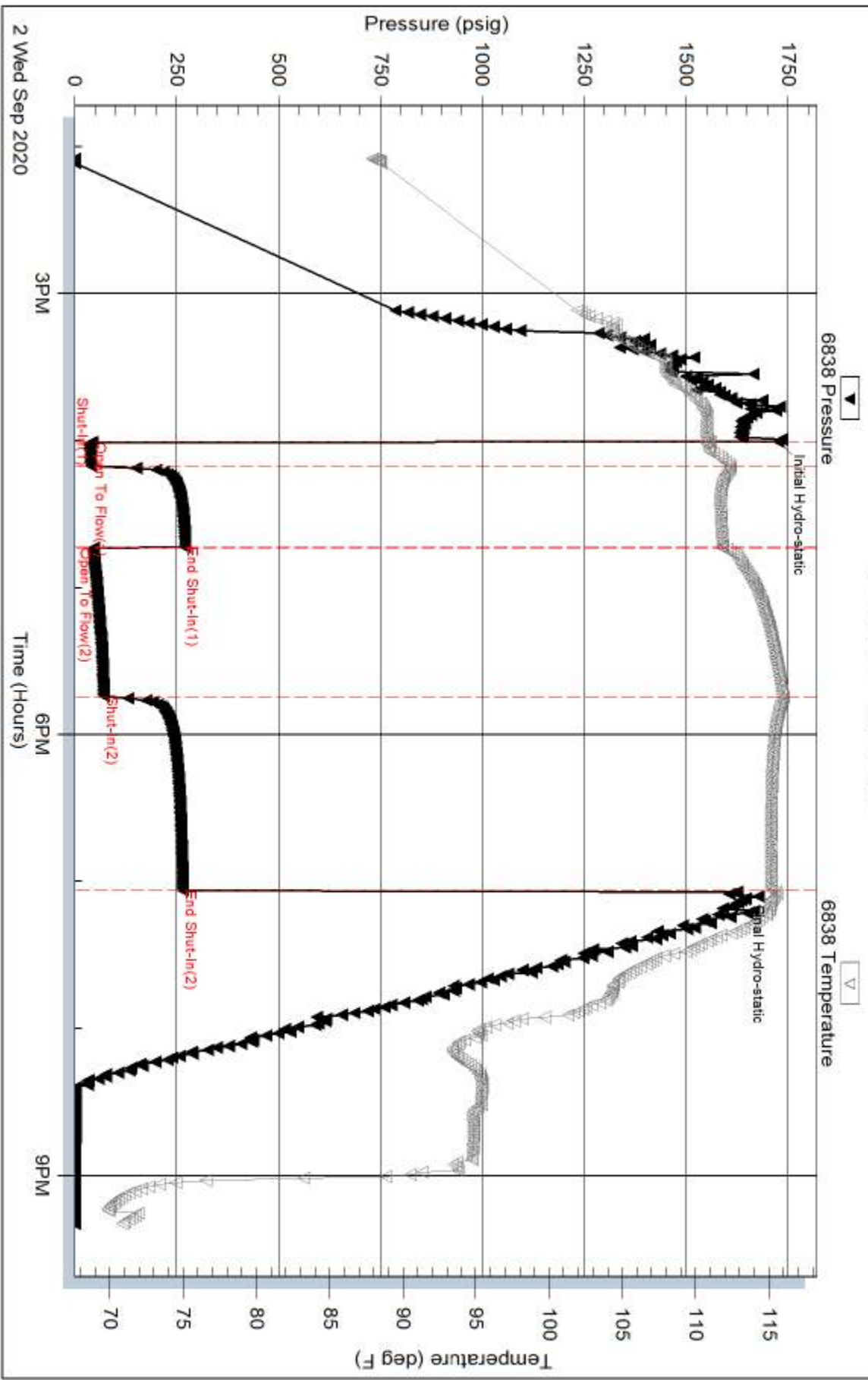
Inside

Cholla Production LLC

Southwind #3

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 67426

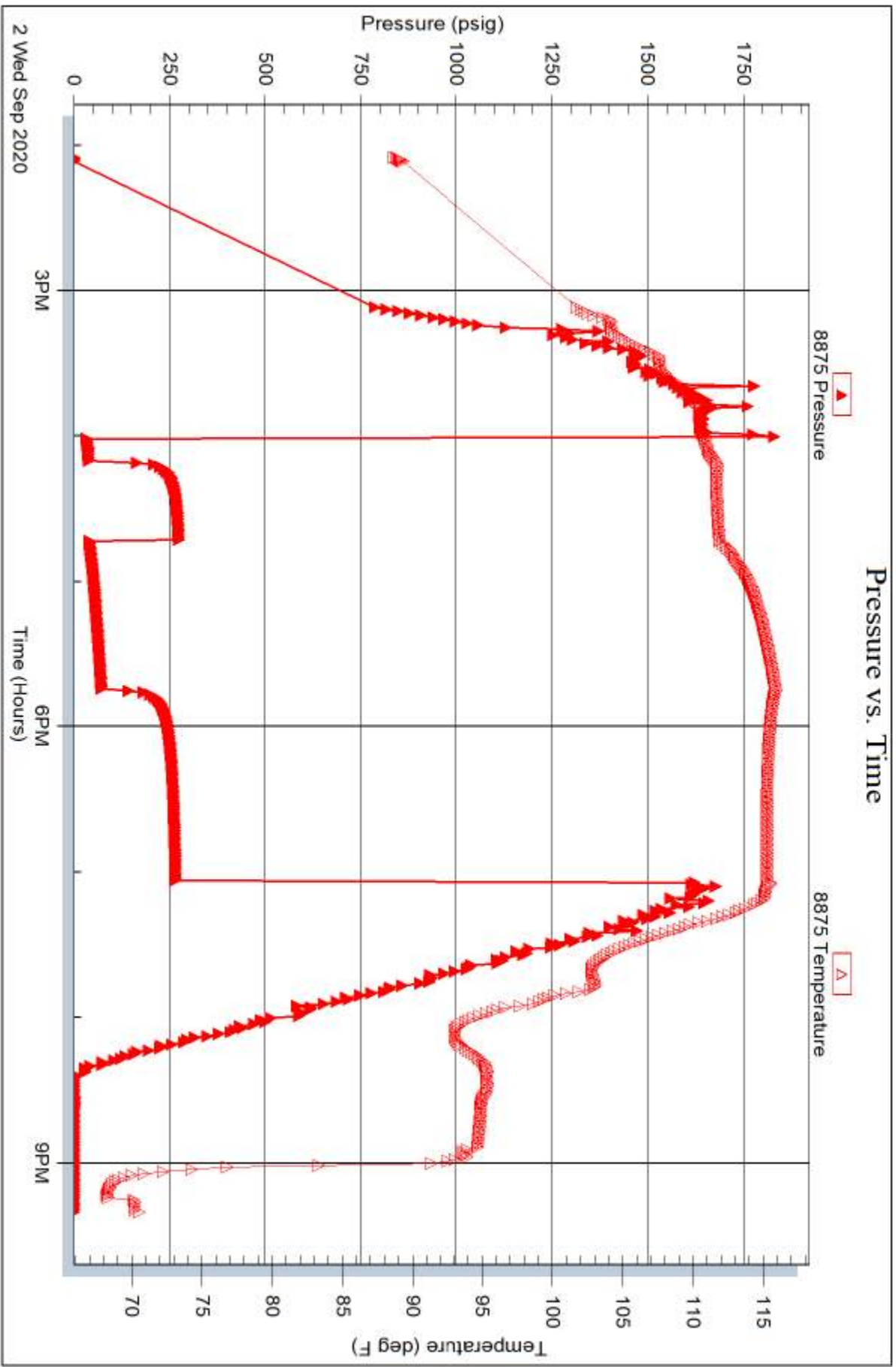
Printed: 2020.09.02 @ 22:26:14

Serial #: 8875

Outside Cholla Production LLC

Southwind #3

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 67426

Printed: 2020.09.02 @ 22:26:14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cholla Production LLC
 10390 Bradford Rd Suite 201
 Littleton Co 80127+6416
 ATTN: Charlie Sturdavant

