



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1200502  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- 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 ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

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
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1200502

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	Hawes Ranch 3-27
Doc ID	1200502

All Electric Logs Run

Dual Induction
Density - Neutron
Micro-log
Sonic

Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	Hawes Ranch 3-27
Doc ID	1200502

Tops

Name	Top	Datum
Heebner Shale	4318	(-1805)
Brown Limestone	4457	(-1944)
Lansing	4467	(-1954)
Stark Shale	4793	(-2280)
Pawnee	5002	(-2489)
Cherokee Shale	5049	(-2536)
Base Penn Limestone	5147	(-2634)
Conglomerate Chert	5156	(-2643)
Mississippian	5162	(-2649)
LTD	5346	(-2833)

Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	Hawas Ranch 3-27
Doc ID	1200502

#### Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	Perf (Miss) 5185' to 5190' & 5176' to 5184'		
	Perf (Cgl Chert) 5157' to 5160' & (Pawnee) 5002-5009'		
		Ran Tubing & packer, isolated Cgl & Miss perms, SDFN	
		Acidized Cgl & Miss w/ 2500 gal 15% MCA	
		Swab avg 10.5 bbl / hr / 5 hrs,	
		recovered 100% water w/ tr oil & show of gas, SDFN	
		SITP 100#, FL @ 2300', swab avg 2.5 bbl / hr / 5 hrs,	
		FL @ 4800' w/ gd show of oil, Acidized w/2000 gal HCl, Swb dwn,	
		swab 2.5 bbl / hr / 5 hrs, w/ FL @ 4500' w/ 1-2% Oil, SDFN	
		SITP 900#, FL @ 2650', swb dwn, swab 3.5 to 5 bbl / hr / 3 hrs 1-2% oil w/ show gas, SDFN	

Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	Hawes Ranch 3-27
Doc ID	1200502

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
		FL @ 2850', all water, moved tubing & packer to Isolate the Pawnee,	
		Acidized w/ 3000 gal 15% MCA	
		Swab 19 - 20 bbl/ hr /3 hrs, 90% Oil, SDFN	
		SITP 50#, FL @ 2000', swab 1000' oil, pulled tools, KW w/ KCL	
		set CIBP @ 5130', ran tubing to 5110',	
		Ran rods, & set surface equip, POP 3/12/2014	



# QUALITY WELL SERVICE, INC.

6064

Federal Tax I.D. # 481187368

Home Office 324 Simpson St., Pratt, KS 67124

Office 620-727-3410  
Fax 620-672-3663

Rich's Cell 620-727-3409  
Brady's Cell 620-727-6964

Date	1-4-14	Sec.	27	Twp.	28	Range	23	County	Foer	State	Ks	On Location	10:00 A.M	Finish	3:00 P.M			
Lease	HAWES Ranch		Well No.		3-27		Location									Kimprow Ks 2W to Wilcox Rd		
Contractor	Duke #10							Owner									4W to 121st Rd 2W to trail bottom E. N 140	
Type Job	Surface							To Quality Well Service, Inc.									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.		645'		Charge To									Vincent Oil Corp		
Csg.	85/8 23		Depth		638.09		Street											
Tbg. Size			Depth				City									State		
Tool			Depth				City									State		
Cement Left in Csg.			Shoe Joint		41.82		The above was done to satisfaction and supervision of owner agent or contractor.											
Meas Line			Displace		33.2 Bbls		Cement Amount Ordered									2005x MDC 3% CC 1/4" CT.		
<b>EQUIPMENT</b>							125x Common 2% GEL 3% CC 1/4" CT											
Pumptrk	No.	8		MIX		Common									125 SX			
Bulktrk	No.	9		SEAL		Poz. Mix									MDC 200 SX			
Bulktrk	No.	10		SHAFT		Gel.									6			
Pickup	No.					Calcium									12			
<b>JOB SERVICES &amp; REMARKS</b>							Hulls											
Rat Hole							Salt											
Mouse Hole							Flowseal									81.25#		
Centralizers							Kol-Seal											
Baskets							Mud CLR 48											
D/V or Port Collar							CFL-117 or CD110 CAF 38											
Ron 15 3/4's 85/8" 23 csg							Sand											
STO							Handling									343		
							Mileage									50		
Hook up to csg & Break circ w/ rig							85/8									<b>FLOAT EQUIPMENT</b>		
							Guide Shoe											
Mix: Pomp 200x MDC 3% CC 1/4" CT							Centralizer											
12" gal							Baskets											
Mix: Pomp 125x Common 2% GEL 3% CC 1/4" CT							AFU Inserts											
15" gal							Float Shoe									1 EA Baffle		
SHAFT DOWN RELEASE 85/8 WOODEN PLUG							LATCH-DOWN									1 EA WOODEN PLUG		
Disp 39.2 Bbls total							LW 50											
plug down 2 2:30 PM 600 FT							Pumptrk Charge									Surface		
Good c/c the jobs							Mileage									50 x 2		
circ amt to pt																Tax		
Thanks TODD MIKE SEAL																Discount		
X Signature																Total Charge		



# QUALITY WELL SERVICE, INC.

6071

Federal Tax I.D. # 481187368

Home Office 324 Simpson St., Pratt, KS 67124

Office 620-727-3410  
Fax 620-672-3663

Rich's Cell 620-727-3409  
Brady's Cell 620-727-6964

Date	1-19-14	Sec.	27	Twp.	28	Range	23	County	Foreo	State	Ks	On Location	6:00 a.m.	Finish	3:30 p.m.								
Lease	HAWES Ranch		Well No.		3-27		Location Kingdown Ks 2 N to Wilboven Rd																
Contractor	DUKE Drlg # 10							Owner 4 E to 121 Rd 1/2 N to Hank Brady															
Type Job	4 1/2 L.S							To Quality Well Service, Inc. E: 7:140 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	7 7/8		L.T.D.		5346		Charge To Vincent Oil Corp																
Csg.	4 1/2 11.6		Depth		5343		Street																
Tbg. Size								City															
Tool								State															
Cement Left in Csg.	Shoe Joint 4A							The above was done to satisfaction and supervision of owner agent or contractor.															
Meas Line	Displace 82.15 Bbls							Cement Amount Ordered 225 & Pro C															
<b>EQUIPMENT</b>												10% Salt 5 1/4 GILSONITE											
Pumptrk	No.	8		MIKE		Common		225															
Bulktrk	No.	9		STEVEN		Poz. Mix																	
Bulktrk	No.					Gel.																	
Pickup	No.			TODD		Calcium																	
<b>JOB SERVICES &amp; REMARKS</b>												Hulls											
Rat Hole	30 sx							Salt 24															
Mouse Hole	20 sx							Flowseal															
Centralizers	1-3-5-7-9-11							Kol-Seal 1125 #															
Baskets								Mud CLR 48 500 gal															
D/V or Port Collar								CFL-117 or CD110 CAF 38 CC-1-10 Gal															
Run 121 #s 4 1/2 11.6 # csg												Sand											
SET @ 5343 1st = 43 GSADE:DFU												Handling 249											
												Mileage 50											
csg on Bottom Deep Ball = BREAK circ w/rig 1 hr												4 1/2 <b>FLOAT EQUIPMENT</b>											
Pump 3 Bbls H2O 12 Bbls MF 3 Bbls H2O												Guide Shoe 1 EA											
Plug R-M holes												Centralizer 6 EA											
Mike Pump 175 sx Down csg												Baskets											
SHUT DOWN Wash up + 2k & CLEAN LINES												AFU Inserts 1 EA											
START disp 2% RCL												Float Shoe											
Plug down @ 2:45 1000"												Latch Down 1 EA TOP R. bbls Plug											
Ps. up 1500" Release HELM												Supervision 1 EA											
												LM 50											
												Pumptrk Charge Longstrains											
												Mileage 50 x 2											
THANKS TODD MIKE STEVEN PLEASE CALL AGAIN																Tax							
																4 1/2 HES 3 EA				Discount			
																				Total Charge			



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Vincent Oil Corporation

**27-28S-23W Ford**

155 N Market Ste 700  
Wichita, KS 67202

**Hawes Ranch 3-27**

ATTN: Jim Hall

Job Ticket: 51917

**DST#: 1**

Test Start: 2014.01.14 @ 01:39:26

## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:51:26

Time Test Ended: 11:40:11

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 74

**Interval: 4988.00 ft (KB) To 5022.00 ft (KB) (TVD)**

Reference Elevations: 2514.00 ft (KB)

Total Depth: 5022.00 ft (KB) (TVD)

2503.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 6798**

**Inside**

Press@RunDepth: 226.88 psig @ 4989.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.14

End Date:

2014.01.14

Last Calib.:

2014.01.14

Start Time: 01:39:27

End Time:

11:40:11

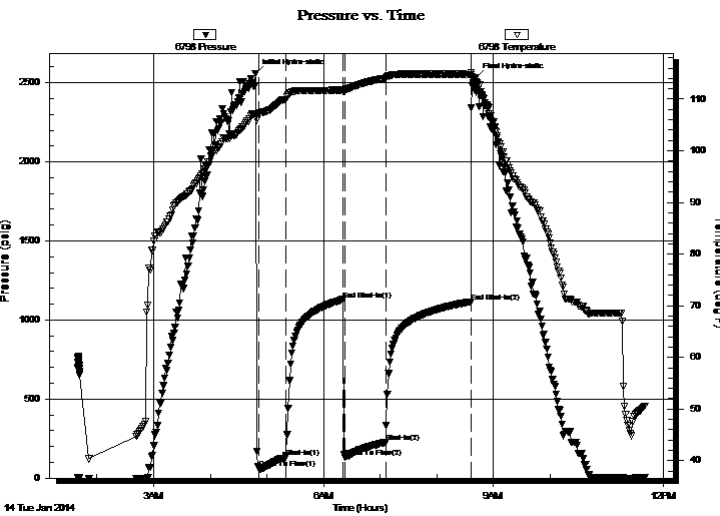
Time On Btm:

2014.01.14 @ 04:47:41

Time Off Btm:

2014.01.14 @ 08:41:56

**TEST COMMENT:** IF: Strong Blow , BOB in 30 seconds  
 IS: GTS 5 minutes into Bleed Off Weak Surface Blow Back  
 FF: Strong Blow , BOB in 90 seconds, GTS Immediate, Gauged & Caught Sample  
 FS: Weak Surface Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2559.29	106.94	Initial Hydro-static
4	60.00	107.34	Open To Flow (1)
33	130.31	109.97	Shut-In(1)
93	1129.02	111.75	End Shut-In(1)
96	130.89	111.73	Open To Flow (2)
138	226.88	114.04	Shut-In(2)
229	1115.33	114.80	End Shut-In(2)
235	2532.44	113.43	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4447 GIP	0.00
93.00	MWCO 5%M 5%W 90%O	1.30
186.00	GSY Oil 15%G 85%O	2.61
256.00	GSY MCO 20%G 20%M 60%O	3.59

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	8.00	35.54
Last Gas Rate	0.25	6.00	32.36
Max. Gas Rate	0.25	8.00	35.54



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Vincent Oil Corporation

**27-28S-23W Ford**

155 N Market Ste 700  
Wichita, KS 67202

**Hawes Ranch 3-27**

Job Ticket: 51917

**DST#: 1**

ATTN: Jim Hall

Test Start: 2014.01.14 @ 01:39:26

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 54.00 sec/qt  
Water Loss: 8.79 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 8000.00 ppm  
Filter Cake: 0.02 inches

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

Oil API: 57.6 deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4447 GIP	0.000
93.00	MWCO 5%M 5%W 90%O	1.305
186.00	GSY Oil 15%G 85%O	2.609
256.00	GSY MCO 20%G 20%M 60%O	3.591

Total Length: 535.00 ft      Total Volume: 7.505 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: Gravity w as 58.8 @ 48 degrees



