

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

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	Directional Drilling Systems, LLC
Well Name	BENFER 7
Doc ID	1346592

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
2	2784-2788	500 gal 15% HCL	2784-2793
1	2789-2793	1500 gal 15% HCL	2784-2793
		7245# 20/40 and 4755# 12/20 sand in 230 bbls gelled water	2784-2793

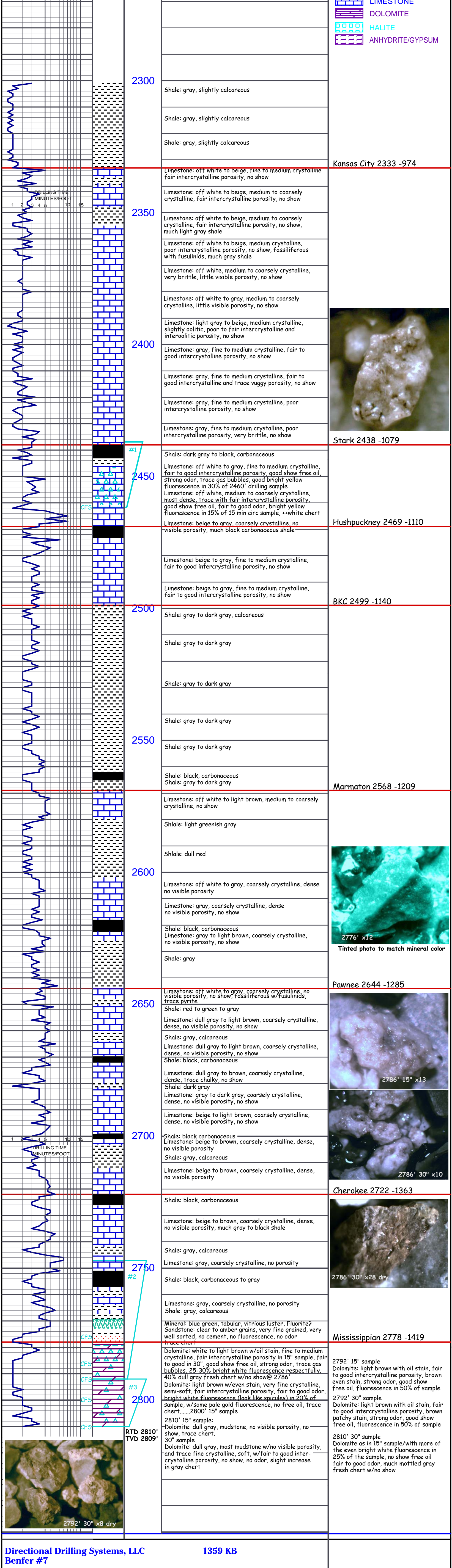
Directional Drilling Systems, LLC

GEOLOGICAL REPORT
DRILLING TIME & SAMPLE LOG
API# 15-015-24,078
REPORT PREPARED BY FRANK S. WITZ/GEOLOGIST

COMPANY Directional Drilling Systems, LLC LEASE Benfer #7 FIELD Benfer LOCATION 1620 FSL & 1010 FWL SEC 9 TWPSP 26S RGE 3E COUNTY Butler STATE Kansas CONTRACTOR Summit Drilling SPUD 12-10-16 OOMP 12-18-16 SAMPLES SAVED FROM 2300' TO RTD	ELEVATION K.B. 1359 D.F. G.L. 1349 DEPTH MEASURED FROM Log Drilling CEASING 8 1/2" @ 217' w/ 30% Production 5 1/2" @ 2809' w/ 75% Fluid Induction Dual Induction Bottom Hole Gamma Ray
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FORMATION	SAMPLE	ELOG	DATE	A. Log	B. DT	C. DT
KC	2333	2333	-974			
Stark	2438	2441	-1081			
Hushpuckney	2469	2472	-1102			
BKC	2499	2499	-1141			
Marmaton	2568	2570	-1209			
Paynee	2644	2645	-1285			
Cherokee	2722	2724	-1365			
Mississippian	NDE	2780	-1421			
Osage	NDE	2810	-1471			
			-1512			

