

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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LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Lacy #1
Well Id:
Location: SE 1/4 S. 30-2s-23w
License Number: 123654789
Spud Date: 2-27-22
Surface Coordinates: 1300 North, 1940 West, from SE corner
Region: Kansas
Drilling Completed: 3-6-23

Bottom Hole
Coordinates:
Ground Elevation (ft): 2366
Logged Interval (ft): 2900 To: RTD
Formation:
Type of Drilling Fluid: Mud-Co Chemical
K.B. Elevation (ft): 2371
Total Depth (ft): 3682

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

OPERATOR

Company: Pioneer Operations, LLC
Address: 3014 Limestone Ct.
Hays, KS 67601

GEOLOGIST

Name: Ryan Seib
Company: Petroleum Geologist
Address: 8153 Foxtail Pine Place
Colorado Springs, CO 80927

Formation Tops

Sample Tops

Anhy- 1931 (+440)
B/Anhy- 1957 (+414)
Topeka- 3180 (-809)
Heebner- 3354 (-983)
Toronto- 3386 (-1015)
Lansing- 3398 (-1027)
Muncie Cr.- 3488 (-1117)
Marmaton- 3598 (-1227)
Granite Wash-3631 (-1260)
Granite- 3642 (-1271)
RTD- 3682 (-1311)

Log Tops

Anhy- 1929 (+442)
B/Anhy- 1958 (+413)
Topeka- 3180 (+809)
Heebner- 3353 (-982)
Toronto- 3385 (-1014)
Lansing- 3397 (-1026)
Muncie Cr.- 3488 (-1117)
Marmaton- 3598 (-1227)
Granite Wash- 3631 (-1260)
Granite- 3641 (-1270)
RTD- 3682 (-1311)

Drilling Report

2-28-23 MIRU
 3-1-23 Drilling @1380
 3-2-23 Drilling @2872
 3-3-23 Drilling @3399, DST #1
 3-4-23 Drilling @3443, DST #2
 3-5-23 Drilling @3551, DST #3
 3-6-23 Drilling @3658, Plugged and Abandoned








































































Comments

Surface Casing: New 8 5/8" set at 266'
 MUD- MudCo
 LOGS: Gemini (CND, DIL, MICRO)
























ROCK TYPES









 Anhy  Bent  Brec  Cht  Clyst	 Coal  Congl  Dol  Gyp  Igne	 Lmst  Meta  Mrlst  Salt  Shale	 Shcol  Shgy  Sltst  Ss  Till
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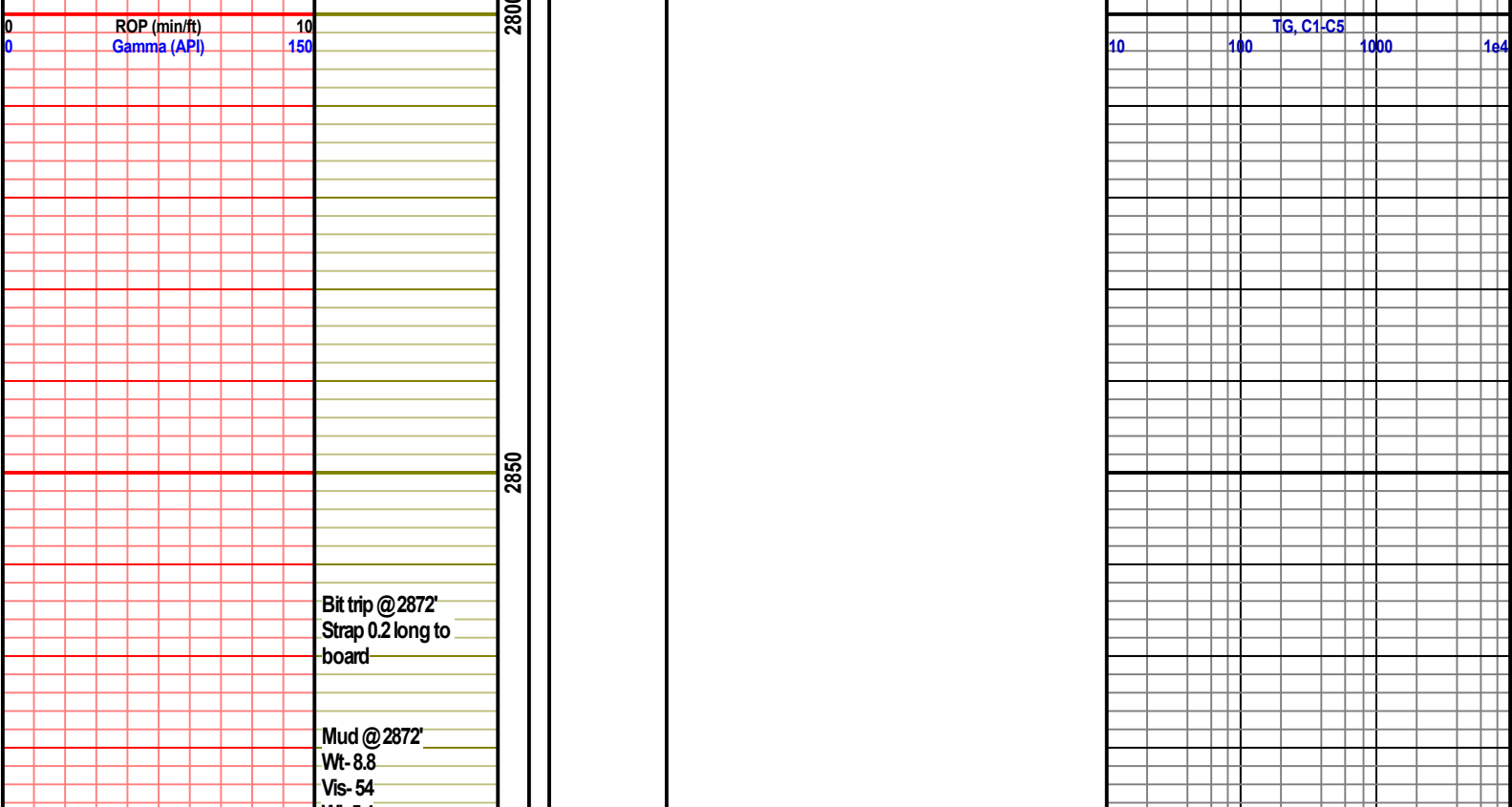
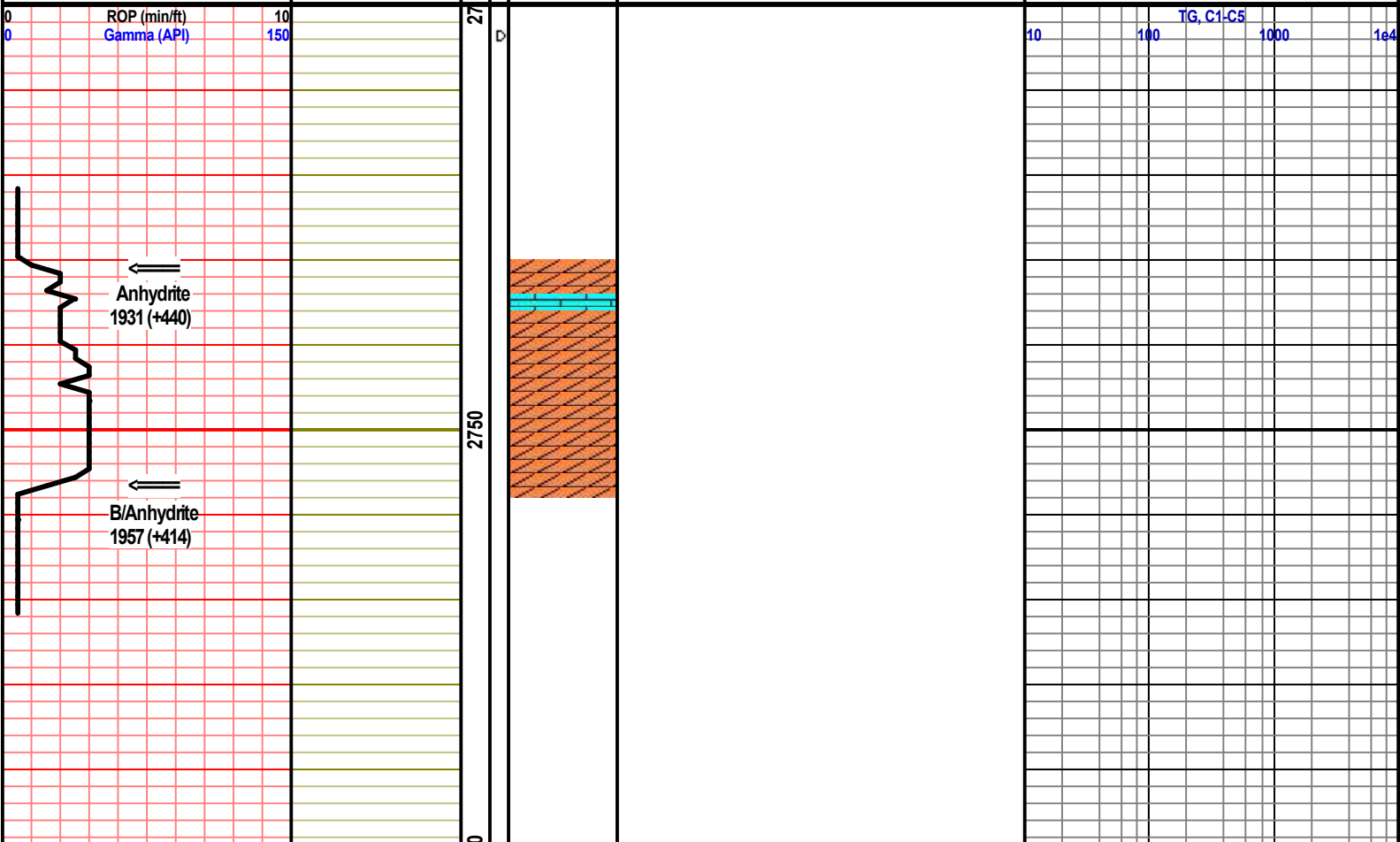
ACCESSORIES