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Vincent Oil Corporation

**27-28S-23W Ford**

155 N Market Ste 700  
Wichita, KS 67202

**Hawes Ranch 3-27**

Job Ticket: 51917

**DST#: 1**

ATTN: Jim Hall

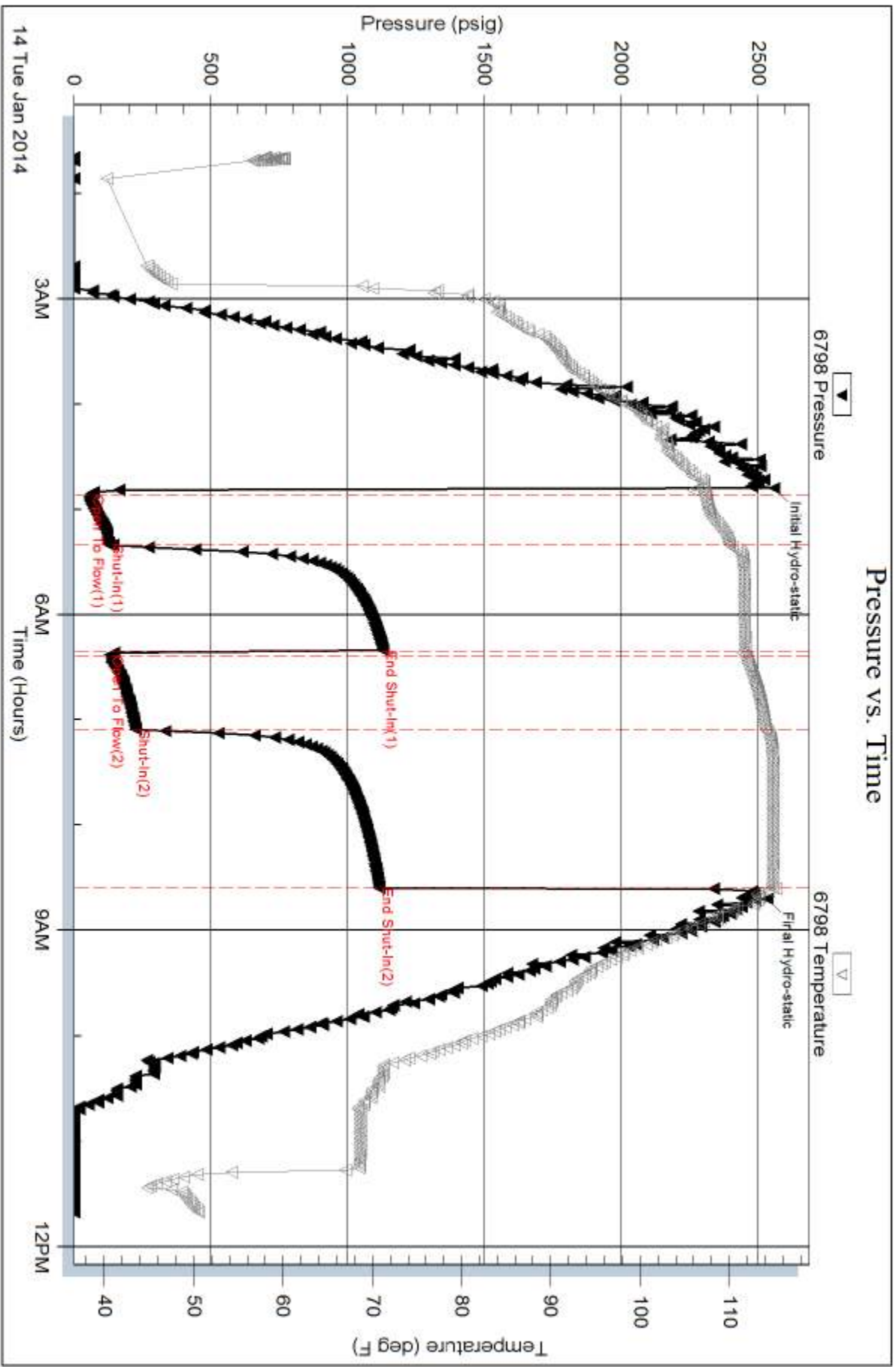
Test Start: 2014.01.14 @ 01:39:26

### Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	15	0.25	8.00	35.54
2	20	0.25	8.00	35.54
2	30	0.25	6.00	32.36
2	40	0.25	6.00	32.36
2	45	0.25	6.00	32.36





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Vincent Oil Corporation

**27-28S-23W Ford**

155 N Market Ste 700  
Wichita, KS 67202

**Hawes Ranch 3-27**

ATTN: Jim Hall

Job Ticket: 51918

**DST#: 2**

Test Start: 2014.01.15 @ 12:56:00

## GENERAL INFORMATION:

Formation: **Basal Penn**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:29:45

Time Test Ended: 22:03:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

**Interval: 5040.00 ft (KB) To 5150.00 ft (KB) (TVD)**

Reference Elevations: 2514.00 ft (KB)

Total Depth: 5150.00 ft (KB) (TVD)

2503.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 6798**

**Inside**

Press @ Run Depth: 313.26 psig @ 5041.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.15

End Date:

2014.01.15

Last Calib.:

2014.01.15

Start Time: 12:56:01

End Time:

22:03:00

Time On Btm:

2014.01.15 @ 15:16:45

Time Off Btm:

2014.01.15 @ 19:24:30

## TEST COMMENT:

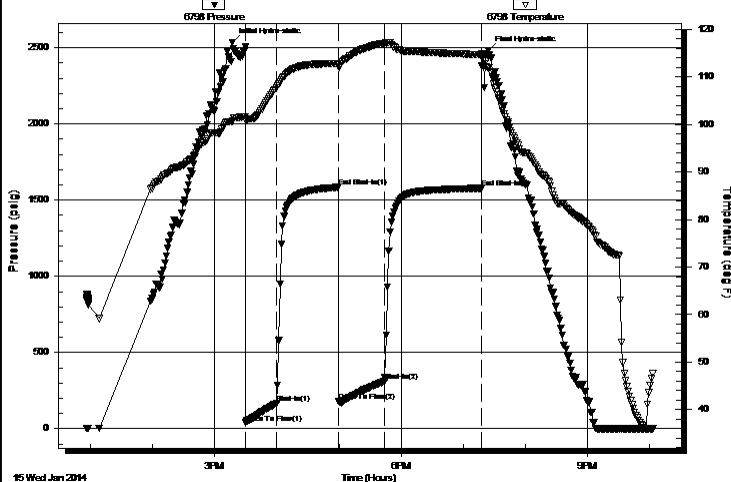
IF: Strong Blow, BOB in 3 minutes

IS: 1/4 inch Blow Back

FF: Strong Blow, BOB in 30 seconds, GTS in 17 minutes, Caught Sample, TSTM

FS: 1/2 inch Blow Back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2534.89	100.70	Initial Hydro-static
13	38.10	101.03	Open To Flow (1)
43	167.06	107.80	Shut-In(1)
103	1585.41	112.75	End Shut-In(1)
103	181.69	112.12	Open To Flow (2)
148	313.26	117.03	Shut-In(2)
241	1577.53	114.68	End Shut-In(2)
248	2480.54	111.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4428 GIP	0.00
465.00	MCW 10%M 90%W	6.52
93.00	GMCW 10%G 40%M 50%W	1.30
60.00	GCM 10%G 90%M	0.84

Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Vincent Oil Corporation

**27-28S-23W Ford**

155 N Market Ste 700  
Wichita, KS 67202

**Hawes Ranch 3-27**

Job Ticket: 51918

**DST#: 2**

ATTN: Jim Hall

Test Start: 2014.01.15 @ 12:56:00

## 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:

126000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	4428 GIP	0.000
465.00	MCW 10%M 90%W	6.523
93.00	GMCW 10%G 40%M 50%W	1.305
60.00	GCM 10%G 90%M	0.842

Total Length: 618.00 ft

Total Volume: 8.670 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

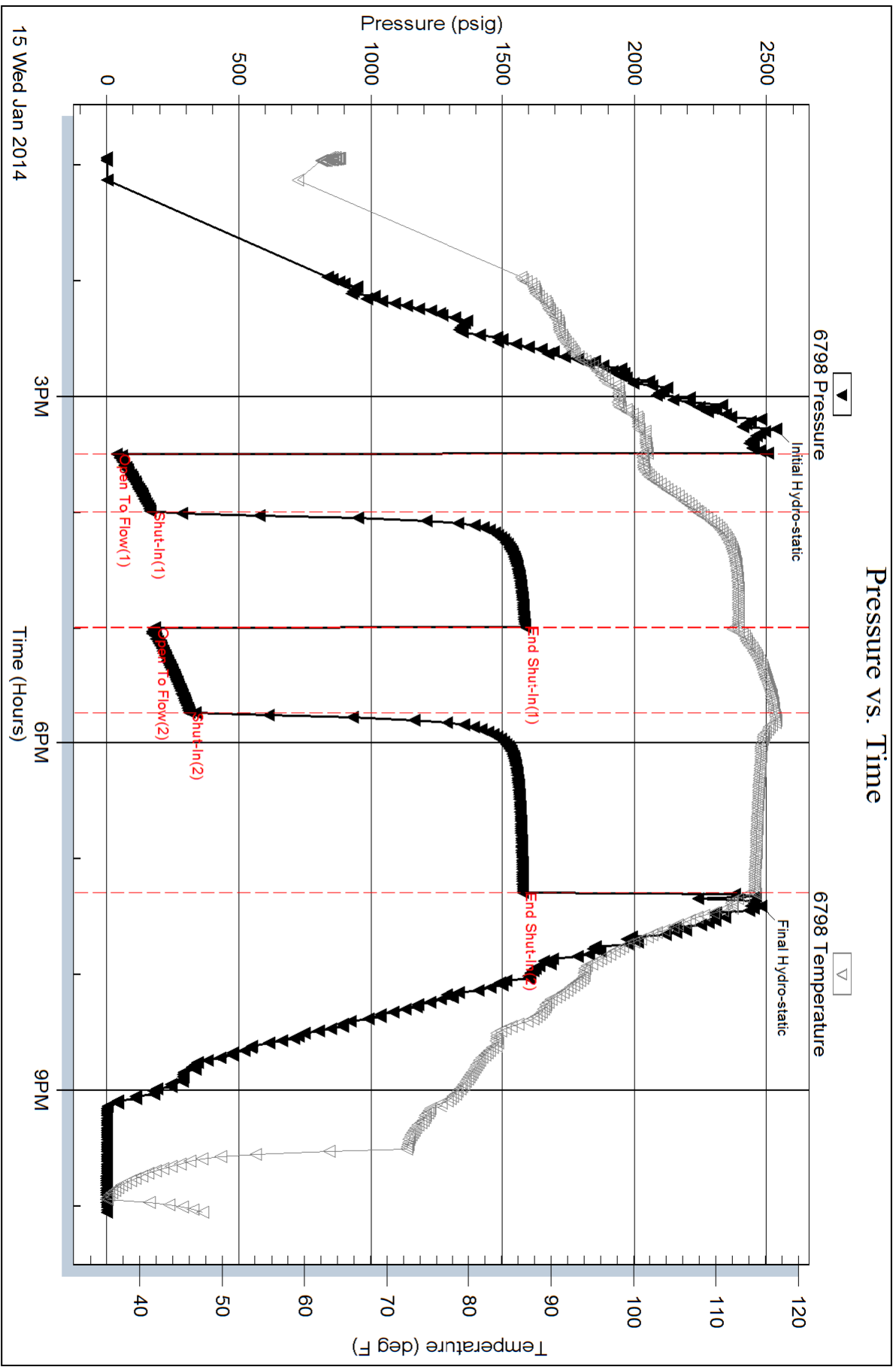
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .11 @ 41 degrees



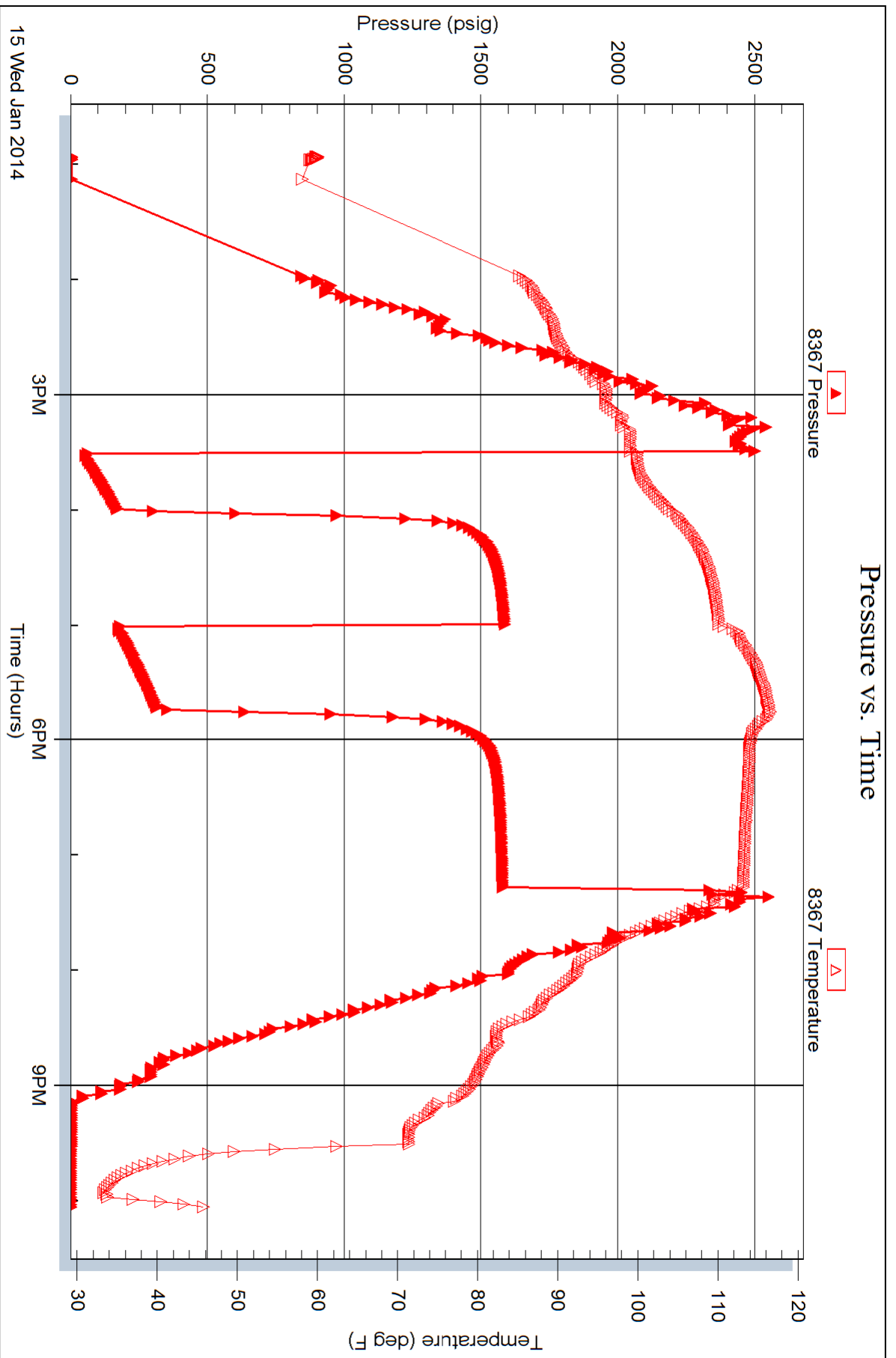


Serial #: 8367

Outside Vincent Oil Corporation

Hawes Ranch 3-27

DST Test Number: 2





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Vincent Oil Corporation  
 155 N Market Ste 700  
 Wichita, KS 67202  
 ATTN: Jim Hall