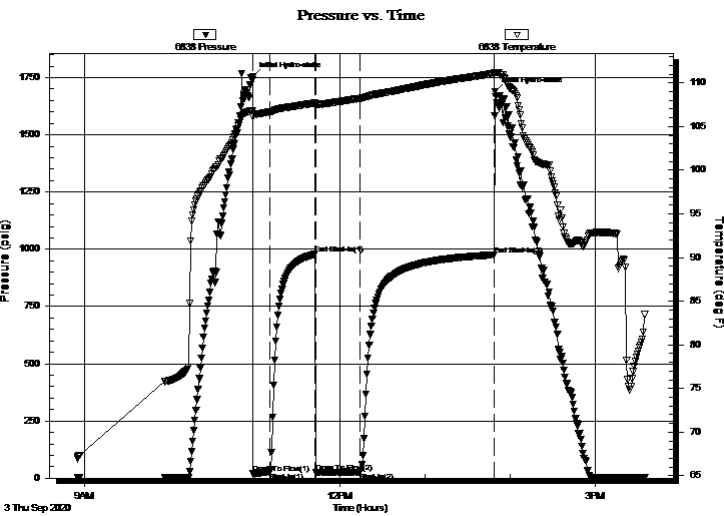
3-16s-20w Rush KS
Southwind #3
 Job Ticket: 67427 **DST#: 2**
 Test Start: 2020.09.03 @ 08:55:00

GENERAL INFORMATION:

Formation: **LKC D-G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:58:27
 Time Test Ended: 15:35:27
Interval: 3502.00 ft (KB) To 3560.00 ft (KB) (TVD)
 Total Depth: 3560.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer J Staab
 Unit No: 84
 Reference Elevations: 2166.00 ft (KB)
 2158.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**
 Press@RunDepth: 25.90 psig @ 3505.00 ft (KB) Capacity: psig
 Start Date: 2020.09.03 End Date: 2020.09.03 Last Calib.: 2020.09.03
 Start Time: 08:55:01 End Time: 15:35:27 Time On Btm: 2020.09.03 @ 10:58:22
 Time Off Btm: 2020.09.03 @ 13:49:17

TEST COMMENT: 10-IF-Surface; Built to 1/2"
 30-ISI-No Return
 30-FF-Surface; Built to 2"
 90-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1752.31	106.82	Initial Hydro-static
1	19.82	106.06	Open To Flow (1)
13	24.33	106.66	Shut-In(1)
45	978.72	107.66	End Shut-In(1)
45	25.70	107.34	Open To Flow (2)
76	25.90	108.21	Shut-In(2)
171	975.75	111.07	End Shut-In(2)
171	1690.29	111.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100%M	0.28
0.00	Sampler 200ml Mud @65PSI	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cholla Production LLC

3-16s-20w Rush KS

10390 Bradford Rd Suite 201
Littleton Co 80127+6416

Southwind #3

Job Ticket: 67427

DST#: 2

ATTN: Charlie Sturdavant

Test Start: 2020.09.03 @ 08:55:00

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:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud 100%M	0.284
0.00	Sampler 200ml Mud @65PSI	0.000

Total Length: 20.00 ft Total Volume: 0.284 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

