

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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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 8254

Date	10-14-72	Sec.	22	Twp.	S	Range	21	County	NORTON	State	KS	On Location	Finish
------	----------	------	----	------	---	-------	----	--------	--------	-------	----	-------------	--------

Location LUGAN SW 45

Lease <u>RS BRAND</u>	Well No. <u>6</u>	Owner To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor <u>DISCOVERY</u>		
Type Job <u>PTA</u>		

Hole Size <u>7 7/8</u>	T.D. <u>3589</u>	Charge To <u>FOURWINDS OIL CORP</u>
------------------------	------------------	-------------------------------------

Csg.	Depth	Street
------	-------	--------

Tbg. Size	Depth	City State
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Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.
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Cement Left in Csg.	Shoe Joint	Cement Amount Ordered <u>30 SB 6/40-4</u>
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Meas Line	Displace	<u>4" HD</u>
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EQUIPMENT

Pumptrk <u>16</u>	No.	Cementer Helper	<u>BILL</u>	Common
Bulktrk	No.	Driver	<u>JORDAN</u>	Poz. Mix
Bulktrk	No.	Driver	<u>ROSS</u>	Gel.
Bulktrk	No.	Driver		Calcium

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole <u>30</u>	Salt
Mouse Hole <u>15</u>	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
<u>3589 - 50M</u>	Sand
<u>1200 - 50M</u>	Handling
<u>1070 - 100M</u>	Mileage
<u>270 - 50M</u>	
<u>40 - 10M</u>	

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down
	<u>WOOD PLUG - 1</u>

Pumptrk Charge	
Mileage	

	Tax	
	Discount	
	Total Charge	

X Signature [Signature]

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 8147

Date	10-5-22	Sec.	22	Twp.	5	Range	21	County	NORTON	State	KS	On Location	Finish
Location													1:00 PM

Lease **KS BRAND** Well No. **6** Location **22 AN SW 4S**

Contractor **DISCOUNT** Owner **To Quality Oilwell Cementing, Inc.**

Type Job **SURFACE** You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size **12 1/4** T.D. **221** Charge To **FOUR WINDS OIL CORP**

Csg. **5 E** Depth Street

Tbg. Size Depth City State

Tool Depth The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. **15** Shoe Joint Cement Amount Ordered **180 80/20 3 2**

Meas Line Displace **13**

EQUIPMENT			Common
Pumptrk 17	No.	Cementer	Poz. Mix
		Helper	
Bulktrk	No.	Driver	Gel.
		Driver	
Bulktrk	No.	Driver	Calcium
		Driver	

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
Pipe set 220	Sand
180 80/20	Handling
plug w/ 13 tbl	Mileage
2 cent did CIRC	

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Pumptrk Charge

Mileage

	Tax	
	Discount	
	Total Charge	

X Signature *[Handwritten Signature]*



DRILL STEM TEST REPORT

Prepared For: **Fourwinds Oil Corp.**

PO Box 1063
Hays, KS 67601

ATTN: Cameron Brin

KS Brand #6

22-5s-21w Norton,KS

Start Date: 2022.10.12 @ 05:45:00

End Date: 2022.10.12 @ 11:35:36

Job Ticket #: 69657 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2022.10.14 @ 11:02:15



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Fourwinds Oil Corp.

22-5s-21w Norton, KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69657

DST#: 1

ATTN: Cameron Brin

Test Start: 2022.10.12 @ 05:45:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:03:36

Time Test Ended: 11:35:36

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 73

Interval: 3556.00 ft (KB) To 3612.00 ft (KB) (TVD)

Reference Elevations: 2179.00 ft (KB)

Total Depth: 3612.00 ft (KB) (TVD)

2171.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6771

Inside

Press@RunDepth: 37.83 psig @ 3557.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.10.12

End Date:

2022.10.12

Last Calib.: 2022.10.12

Start Time: 05:45:01

End Time:

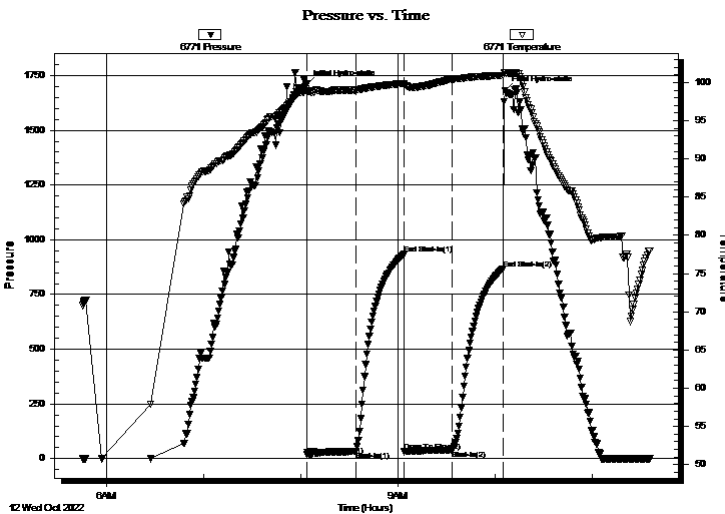
11:35:36

Time On Btm: 2022.10.12 @ 08:03:21

Time Off Btm: 2022.10.12 @ 10:06:06

TEST COMMENT: 30 - IF: Blow built to 1 1/2", died back to 1"
30 - IS: No blow
30 - FF: Blow built to 1/4"
30 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1710.48	99.16	Initial Hydro-static
1	16.91	98.73	Open To Flow (1)
31	32.33	99.03	Shut-In(1)
60	932.94	99.89	End Shut-In(1)
61	33.60	99.66	Open To Flow (2)
90	37.83	100.43	Shut-In(2)
122	867.51	100.94	End Shut-In(2)
123	1682.48	101.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	VSOCM 97% m, 3% o	0.42
0.00	GIP = 13'	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Fourwinds Oil Corp.

22-5s-21w Norton,KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69657

DST#: 1

ATTN: Cameron Brin

Test Start: 2022.10.12 @ 05:45:00

Tool Information

Drill Pipe:	Length: 3506.00 ft	Diameter: 3.80 inches	Volume: 49.18 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 49.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3556.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3529.00	
Shut In Tool	5.00			3534.00	
Hydraulic tool	5.00			3539.00	
EM Tool	4.00			3543.00	
Safety Joint	3.00			3546.00	
Packer	5.00			3551.00	28.00 Bottom Of Top Packer
Packer	5.00			3556.00	
Stubb	1.00			3557.00	
Recorder	0.00	6771	Inside	3557.00	
Recorder	0.00	8367	Outside	3557.00	
Perforations	19.00			3576.00	
Blank Spacing	33.00			3609.00	
Bullnose	3.00			3612.00	56.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Fourwinds Oil Corp.

22-5s-21w Norton,KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69657

DST#: 1

ATTN: Cameron Brin

Test Start: 2022.10.12 @ 05:45:00

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: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	VSOCM 97% _m , 3% _o	0.419
0.00	GIP = 13'	0.000

Total Length: 50.00 ft Total Volume: 0.419 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

