

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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Hayes Oil & Gas LLC
Well Name	HUCK 1-5
Doc ID	1663717

All Electric Logs Run

Dual compensated
Micro
Sonic
PE



DRILL STEM TEST REPORT

Prepared For: **Hayes Oil & Gas LLC**

PO Box 108
Attica KS. 67009

ATTN: John Hastings/Tim He

Huck #1-5

5-32S-18W Comanche

Start Date: 2022.08.31 @ 07:24:00

End Date: 2022.08.31 @ 19:09:00

Job Ticket #: 69513 DST #: 1

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

Printed: 2022.09.07 @ 08:24:14

Hayes Oil & Gas LLC
5-32S-18W Comanche
Huck #1-5
DST # 1
Pawnee/Ft. Scott
2022.08.31



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 69513

DST#: 1

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 07:24:00

GENERAL INFORMATION:

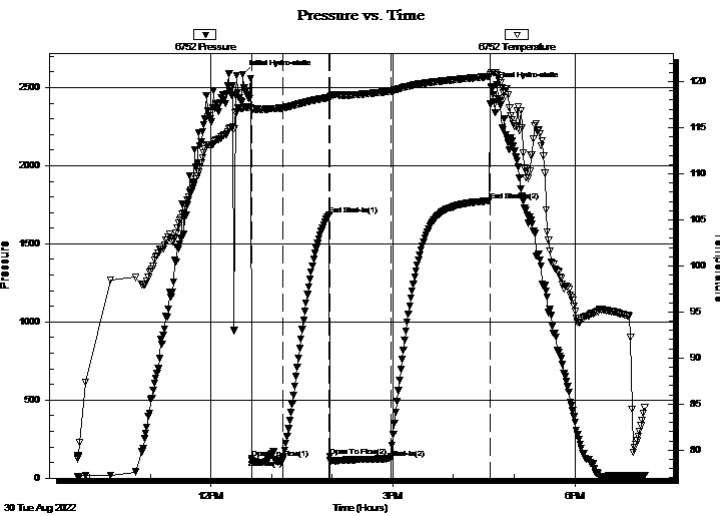
Formation: **Pawnee/ Ft. Scott**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:40:02
 Time Test Ended: 19:09:00
 Interval: **5060.00 ft (KB) To 5122.00 ft (KB) (TVD)**
 Total Depth: 5215.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Richie Samora/Leal C
 Unit No: 74
 Reference Elevations: 2166.00 ft (KB)
 2154.00 ft (CF)
 KB to GR/CF: 12.00 ft

Serial #: 6752

Inside

Press@RunDepth: 128.01 psig @ 5104.00 ft (KB) Capacity: psig
 Start Date: 2022.08.30 End Date: 2022.08.30 Last Calib.: 2022.08.30
 Start Time: 09:48:01 End Time: 19:09:47 Time On Btm: 2022.08.30 @ 12:31:32
 Time Off Btm: 2022.08.30 @ 16:37:32

TEST COMMENT: 30-IF: Strong blow BOB in 30 seconds built to 144 inches
 45-ISI: No blow back
 60-FF: Strong blow BOB immediate GTS 25 minutes Gauged and sampled
 90-FSI: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2581.11	117.13	Initial Hydro-static
9	127.64	116.97	Open To Flow (1)
40	117.82	117.14	Shut-In(1)
86	1685.37	118.26	End Shut-In(1)
86	140.33	118.20	Open To Flow (2)
146	128.01	118.94	Shut-In(2)
245	1775.41	120.58	End Shut-In(2)
246	2502.72	120.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	GCM 10% G 90% M	0.58
91.00	GCM 10% G 90% M	1.28

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	5.18	6.80
Last Gas Rate	0.13	5.52	6.92
Max. Gas Rate	0.13	5.52	6.92



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 69513

DST#: 1

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 07:24:00

Tool Information

Drill Pipe:	Length: 4947.00 ft	Diameter: 3.80 inches	Volume: 69.39 bbl	Tool Weight: 2100.00 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: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 87000.00 lb
			<u>Total Volume: 69.97 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 77000.00 lb
Depth to Top Packer:	5060.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	91.00 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			5036.00	
Hydraulic tool	5.00			5041.00	
Jars	5.00			5046.00	
EM Tool	3.00			5049.00	
Safety Joint	2.00			5051.00	
Packer	5.00			5056.00	29.00 Bottom Of Top Packer
Packer	4.00			5060.00	
Stubb	1.00			5061.00	
Perforations	4.00			5065.00	
Change Over Sub	1.00			5066.00	
Drill Pipe	32.00			5098.00	
Change Over Sub	1.00			5099.00	
Handling Sub	5.00			5104.00	
Recorder	0.00	6752	Inside	5104.00	
Recorder	0.00	8365	Outside	5104.00	
Perforations	15.00			5119.00	
Bullnose	3.00			5122.00	62.00 Bottom Packers & Anchor
Total Tool Length:	91.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 69513

DST#: 1

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 07:24:00

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: 53.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 7000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
118.00	GCM 10% G 90% M	0.580
91.00	GCM 10% G 90% M	1.276

Total Length: ft Total Volume: 1.856 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 69513

DST#: 1

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 07:24:00

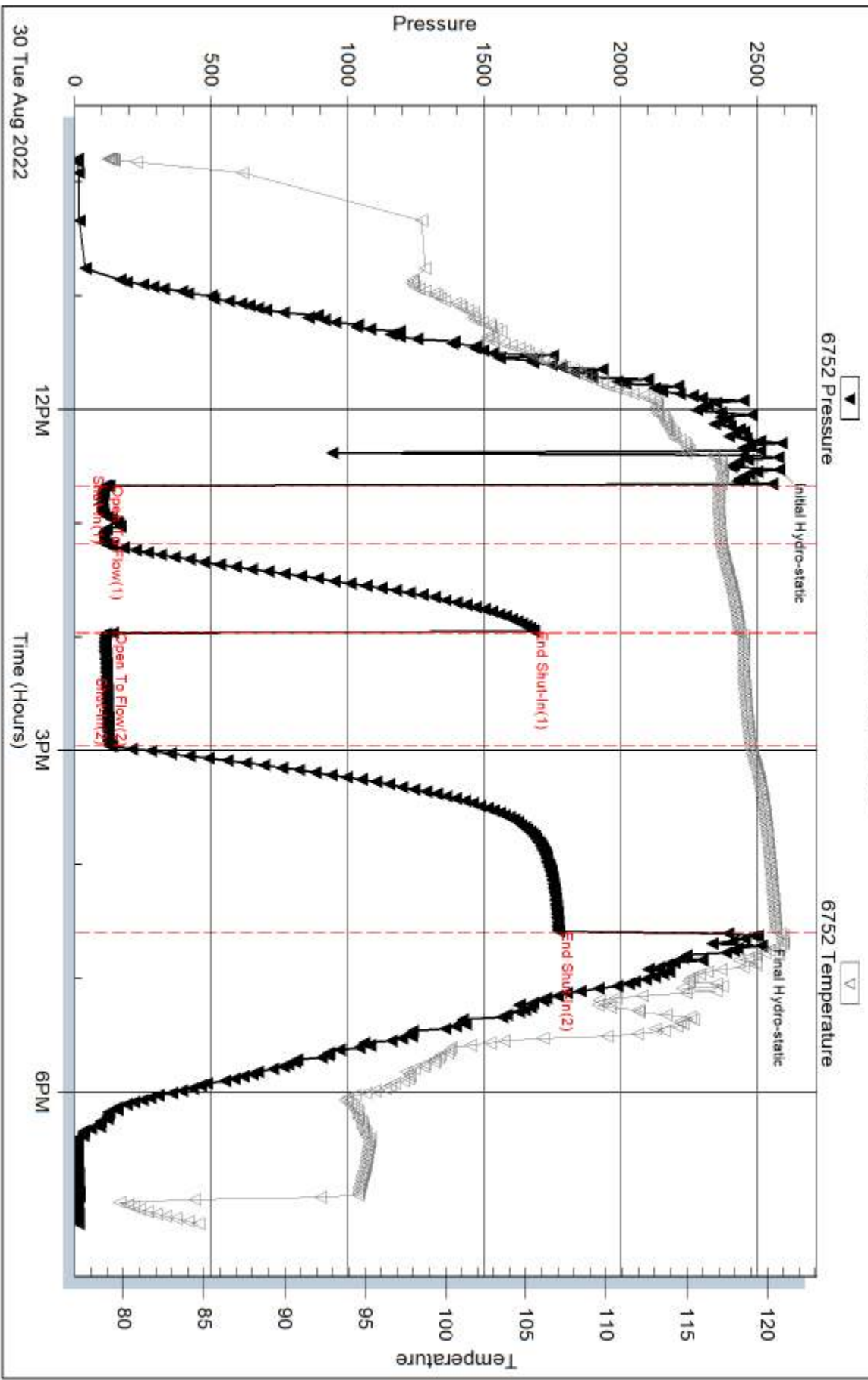
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.67
Z Factor: 0.9

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	30	0.13	5.18	6.80
2	40	0.13	5.23	6.82
2	50	0.13	5.37	6.87
2	60	0.13	5.52	6.92

Pressure vs. Time

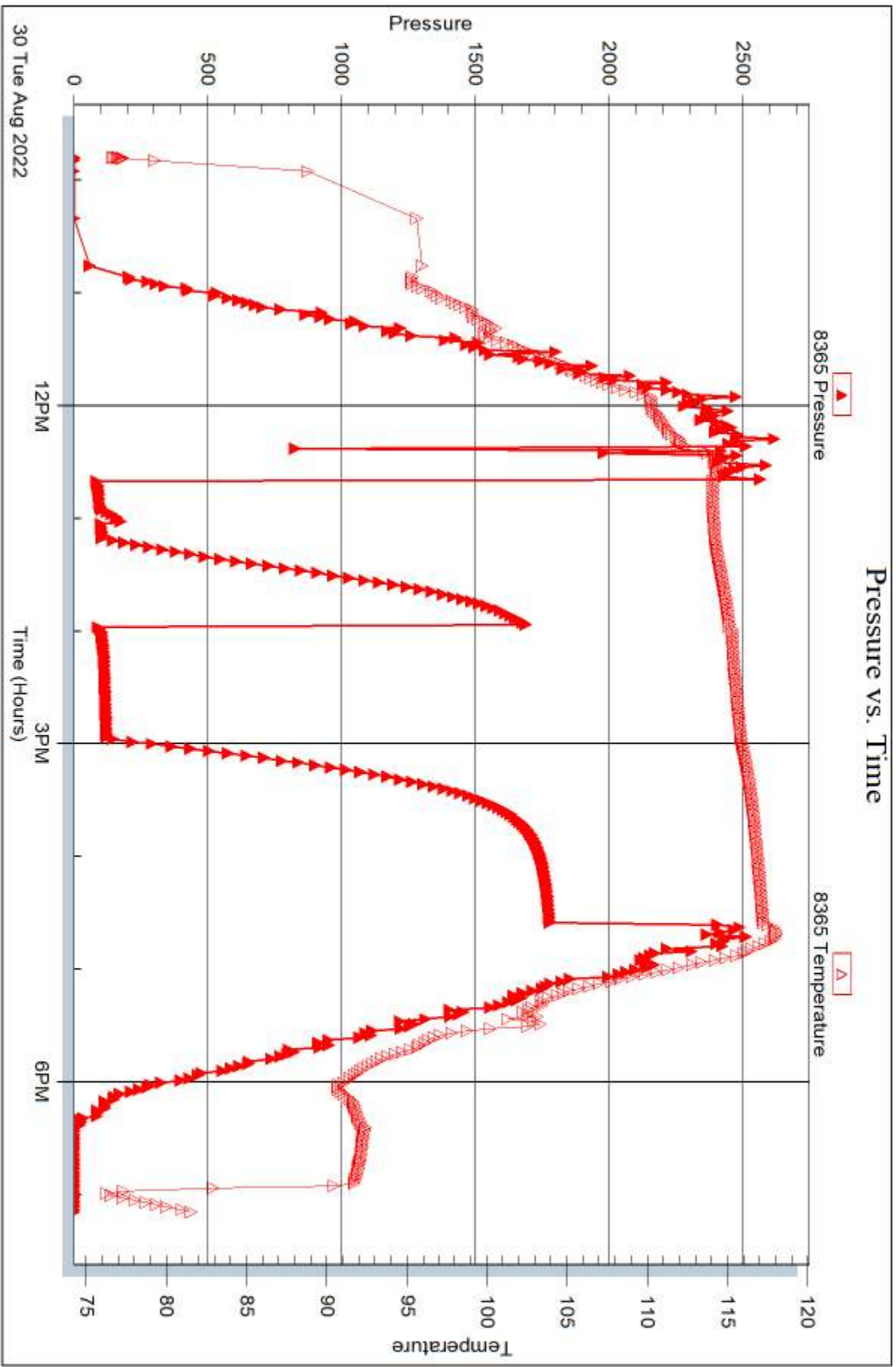


Serial #: 8365

Outside Hayes Oil & Gas LLC

Huck #1-5

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Hayes Oil & Gas LLC**

PO Box 108
Attica KS. 67009

ATTN: John Hastings/Tim He

Huck #1-5

5-32S-18W Comanche

Start Date: 2022.08.31 @ 07:24:00

End Date: 2022.08.31 @ 11:56:17

Job Ticket #: 69513 DST #: 2

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

Printed: 2022.09.07 @ 08:09:11



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 69513

DST#: 2

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 07:24:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:46:17

Time Test Ended: 11:56:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Richie Samora/Leal C

Unit No: 74

Interval: 5120.00 ft (KB) To 5215.00 ft (KB) (TVD)

Reference Elevations: 2166.00 ft (KB)

Total Depth: 5215.00 ft (KB) (TVD)

2154.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 6752 Inside

Press@RunDepth: psig @ 5292.00 ft (KB)

Capacity: psig

Start Date: 2022.08.31 End Date: 2022.08.31

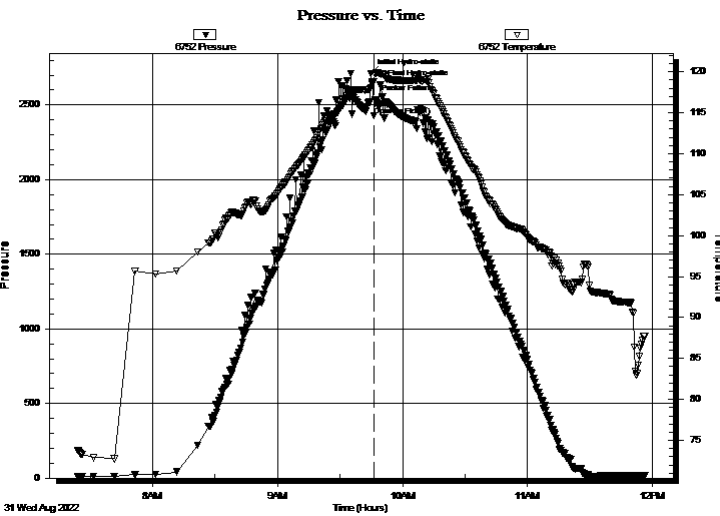
Last Calib.: 2022.08.31

Start Time: 07:24:01 End Time: 11:56:17

Time On Btm: 2022.08.31 @ 09:44:47

Time Off Btm: 2022.08.31 @ 09:49:47

TEST COMMENT: IF: Packer Failure tried to reset failed pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2711.01	118.03	Initial Hydro-static
2	2430.46	118.79	Open To Flow (1)
2	2534.00	119.78	Packer Failure
6	2635.17	119.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
307.00	drilling mud	3.23

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 69513

DST#: 2

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 07:24:00

Tool Information

Drill Pipe:	Length: 5078.00 ft	Diameter: 3.80 inches	Volume: 71.23 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	35000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose:	81000.00 lb
			<u>Total Volume: 71.81 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	80000.00 lb
Depth to Top Packer:	5215.00 ft			Final	81000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	95.00 ft				
Tool Length:	124.00 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			5191.00	
Hydraulic tool	5.00			5196.00	
Jars	5.00			5201.00	
EM Tool	3.00			5204.00	
Safety Joint	2.00			5206.00	
Packer	5.00			5211.00	29.00 Bottom Of Top Packer
Packer	4.00			5215.00	
Stubb	1.00			5216.00	
Perforations	5.00			5221.00	
Change Over Sub	1.00			5222.00	
Drill Pipe	64.00			5286.00	
Change Over Sub	1.00			5287.00	
Handling Sub	5.00			5292.00	
Recorder	0.00	6752	Inside	5292.00	
Recorder	0.00	8365	Outside	5292.00	
Perforations	15.00			5307.00	
Bullnose	3.00			5310.00	95.00 Bottom Packers & Anchor
Total Tool Length:	124.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 69513

DST#: 2

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 07:24:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
307.00	drilling mud	3.231

Total Length: 307.00 ft Total Volume: 3.231 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6752