**27-28S-23W Ford**  
**Hawes Ranch 3-27**  
 Job Ticket: 51919      **DST#: 3**  
 Test Start: 2014.01.16 @ 12:39:49

## GENERAL INFORMATION:

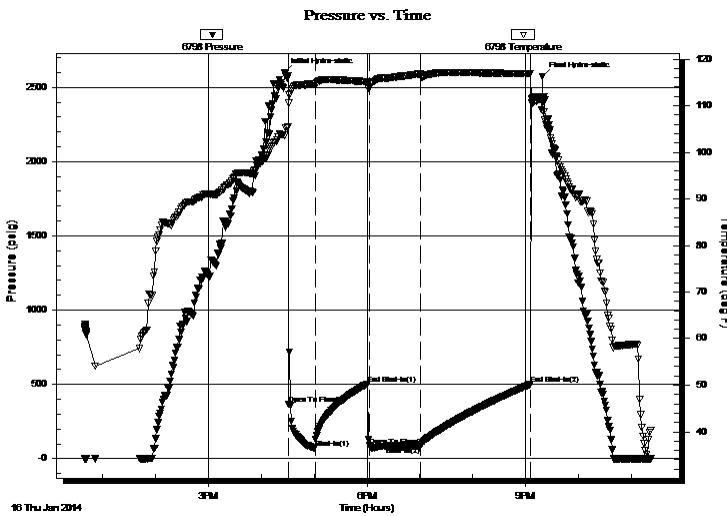
Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:31:34  
 Time Test Ended: 23:22:49  
 Interval: **5164.00 ft (KB) To 5195.00 ft (KB) (TVD)**  
 Total Depth: 5195.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 2514.00 ft (KB)  
 2503.00 ft (CF)  
 KB to GR/CF: 11.00 ft

## Serial #: 6798

Inside

Press @ Run Depth: 82.86 psig @ 5165.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.16 End Date: 2014.01.16 Last Calib.: 2014.01.16  
 Start Time: 12:39:50 End Time: 23:22:49 Time On Btm: 2014.01.16 @ 16:26:49  
 Time Off Btm: 2014.01.16 @ 21:19:04

**TEST COMMENT:** IF: Strong Blow , BOB in 15 seconds, GTS in 4 minutes, Gauged Gas & Caught Sample  
 IS: 1/2 inch Blow Back  
 FF: Strong Blow , BOB & GTS Immediate, Gauged Gas  
 FS: Weak Surface Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2600.28	103.66	Initial Hydro-static
5	367.79	110.52	Open To Flow (1)
35	71.34	114.75	Shut-In(1)
95	505.77	115.15	End Shut-In(1)
97	86.43	113.88	Open To Flow (2)
154	82.86	116.83	Shut-In(2)
279	502.17	116.94	End Shut-In(2)
293	2570.10	111.08	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4992 GIP	0.00
150.00	GMCO 10%G 20%M 70%O	2.10

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	65.00	535.61
Last Gas Rate	0.25	22.00	57.74
Max. Gas Rate	0.50	65.00	535.61

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Vincent Oil Corporation

**27-28S-23W Ford**

155 N Market Ste 700  
Wichita, KS 67202

**Hawes Ranch 3-27**

Job Ticket: 51919

**DST#: 3**

ATTN: Jim Hall

Test Start: 2014.01.16 @ 12:39:49

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	4992 GIP	0.000
150.00	GMCO 10%G 20%M 70%O	2.104

Total Length: 150.00 ft      Total Volume: 2.104 bbl

Num Fluid Samples: 0

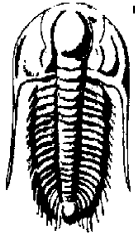
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Vincent Oil Corporation

**27-28S-23W Ford**

155 N Market Ste 700  
Wichita, KS 67202

**Hawes Ranch 3-27**

Job Ticket: 51919

**DST#: 3**

ATTN: Jim Hall

Test Start: 2014.01.16 @ 12:39:49

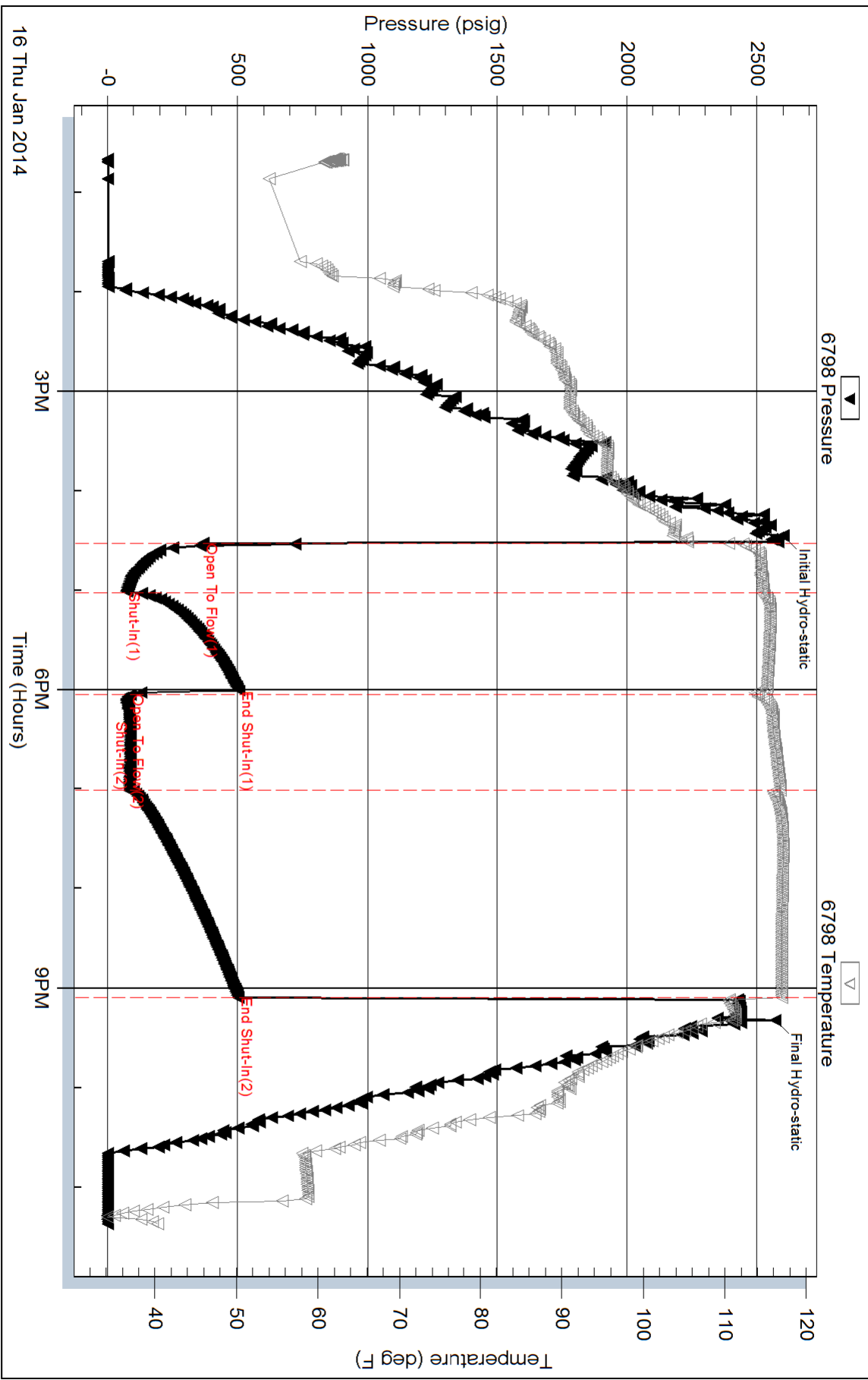
### Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	10	0.50	65.00	535.61
1	20	0.50	32.00	313.00
1	30	0.50	12.00	178.09
2	10	0.25	36.00	79.95
2	20	0.25	38.00	83.13
2	30	0.25	34.00	76.78
2	40	0.25	30.00	70.44
2	50	0.25	25.00	62.50
2	60	0.25	22.00	57.74

### Pressure vs. Time





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Vincent Oil Corporation  
 155 N Market Ste 700  
 Wichita, KS 67202  
 ATTN: Jim Hall

**27-28S-23W Ford**  
**Hawes Ranch 3-27**  
 Job Ticket: 51920      **DST#: 4**  
 Test Start: 2014.01.17 @ 14:20:10

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No      Whipstock:      ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 16:27:25      Tester: Leal Cason  
 Time Test Ended: 22:26:55      Unit No: 74  
 Interval: **5197.00 ft (KB) To 5245.00 ft (KB) (TVD)**      Reference Elevations: 2514.00 ft (KB)  
 Total Depth: 5245.00 ft (KB) (TVD)      2503.00 ft (CF)  
 Hole Diameter: 7.88 inches      Hole Condition: Good      KB to GR/CF: 11.00 ft

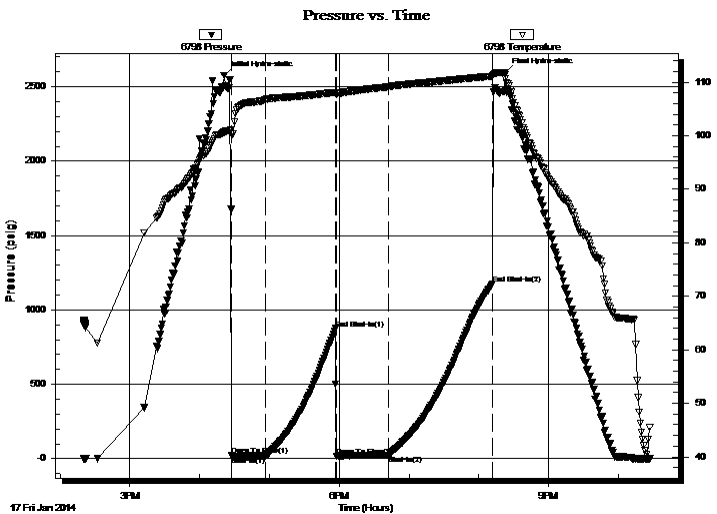
## Serial #: 6798

Inside

Press @ Run Depth: 24.82 psig @ 5198.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2014.01.17      End Date: 2014.01.17      Last Calib.: 2014.01.17  
 Start Time: 14:20:11      End Time: 22:26:55      Time On Btm: 2014.01.17 @ 16:20:55  
 Time Off Btm: 2014.01.17 @ 20:22:40

TEST COMMENT: IF: Weak Blow , Built to 7 inches  
 IS: No Blow Back  
 FF: Strong Blow , BOB in 90 seconds  
 FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2575.17	100.63	Initial Hydro-static
7	20.39	100.40	Open To Flow (1)
36	20.15	106.78	Shut-In(1)
96	874.06	108.10	End Shut-In(1)
97	17.11	107.76	Open To Flow (2)
142	24.82	109.14	Shut-In(2)
231	1173.89	111.13	End Shut-In(2)
242	2596.22	111.36	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	SOCM 2%O 98%M	0.42

