

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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Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	KEOUGH 9-34
Doc ID	1402521

All Electric Logs Run

Dual Induction
Density - Neutron
Micro-log
Sonic

Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	KEOUGH 9-34
Doc ID	1402521

Tops

Name	Top	Datum
Heebner Shale	4368	(-1816)
Brown Limestone	4506	(-1954)
Lansing	4523	(-1971)
Stark Shale	4855	(-2303)
Pawnee	5064	(-2512)
Cherokee Shale	5115	(-2563)
Basae Penn Limestone	5213	(-2661)
Mississippian	5243	(-2691)
RTD	5370	(-2818)



# BASIC

energy services, L.P.

## TREATMENT REPORT

Customer <b>VINCENT OIL CORP.</b>	Lease No.	Date <b>11-25-2017</b>
Lease <b>KEOUGH</b>	Well # <b>9-34</b>	
Field Order # <b>16098</b>	Station <b>PRATT, Ks.</b>	Casing <b>8 5/8"</b>
Type Job <b>8 5/8" S.P.</b>	Depth <b>650'</b>	County <b>FORD</b>
	Formation	State <b>Ks</b>
		Legal Description <b>34-28-23W</b>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size <b>8 5/8" x 23"</b>	Tubing Size	Shots/Ft	<b>CMT</b>	Acid	<b>150sx ACON</b>	RATE	PRESS	ISIP
Depth <b>647.50'</b>	Depth	From	To	From	To	Max		5 Min.
Volume <b>41.4 BBL</b>	Volume	From	To	From	To	Min		10 Min.
Max Press	Max Press	From	To	From	To	Avg		-15 Min.
Well Connection	Annulus Vol.	From	To			HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	<b>38.7 BBL</b>	Gas Volume		Total Load

Customer Representative <b>A. GIBNEY</b>	Station Manager <b>J. WESTERMAN</b>	Treater <b>K. LESLEY</b>
Service Units <b>78809 24780 20920 11903 73765</b>		
Driver Names <b>KEOUGH McBRIDE DILLON</b>		

Time	Casing Pressure	Tubing Pressure	Bbbls. Pumped	Rate	Service Log
1:00 AM					ON LOCATION - SAFETY MEETING
1:30 AM					RUN 15 JTS. 8 5/8" x 23" CSG.
					SJ - 42.17' BAFFLE @ 6L5'
10:30 AM					(CSG ON BOTTOM)
11:35 AM					HOOK UP TO CSG / BREAK CIRC. W/ RIG
11:55 AM	300		10	6	H <sub>2</sub> O AHEAD
11:00 AM	300		166	6	MIX 150 SKS H <sub>2</sub> O @ 12 PPG
11:13 AM	250		35	6	MIX 150 SKS H <sub>2</sub> O / H <sub>2</sub> POZ @ 14.4 PPG
11:19 AM					SHUT DOWN - DROP TR. PLUG
11:28 AM	0		0	6	START DISPLACEMENT
11:29 AM	500		30	4	SLOW RATE
11:30 AM	750		38.7	3	PLUG DOWN - PLUSE IN @ HEAD
					CIRC. THRU JOB
					CIRC. TO PRT TO PIT
					JOB COMPLETE
					1 HOURS -
					KEVIN LESLEY



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1004433	1718	11/30/2017
<b>INVOICE NUMBER</b>			
<b>92580824</b>			

Pratt (620) 672-1201  
 B VINCENT OIL CORPORATION  
 1 200 WEST DOUGLAS STE 725  
 L WICHITA  
 L KS US 67202  
 T  
 O ATTN: BRYAN HILLS

J LEASE NAME Keough 9-34  
 O LOCATION  
 B COUNTY Ford  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 T JOB CONTACT  
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41072690	20920		Net - 30 days	12/30/2017