FOSSIL  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite  Ostra  Pelec  Pellet  Pisolite	 Plant  Strom MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau  Gyp	 Hvymn  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff STRINGER  Anhy  Arg  Bent  Coal  Dol	 Gyp  Ls  Mrst  Sltstrg  Ssstrg TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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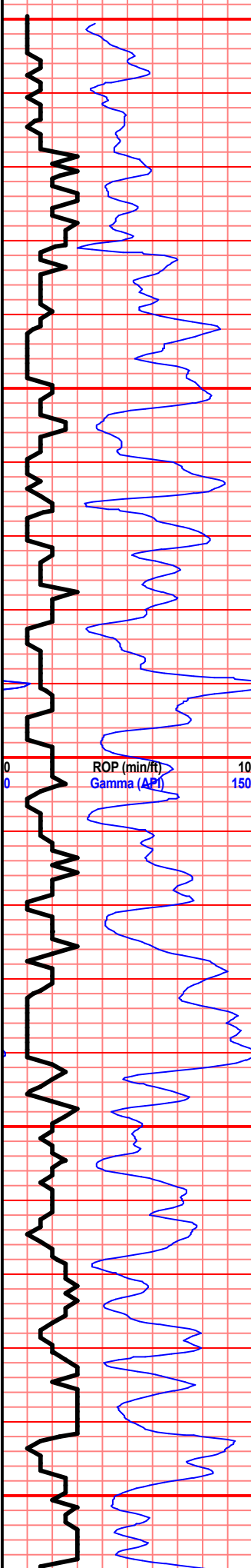
OTHER SYMBOLS

INTERVALS  Core  Dst EVENTS  Rft  Sidewall	POROSITY TYPE  Earthy  Fenest  Fracture  Inter  Moldic  Organic  Pinpoint  Vuggy	SORTING  Well  Moderate  Poor ROUNDING  Rounded  Subrnd  Subang	 Angular OIL SHOWS  Even  Spotted  Ques  Dead
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ROP/GAS ROP (min/ft)  Gamma (API) 	Misc Info	MD	Lithology	Geological Descriptions	TG, C1-C5 C5 (units)  C4 (units)  C3 (units)  C2 (units)  C1 (units)  GAS (units) 
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CHI-500
LCM-2#



Ls., cm-lt gry, fn xln, dense/hard, p vis inter xln por, no odr, n/s

Sh., gry-red, mod soft

Ls., cm-gry, fn-vfn xln., dense/hard, p vis por., n/s

Sh., gry

Sh., gry-drk gry

Ls. cm-tn-lt gry, fn-vfn xln., dense/hard., p vis por., sli chlky, no odr, n/s

Sh., gry-blk

Ls., cm-lt gry, fn-vfn xln., dense/hard., p vis por., tr pyr, no odr, n/s

Sh., gry-red

Ls., cm-tn, fn xln., dense/hard., p vis por., no odr, n/s

Sh., gry-red-gm., soft

Ls., cm-tn., vfn xln, dense/hard., p vis por., scatt foss., no odr, n/s

Sh., AAw/tr foss

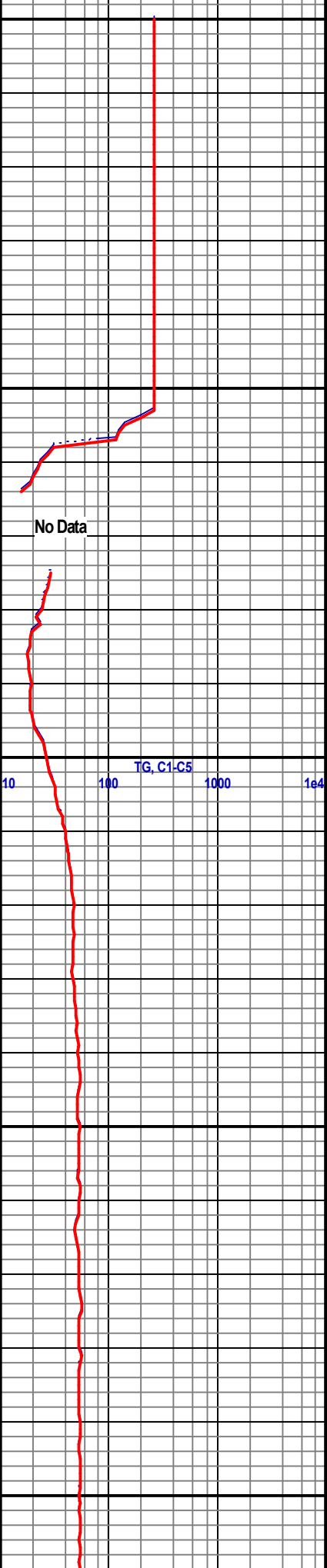
Ls. cm, fn-vfn xln., dense/hard., p vis por., no odr, n/s

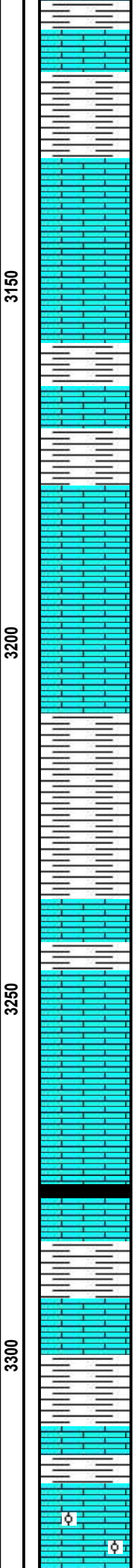
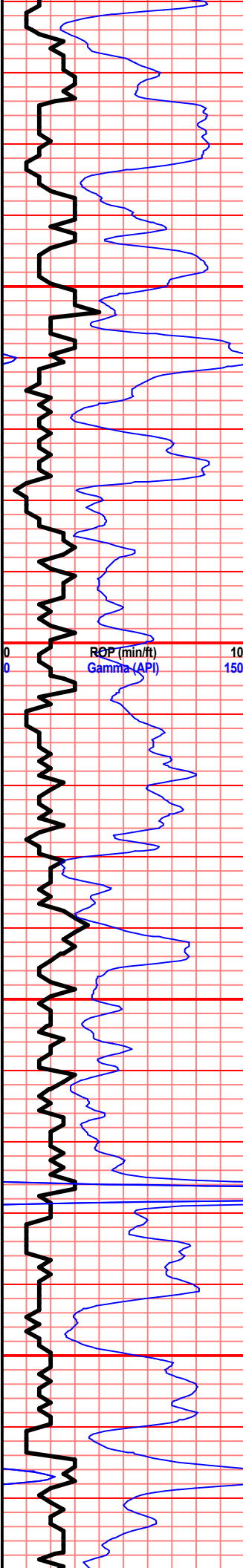
Sh., gry

Ls., cm-tn., fn xln., dense/hard., p vis por., vuggy ip., sli chlky, foss., no odr, n/s

Sh., gry-red

Ls., cm-lt gry, fn-vfn xln, dense/fri ip., p-f vis por., ab. vari color sh., soft/gummy, no odr, n/s