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Vincent Oil Corporation

**27-28S-23W Ford**

155 N Market Ste 700  
Wichita, KS 67202

**Hawes Ranch 3-27**

Job Ticket: 51920

**DST#: 4**

ATTN: Jim Hall

Test Start: 2014.01.17 @ 14:20:10

## 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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9100.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	SOCM 2%O 98%M	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



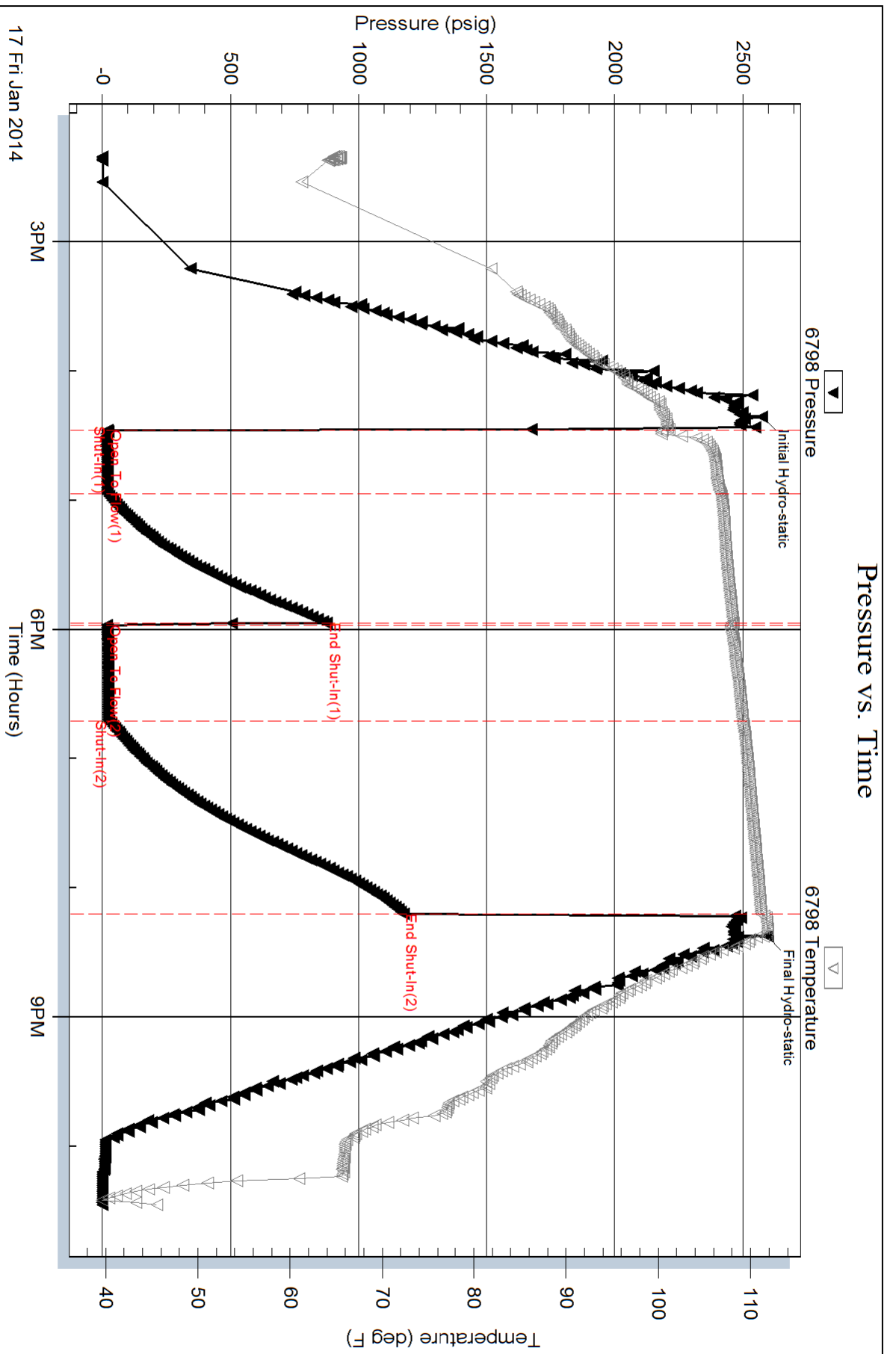
Serial #: 6798

Inside

Vincent Oil Corporation

Hawes Ranch 3-27

DST Test Number: 4



# LITHOLOGY STRIP LOG

## WellSight Systems

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

Well Name: VINCENT OIL CORP. HAWES RANCH #3-27  
Location: NE SW NW NW SEC. 27, T28S, R23W, FORD CO. KANSAS  
License Number: 15-057-20920-00-00  
Spud Date: 12/21/13  
Surface Coordinates: 861' FNL, 552' FWL  
Region: WILDCAT  
Drilling Completed: 1/18/14

### Bottom Hole Coordinates:

Ground Elevation (ft): 2,503  
Logged Interval (ft): 4,200' To: 5,340'  
Formation: Mississippi  
Type of Drilling Fluid: NATIVE MUD TO 3,561'. CHEMICAL GEL TO RTD

K.B. Elevation (ft): 2,513'

Total Depth (ft): 5,340'

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

### OPERATOR

Company: VINCENT OIL CORP.  
Address: 155 N. MARKET STE 700  
WICHITA, KANSAS 67202-1821  
OFFICE; 316-262-3573

### GEOLOGIST

Name: Jame R. Hall Well Site Supervision  
Company: Black Gold Petroleum  
Address: 5530 N. Sedgwick  
Wichita, Kansas 67204-1828  
316-838-2574

## Comments

Drilling contractor: DUKE DRILLING CO. INC., Rig #10, Tool Pusher; Nick Henderson.

Surface Casing: 8 5/8" set at 638' cmt. 325 sx, did circulate.

### Daily Activity @ 07:00hrs.:

12/20/13; completing rig & draw works move in and rig up.

12/21/13; spud @02:00 hrs with 12 1/4" hole.

12/22/13; at 07:00 354' down for draw works bearing and damage to drive shaft, while drilling surface hole.

12/23/13 to 1/3/14; shutting down waiting on repairs to the draw works, and Christmas shut down.

1/4/14; drilling 12 1/4" surface hole at 598'

1/5/14; 645' preparing to trip in and drill out casing shoe.

1/6/14; 900' drilling.

1/7/14; 1,975' drilling.

1/8/14; 2,770' drilling.

1/9/14; 3,258' drilling.

1/10/14; RTD 3,593' stuck in hole @ 3,561', waiting on nitrogen truck. Drilling string free @ 11:30hrs (1/10/14).

Displaced system @ 3,561', with Chemical Gel System prior to tripping back to 3,593' and drilling ahead.

1/11/14; 4,030' drilling.

1/12/14; 4,555' drilling.

1/13/14; 4,917' drilling.

1/14/14; 5,022' running DST #1 Pawnee (4,988'-5,022'). Prior to DST, made 20std short trip, conditioned hole, drop survey (1deg), and strap pipe (2.81'long) on trip out for test tools.

1/15/14; 5,150' trip out for DST #2 Base Penn. (5,040' - 5,150'). During trip out stands 11 thru 14 pulled tight (40k to 10k over). Pulled 20 stands total, then back to bottom and condition, prior to tripping out for DST #2.

1/16/14; 5,180', circulating upper Mississippi, DST #3.

1/17/14; 5,215' circulating, DST #4.

1/18/14; 5,290' drilling. 10:41 hrs RTD @ 5,340'. Ran open hole logs.

1/19/14; Ran 4 1/2" production casing, to evaluate the Pawnee.

Deviation Surveys: 1/4 @ 645', 1/2 @ 1,080', 1/2 @ 1,509', 1/2 @ 2,015', 1/2 @ 2,994', 1 @ 5,022', 1 @ 5,195.

### Bit Record:

#1 12 1/4" out @ 645'.

#2 7 7/8" JZ HA20L in @ 645', out @ 5,022', made 4,377'in 135 1/4 hrs.

#3 7 7/8" JZ HA20 in @ 5,022', out @ 5,350', made 328' in 19 1/4 hrs.

Drilling time commenced: @ 4,200'. Minimum 10' wet and dry samples commenced: @ 4,250' to RTD. Samples delivered to Kansas Geological Sample Library at Wichita, Kansas.

Gas Detector: Blue Stem Labs, digital unit #0756.

Mud System: Mud-Co/Service Mud. Chemical Gel system @ 3,561', Mud Engineer: Terry Ison & Justin Whiting

Open Hole Logs: Nabors Comp. & Prod. Services; Hays Kansas. Logging Engineer: Jeff Lubbers.  
DIL, CDL/CNL/PE, MEL/SON.

Note: If there is a depth difference between the Final Lithology Strip log and the open hole electric log, this Lithology Strip Log, has been shifted to correlate with the open hole logs. (A 3 foot deeper shift was made, for e-log correlation).

Open Hole E-log tops are placed on the Final strip log, with the reference wells "A" Oil Producers Inc. Hawes Ranch #2A-27, NE NW/4 27-T28S-R23W and "B" Oil Producers Inc. Hawes Ranch #1A-27, SW NW/4. (E-log tops datum differences shown).

## DSTs

**DST #1 Pawnee 4,988' to 5,022', 30-60-45-90, IH2559, IF 60-130, BOB 30sec. No GTS, ISI 1129; GTS 5 min into bleed off, surface blow thru shut in., FF 131-227; BOB 90sec. GTS immed. 15min 35mcf, 20min 35mcf, 30min 32mcf, 40min 32mcf, 45min 32mcf, blue orange flame and gas sample taken, FSI 1115, surface blow, FH 2532, Rec; 4,447' GIP, 256' GMCO (20%G, 60%O, 20%M), 186' GO (15%G, 85%O), 93' MWCO (90%O, 5%W, 5%M), Oil Gravity 57.6 API, not enough water or mud for good readings, BHT 115 F.**

**DST #2 (Basal Penn.) 5,040' - 5,150' (110'), 30-60-45-90, IH 2535, IF 38-167 (BOB 3min NGTS), ISI 1585 (1/4" blow), FF 182-313 (BOB 30sec, GTS 17min TSTM), FSI 1577 (1/4" blow), FH 2481, Rec; 4,428' GIP, 60' GCM (10%G,90%M), 93' GMCW (10%G,50%W,40%M), 465' MCW (90%W,10%M), Chl 79,000ppm per mud engineer, (drilling mud 9,600ppm), Rwa 0.11 @ 41deg. (0.039 @ BHT), BHT 115 F.**

**DST #3 (Mississippi), 5,164' - 5,195' (31'), 30-60-60-120, IH 2600, IF 368-71, (BOB 15sec. GTS 4min), 1/2" ck 10min 535mcf, 20min 313mcf, 30min 178mcf. ISI 506 (1/2" blow), FF 86-83 (BOB, GTS Immd.) 1/4" ck 10min 79mcf, 20min 83mcf, 30min 76mcf, 40min 70mcf, 50min 62mcf, 60min 57mcf), FSI 502 (surface blow), FH 2570, Rec; 4,992' GIP, 150' GMCO (10%G, 70%O, 20%M), BHT 117. Gas sample was taken, and an orange flame was observed.**

**DST #4 (Mississippi), 5,197' - 5,245' (48'), 30-60-45-90, IH 2575, IF 20-20 (Weak blow building to 7"), ISI 874 (no blow), FF 17-25 (BOB in 90sec., no GTS), FSI 1174 (no blow), FH 2596, Rec; 30' SOCM (2%O, 98%M), BHT 111 F.**