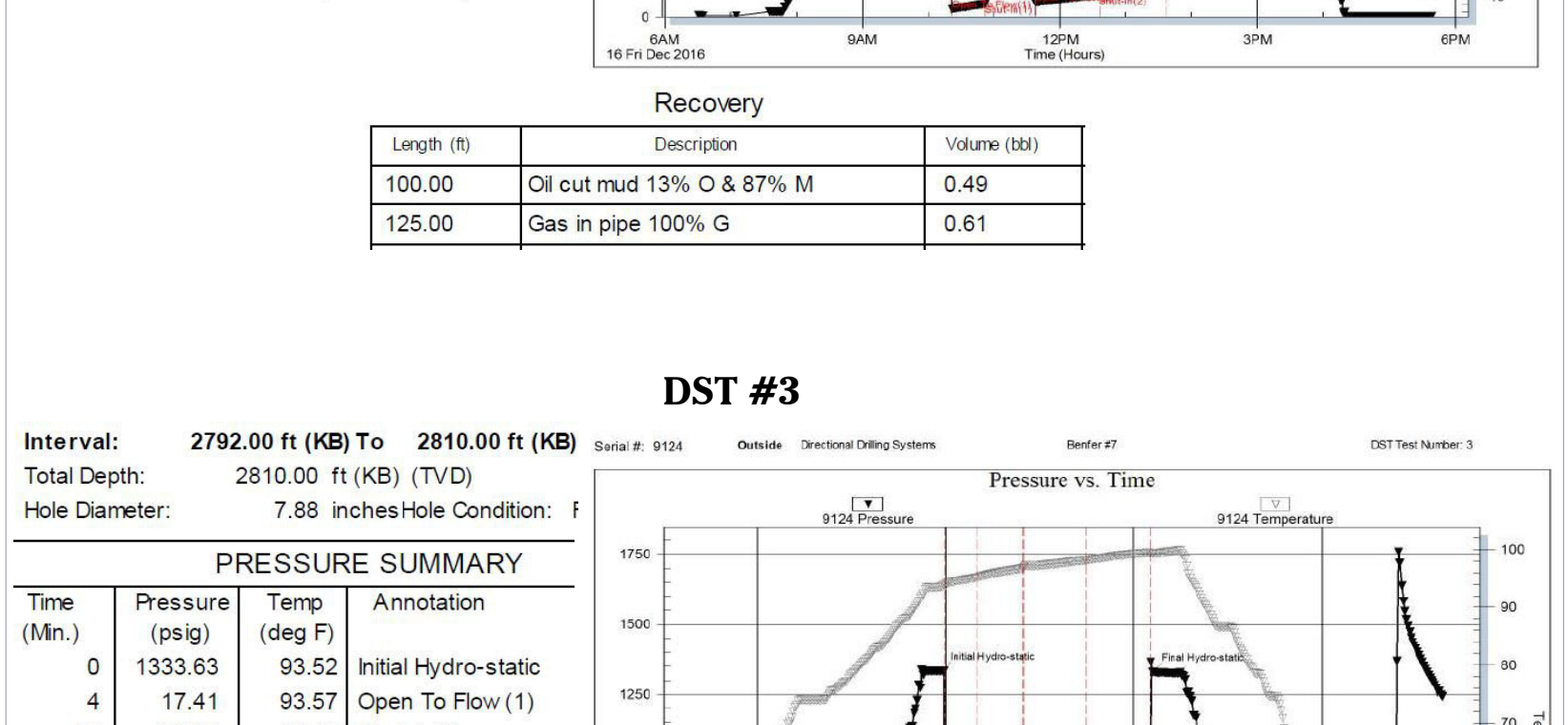
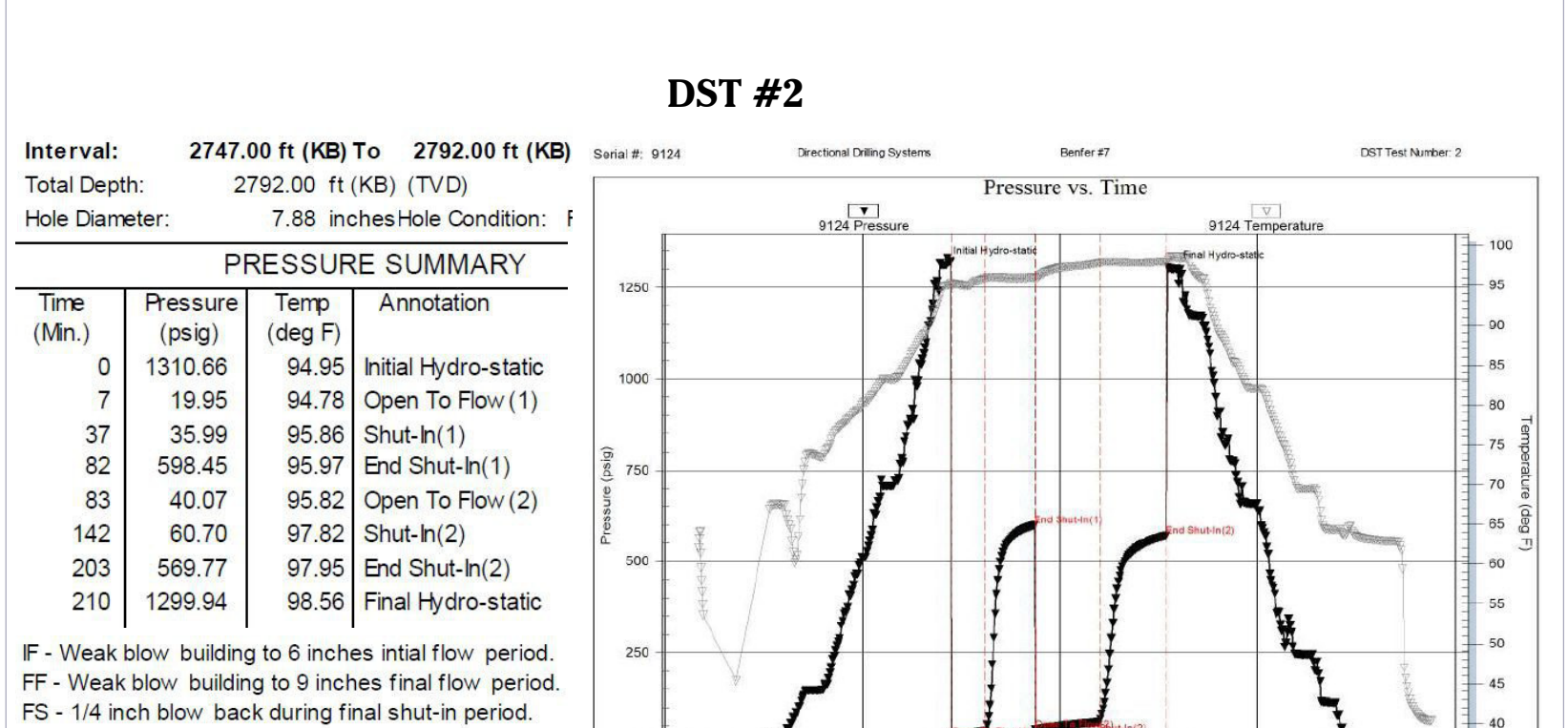
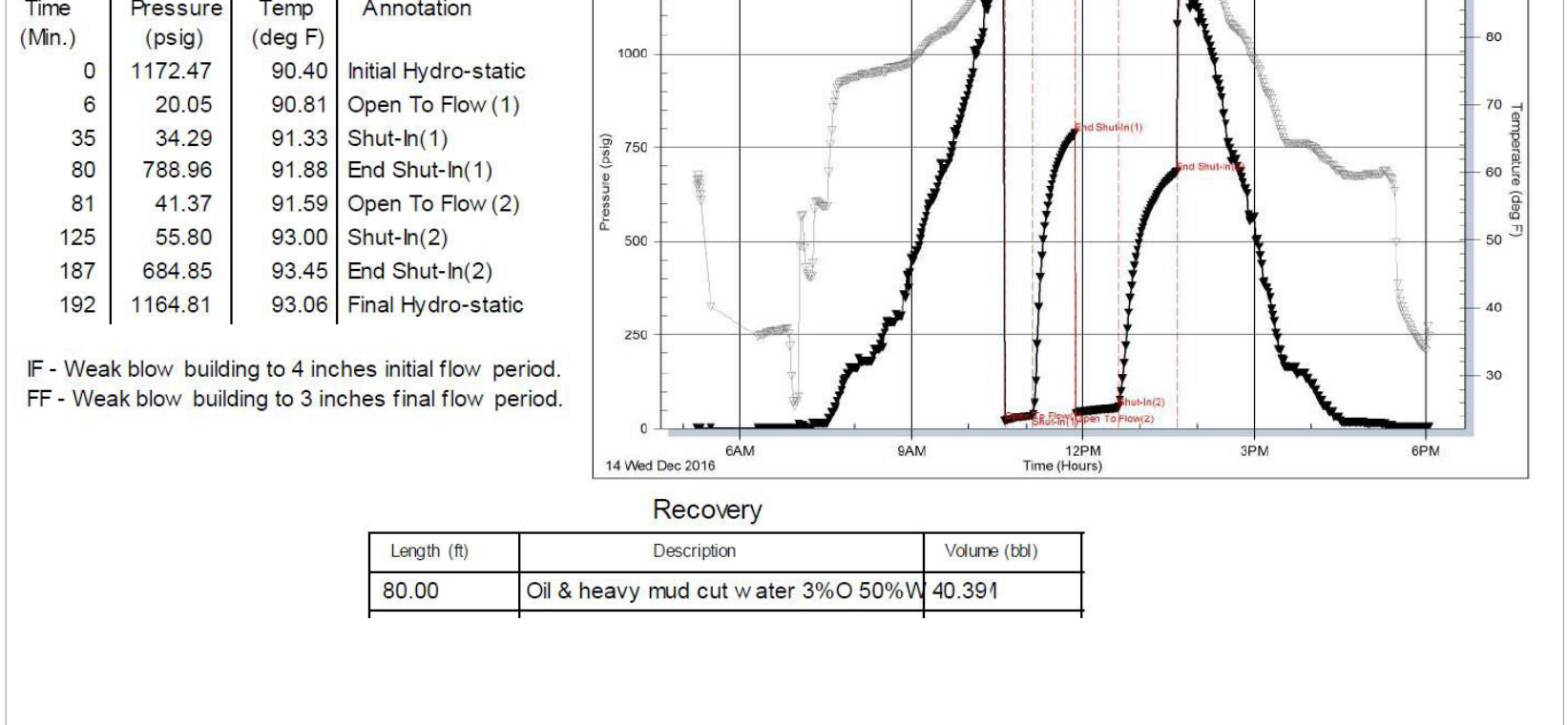
A. NE SW SW 9-26S-3E Oil Prop. Mk. Benfer #3
 B. NW SW SW 9-26S-3E Oil Prop. Mk. Benfer #3
 C. NW SW SW 9-26S-3E Oil Prop. Mk. Benfer #4



Directional Drilling Systems, LLC 1359 KB
Benfer #7
1620' FSL & 1010' FWL 9-26S-3E
Butler County, Kansas

Comments:

12/08/16 Moving in Summit Drilling Rig 1. Rigged up. Plan to spud on 12/10/16.
 12/10/16 Moving mud to spud in early afternoon.
 12/11/16 WOC @ 228' @ 7:00 AM. Spudded at @ 1:15 PM 12/10/16. Drilled 12.25' hole to 228'. Ran 205' of 8.625' 23# casing. Set @ 217' KB. Consolidated Oil Well Services cemented with 130 sacks class A + 3% CaCl₂, 2% gel, .25# Flo-Seal. Plug down @ 2:50 AM.
 12/11/16. Consolidated ticket # 51942. Deviation 1/2" @ 228'.
 12/12/16 Drilling @ 1012' @ 7:00 AM. Under surface @ 5:15 PM 12/11/16. Deviation 3/4" @ 731'. Not mudded up.
 12/13/16 Drilling @ 2226' @ 7:00 AM. Mixing mud, no properties reported. Deviation 3/4" @ 1234', 1 3/4" @ 1735', 2" @ 1988'.
 12/14/16 Present TD 2462'. Running in hole for DST #1 in Kansas City 2437'-2462'. Mud vis 50, wt 9.2 #/gal, LCM 2#. Deviation 2-1/2" @ 2301', 2-1/4" @ 2458'.
 12/15/16 Drilling @ 2616' @ 7:00 AM. Vis 39 Wt. 9.2 LCM 2#. DST #1 2437'-2462' / 30-45-60-60. Weak blow building to 4" in 30 minutes. 30-45-60-60. Blow building to 6" in 30 minutes. Blow building to 9" in 60 minutes on final open. Recovered 125' GIP + 100' OCM, breakdown 13% oil, 87% mud. IHP 1311 PSIG, IFP 20-36 PSIG, ISIP 538 PSIG, FFP 40-61 PSIG, FSIP 570 PSIG, FHP 1300 PSIG.
 12/16/16 Present TD 2792'. Running in hole for DST #2 in Mississippi 2747'-2792'. Mud vis 48, wt 9.1 #/gal, LCM 2#. Deviation 3" @ 2742'.
 12/17/16 Present TD 2810'. Running DST #3 in Mississippi 2792'-2810'. Mud vis 51, wt 9.1 #/gal, LCM 2#. DST #2 2747' - 2792'. 30-45-60-60. Blow building to 6" in 30 minutes. Blow building to 9" in 60 minutes on final open. Recovered 125' GIP + 100' OCM, breakdown 13% oil, 87% mud. IHP 1311 PSIG, IFP 20-36 PSIG, ISIP 538 PSIG, FFP 40-61 PSIG, FSIP 570 PSIG, FHP 1300 PSIG.
 12/18/16 WOC @ RTD 2810' @ 9:30 AM. Ran DST #3 in Mississippi 2792'-2810'. 30-45-60-60. Wk blow building to 4" in 30 minutes. Blow building to 10" in 60 minutes on final open. Recovered 125' GIP + 13' CO + 50' OWCW (16% O, 14% W, 70% M) + 30' OWCW (5% O, 41% W, 45% M). IHP 1334 PSIG, IFP 17-33 PSIG, ISIP 629 PSIG, FFP 34-57 PSIG, FSIP 597 PSIG, FHP 1329 PSIG. Pioneer ran Compensated Neutron Density and Dual Induction Logs. LTD 2811'. Murray Casing Crews ran 65 joints 5.5" 15.5 # casing set @ 2809'. Consolidated Oilwell Services pumped 5 BW. 500 gal. Mud flush, 5 BW, 175 sx. Thickest cement + 5#/sx Kol-Seal. Displaced with 68.5 BW. Good circulation. Plug down @ 9:10 AM 12/18/16.