Sh., gry-red-brn

Ls., cm-tn., fn xln., dense/hard., p vis por., chlky, no odr., n/s

Ls., cm-brn., fn-vfn xln., dense/hard., n vis por., no odr., n/s

Sh., gry-red

Ls., wh-tn-gry., fn-vfn xln., dense/hard., p vis por., sli chlky, no odor, n/s

Ls., cm-lt. gry., fn-vfn xln., dense/hard., p vis por., pp por., no odr., n/s

Sh., AA, w/ tr cm-wh Ls., sli chlky, no odr., n/s

Ls., cm, fn xln., dense/hard., p vis por., n/s

Ls., wh-cm., vfn-fn xln., dense/hard., n vis por., v. chlky, no odr., n/s

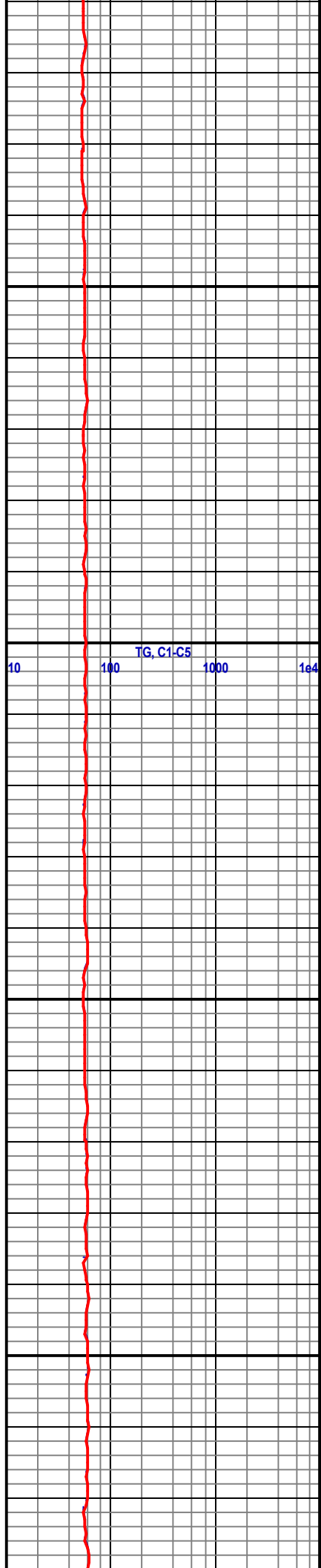
Sh., Blk Carb

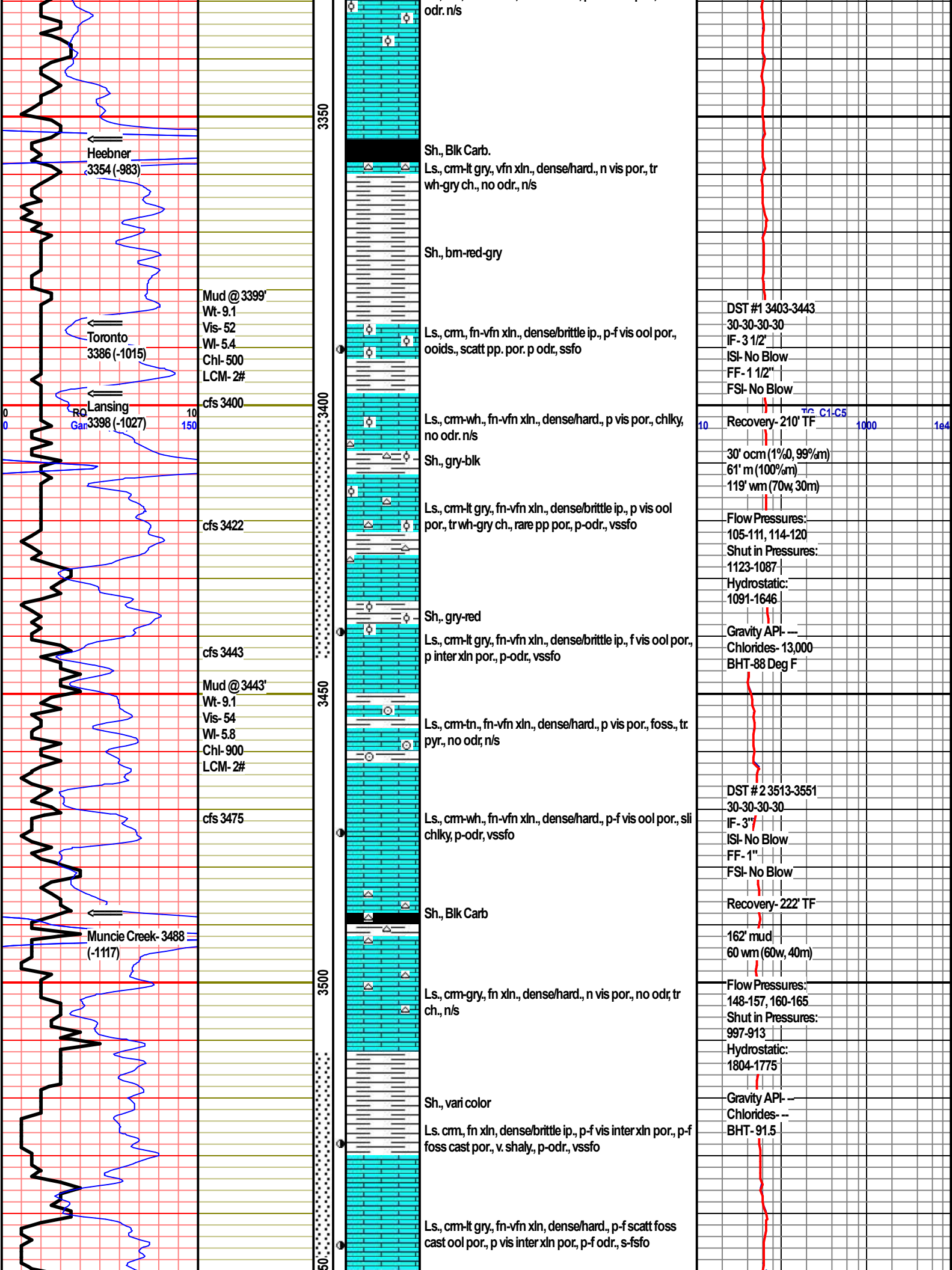
Ls., wh., vfn xln., dense/hard., n vis por., v. chlky, n/s

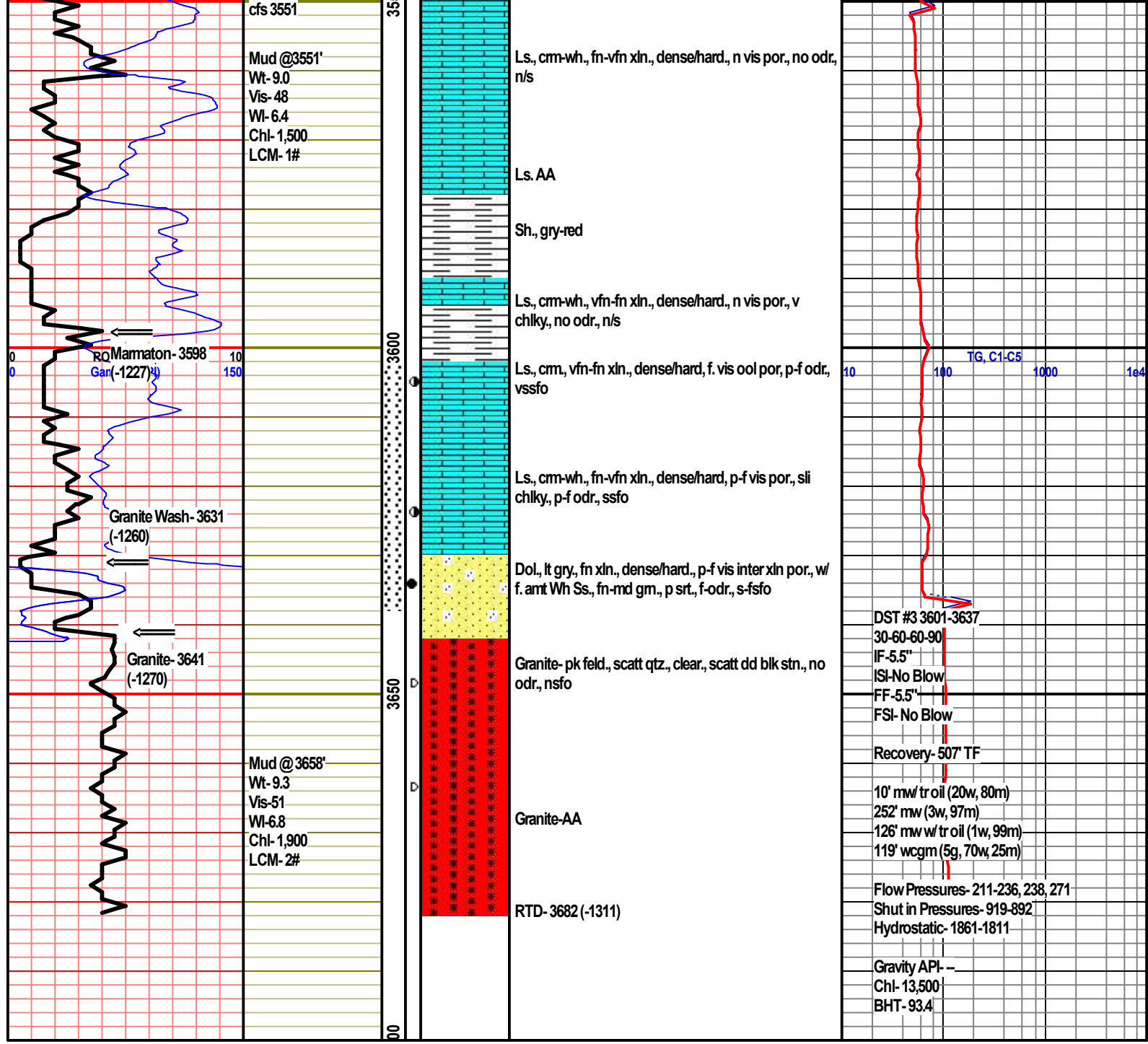
Sh., gry-red-gm

Sh., gry-blk

Ls., wh., fn-vfn xln., dense/hard., p-f vis ool por., no









DRILL STEM TEST REPORT

Prepared For: **Pioneer Operations,LLC**

3014 Limestone Ct.
Hays, KS 67601

ATTN: Ryan Seib

Lacy #1

4-2s-23w Norton,KS

Start Date: 2023.03.03 @ 18:55:00

End Date: 2023.03.04 @ 02:09:30

Job Ticket #: 70291 DST #: 1

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

Printed: 2023.03.08 @ 14:30:48



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 70291

DST#: 1

ATTN: Ryan Seib

Test Start: 2023.03.03 @ 18:55:00

GENERAL INFORMATION:

Formation: **LKC -B - D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:47:00

Time Test Ended: 02:09:30

Test Type: Conventional Bottom Hole (Initial)

Tester: David Urban

Unit No: 67

Interval: 3403.00 ft (KB) To 3443.00 ft (KB) (TVD)

Reference Elevations: 2375.00 ft (KB)

Total Depth: 3443.00 ft (KB) (TVD)

2369.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 6.00 ft

Serial #: 8677 Outside

Press@RunDepth: 120.18 psig @ 3404.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.03.03

End Date:

2023.03.04

Last Calib.:

2023.03.04

Start Time:

18:55:05

End Time:

02:09:29

Time On Btm:

2023.03.03 @ 21:46:00

Time Off Btm:

2023.03.03 @ 23:55:00

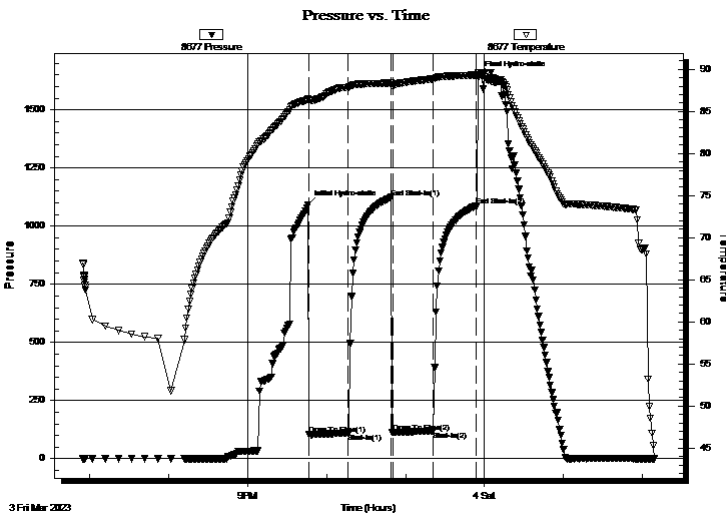
TEST COMMENT: 30-IF- Weak surface blow , Built to 2 1/2" in 10 minutes, Final- Built to 3 1/2"

30-ISI- No blow

30-FF- No blow , Built to 1/2" in 10 minutes, Final- Built to 1 1/2"

30-FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1090.69	86.46	Initial Hydro-static
1	104.99	86.28	Open To Flow (1)
31	111.00	87.87	Shut-In(1)
63	1123.02	88.37	End Shut-In(1)
65	113.51	88.11	Open To Flow (2)
95	120.18	88.84	Shut-In(2)
128	1086.77	89.31	End Shut-In(2)
129	1646.09	89.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OSM99%M 1%O	0.15
61.00	M 100%M	0.30
119.00	MW 70%W 30%M	1.41

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 70291

DST#: 1

ATTN: Ryan Seib

Test Start: 2023.03.03 @ 18:55:00

Tool Information

Drill Pipe:	Length: 3385.00 ft	Diameter: 3.80 inches	Volume: 47.48 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: 20000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 48.07 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	133.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3403.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00		Fluid	3372.00	
Shut In Tool	5.00			3377.00	
Hydraulic tool	5.00			3382.00	
Jars	5.00			3387.00	
EM Tool	4.00			3391.00	
Safety Joint	3.00			3394.00	
Packer	5.00			3399.00	32.00 Bottom Of Top Packer
Packer	4.00			3403.00	
Stubb	1.00			3404.00	
Recorder	0.00	8018	Inside	3404.00	
Recorder	0.00	8677	Outside	3404.00	
Perforations	36.00			3440.00	
Bullnose	3.00			3443.00	40.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 70291

DST#: 1

ATTN: Ryan Seib

Test Start: 2023.03.03 @ 18:55:00

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:

13000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	OSM99%M 1%O	0.148
61.00	M 100%M	0.300
119.00	MW 70%W 30%M	1.414

Total Length: 210.00 ft Total Volume: 2.946 bbl

Num Fluid Samples: 0

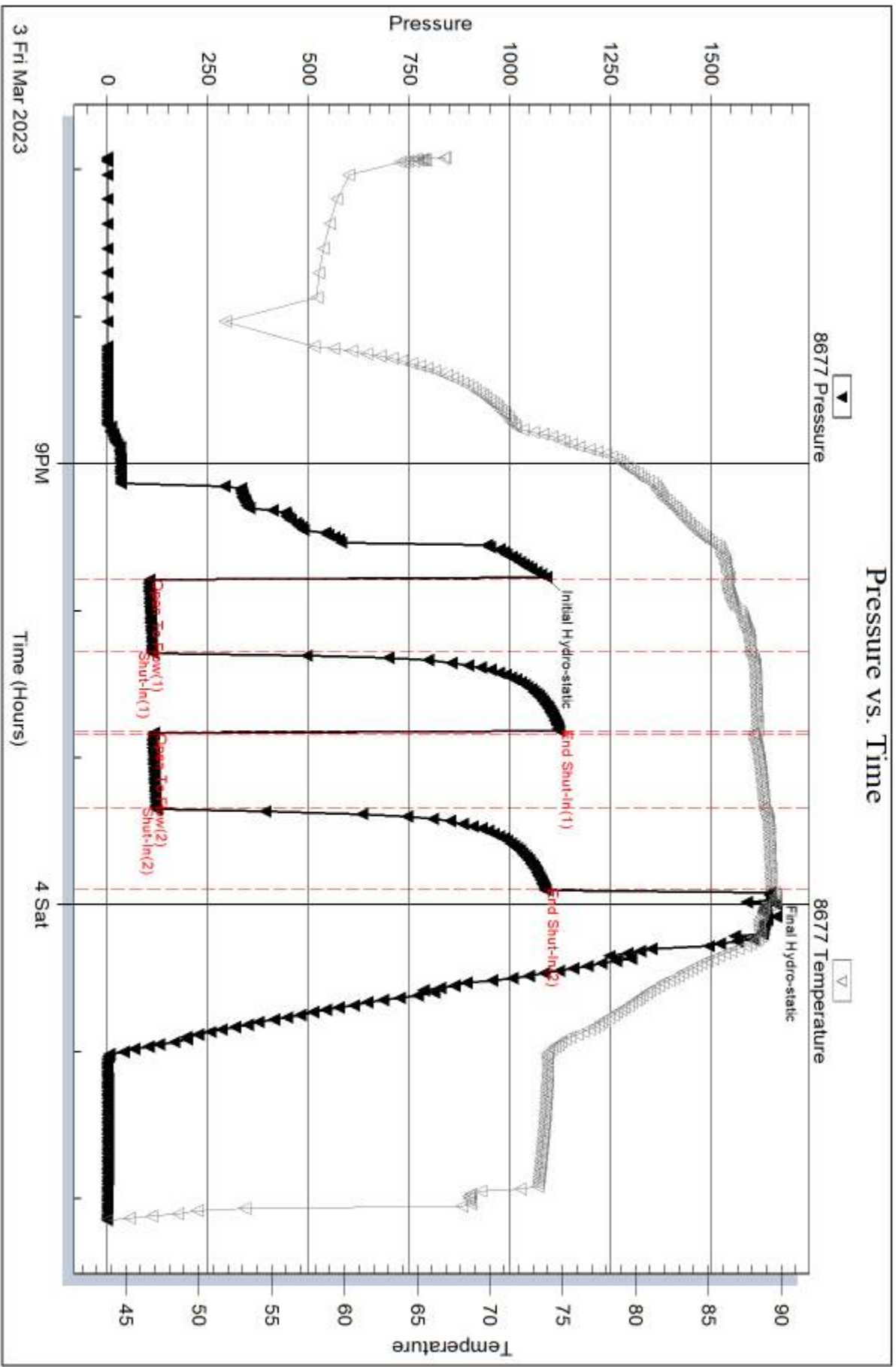
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM 2#



