

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

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:	
----------------	-------	---------	------------	--



Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: B Bar B #25-2
 Well Id:
 Location: SE NE SW SE Sec 25 T8S R23W
 License Number: 15-065-24167-00-00
 Spud Date: 7/15/2019
 Surface Coordinates: 860' FSL & 1520' FEL
 Region: Graham County, KS
 Drilling Completed: 7/22/2019
 Bottom Hole: Surface casing- 8 5/8 @ 210'
 Coordinates: Production casing- N/A
 Ground Elevation (ft): 2281
 K.B. Elevation (ft): 2288
 Logged Interval (ft): 3250 To: TD
 Total Depth (ft): 3850
 Formation:
 Type of Drilling Fluid: Chemical Mud

Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Canyon Operating LLC
 Address: 5228 Lonetree Dr
 Loveland, CO 80537

GEOLOGIST

Name: Clayton Erickson
 Company: Erickson Wellsite Geology
 Address: 402 Palmer Street
 P.O. Box 294
 Loomis, NE 68958

DSTs

DST #1 3592-3636 30-60-30-60; Hydro: 1774-1714 IFF: 74-84 ISIP: 956 FFP: 9-90 FSIP: 949; Rec: 154' 60%w 40%
 BHT: 110 F; RW: .520 @83 F Chl: 10,000ppm; IF: 1 1/2" ISI: dead FF: 1" FSI: dead
 DST #2 3630-3658 30-60-30-60; Hydro: 1800-1721 IFF: 16-29 ISIP: 612 FFP: 31-42 FSIP: 595; Rec: 60' oil sptd mud;
 BHT: 108 F; IF: 1 1/4" ISI: dead FF: 1/2" FSI: dead
 DST #3 3686-3750 30-60-45-90; Hydro: 187-1861 IFF: 17-23 ISIP: 982 FFP: 53-159 FSIP: 1036; Rec: 10' oil 45' 50%
 50%
 BHT: 110 F; IF: 2" ISI: dead FF: 3/4" FSI: dead
 DST #4 3746-3790 30-60-30-60; Hydro: 1888-1869 IFF: 18-19 ISIP: 74 FFP: 19-28 FSIP: 50; Rec: 3' oil spotted mud; BHT:
 110 F; IF: surface ISI: dead FF: dead FSI: dead

COMMENTS

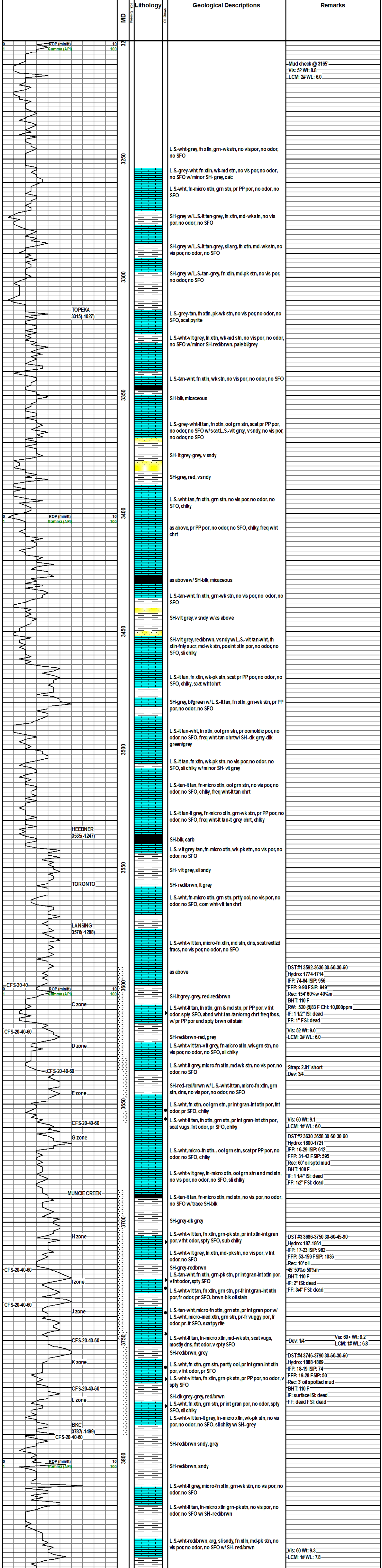
FORMATION TOPS

Log Tops	Sample tops
Anhydrite	1905(+383)
TOPEKA	3315(-1027)
HEEBNER	3535(-1247)
LANSING	3576(-1288)
BKC	3787(-1499)
TD	3850(-1562)

ROCK TYPES					
	Anhy		Clyst		Gyp
	Bent		Carb. shale		Igne
	Brec		Arkose		Lmst
	Cht		Dol		Meta
			Mrlst		Salt
			Shale		Shcol
			Shgy		Siltst
			Ss		Till

OTHER SYMBOLS

	Oil Show Even		Spotted Ques		Dead		Interval Dst
--	---------------	--	--------------	--	------	--	--------------



Mud check @ 3165'
 Vis: 52 Wt: 8.8
 LCM: 2# WL: 6.0

DST #1 3592-3636 30-60-30-60
 Hydro: 1774-1714
 IFF: 74-84 ISIP: 956
 FFP: 9-90 FSIP: 949
 Rec: 154' 60%w 40%
 BHT: 110 F
 RW: .520 @83 F Chl: 10,000ppm
 IF: 1 1/2" ISI: dead
 FF: 1" FSI: dead
 Vis: 52 Wt: 9.0
 LCM: 2# WL: 6.0

DST #2 3630-3658 30-60-30-60
 Hydro: 1800-1721
 IFF: 16-29 ISIP: 612
 FFP: 31-42 FSIP: 595
 Rec: 60' oil sptd mud
 BHT: 108 F
 IF: 1 1/4" ISI: dead
 FF: 1/2" FSI: dead

DST #3 3686-3750 30-60-45-90
 Hydro: 187-1861
 IFF: 17-23 ISIP: 982
 FFP: 53-159 FSIP: 1036
 Rec: 10' oil
 45' 50%o 50%
 BHT: 110 F
 IF: 2" ISI: dead
 FF: 3/4" FSI: dead

DST #4 3746-3790 30-60-30-60
 Hydro: 1888-1869
 IFF: 18-19 ISIP: 74
 FFP: 19-28 FSIP: 50
 Rec: 3' oil spotted mud
 BHT: 110 F
 IF: surface ISI: dead
 FF: dead FSI: dead

Dev: 14 Vis: 60+ Wt: 9.2
 LCM: 1# WL: 6.8

DST #3 3686-3750 30-60-45-90
 Hydro: 187-1861
 IFF: 17-23 ISIP: 982
 FFP: 53-159 FSIP: 1036
 Rec: 10' oil
 45' 50%o 50%
 BHT: 110 F
 IF: 2" ISI: dead
 FF: 3/4" FSI: dead

Dev: 14 Vis: 60+ Wt: 9.2
 LCM: 1# WL: 6.8

DST #4 3746-3790 30-60-30-60
 Hydro: 1888-1869
 IFF: 18-19 ISIP: 74
 FFP: 19-28 FSIP: 50
 Rec: 3' oil spotted mud
 BHT: 110 F
 IF: surface ISI: dead
 FF: dead FSI: dead

Vis: 60 Wt: 9.3
 LCM: 1# WL: 7.8

Dev: 1



DRILL STEM TEST REPORT

Prepared For: **Canyon Operating LLC.**

PO Box 7117
Loveland CO 80537

ATTN: Clayton Erickson

B Bar B #25-2

25-8S-23W Graham,KS

Start Date: 2019.07.19 @ 16:58:00

End Date: 2019.07.20 @ 00:08:30

Job Ticket #: 65948 DST #: 1

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

Printed: 2019.07.23 @ 10:45:38

Canyon Operating LLC. 25-8S-23W Graham,KS B Bar B #25-2 DST # 1 LKC C 2019.07.19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65948

DST#: 1

ATTN: Clayton Erickson

Test Start: 2019.07.19 @ 16:58:00

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:26:45

Time Test Ended: 00:08:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 77

Interval: 3592.00 ft (KB) To 3636.00 ft (KB) (TVD)