CONSOLIDATED
Oil Well Services, LLC

API # 15-015-24078-00-00

TICKET NUMBER 51942

LOCATION Ch Dorado

FOREMAN Fuzz4

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

RS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
12-11-16		Bender #7	9	26	3	Butler
CUSTOMER Directional Drilling Systems LLC			TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS 5780 E IBA Circle			446	Jeremy		
CITY Greenwood Village			775	Mark		
STATE COLO			725	Fuzz4		
ZIP CODE 80111						

JOB TYPE surface HOLE SIZE 12 1/4 HOLE DEPTH 720' CASING SIZE & WEIGHT 8 5/8
 CASING DEPTH 220' DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14.7 SLURRY VOL 31.4 WATER gal/sk _____ CEMENT LEFT in CASING 20'
 DISPLACEMENT 12.7 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting on Summit Only. Rig up and establish circulation
 pump SBBL water, mix 130SKs Class 'A' 390cc 290cc w 1/2 #
 poly flake. Displace 12 3/4 BBL and shut in.
 cement did circulate approx 3 BBL to pit.

Thanks Fuzz4 + Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
660490	1	PUMP CHARGE	1500 ⁰⁰	1500 ⁰⁰
660002	15	MILEAGE	7.15	107.25
660711	6.1 Ton	Ton Mileage Delivery (min)	660 ⁰⁰	660 ⁰⁰
665800A	130 SKs	Class 'A'	20 ⁰⁰	2600 ⁰⁰
665325	400 #	Calcium Chloride	1.25	500 ⁰⁰
665969	250 #	Gel	1.30	75 ⁰⁰
666077	75 #	Poly Flake	2 ⁰⁰	150 ⁰⁰
		subtotal		5592.25
		discount		51.00
		subtotal 1		2796.25
		total		2796.00
		SALES TAX		
		ESTIMATED TOTAL		

AUTHORIZATION [Signature] TITLE Driller DATE 12-11-16

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



CONSOLIDATED
Oil Well Services, LLC

TICKET NUMBER 51947

LOCATION EL Dorado

API# 15-015-24078-00-00

FOREMAN Fuzzly

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

RS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
12-17-16		Beaufort #7	9	26	3	Butler
CUSTOMER Directional Dlg Systems LLC			TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS 5780 GIDA circle			760	Chris		
CITY STATE ZIP CODE Greenwood Village Colo 80111			667	Jud	Jeremy	
			725	Fuzzly		

JOB TYPE Production HOLE SIZE 7 7/8 HOLE DEPTH 2810' CASING SIZE & WEIGHT 5 1/2 15.5
 CASING DEPTH 2813 21 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 15# SLURRY VOL 52.3 WATER gal/sk _____ CEMENT LEFT in CASING 1'
 DISPLACEMENT 66.9 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting on Summit Dlg. Rig up and establish circulation
Pump 5 BBL water, 500 gal mud flush, 5 BBL water. Mix 175 SKK Thicket
w/ 5# Kol-seal. Wash pump & lines. Drop plug and displace. 68' 2
BSL 800# lift hand plug @ 1200' float held

THANKS
FUZZY & CROW

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
660451	1	PUMP CHARGE	1900 ⁰⁰	1900 ⁰⁰
660003	10	MILEAGE	715	715 ⁰⁰
660711	8.2 Ton	Top mileage delivery (min)	660 ⁰⁰	660 ⁰⁰
665860	175 SKS	Thixoblend I	25 ⁰⁰	4375 ⁰⁰
66077	900 #	Kol-seal	150	450 ⁰⁰
66125	500 gal	mud flush	165	325 ⁰⁰
CP8485	1	5 1/2 - APC float shoe	585 ⁰⁰	585 ⁰⁰
CP8254	1	5 1/2 - Latchdown Assy	400 ⁰⁰	400 ⁰⁰
CP8554	6	5 1/2 - Centralizers	81 ⁰⁰	486 ⁰⁰
CE1130	1	5 1/2 - 6" wipple	90 ⁰⁰	90 ⁰⁰
CE1130	1	5 1/2 - Long collar	127 ³²	127 ³²
CP8702	1	5 1/2 - Loc. Ring	48 ⁰⁰	48 ⁰⁰
				9518 ⁰⁰
				4759.35
			total	4759.35
			SALES TAX	
			ESTIMATED TOTAL	

Ravin 3737

AUTHORIZATION Sony Reed TITLE X DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



DRILL STEM TEST REPORT

Prepared For: **Directional Drilling Systems**

5780 East Ida Circle
Greenwood Village, CO 80111

ATTN: Hi Lewis / Frank Miz

Benfer #7

9/26S/3E Butler,KS

Start Date: 2016.12.14 @ 05:15:00

End Date: 2016.12.14 @ 18:03:15

Job Ticket #: 63090 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.12.19 @ 13:21:54



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Directional Drilling Systems
5780 East Ida Circle
Greenwood Village, CO 80111
ATTN: Hi Lew is / Frank Miz

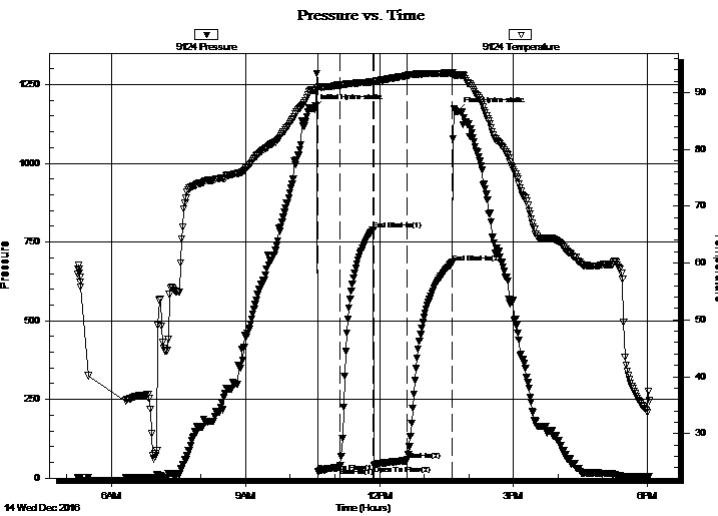
9/26S/3E Butler,KS
Benfer #7
Job Ticket: 63090 **DST#: 1**
Test Start: 2016.12.14 @ 05:15:00

GENERAL INFORMATION:

Formation: **Swope**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:37:15
Time Test Ended: 18:03:15
Interval: **2437.00 ft (KB) To 2462.00 ft (KB) (TVD)**
Total Depth: 2462.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Jimmy Ricketts
Unit No: 80
Reference Elevations: 1359.00 ft (KB)
1349.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 9124 Outside
Press@RunDepth: 55.80 psig @ 2438.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.12.14 End Date: 2016.12.14 Last Calib.: 2016.12.14
Start Time: 05:15:05 End Time: 18:03:15 Time On Btm: 2016.12.14 @ 10:32:00
Time Off Btm: 2016.12.14 @ 13:44:00

TEST COMMENT: IF - Weak blow building to 4" initial flow period.
FF - Weak blow building to 3" final flow period.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1172.47	90.40	Initial Hydro-static
6	20.05	90.81	Open To Flow (1)
35	34.29	91.33	Shut-In(1)
80	788.96	91.88	End Shut-In(1)
81	41.37	91.59	Open To Flow (2)
125	55.80	93.00	Shut-In(2)
187	684.85	93.45	End Shut-In(2)
192	1164.81	93.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	Oil & heavy mud cut water 3%O 50%W	40.391

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Directional Drilling Systems
5780 East Ida Circle
Greenwood Village, CO 80111
ATTN: Hi Lewis / Frank Miz

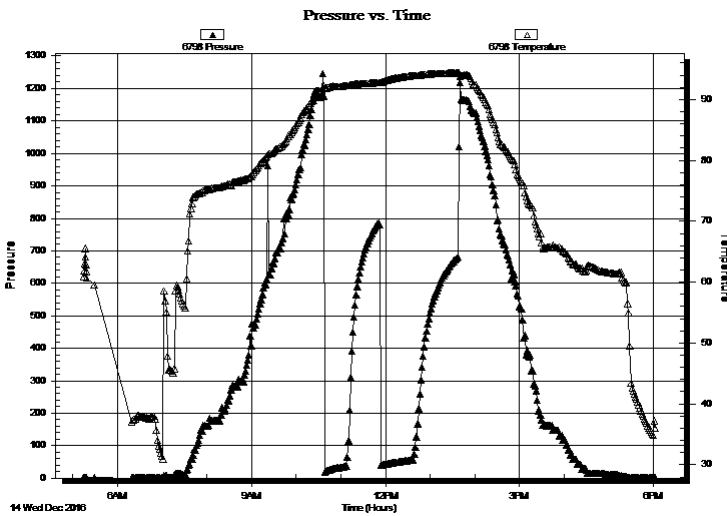
9/26S/3E Butler,KS
Benfer #7
Job Ticket: 63090 **DST#: 1**
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GENERAL INFORMATION:

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Test Type: Conventional Bottom Hole (Initial)
Tester: Jimmy Ricketts
Unit No: 80
Interval: **2437.00 ft (KB) To 2462.00 ft (KB) (TVD)**
Reference Elevations: 1359.00 ft (KB)
Total Depth: 2462.00 ft (KB) (TVD)
1349.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair
KB to GR/CF: 10.00 ft