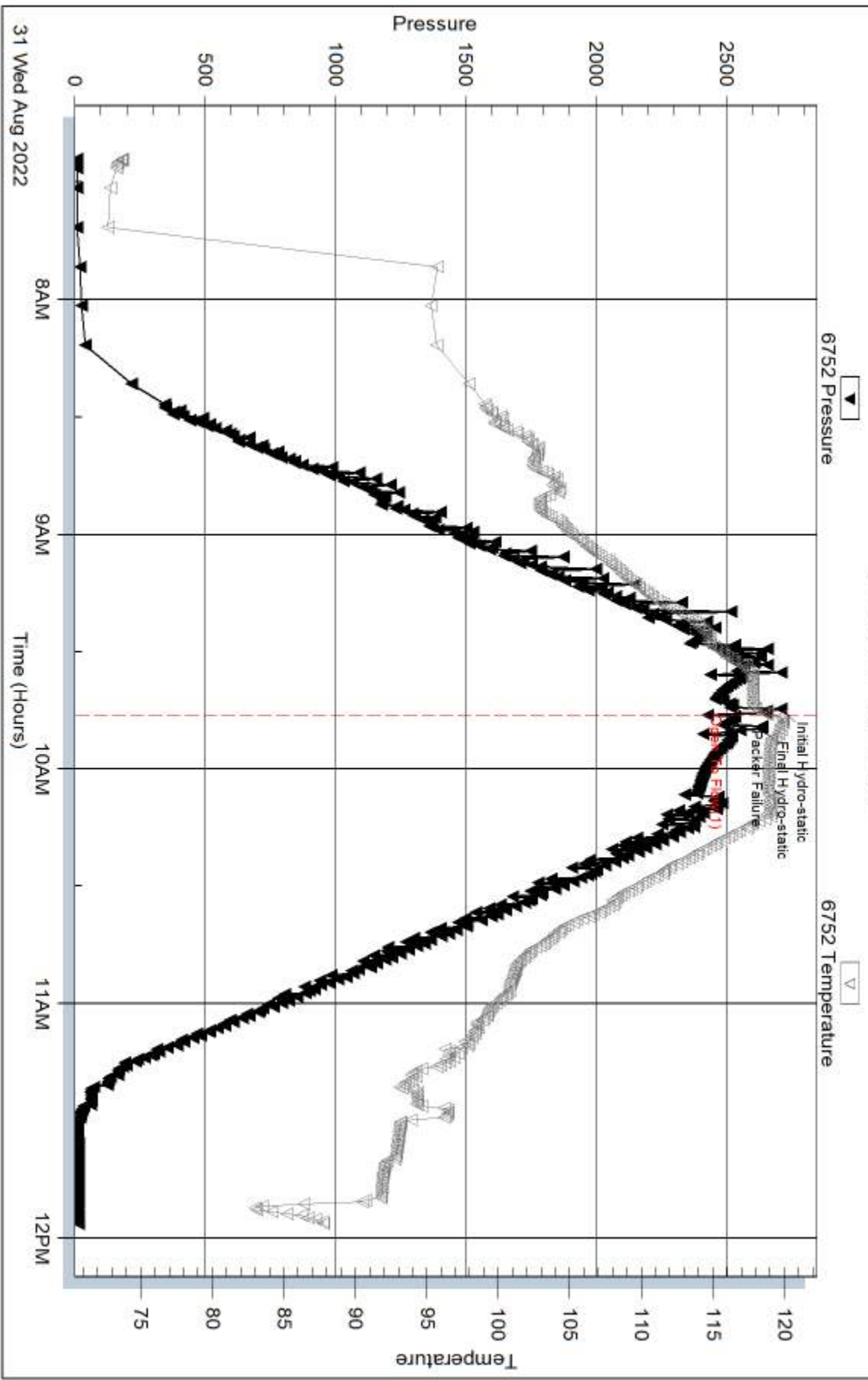
Inside

Hayes Oil & Gas LLC

Huck #1-5

DST Test Number: 2

Pressure vs. Time

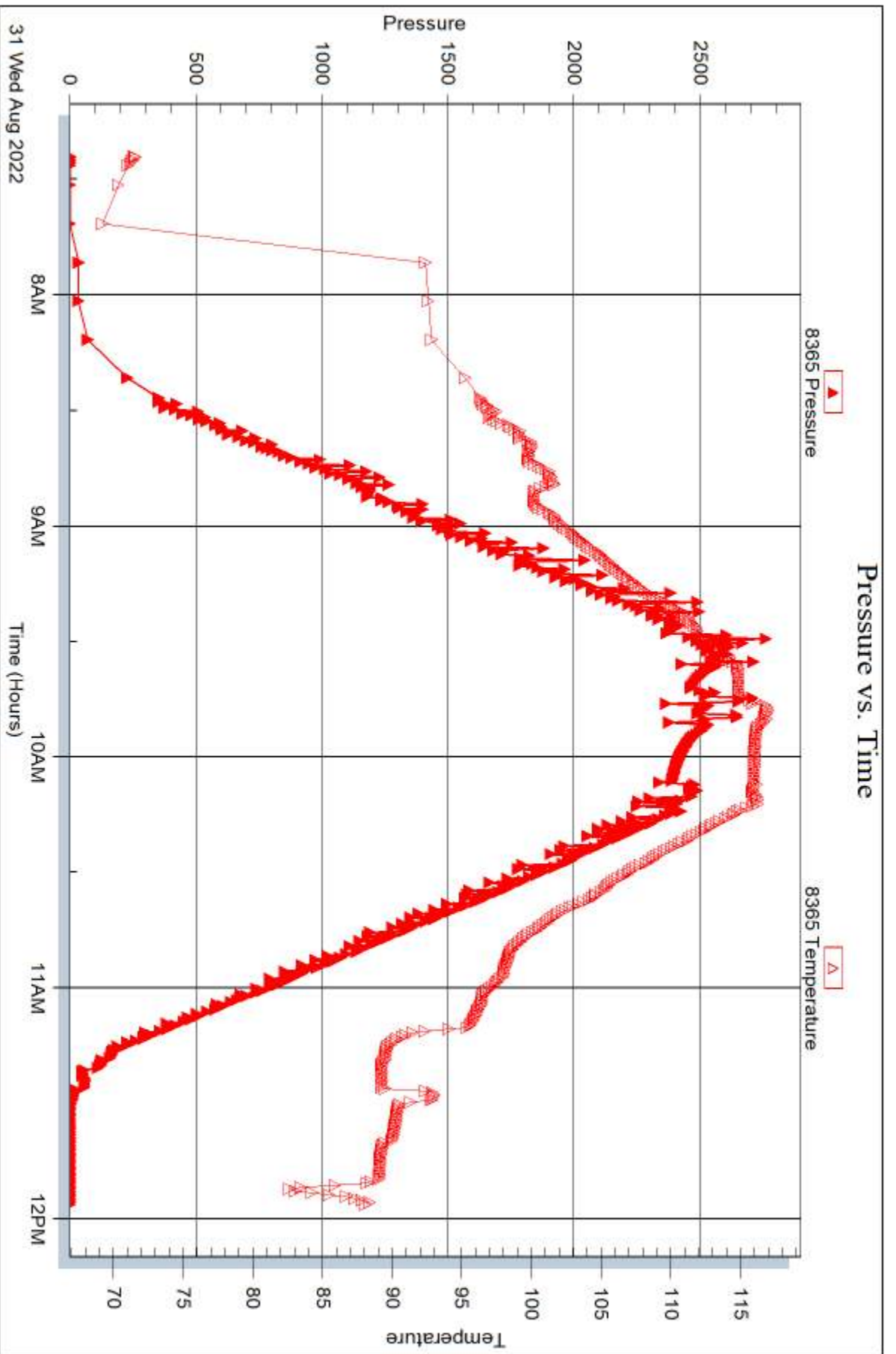


Serial #: 8365

Outside Hayes Oil & Gas LLC

Huck #1-5

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 69513

Printed: 2022.09.07 @ 08:09:12



DRILL STEM TEST REPORT

Prepared For: **Hayes Oil & Gas LLC**

PO Box 108
Attica KS. 67009

ATTN: John Hastings/Tim He

Huck #1-5

5-32S-18W Comanche

Start Date: 2022.08.31 @ 12:08:01

End Date: 2022.08.31 @ 20:32:02

Job Ticket #: 6914 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2022.09.07 @ 08:08:33



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 6914

DST#: 3

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 12:08:01

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 14:05:32
 Tester: Richie Samora/Leal C
 Time Test Ended: 20:32:02
 Unit No: 74
 Interval: **5180.00 ft (KB) To 5215.00 ft (KB) (TVD)**
 Reference Elevations: 2166.00 ft (KB)
 Total Depth: 5215.00 ft (KB) (TVD)
 2154.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 12.00 ft

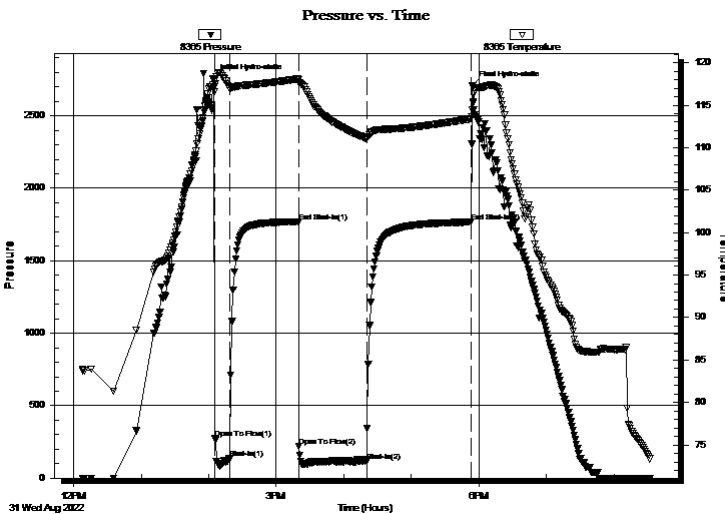
Serial #: 8365

Outside

Press@RunDepth: 118.75 psig @ 5197.00 ft (KB) Capacity: psig
 Start Date: 2022.08.31 End Date: 2022.08.31 Last Calib.: 1899.12.30
 Start Time: 12:08:01 End Time: 20:32:02 Time On Btm: 2022.08.31 @ 14:04:02
 Time Off Btm: 2022.08.31 @ 17:54:17

TEST COMMENT: 10-IF: BOB immediate, gas w as gauged
 60-ISI: Blow back built to 5.51"
 60-FF:BOB immediate, gas w as gauged and sampled
 90-FSI: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2758.07	117.42	Initial Hydro-static
2	273.05	116.63	Open To Flow (1)
15	134.40	116.99	Shut-In(1)
76	1769.33	118.03	End Shut-In(1)
77	217.23	117.66	Open To Flow (2)
137	118.75	111.08	Shut-In(2)
229	1766.99	113.39	End Shut-In(2)
231	2708.52	114.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
214.00	GCM 10%G 90%M	1.93

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	44.17	86.28
Last Gas Rate	0.38	52.56	227.78
Max. Gas Rate	0.38	55.19	236.73



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 6914

DST#: 3

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 12:08:01

Tool Information

Drill Pipe:	Length: 5042.00 ft	Diameter: 3.80 inches	Volume: 70.73 bbl	Tool Weight: 2100.00 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: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 71.31 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 81000.00 lb
Depth to Top Packer:	5180.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			5156.00	
Hydraulic tool	5.00			5161.00	
Jars	5.00			5166.00	
EM Tool	3.00			5169.00	
Safety Joint	2.00			5171.00	
Packer	5.00			5176.00	29.00 Bottom Of Top Packer
Packer	4.00			5180.00	
Stubb	1.00			5181.00	
Perforations	2.00			5183.00	
Perforations	4.00			5187.00	
Perforations	5.00			5192.00	
Handling Sub	5.00			5197.00	
Recorder	0.00	6752	Inside	5197.00	
Recorder	0.00	8365	Outside	5197.00	
Perforations	15.00			5212.00	
Bullnose	3.00			5215.00	35.00 Bottom Packers & Anchor
Total Tool Length:	64.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 6914

DST#: 3

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 12:08:01

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5900.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
214.00	GCM 10%G 90%M	1.927

Total Length: ft Total Volume: 1.927 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck #1-5

Job Ticket: 6914

DST#: 3

ATTN: John Hastings/Tim He

Test Start: 2022.08.31 @ 12:08:01

Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.67
Z Factor: 0.9

Gas Rates Table

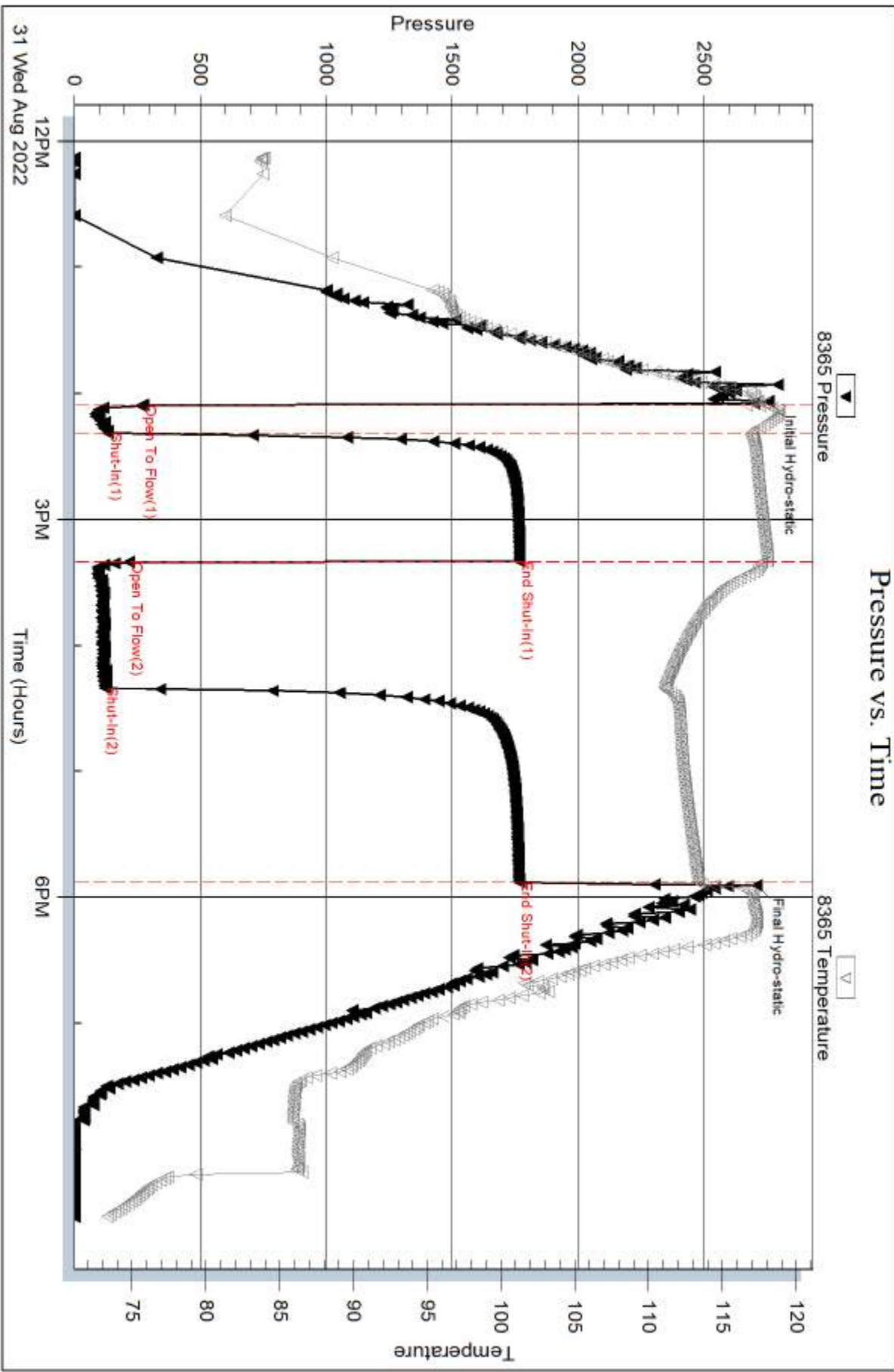
Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	10	0.25	44.17	86.28
2	10	0.38	51.04	222.61
2	20	0.38	55.19	236.73
2	30	0.38	54.69	235.03
2	40	0.38	53.90	232.34
2	50	0.38	53.08	229.55
2	60	0.38	52.56	227.78

