

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](mailto: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. 2711

Date	2-20-22	Sec.	29	Twp.	S	Range	20	County	Phillips	State	KC	On Location		Finish	9:30Am
------	---------	------	----	------	---	-------	----	--------	----------	-------	----	-------------	--	--------	--------

Location 109 An 35 2W

Lease	D. G. Hansen	Well No.	1	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	Discovery			Charge To	Fork Winds Oil Co.
Type Job	long string	T.D.		Street	
Hole Size	7 7/8	Depth		City	State
Csg.	57	Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tbg. Size		Depth		Cement Amount Ordered	150ft 10% salt 5" G.I.
Tool		Shoe Joint	21.13	Meas Line	Displace 86.53
Cement Left in Csg.	21.13				Songel Flush 4 cell 50.4 @ mdc

**EQUIPMENT**

Pumptrk	17	No.		Cementary Helper	David	1314	Common
Bulktrk	19	No.		Driver	Donny		Poz. Mix
Bulktrk	9	No.		Driver	Rick	DOUG	Gel.
				Driver			Calcium

**JOB SERVICES & REMARKS**

Remarks:		Hulls	
Rat Hole	30	Salt	
Mouse Hole	15"	Flowseal	
Centralizers		Kol-Seal	
Baskets		Mud CLR 48	
D/V or Port Collar		CFL-117 or CD110 CAF 38	
pipe set e	3657.23	Sand	
Shoe st	21.13	Handling	
Insert e	3636.10	Mileage	

**FLOAT EQUIPMENT**

pump 500gal Flush		Guide Shoe	
Cement w/ 405 & 150		Centralizer	7
		Baskets	4
pump plug w/ 8" bbls		AFU Inserts	
land plug		Float Shoe	
Float did hold		Latch Down	1
Cent did cure			

		Pumptrk Charge	
		Mileage	
		Tax	
		Discount	
		Total Charge	

X 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. 2706

Date	2-14-22	Sec.	29	Twp.	S	Range	20	County	Phillips	State	Ka	On Location		Finish	9:15pm
								Location	Logan SS 1 1/2 W						

Lease	D.G. Hansen		Well No.	1	Owner										
Contractor	Discovery				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.										
Type Job	SURFACE				Charge To FOUR WINDS OIL CORP.										
Hole Size	12 1/4	T.D.	224												
Csg.	8 5/8	Depth			Street										
Tbg. Size		Depth			City										
Tool		Depth			State										
Cement Left in Csg.	15	Shoe Joint			The above was done to satisfaction and supervision of owner agent or contractor.										
Meas Line		Displace	13.3 bbls		Cement Amount Ordered 180 8/20 3-2										

EQUIPMENT															
Pumptrk	17	No.	Cementor	Bunker		Common	145								
			Helper			Poz. Mix	35								
Bulktrk		No.	Driver	Cra. 6		Gel.	3								
Bulktrk	14	No.	Driver	Jordan		Calcium	7								

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											
	Ran 5 Jts 8 5/8 det e			Sand											
	cent of 1800			Handling 190											
	pump plug 13.3 bbls			Mileage											
	Cent did circ.														

FLOAT EQUIPMENT															
				Guide Shoe											
				Centralizer											
				Baskets											
				AFU Inserts											
				Float Shoe											
				Latch Down											
				Pumptrk Charge											
				Sur face											
				Mileage 58											

X Signature	Ryan G. Joshi			Tax											
				Discount											
				Total Charge											





## DRILL STEM TEST REPORT

Prepared For: **FourWinds Oil Corp.**

PO Box 1063  
Hays, KS. 67601

ATTN: Dan Windholz

### **DG Hansen #1**

### **29-5S-20W Phillips,KS**

Start Date: 2022.02.17 @ 23:00:10

End Date: 2022.02.18 @ 06:30:40

Job Ticket #: 67612                      DST #: 1

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

Printed: 2022.02.21 @ 14:24:31



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

FourWinds Oil Corp.

**29-5S-20W Phillips,KS**

PO Box 1063  
Hays, KS. 67601

**DG Hansen #1**

Job Ticket: 67612

**DST#: 1**

ATTN: Dan Windholz

Test Start: 2022.02.17 @ 23:00:10

## GENERAL INFORMATION:

Formation: **Toronto - LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:51:20

Time Test Ended: 06:30:40

Test Type: Conventional Bottom Hole (Initial)

Tester: Eric Burgess

Unit No: 80

**Interval: 3360.00 ft (KB) To 3452.00 ft (KB) (TVD)**

Reference Elevations: 2241.00 ft (KB)

Total Depth: 3452.00 ft (KB) (TVD)

2232.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8369**

**Inside**

Press@RunDepth: 48.30 psig @ 3361.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.02.17 End Date: 2022.02.18

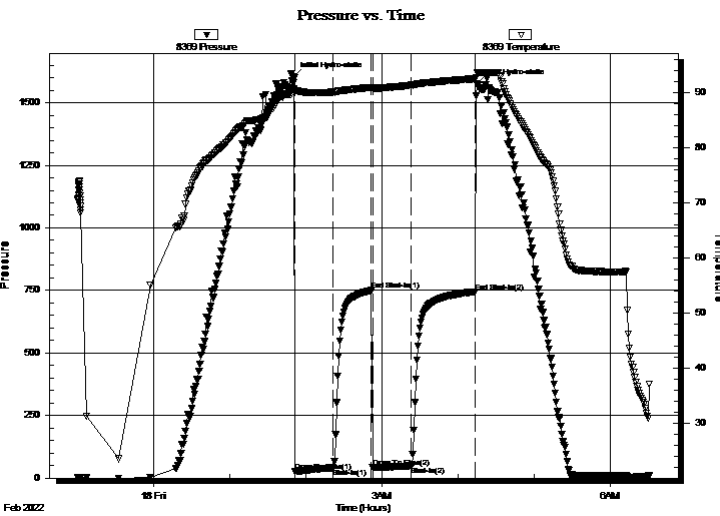
Last Calib.: 2022.02.17

Start Time: 23:00:11 End Time: 06:30:40

Time On Btm: 2022.02.18 @ 01:50:20

Time Off Btm: 2022.02.18 @ 04:15:00

**TEST COMMENT:** IF:Weak Surface Blow built to 3" (30)  
IS:No Blow Back (30)  
FF:Weak Surface Blow built to 2.5" (30)  
FS:No Blow Back(45)



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1602.80	90.54	Initial Hydro-static
1	26.76	89.90	Open To Flow (1)
31	40.68	90.01	Shut-In(1)
62	750.18	90.88	End Shut-In(1)
62	42.62	90.70	Open To Flow (2)
93	48.30	91.25	Shut-In(2)
143	744.86	92.44	End Shut-In(2)
145	1575.04	93.56	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	OSM 100%M	0.23

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FourWinds Oil Corp.

**29-5S-20W Phillips,KS**

PO Box 1063  
Hays, KS. 67601

**DG Hansen #1**

Job Ticket: 67612

**DST#: 1**

ATTN: Dan Windholz

Test Start: 2022.02.17 @ 23:00:10

## Tool Information

Drill Pipe:	Length: 3318.00 ft	Diameter: 3.80 inches	Volume: 46.54 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.80 inches	Volume: 0.23 bbl	Weight to Pull Loose: 24000.00 lb
			<u>Total Volume: 46.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3360.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	92.00 ft			
Tool Length:	112.00 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			3341.00	
Shut In Tool	5.00			3346.00	
Hydraulic tool	5.00			3351.00	
Packer	4.00			3355.00	20.00 Bottom Of Top Packer
Packer	5.00			3360.00	
Stubb	1.00			3361.00	
Recorder	0.00	8369	Inside	3361.00	
Recorder	0.00	8846	Inside	3361.00	
Perforations	3.00			3364.00	
Change Over Sub	1.00			3365.00	
Blank Spacing	63.00			3428.00	
Perforations	20.00			3448.00	
Change Over Sub	1.00			3449.00	
Bullnose	3.00			3452.00	92.00 Bottom Packers & Anchor

**Total Tool Length: 112.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

FourWinds Oil Corp.