Serial #: 6798 **Inside**
Press@RunDepth: psig @ 2438.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.12.14 End Date: 2016.12.14 Last Calib.: 1899.12.30
Start Time: 05:15:05 End Time: 18:03:30 Time On Btm:
Time Off Btm:

TEST COMMENT: IF - Weak blow building to 4" initial flow period.
FF - Weak blow building to 3" final flow period.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
80.00	Oil & heavy mud cut w water 3%O 50%W	40.391

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Directional Drilling Systems
5780 East Ida Circle
Greenwood Village, CO 80111
ATTN: Hi Lewis / Frank Miz

9/26S/3E Butler,KS
Benfer #7
Job Ticket: 63090 **DST#: 1**
Test Start: 2016.12.14 @ 05:15:00

Tool Information

Drill Pipe:	Length: 2102.00 ft	Diameter: 3.20 inches	Volume: 20.91 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 313.00 ft	Diameter: 2.25 inches	Volume: 1.54 bbl	Weight to Pull Loose: 36000.00 lb
			<u>Total Volume: 22.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 28000.00 lb
Depth to Top Packer:	2437.00 ft			Final 28000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	53.00 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			2410.00	
Shut In Tool	5.00			2415.00	
Hydraulic tool	5.00			2420.00	
Jars	5.00			2425.00	
Safety Joint	3.00			2428.00	
Packer	4.00			2432.00	28.00 Bottom Of Top Packer
Packer	5.00			2437.00	
Stubb	1.00			2438.00	
Recorder	0.00	9124	Outside	2438.00	
Recorder	0.00	6798	Inside	2438.00	
Perforations	19.00			2457.00	
Bullnose	5.00			2462.00	25.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Directional Drilling Systems

9/26S/3E Butler,KS

5780 East Ida Circle
Greenwood Village, CO 80111

Benfer #7

Job Ticket: 63090

DST#: 1

ATTN: Hi Lewis / Frank Miz

Test Start: 2016.12.14 @ 05:15:00

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:

17000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	Oil & heavy mud cut w ater 3%O 50%W 47%I	0.393

Total Length: 80.00 ft Total Volume: 0.393 bbl

Num Fluid Samples: 0

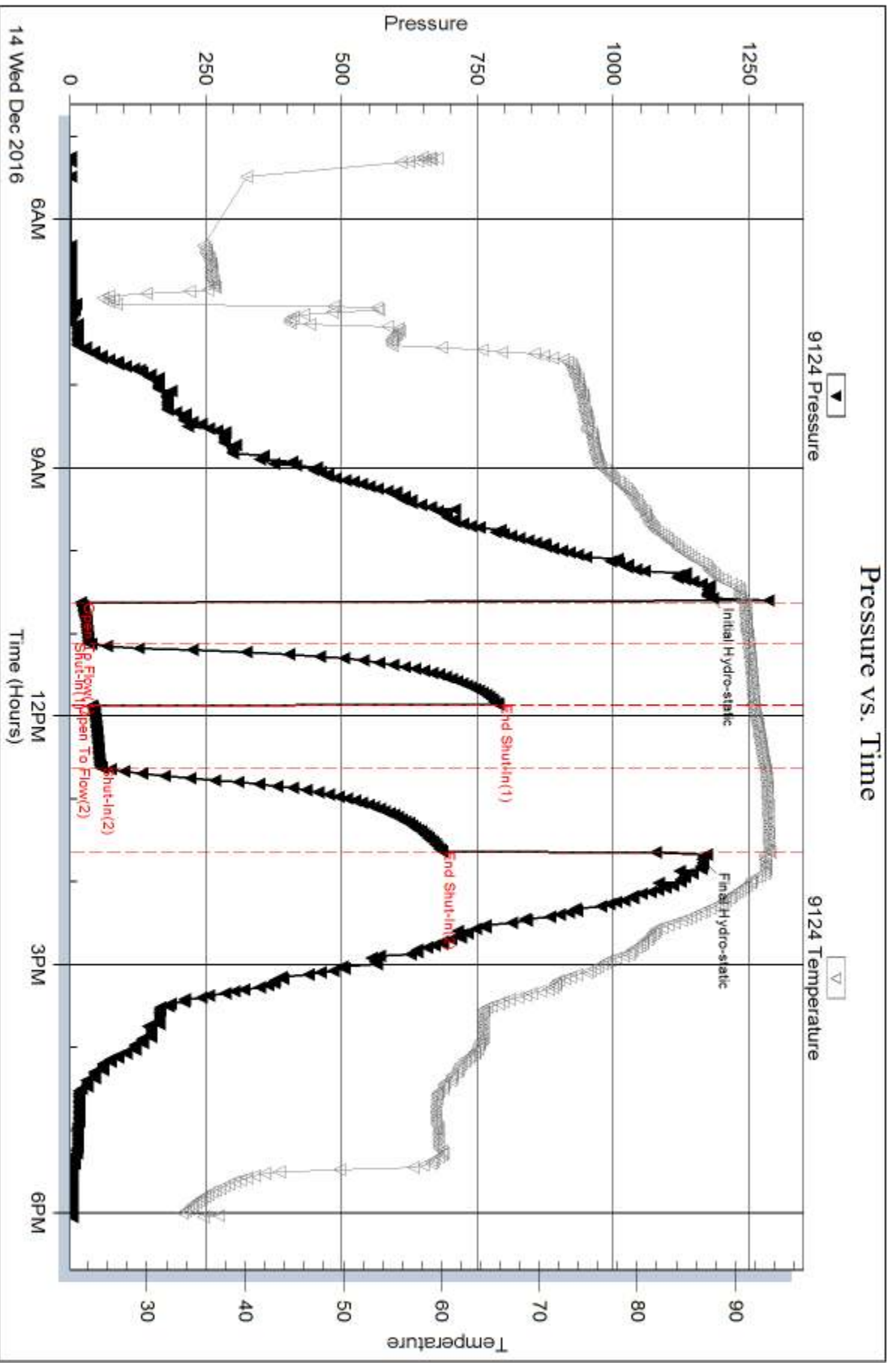
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



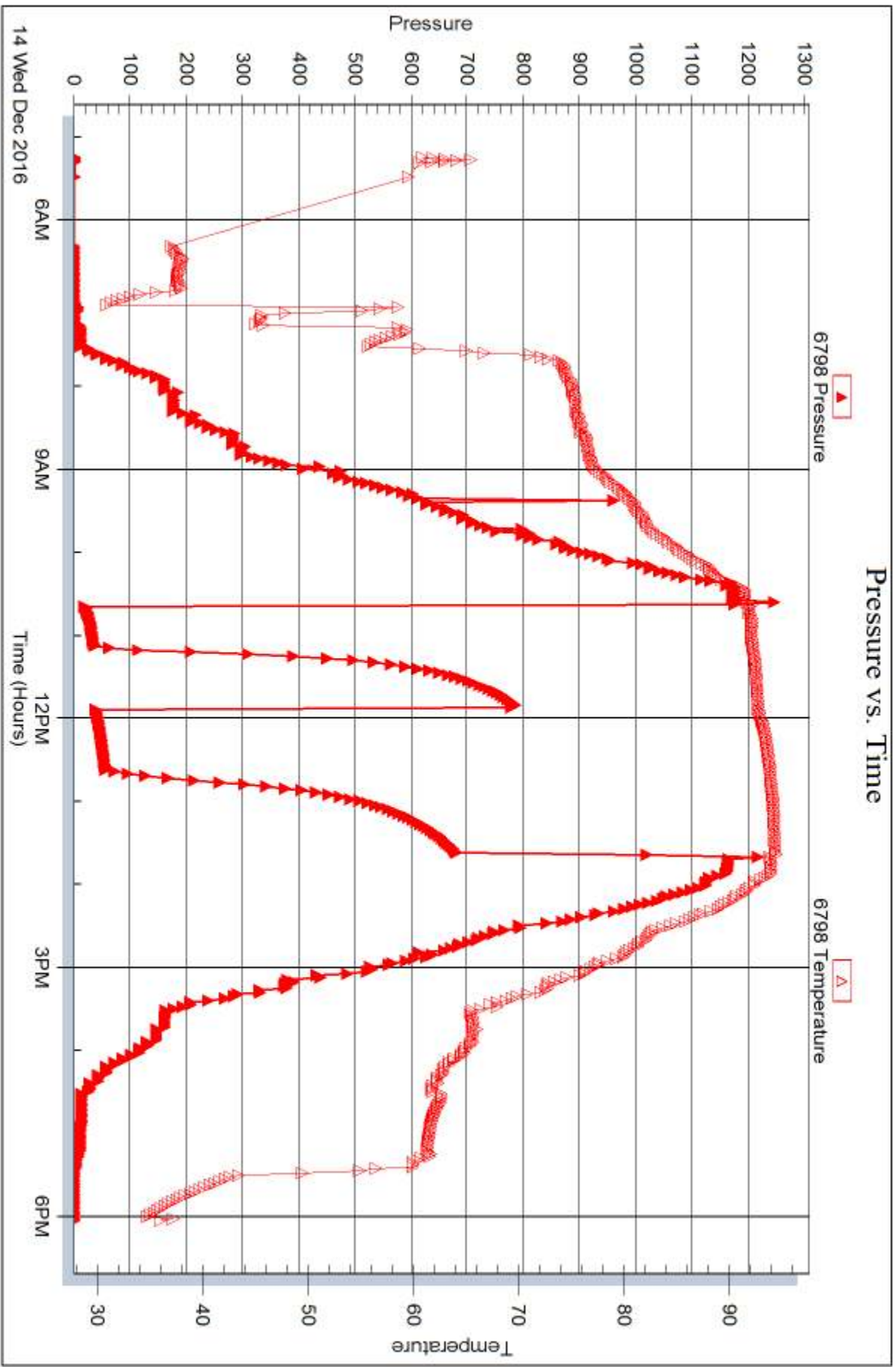
Serial #: 6798

Inside

Directional Drilling Systems

Benfer #7

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 63090

Printed: 2016.12.19 @ 13:21:54



DRILL STEM TEST REPORT

Prepared For: **Directional Drilling Systems**

5780 East Ida Circle
Greenwood Village, CO 80111

ATTN: Hi Lewis / Frank Miz

Benfer #7

9/26S/3E Butler,KS

Start Date: 2016.12.16 @ 06:31:00

End Date: 2016.12.16 @ 17:38:30

Job Ticket #: 63091 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.12.19 @ 13:21:31