Reference Elevations: 2288.00 ft (KB)

Total Depth: 3636.00 ft (KB) (TVD)

2281.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8671 Outside

Press@RunDepth: 90.38 psig @ 3593.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.19

End Date:

2019.07.20

Last Calib.:

2019.07.20

Start Time: 16:58:05

End Time:

00:08:29

Time On Btm:

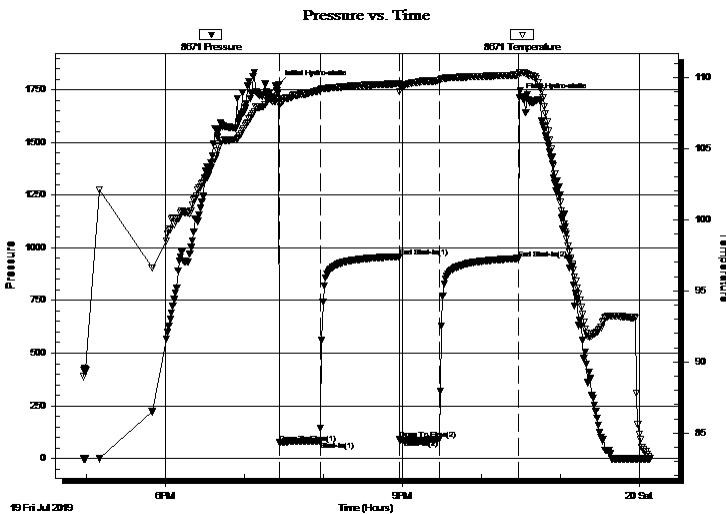
2019.07.19 @ 19:26:15

Time Off Btm:

2019.07.19 @ 22:28:45

TEST COMMENT: 30 - IFP - Surface blow built up to 1 1/2"
60 - ISI - No Return
30 - FFP - Surface blow slowly built up to 1"
60 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.79	108.49	Initial Hydro-static
1	74.21	108.09	Open To Flow (1)
32	83.66	109.07	Shut-In(1)
92	955.82	109.55	End Shut-In(1)
92	91.65	109.00	Open To Flow (2)
122	90.38	109.76	Shut-In(2)
182	949.15	110.16	End Shut-In(2)
183	1714.30	110.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
154.00	MW - 40%m - 60%w	0.93

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65948

DST#: 1

ATTN: Clayton Erickson

Test Start: 2019.07.19 @ 16:58:00

Tool Information

Drill Pipe:	Length: 3475.34 ft	Diameter: 3.25 inches	Volume: 35.66 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: 121.54 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 36.26 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	32.88 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3592.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Chased tool 15' to Bottom

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

Shut In Tool	5.00			3569.00	
Hydraulic tool	5.00			3574.00	
Jars	5.00			3579.00	
Safety Joint	3.00			3582.00	
Packer	5.00			3587.00	28.00 Bottom Of Top Packer
Packer	5.00			3592.00	
Stubb	1.00			3593.00	
Recorder	0.00	8360	Inside	3593.00	
Recorder	0.00	8671	Outside	3593.00	
Perforations	7.00			3600.00	
Change Over Sub	1.00			3601.00	
Drill Pipe	31.00			3632.00	
Change Over Sub	1.00			3633.00	
Bullnose	3.00			3636.00	44.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65948

DST#: 1

ATTN: Clayton Erickson

Test Start: 2019.07.19 @ 16:58:00

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:

10000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
154.00	MW - 40%m - 60%w	0.931

Total Length: 154.00 ft Total Volume: 0.931 bbl

Num Fluid Samples: 0

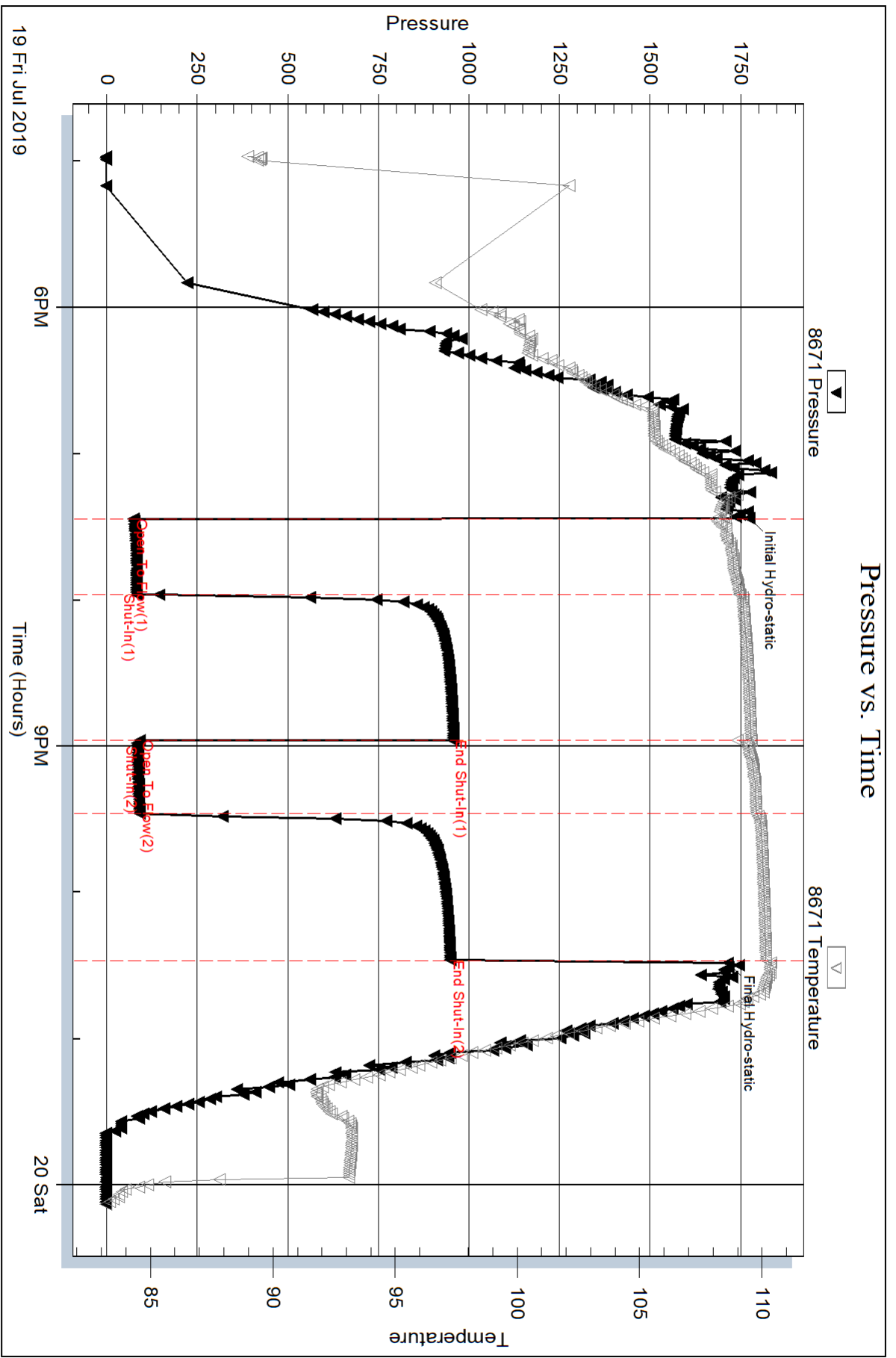
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .520@83 deg.