**29-5S-20W Phillips,KS**

PO Box 1063  
Hays, KS. 67601

**DG Hansen #1**

Job Ticket: 67612

**DST#: 1**

ATTN: Dan Windholz

Test Start: 2022.02.17 @ 23:00:10

### 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: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	OSM 100%M	0.228

Total Length: 30.00 ft      Total Volume: 0.228 bbl

Num Fluid Samples: 0

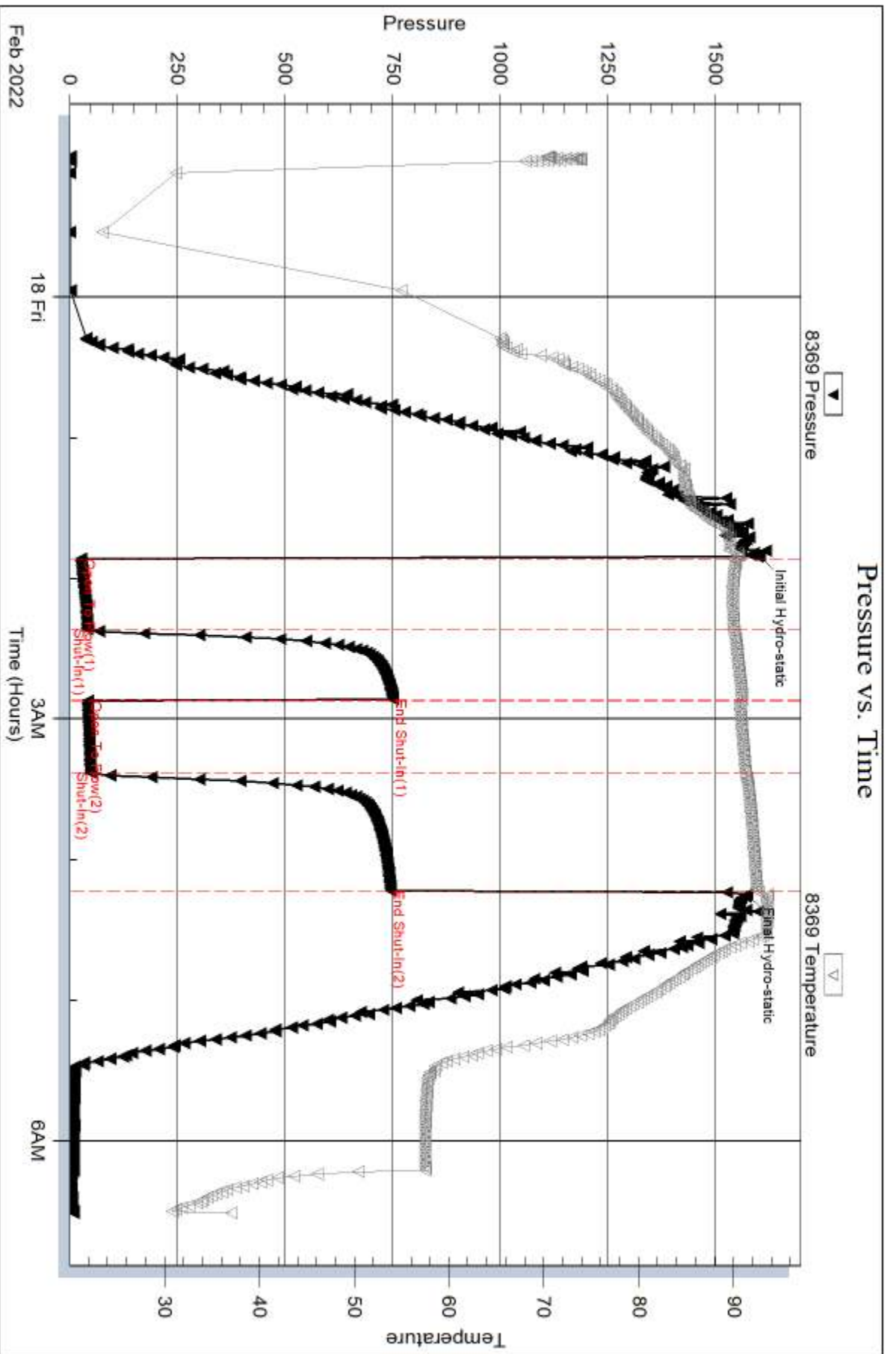
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