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Directional Drilling Systems
 5780 East Ida Circle
 Greenwood Village, CO 80111
 ATTN: Hi Lew is / Frank Miz

9/26S/3E Butler,KS
Benfer #7
 Job Ticket: 63091 **DST#: 2**
 Test Start: 2016.12.16 @ 06:31:00

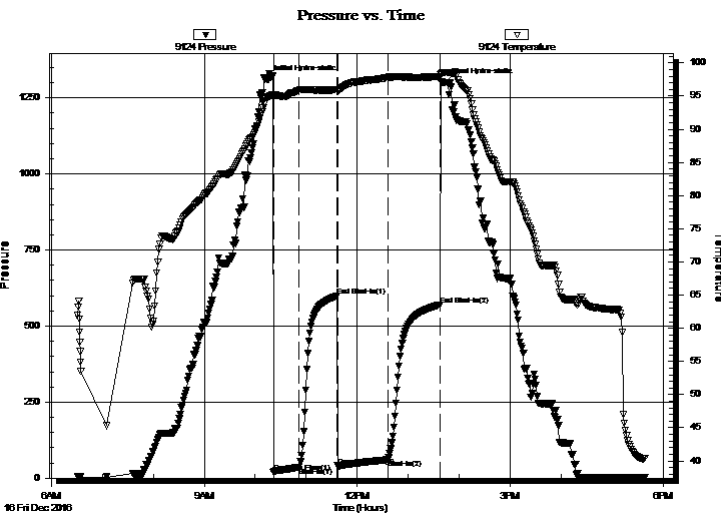
GENERAL INFORMATION:

Formation: **Mississippian**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:21:15
 Time Test Ended: 17:38:30
 Interval: **2747.00 ft (KB) To 2792.00 ft (KB) (TVD)**
 Total Depth: 2792.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jimmy Ricketts
 Unit No: 80
 Reference Elevations: 1359.00 ft (KB)
 1349.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 9124 Outside

Press@RunDepth: 60.70 psig @ 2748.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.12.16 End Date: 2016.12.16 Last Calib.: 2016.12.16
 Start Time: 06:31:05 End Time: 17:38:30 Time On Btm: 2016.12.16 @ 10:14:15
 Time Off Btm: 2016.12.16 @ 13:43:45

TEST COMMENT: IF - Weak blow building to 6" initial flow period.
 FF - Weak blow building to 9" final flow period.
 FS - 1/4 inch blow back during final shut-in period.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1310.66	94.95	Initial Hydro-static
7	19.95	94.78	Open To Flow (1)
37	35.99	95.86	Shut-In(1)
82	598.45	95.97	End Shut-In(1)
83	40.07	95.82	Open To Flow (2)
142	60.70	97.82	Shut-In(2)
203	569.77	97.95	End Shut-In(2)
210	1299.94	98.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	Oil cut mud 13% O & 87% M	0.49
125.00	Gas in pipe 100% G	0.61

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Directional Drilling Systems
 5780 East Ida Circle
 Greenwood Village, CO 80111
 ATTN: Hi Lewis / Frank Miz

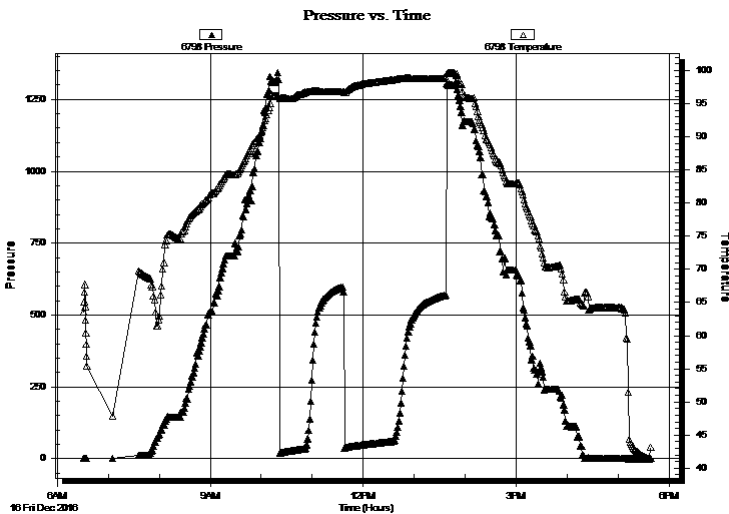
9/26S/3E Butler,KS
Benfer #7
 Job Ticket: 63091 **DST#: 2**
 Test Start: 2016.12.16 @ 06:31:00

GENERAL INFORMATION:

Formation: **Mississippian**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 10:21:15 Tester: Jimmy Ricketts
 Time Test Ended: 17:38:30 Unit No: 80
Interval: 2747.00 ft (KB) To 2792.00 ft (KB) (TVD) Reference Elevations: 1359.00 ft (KB)
 Total Depth: 2792.00 ft (KB) (TVD) 1349.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 6798 **Inside**
 Press@RunDepth: psig @ 2748.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.12.16 End Date: 2016.12.16 Last Calib.: 1899.12.30
 Start Time: 06:31:05 End Time: 17:38:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF - Weak blow building to 6" initial flow period.
 FF - Weak blow building to 9" final flow period.
 FS - 1/4 inch blow back during final shut-in period.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
100.00	Oil cut mud 13% O & 87% M	0.49
125.00	Gas in pipe 100% G	0.61

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Directional Drilling Systems
5780 East Ida Circle
Greenwood Village, CO 80111
ATTN: Hi Lewis / Frank Miz

9/26S/3E Butler,KS
Benfer #7
Job Ticket: 63091 **DST#: 2**
Test Start: 2016.12.16 @ 06:31:00

Tool Information

Drill Pipe:	Length: 2448.00 ft	Diameter: 3.20 inches	Volume: 24.35 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 282.00 ft	Diameter: 2.25 inches	Volume: 1.39 bbl	Weight to Pull Loose: 30000.00 lb
			<u>Total Volume: 25.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 29000.00 lb
Depth to Top Packer:	2747.00 ft			Final 29000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	73.00 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			2720.00	
Shut In Tool	5.00			2725.00	
Hydraulic tool	5.00			2730.00	
Jars	5.00			2735.00	
Safety Joint	3.00			2738.00	
Packer	4.00			2742.00	28.00 Bottom Of Top Packer
Packer	5.00			2747.00	
Stubb	1.00			2748.00	
Recorder	0.00	9124	Outside	2748.00	
Recorder	0.00	6798	Inside	2748.00	
Perforations	7.00			2755.00	
Change Over Sub	0.50			2755.50	
Blank Spacing	31.00			2786.50	
Change Over Sub	0.50			2787.00	
Bullnose	5.00			2792.00	45.00 Bottom Packers & Anchor

Total Tool Length: 73.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Directional Drilling Systems

9/26S/3E Butler,KS

5780 East Ida Circle
Greenwood Village, CO 80111

Benfer #7

Job Ticket: 63091

DST#: 2

ATTN: Hi Lewis / Frank Miz

Test Start: 2016.12.16 @ 06:31:00

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	Oil cut mud 13% O & 87% M	0.492
125.00	Gas in pipe 100% G	0.615