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 11/25/2017 to 11/25/2017</i>				
0041072690				
171816098A Cement-New Well Casing/Pi 11/25/2017 Cement Surface				
A-Con' Blend	150.00	EA	10.26	1,539.00 T
60/40 POZ	150.00	EA	6.84	1,026.00 T
Calcium Chloride	810.00	EA	0.60	484.78 T
Celloflake	76.00	EA	2.11	160.28 T
"Top Rubber Cmt Plug, 8 5/8""	1.00	EA	128.25	128.25
"Baffle Plate Alum., 8 5/8"" (Blue)"	1.00	EA	96.90	96.90
"Unit Mileage Chg (PU, cars one way)"	60.00	MI	2.57	153.90
Heavy Equipment Mileage	120.00	MI	4.28	513.00
Proppant & Bulk Del. Chgs., per ton mil	810.00	EA	1.43	1,154.25
Blending & Mixing Service Charge	300.00	BAG	0.80	239.40
Plug Container Util. Chg.	1.00	EA	142.50	142.50
Depth Charge; 501'-1000'	1.00	EA	684.00	684.00
"Service Supervisor, first 8 hrs on loc.	1.00	EA	99.76	99.76

<b>PLEASE REMIT TO:</b>	<b>SEND OTHER CORRESPONDENCE TO:</b>	<b>SUB TOTAL</b>	<b>6,422.02</b>
<b>BASIC ENERGY SERVICES, LP</b>	<b>BASIC ENERGY SERVICES, LP</b>	<b>TAX</b>	<b>245.57</b>
<b>PO BOX 841903</b>	<b>801 CHERRY ST, STE 2100</b>	<b>INVOICE TOTAL</b>	<b>6,667.59</b>
<b>DALLAS, TX 75284-1903</b>	<b>FORT WORTH, TX 76102</b>		

# QUALITY WELL SERVICE, INC.

6768

Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124

Mailing Address P.O. Box 468

Office 620-727-3410

Fax 620-672-3663

Rich's Cell 620-727-3409

Brady's Cell 620-727-6964

Date <u>12-5-17</u>	Sec. <u>34</u>	Twp. <u>28</u>	Range <u>23</u>	County <u>Ford</u>	State <u>Ks</u>	On Location <u>6:30 pm</u>	Finish <u>9:00 pm</u>
Lease <u>Keough</u>		Well No. <u>9-34</u>		Location			
Contractor <u>Duke 1</u>				Owner			
Type Job <u>Rotary PTA</u>				To Quality Well Service, Inc.			
Hole Size <u>7 7/8</u>				You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Csg. <u>4.5 Drill Pipe</u>				Charge To <u>Vincent</u>			
Tbg. Size				Street			
Tool				City State			
Cement Left in Csg.				The above was done to satisfaction and supervision of owner agent or contractor.			
Meas Line				Cement Amount Ordered <u>170sx 60/40 4 1/2 Gel</u>			
<b>EQUIPMENT</b>				<u>44 C.F.</u>			
Pumptrk <u>8</u> No.	<u>Duck</u>			Common <u>105</u>			
Bulktrk <u>10</u> No.	<u>Mix</u>			Poz. Mix <u>65</u>			
Bulktrk No.				Gel. <u>6</u>			
Pickup No.				Calcium			
<b>JOB SERVICES &amp; REMARKS</b>				Hulls			
Rat Hole <u>30sx</u>				Salt			
Mouse Hole <u>20sx</u>				Flowseal <u>42.50</u>			
Centralizers				Kol-Seal			
Baskets				Mud CLR 48			
DN or Port Collar				CFL-117 or CD110 CAF 38			
<u>1st Pumped 50sx 60/40 4% Gel @ 1610'</u>				Sand			
				Handling <u>176</u>			
<u>2nd Pumped 50sx 60/40 4% Gel @ 660'</u>				Mileage <u>0</u>			
				<b>FLOAT EQUIPMENT</b>			
				Guide Shoe			
<u>3rd Pumped 20sx 60/40 4% Gel @ 60' to surface</u>				Centralizer			
				Baskets			
				AFU Inserts			
<u>4th Plugged Rat + Mouse hole with 50sx 60/40 4% Gel</u>				Float Shoe			
				Latch Down			
				<u>1 mi 50</u>			
				<u>Service supervisor</u>			
				Pumptrk Charge <u>Rotary Plug</u>			
				Mileage <u>50x2</u>			
				Tax			
				Discount			
				Total Charge			
X Signature <u>[Signature]</u>							