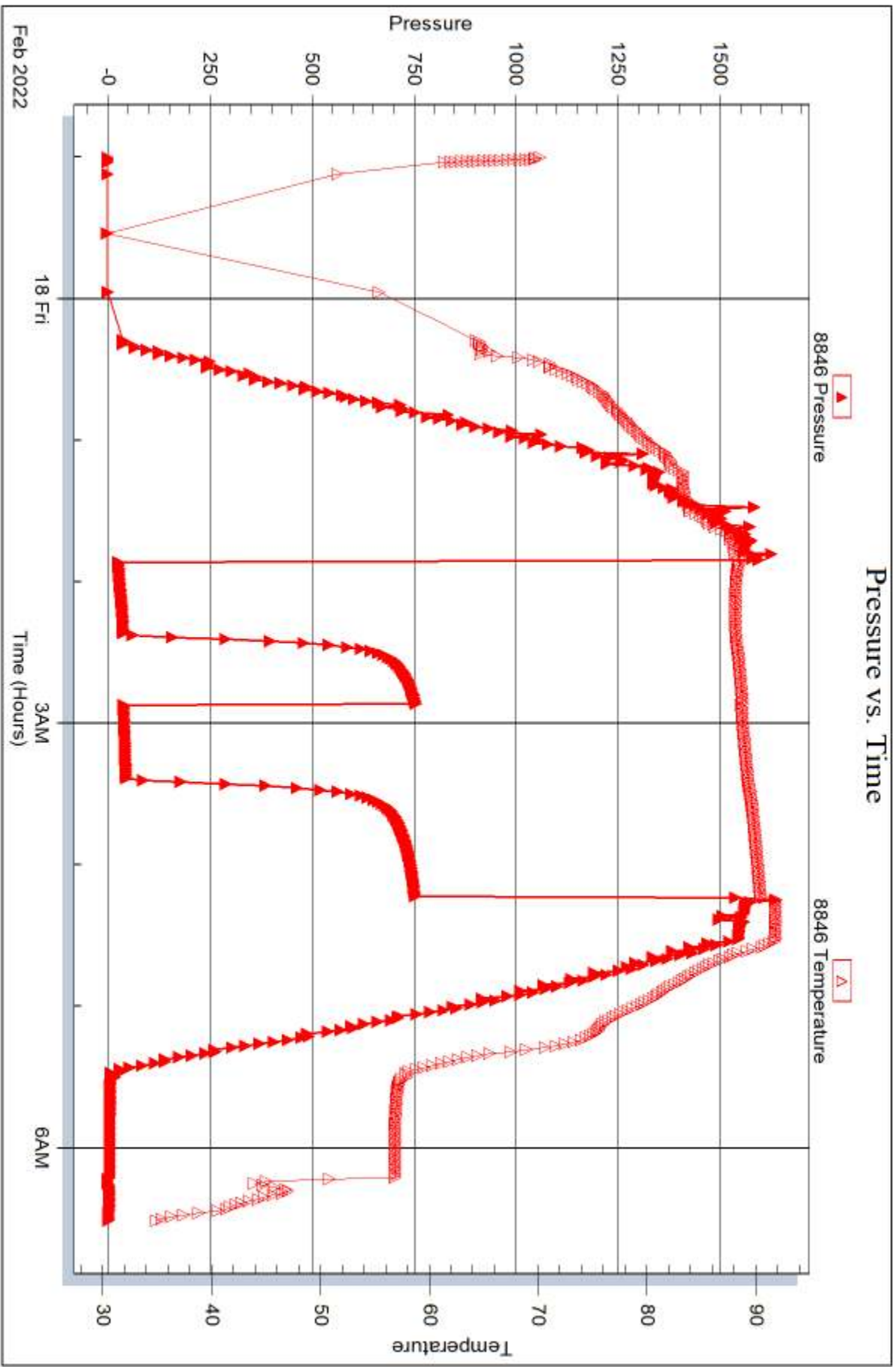
Serial #: 8846

Inside

FourWinds Oil Corp.

DG Hansen #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 67612

Printed: 2022.02.21 @ 14:24:34



## DRILL STEM TEST REPORT

Prepared For: **FourWinds Oil Corp.**

PO Box 1063  
Hays, KS. 67601

ATTN: Dan Windholz

### **DG Hansen #1**

### **29-5S-20W Phillips,KS**

Start Date: 2022.02.19 @ 05:30:00

End Date: 2022.02.19 @ 11:09:00

Job Ticket #: 67613                      DST #: 2

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

Printed: 2022.02.21 @ 13:56:26



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FourWinds Oil Corp.

**29-5S-20W Phillips,KS**

PO Box 1063  
Hays, KS. 67601

**DG Hansen #1**

Job Ticket: 67613

**DST#: 2**

ATTN: Dan Windholz

Test Start: 2022.02.19 @ 05:30:00

## GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:35:00

Time Test Ended: 11:09:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 80

Interval: **3641.00 ft (KB) To 3658.00 ft (KB) (TVD)**

Reference Elevations: 2241.00 ft (KB)

Total Depth: 3658.00 ft (KB) (TVD)

2232.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

**Serial #: 8846 Outside**

Press@RunDepth: 110.66 psig @ 3642.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.02.19

End Date:

2022.02.19

Last Calib.:

2022.02.19

Start Time: 05:30:01

End Time:

11:09:00

Time On Btm:

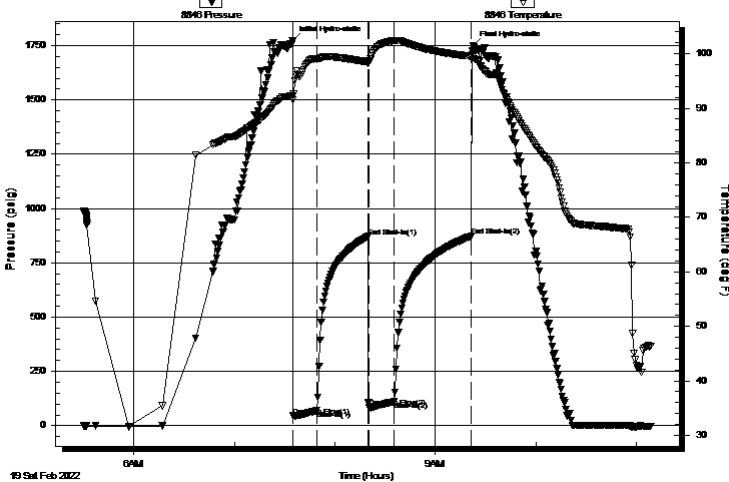
2022.02.19 @ 07:34:50

Time Off Btm:

2022.02.19 @ 09:22:30

**TEST COMMENT:** 15-IF-BOB 7 mins Built to 18"  
30-ISI-Surface to 2.25"  
15-FF-BOB 6 mins Built to 21"  
45-FSI-Very Weak Surface Blow

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.67	92.29	Initial Hydro-static
1	44.49	91.51	Open To Flow (1)
15	69.98	99.12	Shut-In(1)
45	870.72	98.46	End Shut-In(1)
46	83.18	98.63	Open To Flow (2)
61	110.66	102.42	Shut-In(2)
107	871.42	99.53	End Shut-In(2)
108	1750.19	99.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	GHMCO 20%G 20%M 60%O	1.49
140.00	GMCO 10%G 10%M 80%O	1.96
0.00	250 GIP 100%G	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FourWinds Oil Corp.

**29-5S-20W Phillips,KS**

PO Box 1063  
Hays, KS. 67601

**DG Hansen #1**

Job Ticket: 67613

**DST#: 2**

ATTN: Dan Windholz

Test Start: 2022.02.19 @ 05:30:00

## GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:35:00

Time Test Ended: 11:09:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 80

**Interval: 3641.00 ft (KB) To 3658.00 ft (KB) (TVD)**

Total Depth: 3658.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2241.00 ft (KB)

2232.00 ft (CF)

KB to GR/CF: 9.00 ft

**Serial #: 8369 Inside**

Press@RunDepth: psig @ 3642.00 ft (KB)

Start Date: 2022.02.19

End Date: 2022.02.19

Start Time: 05:30:01

End Time: 11:08:50

Capacity: 8000.00 psig

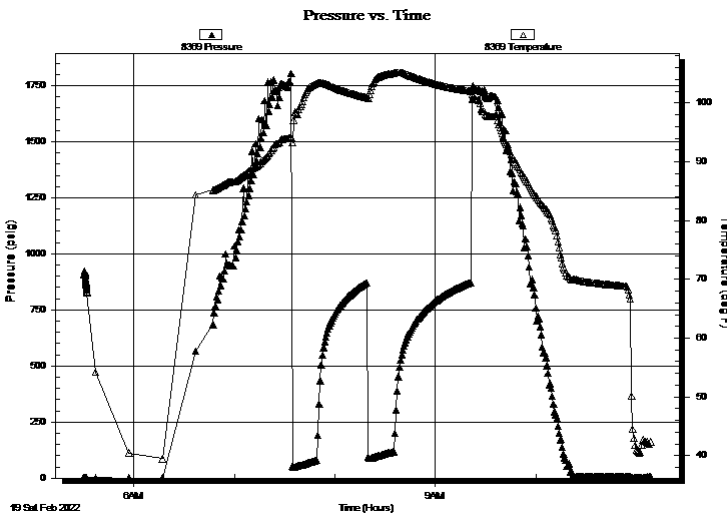
Last Calib.: 2022.02.19

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 15-IF-BOB 7 mins Built to 18"  
30-ISI-Surface to 2.25"  
15-FF-BOB 6 mins Built to 21"  
45-FSI-Very Weak Surface Blow

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	GHMCO 20%G 20%M 60%O	1.49
140.00	GMCO 10%G 10%M 80%O	1.96
0.00	250 GIP 100%G	0.00

## 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.

**29-5S-20W Phillips,KS**

PO Box 1063  
Hays, KS. 67601

**DG Hansen #1**

Job Ticket: 67613

**DST#: 2**

ATTN: Dan Windholz

Test Start: 2022.02.19 @ 05:30:00

## Tool Information

Drill Pipe:	Length: 3603.00 ft	Diameter: 3.80 inches	Volume: 50.54 bbl	Tool Weight: 2000.00 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: 30.00 ft	Diameter: 2.80 inches	Volume: 0.23 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 50.77 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3641.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	17.00 ft			
Tool Length:	37.00 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			3622.00	
Shut In Tool	5.00			3627.00	
Hydraulic tool	5.00			3632.00	
Packer	4.00			3636.00	20.00 Bottom Of Top Packer
Packer	5.00			3641.00	
Stubb	1.00			3642.00	
Recorder	0.00	8369	Inside	3642.00	
Recorder	0.00	8846	Outside	3642.00	
Perforations	13.00			3655.00	
Bullnose	3.00			3658.00	17.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>37.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

FourWinds Oil Corp.