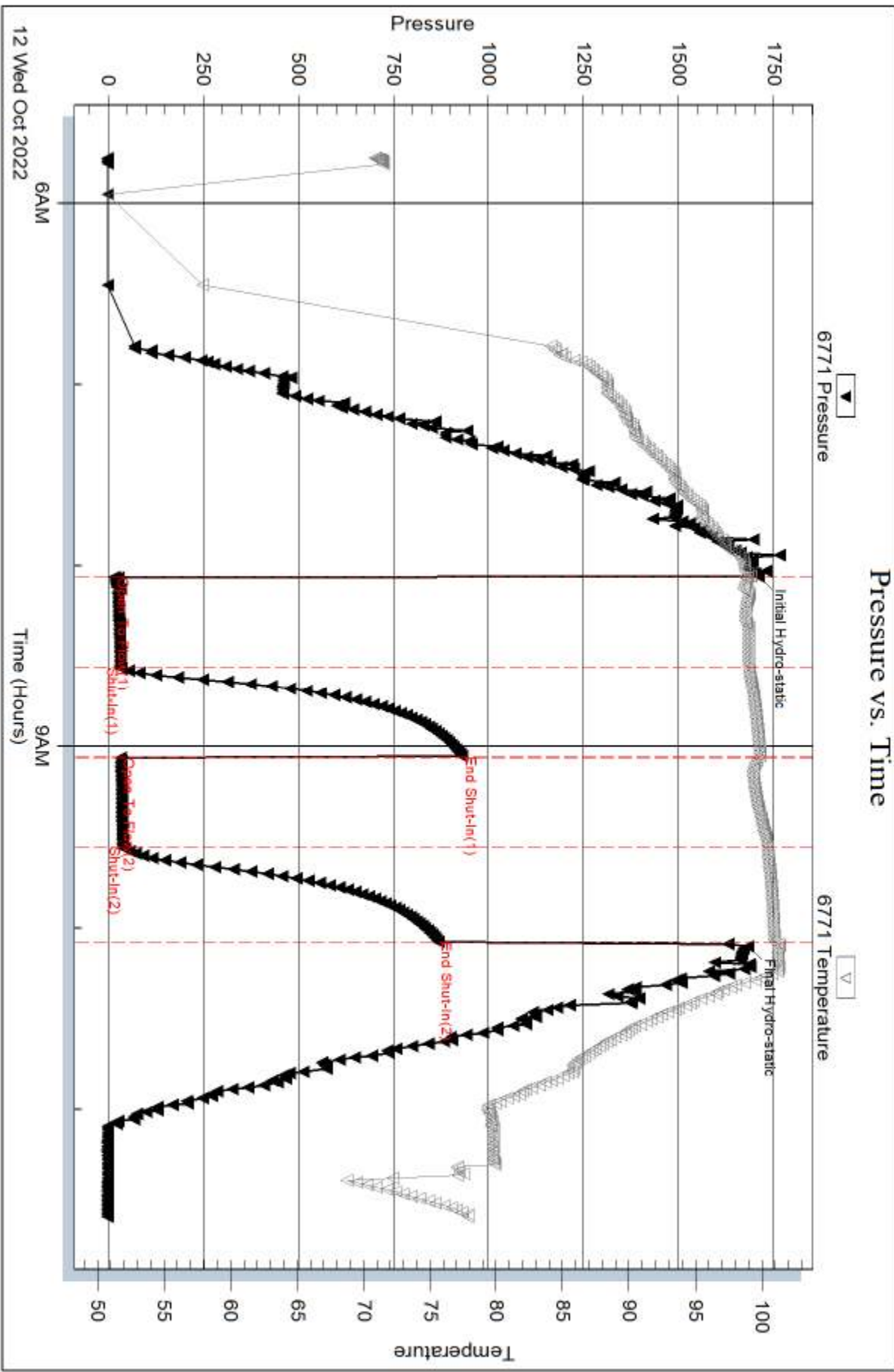
Serial #: 6771

Inside

Fourwinds Oil Corp.

KS Brand #6

DST Test Number: 1



12 Wed Oct 2022

Time (Hours)

Trilobite Testing, Inc

Ref. No: 69657

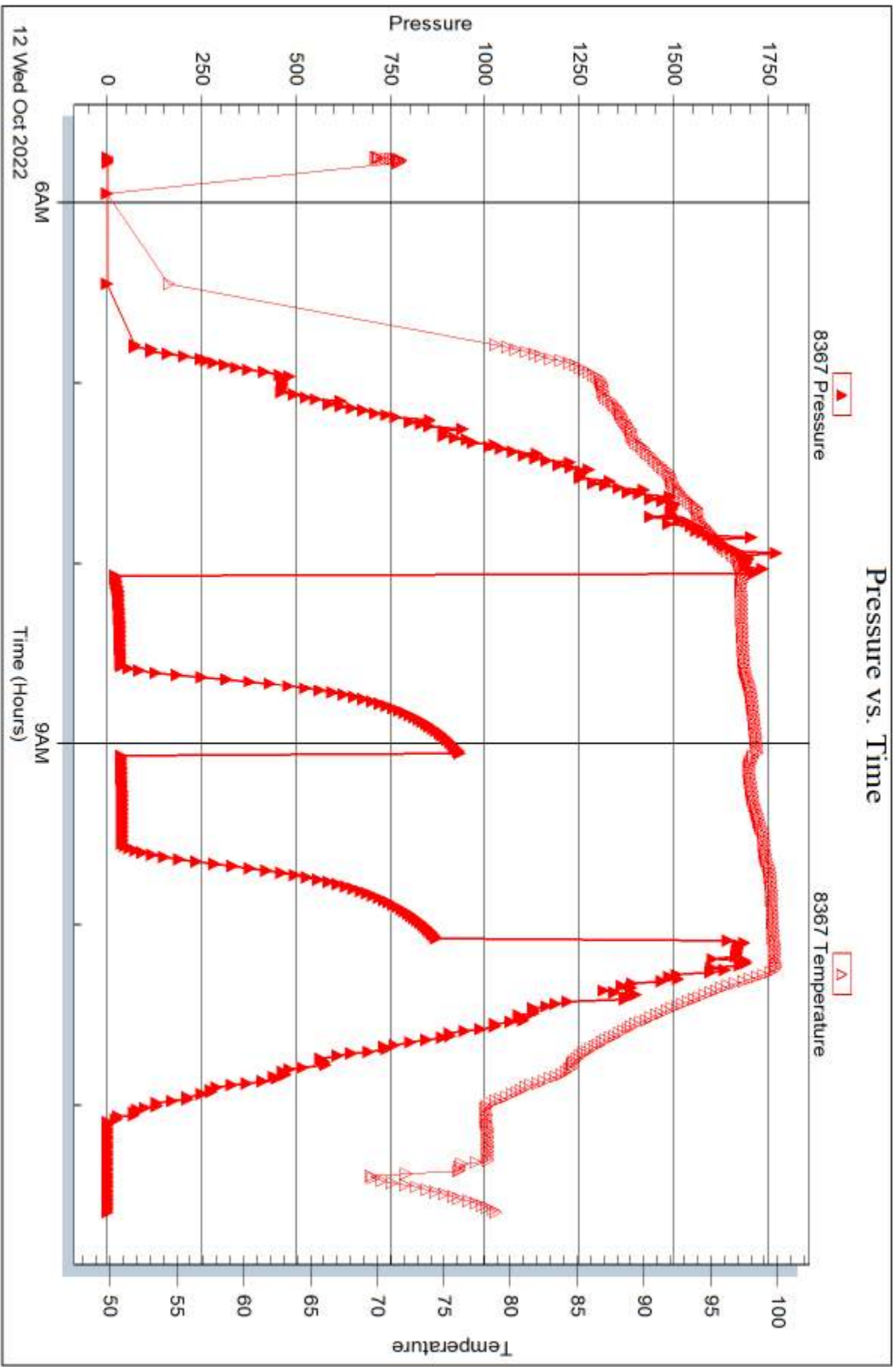
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Serial #: 8367

Outside Fourwinds Oil Corp.

KS Brand #6

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Fourwinds Oil Corp.**

PO Box 1063
Hays, KS 67601

ATTN: Cameron Brin

KS Brand #6

22-5s-21w Norton,KS

Start Date: 2022.10.12 @ 20:28:00

End Date: 2022.10.13 @ 01:16:36

Job Ticket #: 69658 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2022.10.14 @ 11:01:35



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Fourwinds Oil Corp.

22-5s-21w Norton, KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69658

DST#: 2

ATTN: Cameron Brin

Test Start: 2022.10.12 @ 20:28:00

GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:38:21

Time Test Ended: 01:16:36

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 3556.00 ft (KB) To 3620.00 ft (KB) (TVD)

Reference Elevations: 2179.00 ft (KB)

Total Depth: 3620.00 ft (KB) (TVD)

2171.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6771 Inside

Press@RunDepth: psig @ 3557.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.10.12

End Date:

2022.10.13

Last Calib.: 2022.10.13

Start Time: 20:28:01

End Time:

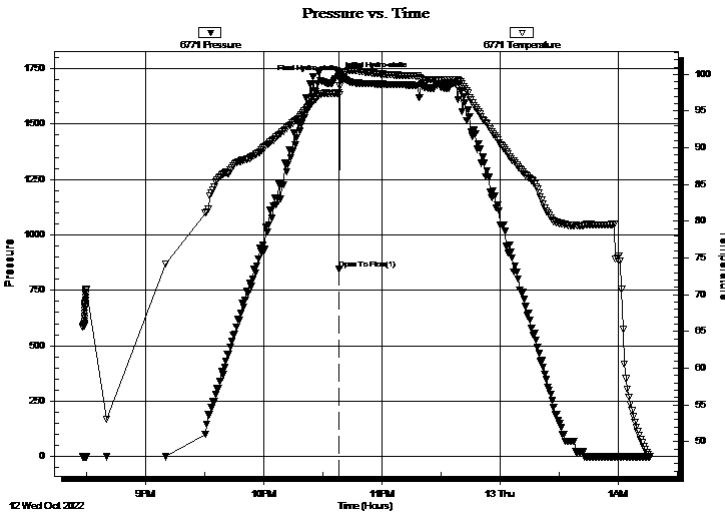
01:16:36

Time On Btm: 2022.10.12 @ 22:38:06

Time Off Btm: 2022.10.12 @ 22:41:21

TEST COMMENT: Packer Failure
reset tools - failed again
pulled tools

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1714.86	97.53	Initial Hydro-static
1	846.31	97.26	Open To Flow (1)
4	1699.63	100.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud 100%	1.40

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Fourwinds Oil Corp.