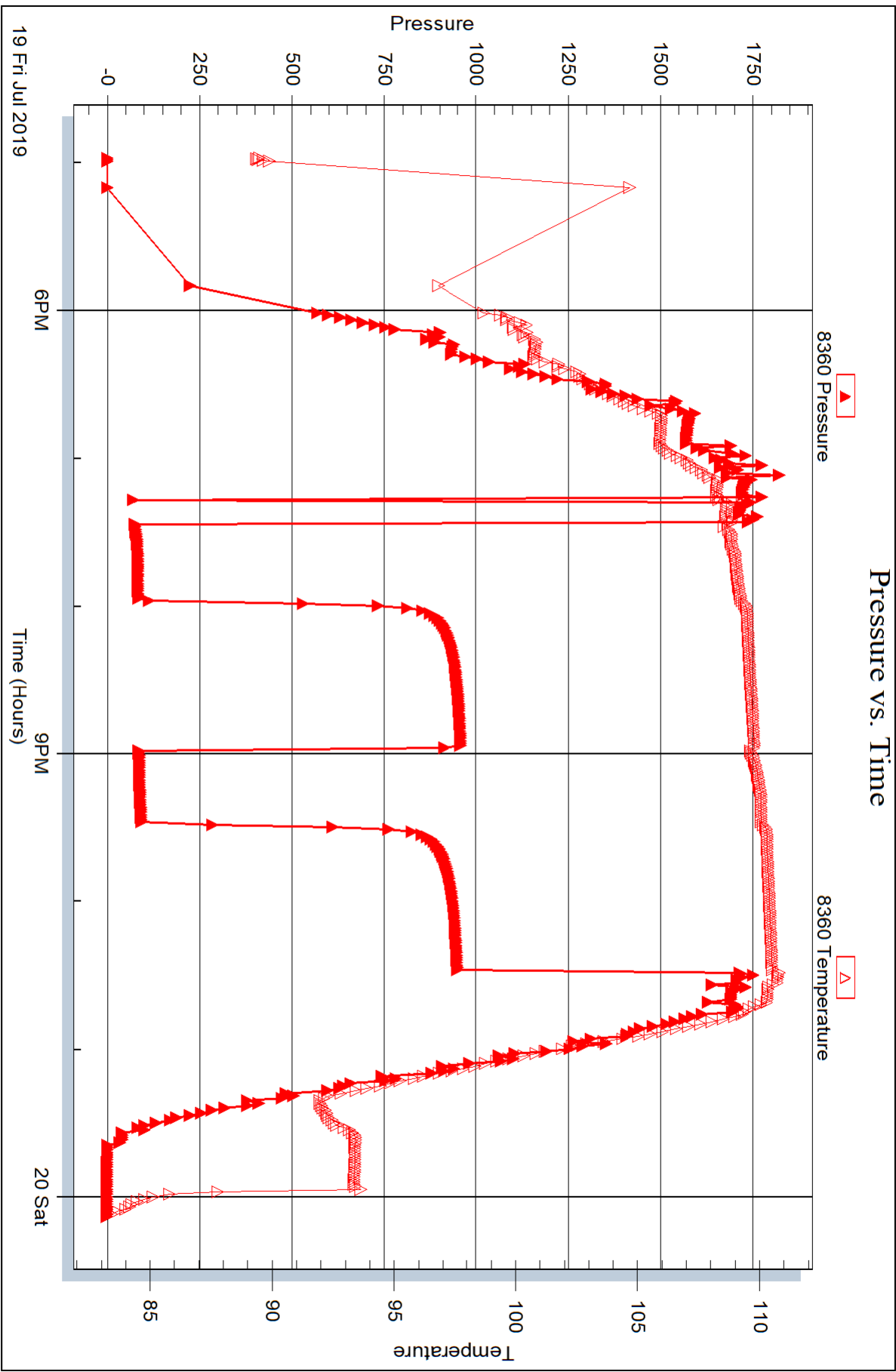
Serial #: 8360

Inside

Canyon Operating LLC.

B Bar B#25-2

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 65948

Printed: 2019.07.23 @ 10:45:40



DRILL STEM TEST REPORT

Prepared For: **Canyon Operating LLC.**

PO Box 7117
Loveland CO 80537

ATTN: Clayton Erickson

B Bar B #25-2

25-8S-23W Graham,KS

Start Date: 2019.07.20 @ 07:20:00

End Date: 2019.07.20 @ 13:19:45

Job Ticket #: 65949 DST #: 2

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

Printed: 2019.07.23 @ 10:45:17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65949

DST#: 2

ATTN: Clayton Erickson

Test Start: 2019.07.20 @ 07:20:00

GENERAL INFORMATION:

Formation: **LKC E - F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:42:30

Time Test Ended: 13:19:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 77

Interval: 3630.00 ft (KB) To 3658.00 ft (KB) (TVD)

Reference Elevations: 2288.00 ft (KB)

Total Depth: 3658.00 ft (KB) (TVD)

2281.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8671

Outside

Press@RunDepth: 42.08 psig @ 3631.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.20

End Date:

2019.07.20

Last Calib.:

2019.07.20

Start Time: 07:20:05

End Time:

13:19:44

Time On Btm:

2019.07.20 @ 08:42:15

Time Off Btm:

2019.07.20 @ 11:43:30

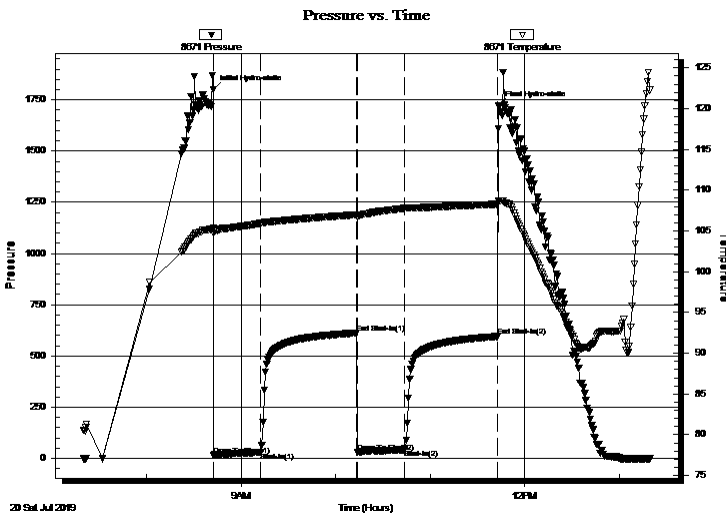
TEST COMMENT: 30 - IFP - Surface blow slowly built up to 1 1/4"

60 - ISI - No Return

30 - FFP - Surface blow built up to 1/2"

60 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1799.67	105.33	Initial Hydro-static
1	16.20	104.69	Open To Flow (1)
31	29.18	105.92	Shut-In(1)
91	611.75	106.98	End Shut-In(1)
92	31.00	106.67	Open To Flow (2)
122	42.08	107.79	Shut-In(2)
181	595.09	108.28	End Shut-In(2)
182	1720.84	108.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OSM - Oil Spots - 100%m	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65949

DST#: 2

ATTN: Clayton Erickson

Test Start: 2019.07.20 @ 07:20:00

Tool Information

Drill Pipe:	Length: 3497.33 ft	Diameter: 3.25 inches	Volume: 35.88 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: 121.54 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 36.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.87 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3630.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3607.00	
Hydraulic tool	5.00			3612.00	
Jars	5.00			3617.00	
Safety Joint	3.00			3620.00	
Packer	5.00			3625.00	28.00 Bottom Of Top Packer
Packer	5.00			3630.00	
Stubb	1.00			3631.00	
Recorder	0.00	8360	Inside	3631.00	
Recorder	0.00	8671	Outside	3631.00	
Perforations	24.00			3655.00	
Bullnose	3.00			3658.00	28.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65949

DST#: 2

ATTN: Clayton Erickson

Test Start: 2019.07.20 @ 07:20:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OSM - Oil Spots - 100%m	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