Serial #: 8365

Outside Hayes Oil & Gas LLC

Huck #1-5

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 6914

Printed: 2022.09.07 @ 08:08:35

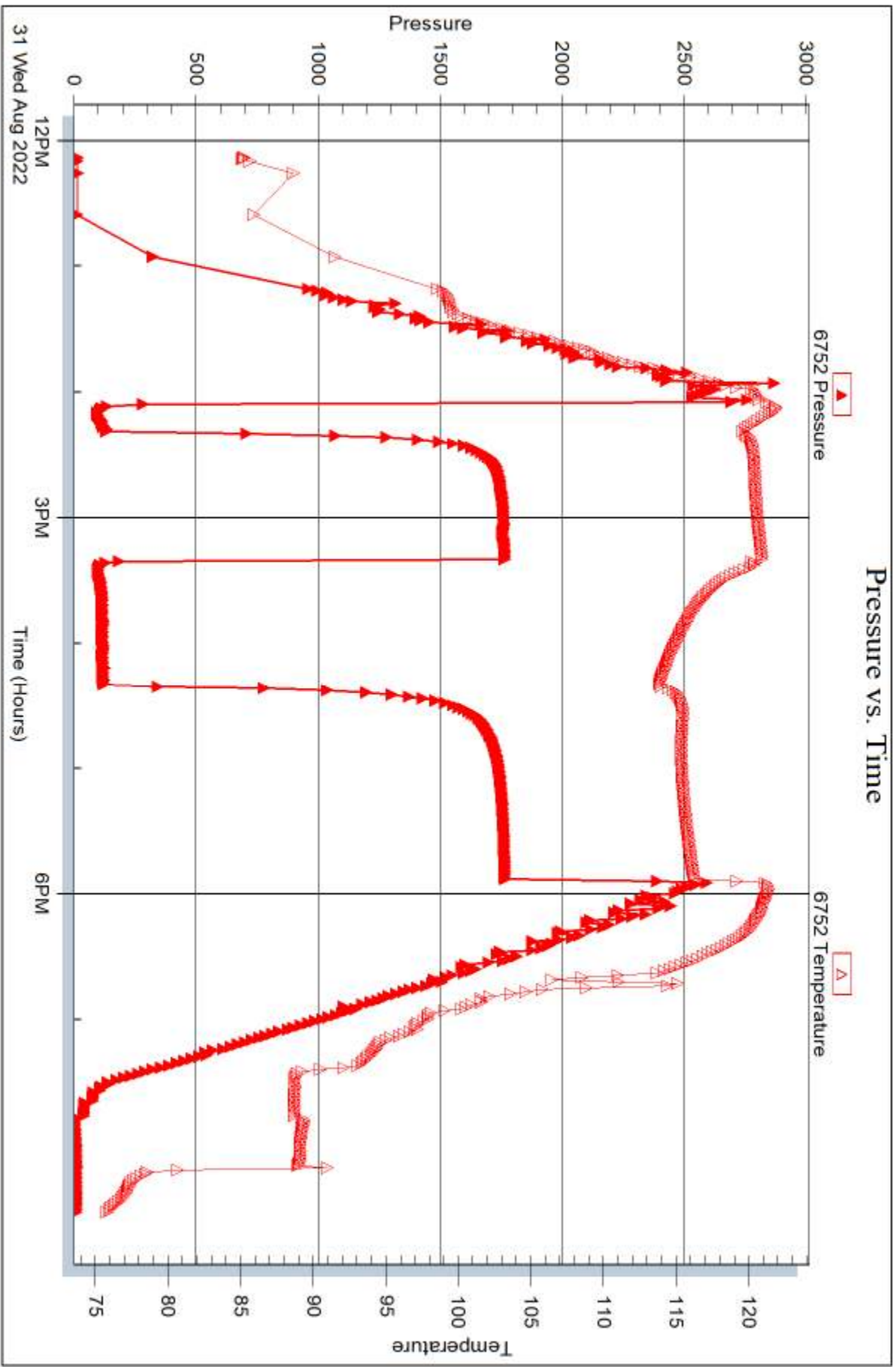
Serial #: 6752

Inside

Hayes Oil & Gas LLC

Huck #1-5

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Hayes Oil & Gas LLC**

PO Box 108
Attica KS. 67009

ATTN: John Hastings/Tim He

Huck 1-5

5-32S-18W Comanche

Start Date: 2022.09.02 @ 02:59:00

End Date: 2022.09.02 @ 12:19:02

Job Ticket #: 69515 DST #: 4

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

Printed: 2022.09.07 @ 07:56:14

Hayes Oil & Gas LLC
5-32S-18W Comanche
Huck 1-5
DST # 4
Upper Viola
2022.09.02



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck 1-5

Job Ticket: 69515

DST#: 4

ATTN: John Hastings/Tim He

Test Start: 2022.09.02 @ 02:59:00

GENERAL INFORMATION:

Formation: **Upper Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:07:17

Time Test Ended: 12:19:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Richie Samora/Leal C

Unit No: 74

Interval: 5640.00 ft (KB) To 5700.00 ft (KB) (TVD)

Reference Elevations: 2166.00 ft (KB)

Total Depth: 5700.00 ft (KB) (TVD)

2154.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8365

Press@RunDepth: 142.69 psig @ ft (KB)

Capacity: psig

Start Date: 2022.09.02 End Date: 2022.09.02

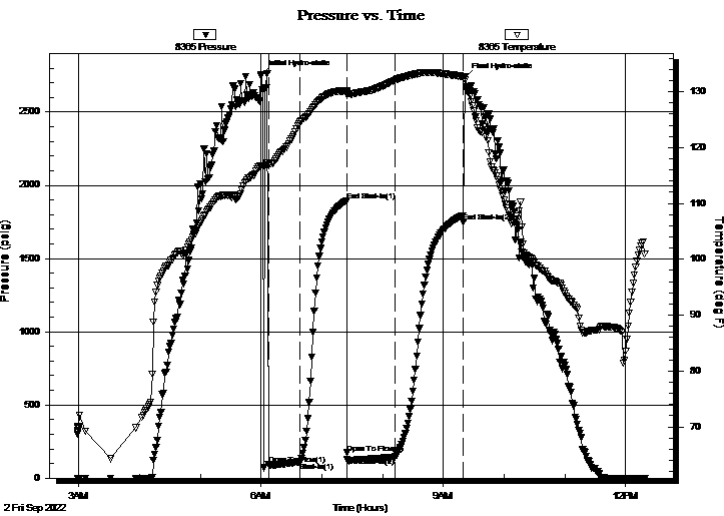
Last Calib.: 2022.09.02

Start Time: 02:59:01 End Time: 12:19:02

Time On Btm: 2022.09.02 @ 06:00:17

Time Off Btm: 2022.09.02 @ 09:21:17

TEST COMMENT: 30-IF: Strong blow , BOB in 6 min, built to 46.75"
45-ISI: No blow back
45-FF: Fair blow , BOB in 12 minutes, built to 34.26"
60-FSI: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2753.00	116.77	Initial Hydro-static
7	96.59	116.78	Open To Flow (1)
39	111.00	124.58	Shut-In(1)
85	1891.91	130.12	End Shut-In(1)
85	171.82	129.40	Open To Flow (2)
132	142.69	132.05	Shut-In(2)
200	1749.98	132.67	End Shut-In(2)
201	2738.39	132.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
246.00	GCM 10%G 90%M	2.38

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck 1-5

Job Ticket: 69515

DST#: 4

ATTN: John Hastings/Tim He

Test Start: 2022.09.02 @ 02:59:00

Tool Information

Drill Pipe:	Length: 5500.28 ft	Diameter: 3.80 inches	Volume: 77.15 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 35000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 93000.00 lb
			<u>Total Volume: 77.73 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	7.28 ft			String Weight: Initial 90000.00 lb
Depth to Top Packer:	5640.00 ft			Final 91000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	89.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			5616.00	
Hydraulic tool	5.00			5621.00	
Jars	5.00			5626.00	
EM Tool	3.00			5629.00	
Safety Joint	2.00			5631.00	
Packer	5.00			5636.00	29.00 Bottom Of Top Packer
Packer	4.00			5640.00	
Stubb	1.00			5641.00	
Perforations	2.00			5643.00	
Perforations	5.00			5648.00	
Change Over Sub	1.00			5649.00	
Drill Pipe	32.00			5681.00	
Change Over Sub	1.00			5682.00	
Handling Sub	5.00			5687.00	
Recorder	0.00	6752	Inside	5687.00	
Recorder	0.00	8365	Outside	5687.00	
Perforations	10.00			5697.00	
Bullnose	3.00			5700.00	60.00 Bottom Packers & Anchor

Total Tool Length: 89.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hayes Oil & Gas LLC

5-32S-18W Comanche

PO Box 108
Attica KS. 67009

Huck 1-5

Job Ticket: 69515

DST#: 4

ATTN: John Hastings/Tim He

Test Start: 2022.09.02 @ 02:59:00

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4450.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
246.00	GCM 10%G 90%M	2.376

Total Length: 246.00 ft Total Volume: 2.376 bbl

Num Fluid Samples: 0

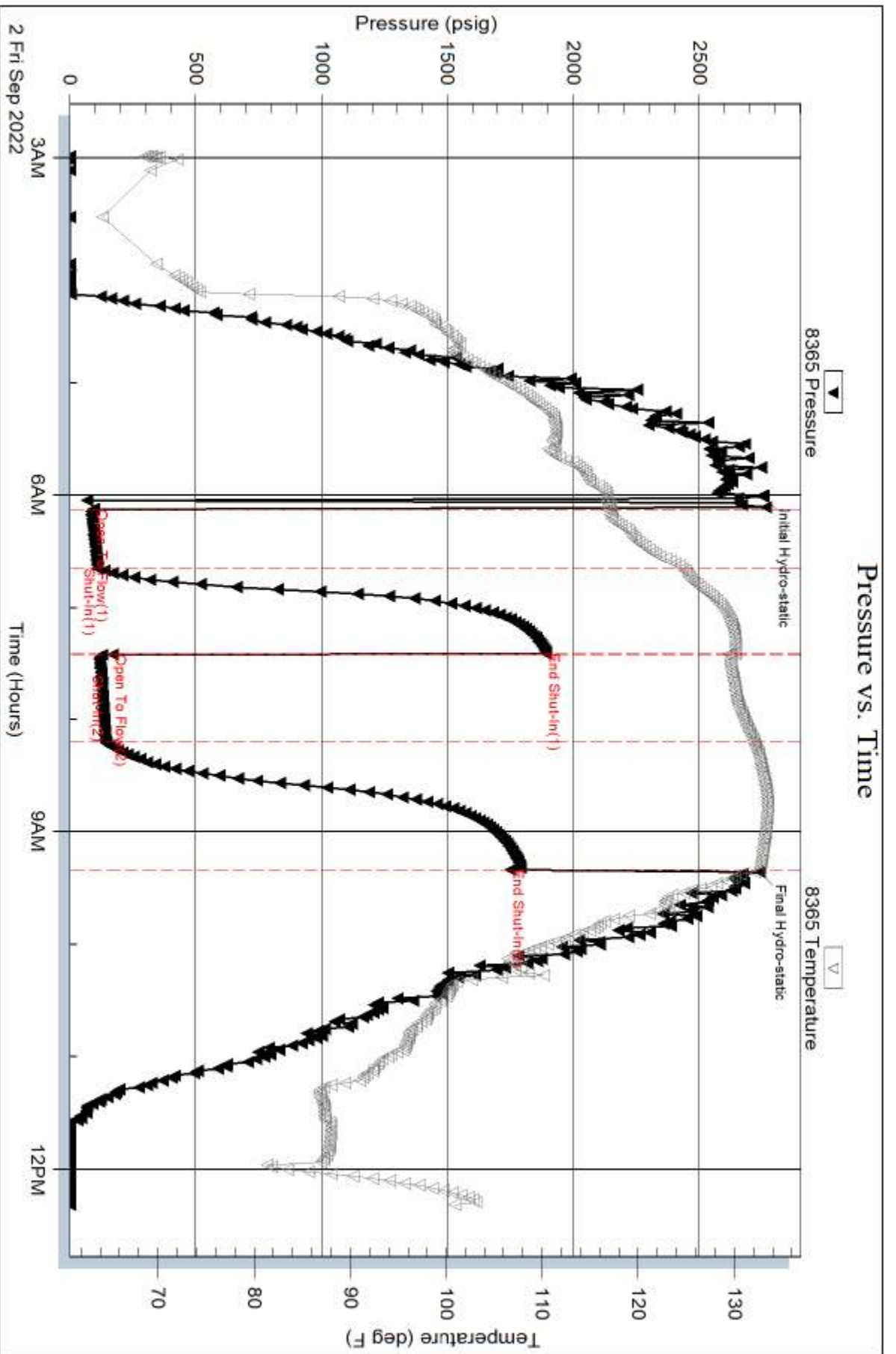
Num Gas Bombs: 0

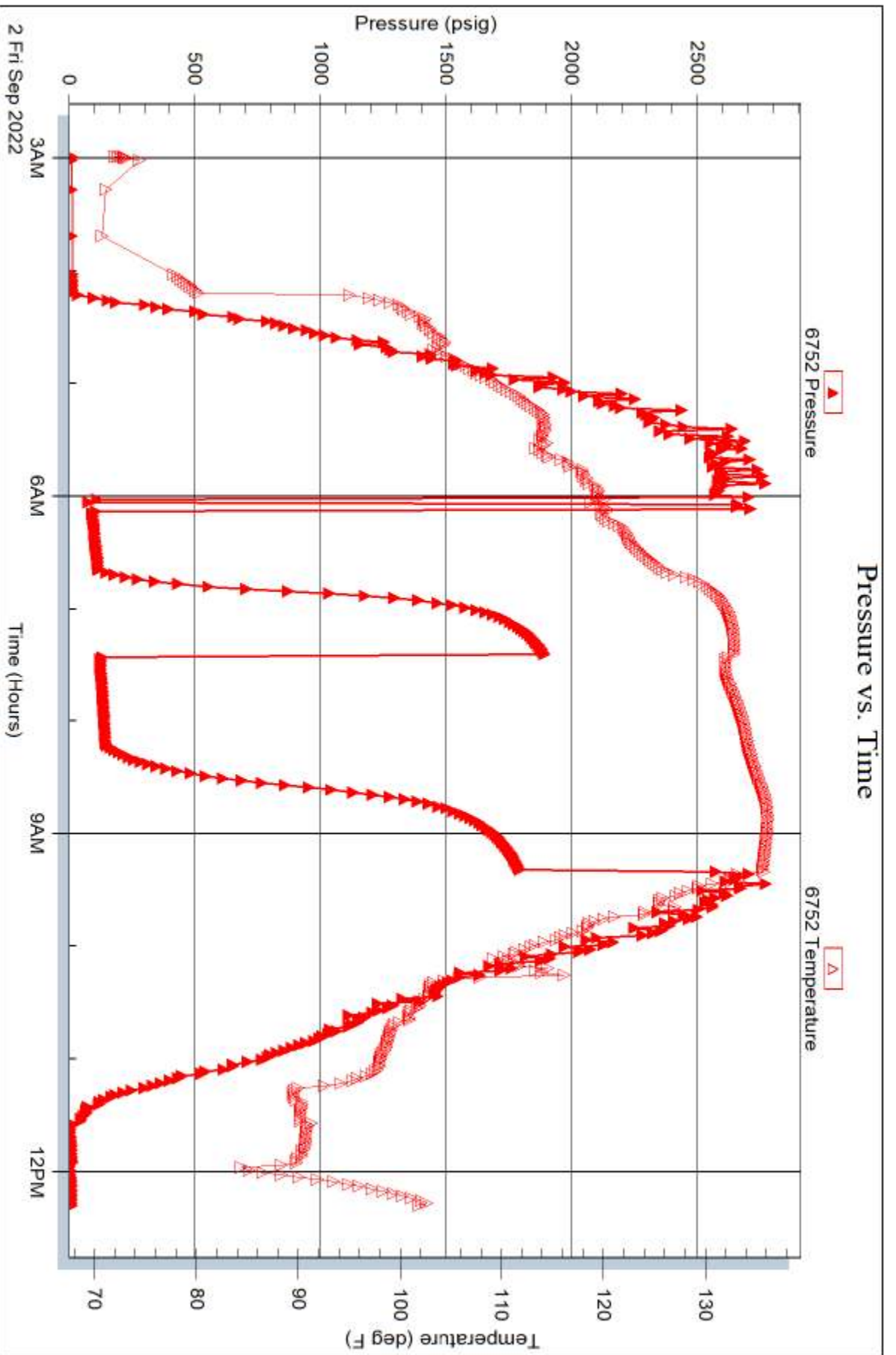
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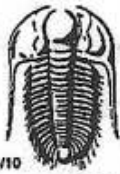
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69512

Well Name & No. Huck # 1-5 Test No. 1 Date 8-30-22
 Company Hayes Oil & Gas LLC Elevation 2166 KB 2154 GL
 Address 1001 W Hwy 160 PO Box 108 Attica KS 67009
 Co. Rep / Geo. John Hastings Rig Fossil 3
 Location: Sec. 5 Twp 32S Rge. 18W Co. Comanche State KS

Interval Tested 5060-5122 Zone Tested Pawnee / Ft. Scott
 Anchor Length 62' Drill Pipe Run 4947 Mud Wt. 9.2
 Top Packer Depth 5055 Drill Collars Run 118 Vis 53
 Bottom Packer Depth 5060 Wt. Pipe Run _____ WL 8.8
 Total Depth 5122 Chlorides 7.000 ppm System LCM 5 1/2

Blow Description IF: Strong blow, BOB in 30 seconds, Built to 144"
ISI: No blow back
FP: Strong blow BOB immediate GTS 25 minutes gauged & sampled
FSL: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>4856</u>	<u>GIP</u>	<u>100</u>			
<u>91</u>	<u>GCM</u>	<u>10</u>			<u>90</u>
<u>118</u>	<u>GCM</u>	<u>10</u>			<u>90</u>
____	____	____	____	____	____
____	____	____	____	____	____

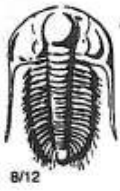
Rec Total 209 BHT 121 Gravity N/C API RW N/C @ _____ °F Chlorides N/C ppm

(A) Initial Hydrostatic 2581 Test 2150 T-On Location 0730
 (B) First Initial Flow 128 Jars 300 T-Started 0948
 (C) First Final Flow 118 Safety Joint _____ T-Open 1240
 (D) Initial Shut-In 1685 Circ Sub _____ T-Pulled 1636
 (E) Second Initial Flow 140 Hourly Standby _____ T-Out 1909
 (F) Second Final Flow 128 Mileage (120) 180 Comments _____
 (G) Final Shut-In 1775 Sampler _____
 (H) Final Hydrostatic 2503 Straddle _____ EM Tool _____
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 0
 Accessibility _____ Total 2630
 Sub Total 2630 MP/DST Disc't _____

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

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

Gas Volume Report

Hayes Oil & Gas LLC
Operator

Huck 1-5

Well Name and No.

GTS 25

DST No.