22-5s-21w Norton,KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69658

DST#: 2

ATTN: Cameron Brin

Test Start: 2022.10.12 @ 20:28:00

Tool Information

Drill Pipe:	Length: 3506.00 ft	Diameter: 3.80 inches	Volume: 49.18 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 49.33 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3556.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	64.00 ft				
Tool Length:	92.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3529.00	
Shut In Tool	5.00			3534.00	
Hydraulic tool	5.00			3539.00	
EM Tool	4.00			3543.00	
Safety Joint	3.00			3546.00	
Packer	5.00			3551.00	28.00 Bottom Of Top Packer
Packer	5.00			3556.00	
Stubb	1.00			3557.00	
Recorder	0.00	6771	Inside	3557.00	
Recorder	0.00	8367	Outside	3557.00	
Perforations	25.00			3582.00	
Blank Spacing	33.00			3615.00	
Perforations	2.00			3617.00	
Bullnose	3.00			3620.00	64.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Fourwinds Oil Corp.

22-5s-21w Norton,KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69658

DST#: 2

ATTN: Cameron Brin

Test Start: 2022.10.12 @ 20:28:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Mud 100%	1.401

Total Length: 120.00 ft Total Volume: 1.401 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6771

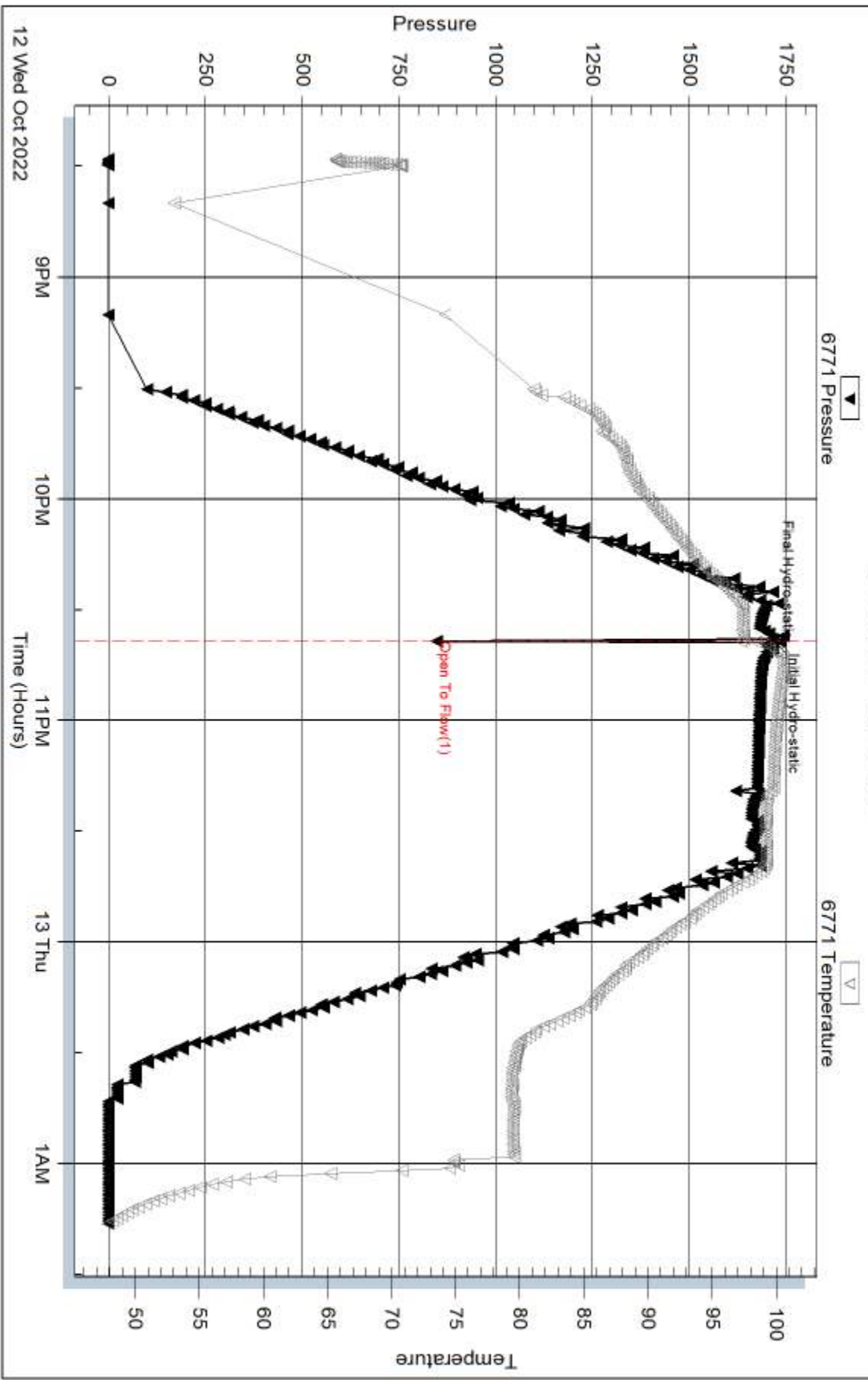
Inside

Fourwinds Oil Corp.

KS Brand #6

DST Test Number: 2

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 69658

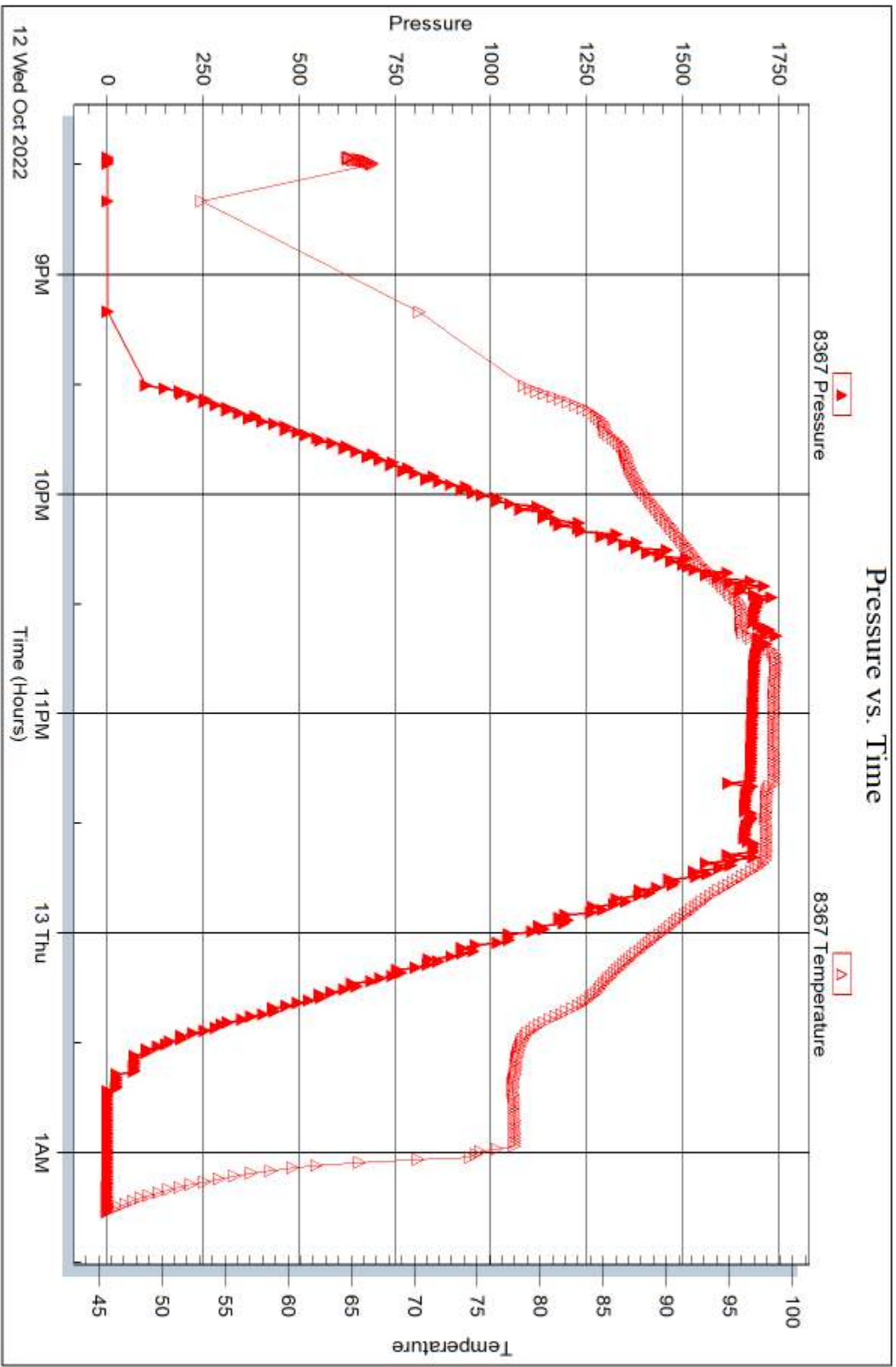
Printed: 2022.10.14 @ 11:01:36

Serial #: 8367

Outside Fourwinds Oil Corp.