**29-5S-20W Phillips,KS**

PO Box 1063  
Hays, KS. 67601

**DG Hansen #1**

Job Ticket: 67613

**DST#: 2**

ATTN: Dan Windholz

Test Start: 2022.02.19 @ 05:30:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GHMCO 20%G 20%M 60%O	1.491
140.00	GMCO 10%G 10%M 80%O	1.964
0.00	250 GIP 100%G	0.000

Total Length: 260.00 ft

Total Volume: 3.455 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

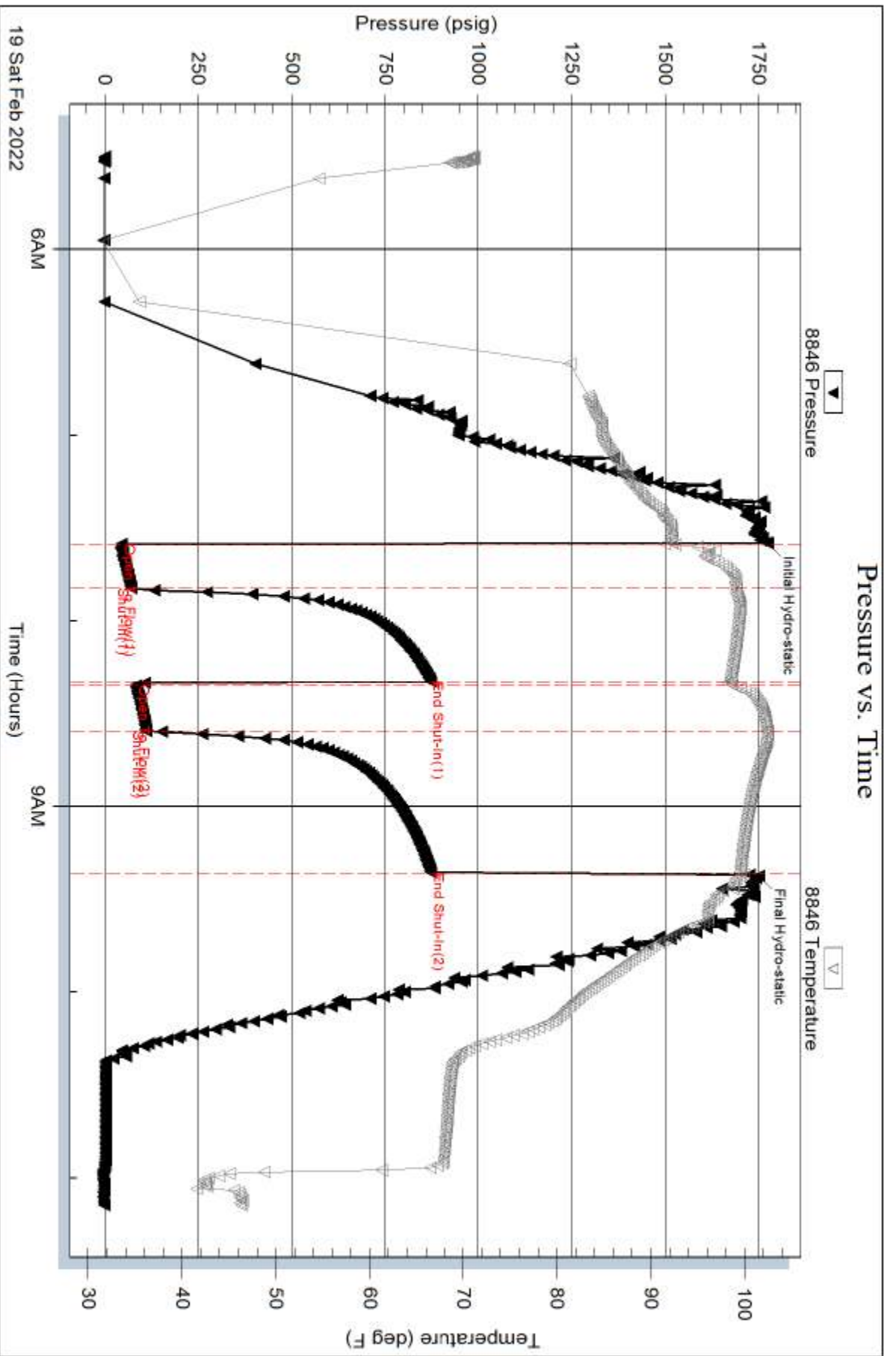
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 3#LCM