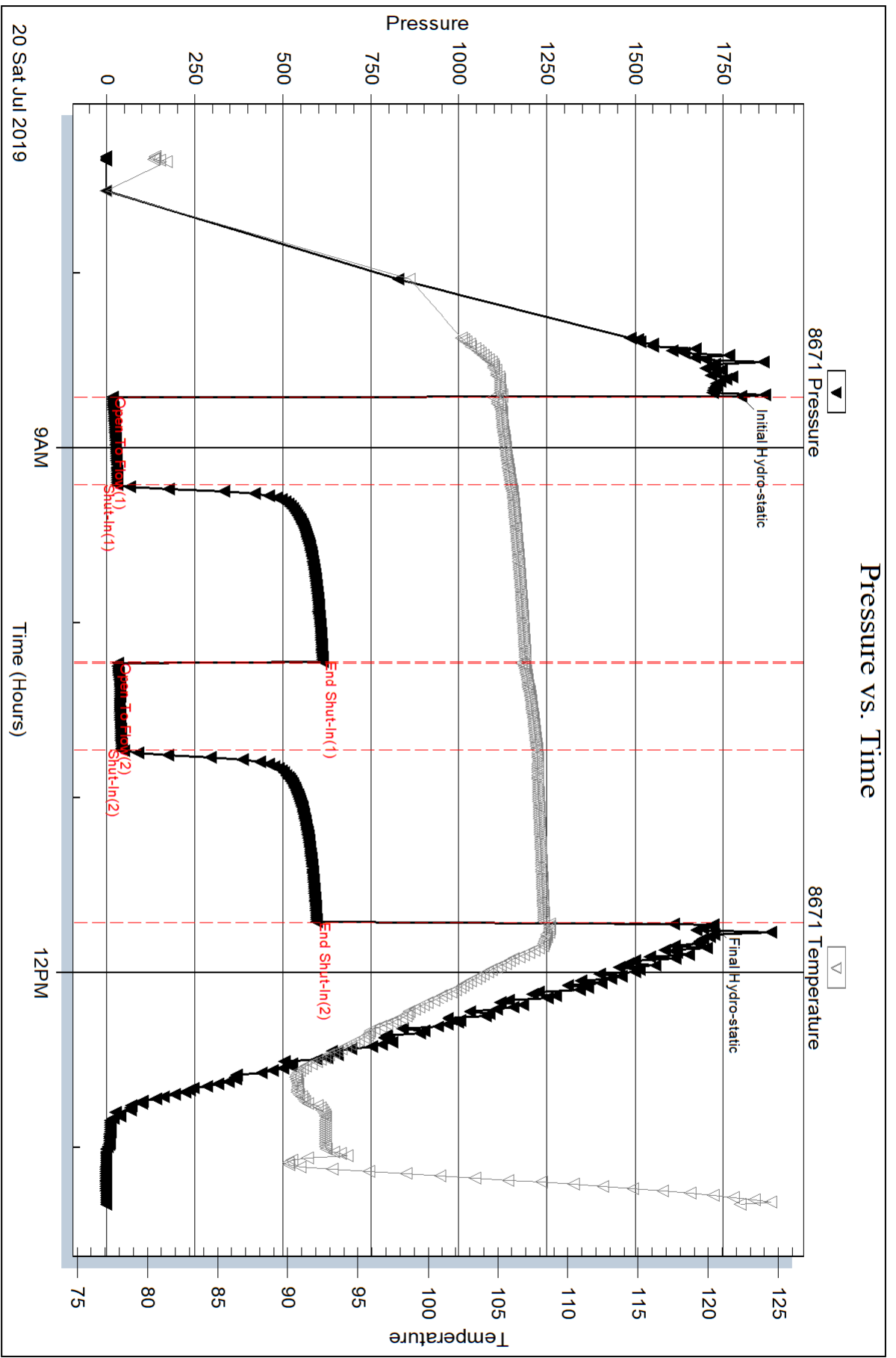
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



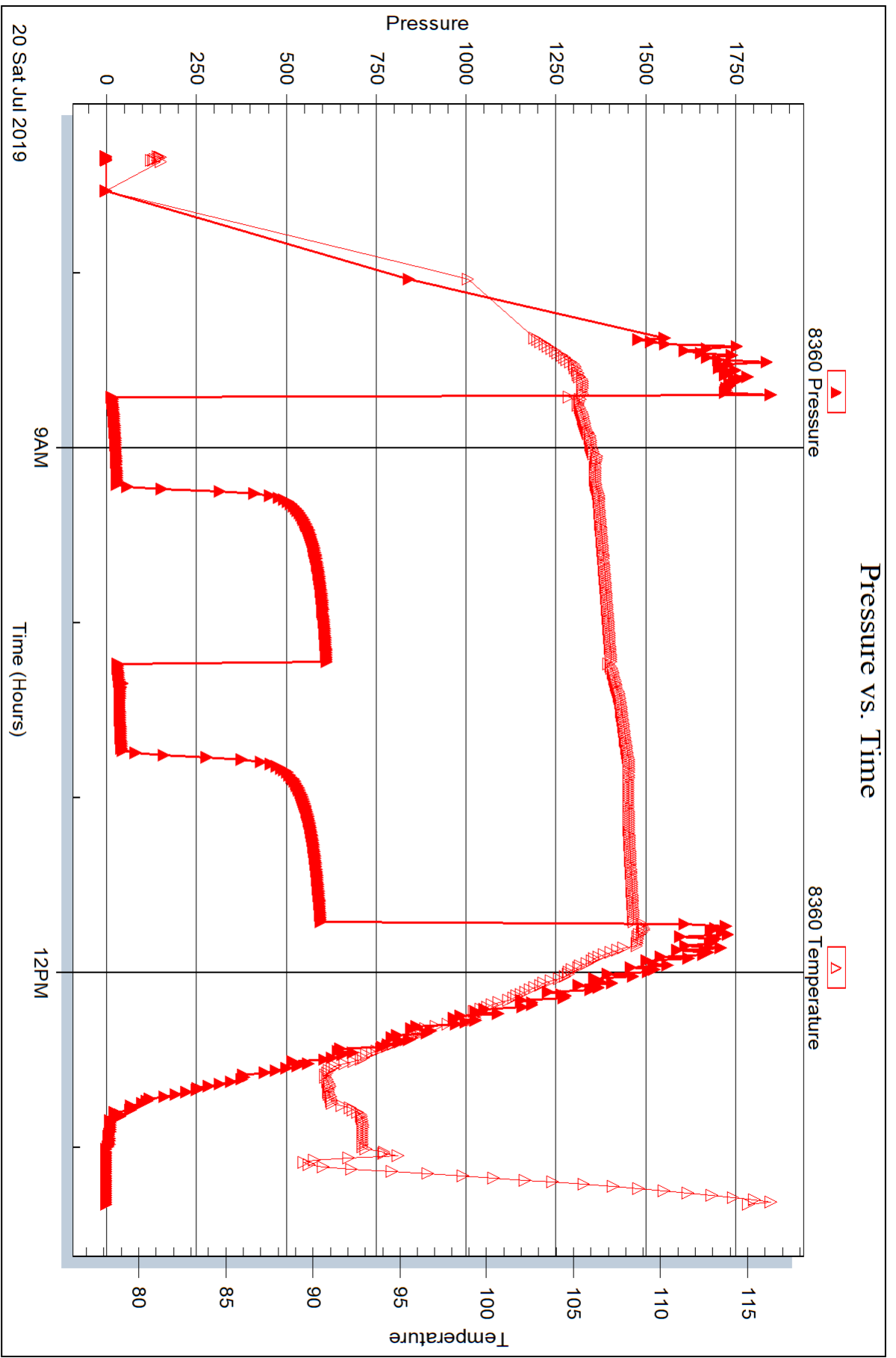
Serial #: 8360

Inside

Canyon Operating LLC.