KS Brand #6

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 69658

Printed: 2022.10.14 @ 11:01:36



DRILL STEM TEST REPORT

Prepared For: **Fourwinds Oil Corp.**

PO Box 1063
Hays, KS 67601

ATTN: Cameron Brin

KS Brand #6

22-5s-21w Norton,KS

Start Date: 2022.10.13 @ 01:45:00

End Date: 2022.10.13 @ 07:39:36

Job Ticket #: 69659 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2022.10.14 @ 11:00:25



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Fourwinds Oil Corp.

22-5s-21w Norton, KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69659

DST#: 3

ATTN: Cameron Brin

Test Start: 2022.10.13 @ 01:45:00

GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:33:36

Time Test Ended: 07:39:36

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 3538.00 ft (KB) To 3620.00 ft (KB) (TVD)

Reference Elevations: 2179.00 ft (KB)

Total Depth: 3620.00 ft (KB) (TVD)

2171.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6771

Inside

Press@RunDepth: 72.95 psig @ 3539.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.10.13

End Date:

2022.10.13

Last Calib.: 2022.10.13

Start Time: 01:45:01

End Time:

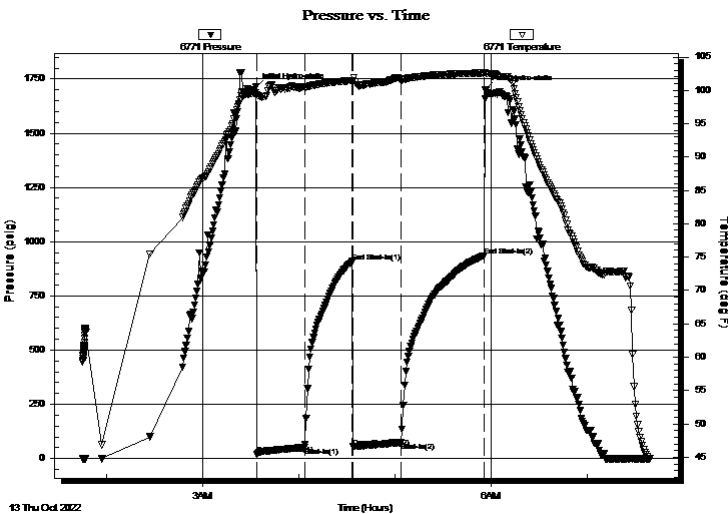
07:39:36

Time On Btm: 2022.10.13 @ 03:33:06

Time Off Btm: 2022.10.13 @ 05:56:36

TEST COMMENT: 30 - IF: Blow built to 2 3/4"
30 - IS: No blow
30 - FF: Blow built to 1 3/4"
45 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1712.42	99.63	Initial Hydro-static
1	20.79	99.39	Open To Flow (1)
31	51.36	100.52	Shut-In(1)
61	908.85	101.46	End Shut-In(1)
61	54.04	101.38	Open To Flow (2)
91	72.95	101.54	Shut-In(2)
143	936.25	102.61	End Shut-In(2)
144	1699.67	102.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	Mud w /Oil spots 98%m, 2%o	0.60
52.00	Mud w /trace oil 100%m	0.73

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Fourwinds Oil Corp.

22-5s-21w Norton,KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69659

DST#: 3

ATTN: Cameron Brin

Test Start: 2022.10.13 @ 01:45:00

Tool Information

Drill Pipe:	Length: 3506.00 ft	Diameter: 3.80 inches	Volume: 49.18 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 49.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3538.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.00 ft			
Tool Length:	110.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3511.00	
Shut In Tool	5.00			3516.00	
Hydraulic tool	5.00			3521.00	
EM Tool	4.00			3525.00	
Safety Joint	3.00			3528.00	
Packer	5.00			3533.00	28.00 Bottom Of Top Packer
Packer	5.00			3538.00	
Stubb	1.00			3539.00	
Recorder	0.00	6771	Inside	3539.00	
Recorder	0.00	8367	Outside	3539.00	
Perforations	11.00			3550.00	
Blank Spacing	65.00			3615.00	
Perforations	2.00			3617.00	
Bullnose	3.00			3620.00	82.00 Bottom Packers & Anchor

Total Tool Length: 110.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Fourwinds Oil Corp.

22-5s-21w Norton,KS

PO Box 1063
Hays, KS 67601

KS Brand #6

Job Ticket: 69659

DST#: 3

ATTN: Cameron Brin

Test Start: 2022.10.13 @ 01:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	Mud w /Oil spots 98%m, 2%o	0.601
52.00	Mud w /trace oil 100%m	0.729

Total Length: 115.00 ft

Total Volume: 1.330 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

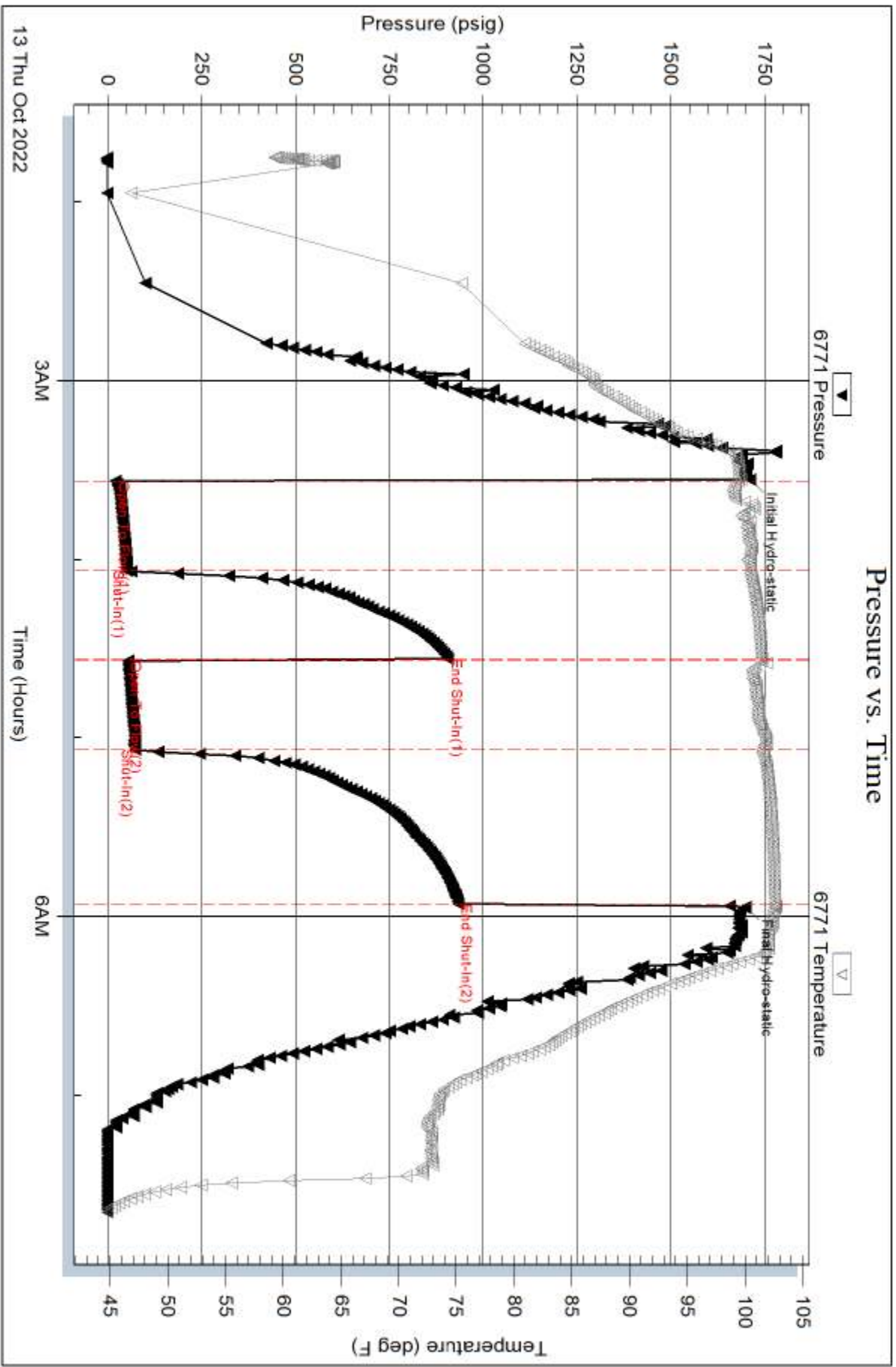
Serial #: 6771

Inside

Fourwinds Oil Corp.