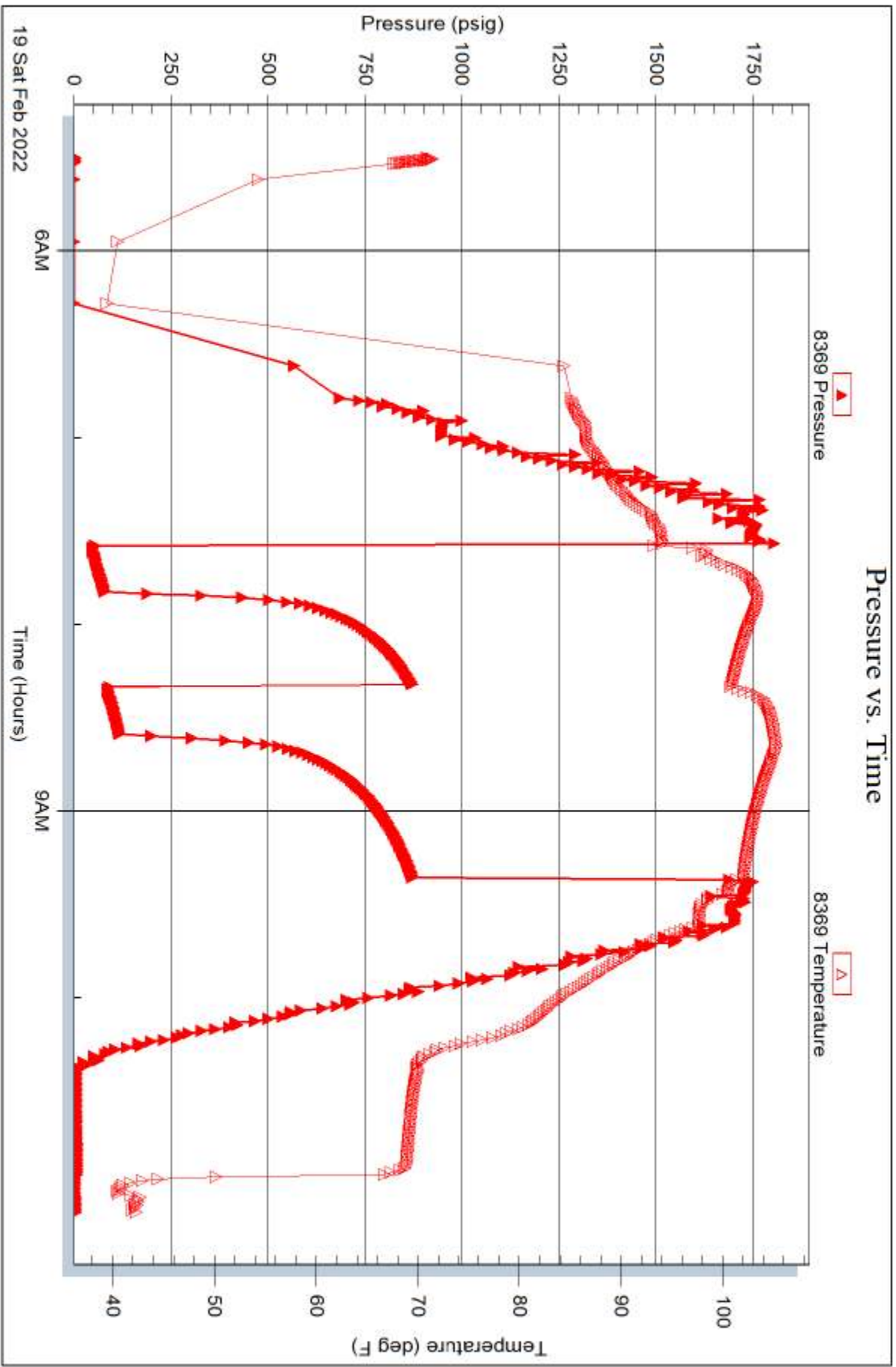
Serial #: 8369

Inside

FourWinds Oil Corp.

DG Hansen #1

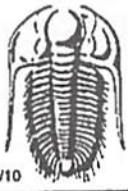
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 67613

Printed: 2022.02.21 @ 13:56:29



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 67612

Well Name & No. D.G. Hansen #1 Test No. 1 Date 2/17/22  
 Company Four Winds Oil Corp. Elevation 2241 KB 2230 GL  
 Address PO Box 1063 Hays, KS. 67601  
 Co. Rep / Geo. Dan Windholz Rig Discovery 4  
 Location: Sec. 29 Twp S5 Rge. 20 W Co. Phillips State KS

Interval Tested 3360'-3452' Zone Tested \_\_\_\_\_  
 Anchor Length 92' Drill Pipe Run \_\_\_\_\_ Mud Wt. 9  
 Top Packer Depth 3352' Drill Collars Run \_\_\_\_\_ Vls 52  
 Bottom Packer Depth 3356' Wt. Pipe Run \_\_\_\_\_ WL 8  
 Total Depth 3452' Chlorides 500 ppm System LCM 3  
 Blow Description IF: Weak surface blow built to 3" (in bucket (30))  
IST: NO Blow Back (30)  
FF: Weak surface blow built to 2.5" in bucket (30)  
FST: No Blow Back (45)

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>OSM</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 30 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1603  Test 1300 T-On Location 2140  
 (B) First Initial Flow 27  Jars \_\_\_\_\_ T-Started 2300  
 (C) First Final Flow 41  Safety Joint \_\_\_\_\_ T-Open 0154  
 (D) Initial Shut-In 750  Circ Sub \_\_\_\_\_ T-Pulled 0415  
 (E) Second Initial Flow 43  Hourly Standby \_\_\_\_\_ T-Out 0630  
 (F) Second Final Flow 48  Mileage 340 165 Comments \_\_\_\_\_  
 (G) Final Shut-In 745  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1575  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

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

Sub Total 1465 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative [Signature]

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



Well Name & No. D J Hansen #1 Test No. 2 Date 02/18/2022  
 Company Tourwinds Oil Corp Elevation 2241 KB 2233 GL  
 Address PO BOX 1063 Hays KS 67601  
 Co. Rep / Geo. Cameron Brin Rig Discovery #4  
 Location: Sec. 29 Twp 5A Rge. 20w Co. Phillips State KS

Interval Tested 3641'-3658' Zone Tested Reagan Ss  
 Anchor Length 17' Drill Pipe Run 3663' Mud Wt. 9.0  
 Top Packer Depth 3636' Drill Collars Run 30' Vis 56  
 Bottom Packer Depth 3641' Wt. Pipe Run - WL 7.8  
 Total Depth 3658' Chlorides 1000 ppm System LCM 3#

Blow Description 17- BOB 7 mins; Built to 18"  
18- Surface to 2 1/4"  
77- BOB in 6 mins; Built to 21"  
78- Very Weak Surface Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>120'</u>	<u>GHMCO</u>	<u>20</u>	<u>60</u>	<u>20</u>	<u></u>
<u>140'</u>	<u>GMCO</u>	<u>10</u>	<u>80</u>	<u>10</u>	<u></u>
<u></u>	<u>250 GIP</u>	<u>100</u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>

Rec Total 260' BHT 99° Gravity 27° API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic   Test 1300 T-On Location 03:56  
 (B) First Initial Flow   Jars  T-Started 05:30  
 (C) First Final Flow   Safety Joint  T-Open 07:37  
 (D) Initial Shut-In   Circ Sub  T-Pulled 09:22  
 (E) Second Initial Flow   Hourly Standby  T-Out 11:11  
 (F) Second Final Flow   Mileage 132 27 165 Comments Loaded after test  
 (G) Final Shut-In   Sampler   
 (H) Final Hydrostatic   Straddle   EM Tool

Initial Open 15  Shale Packer   Ruined Shale Packer   
 Initial Shut-In 30  Extra Packer   Ruined Packer   
 Final Flow 15  Extra Recorder   Extra Copies   
 Final Shut-In 45  Day Standby  Sub Total 0  
 Accessibility  Total 1465  
 Sub Total 1465 MP/DST Disc't

Approved By  Our Representative D J Staal Thanks!  
 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.

785-259-0056





Scale 1:240 Imperial

Well Name: D.G. HANSEN #1  
Surface Location: N2, NE, SE, NE, Sec. 29, T5S, R20W  
Bottom Location:  
API: 15-147-20759  
License Number: 34916  
Spud Date: 2/14/2022 Time: 2:30 PM  
Region: PHILLIPS CO.  
Drilling Completed: 2/19/2022 Time: 2:00 AM  
Surface Coordinates: 1500' FNL & 330' FEL  
Bottom Hole Coordinates:  
Ground Elevation: 2233.00ft  
K.B. Elevation: 2241.00ft  
Logged Interval: 3100.00ft To: 3658.00ft  
Total Depth: 3658.00ft  
Formation: ARBUCKLE, REAGAN SAND  
Drilling Fluid Type: CHEMICAL MUD

#### OPERATOR

Company: FOURWINDS OIL CORP.  
Address: P.O. BOX 1063

Contact Geologist: DAN WINDHOLZ  
Contact Phone Nbr: 785-259-8403  
Well Name: D.G. HANSEN #1  
Location: N2, NE, SE, NE, Sec. 29, T5S, R20W  
API: 15-147-20759  
Pool: State: KS Field: RAY  
Country:

#### SURFACE CO-ORDINATES

Well Type: Vertical  
Longitude: -99.591504  
Latitude: 39.592216  
N/S Co-ord: 1500' FNL  
E/W Co-ord: 330' 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: 2/14/2022 Time: 2:30 PM  
TD Date: 2/19/2022 Time: 2:00 AM  
Rig Release: 2/20/2022 Time: 10:30 AM

#### ELEVATIONS



**NOTES**

DUE TO POSITIVE RESULTS IN DST #2, DECISION WAS MADE TO RUN 5 1/2" PRODUCTION CASING TO FURTHER EVALUATE THE D.G. HANSEN #1 WELL.