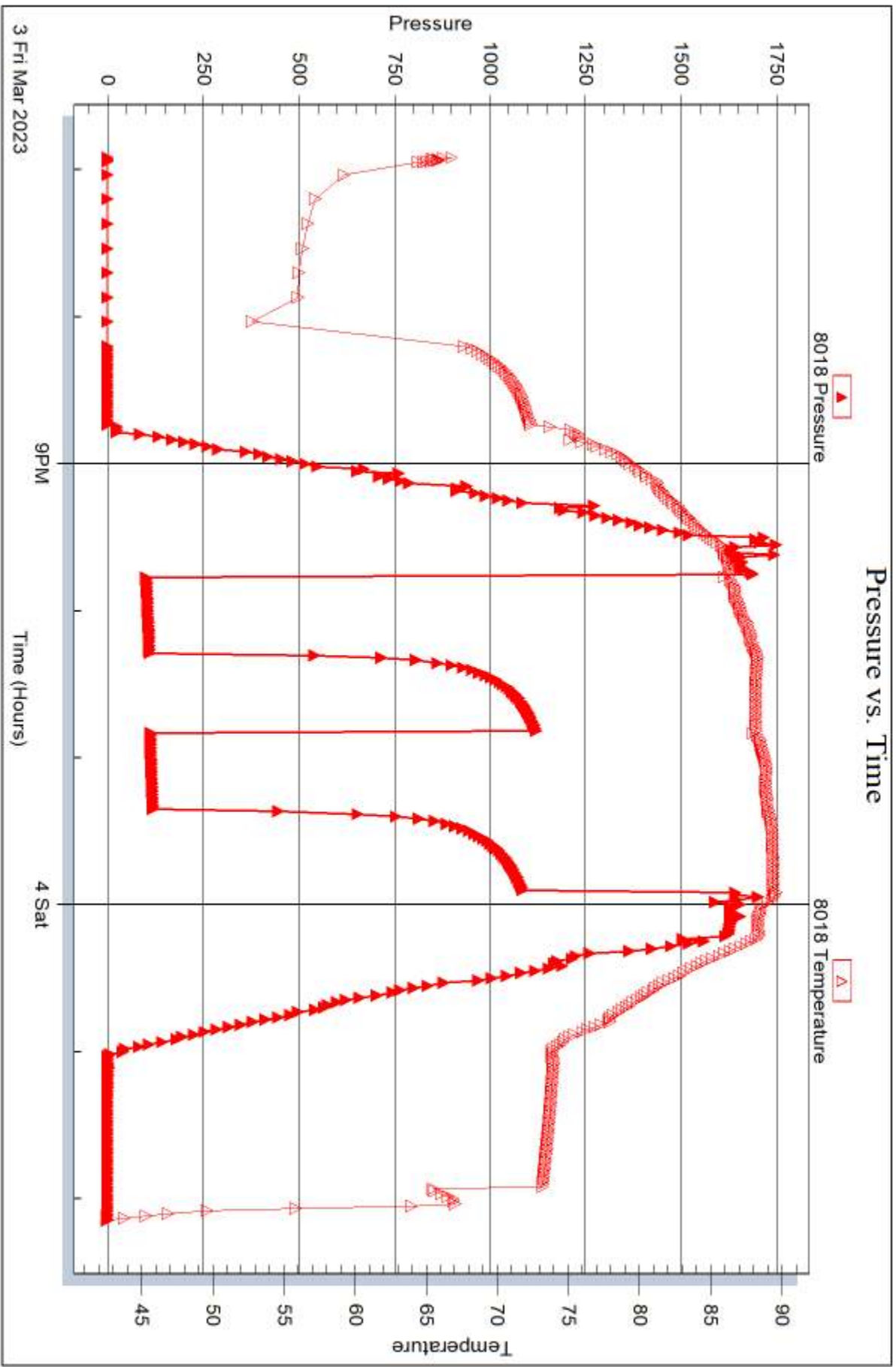
Serial #: 8018

Inside

Pioneer Operations, LLC

Lacy #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Pioneer Operations, LLC**

3014 Limestone Ct.
Hays, KS 67601

ATTN: Ryan Seib

Lacy #1

4-2s-23w Norton, KS

Start Date: 2023.03.04 @ 19:23:00

End Date: 2023.03.05 @ 02:18:00

Job Ticket #: 65851 DST #: 2

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

Printed: 2023.03.08 @ 14:30:20



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 65851

DST#: 2

ATTN: Ryan Seib

Test Start: 2023.03.04 @ 19:23:00

GENERAL INFORMATION:

Formation: **LKC, I&J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:32:00

Time Test Ended: 02:18:00

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Interval: 3513.00 ft (KB) To 3551.00 ft (KB) (TVD)

Reference Elevations: 2375.00 ft (KB)

Total Depth: 3443.00 ft (KB) (TVD)

2369.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 6.00 ft

Serial #: 8018 Inside

Press@RunDepth: 165.19 psig @ 3514.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.03.04 End Date: 2023.03.05

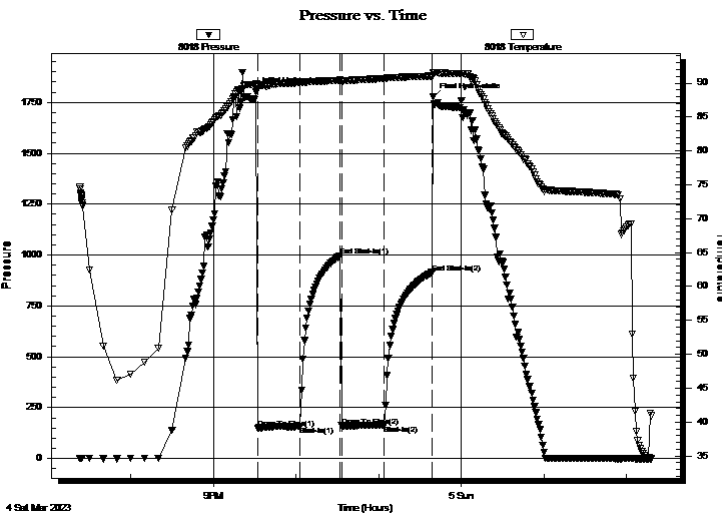
Last Calib.: 2023.03.05

Start Time: 19:23:05 End Time: 02:17:59

Time On Btm: 2023.03.04 @ 21:31:00

Time Off Btm: 2023.03.04 @ 23:39:30

TEST COMMENT: IF- Weak blow , built to 2"/ Final- built to 3".
IS- No blow .
FF- Weak blow , built to 1/2" in 10 minutes/ Final- Built to 1".
FS- No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1803.59	89.86	Initial Hydro-static
1	147.54	89.45	Open To Flow (1)
32	156.64	90.06	Shut-In(1)
61	997.05	90.42	End Shut-In(1)
63	160.07	90.28	Open To Flow (2)
93	165.19	90.69	Shut-In(2)
128	913.41	91.04	End Shut-In(2)
129	1775.47	91.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
162.00	M: 100%M	1.19
60.00	WM: 60%W 40%M	0.84

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 65851

DST#: 2

ATTN: Ryan Seib

Test Start: 2023.03.04 @ 19:23:00

Tool Information

Drill Pipe:	Length: 3508.00 ft	Diameter: 3.80 inches	Volume: 49.21 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 49.80 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	146.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3513.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Stubb	1.00		Fluid	3482.00	
Shut In Tool	5.00			3487.00	
Hydraulic tool	5.00			3492.00	
Jars	5.00			3497.00	
EM Tool	4.00			3501.00	
Safety Joint	3.00			3504.00	
Packer	5.00			3509.00	32.00 Bottom Of Top Packer
Packer	4.00			3513.00	
Stubb	1.00			3514.00	
Recorder	0.00	8018	Inside	3514.00	
Recorder	0.00	8677	Outside	3514.00	
Perforations	34.00			3548.00	
Bullnose	3.00			3551.00	38.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 65851

DST#: 2

ATTN: Ryan Seib

Test Start: 2023.03.04 @ 19:23:00

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: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
162.00	M: 100%M	1.188
60.00	WM: 60%W 40%M	0.842

Total Length: 222.00 ft

Total Volume:

bbl

Num Fluid Samples: 0

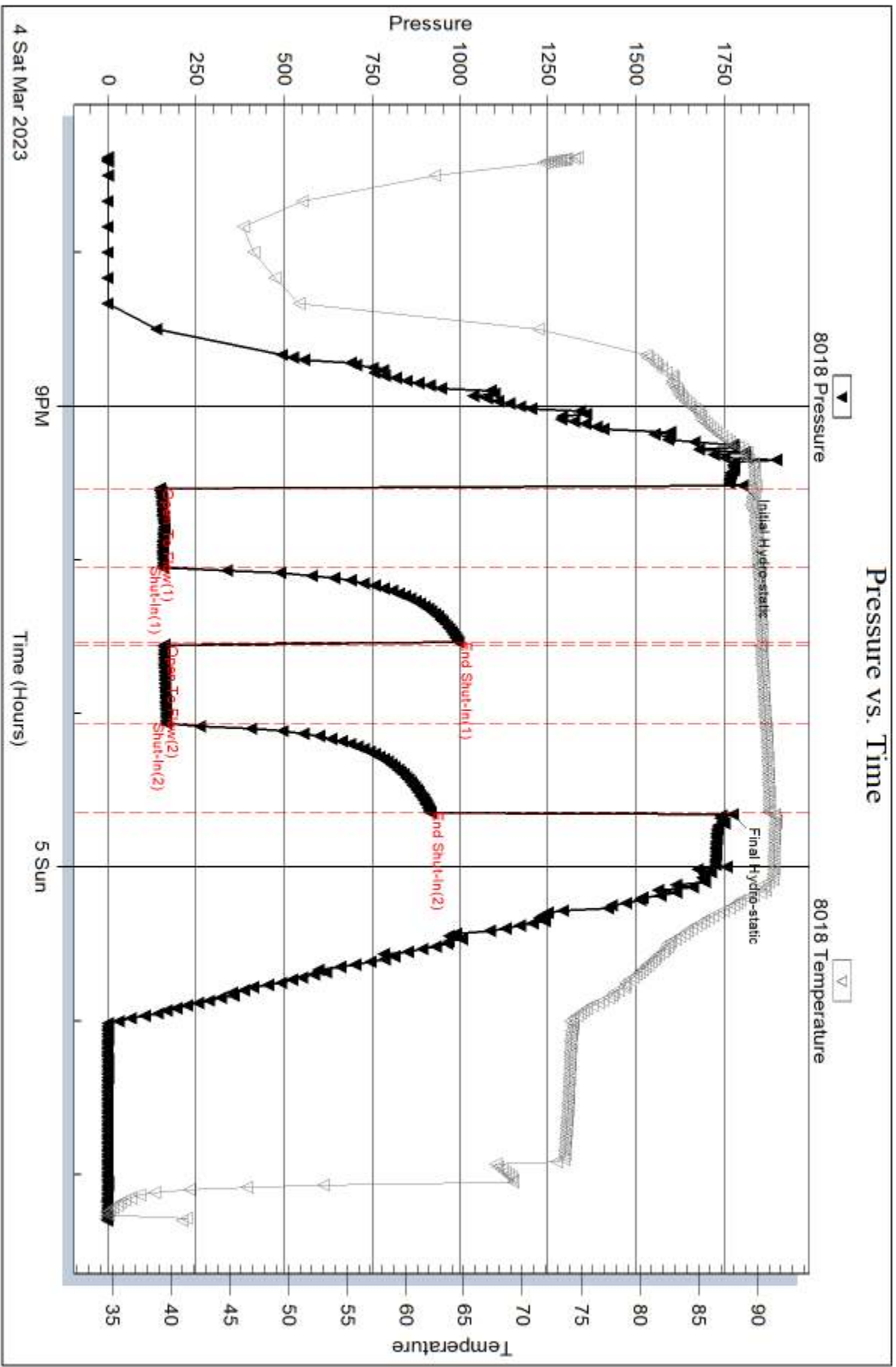
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#





DRILL STEM TEST REPORT

Prepared For: **Pioneer Operations,LLC**

3014 Limestone Ct.
Hays, KS 67601

ATTN: Ryan Seib

Lacy #1

4-2s-23w Norton,KS

Start Date: 2023.03.05 @ 16:54:00

End Date: 2023.03.06 @ 02:53:00

Job Ticket #: 65852 DST #: 3

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

Printed: 2023.03.08 @ 14:29:29



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 65852

DST#: 3

ATTN: Ryan Seib

Test Start: 2023.03.05 @ 16:54:00

GENERAL INFORMATION:

Formation: **Reagan**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:07:30

Time Test Ended: 02:53:00

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Interval: 3601.00 ft (KB) To 3637.00 ft (KB) (TVD)

Reference Elevations: 2375.00 ft (KB)

Total Depth: 3443.00 ft (KB) (TVD)

2369.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 6.00 ft

Serial #: 8018

Press@RunDepth: 271.07 psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.03.05

End Date:

2023.03.06

Last Calib.:

2023.03.06

Start Time:

16:54:05

End Time:

02:53:00

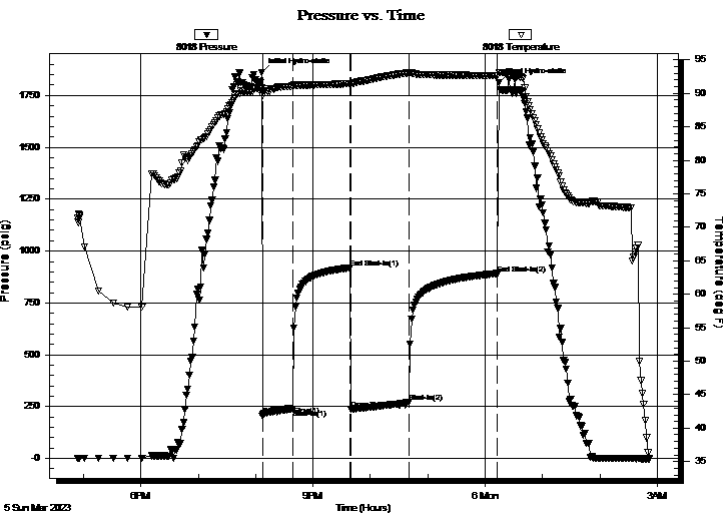
Time On Btm:

2023.03.05 @ 20:06:30

Time Off Btm:

2023.03.06 @ 00:14:30

TEST COMMENT: IF- Weak surface blow , built to 3 1/2 in 10 minutes; Final- Built to 5 1/2
 IS- Weak surface blow , died after 10 minutes
 FF- No blow , weak surface blow after 3 minutes, built to 1 1/2 in 10 minutes; Final 5 1/2
 FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1861.03	90.81	Initial Hydro-static
1	210.59	90.30	Open To Flow (1)
32	236.38	91.12	Shut-In(1)
92	918.61	91.46	End Shut-In(1)
94	237.91	91.41	Open To Flow (2)
154	271.07	93.05	Shut-In(2)
247	891.86	92.70	End Shut-In(2)
248	1810.87	93.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	WM w ith trace O: 80%M 20%W	0.05
252.00	WM: 97%M 3%W	2.54
126.00	WM w ith trace O: 99%M 1%W	1.77
119.00	WCGM: 70%W 25%M 5%G	1.67

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 65852

DST#: 3

ATTN: Ryan Seib

Test Start: 2023.03.05 @ 16:54:00

GENERAL INFORMATION:

Formation: **Reagan**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:07:30

Time Test Ended: 02:53:00

Interval: **3601.00 ft (KB) To 3637.00 ft (KB) (TVD)**

Total Depth: 3443.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Reference Elevations: 2375.00 ft (KB)

2369.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8677

Press@RunDepth: psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.03.05

End Date: 2023.03.06

Last Calib.: 2023.03.06

Start Time: 16:54:05

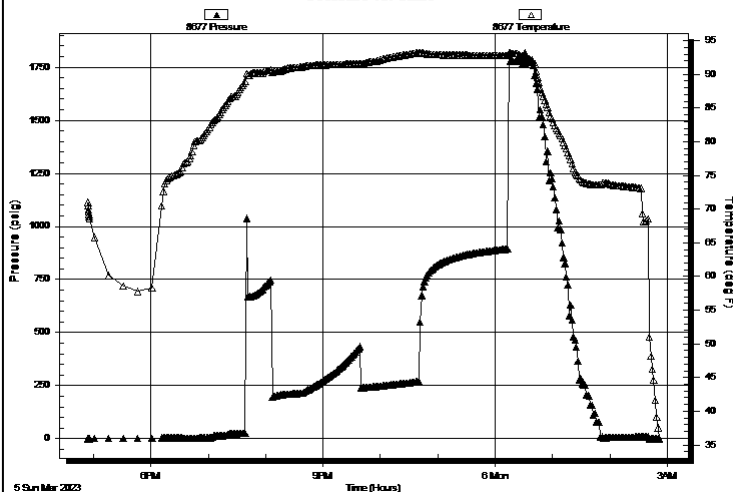
End Time: 02:53:00

Time On Btm:

Time Off Btm:

TEST COMMENT: IF- Weak surface blow , built to 3 1/2 in 10 minutes; Final- Built to 5 1/2
IS- Weak surface blow , died after 10 minutes
FF- No blow , weak surface blow after 3 minutes, built to 1 1/2 in 10 minutes; Final 5 1/2
FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	WM w ith trace O: 80%M 20%W	0.05
252.00	WM: 97%M 3%W	2.54
126.00	WM w ith trace O: 99%M 1%W	1.77
119.00	WCGM: 70%W 25%M 5%G	1.67

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 65852

DST#: 3

ATTN: Ryan Seib

Test Start: 2023.03.05 @ 16:54:00

Tool Information

Drill Pipe:	Length: 3601.00 ft	Diameter: 3.80 inches	Volume: 50.51 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: 20000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 51.10 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	151.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3601.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	68.00 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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Stubb	1.00		Fluid	3570.00	
Shut In Tool	5.00			3575.00	
Hydraulic tool	5.00			3580.00	
Jars	5.00			3585.00	
EM Tool	4.00			3589.00	
Safety Joint	3.00			3592.00	
Packer	5.00			3597.00	32.00 Bottom Of Top Packer
Packer	4.00			3601.00	
Stubb	1.00			3602.00	
Recorder	0.00	8018	Inside	3602.00	
Recorder	0.00	8677	Outside	3602.00	
Perforations	32.00			3634.00	
Bullnose	3.00			3637.00	36.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Operations, LLC