B Bar B#25-2

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 65949

Printed: 2019.07.23 @ 10:45:19



DRILL STEM TEST REPORT

Prepared For: **Canyon Operating LLC.**

PO Box 7117
Loveland CO 80537

ATTN: Clayton Erickson

B Bar B #25-2

25-8S-23W Graham,KS

Start Date: 2019.07.21 @ 02:55:00

End Date: 2019.07.21 @ 09:57:15

Job Ticket #: 65950 DST #: 3

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

Printed: 2019.07.23 @ 10:44:54



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65950

DST#: 3

ATTN: Clayton Erickson

Test Start: 2019.07.21 @ 02:55:00

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:40:30

Time Test Ended: 09:57:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 77

Interval: 3686.00 ft (KB) To 3750.00 ft (KB) (TVD)

Reference Elevations: 2288.00 ft (KB)

Total Depth: 3750.00 ft (KB) (TVD)

2281.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8671 Outside

Press@RunDepth: 158.82 psig @ 3687.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.21

End Date: 2019.07.21

Last Calib.: 2019.07.21

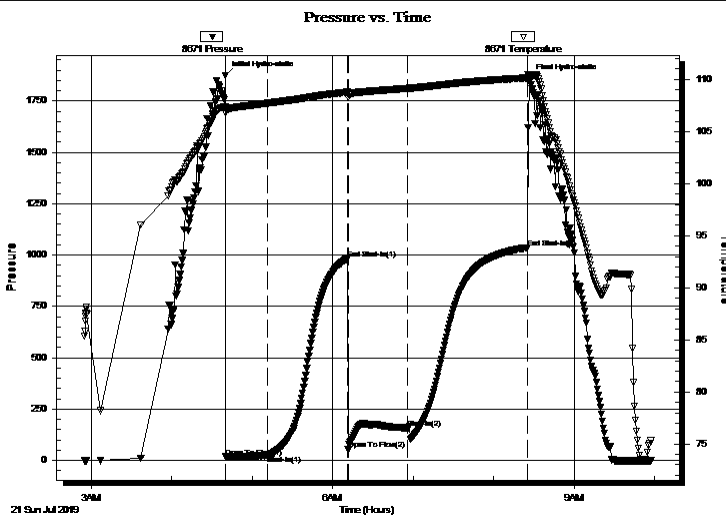
Start Time: 02:55:05

End Time: 09:57:14

Time On Btm: 2019.07.21 @ 04:40:15

Time Off Btm: 2019.07.21 @ 08:27:00

TEST COMMENT: 30 - IFP - Surface blow gradually built to 2"
60 - ISI - No Return
45 - FFP - Faint surface blow started 20 mins in and built up to 3/4"
90 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1873.24	107.41	Initial Hydro-static
1	17.34	106.80	Open To Flow (1)
32	23.18	107.73	Shut-In(1)
91	981.79	108.78	End Shut-In(1)
92	53.01	108.25	Open To Flow (2)
136	158.82	109.15	Shut-In(2)
225	1036.25	110.15	End Shut-In(2)
227	1860.57	110.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Free Oil - 100%o	0.05
45.00	OCM - 50%o - 50%m	0.22

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65950

DST#: 3

ATTN: Clayton Erickson

Test Start: 2019.07.21 @ 02:55:00

Tool Information

Drill Pipe:	Length: 3569.69 ft	Diameter: 3.25 inches	Volume: 36.63 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: 121.54 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 37.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.23 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3686.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	92.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3663.00	
Hydraulic tool	5.00			3668.00	
Jars	5.00			3673.00	
Safety Joint	3.00			3676.00	
Packer	5.00			3681.00	28.00 Bottom Of Top Packer
Packer	5.00			3686.00	
Stubb	1.00			3687.00	
Recorder	0.00	8360	Inside	3687.00	
Recorder	0.00	8671	Outside	3687.00	
Perforations	27.00			3714.00	
Change Over Sub	1.00			3715.00	
Drill Pipe	31.00			3746.00	
Change Over Sub	1.00			3747.00	
Bullnose	3.00			3750.00	64.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 65950

DST#: 3

ATTN: Clayton Erickson

Test Start: 2019.07.21 @ 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:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
10.00	Free Oil - 100%o	0.049
45.00	OCM - 50%o - 50%m	0.221

Total Length: 55.00 ft Total Volume: 0.270 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

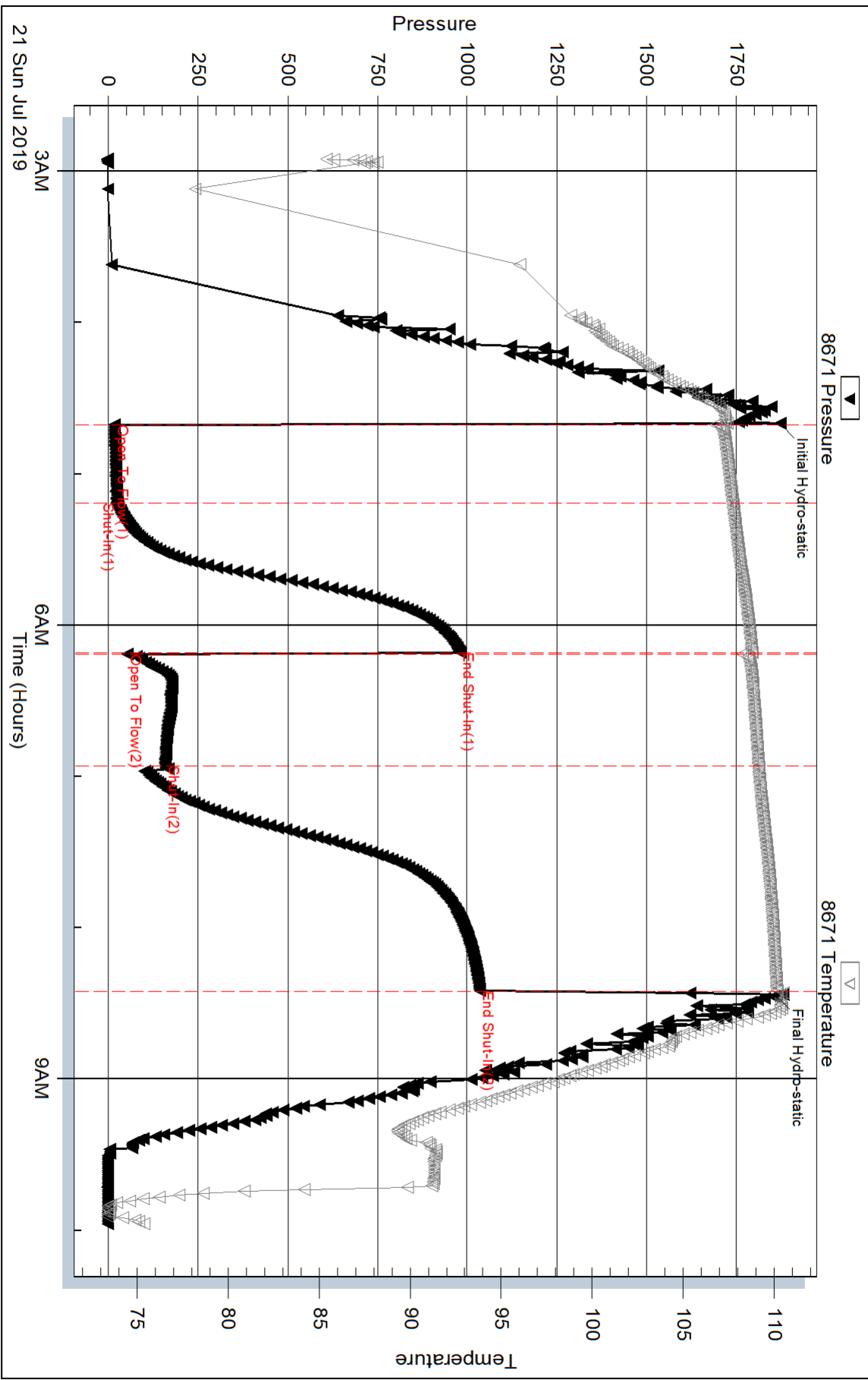
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