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Vincent Oil Corporation  
 200 W Douglas Ste 725  
 Wichita, KS 67202  
 ATTN: Tom Dudgeon

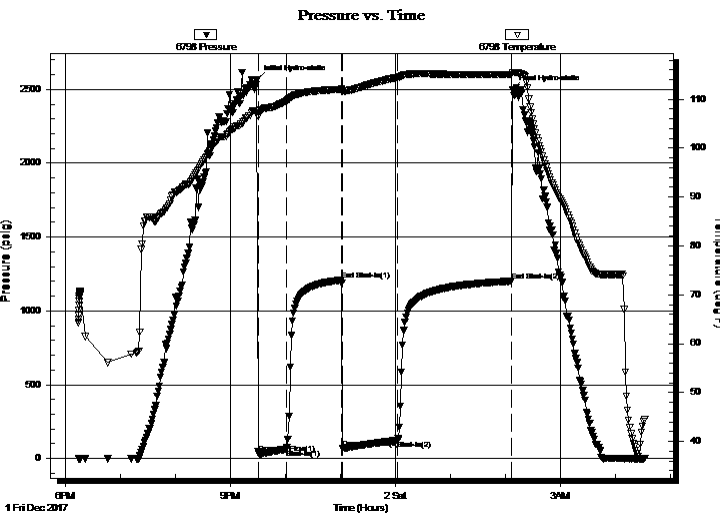
**34-28S-23W**  
**Keough 9-34**  
 Job Ticket: 63635 **DST#: 1**  
 Test Start: 2017.12.01 @ 18:14:41

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:30:26  
 Time Test Ended: 04:31:41  
 Interval: **5052.00 ft (KB) To 5087.00 ft (KB) (TVD)**  
 Total Depth: 5087.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 2552.00 ft (KB)  
 2540.00 ft (CF)  
 KB to GR/CF: 12.00 ft

**Serial #: 6798 Inside**  
 Press@RunDepth: 124.54 psig @ 5053.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.12.01 End Date: 2017.12.02 Last Calib.: 2017.12.02  
 Start Time: 18:14:42 End Time: 04:31:41 Time On Btm: 2017.12.01 @ 21:28:56  
 Time Off Btm: 2017.12.02 @ 02:07:41

**TEST COMMENT:** IF: Fair Blow , Built to 21 inches  
 IS: No Blow Back  
 FF: Fair Blow , Built to 17 1/2 inches  
 IS: No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2568.55	107.68	Initial Hydro-static
2	34.74	107.18	Open To Flow (1)
33	64.56	109.67	Shut-In(1)
93	1209.75	112.03	End Shut-In(1)
94	69.69	111.69	Open To Flow (2)
154	124.54	114.46	Shut-In(2)
278	1201.54	115.05	End Shut-In(2)
279	2500.29	115.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	176 GIP	0.00
126.00	Water	1.77
136.00	SOCM 4%O 96%M	1.91

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Vincent Oil Corporation

**34-28S-23W**

200 W Douglas Ste 725  
Wichita, KS 67202

**Keough 9-34**

Job Ticket: 63635

**DST#: 1**

ATTN: Tom Dudgeon

Test Start: 2017.12.01 @ 18:14:41

### 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:

63000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6600.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	176 GIP	0.000
126.00	Water	1.767
136.00	SOCM 4%O 96%M	1.908

Total Length: 262.00 ft      Total Volume: 3.675 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .24 @ 36 degrees