Serial #: 6798

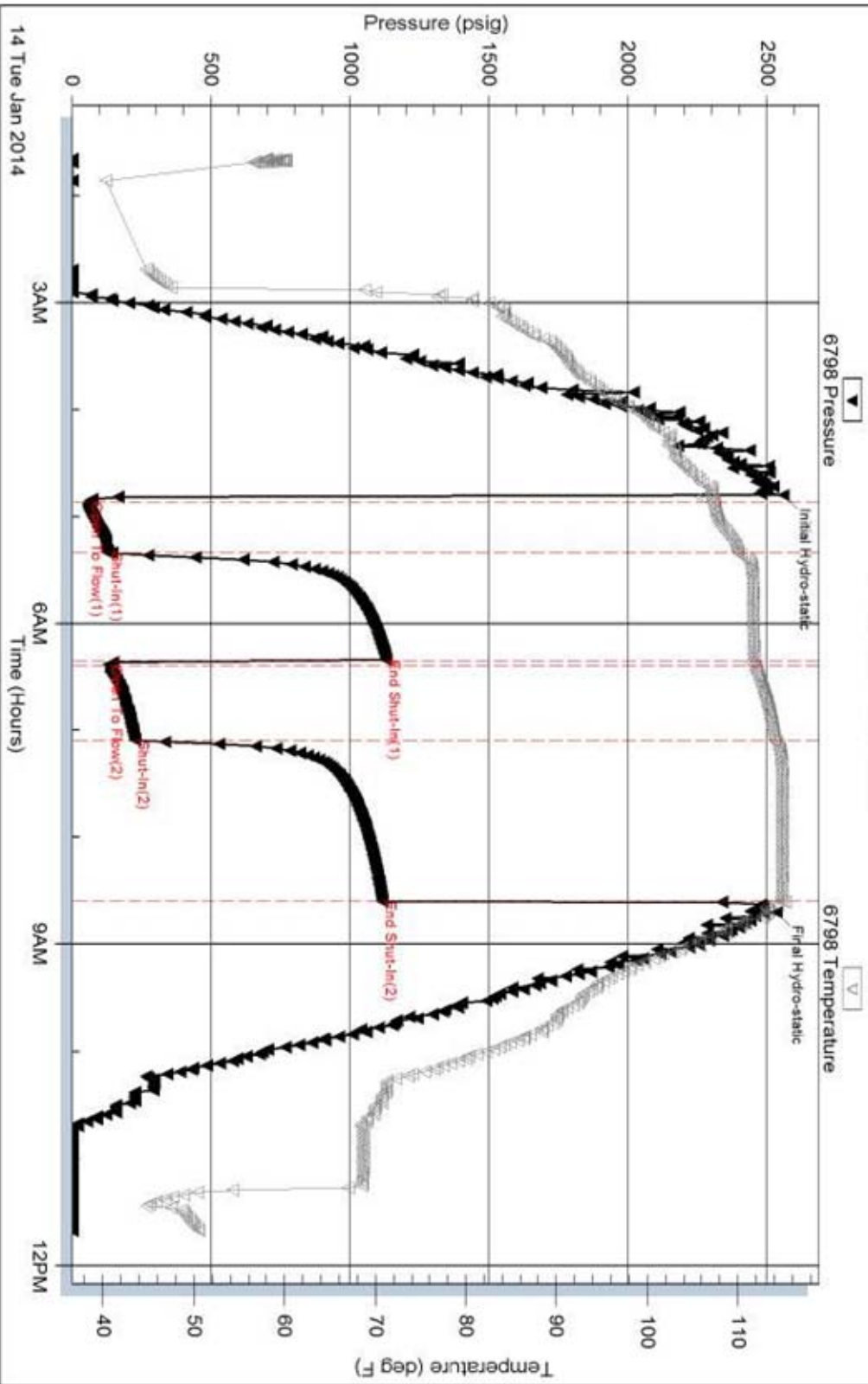
Inside

Vincent Oil Corporation

Hawes Ranch 3-27

DST Test Number: 1

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 51917

Printed: 2014.01.14 @ 12:03:38

Serial #: 6798

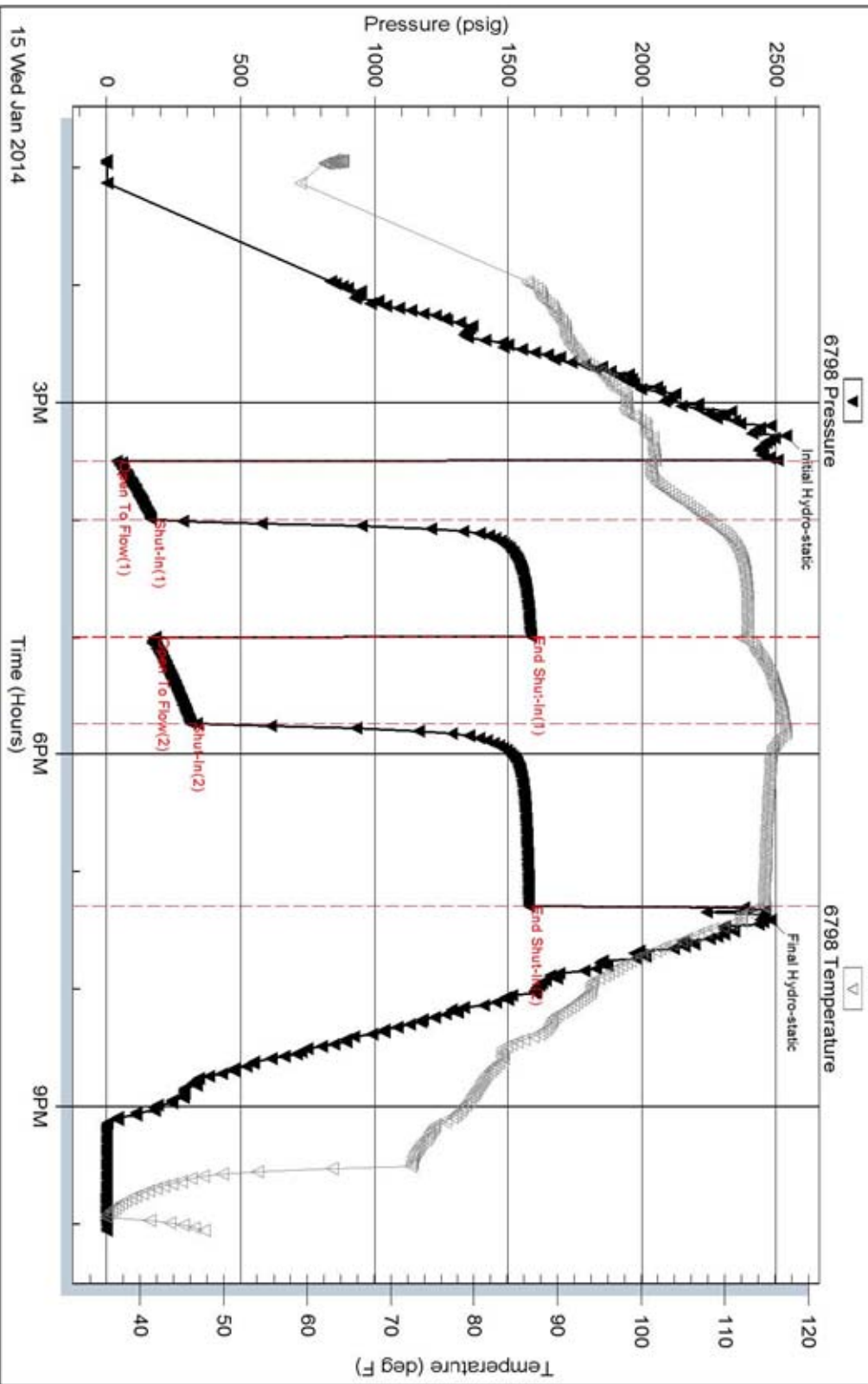
Inside

Vincent Oil Corporation

Hawes Ranch 3-27

DST Test Number: 2

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 51918

Printed: 2014.01.15 @ 22:31:11

Serial #: 6798

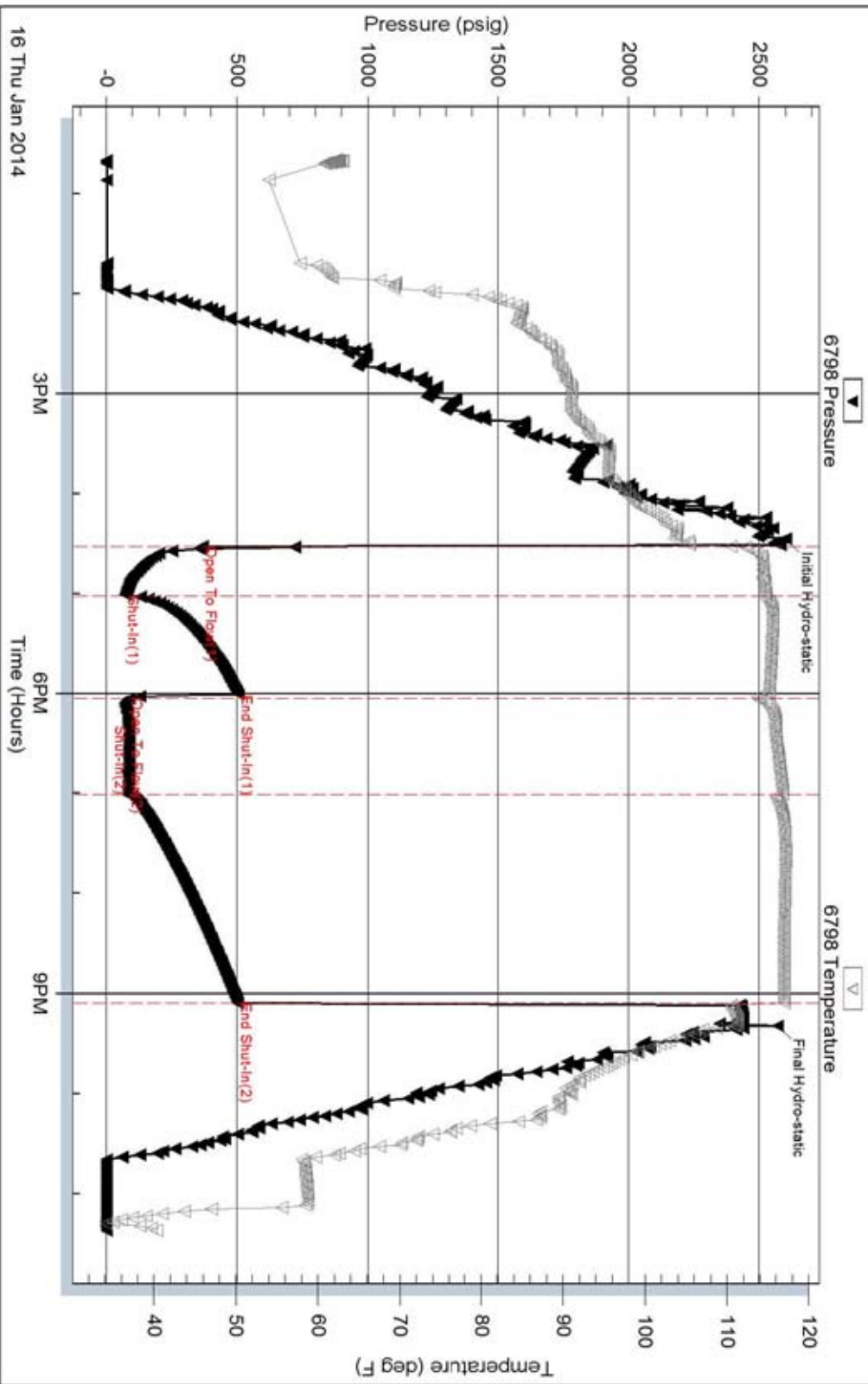
Inside

Vincent Oil Corporation

Hawes Ranch 3-27

DST Test Number: 3

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 51919

Printed: 2014.01.17 @ 01:23:37

Serial #: 6798

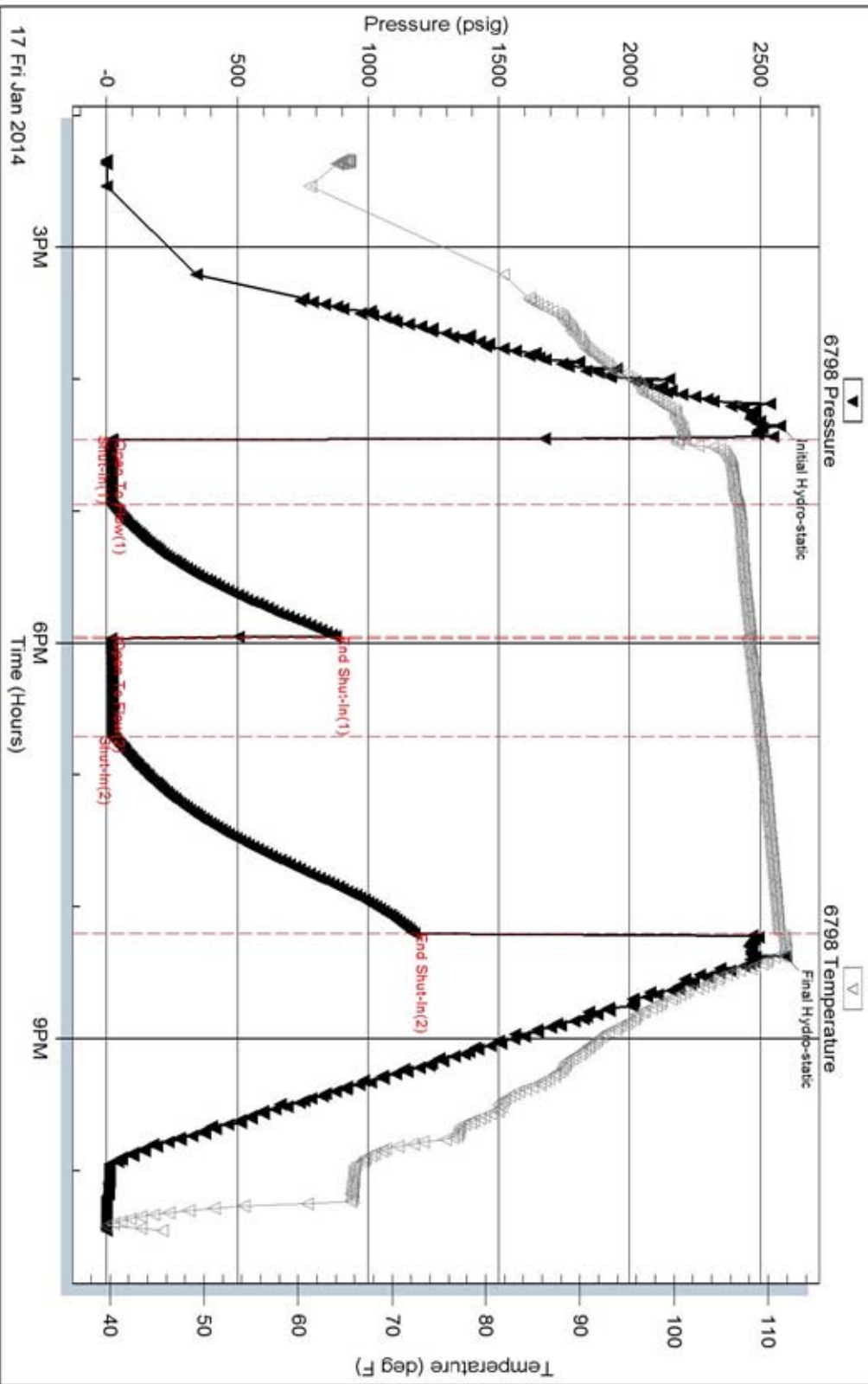
Inside

Vincent Oil Corporation

Hawes Ranch 3-27

DST Test Number: 4

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 51920

Printed: 2014.01.18 @ 01:10:10



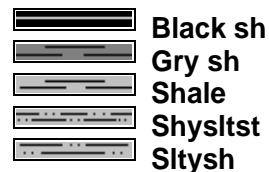
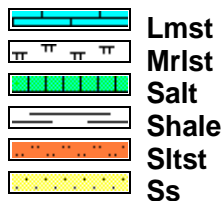
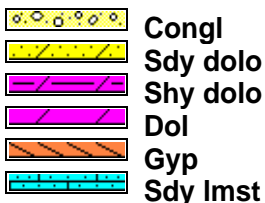
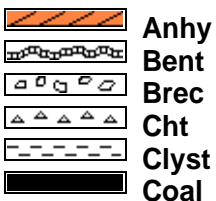
## Qualifiers

### CARBONATE CLASSIFICATION:

**AFTER DUNHAM:** GRAIN; any fossil, fossil fragment, sand grain, or other rock fragment within the rock. **MUDSTONE;** muddy carbonate rocks containing less than 10% grains. **WACKESTONE;** mud supported carbonate rocks with more than 10% grains. **PACKSTONE;** grain supported muddy carbonate rocks. **GRAINSTONE;** mud free carbonate rock, grain supported. **BOUNDSTONE;** carbonate rock bound together at deposition (coral, etc.). **CRYSTALLINE CARBONATE;** carbonate rock retaining to little of their depositional texture to be classified.

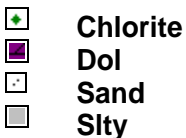
**Qualifiers:** (fossils, minerals, shows); Rare = less than 1% of sample total, Trace = less than 5% of sample total, 5% or greater = estimate of total percentage.

## ROCK TYPES

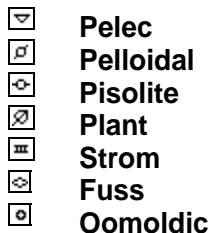


## ACCESSORIES

### MINERAL



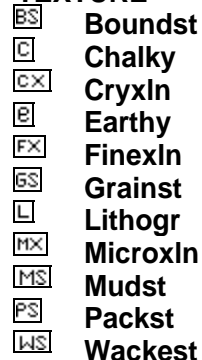
### FOSSIL



### STRINGER



### TEXTURE



Curve Track 1

ROP (min/ft) ———  
 Gamma (API) - - - -  
 Caliper (API) ·····

TG (units) ———  
 C1 (units) - - - -  
 C2 (units) - - - -  
 C3 (units) ·····  
 C4 (units) ·····  
 C5 (units) ·····

Depth

Porosity Type

Lithology

Oil Shows

Geological Descriptions

0 ROP (min/ft) 10  
 0 Gamma (API) 150  
 6 Caliper (API) 16

@4080  
 Wt 9  
 Vis 44  
 Fil 14  
 Chl 9,000  
 Lcm 0#  
 Cum \$13,344

0 ROP (min/ft) 10  
 0 Gamma (API) 150  
 6 Caliper (API) 16

9.3-50  
 conn  
 Wob 36k  
 Rpm 75-80  
 Spm 58  
 Pp 1150

9.3-50  
 conn

9.2-51  
 conn

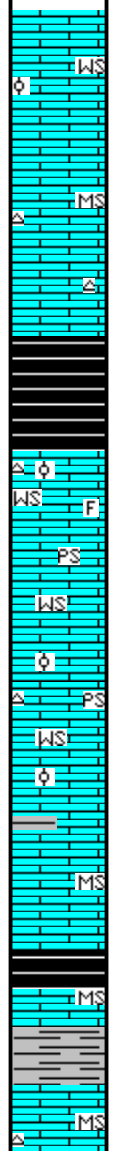
Wob 36k  
 Rpm 75-80  
 Spm 58  
 Pp 1150  
 conn

9.2-50

4200

4250

4300



Jim Hall on location @ 4,290'.

Wackestone; off white, cream, brittle, to soft, most chalky matrix, micro-oolitic to micro-fossiliferous, no show, dull yellow to gold mineral fluorescence only.

Mudstone; cream to gray, firm, some crystalline-silky matrix, dense.