1

Min.	Ins. of Water PSIG	Orifice Size	CF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
				30	5.18	1/8	6.805
				40	5.23	1/8	6.823
				50	5.37	1/8	6.871
				60	5.52	1/8	6.924

Remarks:



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69513

Well Name & No. Huck 1-5 Test No. 2 Date 8-31-22
 Company Hales Oil & Gas LLC Elevation 2116 KB 2154 GL
 Address PO box 108 Atkinson KS 67009
 Co. Rep / Geo. Tim Rig Fossil 3
 Location: Sec. 5 Twp 32S Rge. 18W Co. Comanche State KS

Interval Tested 5120 - 5215 Zone Tested Mississippi
 Anchor Length 95 Drill Pipe Run 5071 Mud Wt. 9.2
 Top Packer Depth 5115 Drill Collars Run 118 Vis 53
 Bottom Packer Depth 5120 Wt. Pipe Run 0 WL 8.8
 Total Depth 5215 Chlorides 7000 ppm System LCM 5 1/2
 Blow Description IF: Packer Failure tried to Reset Failed pulled tool

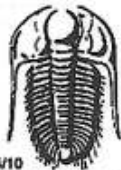
Rec	Feet of	%gas	%oil	%water	%mud
307	Drilling Mud				

Rec Total 307 BHT N/C Gravity N/C API RW N/C @ °F Chlorides N/C ppm

(A) Initial Hydrostatic <u>2711.01</u>	<input checked="" type="checkbox"/> Test 1700	T-On Location <u>0700</u>
(B) First Initial Flow <u>N/A</u>	<input checked="" type="checkbox"/> Jars 300	T-Started <u>0724</u>
(C) First Final Flow <u>N/A</u>	<input type="checkbox"/> Safety Joint	T-Open <u>09:46</u>
(D) Initial Shut-In <u>N/A</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>09:49</u>
(E) Second Initial Flow <u>N/A</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>11:56</u>
(F) Second Final Flow <u>N/A</u>	<input checked="" type="checkbox"/> Mileage <u>(120)</u> 180	Comments <u>Packer failure</u>
(G) Final Shut-In <u>N/A</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2635</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool -350
Initial Open <u>N/A</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>N/A</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>N/A</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>N/A</u>	<input type="checkbox"/> Day Standby	Sub Total <u>-350</u>
	<input type="checkbox"/> Accessibility	Total <u>1830</u>
	Sub Total <u>2180</u>	MP/DST Disc't <u></u>

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69514

Well Name & No. Huck 1-5 Test No. 3 Date 8-31-22
 Company Hayer Oil & Gas Inc Elevation 2166 KB 2154 GL
 Address PO Box 108 Attecia KS 67009
 Co. Rep / Geo. Tim Rig fossil 1
 Location: Sec. 5 Twp 32S Rge. 18W Co. Comanche State KS

Interval Tested 5180-5215 Zone Tested MISS
 Anchor Length 35' Drill Pipe Run _____ Mud Wt. 9.2
 Top Packer Depth 5175 Drill Collars Run 118 Vls 53
 Bottom Packer Depth 5180 Wt. Pipe Run 0 WL 8.8
 Total Depth 2515 5215 Chlorides 7000 ppm System LCM 5 1/2

Blow Description IF: BOB immediately GTS 9 minutes Gas was Ganged
ISI: Blow Back built to 5.51 inches
FF: BOB immediate, Gas was ganged & sampled
FST: No blow back

Rec	Feet of	%gas	%oil	%water	%mud

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

(A) Initial Hydrostatic 2758 Test 2150 T-On Location 11:56
 (B) First Initial Flow 273 Jars 300 T-Started 12:08
 (C) First Final Flow 134 Safety Joint _____ T-Open 1405
 (D) Initial Shut-In 1769 Circ Sub _____ T-Pulled 1754
 (E) Second Initial Flow 217 Hourly Standby _____ T-Out 2015
 (F) Second Final Flow 118 Mileage _____ Comments Stayed @ Rig
 (G) Final Shut-In 1767 Sampler _____
 (H) Final Hydrostatic 2708 Straddle _____ EM Tool -175
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total -175
 Accessibility _____ Total 2275
 Sub Total 2450 MP/DST Disc't _____

Approved By [Signature] 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

Gas Volume Report

Hayes Oil & Gas

Huck 1-5

3

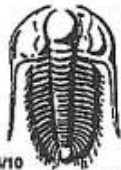
GTS Operator
gmin

Well Name and No.

DST No.

Min.	Ins. of Water PSIG	Orifice Size	CF/D	Min.	Ins. of Water PSIG	Orifice Size	CF/D
10	44.17	.25	86.284	10	51.04	3750	222.613
				20	55.19	" "	236.731
				30	54.69	" "	235.030
				40	53.9	" "	232.442
				50	53.08	" "	229.553
				60	52.56	" "	227.784

Remarks:



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69515

Well Name & No. Huck 1-5 Test No. 4 Date 9-2-22
 Company Hayes Oil & Gas LLC Elevation 2111 KB 2154 GL
 Address Po Box 108 Attica KS 67009
 Co. Rep / Geo. Tim Hedrick Rig Fossil 3
 Location: Sec. 5 Twp 32S Rge. 18W Co. Comanche State KS

Interval Tested 5640-5700 Zone Tested Upper Viola
 Anchor Length 60' Drill Pipe Run 5500 Mud Wt. 8.9
 Top Packer Depth 5635 Drill Collars Run 118 Vis 49
 Bottom Packer Depth 5640 Wt. Pipe Run @ WL 10.0
 Total Depth 5700 Chlorides 4450 ppm System LCM 11

Blow Description IF: Strong blow, BoB in 6 minutes, built to 46.75
IST: No blow back
FF: Fair blow BoB in 12 minutes, built to 24.36
FST: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>118</u>	<u>GCM</u>	<u>10</u>		<u>90</u>	
<u>128</u>	<u>GCM</u>	<u>10</u>		<u>90</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 246 BHT 133 Gravity NC API RW N/C@ F Chlorides N/C ppm

(A) Initial Hydrostatic 2753 Test 2150 T-On Location 01:15
 (B) First Initial Flow 97 Jars 300 T-Started 02:59
 (C) First Final Flow 111 Safety Joint T-Open 06:07
 (D) Initial Shut-In 1892 Circ Sub T-Pulled 09:20
 (E) Second Initial Flow 172 Hourly Standby T-Out 12:19
 (F) Second Final Flow 143 Mileage (120) 180 Comments
 (G) Final Shut-In 1750 Sampler
 (H) Final Hydrostatic 2738 Straddle EM Tool -175
 Shale Packer Ruined Shale Packer
 Extra Packer Ruined Packer
 Extra Recorder Extra Copies
 Day Standby Sub Total -175
 Accessibility Total 2455
 Sub Total 2630 MP/DST Disc't

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

Approved By [Signature] Our Representative [Signature]

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CEMENT TREATMENT REPORT

Customer:	HAYES OIL AND GAS, LLC	Well:	HUCK 1-5	Ticket:	WP 3261
City, State:	COMANCHE, KS.	County:	COMANCHE, KS.	Date:	8/23/2022
Field Rep:		S-T-R:	5-355-18W	Service:	SURFACE PIPE

Downhole Information	
Hole Size:	12 1/4 in
Hole Depth:	824 ft
Casing Size:	8 5/8 in
Casing Depth:	796.61 ft
Tubing / Liner:	in
PLUG Depth:	752 ft
Tool / Packer:	14" LJ
Tool Depth:	ft
Displacement:	47.8 bbls

Calculated Slurry - Lead	
Blend:	H-LITE
Weight:	12.3 ppg
Water / Sx:	11.5 gal / sx
Yield:	2.08 ft ³ / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	92.6 bbls
Total Sacks:	250 sx

Calculated Slurry - Tail	
Blend:	CLASS A CEMENT
Weight:	15.6 ppg
Water / Sx:	5.2 gal / sx
Yield:	1.20 ft ³ / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	53.4 bbls
Total Sacks:	250 sx

TIME	RATE	PSI	BBLs	STAGE TOTAL	BBLs	REMARKS
6:30AM						ON LOCATION- SPOT EQUIPMENT
8:15AM						RUN 19 JTS, 8 5/8" X 24#
						BASKET - #1
						CENTRALIZERS- 3, 12
9:00AM						CASING ON BOTTOM - HOOK UP AND BREAK CIRC. WITH RIG PUMP AND MUD
9:15AM	5.0	200.0	5.0			H2O AHEAD
9:16AM	6.0	200.0	92.6			MIX 250 SKS H-LITE CEMENT @ 12.3 PPG
9:37AM	5.0	150.0	53.4			MIX 250 SKS CLASS A CEMENT @ 15.6 PPG
9:50AM						SHUT DOWN- DROP T.R. PLUG
10:00AM	5.0	200.0				START DISPLACEMENT
10:11AM	4.0	350.0	40.0		191.0	SLOW RATE
10:15AM	3.0	700.0	47.8			PLUG DOWN- HELD
						CIRCULATION THRU JOB
						CIRCULATED 15 BBL TO PIT
						JOB COMPLETE,
						THANKS - KEVEN AND CREW

CREW		UNIT		SUMMARY	
Cement:	LESLEY	926	Average Rate	4.7 bpm	Average Pressure
Pump Operator:	CLIFTON	179-621	Total Fluid	239 bbls	
Bulk #1:	TRAVINO	182-534			
Bulk #2:					



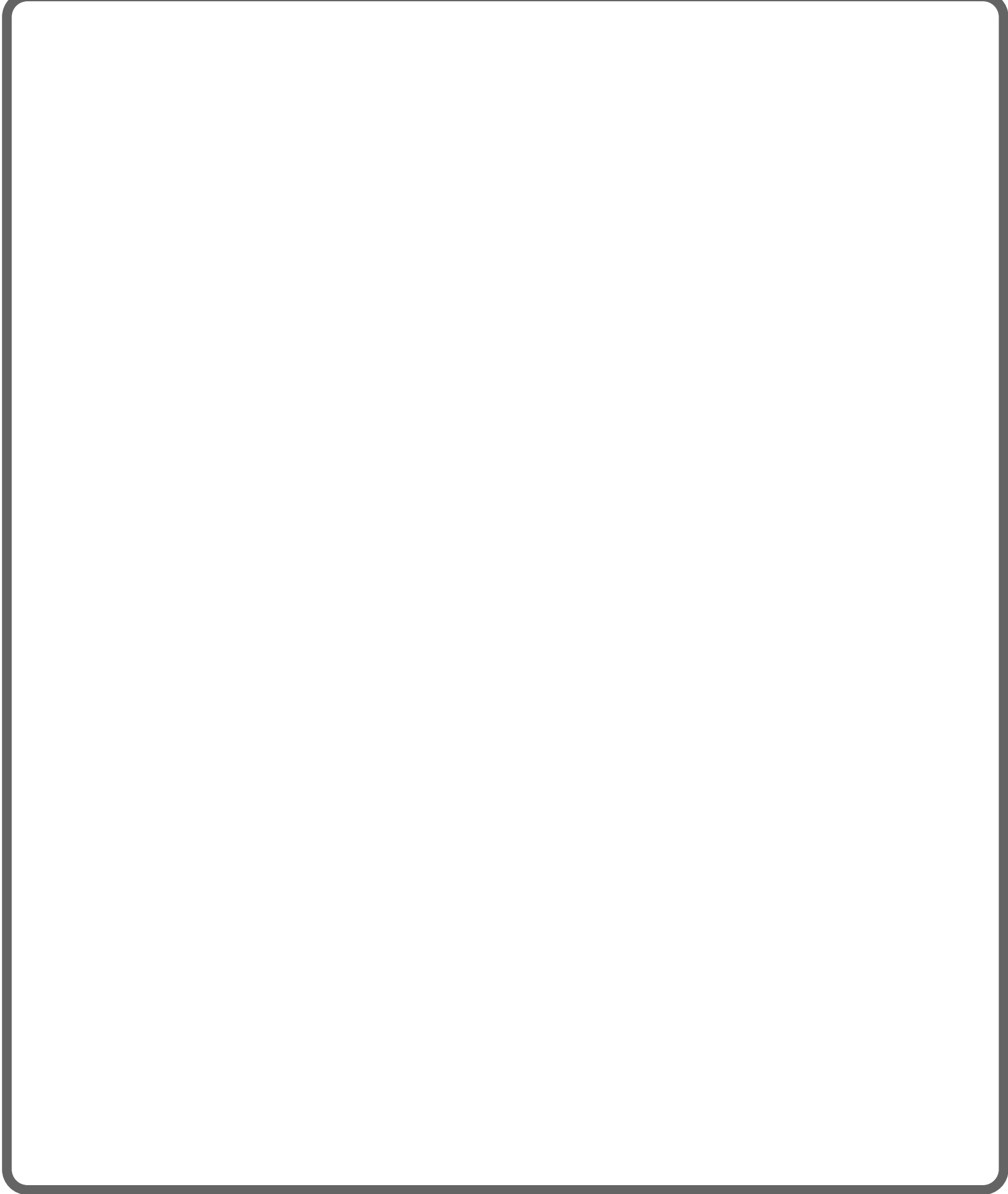
CEMENT TREATMENT REPORT

Customer: Hayes Oil & Gas LLC	Well: Huck 1-5	Ticket: WP 3323
City, State: Coldwater Kansas	County: Comanche, Kansas	Date: 9/4/2022
Field Rep: Dave Pauly	S-T-R: 5-32s-18w	Service: Production Casing

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7 7/8 in	Blend:	H-Long	Blend:	H-Plug
Hole Depth:	5925 ft	Weight:	15.0 ppg	Weight:	13.8 ppg
Casing Size:	5 1/2 in	Water / Sx:	5.9 gal / sx	Water / Sx:	6.9 gal / sx
Casing Depth:	5920 ft	Yield:	1.49 ft ³ / sx	Yield:	1.43 ft ³ / sx
Tubing / Liner:	in	Annular Bbls / Ft.:	bbs / ft.	Annular Bbls / Ft.:	bbs / ft.
Depth:	ft	Depth:	ft	Depth:	ft
Tool / Packers:		Annular Volume:	0.0 bbls	Annular Volume:	0 bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	bbls	Total Slurry:	47.7 bbls	Total Slurry:	25.4 bbls
STAGE TOTAL		Total Sacks:	180 sx	Total Sacks:	100 sx

TIME	RATE	PSI	BBLs	REMARKS
10:15 PM	-	-	-	on location job and safety
10:30 PM	-	-	-	spot trucks and rig up
	-	-	-	turbolizers 1,3,5,7,9,11,13,15,17,19,21,23
	-	-	-	baskets 8 & 17
2:15 AM	-	-	-	start casing in the ground
8:45 AM	-	-	-	casing on bottom and circulate
9:55 AM	2.0	-	12.7	plug rat hole 30 sacks plug mouse 20 sacks
10:10 AM				start cement down hole
	5.5	12.7	200.0	mix 50 sacks scavenger
	5.5	48.0	200.0	mix 180 sacks H-Long
10:25 AM				cement in and shut down
				wash pump and lines and release the plug
10:35 AM				start displacement
	5.0	200.0	10.0	
	5.0	230.0	20.0	
	5.0	240.0	30.0	
	5.0	240.0	40.0	
	5.0	240.0	60.0	
	5.0	240.0	80.0	
	5.0	400.0	100.0	
	5.0	900.0	130.0	
11:00 AM	3.0	900.0	139.0	plug down took pressure from 900 to 1500 psi
				release pressure and plug did hold

CREW		UNIT		SUMMARY	
Cement:	M Brungardt	916	Average Rate	5.3 bpm	Average Pressure
Pump Operator:	A Clifton	179/521	Total Fluid	682 bbls	
Bulk #1:	J Trveno	182/			
Bulk #2:	M Harrison				





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

Well Name: HUCK 1-5
 Well Id:
 Location: Sec 5 T32S, R18W, Commanche County, Kansas
 License Number: 15-033-21794
 Spud Date: August 22nd, 2022
 Surface Coordinates: NW -SW - NE
 Region: Unnamed
 Drilling Completed: Sept. 03, 2022

Bottom Hole
 Coordinates:
 Ground Elevation (ft): 2154' K.B. Elevation (ft): 2166'
 Logged Interval (ft): 3400' To: 5925' Total Depth (ft): 5925'
 Formation: Lansing, Marmaton, Miss.
 Type of Drilling Fluid: Natural Chemical

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

OPERATOR

Company: Hayes Oil & Gas LLC
 Address: 1081 W. HWY 160
 PO Box 108 Attica , Kansas 67009
 GEO: John Hastings

GEOLOGIST

Name: Tim Hedrick
 Company: Earth Tech OGL, Inc.
 Address: PO Box 683
 Hooker, Okla 73945
 580-754-0062

DST's Report

ROCK TYPES

Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal
 Congl
 Dol

Gyp
 Igne
 Lmst
 Meta
 Mrlst
 Salt
 Shale
 Shcol

Shgy
 Sltst
 Ss
 Till
 Carb sh
 Dol
 Dtd
 Gry sh

Sandylms
 Shale
 Sltstn
 Shlyslts
 Sltys h
 Lms

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclfrag
- Calc
- Carb
- Chtdk
- Chtit
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr

- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Sity

- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

SORTING

- Well
- Moderate
- Poor

- Angular

OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Gas show

INTERVALS

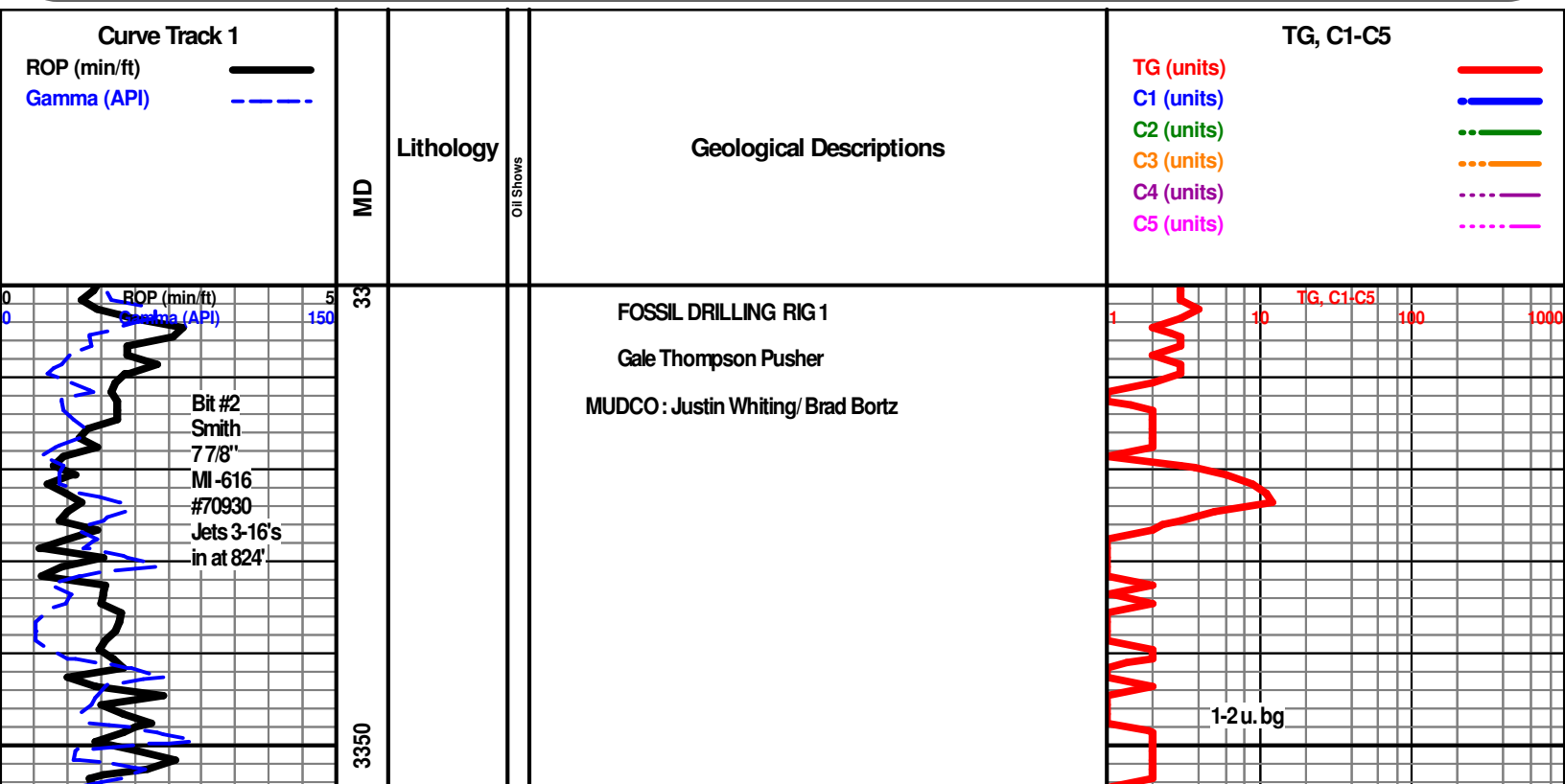
- Core
- Dst
- Dst

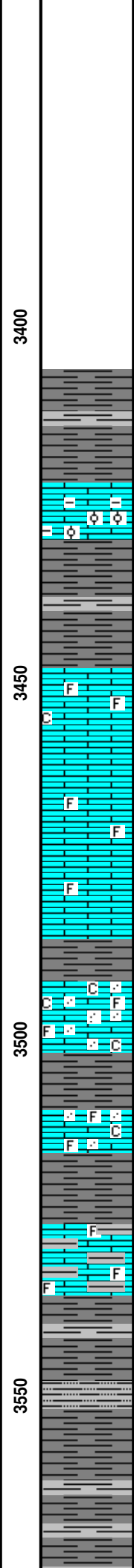
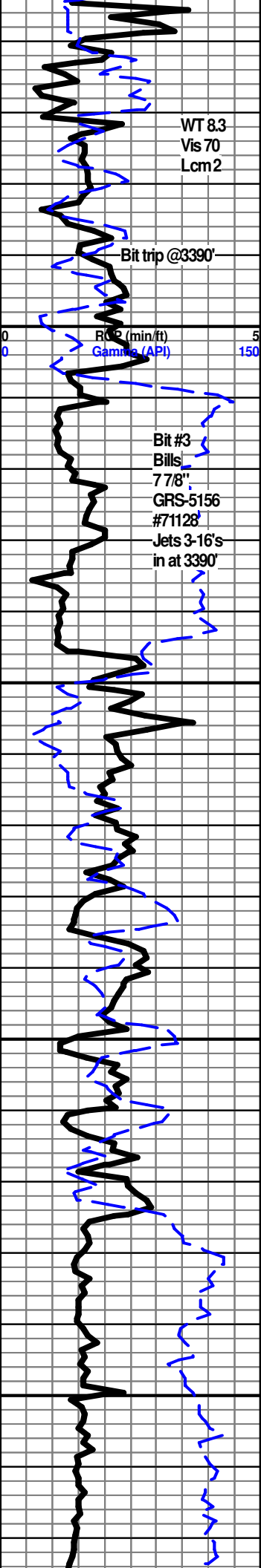
ROUNDING

- Rounded
- Subrnd
- Subang

EVENTS

- Rft
- Sidewall





Shale- Red firm blocky smooth texture to green firm blocky smooth to grainy texture in part to dark gray smooth texture

Limestone- Hard dense to brittle, fine to medium crystalline re-crystalline in part embed small ooids in part , embed disseminated gray shale in part, dull yellow mineral fluorescence, no visible show or cut

Wabaunsee 3448' (-1282')

Limestone- cream light tan off white, hard in part to slightly brittle medium crystalline re-crystalline in part with embed fossil fragments in part, slightly sub chalky in part, light yellow mineral fluorescence , no visible porosity, no visible show

Limestone- cream tan light brown, hard dense to brittle in part fine crystalline re-crystalline with small lime grains thruout, embed fossil fragments in part, light yellow fluorescence in part, no visible porosity, no visible show

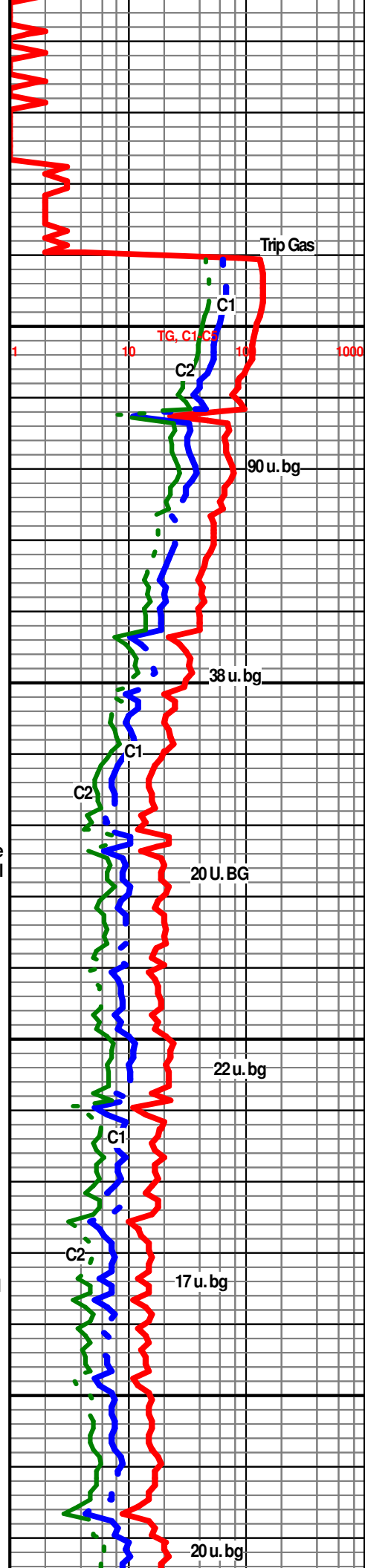
Limestone- cream off white, hard in part to brittle sucrosic to sucrosic sub chalky in part with embed fossil fragments in part, arenaceous in part light yellow mineral fluorescence , no visible porosity, no visible show

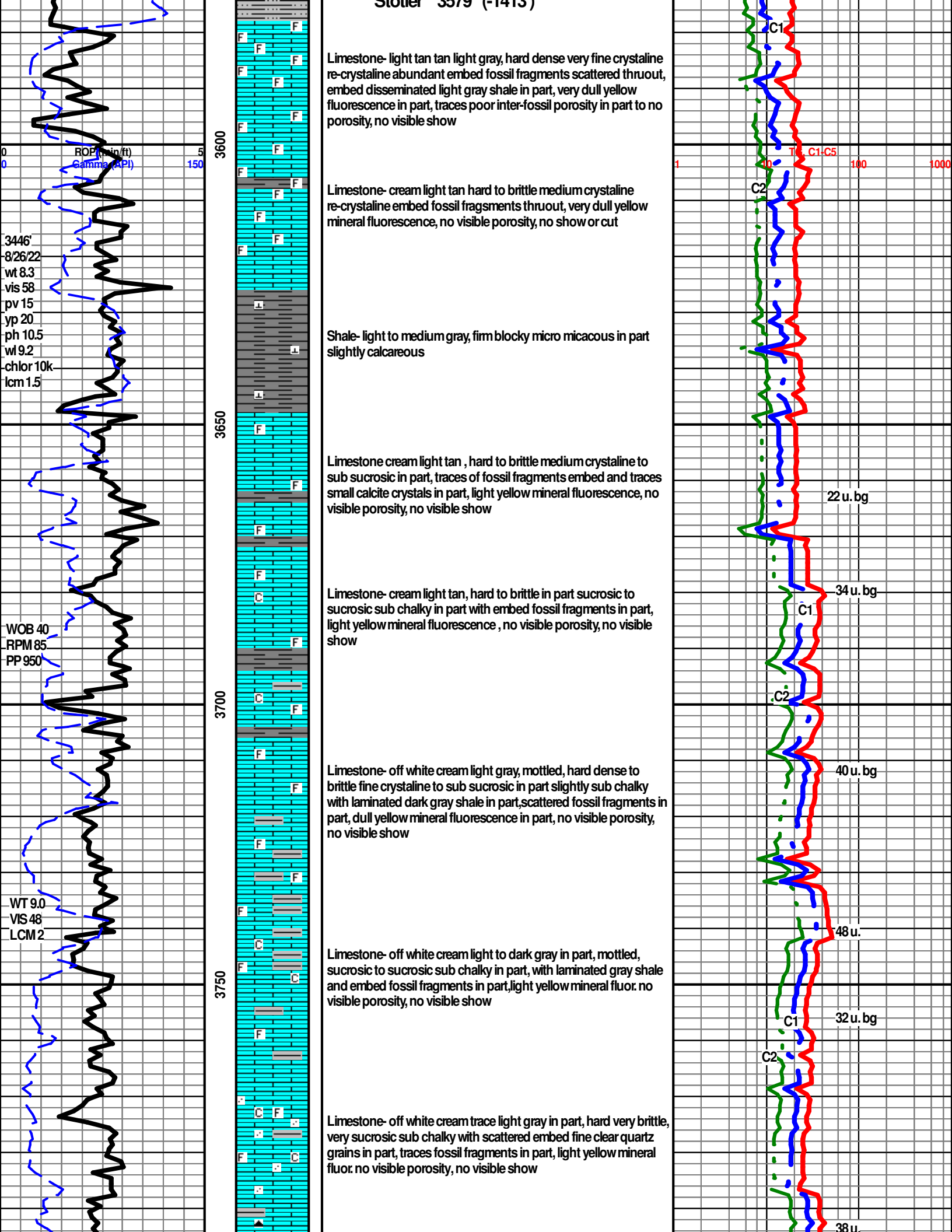
Limestone- cream light tan, hard to brittle in part sucrosic to sucrosic sub chalky in part with embed fossil fragments in part, trace arenaceous in part light yellow mineral fluorescence , no visible porosity, no visible show

Limestone- tan light brown gray, hard dense to brittle in part fine to medium crystalline re-crystalline, embed fossil fragments, embed light gray shale scattered in part, light yellow fluorescence in part, no visible porosity, no visible show

Shale- light gray to light green, firm smooth texture to very slighty silty in part grading to very light gray very fine silts

Stetler 2570' (-1412')





3600

3650

3700

3750

ROP (ft)
Gamma (API)

3446'
8/26/22
wt 8.3
vis 58
pv 15
yp 20
ph 10.5
wl 9.2
chlor 10k
lcm 1.5

WOB 40
RPM 85
PP 950

WT 9.0
VIS 48
LCM 2

Limestone- light tan tan light gray, hard dense very fine crystalline re-crystalline abundant embed fossil fragments scattered thruout, embed disseminated light gray shale in part, very dull yellow fluorescence in part, traces poor inter-fossil porosity in part to no porosity, no visible show

Limestone- cream light tan hard to brittle medium crystalline re-crystalline embed fossil fragments thruout, very dull yellow mineral fluorescence, no visible porosity, no show or cut

Shale- light to medium gray, firm blocky micro micaceous in part slightly calcareous

Limestone cream light tan , hard to brittle medium crystalline to sub sucrosic in part, traces of fossil fragments embed and traces small calcite crystals in part, light yellow mineral fluorescence, no visible porosity, no visible show

Limestone- cream light tan, hard to brittle in part sucrosic to sucrosic sub chalky in part with embed fossil fragments in part, light yellow mineral fluorescence , no visible porosity, no visible show

Limestone- off white cream light gray, mottled, hard dense to brittle fine crystalline to sub sucrosic in part slightly sub chalky with laminated dark gray shale in part, scattered fossil fragments in part, dull yellow mineral fluorescence in part, no visible porosity, no visible show

Limestone- off white cream light to dark gray in part, mottled, sucrosic to sucrosic sub chalky in part, with laminated gray shale and embed fossil fragments in part, light yellow mineral fluor. no visible porosity, no visible show

Limestone- off white cream trace light gray in part, hard very brittle, very sucrosic sub chalky with scattered embed fine clear quartz grains in part, traces fossil fragments in part, light yellow mineral fluor. no visible porosity, no visible show

C1

C2

22 u. bg

34 u. bg

C1

C2

40 u. bg

48 u.

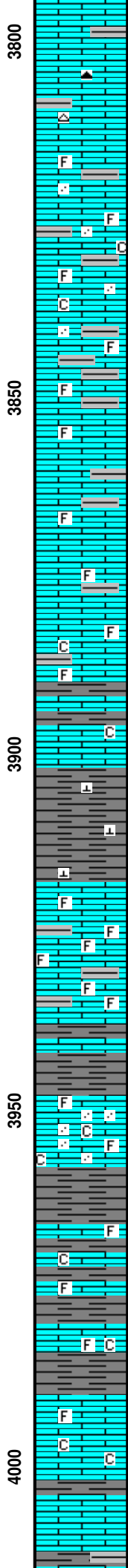
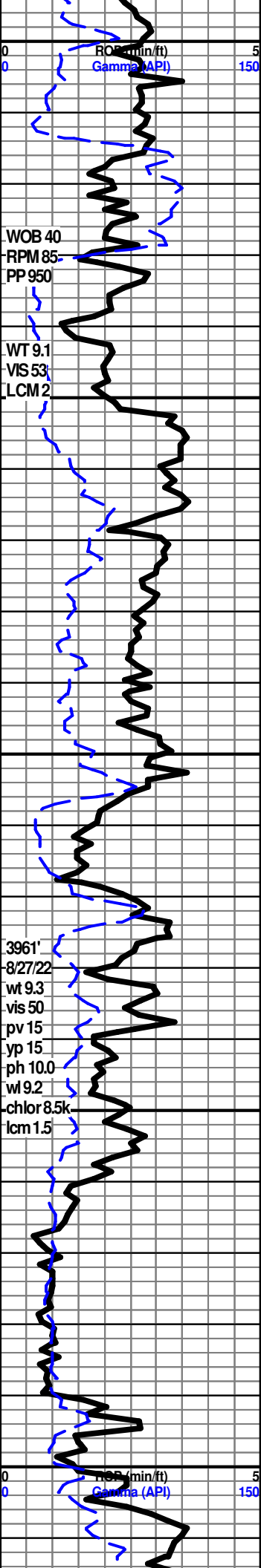
C1

C2

32 u. bg

38 u.