Total Length: 225.00 ft

Total Volume: 1.107 bbl

Num Fluid Samples: 0

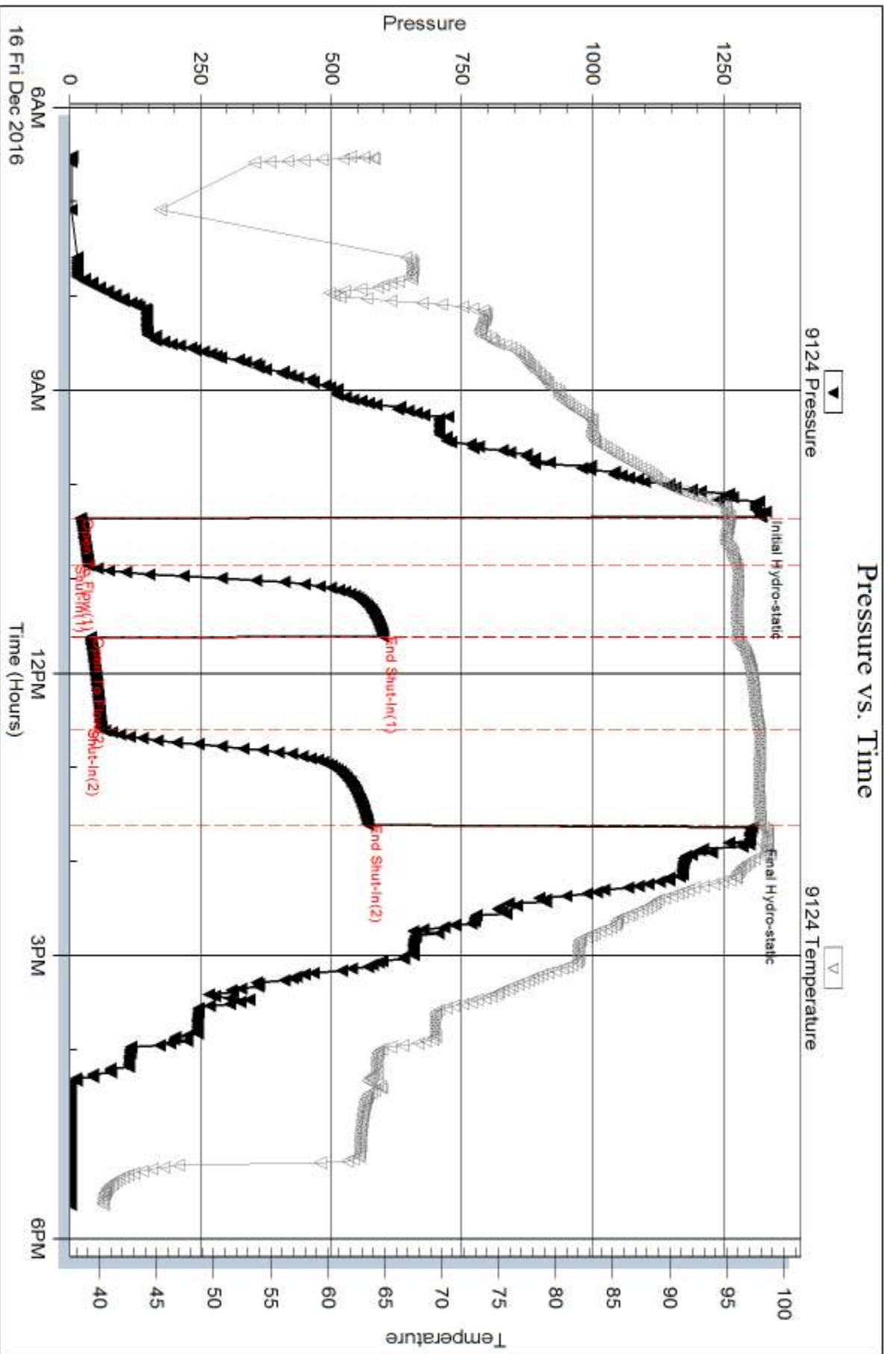
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



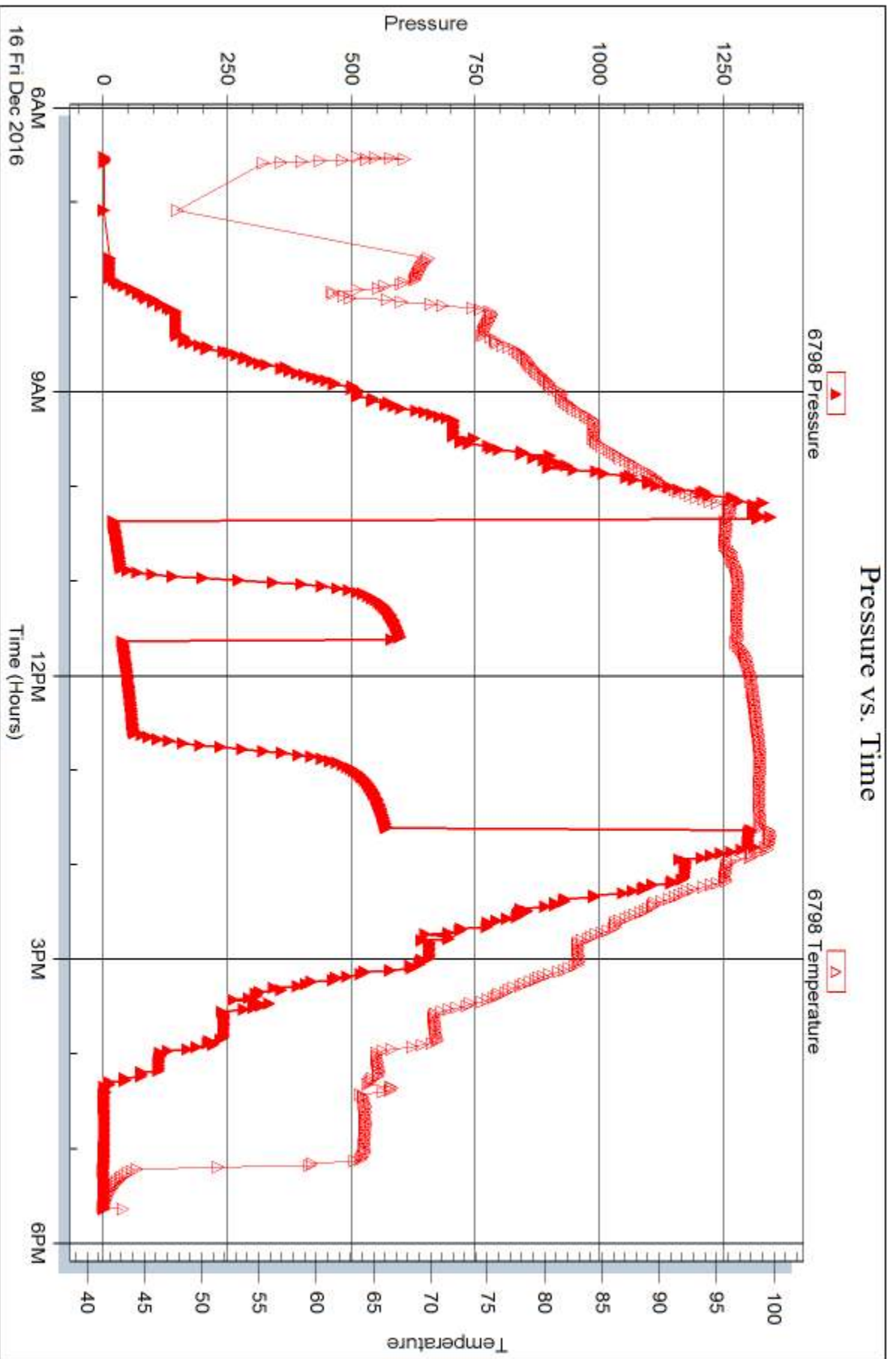
Serial #: 6798

Inside

Directional Drilling Systems

Benfer #7

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 63091

Printed: 2016.12.19 @ 13:21:32



DRILL STEM TEST REPORT

Prepared For: **Directional Drilling Systems**

5780 East Ida Circle
Greenwood Village, CO 80111

ATTN: Hi Lewis / Frank Miz

Benfer #7

9/26S/3E Butler,KS

Start Date: 2016.12.17 @ 02:06:00

End Date: 2016.12.17 @ 13:55:45

Job Ticket #: 63092 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.12.19 @ 13:20:54

Directional Drilling Systems
9/26S/3E Butler,KS
Benfer #7
DST # 3
Mississippi
2016.12.17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Directional Drilling Systems
 5780 East Ida Circle
 Greenwood Village, CO 80111
 ATTN: Hi Lewis / Frank Miz

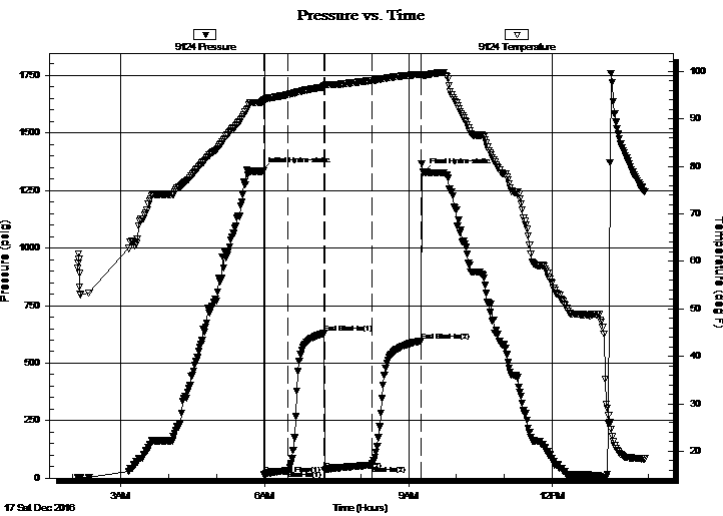
9/26S/3E Butler,KS
Benfer #7
 Job Ticket: 63092 **DST#: 3**
 Test Start: 2016.12.17 @ 02:06:00

GENERAL INFORMATION:

Formation: **Mississippin**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:59:15
 Time Test Ended: 13:55:45
 Interval: **2792.00 ft (KB) To 2810.00 ft (KB) (TVD)**
 Total Depth: 2810.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jimmy Ricketts
 Unit No: 80
 Reference Elevations: 1359.00 ft (KB)
 1349.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 9124 Outside
 Press@RunDepth: 56.77 psig @ 2793.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.12.17 End Date: 2016.12.17 Last Calib.: 2016.12.17
 Start Time: 02:06:05 End Time: 13:55:45 Time On Btm: 2016.12.17 @ 05:55:45
 Time Off Btm: 2016.12.17 @ 09:18:30