KS Brand #6

DST Test Number: 3

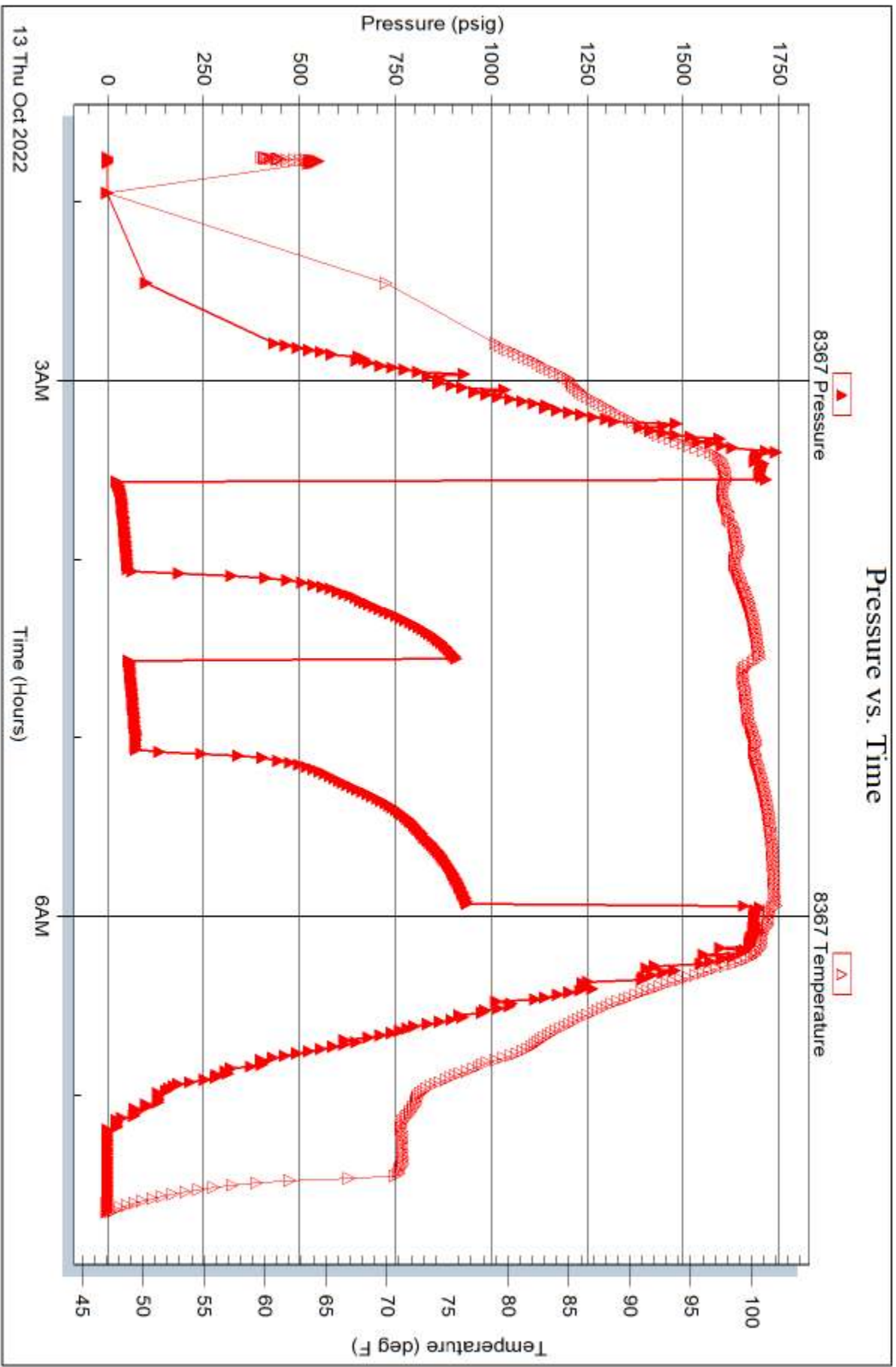


Serial #: 8367

Outside Fourwinds Oil Corp.

KS Brand #6

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69657

Well Name & No. KS Brand #6 Test No. 1 Date 10-12-22
 Company Fourwinds Oil Corp Elevation 2179 KB 2171 GL
 Address PO Box 1063 Hays KS 67601
 Co. Rep / Geo. Cameron Brin Rig Discovery #4
 Location: Sec. 22 Twp 5s Rge. 21w Co. Norton State KS

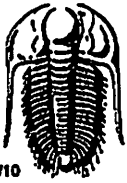
Interval Tested 3556 - 3612 Zone Tested Arbuckle
 Anchor Length 56 Drill Pipe Run 3506 Mud Wt. 8.8
 Top Packer Depth 3551 Drill Collars Run 31 Vls 53
 Bottom Packer Depth 3556 Wt. Pipe Run - WL 8.0
 Total Depth 3612 Chlorides 700 ppm System LCM 2 1/2
 Blow Description IF: Blow built to 1/2", died back to 1"
ISI: No blow
FF: Blow built to 1/4"
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>50</u>	<u>VSOCM</u>	<u>3</u>		<u>97</u>	
	<u>GIP=13'</u>				

Rec Total 50 BHT 101 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1710 Test 1800 T-On Location 4:00
 (B) First Initial Flow 17 Jars _____ T-Started 5:45
 (C) First Final Flow 32 Safety Joint _____ T-Open 8:03
 (D) Initial Shut-In 933 Circ Sub _____ T-Pulled 10:04
 (E) Second Initial Flow 34 Hourly Standby _____ T-Out 11:30
 (F) Second Final Flow 38 Mileage 132RT 198 Comments _____
 (G) Final Shut-In 868 Sampler _____
 (H) Final Hydrostatic 1682 Straddle _____ EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1998
 Sub Total 1998 MP/DST Disc't _____

Approved By _____ Our Representative James Winder
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69658

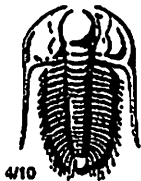
Well Name & No. KS Brand #6 Test No. 2 Date 10-12-22
 Company Fourwinds Oil Corp Elevation 2179 KB 2171 GL
 Address PO Box 1063 Hays KS 67601
 Co. Rep / Geo. Cameron Brin Rig Discovery #4
 Location: Sec. 22 Twp 5S Rge. 21W Co. Norton State KS

Interval Tested 3556 - 3620 Zone Tested Reagan Sand
 Anchor Length 64 Drill Pipe Run 3506 Mud Wt. 9.1
 Top Packer Depth 3551 Drill Collars Run 31 Vls 56
 Bottom Packer Depth 3556 Wt. Pipe Run - WL 8.0
 Total Depth 3620 Chlorides 1000 ppm System LCM 2
 Blow Description Packer Failure
Reset tool - failed again
Pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 120 BHT 100 Gravity 1350 API RW @ °F Chlorides ppm
 (A) Initial Hydrostatic Test 1350 T-On Location 18:45 10/12
 (B) First Initial Flow Jars _____ T-Started 20:28
 (C) First Final Flow Safety Joint _____ T-Open 22:38
 (D) Initial Shut-In Circ Sub _____ T-Pulled 22:41
 (E) Second Initial Flow Hourly Standby _____ T-Out 1:15 11/13
 (F) Second Final Flow Mileage NA _____
 (G) Final Shut-In Sampler _____
 (H) Final Hydrostatic Straddle _____
 EM Tool -350
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1350 Sub Total 0
 Total 1000 MP/DST Disc't _____

Approved By _____ Our Representative James Wink
 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.



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 69659

Well Name & No. KS Brand #6 Test No. 3 Date 10-13-22
 Company Fourwinds Oil Corp. Elevation 2179 KB 2171 GL
 Address PO Box 1063 Hays KS 67601
 Co. Rep / Geo. Cameron Brin Rig Discovery #4
 Location: Sec. 22 Twp 5s Rge. 2W Co. Norton State KS

Interval Tested 3538 - 3620 Zone Tested Reagan Sand
 Anchor Length 82 Drill Pipe Run 3506 Mud Wt. 9.1
 Top Packer Depth 3533 Drill Collars Run 31 Vis 56
 Bottom Packer Depth 3538 Wt. Pipe Run - WL 8.0
 Total Depth 3620 Chlorides 1000 ppm System LCM 2

Blow Description IF: Blow built to 2 3/4"
ISI: No blow
FF: Blow built to 1 3/4"
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>52</u>	<u>Mud w/trace oil</u>	<u>trace</u>		<u>100</u>	
<u>63</u>	<u>Mud w/oil spots</u>	<u>2</u>		<u>98</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 115 BHT 103 Gravity 1800 API RW @ °F Chlorides ppm
 (A) Initial Hydrostatic 1712 Test 1800 T-On Location 1:30
 (B) First Initial Flow 21 Jars _____ T-Started 1:45
 (C) First Final Flow 51 Safety Joint _____ T-Open 3:33
 (D) Initial Shut-In 909 Circ Sub _____ T-Pulled 5:55
 (E) Second Initial Flow 54 Hourly Standby _____ T-Out 7:40
 (F) Second Final Flow 73 Mileage NA 132 RT ¹⁹⁸ Comments _____
 (G) Final Shut-In 936 Sampler _____
 (H) Final Hydrostatic 1700 Straddle _____ EM Tool _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 30 Ruined Packer _____
 Final Flow 30 Extra Copies _____
 Final Shut-In 45 Extra Recorder _____
 Sub Total 1998 Day Standby _____
 Sub Total 1998 Accessibility _____
 Sub Total 1998 MP/DST Disc't _____

Approved By _____ Our Representative Jarnee Hanks

Triobite 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.