4-2s-23w Norton, KS

3014 Limestone Ct.
Hays, KS 67601

Lacy #1

Job Ticket: 65852

DST#: 3

ATTN: Ryan Seib

Test Start: 2023.03.05 @ 16:54:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 602.47 in³
Resistivity: ohm.m
Salinity: 1500.00 ppm
Filter Cake: 2.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	WM with trace O: 80%M 20%W	0.049
252.00	WM: 97%M 3%W	2.542
126.00	WM with trace O: 99%M 1%W	1.767
119.00	WCGM: 70%W 25%M 5%G	1.669

Total Length: 507.00 ft Total Volume: 6.027 bbl

Num Fluid Samples: 0

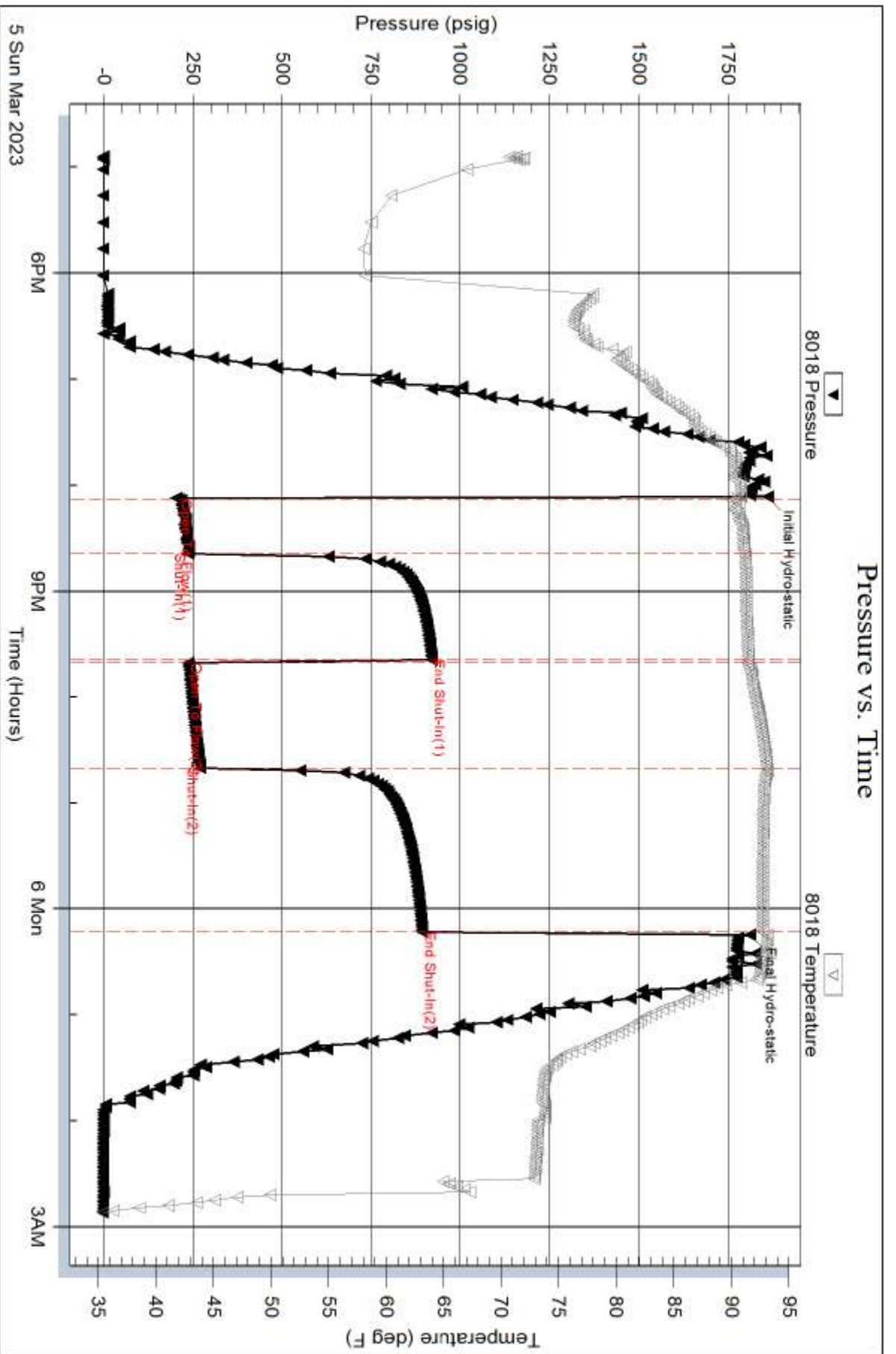
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM, 1#

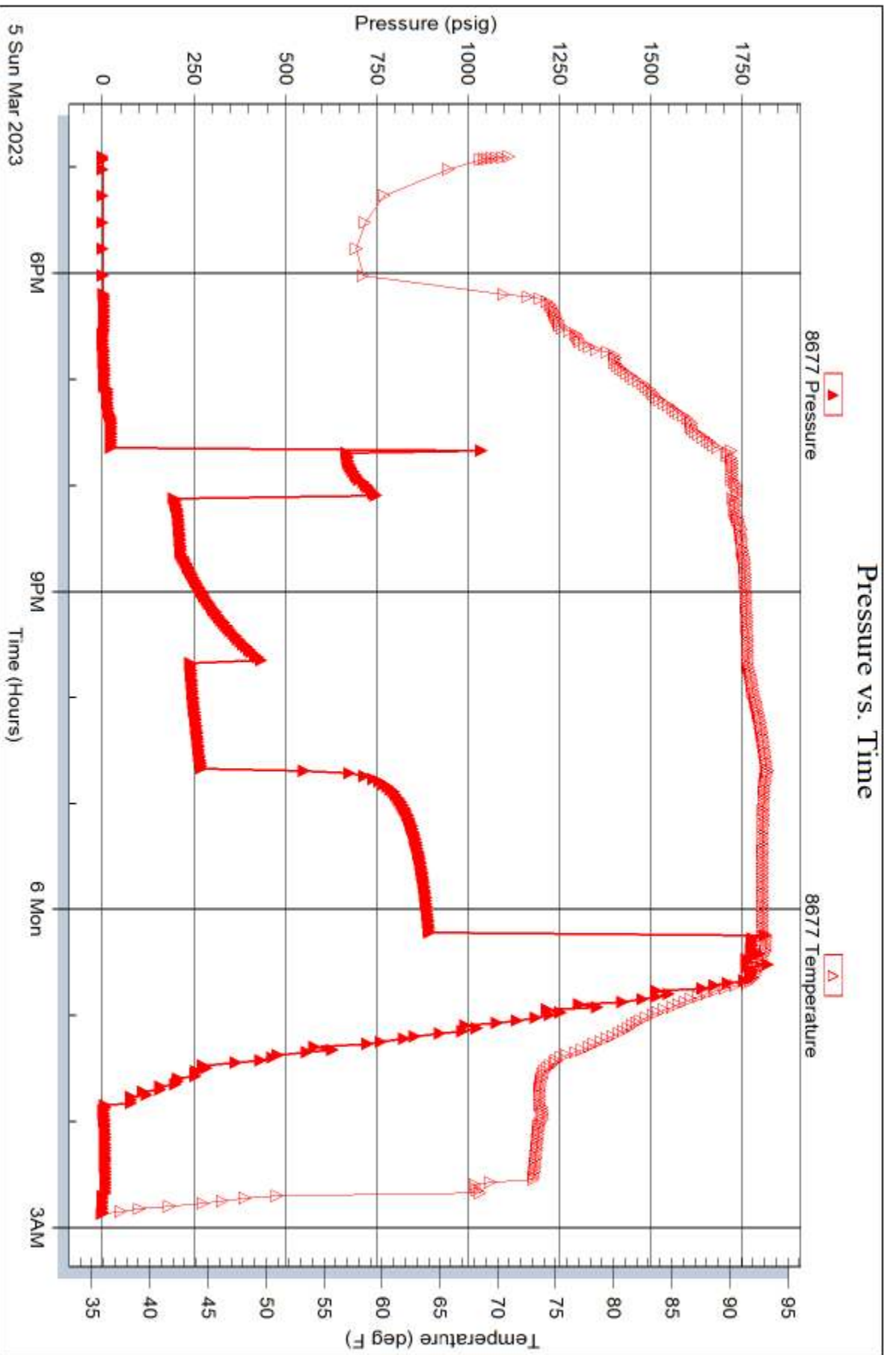


Serial #: 8677

Pioneer Operations, LLC

Lacy #1

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70291

Well Name & No. Lacy #1 Test No. 1 Date 3/3/13
 Company Pioneer Operations, LLC Elevation 2375 KB 2369 GL
 Address 3014 Limestone Ct. Hays KS 67601
 Co. Rep / Geo Ryan Seib Rig White Knight Drilling, LLC #1
 Location: Sec. 4 Twp 2S Rge. 23W Co. Norton State KS