TEST COMMENT: IF - Weak blow building to 4" initial flow period.
 FF - Weak blow building to 10" final flow period.
 FS - Surface blow back during final shut-in period.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1333.63	93.52	Initial Hydro-static
4	17.41	93.57	Open To Flow (1)
34	33.02	95.12	Shut-In(1)
79	628.67	96.72	End Shut-In(1)
80	34.01	97.05	Open To Flow (2)
139	56.77	98.09	Shut-In(2)
200	596.69	99.41	End Shut-In(2)
203	1329.30	99.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Oil & heavy water cut mud 5%O 41%W	50.151
50.00	Oil & water cut mud 16%O 14%W 70%M	0.25
13.00	Clean oil 100%O	0.06
125.00	Gas in pipe 100%G	0.61

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Directional Drilling Systems
5780 East Ida Circle
Greenwood Village, CO 80111
ATTN: Hi Lewis / Frank Miz

9/26S/3E Butler,KS
Benfer #7
Job Ticket: 63092 **DST#: 3**
Test Start: 2016.12.17 @ 02:06:00

GENERAL INFORMATION:

Formation: **Mississippin**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:59:15
 Time Test Ended: 13:55:45
 Interval: **2792.00 ft (KB) To 2810.00 ft (KB) (TVD)**
 Total Depth: 2810.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jimmy Ricketts
 Unit No: 80
 Reference Elevations: 1359.00 ft (KB)
 1349.00 ft (CF)
 KB to GR/CF: 10.00 ft

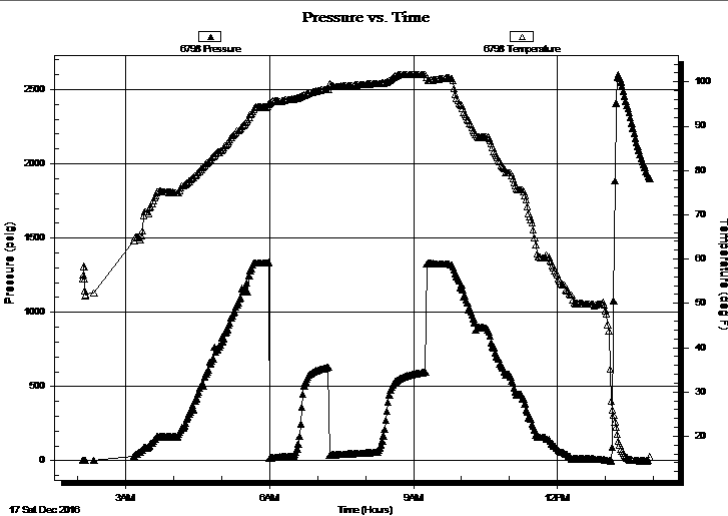
Serial #: 6798

Inside

Press@RunDepth: psig @ 2793.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.12.17 End Date: 2016.12.17 Last Calib.: 1899.12.30
 Start Time: 02:06:05 End Time: 13:55:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF - Weak blow building to 4" initial flow period.
 FF - Weak blow building to 10" final flow period.
 FS - Surface blow back during final shut-in period.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Oil & heavy water cut mud 5%O 41%W	50.151
50.00	Oil & water cut mud 16%O 14%W 70%M	0.25
13.00	Clean oil 100%O	0.06
125.00	Gas in pipe 100%G	0.61

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Directional Drilling Systems
5780 East Ida Circle
Greenwood Village, CO 80111
ATTN: Hi Lewis / Frank Miz

9/26S/3E Butler,KS
Benfer #7
Job Ticket: 63092 **DST#: 3**
Test Start: 2016.12.17 @ 02:06:00

Tool Information

Drill Pipe:	Length: 2479.00 ft	Diameter: 3.20 inches	Volume: 24.66 bbl	Tool Weight:	2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 313.00 ft	Diameter: 2.25 inches	Volume: 1.54 bbl	Weight to Pull Loose:	39000.00 lb
			<u>Total Volume: 26.20 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	30000.00 lb
Depth to Top Packer:	2792.00 ft			Final	32000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	18.00 ft				
Tool Length:	46.00 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			2765.00	
Shut In Tool	5.00			2770.00	
Hydraulic tool	5.00			2775.00	
Jars	5.00			2780.00	
Safety Joint	3.00			2783.00	
Packer	4.00			2787.00	28.00 Bottom Of Top Packer
Packer	5.00			2792.00	
Stubb	1.00			2793.00	
Recorder	0.00	9124	Outside	2793.00	
Recorder	0.00	6798	Inside	2793.00	
Perforations	12.00			2805.00	
Bullnose	5.00			2810.00	18.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Directional Drilling Systems

9/26S/3E Butler,KS

5780 East Ida Circle
Greenw ood Village, CO 80111

Benfer #7

Job Ticket: 63092

DST#: 3

ATTN: Hi Lew is / Frank Miz

Test Start: 2016.12.17 @ 02:06:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41.5 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

49000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
30.00	Oil & heavy w ater cut mud 5%O 41%W 54%I	0.148
50.00	Oil & w ater cut mud 16%O 14%W 70%M	0.246
13.00	Clean oil 100%O	0.064
125.00	Gas in pipe 100%G	0.615

Total Length: 218.00 ft

Total Volume: 1.073 bbl

Num Fluid Samples: 0

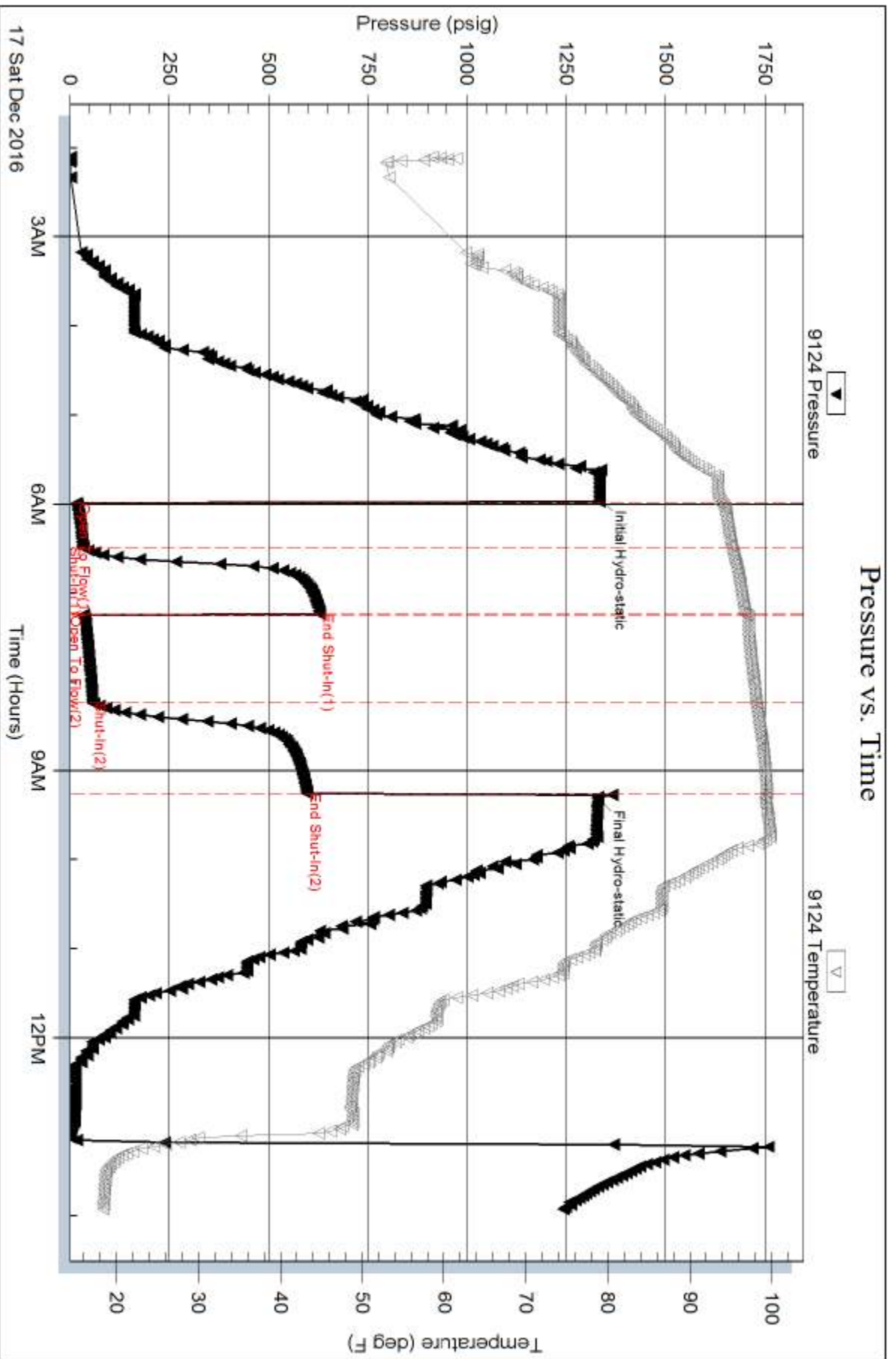
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