Scale 1:240 Imperial

Well Name: KS BRAND #6
Surface Location: SE, NW, NE, SE, Sec. 22, T5S, R21W
Bottom Location:
API: 15-137-20763
License Number: 34916
Spud Date: 10/8/2022 Time: 8:15 AM
Region: NORTON COUNTY
Drilling Completed: 10/13/2022 Time: 2:00 PM
Surface Coordinates: 2050' FSL & 840' FEL
Bottom Hole Coordinates:
Ground Elevation: 2171.00ft
K.B. Elevation: 2179.00ft
Logged Interval: 3100.00ft To: 3650.00ft
Total Depth: 3650.00ft
Formation: ARBUCKLE
Drilling Fluid Type: CHEMICAL MUD

OPERATOR

Company: FOURWINDS OIL CORPORATION
Address: PO BOX 1063

Contact Geologist: DAN WINDHOLZ
Contact Phone Nbr: 785-259-8403
Well Name: KS BRAND #6
Location: SE, NW, NE, SE, Sec. 22, T5S, R21W
API: 15-137-20763
Pool: Field: RAY WEST
State: KS Country:

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.668176
Latitude: 39.60191
N/S Co-ord: 2050' FSL
E/W Co-ord: 840' FEL

LOGGED BY

Company:
Address: 2511 E 19TH
HAYS, KS 67601
Phone Nbr: (785) 639-0721
Logged By: Geologist Name: CAMERON BRIN

CONTRACTOR

Contractor: DISCOVERY DRILLING
Rig #: 4
Rig Type: MUD ROTARY
Spud Date: 10/8/2022 Time: 8:15 AM
TD Date: 10/13/2022 Time: 2:00 PM
Rig Release: 10/14/2022 Time: 3:00 AM

ELEVATIONS

K.B. Elevation: 2179.00ft Ground Elevation: 2171.00ft
 K.B. to Ground: 8.00ft

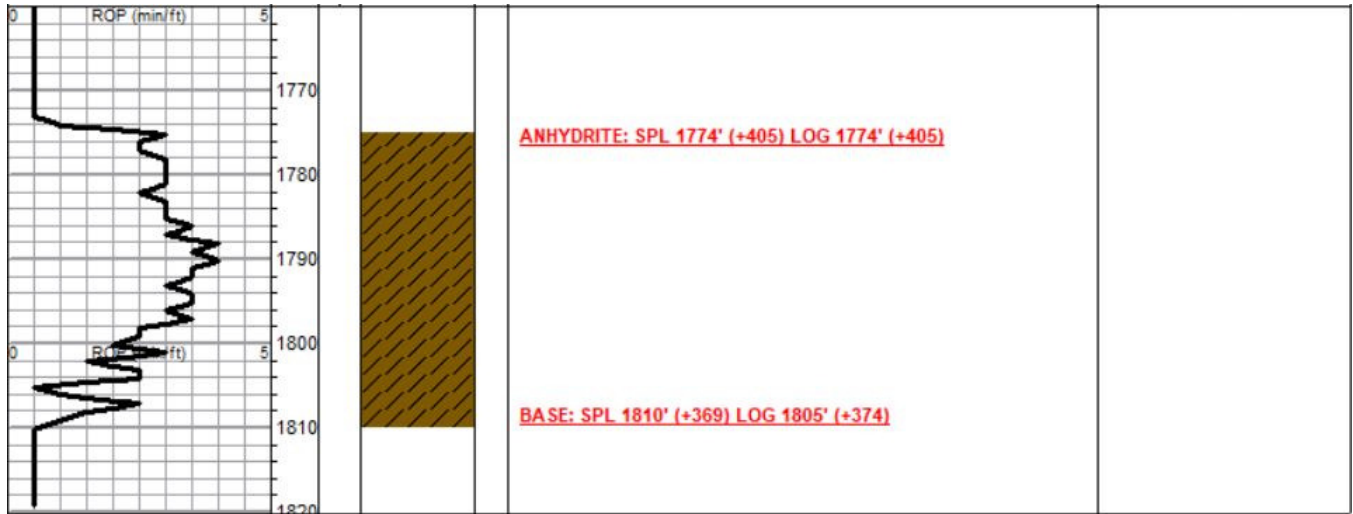
NOTES

AFTER REVIEWING THE LOGS AND POOR DST RESULTS, DECISION WAS MADE TO PLUG AND ABANDON THE KS BRAND #6

TOPS COMPARISON

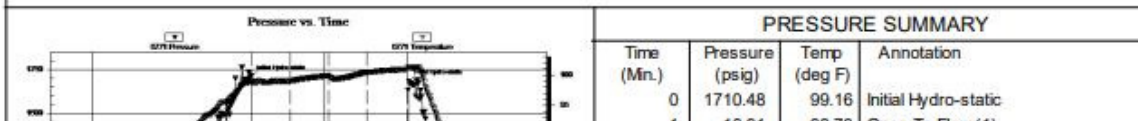
FORMATION	KS BRAND #6				KEMPER #1				KEMPER B UNIT #2				D&A 10/28/67				KEMPER A #1											
	BLACK DIAMOND OIL				BLACK DIAMOND OIL				BLACK DIAMOND OIL				ALENADER HOWARD				BLACK DIAMOND OIL											
	NW, SE, SE, Sec. 22-9-21				SW, NW, NW, SW, Sec. 23-9-21				SW, SE, NE, Sec. 22-9-21				NE, SW, SW, NE, Sec. 22-9-21															
	KB	2179	GL	2171	KB	2167	KB	2195	KB	2162	KB	2134																
	LOG TOPS		SAMPLE TOPS		LOG		SMPL.		COMP. CARD		LOG		SMPL.		LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.			
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM
ANHYDRITE TOP	1774	405	1774	405	1757	410	- 5	- 5	1788	407	- 2	- 2	1756	406	- 1	- 1	1731	403	+ 2	+ 2								
BASE	1805	374	1810	369	1786	381	- 7	- 12	1819	376	- 2	- 7	1793	369	+ 5	+ 0	1755	379	- 5	- 10								
TOPEKA	3183	-1004	3184	-1005	3164	-997	- 7	- 8	3199	-1004	+ 0	- 1					3145	-1011	+ 7	+ 6								
HEEBNER SHALE	3330	-1151	3330	-1151	3313	-1146	- 5	- 5	3344	-1149	- 2	- 2	3311	-1149	- 2	- 2	3288	-1154	+ 3	+ 3								
TORONTO	3356	-1177	3355	-1176	3340	-1173	- 4	- 3	3370	-1175	- 2	- 1	3335	-1173	- 4	- 3	3314	-1180	+ 3	+ 4								
LKC	3373	-1194	3370	-1191	3357	-1190	- 4	- 1	3384	-1189	- 5	- 2	3351	-1189	- 5	- 2	3330	-1196	+ 2	+ 5								
BKC	3565	-1386	3560	-1381	3543	-1376	- 10	- 5	3578	-1383	- 3	+ 2	3540	-1378	- 8	- 3	3518	-1384	- 2	+ 3								
ARBUCKLE	3609	-1430	3608	-1429	3588	-1421	- 9	- 8	3622	-1427	- 3	- 2	3588	-1426	- 4	- 3												
REAGAN	3615	-1436	3614	-1435													3568	-1434	- 2	- 1								
TOTAL DEPTH	3652	-1473	3650	-1471	3590	-1423	- 50	- 48	3626	-1431	- 42	- 40	3592	-1430	- 43	- 41	3568	-1434	- 39	- 37								

ANHYDRITE



DST #1 3556'-3612' (ARBUCKLE)

	DRILL STEM TEST REPORT		
	Fourwinds Oil Corp. PO Box 1063 Hays, KS 67601 ATTN: Cameron Brin	22/5s/21w Norton, KS KS Brand #6 Job Ticket: 69657 Test Start: 2022.10.12 @ 05:45:00	
GENERAL INFORMATION:			
Formation: Arbuckle Deviated: No Whipstock Time Tool Opened: 08:03:36 Time Test Ended: 11:35:36	ft (KB) Test Type: Conventional Bottom Hole (Initial) Tester: James Winder Unit No: 73		
Interval: 3556.00 ft (KB) To 3612.00 ft (KB) (TVD) Total Depth: 3612.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair	Reference Elevations: 2179.00 ft (KB) 2171.00 ft (CF) KB to GR/CF: 8.00 ft		
Serial #: 6771 Press@RunDepth: 37.83 psig @ 3557.00 ft (KB) Start Date: 2022.10.12 Start Time: 05:45:01	Inside End Date: 2022.10.12 End Time: 11:35:36	Capacity: 8000.00 psig Last Calib.: 2022.10.12 Time On Btm: 2022.10.12 @ 08:03:21 Time Off Btm: 2022.10.12 @ 10:06:06	
TEST COMMENT: 30 - IF: Blow built to 1 1/2", died back to 1" 30 - IS: No blow 30 - FF: Blow built to 1/4" 30 - FS: No blow			