Shale; small influx dark gray and black carbonaceous looking shales, no visible gas bubbles.

Wackestone; micor-oolitic, as above, trace light gray micro-oolitic, firm, crystalline matrix, no show, slight increase in carb-shale.

Wackestone to Packestone; firm to brittle, some soft, most chalky matrix, micor oolitic to micro-fossil fragments, dull yellow to gold mineral fluorescence only, no show in wet or dry sample, small influx, black, gray and red-brown shales aa.

Wackestone: cream to off white, most chalky, firm to soft, micro-oolitic, rare blue - gray free fossiliferous chert, dull yellow gold mineral fluorescence-no show.

Mudstone; gray to tan, firm, most chalky matrix.

Heebner 4318 (-1805) A +3 B +13

Shale; increase in black, carbonaceous shale-no visible gas bubbles.

Shale; gray-red to black, slight increase in %.

Mudstone; tan to brown, hard, crystalline to chalky matrix, some micro-oolitic, no show, less shale here, rare free chert. As above poor sample representation here.

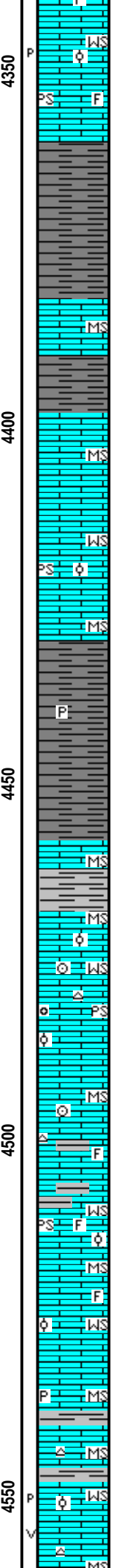
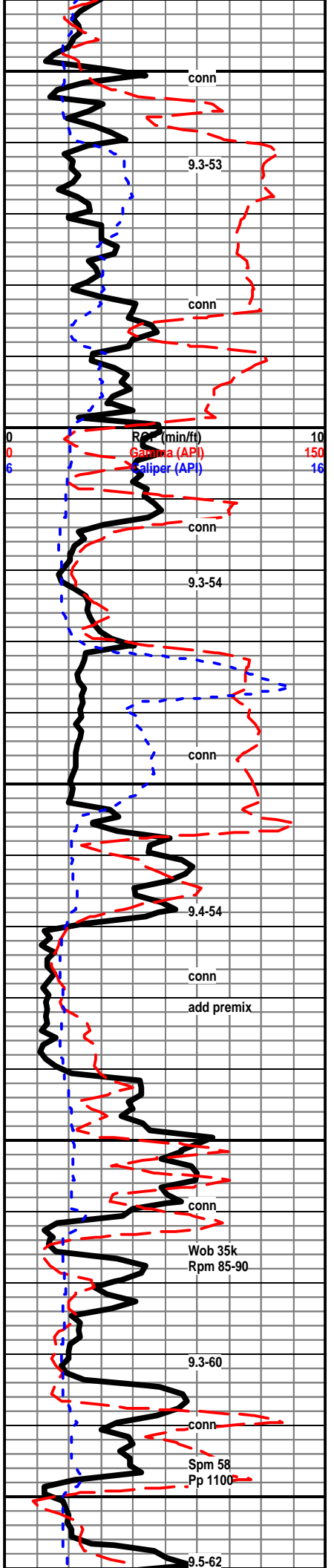
1 10 TG 100 1000

1 10 TG 100 1000

1 10 TG 100 1000

1 10 TG 100 1000

1 10 TG 100 1000



As above poor sample representation here.

Wackestone; to occasional Packstone; cream to off white, chalky to crystalline matrix, micro-oolitic, scattered bright mineral fluorescence - no cut and no visible show, rare off white free chert.

Shale; slight increase in soft gray shales here, very poor sample representation here.

Mudstone to Wackestone; cream, micro-oolitic, firm, most chalky matrix, some bright fluorescence but no show.

Shale; slight increase in gray soft.

Mudstone; cream to light gray, hard, chalky, some crystalline, yellow to dull gold mineral fluorescence, no show.

Wackestone; cream to off white, micro-oolitic, brittle to hard, mineral fluorescence as above-no show, no visible porosity in dry.

Mudstone; brown crystalline-hard, some with fossil fragments, cream to off white-chalky.

Shale; increase in gray, gray green and scattered brown, soft, waxy to dull luster, rare free pyrite.

**Brown Lime 4457 (-1944) A +3 B +13**

Mudstone; cream to off white, some tan, brittle to hard.

**Lansing 4468 (-1955) A +8 B +13**

Wackestone to Packstone; cream to tan, micro-oolitic, to very fine oolitic, some fossil fragments, rare micro-oolitic look, chalky to crystalline matrix, yellow to dull gold mineral fluorescence, no show in the wet sample, rare crinoid stem, looks tight in wet, rare free white chert.

Mudstone; cream to tan some gray, hard-brittle, chalky to crystalline, some off white chalky-soft, rare fossil fragments, rare free crinoid stem, trace free white and gray fossiliferous chert.

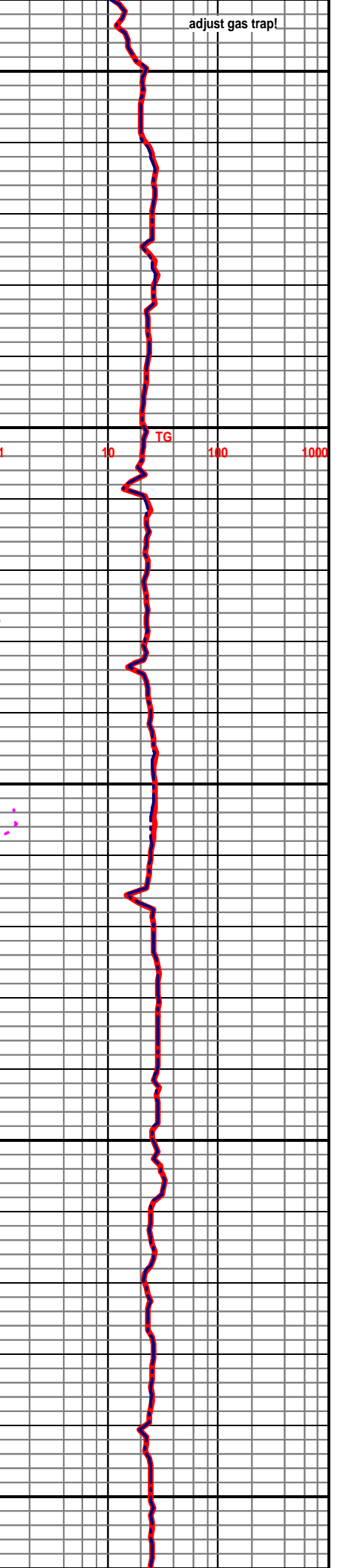
Wackestone to Packstone; cream to gray, firm, most chalky matrix, micro-oolitic to fossiliferous, tight looking wet and dry, mineral fluorescence only, no show.