Serial #: 6798

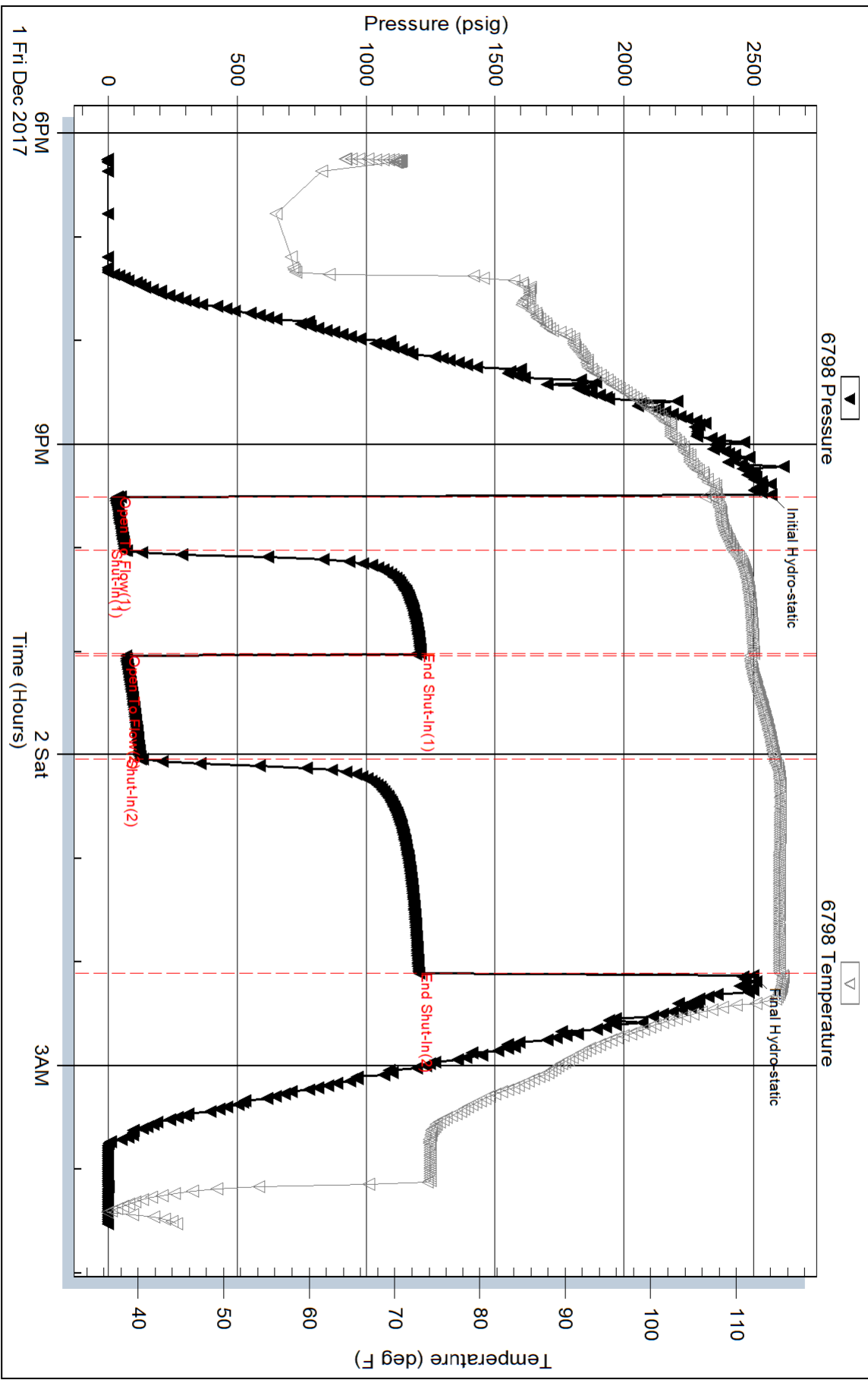
Inside

Vincent Oil Corporation

Keough 9-34

DST Test Number: 1

# Pressure vs. Time

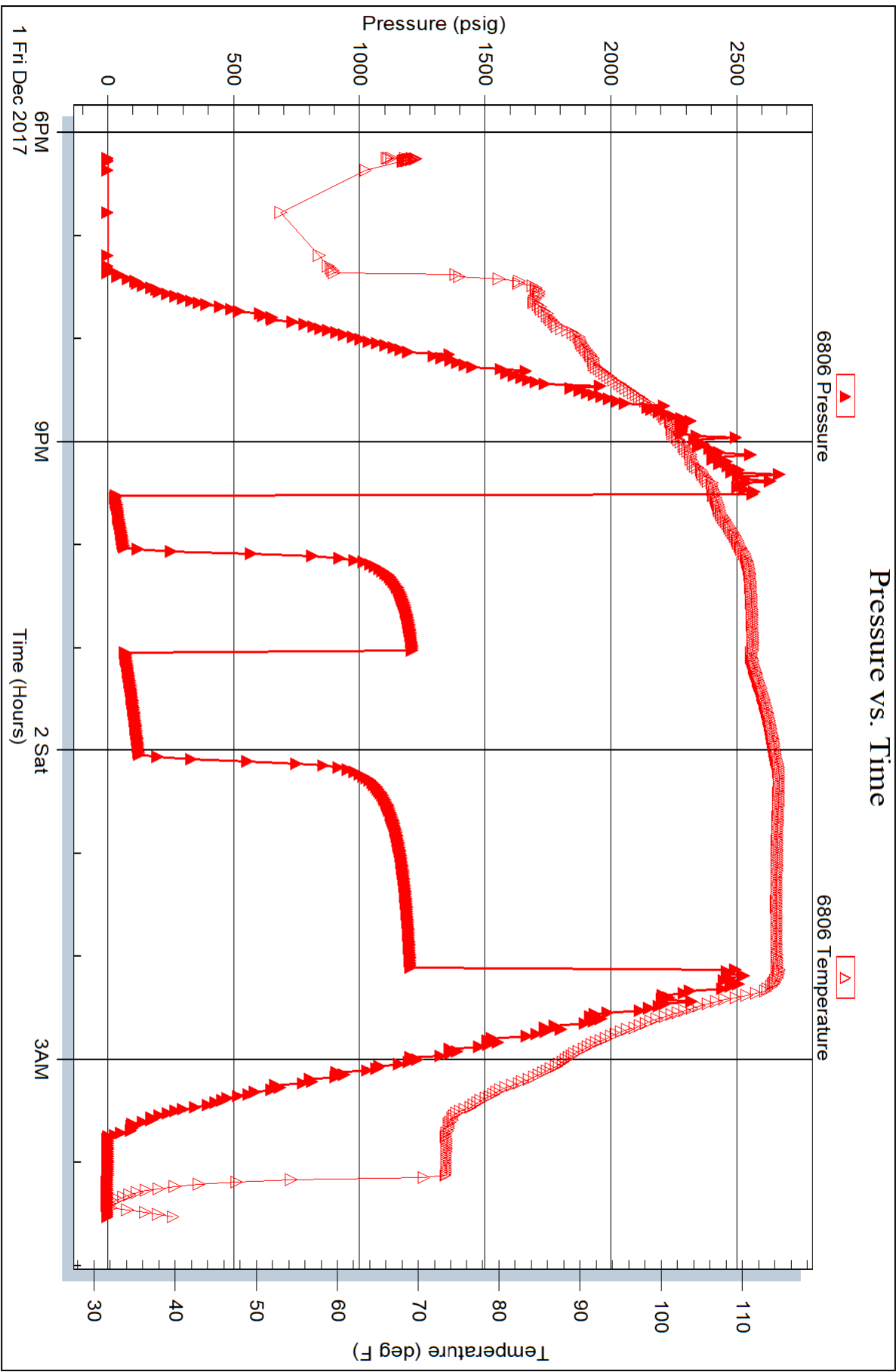


Serial #: 6806

Outside Vincent Oil Corporation

Keough 9-34

DST Test Number: 1





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Vincent Oil Corporation  
 200 W Douglas Ste 725  
 Wichita, KS 67202  
 ATTN: Tom Dudgeon