1	16.91	98.73	Open To Flow (1)
31	32.33	99.03	Shut-h(1)
60	932.94	99.89	End Shut-h(1)
61	33.60	99.66	Open To Flow (2)
90	37.83	100.43	Shut-h(2)
122	867.51	100.94	End Shut-h(2)
123	1682.48	101.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	VSOOM 97% _m , 3% _o	0.42
0.00	GIP = 13'	0.00

Gas Rates

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

Tribolite Testing, Inc

Ref. No: 69657

Printed: 2022.10.12 @ 13:47:51

DST #3 3538'-3620' (REAGAN)

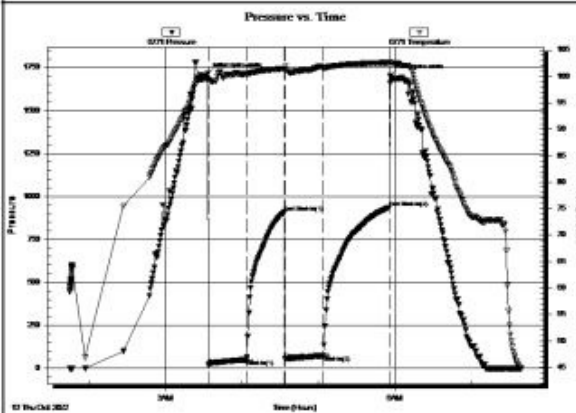
	DRILL STEM TEST REPORT	
	Fourwinds Oil Corp. PO Box 1063 Hays, KS 67601 ATTN: Cameron Brin	22/5s/21w Norton, KS KS Brand #6 Job Ticket: 69659 Test Start: 2022.10.13 @ 01:45:00

GENERAL INFORMATION:

Formation: Reagan Sand
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:33:36
Time Test Ended: 07:39:36
Interval: 3538.00 ft (KB) To 3620.00 ft (KB) (TVD)
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches
Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 73
Reference Elevations: 2179.00 ft (KB)
 2171.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6771 **Inside**
Press@RunDepth: 72.95 psig @ 3539.00 ft (KB) **Capacity:** 8000.00 psig
Start Date: 2022.10.13 **End Date:** 2022.10.13 **Last Calib.:** 2022.10.13
Start Time: 01:45:01 **End Time:** 07:39:36 **Time On Btm:** 2022.10.13 @ 03:33:06
Time Off Btm: 2022.10.13 @ 05:56:36

TEST COMMENT: 30 - IF: Blow built to 2 3/4"
 30 - IS: No blow
 30 - FF: Blow built to 1 3/4"
 45 - FS: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1712.42	99.63	Initial Hydro-static
1	20.79	99.39	Open To Flow (1)
31	51.36	100.52	Shut-h(1)
61	908.85	101.46	End Shut-h(1)
61	54.04	101.38	Open To Flow (2)
91	72.95	101.54	Shut-h(2)
143	936.25	102.61	End Shut-h(2)
144	1699.67	102.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	Mud w/Oil spots 98% _m , 2% _o	0.60
52.00	Mud w/trace oil 100% _m	0.73

Gas Rates

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

ROCK TYPES

 Dolprim	 shale, gry	 shale, red
 Lmst fw7>	 Carbon Sh	 Ss

ACCESSORIES

MINERAL

- ▲ Chert, dark
- Silty
- △ Chert White

FOSSIL

- F Fossils < 20%
- φ Oolite

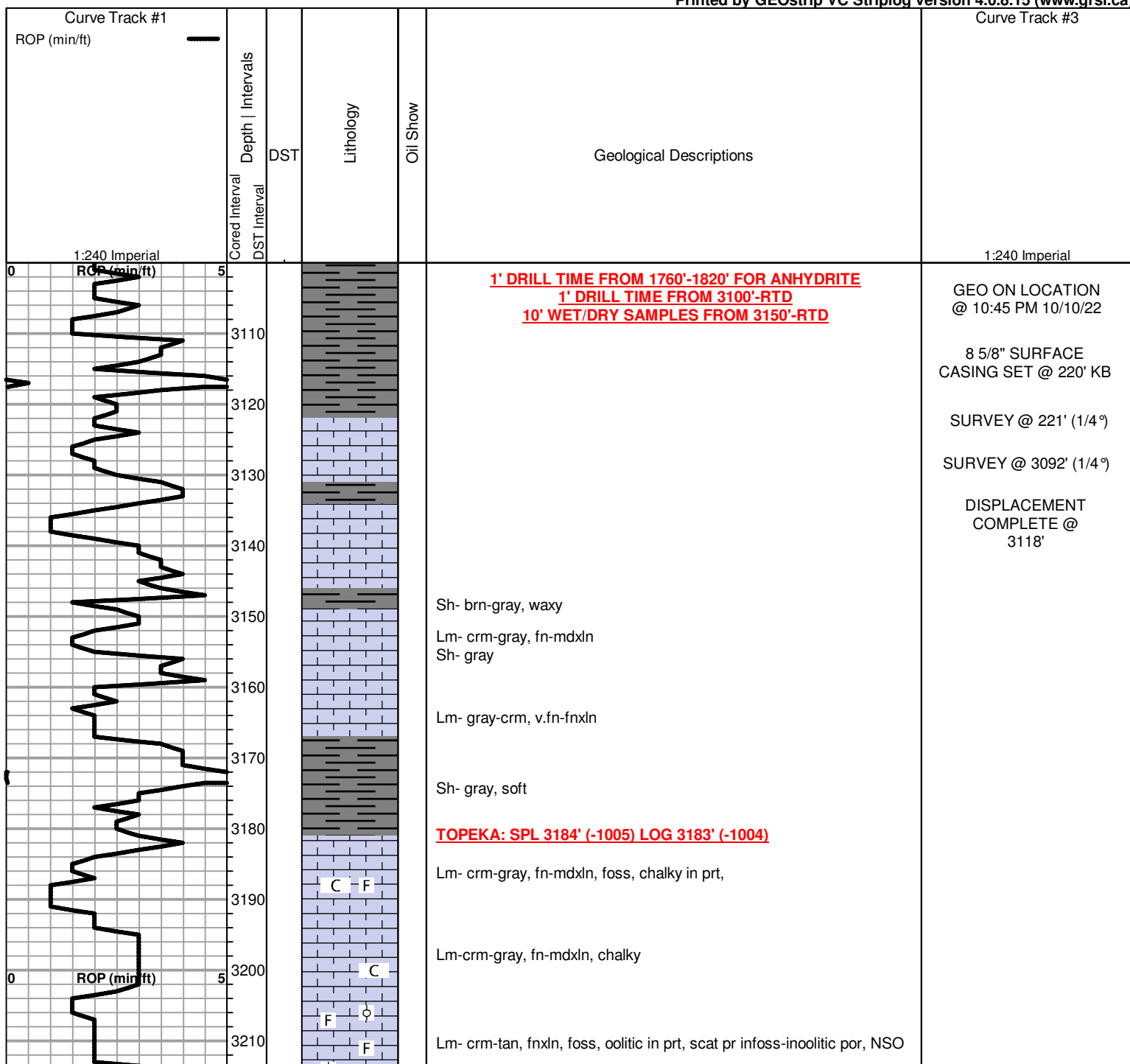
STRINGER

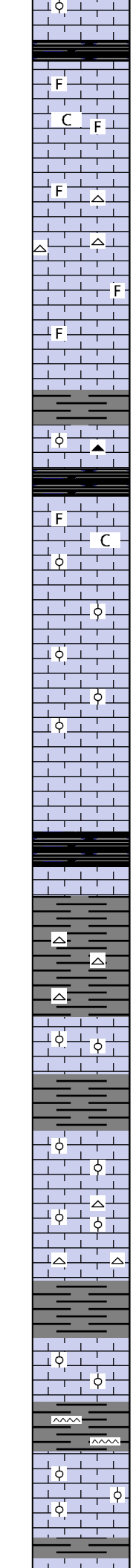
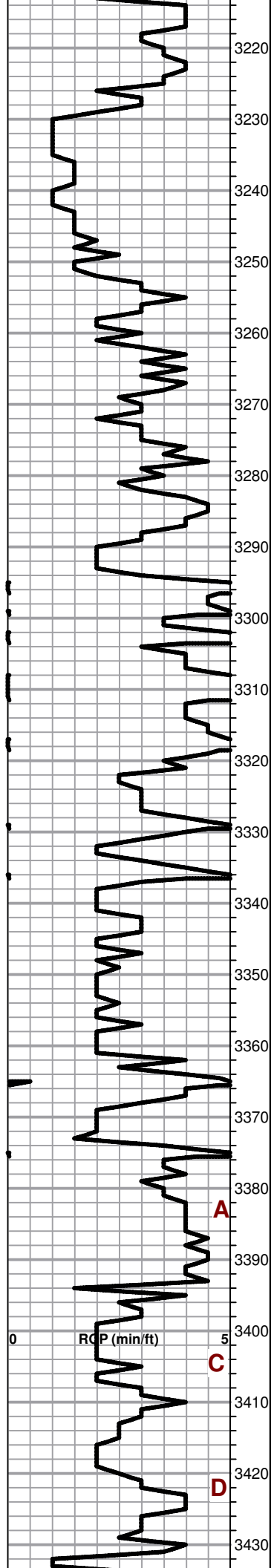
- ~ Chert
- ▬ Shale
- ▬ red shale