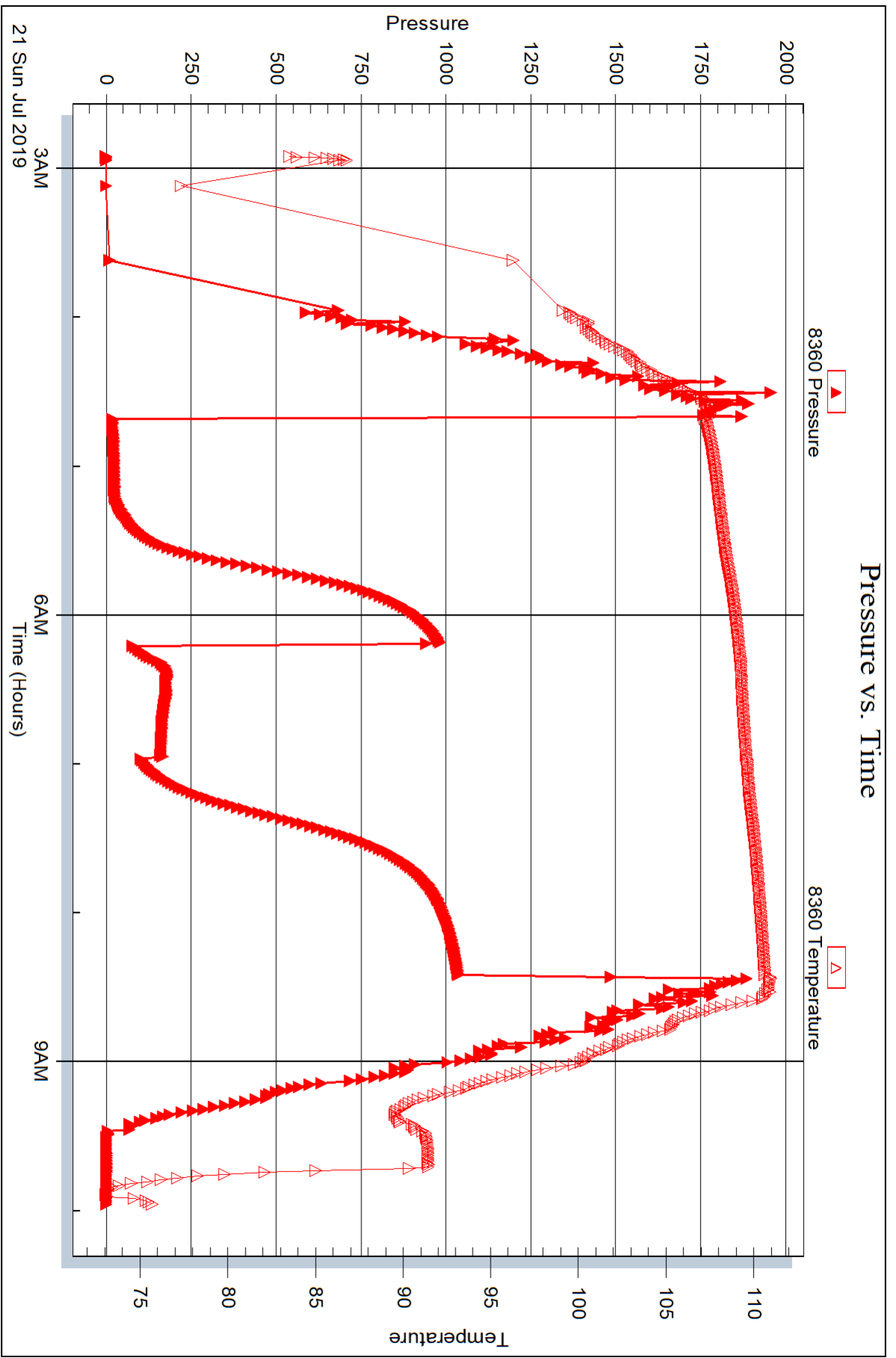
Serial #: 8360

Inside

Canyon Operating LLC.

B Bar B#25-2

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Canyon Operating LLC.**

PO Box 7117
Loveland CO 80537

ATTN: Clayton Erickson

B Bar B #25-2

25-8S-23W Graham,KS

Start Date: 2019.07.21 @ 19:03:00

End Date: 2019.07.22 @ 01:49:30

Job Ticket #: 63651 DST #: 4

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

Printed: 2019.07.23 @ 10:44:25

Canyon Operating LLC. 25-8S-23W Graham,KS B Bar B #25-2 DST # 4 LKC K - L 2019.07.21



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 63651

DST#: 4

ATTN: Clayton Erickson

Test Start: 2019.07.21 @ 19:03:00

GENERAL INFORMATION:

Formation: **LKC K - L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:15:15

Time Test Ended: 01:49:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 77

Interval: 3746.00 ft (KB) To 3790.00 ft (KB) (TVD)

Reference Elevations: 2288.00 ft (KB)

Total Depth: 3790.00 ft (KB) (TVD)

2281.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8671

Outside

Press@RunDepth: 27.92 psig @ 3747.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.21

End Date:

2019.07.22

Last Calib.:

2019.07.22

Start Time:

19:03:05

End Time:

01:49:29

Time On Btm:

2019.07.21 @ 21:15:00

Time Off Btm:

2019.07.22 @ 00:16:45

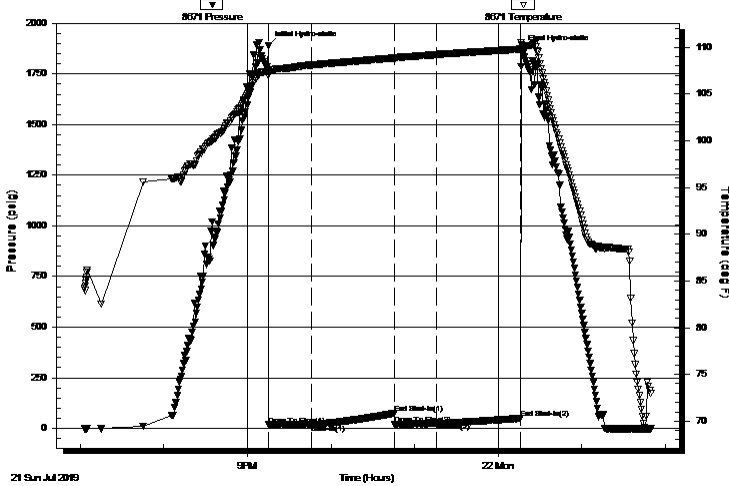
TEST COMMENT: 30 - IFP - Surface blow stayed at a weak blow

60 - ISI - No Return

30 - FFP - No Surface blow

60 - FSI - No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1887.72	107.52	Initial Hydro-static
1	17.79	106.97	Open To Flow (1)
31	19.29	108.11	Shut-In(1)
91	74.49	108.86	End Shut-In(1)
91	19.44	108.83	Open To Flow (2)
121	27.92	109.21	Shut-In(2)
181	49.88	109.80	End Shut-In(2)
182	1869.04	110.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	OSM - Oil Spots - 100%m	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 63651

DST#: 4

ATTN: Clayton Erickson

Test Start: 2019.07.21 @ 19:03:00

Tool Information

Drill Pipe:	Length: 3631.66 ft	Diameter: 3.25 inches	Volume: 37.26 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: 121.54 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 37.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	35.20 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3746.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3723.00	
Hydraulic tool	5.00			3728.00	
Jars	5.00			3733.00	
Safety Joint	3.00			3736.00	
Packer	5.00			3741.00	28.00 Bottom Of Top Packer
Packer	5.00			3746.00	
Stubb	1.00			3747.00	
Recorder	0.00	8360	Inside	3747.00	
Recorder	0.00	8671	Outside	3747.00	
Perforations	7.00			3754.00	
Change Over Sub	1.00			3755.00	
Drill Pipe	31.00			3786.00	
Change Over Sub	1.00			3787.00	
Bullnose	3.00			3790.00	44.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Canyon Operating LLC.