Interval Tested 3403-3443 Zone Tested Lansing - B, C, D
 Anchor Length 40 Drill Pipe Run 3385 Mud Wt. 9.1
 Top Packer Depth 3998 Drill Collars Run 119 Vis 52
 Bottom Packer Depth 3403 Wt. Pipe Run --- WL 5.4
 Total Depth 3443 Chlorides 500 ppm System LCM 2#

Blow Description IF-Weak Surface Blow, Built to 2 1/2" in 10 minutes, Final-Built to 3.5"
ISI-NO Blow
FF-NO Blow, Built to 1/2" in 10 minutes, Final-Built to 1 1/2"
FSI-NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>OCM</u>		<u>1</u>		<u>99</u>
<u>61</u>	<u>M</u>				<u>100</u>
<u>119</u>	<u>WM</u>			<u>80</u>	<u>20</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 210 BHT 88° Gravity --- API RW 1.0 @ 35.5 °F Chlorides 13,000 ppm
 Initial Hydrostatic 1091 Test 1800 Ruined Shale Packer
 Initial Flow 105 to --- Jars 300 Ruined Packer
 Initial Shut-In 111 Circ Sub Hotel
 Final Flow 1123 to --- Hourly Standby EM Tool Successful
 Final Shut-In 1087 Mileage 66 RT 115.50 Accessibility
 Final Hydrostatic 1646 Sampler Gas Sample
 T. On Location 15:00 Straddle Sub Total 0
 Initial Flow 30 T-Started 18:55 Shale Packer 250 Total 2465.50
 Initial Shut-In 30 T-Open 21:46 Extra Packer Tool Loaded @ ---
 Final Flow 30 T-Pulled 23:54 Extra Recorder MP/DST Disc't
 Final Shut-In 30 T-Out 2:10 Day Standby
 Comments Ran Safety joint

Approved By _____ Our Representative [Signature]

TriLOBITE TESTING Inc. shall not be liable for damage of any kind of 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 65851

NO.

Well Name & No. Lacy #1 Test No. 2 Date 3/4/23
 Company Pioneer Operations, LLC Elevation 2371 KB 2366 GL
 Address 3014 Limestone Ct. Hays KS 67601
 Co. Rep / Geo. Bryan Seib Rig White Knight Drilling, LLC #1
 Location: Sec. 4 Twp 2S Rge. 23W Co. Norton State KS

Interval Tested 3513-3551 Zone Tested LKC/Iay
 Anchor Length 38 Drill Pipe Run 3508 Mud Wt. 9.1
 Top Packer Depth ~~3513~~ 3508 Drill Collars Run 119 Vls 54
 Bottom Packer Depth 3513 Wt. Pipe Run _____ WL 5.8
 Total Depth 3551 Chlorides 900 ppm System LCM 2#

Blow Description IF-Weak blow, built to 2" in 10 minutes / Final Built to 3"
ISI-NO Blow
FF-Weak blow, built to 1/2" in 10 minutes / Final - Built to 1"
FSI-NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>162</u>	<u>M</u>			<u>100</u>	<u>0</u>
<u>60</u>	<u>WM</u>			<u>60</u>	<u>40</u>
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 222 BHT 91.5 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1804 Test 1800 T-On Location 18:40
 (B) First Initial Flow 148 Jars 300 T-Started _____
 (C) First Final Flow 157 Safety Joint _____ T-Open ~~23:45~~ 21:32
 (D) Initial Shut-In 997 Circ Sub _____ T-Pulled 23:45
 (E) Second Initial Flow 160 Hourly Standby _____ T-Out 2:15
 (F) Second Final Flow 165 Mileage 66 115.50 Comments _____
 (G) Final Shut-In 913 Sampler _____
 (H) Final Hydrostatic 1775 Straddle _____ EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 2465.50 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Approved By _____ Our Representative Paul W

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 65852

NO.

Well Name & No. Lacy #1 Test No. 3 Date 3/4/23
 Company Pioneer Operations, LLC Elevation 2371 KB 2366 GL
 Address 3014 Limestone Ct. Hays KS 67601
 Co. Rep / Geo. Ryan Seib Rig White Knight Drilling, LLC #1
 Location: Sec. 4 Twp 2s Rge. 23W Co. Norton State KS

Interval Tested 3601-3637 Zone Tested Raegan
 Anchor Length 36 Drill Pipe Run 3601 Mud Wt. 9.0
 Top Packer Depth 3606 Drill Collars Run 119 Vis 48
 Bottom Packer Depth 3601 Wt. Pipe Run _____ WL 6.4
 Total Depth 3637 Chlorides 1500 ppm System LCM 1#

Blow Description IF-Weak surface blow, built to 3 1/2" Final-Built to 5 1/2"
ISI-Weak surface blow, Died off after 10 minutes
EF-No blow, Weak surface after 3 minutes, built to 1 1/2" in 10 minutes; Final 5 1/2"
FSI-No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>MW with trace oil</u>		<u>20</u>	<u>80</u>	
<u>252</u>	<u>MW</u>		<u>07</u>	<u>97</u>	
<u>126</u>	<u>MW with trace oil</u>		<u>1</u>	<u>99</u>	
<u>119</u>	<u>WCGM</u>	<u>5</u>	<u>70</u>	<u>25</u>	

Rec Total 507 BHT 93.4° Gravity _____ API RW 1.23 @ 30 ° F Chlorides 13500 ppm

(A) Initial Hydrostatic <u>1861</u>	<input checked="" type="checkbox"/> Test <u>1800</u>	T-On Location <u>14:35</u>
(B) First Initial Flow <u>211</u>	<input checked="" type="checkbox"/> Jars <u>300</u>	T-Started <u>16:54</u>
(C) First Final Flow <u>236</u>	<input checked="" type="checkbox"/> Safety Joint _____	T-Open <u>20:08</u>
(D) Initial Shut-In <u>919</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>00:12</u>
(E) Second Initial Flow <u>238</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2:53</u>
(F) Second Final Flow <u>271</u>	<input checked="" type="checkbox"/> Mileage <u>66 RT</u> 115.50	Comments _____
(G) Final Shut-In <u>892</u>	<input type="checkbox"/> Sampler _____	loaded tools 3/6 16:30
(H) Final Hydrostatic <u>1811</u>	<input type="checkbox"/> Straddle _____	
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input checked="" type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby <u>1d 13.5h</u>	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility _____	Sub Total <u>800</u>
	Sub Total <u>2581</u>	Total <u>3381</u>
		MP/DST Disc't _____

Approved By _____ Our Representative Paul W

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JOB LOG

SWIFT Services, Inc.

DATE: 2/28/2023 PAGE NO.: 1

CUSTOMER: *Pioneer Operations* WELL NO: *#1* LEASE: *Lacy #1* JOB TYPE: *Surface* TICKET NO.: *35877*

CHART NO.	TIME	RATE (BPM)	VOLUME (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	12:45							on loc. Set up trends
	13:45							Rig Running 274' 8 5/8 csg. 263'
								on Bottom Circulate
								Pump 5 ^{SS1} 1620 spm
	13:50							Mix 175 sks Std. 2 1/6 Gd, 3% cc
								Displ. to 254' 243'
								shut down
								Circulated 175 ^{sk} out to pit
								skut in wash + Reack up trends
	1445							Jobs Complete

Thank You

Roger Seth, John J.

FRANKS Oilfield Service

◆ 815 Main Street Victoria, KS 67671 ◆ 24 Hour Phone (785) 639-7269
 ◆ Office Phone (785) 639-3949 ◆ Email: franksoilfield@yahoo.com

TICKET NUMBER 0884

LOCATION Hays

FOREMAN Tam Williams

FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3-6-23	35862	Lacy #1	30	2	23	Norton
CUSTOMER <u>Pioneer Operations</u>			TRUCK #			
MAILING ADDRESS <u>3014 Limestone Ct</u>			DRIVER		TRUCK #	
CITY <u>Hays</u>			DRIVER		TRUCK #	
STATE <u>KS</u>			DRIVER		TRUCK #	
ZIP CODE <u>67601</u>			DRIVER		TRUCK #	

JOB TYPE PTA HOLE SIZE _____ HOLE DEPTH _____ CASING SIZE & WEIGHT _____
 CASING DEPTH _____ DRILL PIPE 4 1/2" TUBING _____ OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING _____
 DISPLACEMENT _____ DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: safety meeting & set up on White Knight Mug as ordered

- 1) 1975' 50sf
 - 2) 1275' 100sf
 - 3) 325' 50sf
 - center 10sf
 - RH 30sf
- 240sf Thanks Tom & Cain

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
P005	1	PUMP CHARGE <u>PTA</u>	\$1500.00	\$1500.00
MA01	55	MILEAGE	\$6.50	\$357.50
MA02	10.68 tons	T.M.D.	\$88.10	\$881.10
CB010	240sf	60/40 49 gal 1/4# Flased	\$17.35	\$4,164.00
CP005	100lbs	Salt	\$5.00	\$50.00
			sub total	\$4,952.60
			less 5% disc.	\$347.43
			sub total	\$4,605.17
			SALES TAX	290.24
			ESTIMATED TOTAL	6895.21

AUTHORIZATION _____ TITLE _____ 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.