TEXTURE

- C Chalky

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





Sh- gray-blk, carb

Lm- crm-wt, v.fn-fnxln, cherty, chalky in prt, scat foss

Lm- crm-wt, v.fn-fnxln, foss in prt, scat wt-tan angular chert

Lm- crm-tan, fnxln, foss in prt

Sh- brn-gray-blk, silty

Lm- crm, fnxln, oolitic in prt, scat tan subangular chert

Sh- blk, carb

Lm-crm-tan, v.fn-fnxln, foss in prt, chalky in prt

Lm- crm, v.fn-fnxln, oolitic in prt, cherty, chalky in prt, scat pr ppt-inoolitic por, few scat pcs w/ spotty brn stn in por, SFO upon crush, mod odor

Lm- crm-wt, v.fn-fnxln, oolitic

Lm- crm, microxln, cherty, dense

HEEBNER: SPL 3330' (-1151) LOG 3330' (-1151)

Sh- blk, carb

Sh- gray-brn-blk, scat tan-wt-gray, blocky chert

TORONTO: SPL 3355' (-1176) LOG 3356' (-1177)

Lm- crm-v.fn-fnxln, oolitic, cherty, v.few pcs w/ pr inoolitic por, 3-4 pcs w/ spotty brn stn in por, NSFO, no odor

Sh- gray-brn
Chert- tan-wt, fresh, angular

LANSING: SPL 3370' (-1191) LOG 3373' (-1194)

Lm- crm, fnxln, oolitic, scat pr inoolitic por, scat spotty brn stn in por, NSFO, no odor

Lm- crm, fnxln, oolitic, scat tan-wt sub angular chert

Lm- crm, microxln, cherty, dense

Sh- brn-gray

Lm- crm, v.fn-fnxln, oolitic, few scat pcs w/ pr ppt-inoolitic por, few pcs w/ spotty brn stn in por, NSFO, no odor

Chert-gray-wt, blocky

Lm- crm, fnxln, oolitic, scat pr fr ppt-inoolitic & vuggy por, scat brn heavy sli sat stn, sli SFO upon crush, no odor

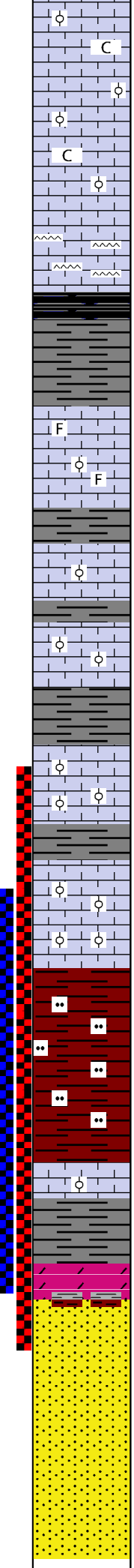
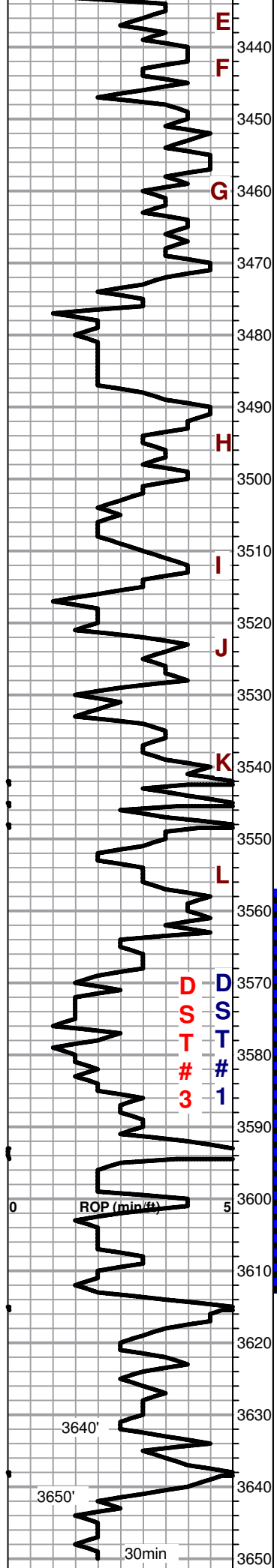
Sh- gray-green, waxy

A

C

D

RCP (min/ft)



Lm- crm, v.fn-fnxln, chalky in prt, oolitic in prt, scat pr in oolitic por, few scat pcs w/ lt. brn spotty stn in por, no vis SFO, gd odor

Lm- crm, fnxln, oolitic, scat pr inoolitic-oomoldic por, few scat pcs w/ brn spotty stn in por, sli sheen & FO drop in cup, faint odor

Lm- crm, v.fnxln, oolitic in prt, chalky in prt, scat tan-wt chert

Lm-A/A
Chert- tan-wt, fresh, subangular

Sh- blk, carb

Sh- gray-blk

Lm- crm-lt. gray, fnxln, foss, oolitic in prt, few scat pcs w/ pr infoss-ppt por, 3-5 pcs w/ brn sli sat stn, sli SFO upon crush, faint odor

Sh- gray-brn

Lm- crm- lt.gray, v.fn-fnxln, oolitic in prt, cherty, scat pr ppt por, v. few scat pcs w/ brn-blk spotty stn, NSFO, no odor

Lm- crm, fnxln, oolitic, tight ppt-inoolitic por, even lt. brn stn in prt, gd SFO in cup & gas bubbles when heated, fr odor

Sh- gray-brn-green

Lm- crm, fnxln, oolitic, scat tight inoolitic por, scat brn stn in por, sli sheen FO in cup, faint odor

Lm- crm, fnxln, oolitic, scat pr inoolitic por, few scat pcs w/ brn-blk stn in por, NSFO, no odor

Lm- crm-olive-lt purple, oolitic, mottled, fairly dense, few pcs w/ pr inoolitic por, v. few pcs w/ blk stn in por, NSFO, no odor

BKC: SPL 3560' (1381') LOG 3565' (-1386)

Sh- red, silty, red wash

Lm- crm, fnxln, cherty, oolitic in prt

Sh- gray-green-brn, gummy gray wash

ARBUCKLE: SPL 3608' (-1429) LOG 3609' (-1430)

3610'- Dolo- crm, fnxln-mdgrn, sandy in prt, sucrosic in prt, fairly tight inxln por, brn sat stn, fr SFO in cup & upon crush, fr-gd odor

3612' Dolo- A/A, few pieces w/ fr inxln por

REAGAN SAND: SPL 3614' (-1435) LOG 3615' (-1436)

3614' Sh- brn-gray, only a few pcs of Dolo w/ pr por, pr show

3617' - Ss-qtz, wt-tan, v.fn-fngrn, calcite matrix, v. well consolidated, well sorted well rounded, mostly tight ppt-inxln-ingrn & tr vuggy por, fr brn sat stn, gd sheen FO in cup & spl, bleeding oil when heated, fr-gd odor

3620'- Ss-qtz, frosted, fn-mdgrn, calcite matrix, well consolidated, mod sorting, mod rounding, fr grading to pr sat stn, mostly tight ingrn & tr vuggy por, fr sheen FO in cup & upon crush, mod grading to pr odor

3623'- Ss-qt, frosted, v.fn-mdgrn, mix of calcite & dolomite cement, well

DST #1
3556'-3612' (ARB)
30-30-30-30
50' VSOCM (3%O)
13' GIP
SIP: 932-867#

DST #2
3556'-3620' (REAGAN)
MISRUN

DST #3
3538'-3620' (REAGAN)
30-30-30-45
63' M w/ O SPTS (2% O)
52' M w/ TR O

CFS @ 3610'
CFS @ 3612'
SURVEY @ 3612 (0°)
CFS @ 3614'
CFS @ 3617'
CFS @ 3620'
CFS @ 3623'

3660
3670
3680
3690
3700

consolidated, mostly well sorted, well rounded, scat tight ingrn por, scat blk spotty-flaky strn, few pcs sli sat, sli sheen FO in cup, pr grading to no odor, abundance of gray & brn waxy shales

3640'- Ss- qtz, clear-frosted, fn-mdgrn, mix of calcite and dolo cement, mostly well cemented, mod-pr sorting, rounded-subangular, pr ingrn por, few scat pcs w/ drk brn-blk tarry-flaky strn, v. sli SFO in cup & 3-4 pcs upon crush, pr-no odor, glauc inclusions

3650'- Ss, qtz, frosted, fn-coarse grn, barren, mix of calcite & dolo cement, mod sorting, mod rounding, scat tight ingrn & tr vuggy por, NSO, glauc inclusion

30min- Ss- clear-frosted, A/A

RTD: SPL 3650' (-1471) LOG 3652' (-1473)

GEO OFF LOCATION
@ 8:30 PM 8/13/22