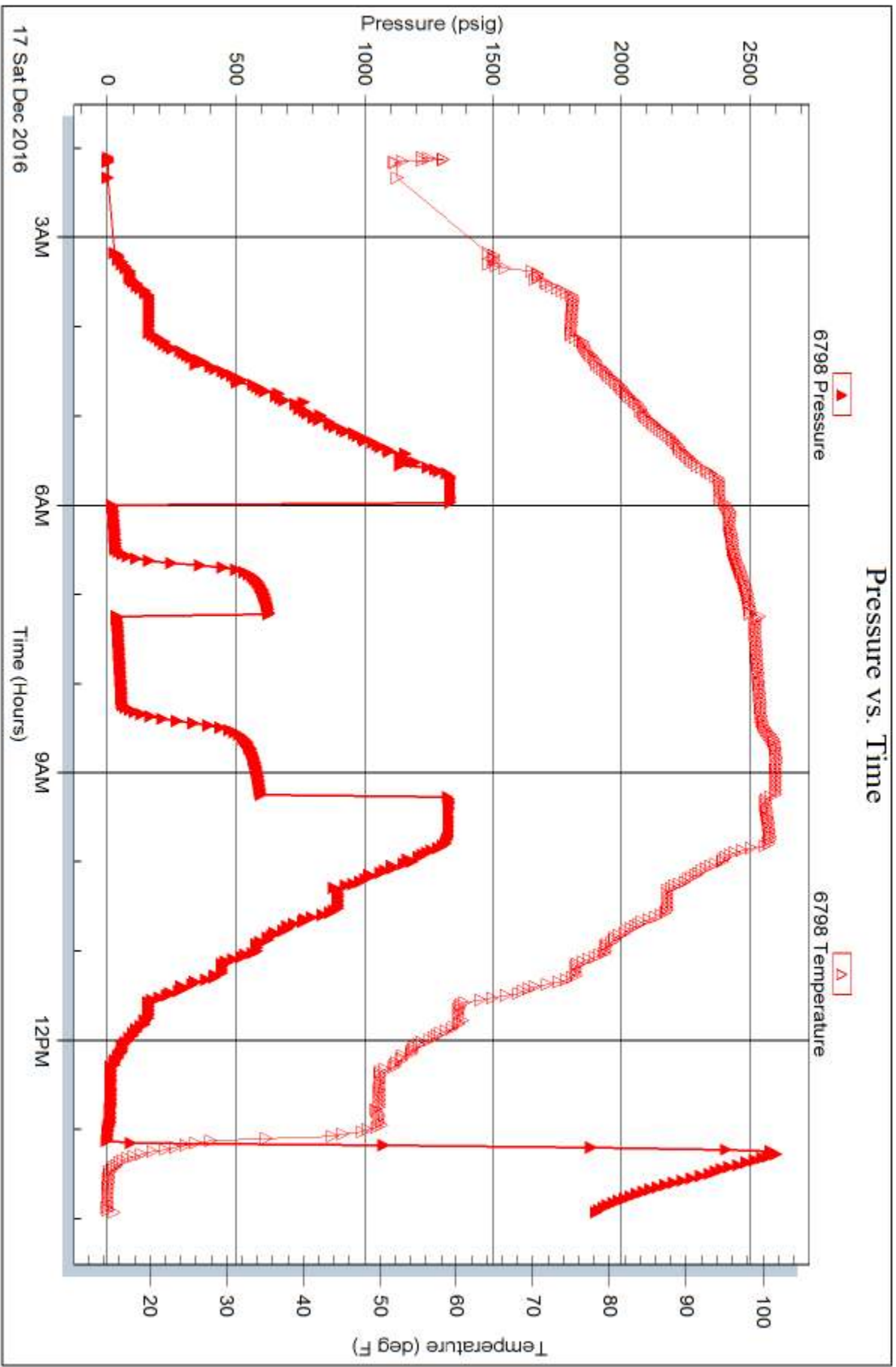
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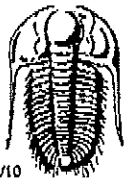
Inside

Directional Drilling Systems

Benfer #7

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63090

Well Name & No. Benfer #7 Test No. 1 Date 12-14-16
 Company Directional Drilling Systems Elevation 1359 KB 1349 GL
 Address 5780 East Ida Circle Greenwood Village, CO 80111
 Co. Rep / Geo. Frank Mize / Hi Lewis Rig Summit Drilling #1
 Location: Sec. 9 Twp. 26S Rge. 3E Co. Butler State Ks

Interval Tasted 2437-2462 Zone Tested Swope
 Anchor Length 25' Drill Pipe Run 2102 Mud Wt. 9.2
 Top Packer Depth 2432 Drill Collars Run 313 Vls 54
 Bottom Packer Depth 2437 Wt. Pipe Run 0 WL 9.6
 Total Depth 2462 Chlorides 1900 ppm System LCM

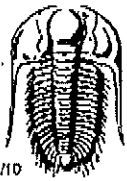
Blow Description EF - weak blow building to 4 inches IFP
FF - weak blow building to 3 inches FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>Heavy mud + oil cut water</u>		<u>3</u>	<u>58</u>	<u>47</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 80 BH-T 93 Gravity API RW .73 @ 38° F Chlorides 17000 ppm

(A) Initial Hydrostatic <u>1172</u>	<input checked="" type="checkbox"/> Test 1050	T-On Location <u>2330</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>0515</u>
(C) First Final Flow <u>34</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>1037</u>
(D) Initial Shut-In <u>789</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1337</u>
(E) Second Initial Flow <u>41</u>	<input checked="" type="checkbox"/> Hourly Standby <u>9 hrs</u> 720	T-Out <u>1800</u>
(F) Second Final Flow <u>56</u>	<input checked="" type="checkbox"/> Mileage <u>RT 50</u>	Comments _____
(G) Final Shut-In <u>685</u>	<input type="checkbox"/> Sampler 202rt 151.50	_____
(H) Final Hydrostatic <u>1165</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies _____
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>2246.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>2246.50</u>	

Approved By [Signature] Our Representative [Signature]
 Trilobite Testing Inc. shall not be liable for damaged or 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63091

Well Name & No. Bentley #7 Test No. 2 Date 12-16-16
 Company Directional Drilling Systems Elevation 1359 KB 1399 GL
 Address 5780 East Ida Circle, Greenwood Village, CO 80111
 Co. Rep / Geo. Hi Lewis / Frank Mize Rig Summit Drilling #1
 Location: Sec. 9 Twp. 26 S Rge. 3 E Co. Butler State KS

Interval Tested 2747-2793 Zone Tested Mississippian
 Anchor Length 45' Drill Pipe Run 2448 Mud Wt. 9.2
 Top Packer Depth 2742 Drill Collars Run 282 Vis 48
 Bottom Packer Depth 2747 Wt. Pipe Run 0 WL 9.6
 Total Depth 2793 Chlorides 1900 ppm System LCM
 Blow Description EF- weak blow building to 6 inches I FP
EF- weak blow building to 9 inches FFP
1/4 inch blow back during FSP

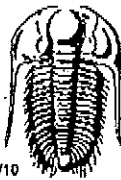
Rec	Feet of	%gas	%oil	%water	%mud
100	Oil cut mud	13		87	
125	Gas in pipe	100			

Rec Total 100 BHT 99 Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>1311</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>0420</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0631</u>
(C) First Final Flow <u>36</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1021</u>
(D) Initial Shut-In <u>598</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1336</u>
(E) Second Initial Flow <u>40</u>	<input type="checkbox"/> Hourly Standby <u>1.5h 120</u>	T-Out <u>1700</u>
(F) Second Final Flow <u>61</u>	<input checked="" type="checkbox"/> Mileage <u>37.50 RT 50</u>	Comments
(G) Final Shut-In <u>570</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1300</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Total <u>1545</u>
Final Flow <u>650</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	
	Sub Total <u>1545</u>	

Approved By [Signature] Our Representative Jimmy Ricketts

Trilobite Testing Inc. shall not be liable for damaged or any kind of the property or personal 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 opinions 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63092

Well Name & No. Bentley #7 Test No. 3 Date 12-17-16
 Company Directional Drilling Systems, LLC Elevation 1359 KB 1349 GL
 Address 5780 East Ida Circle, Greenwood Village CO 80111
 Co. Rep / Geo. Hi Lewis / Frank Nize Rtg Summit Drilling #1
 Location: Sec. 9 Twp. 26S Rge. 3E Co. Butler State KS

Interval Tested 2792 - 2810 Zone Tested Mississippian
 Anchor Length 181 Drill Pipe Run 2479 Mud Wt. 9.1
 Top Packer Depth 2787 Drill Collars Run 313 Vis 51
 Bottom Packer Depth 2792 Wt. Pipe Run 0 WL 7.8
 Total Depth 2810 Chlorides 1200 ppm System LCM
 Blow Description FF - weak blow building to 4 inches FFP
FF - weak blow building to 10 inches FFP
Surface blow back during FFP

Rec	Feet of	%gas	%oil	%water	%mud
125	Gas in pipe	100			
13	Clean oil	100			
50	oil + water cut mud	16	14	70	
30	oil + heavy water cut mud	5	41	54	

Rec Total 93 BH 79 Gravity 41.5 API RW .28 @ 38 °F Chlorides 4900 ppm

(A) Initial Hydrostatic <u>1334</u>	<input checked="" type="checkbox"/> Test 1050	T-On Location <u>0030</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>0306</u>
(C) First Final Flow <u>33</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>0559</u>
(D) Initial Shut-In <u>629</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>0915</u>
(E) Second Initial Flow <u>34</u>	<input type="checkbox"/> Hourly Standby 2.75h 220	T-Out <u>1330</u>
(F) Second Final Flow <u>57</u>	<input checked="" type="checkbox"/> Mileage 37.50 <u>RT 50</u>	Comments _____
(G) Final Shut-In <u>597</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1329</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Total <u>1632.50</u>
Final Shut-In <u>61</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1632.50</u>	

Approved By [Signature] Our Representative [Signature]
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