1 40 100 1000



Limestone - white off white cream hard dense fine crystalline to sucrosic in part, traces of embed light gray shale in part, traces of light gray chert in part, dull yellow mineral fluor. no visible porosity, no visible show

Limestone - cream light gray gray mottled hard to brittle fine crystalline to sucrosic sub chalky in part, re-crystalline, embed fossil fragments thruout, trace of free crinoid stems, laminated shale in part, scattered embed fine clear quartz grains . dull yellow fluor. no visible porosity, no visible show or cut

Limestone-cream buff light gray in part, hard to brittle very tight sucrosic matrix with scattered embed fossil fragments, traces of laminated gray shale in part, very dull yellow fluor. no visble porosity, no visible show

Limestone-cream buff , hard to brittle very tight sucrosic matrix to fine crystalline with scattered embed fossil fragments, traces of sub chalky in part traces of laminated gray shale in part, very dull yellow fluor. no visible porosity, no visible show

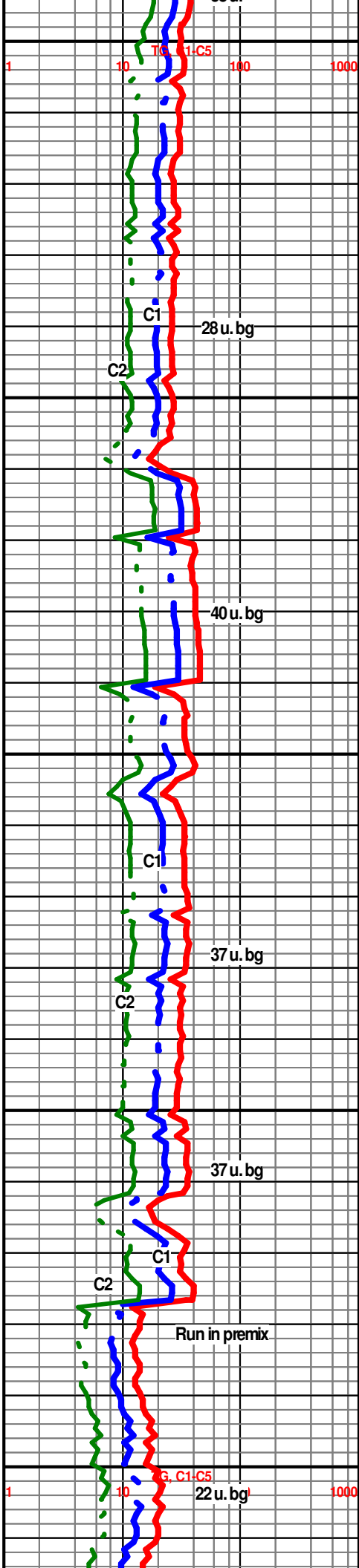
Shale - gray dark gray - firm blocky smooth texture slightly calcareous to black hard splinty in part

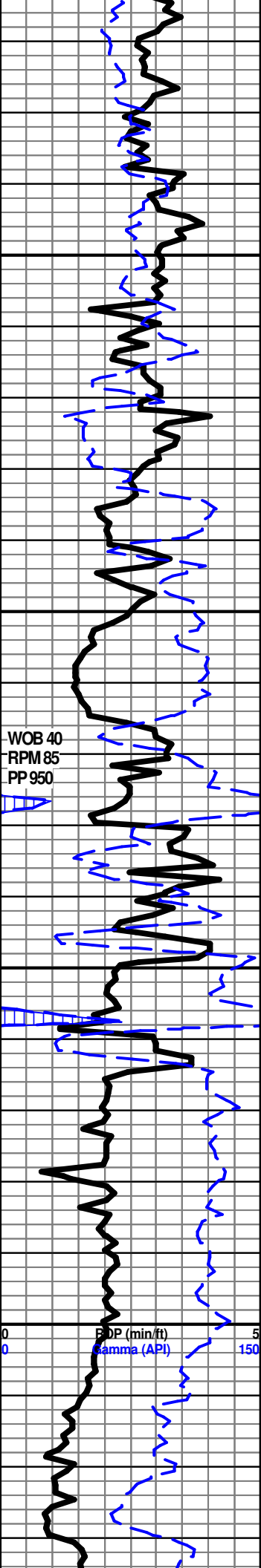
Limestone- cream light gray mottled, hard to brittle, fine crystalline re-crystaline embed fossils to trace free fossils trace laminated shale and verigated calcite crystals in part, light yellow mineral fluor. no visible porosity, no visible show

Limestone- off white cream gray, hard brittle sucrosic to sucrosic sub chalky in part , traces fossil fragments in part , scattered very fine grain quartz grains embed in part, light yellow mineral fluor. no visible porosity, no visible show

Interbedded Limes and Shales- Cream light tan light gray to gray mottled, fine crystalline to sucrosic sub chalky in part with laminated gray shales thruout, scattered fossil fragments embed thruout, traces of free soft white chalk, dull to light yellow mineral fluor. in part, no visible porosity, no visible show

Limestone- off white cream buff, hard to very brittle, sucrosic to sucrosic sub chalky, traces of fossil fragments in part, dull yellow fluor. no visible porosity, no visible show





Limestone cream light gray to gray hard dense trace brittle, fine crystalline to sucrosic in part, abundant embed laminated and disseminated gray shale thruout, no fluor. no visible porosity, no visible show

Limestone - off white cream tan light gray in part, hard dense to brittle fine crystalline to sucrosic in trace sub chalky in part, traces laminated light gray shale in part, no fluor. no visible porosity, no visible show

Limestone tan brown light gray to gray hard dense trace brittle, very fine crystalline to sucrosic in part, abundant embed laminated and disseminated gray shale in part, slight trace black carbonaceous shale in part no fluor. no visible porosity, no visible show

Shale - gray dark gray firm blocky smooth texture calcareous in part to slightly black soft carbonaceous in part

Limestone- cream light gray gray hard dense fine crystalline to sucrosic very argillaceous in part, no fluor no visible porosity, no visible show

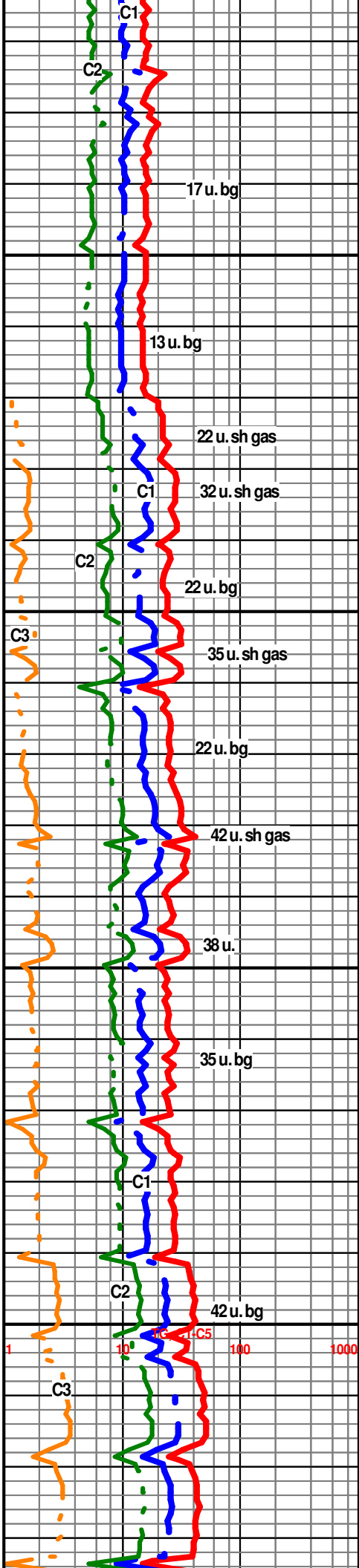
Shale - gray dark gray firm blocky smooth texture calcareous in part to slightly black soft carbonaceous in part

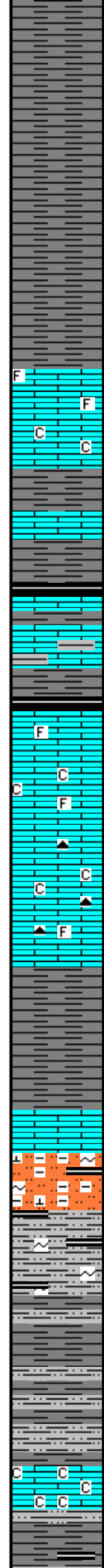
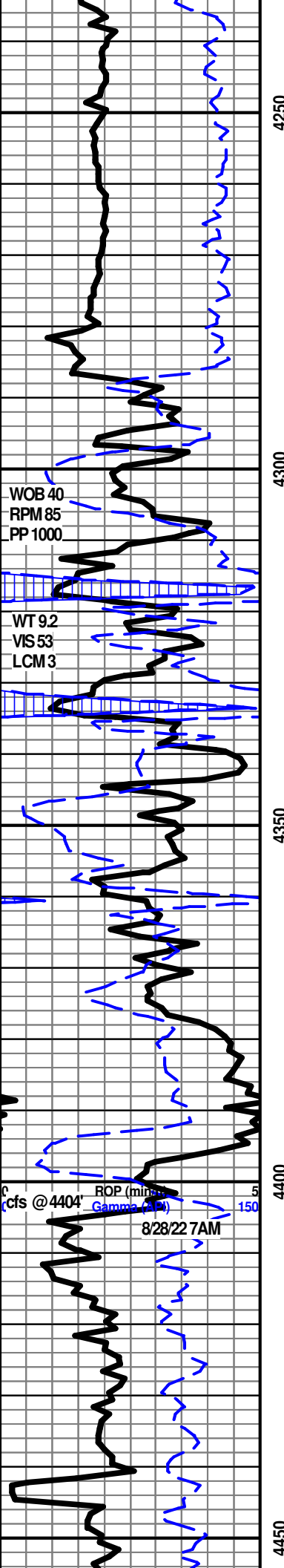
Limestone -tan brown gray dark gray mottled, hard dense to brittle fine crystalline in part to sucrosic, laminated dark gray shale scattered thruout, no fluor. no visible porosity, no visible show

Limestone - brown to dark gray hard dense very fine crystalline to sucrosic in part very argillaceous to shaly thruout, no fluor. no visible porosity, no show

Shale- light gray very soft to firm blocky very silty in part with finely disseminated black carb shale in part

Siltstone- frosty white, hard tight to friable very very fine grain quartz, frosty to clear grains with occasional scattered embed fine clear quartz grains angular to sub angular, siliceous cementation, abundant embed heavy minerals, embed glauconite or chlorite, no fluorescence, trace of poor visible inter-granular porosity, no





visible show

Shale - light gray firm blocky smooth texture to very soft in part

Limestone - cream tan brown, mottled hard dense medium to very fine crystalline with embed small calcite crystals, trace of fossil fragments in part, heavt traces of free soft white chalk in part, very dull yellow fluor. no visible porosity, no visible show

Shale - light gray soft to black soft carbonaceous

Limestone - tan dark gray mottled, hard dense, laminated dark gray shales thruout with traces embed fossil fragments in part, dull yellow fluor. no visible porosity, no visible show

Heebner 4329' (-2163')

Limestone - cream tan off white- hard to brittle fine crystalline to sucrosic sub chalky in part, traces of fossil fragments in part, traces of free soft white chalk, light yellow mineral fluor. no visible porosity, no show

Limestone - cream tan dark tan- hard dense in part to brittle fine crystalline to sucrosic sub chalky in part, traces of fossil fragments in part, gray chert, ,heavy traces of free soft white chalk, light yellow mineral fluor. no visible porosity, no show

Shale - light gray firm blocky smooth texture

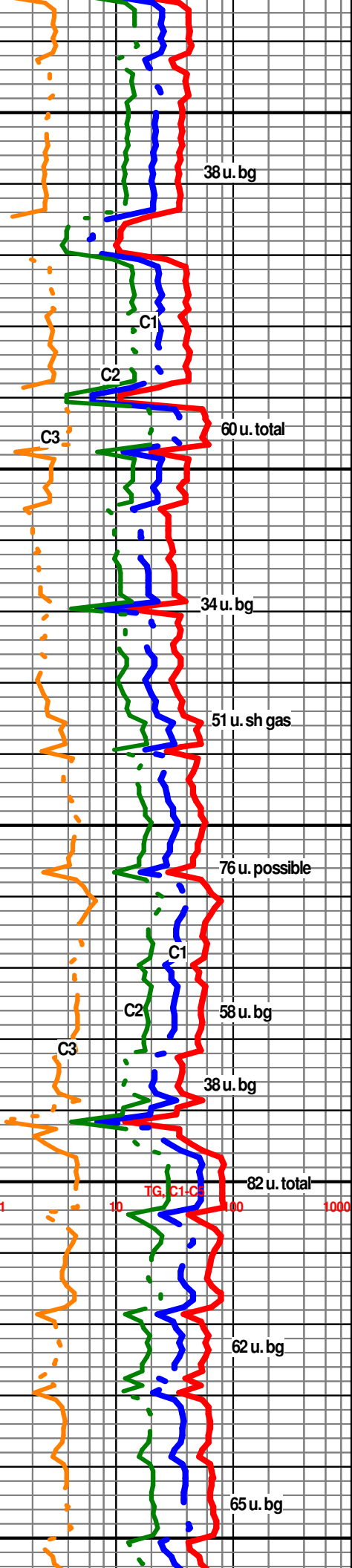
Limestone - off white cream, hard dense very tight sucrosic matrix to fine crystalline in part, light yellow mineral fluorescence, no visible porosity, no visible show

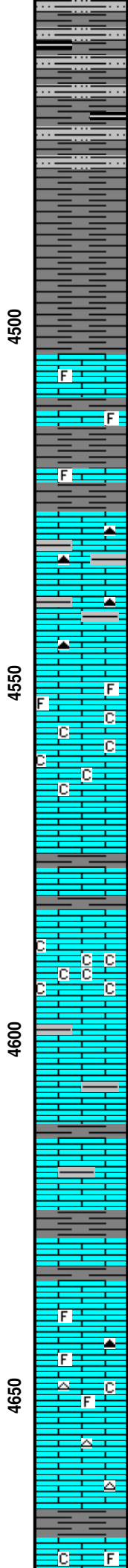
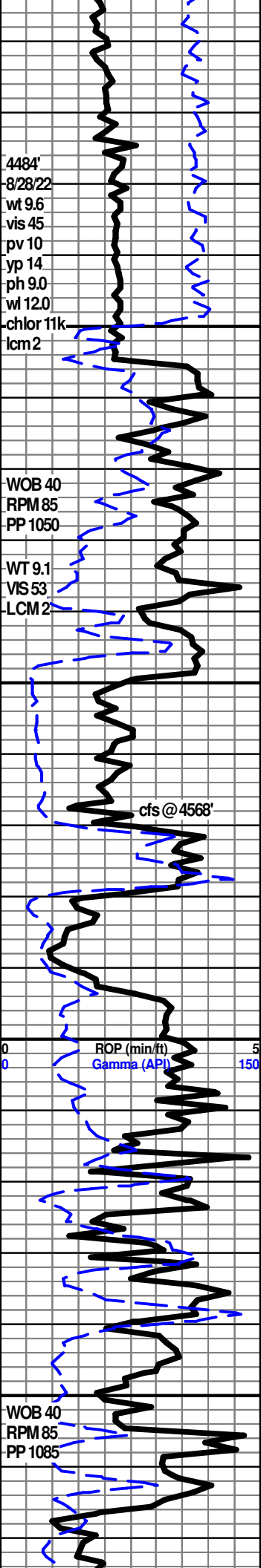
Douglas 4402' (-2236')

Siltstone - frosty white light gray hard tight trace friable, very fine grain quartz with slight calcareous cementaion, embed disseminated and laminated shale scattered thruout, traces black soft carb shale scattered, trace glauconite or chlorite, no fluorescence, trace poor visible inter-granular porosity to no visible porosity, no show or cut

Siltstone - frosty light gray - hard tight to friable very very fine grain quartz, abundant laminated and disseminated gray shale thruout, siliceous cementation, no fluor. no visible porosity, no visible show or cut

Limestone - off white white - hard in part to soft, very sucrosic sub chalky matrix, free soft white chalk in part, light yellow fluor. no visible porosity, no visible show or cut





Silty shales- light gray - firm to soft micro micaceous with traces of scattered black soft carbonaceous in part

Shale - light gray gray to green - firm blocky smooth texture to silty in part

Limestone tan brown gray, mottled in part fine crystalline to tight sucrosic in part embedded gray shale in part, embedded fossil fragments in part, light yellow mineral fluorescence, no visible show

Lansing 4523' (- 2357')

Limestone- cream light tan, hard dense fine crystalline re-crystalline in part traces light gray reworked chert, laminated shale in part, dull yellow fluor. no visible porosity, no visible show

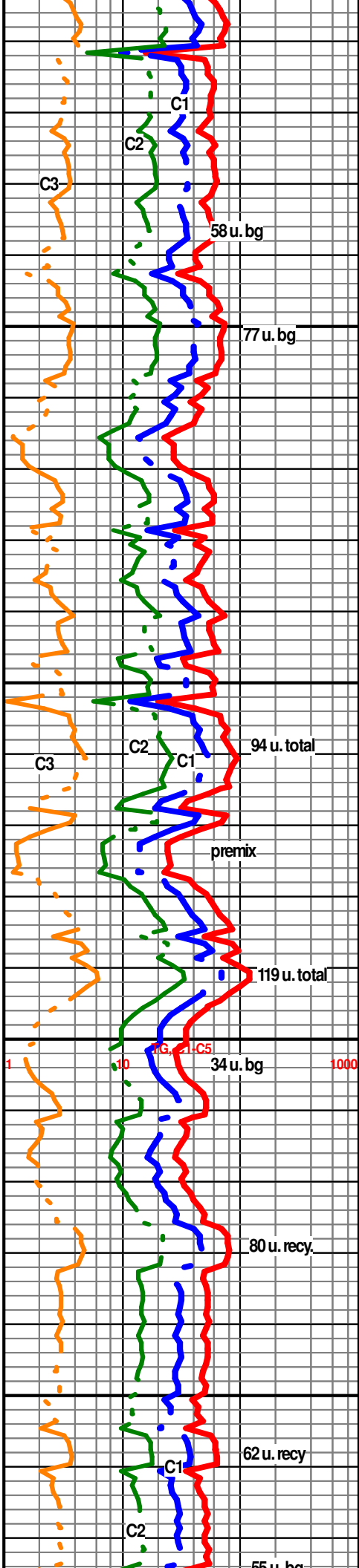
Limestone off white white cream, hard brittle to soft in part, fine crystalline re-crystalline embed fossil fragments in part grading to sucrosic sub chaly with abundant firm to soft white chalk, trace of microvug porosity in 2% to no porosity, dull yellow mineral fluorescence in part, no visible show