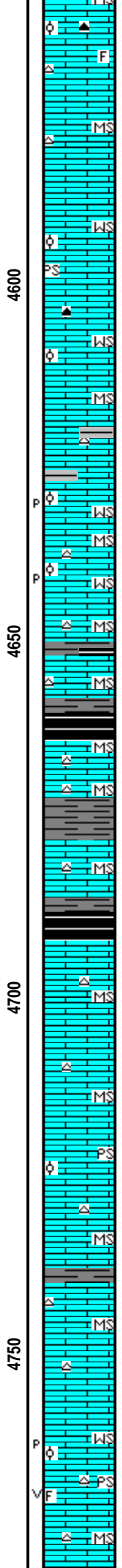
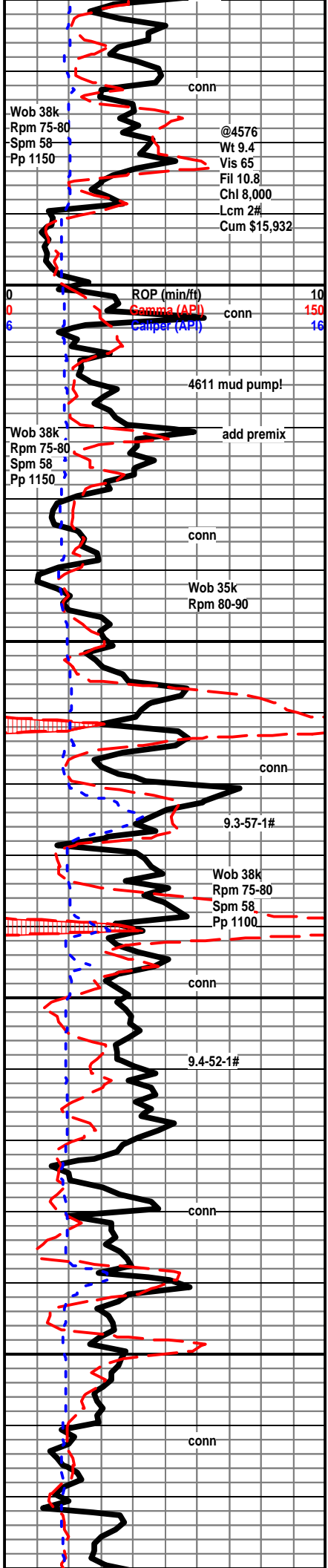
Wackestone; as above; rare fossil fragments, no show.

Mudstone; cream to light gray, firm - chalky, trace brown-crystalline with pyrite inclusions-dense.

Shale; small influx, gray soft earthy to smooth texture.

Wackestone; cream to gray, most hard to brittle, micro-oolitic rare very fine oolites, tight looking matrix in the wet, yellow mineral fluorescence, no show, rare white free chert, rare barren porosity in the dry sample.





Mudstone; gray to cream, firm, most chalky, Scattered Wackestone; cream to off white, micro-oolitic to very fine oolites, increase in dull gold mineral fluorescence less yellow here, no show, trace blue gray fossiliferous, chert, rare black blocky chert.

Mudstone; cream, tan, chalky to crystalline, some fossiliferous, tight look in wet, rare free light gray fossiliferous chert.

Wackestone to Packstone; cream to tan, micro-oolitic, micro-fossiliferous, no show, tight look wet.

Wackestone; as above, influx, cream to tan micro-oolitic, micro-fossiliferous, with dark inclusions, no show, looks wet, rare black and gray spicular chert.

Mudstone; cream to tan, some brown, chalky to crystalline, dense, mineral fluorescence only, trace gray to tan free chert, slight increase in gray to dark gray shale here-cave?

Wackestone; micro-oolitic, chalky to crystalline matrix, looks tight wet, no show, rare barren porosity in the dry sample.

Wackestone; aa, no show.

Mudstone; cream to brown, chalky-crystalline, slight decrease in chert here.

Mudstone; cream, tan, buff, chalky to crystalline, firm to brittle, tight look in wet, chert off white to light gray, some mottled. Influx Shale, dark gray to black carbonaceous, no visible gas bubbles.

Mudstone; cream to off white, hard to brittle, chalky, some micro-oolitic look, trace free chert aa, trace gray to dark gray shale stringers.

Mudstone; cream off white, chalky, hard to brittle, some chalky soft, tan chalky to crystalline, dense, rare off white free chert, mineral fluorescence only.

Mudstone; cream to off white, trace tan crystalline-silky texture, dense.

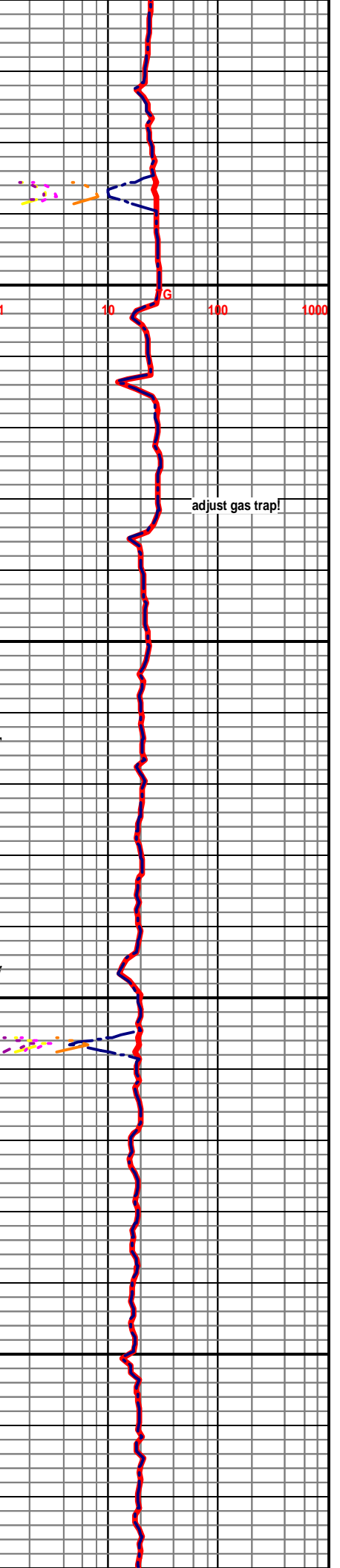
Packstone; cream, micro-oolitic to very fine oolitic, no visible porosity and no show, trace free chert, some pale blue-gray.

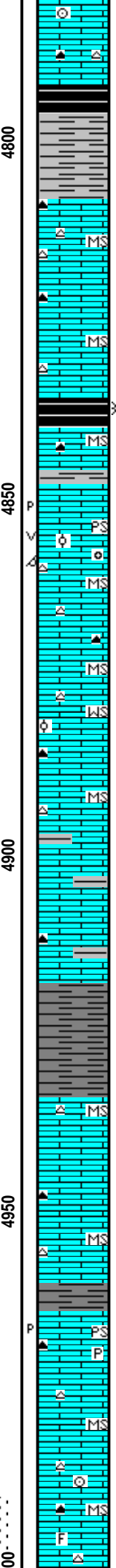
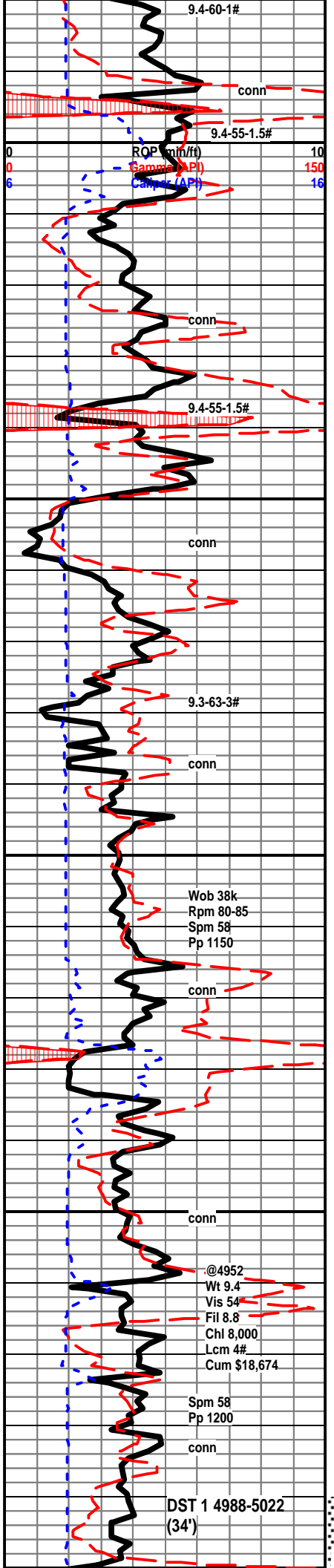
Mudstone; cream to tan, chalky to crystalline, trace free chert.

Mudstone; cream to tan, chalky, hard to soft, dense, trace wormy stain - no cut, no live show, trace free chert as above.

Wackestone to Packstone; cream, micro-oolitic to micro-fossiliferous, chalky, no visible show in wet, trace barren porosity in the dry, rare fossiliferous free chert, rare barren porosity in the dry.

Mudstone; tan to brown, hard, crystalline - silky texture, dense rare cream crinoid stem, less Wackestone and Packstone with depth. trace black. brown and off white free chert here.





**Stark Shale 4793 (-2280) A -3 B +22**

Shale; black-carbonaceous, no visible gas.

Shale; slight increase in gray, gary-green and black shales.

Mudstone; as above, stringers of shale as above, no show, free light and dark free chert.

Mudstone; cream to tan and off white, chalky to crystalline, free gray to dark gray chert.

**Hush. Shale 4837 (-2324) A -7 B +22**

Shale; black, carbonaceous, rare gassy when broken.

Mudstone; cream, off white, chalky, firm to soft, tan-crystalline silky, firm to hard, trace dark blocky chert, trace gassy carb. shale from above.

Packstone; off white, oolitic, brittle, chalky matrix, no show wet, rare barren porosity visible in the dry sample, no stain, trace off white fossiliferous free chert.

Mudstone; tan, brown and light gray, most crystalline matrix, dense.

Mudstone; cream to brown, some light gray, chalky-crystalline, most brittle.

Wackestone; cream to brown, micro-oolitic, chalky to occasionally crystalline, tight look wet, no show wet, free whi fossiliferous chert and dark gray chert.

Mudstone; gray to light gray, firm to soft, crystalline-silky to dull-chalky, tight look in wet, trace off white to tan free chert, slight increase in % gray to dark gray and black chert.

Mudstone; gray to light gray and influx of brown, crystalline-silky, dense, free dark chert, increase in gray and sean green, shales here.

Shale; increase in %, gray-green, dark gray, black, scattered green, some arenaceous texture, soft to firm.

**Marmaton 4936 (-2423) A -5 B +20**

Mudstone; cream to tan, scattered brown, less gray here, chalky to crystalline, dense looking in wet sample, some micro-oolitic to micro-fossiliferous in a tight matrix, much shale in samples as above.

Mudstone; cream to tan, off white, chalky to crystalline, firm to hard, tight looking wet, free light to dark chert, rare Mudstone with chert inclusions.

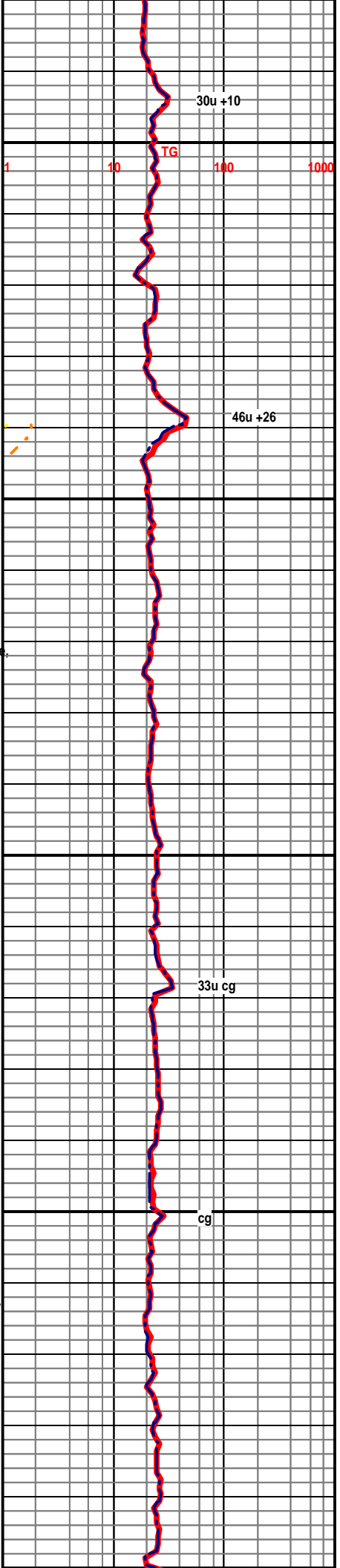
Packstone; rare in sample, no stain, no show, barren porosity in the dry sample.