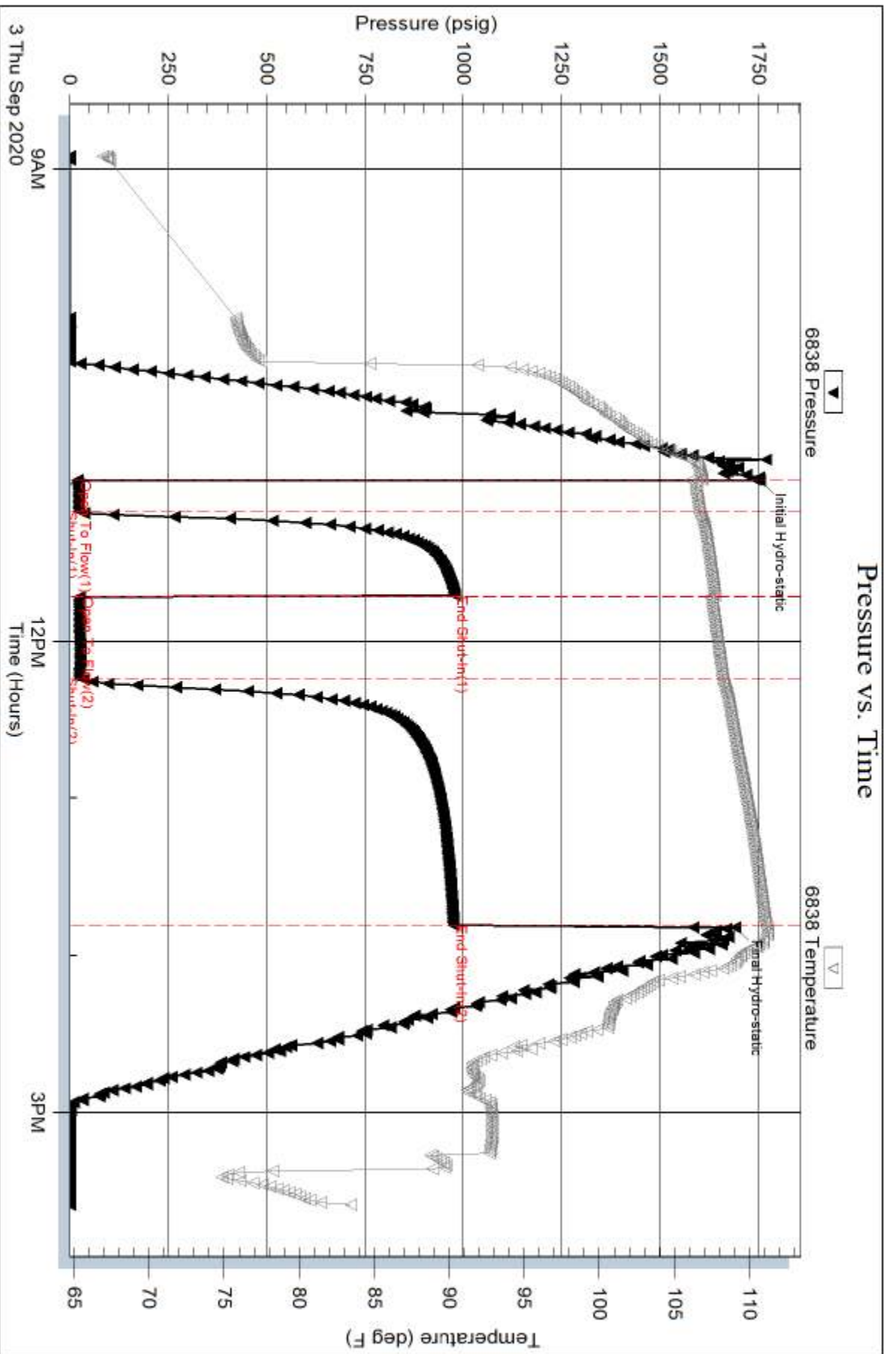
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: TR LCM

Sampler 200ml Mud @ 65PSI



Serial #: 8875

Inside

Cholla Production LLC

Southwind #3

DST Test Number: 2