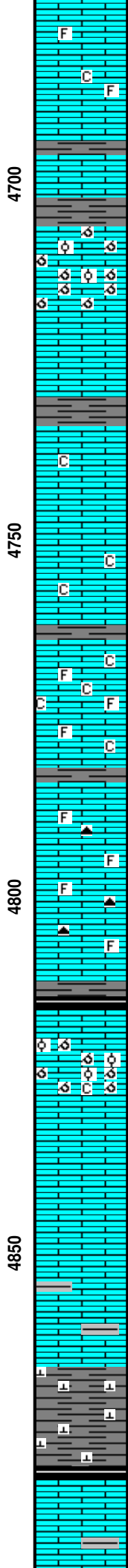
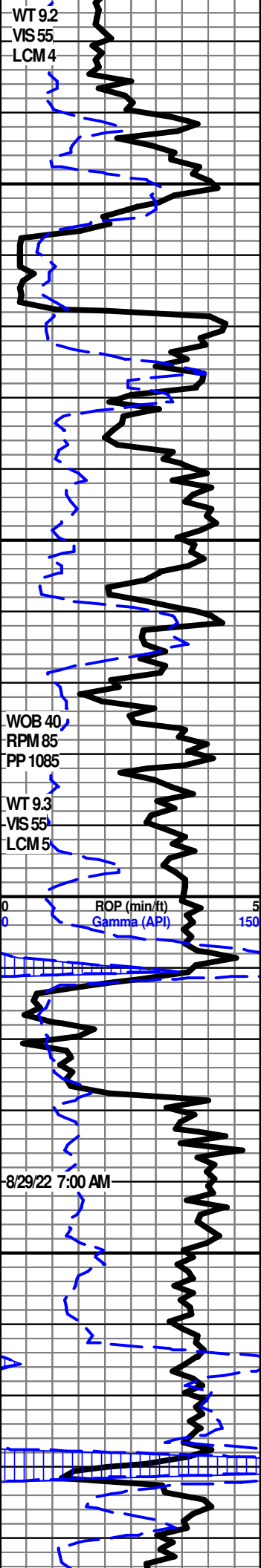
Limestone- off white cream- hard brittle very sucrosic matrix grading to sucrosic sub chaly to chaly, light yellow mineral fluor in part to no fluor. traces of micro pin point porosity in 2%, no visible show or cut

Limestone- cream tan light gray , hard dense, fine crystalline re-crystalline in part traces of laminated light gray shale, light bright yellow mineral fluor. no visible porosity, no visible show

Shale - medium to dark gray , firm blocky smooth texture slightly calcareous

Limestone- cream light tan light gray in part, hard dense to brittle in part, fine crystalline with embed fossil fragments in part to sucrosic slightly sub chaly in part with scattered embed fossil fragments , traces white gray chert, light bright yellow mineral fluor. no visible porosity, no visible show





Limestone off white cream - hard in part to soft. sucrosic sub chaly matrix with scattered embed fossil fragments , traces of embed shale, light yellow mineral fluor. no visible porosity, no visble show or cut

Limestone - cream light tan, hard dense, crypto to very fine crystalline with traces of laminated gray shale in part, light yellow mineral fluor. no visible porosity, no visble show

Limestone- cream light tan, hard to brittle medium crystalline, re-crystalline matrix, very oolmold to very oolitic, fossil fragments thruout, light bright yellow mineral fluor. very good to excellent oolmold to inter-crystalline porosity traces of free soft white chalk in part, thruout, no visible show or cut

Limestone- cream light tan , hard dense in part to trace brittle, medium crystalline re-crystalline embed calcite crystals, traces of free soft white chalk in part, dull yellow mineral fluor. poor to fair inter-crystalline porosity in 10%, no visble show or cut

Limestone cream light tan, hard to brittle , fine crystalline to sucrosic sub chaly, dull to light yellow mineral fluor. no visible porosity, no visble show or cut

Limestone- off white cream hard to soft, very sucrosic sub chaly matrix, embed fossil fragments thruout, light yellow mineral fluor. no visible porosity, no visble show

Limestone cream light tan to tan, hard dense trace brittle fine crystalline re-crystalline in part with embed fossil fragments, tan brown chert in part, dull yellow fluorescence, no visible porosity, no visble show

Stark Shale 4806' (-2640')

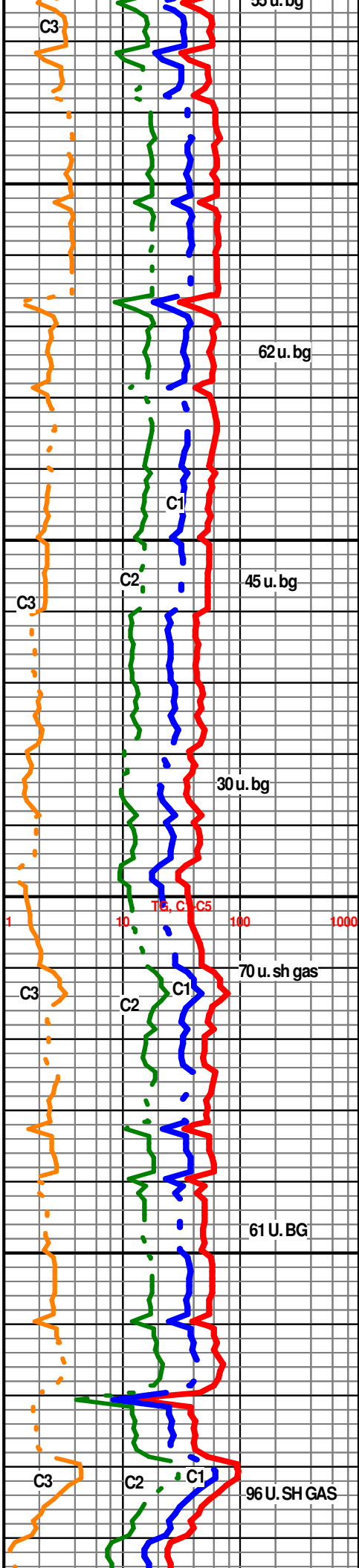
Shale - black soft carbonaceous

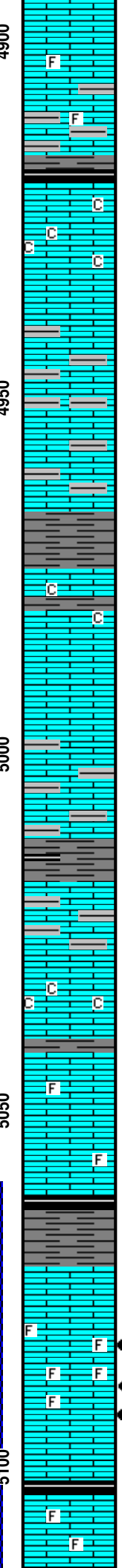
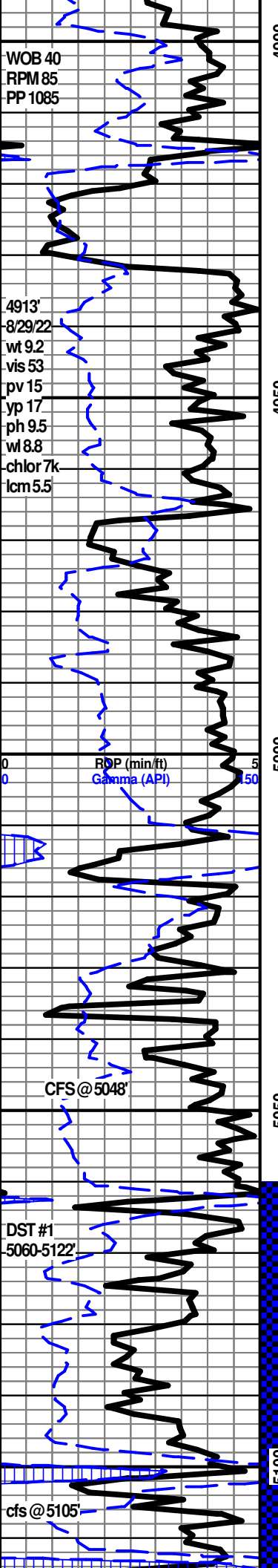
Limestone- cream off white tan hard to brittle medium crystalline to sucrosic in part re-crystalline, very oolmoldic thruout, embed oolites in part fossil fragments in part, traces of soft white chalk, dull to light yellow mineral fluorescence, poor fair to good oolmoldic porosity to fair scattered microvug porosity, no visible show or cut

Limestone -cream tan light brown , hard dense to traces brittle fine crystalline to crypto-crystalline, traces light gray shale embed in part, fairly non descript, dull yellow fluor. no visible porosity, no visble show or cut

Shale- Light gray to dark gray firm blocky smooth texture very calcareous in part grading to black soft carbonaceous

Limestone - cream light tan light gray, hard dense crypto to very fine crystalline traces of light gray shale in part, dull yellow mineral fluor. no visible porosity, no visble show or cut





Limestone- tan light to dark gray , mottled, hard dense fine crystalline to tight sucrosic with embed fossil frags in part and laminated shales, dull yellow fluor. no visible porosity, no visible show or cut

Shale -black soft carbonaceous

Limestone off white cream trace tan, hard brittle to soft in part, medium crystalline to very coarse sucrosic, very sub chalky in part, traces of large free calcite crystals, dull yellow mineral fluor in 5% to no fluor. poor to fair visible inter-crystalline porosity, trace of poor vug porosity in part, no visible show or cut

Limestone- tan light gray to gray, hard dense fine crystalline to very tight sucrosic matrix, abundant laminated and disseminated gray shale thruout, very dull yellow fluor. no visible porosity, no visible show

BKC 4965' - (2799')

Marmaton 4973' (-2807')

Limestone - cream tan brown , hard dense crypto-very fine crystalline, tight sucrosic in part, traces of sub chalky in part, dull yellow fluor. no visible porosity, no visible show

Limestone tan to gray dark gray hard dense traces brittle very fine crystalline to very tight sucrosic very argillaceous to shaly in part, no fluor no visible porosity, no visble show

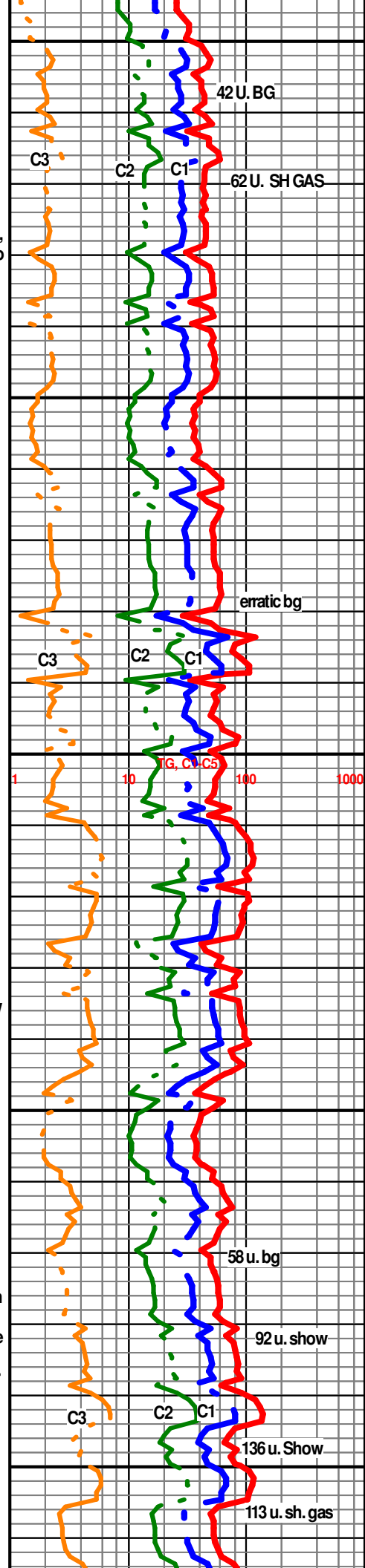
Limestone- cream tan hard dense to brittle in part very tight sucrosic matrix to fine crystalline, with abundant free soft white chalk, dull yellow mineral fluor. no visible porosity, no visible show

limestone- light tan to brown hard dense very fine top crypto-crystalline trace of fossil frags in part, dull yellow fluor. no visible porosity, no visible show or cut

Pawnee 5070' (-2904')

Limestone - off white cream hard dense in part to very brittle very sucrosic matrix re-crystalline in part with embed fossil fragments in 50%, grading to fine crystalline in part, dull yellow gold fluorescence thruout in 50% dull yellow gold fluorescence on one faces of rock in 30%, fair to good visible inter-xln & inter-fossiliferous porosity in 30%, possible fractured porosity, fair to good flush cut thruout, fair to good light streaming cut in 70%, fair oil odor dry

Limestone- cream light tan- hard dense to trace brittle, fine crystalline re-crystalline in part, fossils embed in part, dull yellow mineral fluor. no visible porosity, no visible show



Cherokee 5113' (-2947')

Shale- gray dark gray - firm blocky smooth texture

Limestone- cream light tan hard dense to brittle

Shale- gray dark gray firm blocky smooth texture calcareous in part to black soft carbonaceous

Mississippi 5171' (- 3005')

Limestone- cream light tan hard dense to brittle in part, crypto-crystalline to tight sucrosic in part with embed small calcite crystals, dull yellow mineral fluor in part to no fluor. no visible porosity, no visible show

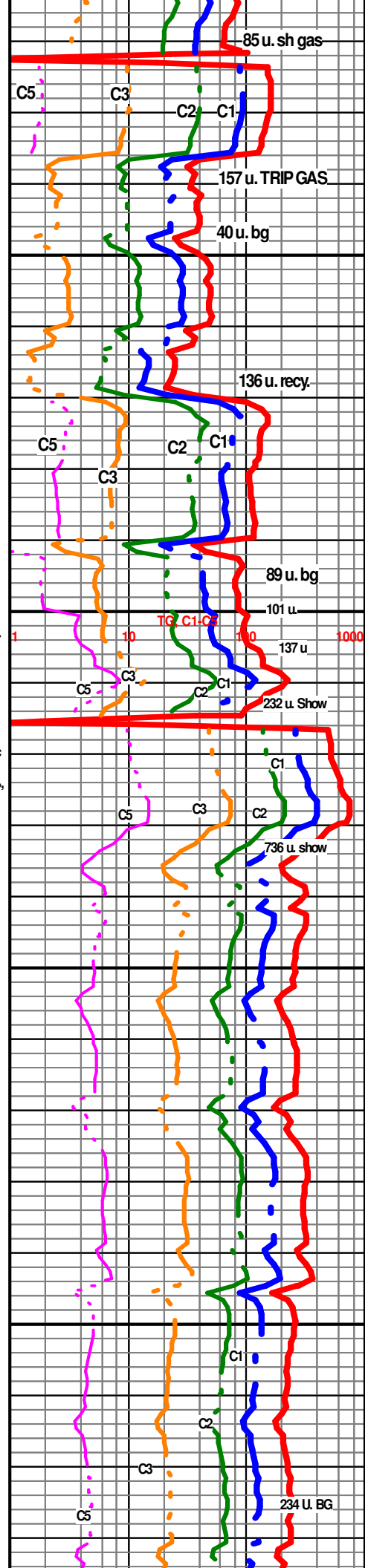
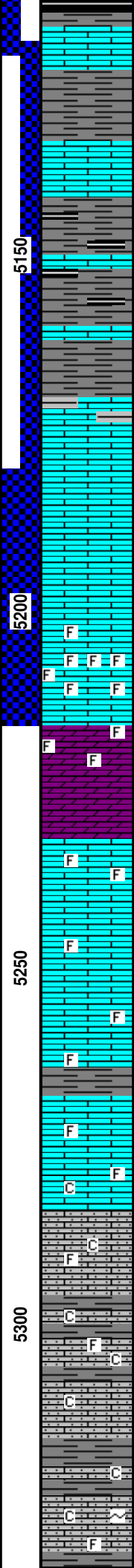
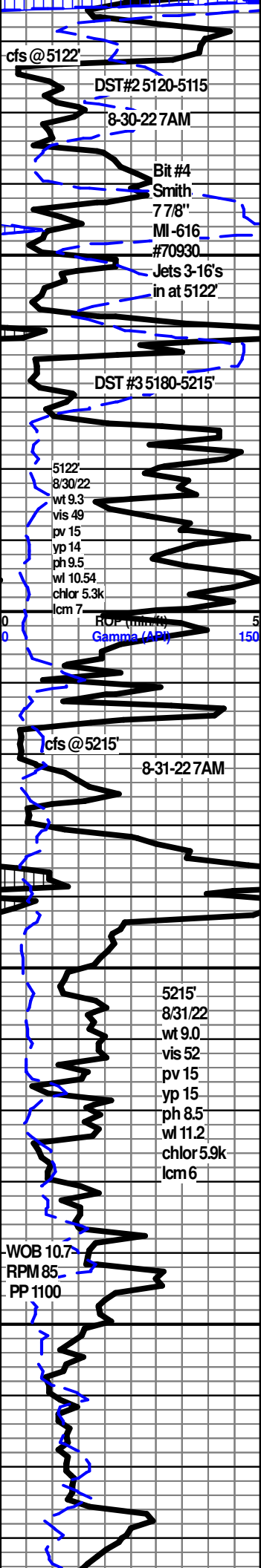
Limestone- cream light tan tan with light tan oil stain thruout, with asphaltic stain 30%, hard to very brittle coarse sucrosic matrix re-crystalline embed fossil fragments thru, small calcite crystals in vugs, bright yellow gold fluorescence thruout, good to very good micro vug porosity to good visible inter-fossil porosity fair to good inter-xln porosity scattered thruout, very good flush cut to excellent slow stream cut thruout, very good oil odor, light tan stain on dish