**TOPS COMPARISON**

FORMATION	D&A 5/5/48 REESE D #4 CITIES SERVICES D.G. HANSEN #1				P&A 1/24/73 REESE D #2 CITIES SERVICE 2191				P&A 4/17/13 VEHIGE B #1 CITIES SERVICES 2201				H&S UNIT #1 FOURWINDS OIL 2236				MARY A UNIT #1 FOURWINDS OIL 2229				D&A 6/25/55 VEHIGE B #4 CITIES SERVICES 2203																	
	LOG TOPS		SAMPLE TOPS		LOG		SMPL.		LOGS		LOG		SMPL.		LOG		SMPL.		LOG		SMPL.		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												
ANHYDRITE TOP	1764	477	1765	476	1748	480	-	3	1725	466	+	11	+	10	1730	471	+	6	+	5	1761	475	+	2	+	1	1757	472	+	5	+	4						
BASE	1793	448	1794	447											1792	444	+	4	+	3	1786	443	+	5	+	4												
TOPKA	3169	-928	3169	-928											3170	-924	+	6	+	6	3157	-928	+	0	+	0												
HEERNER SHALE	3365	-1124	3365	-1124	3361	-1133	+	9	+	9					3368	-1132	+	8	+	8	3351	-1122	+	2	+	2												
TORONTO	3391	-1150	3388	-1147											3391	-1155	+	5	+	8	3375	-1146	+	4	+	1	3355	-1152	+	2	+	5						
LKC	3406	-1165	3405	-1164	3400	-1172	+	7	+	8	3343	-1152	-	13	-	12	3327	-1126	-	39	-	38	3409	-1173	+	8	+	9	3394	-1165	+	0	+	1				
BKC	3599	-1358	3598	-1357											3595	-1394	+	36	+	37	3601	-1365	+	7	+	8	3585	-1356	+	2	+	1	3568	-1365	+	7	+	8
GORHAM SAND																																						
ARBuckle					3651	-1423			3596	-1405											3649	-1413																
REAGAN SAND	3650	-1409	3651	-1410					3631	-1440	+	31	+	30	3618	-1417	+	8	+	7	3660	-1424	+	15	+	14												
GRANITE									3682	-1491																												
TOTAL DEPTH	3659	-1418	3658	-1417	3670	-1442	+	24	+	25	3688	-1497	+	79	+	80	3675	-1474	+	56	+	57	3674	-1438	+	20	+	21	3636	-1407								

**DST #1 3360-3452 (TOR-LKC C)**



**DRILL STEM TEST REPORT**

Four Winds Oil Corp. **29 5S 20W**  
 Po Box 1063 **D.G. Hansen #1**  
 Hays, Ks. 67601 Job Ticket: 67612 **DST#: 1**  
 ATTN: Dan Windholz Test Start: 2022.02.17 @ 23:00:10

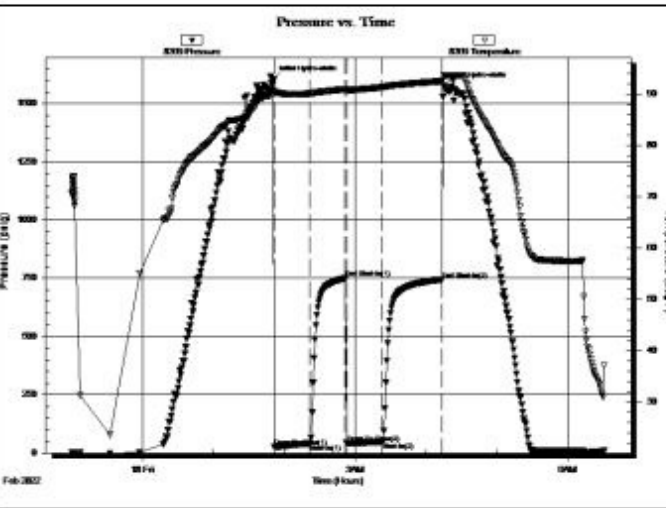
**GENERAL INFORMATION:**

Formation: **Toronto-LKC C**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 01:51:20 Tester: Eric Burgess  
 Time Test Ended: 06:30:40 Unit No: 80  
 Interval: **3360.00 ft (KB) To 3452.00 ft (KB) (TVD)** Reference Elevations: 2241.00 ft (KB)  
 Total Depth: 3452.00 ft (KB) (TVD) 2232.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

**Serial #: 8369**

Press@RunDepth: 48.30 psig @ ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.02.17 End Date: 2022.02.18 Last Calib.: 1899.12.30  
 Start Time: 23:00:10 End Time: 06:30:40 Time On Btm: 2022.02.18 @ 01:50:20  
 Time Off Btm: 2022.02.18 @ 04:15:00

**TEST COMMENT:** IF:Weak Surface Blow built to 3" in bucket (30)  
 IS:No Blow Back (30)  
 FF:Weak Surface Blow built to 2.5" in bucket (30)  
 FS:No Blow Back(45)



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1602.80	90.54	Initial Hydro-static
1	26.76	89.90	Open To Flow (1)
31	40.68	90.01	Shut-In(1)
62	750.18	90.88	End Shut-In(1)
62	42.62	90.70	Open To Flow (2)
93	48.30	91.25	Shut-In(2)
143	744.86	92.44	End Shut-In(2)
145	1575.04	93.56	Final Hydro-static


**Recovery**

Length (ft)	Description	Volume (bbl)
30.00	OSM 100%M	0.23

**Gas Rates**

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


**DST #2 3641'-3658' (REAGAN SAND)**

 <p><b>TRILOBITE TESTING, INC</b></p>	<b>DRILL STEM TEST REPORT</b>	
	<p>Four Winds Oil Corp.          Po Box 1063          Hays, Ks. 67601          ATTN: Dan Windholz</p>	<p><b>29 5S 20W</b>  <b>D.G. Hansen #1</b>          Job Ticket: 67613      <b>DST#: 2</b>          Test Start: 2022.02.19 @ 05:30:00</p>

**GENERAL INFORMATION:**

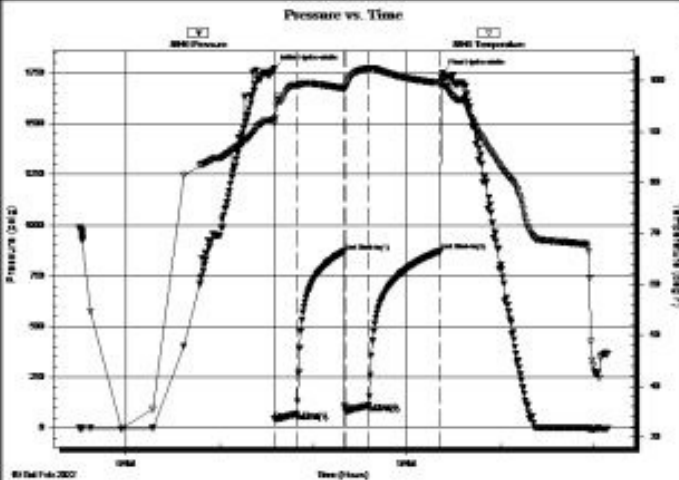
Formation: <b>Reagan Ss</b>	Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)	Tester: Spencer J Staab
Time Tool Opened: 07:35:00	Unit No: 80
Time Test Ended: 11:09:00	Reference Elevations: 2241.00 ft (KB)
Interval: <b>3641.00 ft (KB) To 3658.00 ft (KB) (TVD)</b>	2232.00 ft (CF)
Total Depth: 3658.00 ft (KB) (TVD)	KB to GR/CF: 9.00 ft
Hole Diameter: 7.88 inches Hole Condition: Fair	