25-8S-23W Graham,KS

PO Box 7117
Loveland CO 80537

B Bar B #25-2

Job Ticket: 63651

DST#: 4

ATTN: Clayton Erickson

Test Start: 2019.07.21 @ 19:03:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	OSM - Oil Spots - 100%m	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

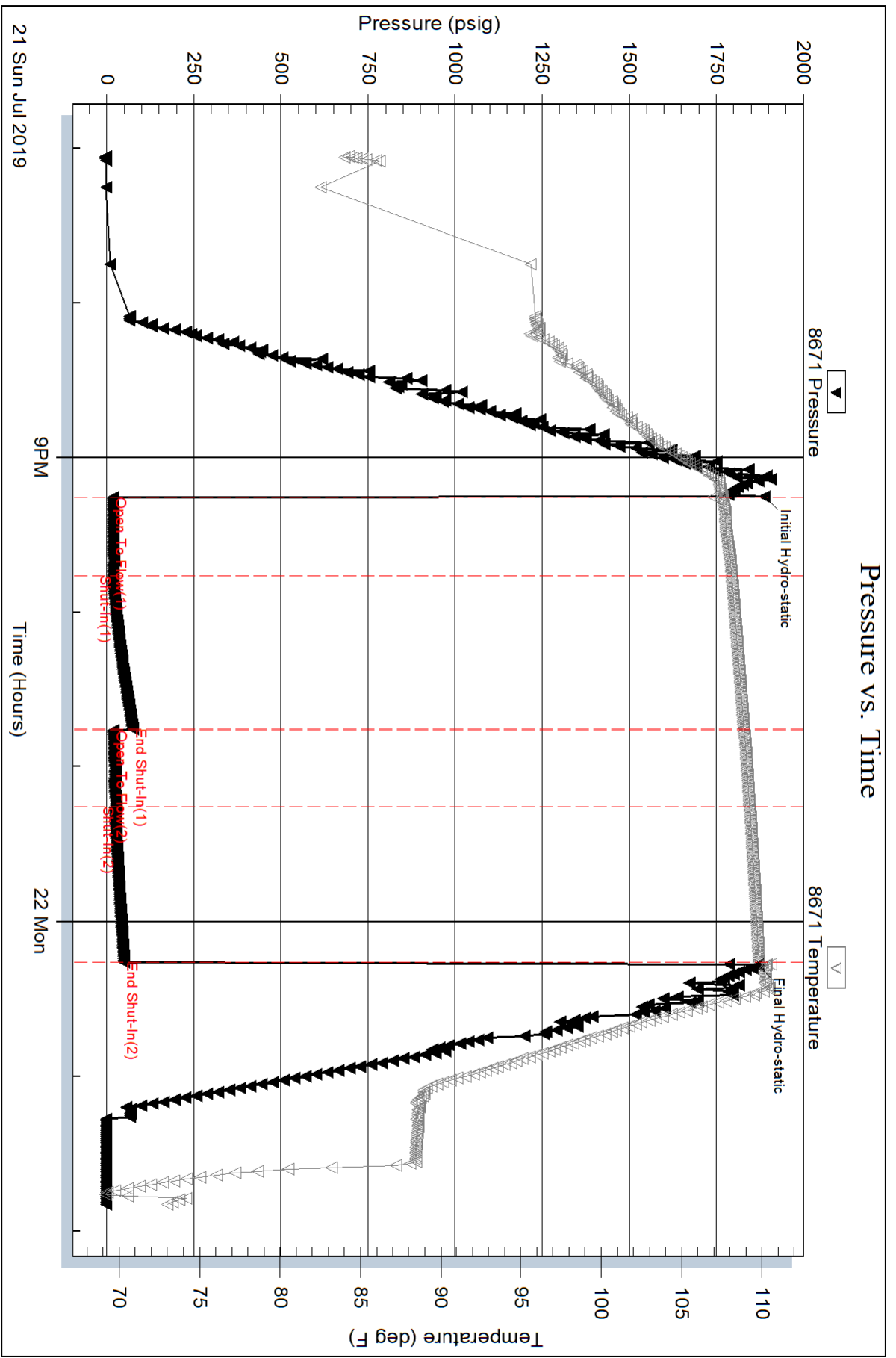
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



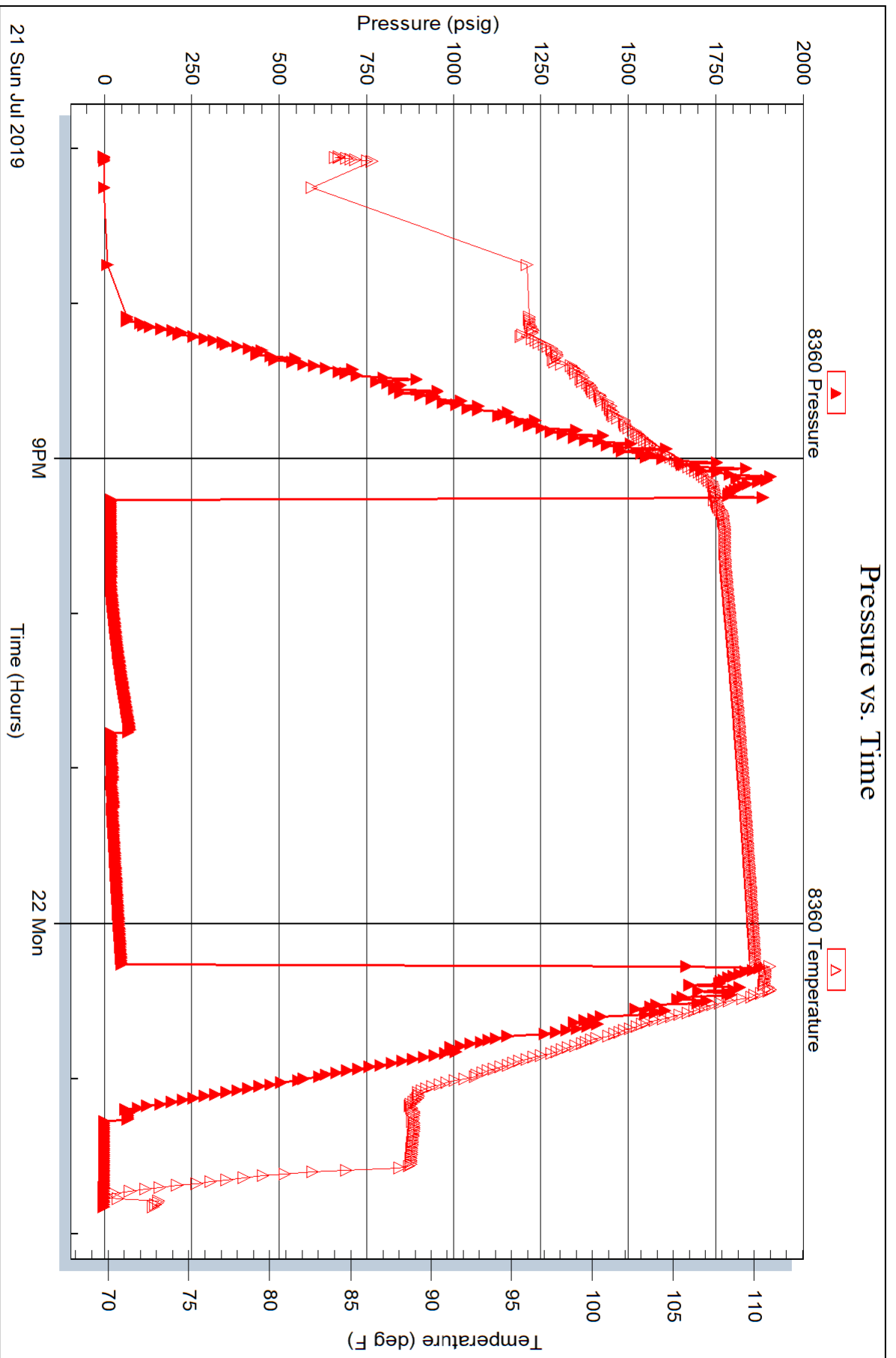
Serial #: 8360

Inside

Canyon Operating LLC.

B Bar B#25-2

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65948

NO.