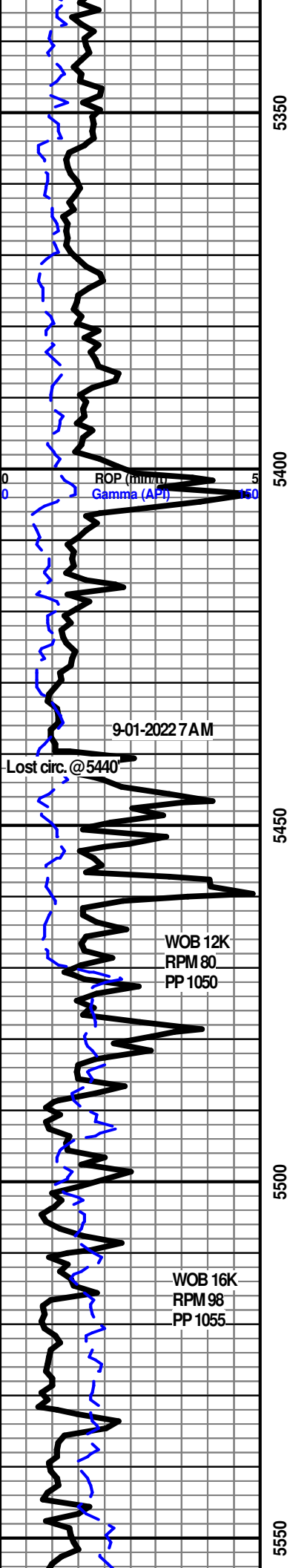
Dolomite- cream buff light tan oil stain scattered in 40%- hard to brittle very sucrosic matrix, small fossil fragments embed in part, trace re-crystalline in part, bright yellow gold fluorescence thruout, poor to fair visible micro pin point porosity in 40%, good visible inter-fossiliferous porosity in 20%, fair gassy flush cut to good slow streaming gassy cut thruout, fair oil odor

Limestone- cream light tan hard dense, fine crystalline to medium crystalline scattered embed fossil fragments in part, trace if sub lithographic in part, dull yellow mineral fluor, no visible porosity

Limestone light tan-Hard dense to brittle, fine crystalline re-crystalline in part to coarse lime grains in part, trace fossil fragments slighty sub chalky in part, dull yellow mineral fluor, traces of poor inter- granular porosity, no visible cut or show

Limestone - off white cream light gray hard to brittle very sucrosic to sucrosic sub chalky matrix very arenacious with scattered embed disseminated dark shale in part, no visible porosity, no visible show or cut





Limestone cream light gray gray hard to brittle very sucrosic matrix, sub chalky in part, very arenaceous, embed fine disseminated shale thruout, traces glauconite or chlorite, no fluorescence, no visible porosity

Shale- light to medium gray - firm blocky smooth texture to grainy texture in part

Cowley 5354' (-3188')

Limestone off white cream light gray hard dens to brittle very sucrosic matrix to fine crystalline in part, slightly dolomitic, sub chalky in part, embed fossil frags in part, very arenaceous to sandy, glauconite or chlorite, no fluor, no visible porosity

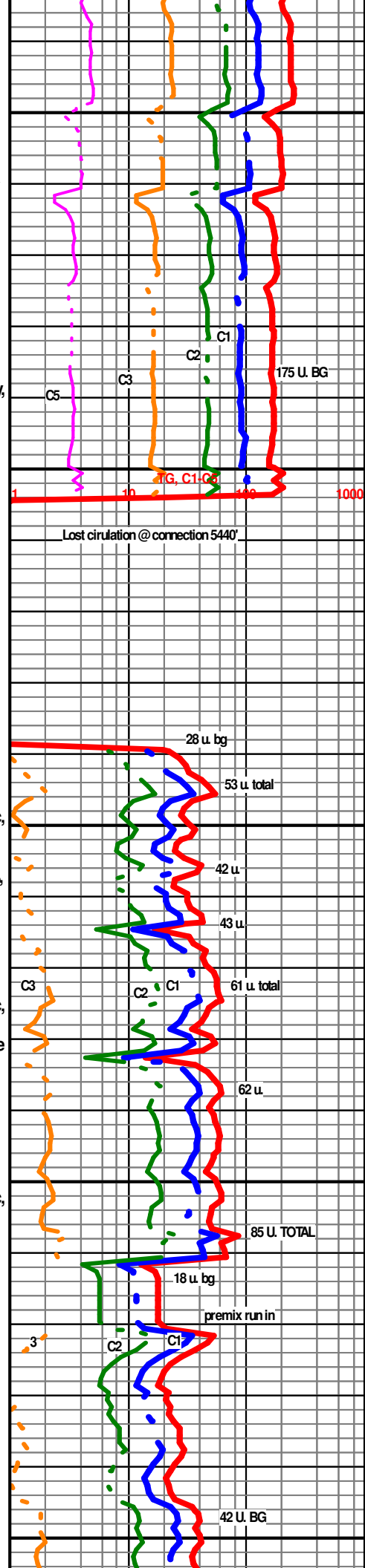
No samples due to lost circulation

regain circulation with 12# hulls

Chert- white off white gray mottled. fine crystalline to very sucrosic, tripolitic in part, re-worked dolomitic and calcareous in part with embed disseminated light gray shale, no fluorescence, poor visible micro pinpoint porosity in part, trace of poor acid cut in 2%, no odor

Chert- white off white gray mottled. fine crystalline to very sucrosic, re-worked, dolomitic and calcareous scattered with embed disseminated light gray shale in part, no fluorescence, poor visible micro pinpoint porosity in part, no visible cut

Chert- white off white gray mottled. fine crystalline to very sucrosic, re-worked dolomitic and calcareous scattered with embed disseminated and lamintaed light gray shale in part, traces glauconite, no fluorescence, poor visible micro pinpoint porosity in part, no visible cut



Lost circulation @ connection 5440'

175 U. BG

28 u. bg

53 u. total

42 u.

43 u.

61 u. total

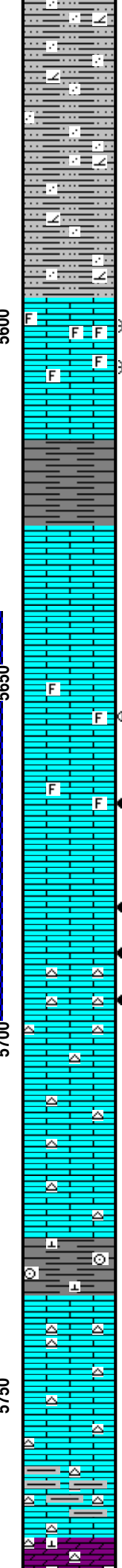
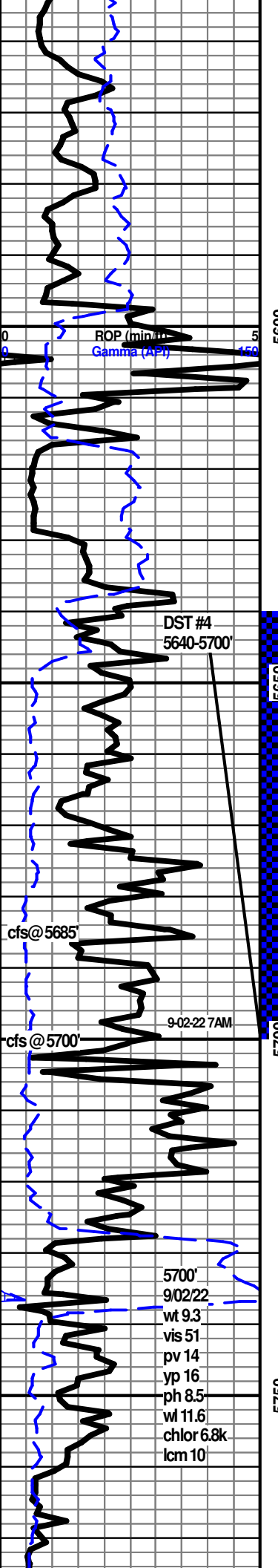
62 u.

85 U. TOTAL

18 u. bg

premix run in

42 U. BG



Silty shales light to medium gray very very fine quartz thruout glauconitic in part calcareous in part, no fluor. no visible porosity, no visible show

Limestone- cream buff hard brittle sucrosic to fine crystalline re-crystalline embed fossil fragments thruout, bright yellow fluor. good inter-xln porosity, fair inter-fossil porosity, possible pin point porosity, light gassy cut

Viola 5638' (-3472')

5650-5654' Limestone- cream light tan tan (due to tan stain in part) hard dense to brittle very fine sucrosic matrix, trace fossil fragments in part, bright yellow gold fluorescence thruout, poor to fair trace good micro pin point to micro vug porosity in 30%, good flush cut fair to good slow stream cut in 30%, fair oil odor

5661'-5669' Limestone cream light tan to tan (from oil stain 60%) hard to very brittle fine to coarse sucrosic matrix, re crystalline in part , trace fossil fragments in part, poor fair to very good microvug porosity in 20%, fair visible micro pin point porosity, in 20-30% fair visible inter-fossiliferous in 5%, good flush cut in 60%, good slow stream cut in 60%, fair to good oil odor

Viola A 5684' (-3518')

5680-5684' Limestone- cream light tan tan (due to oil stain in 60%, hard dense to brittle in part, very tight sucrosic matrix, traces coarse sucrosic in 5%, bright yellow gold fluor. poor to fair visible micro pin point porosity, good flush cut thruout to fair to good slow stream cut thruout, good oil odor dry

5685-5698' Limestone - cream light tan to tan (due to oil stain in 50%), hard dense fine sucrosic in part to coarse sucrosic matrix with embed large calcite crystals in part abundant white tan chert, bright yellow gold fluor. thruout, poor micro pin point to fair good inter-xln porosity in part with tan stain, good flush cut to very good slow stream milky cut thruout, good oil odor

Limestone- light tan tan hard dense fine crystalline to very tight sucrosic in part, trace fossil fragments in part, white light tan chert thruout, no fluorescence, no visible porosity, no visible show or cut

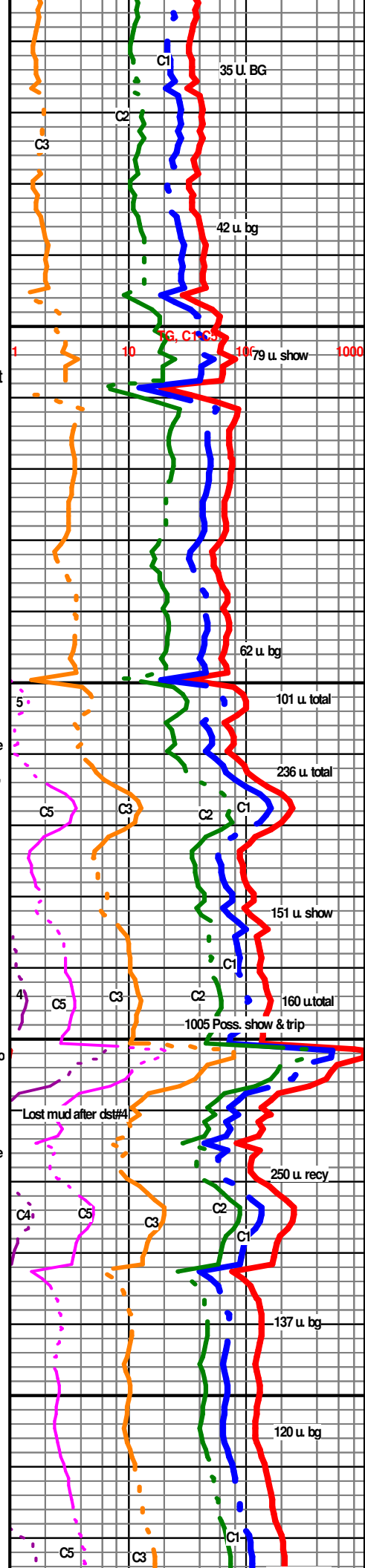
Shale gray dark gray firm blocky calcareous with traces free crinoid stems, grainy texture

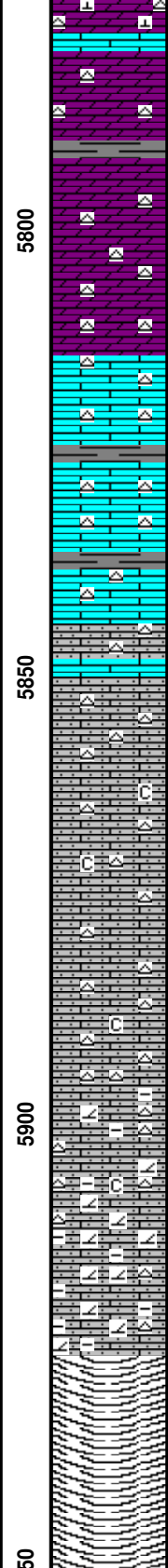
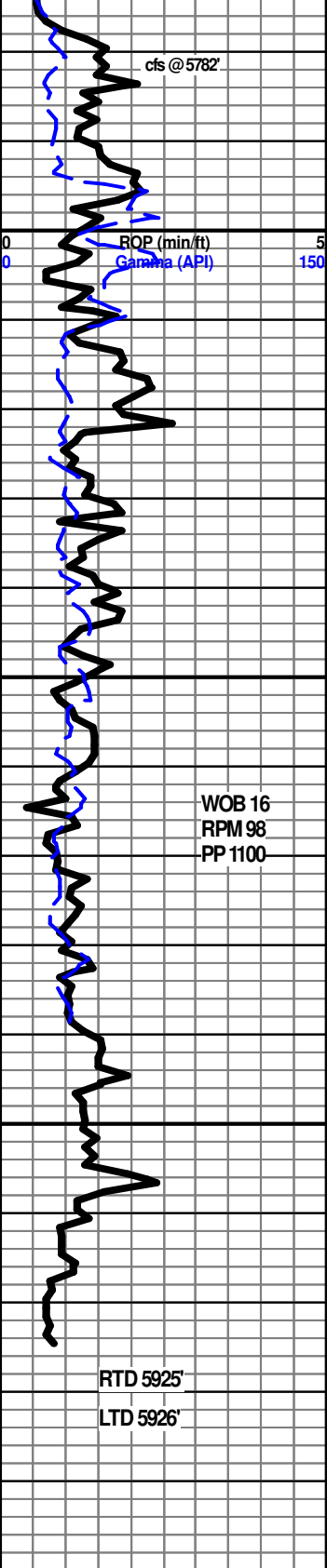
Viola C 5737' (-3571')

Limestone-cream light tan hard dense to brittle, fine crystalline to very tight sucrosic trace of fossil fragments, abundant white reworked chert embed, dull yellow fluorescence in part, no visible porosity, no visible show or cut

Limestone- off white cream light gray, hard dense to brittle very fine sucrosic matrix with laminated dark gray shale, abundant white chert thruout, no fluorescence no visible porosity, no visible show or cut

5770-5777' Dolomite- pure white, with light tan oil stain in 30%, hard brittle, very coarse sucrosic matrix to fine sucrosic in part, traces calcareous in part with tan





white chert embed , bright yellow gold fluorescence thruout, fair to good visible inter-xln porosity to scattered micro vug porosity, good flush cut, to good very good slow stream cut very good strong oil odor wet in cup and dry
 5780-5790' Dolomite light tan tan & due to scattered stain hard very brittle in part very coarse sucrosic matrix to fine crystalline in part, bright yellow gold fluorescence in 40%, poor fair to good visible inter-xln porosity in 30%, fair flush cut to fair to good slow stream cut in 30%, very strong oil odor (sulphur), no stain on dish
 5796'-5813' Dolomite white hard brittle very coarse sucrosic matrix with coarse dolomitic grains, trace of embed white chert, bright yellow mineral fluorescence thruout, very good inter-xln porosity thruout good micro vug porosity thruout, no visible show or cut
 Limestone- cream buff -hard dense to slight brittle, fine crystalline to slightly sucrosic, traces of laminated shale in part with abundant white tan chert, dull yellow fluorescence, no visible porosity, no visible show
 Limestone- frosty white to light gray hard to very brittle very sucrosic matrix, very arenaceous thru, slightly sub chalky, abundant white chert, no fluorescence, no visible porosity, no visible show
 Limestone- frosty white to light gray hard to very brittle very sucrosic matrix, very arenaceous thru, slightly sub chalky, abundant white chert, no fluorescence, no visible porosity, no visible show
 sandy Limestone- light tan to frosty hard very brittle , very dolomitic thruout, disseminated gray shale embed in part, abundant white tan gray chert, no fluorescence, traces of poor visible micro pin point porosity, no visible show or cut
 RTD @ 2:37 am Sept 03, 2022
 CTCH 2 Hours
 Drop Survey/ TOFL