**Serial #: 8846**

**Outside**

Press@RunDepth: 110.66 psig @ 3642.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2022.02.19	End Date: 2022.02.19
Start Time: 05:30:00	End Time: 11:09:00
Last Calib.: 2022.02.19	Time On Btm: 2022.02.19 @ 07:34:50
	Time Off Btm: 2022.02.19 @ 09:22:30

**TEST COMMENT:** 15-IF-BOB 7 mins Built to 18"  
 30-ISI-Surface to 2.25"  
 15-FF-BOB 6 mins Built to 21"  
 45-FSI-Very Weak Surface Blow



**PRESSURE SUMMARY**

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.67	92.29	Initial Hydro-static
1	44.49	91.51	Open To Flow (1)
15	69.98	99.12	Shut-In(1)
45	870.72	98.46	End Shut-In(1)
46	83.18	98.63	Open To Flow (2)
61	110.66	102.42	Shut-In(2)
107	871.42	99.53	End Shut-In(2)
108	1750.19	99.49	Final Hydro-static

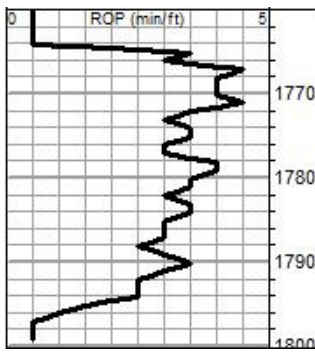
**Recovery**

Length (ft)	Description	Volume (bbl)
120.00	GHMCO 20%G 20%M 60%O	1.49
140.00	GMCO 10%G 10%M 80%O	1.96
0.00	250 GIP 100%G	0.00

**Gas Rates**

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

\* Recovery from multiple tests



**ANHYDRITE: SPL 1765' (+476) LOG 1764' (+477)**

**BASE: SPL 1794' (+447) LOG 1793' (+448)**

**ROCK TYPES**

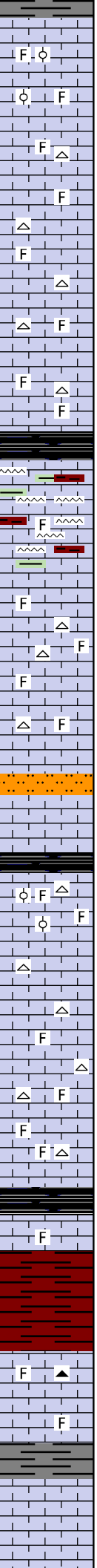
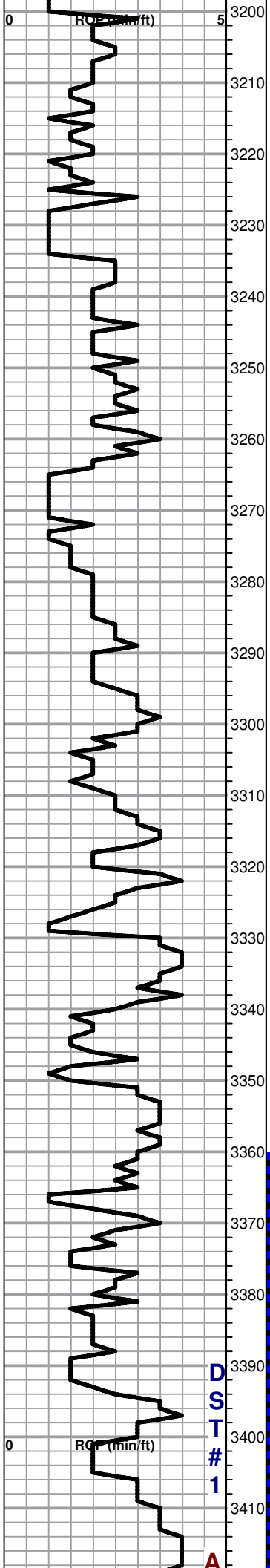
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  -
- Lmst fw7> shale, gry    Carbon Sh shale, red    Ss    CglSandy  
 shale, gry    shale, red    Slst

**ACCESSORIES**

- MINERAL**                      **FOSSIL**                      **STRINGER**                      **TEXTURE**
- ▲ Chert, dark
  - F Fossils < 20%
  - ~ Chert
  - C Chalky
  - Sandy
  - φ Oolite
  - green shale
  - red shale
  - △ Chert White

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

Curve Track #1 ROP (min/ft)	Depth   Intervals	DST	Lithology	Oil Show	Geological Descriptions	Curve Track #3
<p>ROP (min/ft) graph showing depth from 3110' to 3190'.</p>					<p><b>1' DRILL TIME FROM 1760'-1800' FOR ANHYDRITE</b>  <b>1' DRILL TIME 3100'-RTD</b>  <b>10' WET/DRY SAMPLES FROM 3150'-RTD</b></p> <p>Lm- gray-crm, v.fn-fnxln, scat foss, sli sandy</p> <p>Lm- A/A</p> <p>Sh- gray</p> <p>Lm- crm- tan, fnxln, scat foss</p> <p>Sh- gray-red, muddy, silty</p> <p><b>TOPEKA: SPL 3169' (-928) LOG 3169' (-928)</b></p> <p>Lm-crm-gray, v.fn-fnxln, cherty in prt, sandy in prt</p> <p>Lm- A/A, scat foss</p> <p>Lm- crm-tan, v.fn-fnxln, scat foss, sli sandy in prt</p> <p>Lm- crm-gray, v.fnxln, scat foss, sandy in prt, chalky in prt</p>	<p>1:240 Imperial</p> <p>GEO ON LOCATION @ 5:00 A.M. 2/17/22</p> <p>8 5/8" SURFACE CASING SET @ 224' (CEMENT DID CIR)</p> <p>SURVEY @ 224 (3/4°)</p> <p>PDC BIT TRIP @ 3003'</p> <p>SURVEY @ 3003' (3/4°)</p> <p>DISPLACED MUD @ 3088'</p>



Lm- crm-tan, fnxln, scat foss, oolitic in prt

Lm- A/A, chalky, scat wt-tan chert

Lm- A/A

Lm- crm, v.fnxln, scat foss, scat wt chert

Lm- crm, fnxln, foss, oolitic in prt  
chert- wt, angular, fresh

Lm- brn, fnxln, scat foss, scat gray-red shales, scat fresh wt chert

Lm- tan, fnxln, scat foss, scat angular wt chert

Lm- crm-wt, fnxln, foss, scat wt chert

Sh- red, muddy, silty

Sh- blk, car, gray-red, silty in prt

Lm- crm, v.fn-fnxln, scat foss, oolitic in prt, cherty in prt, v. few scat pcs  
pr inxln-inoolitic por, v. lt brn stn in pores, no vis SFO, no odor

Lm-crm, v.fnxln, cherty, few scat pcs pr inxln-inoolitic por, v. sli sheen  
FO on chips v. sli odor, possible from above