Well Name & No. B Bar B # 25-2 Test No. 1 Date 7-19-19
 Company Canyon Operating LLC Elevation 2288 KB 2281 GL
 Address PO Box 7117 Loveland Co 80537
 Co. Rep / Geo. Clayton Erickson Rig STP
 Location: Sec. 25 Twp 8S Rge. 23W Co. Graham State Ks

Interval Tested 3592' - 3636' Zone Tested LKC - C
 Anchor Length 44' Drill Pipe Run 3475.34' Mud Wt. 9.0
 Top Packer Depth 3587' Drill Collars Run 121.54' Vis 52
 Bottom Packer Depth 3592' Wt. Pipe Run 0 WL 6.0
 Total Depth 3636' Chlorides 1900 ppm System LCM 2#

Blow Description IFP - surface blow built up to 1 1/2"
ISI - No Return
FFP - Surface blow slowly built to 1"
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>154</u>	<u>mw</u>		<u>60</u>	<u>40</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 154' BHT 110°F Gravity _____ API RW 520 @ 83 °F Chlorides 10,000 ppm

(A) Initial Hydrostatic <u>1774</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>4:15pm</u>
(B) First Initial Flow <u>74</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>4:58pm</u>
(C) First Final Flow <u>84</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>7:27pm</u>
(D) Initial Shut-In <u>956</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>10:27pm</u>
(E) Second Initial Flow <u>92</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>12:08am</u>
(F) Second Final Flow <u>90</u>	<input checked="" type="checkbox"/> Mileage <u>116 R/T</u> 116	Comments <u>Chased tool</u>
(G) Final Shut-In <u>949</u>	<input type="checkbox"/> Sampler _____	<u>15'</u>
(H) Final Hydrostatic <u>1714</u>	<input type="checkbox"/> Straddle _____	

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> EM Tool _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Ruined Packer _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Accessibility _____	Sub Total <u>0</u>
	Sub Total <u>1641</u>	Total <u>1641</u>
		MP/DST Disc't _____

Approved By _____ Our Representative Royal Fisher

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65949

NO. _____

Well Name & No. B Bar B # 25-2 Test No. 2 Date 7-20-19
 Company Canyon Operating LLC Elevation 2288 KB 2281 GL _____
 Address PO Box 7117 Loveland Co. 80537
 Co. Rep / Geo. Clayton Erickson Rig STP
 Location: Sec. 25 Twp 8S Rge. 23W Co. Graham State Ks

Interval Tested 3630' - 3658' Zone Tested E & F
 Anchor Length 28' Drill Pipe Run 3497.33' Mud Wt. 9.1
 Top Packer Depth 3625' Drill Collars Run 121.54' Vis 60
 Bottom Packer Depth 3630' Wt. Pipe Run 0 WL 6.0
 Total Depth 3658' Chlorides 2700 ppm System LCM 1#

Blow Description IFP - Surface blow slowly built to 1/4"
ISI - No Return
FFP - Surface blow built to 1/2"
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>60'</u>	<u>OSM</u>	<u>Spots</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 60' BHT 108°F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 1800
- (B) First Initial Flow 16
- (C) First Final Flow 29
- (D) Initial Shut-In 612
- (E) Second Initial Flow 31
- (F) Second Final Flow 42
- (G) Final Shut-In 595
- (H) Final Hydrostatic 1721

- Test 1200
- Jars 250
- Safety Joint 75
- Circ Sub _____
- Hourly Standby _____
- Mileage 116 R/T 116
- Sampler _____
- Straddle _____
- Shale Packer _____
- Extra Packer _____
- Extra Recorder _____
- Day Standby _____
- Accessibility _____

T-On Location 7:05am
 T-Started 7:20am
 T-Open 8:42am
 T-Pulled 11:42am
 T-Out 11:20pm

Comments _____

 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1641
 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 60

Approved By _____

Our Representative Royal Justice

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65950

NO.

Well Name & No. B Bar B # 25-2 Test No. 3 Date 7-21-19
 Company Canyon Operating LLC Elevation 2288 KB 2281 GL
 Address PO Box 7117 Loveland Co. 80537
 Co. Rep / Geo. Clayton Erickson Rig STP
 Location: Sec. 25 Twp 8S Rge. 23W Co. Graham State KS

Interval Tested 31686' - 3750' Zone Tested LHC - H, I, & J
 Anchor Length 64' Drill Pipe Run 3569.69' Mud Wt. 9.1
 Top Packer Depth 31681' Drill Collars Run 121.54' Vis 60
 Bottom Packer Depth 31686' Wt. Pipe Run 0 WL 10.0
 Total Depth 3750' Chlorides 2700 ppm System LCM 1#

Blow Description FFP - Surface blow gradually built to 2"
ISI - No Return
FFP - Faint surface blow started 20 mins. in and built to 3/4"
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>Free Oil</u>	<u>100</u>			
<u>45'</u>	<u>OCM</u>	<u>50</u>		<u>50</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 55' BHT 1109F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1873</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>2:30am</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2:55am</u>
(C) First Final Flow <u>23</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>4:40am</u>
(D) Initial Shut-In <u>982</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>8:25am</u>
(E) Second Initial Flow <u>53</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>9:57am</u>
(F) Second Final Flow <u>159</u>	<input checked="" type="checkbox"/> Mileage <u>116 R/T</u> 116	Comments _____
(G) Final Shut-In <u>1036</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1861</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> EM Tool _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 45
 Final Shut-In 90

Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Sub Total 1641

MP/DST Disc't _____

Approved By _____ Our Representative [Signature]
 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63651**

Well Name & No. B Bar B # 25-2 Test No. 4 Date 7-21-19
 Company Canyon Operating LLC Elevation 2288 KB 2281 GL
 Address PO Box 7117 Loveland Co, 80537
 Co. Rep / Geo. Clayton Erickson Rig STP
 Location: Sec. 25 Twp. 8S Rge. 23 W Co. Graham State Ks

Interval Tested 3746' - 3790' Zone Tested LKC-K44
 Anchor Length 44' Drill Pipe Run 31631, 100 Mud Wt. 9.2
 Top Packer Depth 3741' Drill Collars Run 121.54' Vis 60+
 Bottom Packer Depth 3746' Wt. Pipe Run 0 WL 6.8
 Total Depth 3790' Chlorides 2700 ppm System LCM 1#

Blow Description IFP - Surface blow stayed @ a weak blow
ISI - No Return
FFP - No Surface blow
FSI - No Return

Rec	Feet of	%gas	Spots	%oil	%water	%mud
3'	asm				100	

Rec Total 3' BHT 110°F Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1888
 (B) First Initial Flow 18
 (C) First Final Flow 19
 (D) Initial Shut-In 74
 (E) Second Initial Flow 19
 (F) Second Final Flow 28
 (G) Final Shut-In 50
 (H) Final Hydrostatic 1869

Test 1200
 Jars 250
 Safety Joint 75
 Circ Sub _____
 Hourly Standby _____
 Mileage 116 R/T 232
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1757

T-On Location 6:30 pm
 T-Started 7:03 pm
 T-Open 9:15 pm
 T-Pulled 12:15 am
 T-Out 1:50 am
 Comments loaded tools at 9:10 am - 10 am
7-22-19
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1757
 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 60

Approved By _____

Our Representative [Signature]

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. 1504

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-15-19	25	8	23	Cochran	KS		Cell 50
Lease				Well No.		Owner	
B loc B				25-2		To Quality Oilwell Cementing, Inc. #970-222-7530	
Contractor				You are hereby requested to rent cementing equipment and furnish			
S.T.P				cementer and helper to assist owner or contractor to do work as listed.			
Type Job				Charge To			
Surface				Canyon Operating LLC			
Hole Size		T.D.		Street			
12 1/4		210		P.O. Box 3117			
Csg.		Depth		City			
8 5/8		209		Loveland			
Tbg. Size		Depth		State			
				CO 80537			
Tool				The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg.		Shoe Joint		Cement Amount Ordered			
10				150 8/20 3/11 2/052			
Meas Line		Displace					
		12 1/2 BCL					
EQUIPMENT				Common			
Pumptrk		Cementer		Poz. Mix			
20		Helper					
Bulktrk		Driver		Gel.			
		Driver					
Bulktrk		Driver		Calcium			
14		Driver					
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			
8 5/8 on bottom Fast Circulator				Handling			
Mix 150254 & Displace				Mileage			
Cement Circulator				FLOAT EQUIPMENT			
				Guide Shoe			
				Centralizer			
				Baskets			
				AFU Inserts			
				Float Shoe			
				Latch Down			
				Pumptrk Charge			
				Mileage			
X Signature <i>Kovacs</i>				Tax			
				Discount			
				Total Charge			