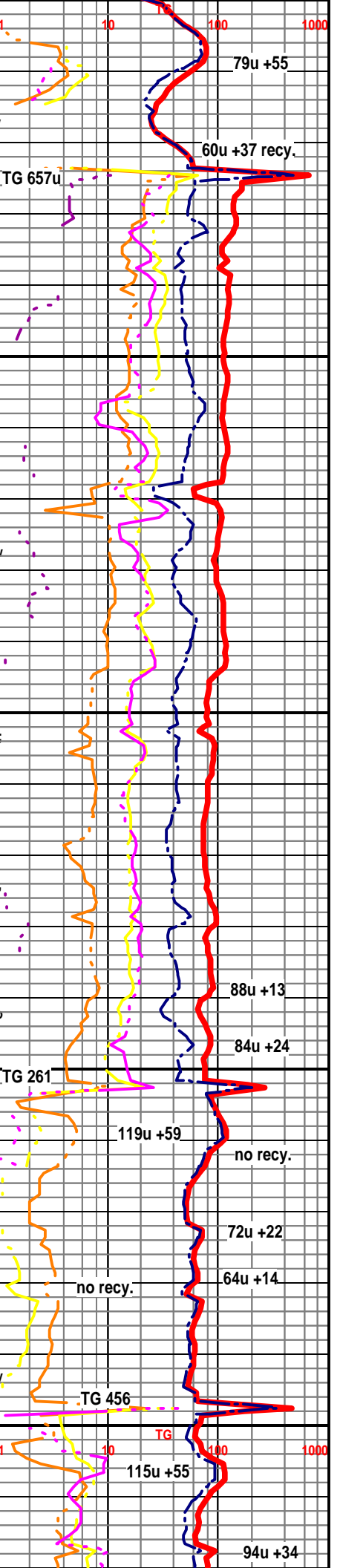
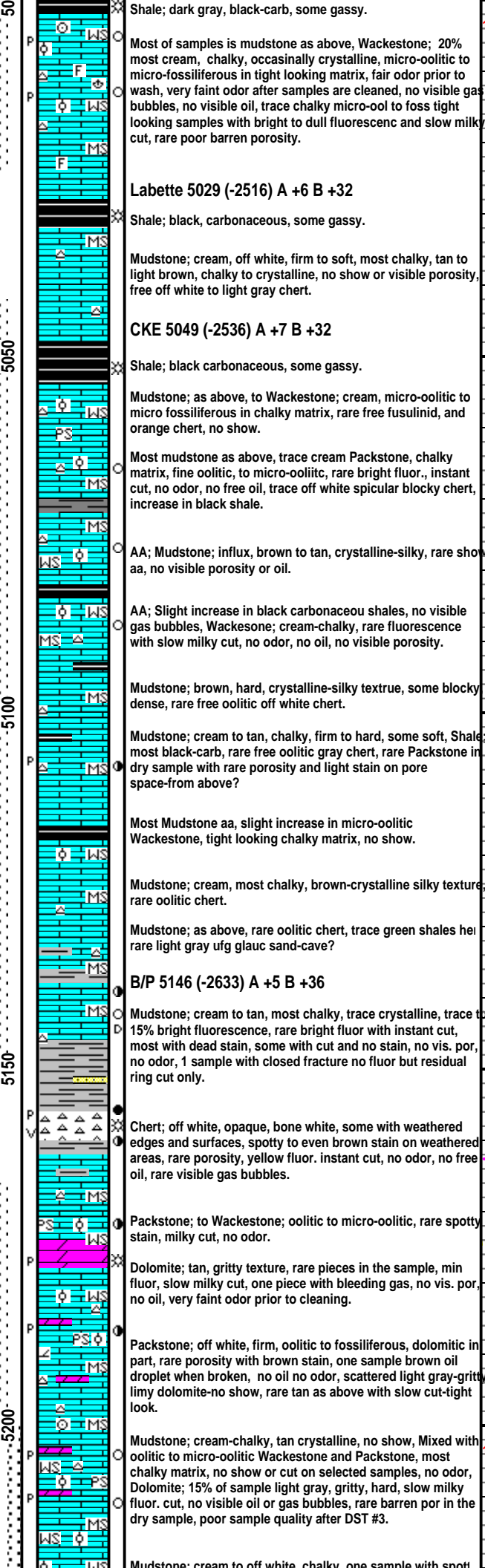
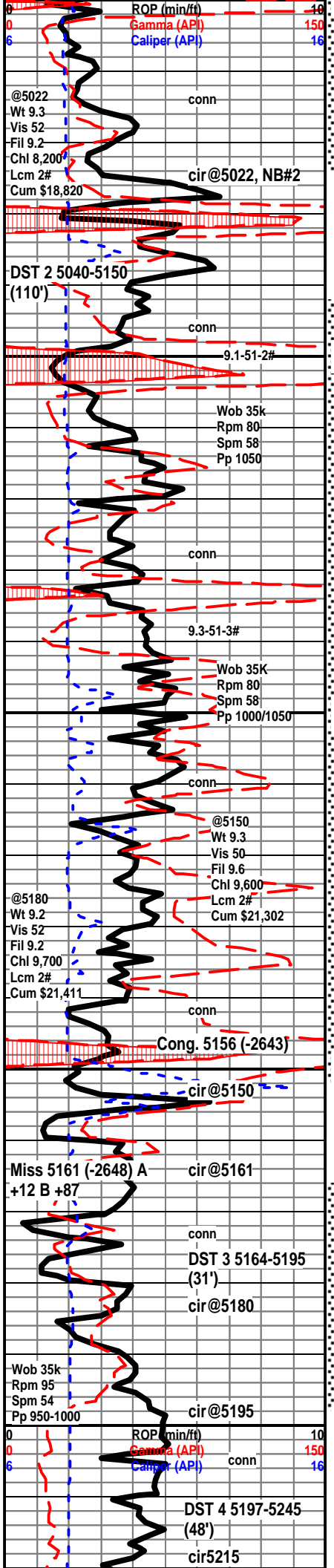
Mudstone; cream to tan and off white, aa, trace Wackestone; micro-oolitic, tight, rare free dark chert and pyrite.

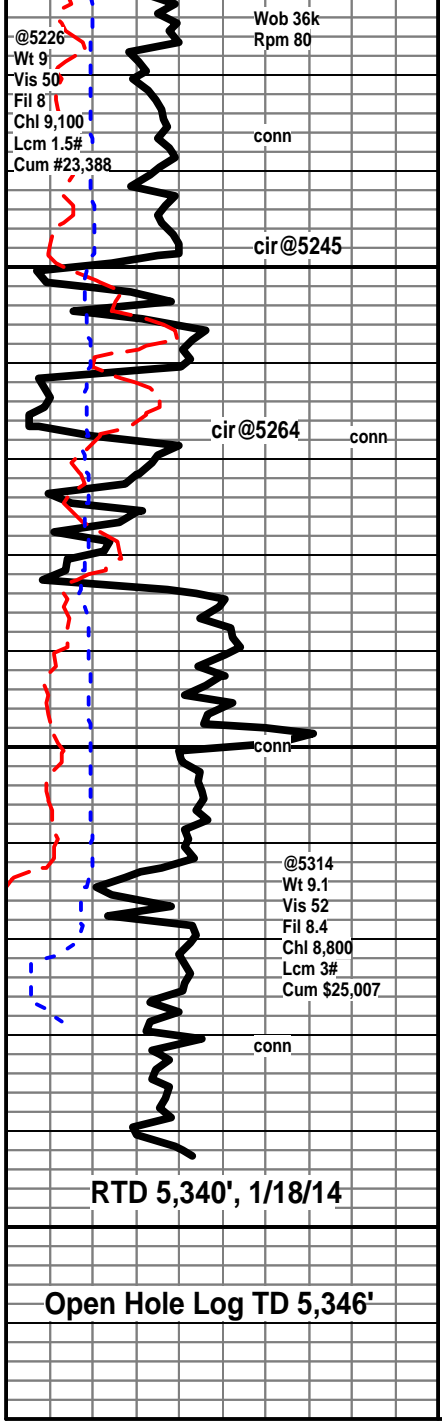
Mudstone; cream to light gray, chalky-crystalline, brittle to firm.

Mudstone; off white, cream to light gray, free white chert, crystalline to chalky, trace free fossil and crinoid stem fragment, no show.

**Pawnee 5002 (-2489) A +8 B +32**







@5226  
Wt 9  
Vis 50  
Fil 8  
Chl 9,100  
Lcm 1.5#  
Cum #23,388

Wob 36k  
Rpm 80

conn

cir@5245

cir@5264 conn

conn

@5314  
Wt 9.1  
Vis 52  
Fil 8.4  
Chl 8,800  
Lcm 3#  
Cum \$25,007

conn

RTD 5,340', 1/18/14

Open Hole Log TD 5,346'

5250

5300

5350



Mudstone; cream to off white, chalky, one sample with spotty stain, slow milky cut, one sample oolitic Packstone; with spotty dark stain and milky cut, no odor, no visible oil.

Packstone; cream to off white, oolitic, chalky matrix, one sample free chert with light spotty stain-fluor cut, one sample dolomite with fluor. cut, old shows? no show in Packstone.

Packstone to Wackestone, cream to off white, oolitic to micro-oolitic, only one sample with spotty stain and slow milky cut, no visible oil, no odor, aa no visible porosity in the wet, trace free white chert as above some oolitic, increase in % shale, however box is cleaner with circulating time.

Dolomite; light gray to buff, hard, sucrosic to very fine crystalline, visible porosity-no show, only mineral fluorescence, one sample vgy chert with instant cut, no sample odor.

Dolomite; light gray to tan, hard-brittle, sucrosic, mineral fluorescence only, no cut, no show, rare galuconite inclusions and blue gray fossiliferous chert.

Dolomite; light gray, buff, sucrosic, hard to brittle, rare galuconite-chlorite inclusions, rare visible porosity in the dry, mineral fluorescence only, rare off white chert, some fossiliferous.

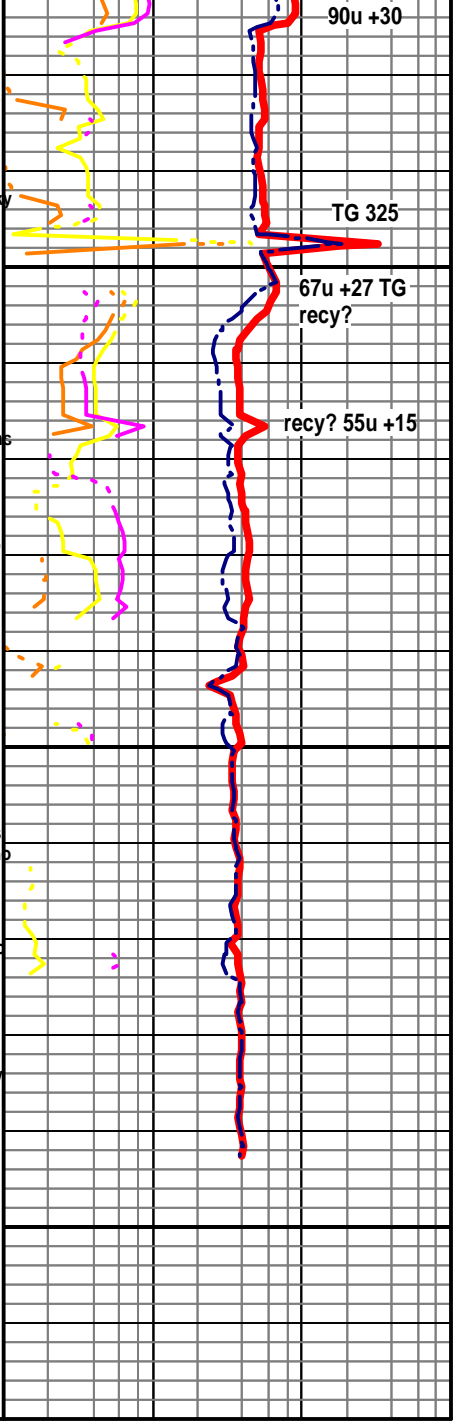
Wackestone; cream, firm to soft, micro-oolitic, traces white oolitic Packstone, some glauconitic, no show, trace bone white blocky free chert.

As above; 5 - 10% opaque free fresh chert here.

Wackestone to Packstone; cream to off white, most chalky matrix, micro-oolitic to fine oolitic, rare glauconitic inclusions a bit less chert here, all fresh, off white to opaque, no show, no visible porosity.

Wackestone to Packstone; cream to off white, micro-oolitic to small oolites in chalky and crystalline matrix, free off white chert, influx very colored shales here-cave?

Mudstone; cream, chalky, soft, increase in chert, occasionally green-blocky, still much vary colored shales in the sample-cave? However hole is cleaning up with circulating time.



90u +30

TG 325

67u +27 TG  
recy?

recy? 55u +15