Lm- crm, fnxln, foss, cherty, dense in prt, scat pr inxln-infoss por, NSO

Lm- crm, v. fnxln, cherty, scat foss, dense in prt

**HEEBNER: SPL 3365' (-1124) LOG 336' (-1124)**

Sh- blk, carb

Lm- tan, v.fnxln, dense, foss

Sh- gray-red, muddy red wash

**TORONTO: SPL 3388' (-1147) LOG 3391' (-1150)**

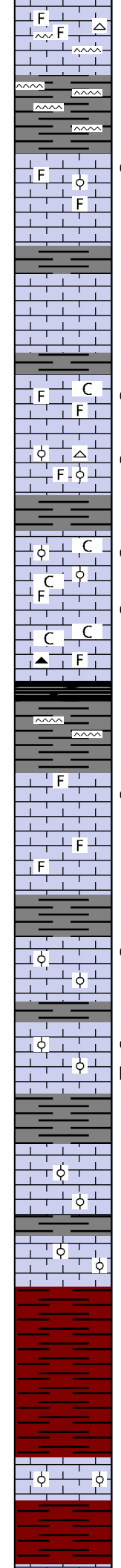
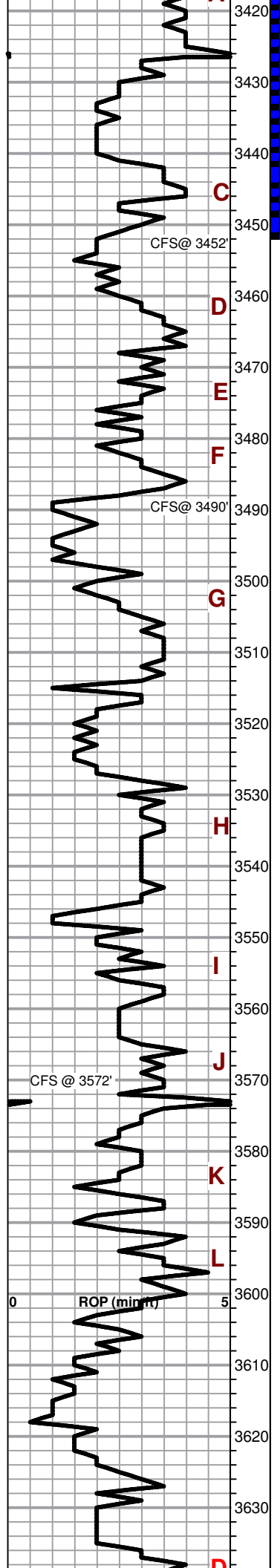
Lm- crm, fnxln, foss in prt, scat brn-orange chert, scat mostly pr w/ few  
pcs fr inxln-infoss por, scat lt brn stn in pores, pr-fr sheen FO in cup, fr  
odor

**LKC: SPL 3405' (-1164) LOG 3406' (-1165)**

Lm- crm, v.fn-fnxln, oolitic, fairly dnse, scat fairly tight ppt-inoolitic por,  
scat brn stn in pores, pr-fr sheen FO w/ few oil drops in cup, fr odor

**DST #1**  
3360-3452  
(TOR-LKC C)  
30' OSM  
SIP: 750-745#





Lm- crm, v.fnxln, cherty,foss in prt, barren, dense

Sh- gray-red, silty in prt  
Chert- tan-brn

Lm- crm, v.fn-fnxln, scat foss, oolitic in prt, fairly dense, **scat tight pr inxln-oolitic por, scat lt brn stn in pores, pr-no SFO, v. lt- no odor**

Lm- crm, v.fn-fnxln, barren, 1chip w/ pr inxln por, v. lt brn stn in pores, NSFO, no odor

Lm- crm, fnxln, scat foss, chalky in prt, **scat pr inxln-infoss por, few scat pcs brn stn in pores, few oil FO drops in cup, pr-fr odor**

Lm- crm, v.fn-fnxln, scat foss, scat wt oolitic chert, mostly barren, **few scat pcs pr inxln-infoss por, v. few scat pcs pr brn stn in pores, few FO drops in cup, mod odor**

Lm- crm, fnxln, foss, oolitic in prt, chalky, **scat pr-fr inxln-infoss por, scat brn stn, few pcs sli sat, pr-fr sheen & few FO drops in cup, fr odor**

Lm- crm, v. fnxln, scat foss, chalky in prt, **scat tan chert, 2-3 pcs pr infoss por w/ lt. brn stn, NSFO, pr-no odor, show possible from above**

Sh- blk, carb

Sh- gray-red  
Chert- tan, angular

Lm- crm, v.fnxln, scat foss, mostly dense, **scat pr ppt-infoss por, pr lt brn stn in pores, v. sli sheen FO in cup, v. lt odor**

Sh- gray-green-red  
Chert- tan

Lm- crm, v.fn-fnxln, oolitic in prt, **scat tight inxln-oolitic por, scat brn stn in pores, pr-fr sheen & 1-2 FO drops in cup, mod odor**

Lm- crm, v.fn-fnxln, oolitic in prt, **scat blk dead oil, scat tight inxln-oolitic por, scat lt brn stn in pores, fr sheen FO in cup, mod odor**

Sh- red-gray-green, silty in prt

Lm- crm-wt, v.fn-fnxln, oolitic, **scat mostly tight inxln-oolitic por, prt lt brn stn in pores, sli sheen FO in cup, mod odor**

Lm- crm, fnxln, oolitic, scat pr oolitic por, few scat pcs pr brn stn in pores, NSFO, no odor

**BKC: SPL 3598' (-1357) LOG 3599' (-1358)**

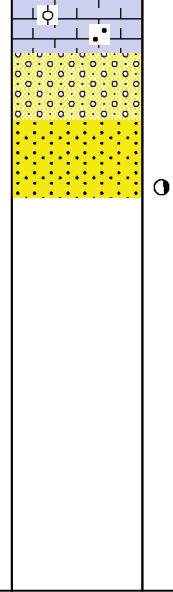
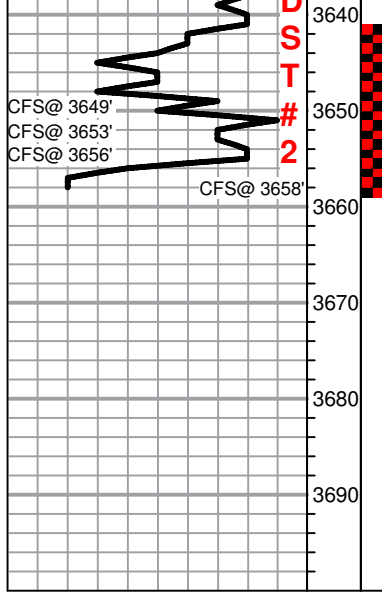
Sh- red- gray, silty

Lm- crm, fnxln, oolitic, dense

SURVEY @ 3452 (3/4°)

PIPE STRAP  
0.33' LONG TO  
BOARD





Lm- crm, fnxln-mdgrn, oolitic, sandy, well cemented, dense  
 sandy-lm,fnxln- mdgrn, mix of sandy Lm & v. well consolidated SS  
 clusters, calcite matrix, mod sorting, mod rounding

**REAGAN SAND: SPL 3651' (-1410) LOG 3650' (-1409)**

3653' sandy-lm, fn-mdgrn, v.well consolidated, mod sorting, mod  
 rounding, fairly dense

3656'- A/A, not quite as dense, v. sli odor?

3658'- Ss- clear, fn-coarsegrn, calcite cement, mod well rounded, mod  
 well sorted, *only a few clusters with visable oil show, sli sheen FO  
 unpon crush, spl and cup had sli glistening FO sheen, fr odor, Ss  
 clusters in spl were mostly tight and well consolidated, most of the  
 clusters and show were crushed by the bit and went over the sample  
 box*

**RTD: SPL 3658' (-1417) LOG 3659' (-1418)**

**DST #2**  
 3641'-3658'  
 (REAGAN SAND)  
 120' GHMCO  
 140' GMCO  
 250' GIP  
 SIP: 870-871#

SURVEY @ RTD (1 3/4")