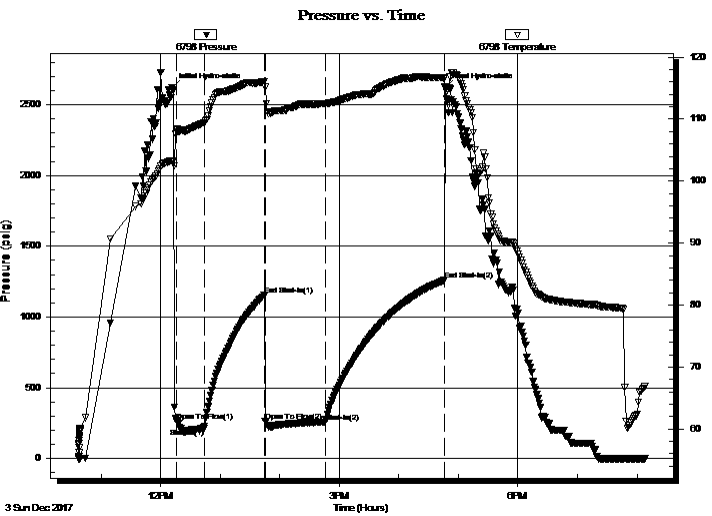
**34-28S-23W**  
**Keough 9-34**  
 Job Ticket: 63636 **DST#: 2**  
 Test Start: 2017.12.03 @ 10:37:19

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:15:49  
 Time Test Ended: 20:07:49  
 Interval: **5165.00 ft (KB) To 5275.00 ft (KB) (TVD)**  
 Total Depth: 5275.00 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: 2552.00 ft (KB)  
 2540.00 ft (CF)  
 KB to GR/CF: 12.00 ft

**Serial #: 6798** **Inside**  
 Press@RunDepth: 256.76 psig @ 5166.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.12.03 End Date: 2017.12.03 Last Calib.: 2017.12.03  
 Start Time: 10:37:20 End Time: 20:07:49 Time On Btm: 2017.12.03 @ 12:11:34  
 Time Off Btm: 2017.12.03 @ 16:46:34

**TEST COMMENT:** IF: Strong Blow , BOB in 1 minute, GTS in 11 minutes, Gauged & Caught Sample  
 IS: No Blow Back  
 FF: Strong Blow , BOB & GTS Immediate, Gauged Gas  
 FS: Blow Back Built to 4 inches



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2623.07	103.27	Initial Hydro-static
5	266.60	108.29	Open To Flow (1)
33	212.96	109.44	Shut-In(1)
94	1156.17	116.04	End Shut-In(1)
94	261.40	115.19	Open To Flow (2)
155	256.76	112.46	Shut-In(2)
275	1260.11	116.58	End Shut-In(2)
275	2620.04	115.20	Final Hydro-static

## Recovery

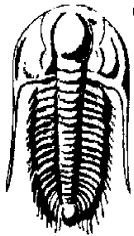
Length (ft)	Description	Volume (bbl)
0.00	4599 GIP	0.00
252.00	GMCO 20%G 20%M 60%O	3.53
315.00	GOCM 20%G 10%O 70%M	4.42

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	18.00	28.55
Last Gas Rate	0.25	9.00	14.28
Max. Gas Rate	0.25	20.00	31.73





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Vincent Oil Corporation  
200 W Douglas Ste 725  
Wichita, KS 67202  
ATTN: Tom Dudgeon

**34-28S-23W**  
**Keough 9-34**  
Job Ticket: 63636      **DST#: 2**  
Test Start: 2017.12.03 @ 10:37:19

### 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: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6600.00 ppm			
Filter Cake: 0.02 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4599 GIP	0.000
252.00	GMCO 20%G 20%M 60%O	3.535
315.00	GOCM 20%G 10%O 70%M	4.419

Total Length: 567.00 ft      Total Volume: 7.954 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

**34-28S-23W**

200 W Douglas Ste 725  
Wichita, KS 67202

**Keough 9-34**

Job Ticket: 63636

**DST#: 2**

ATTN: Tom Dudgeon

Test Start: 2017.12.03 @ 10:37:19

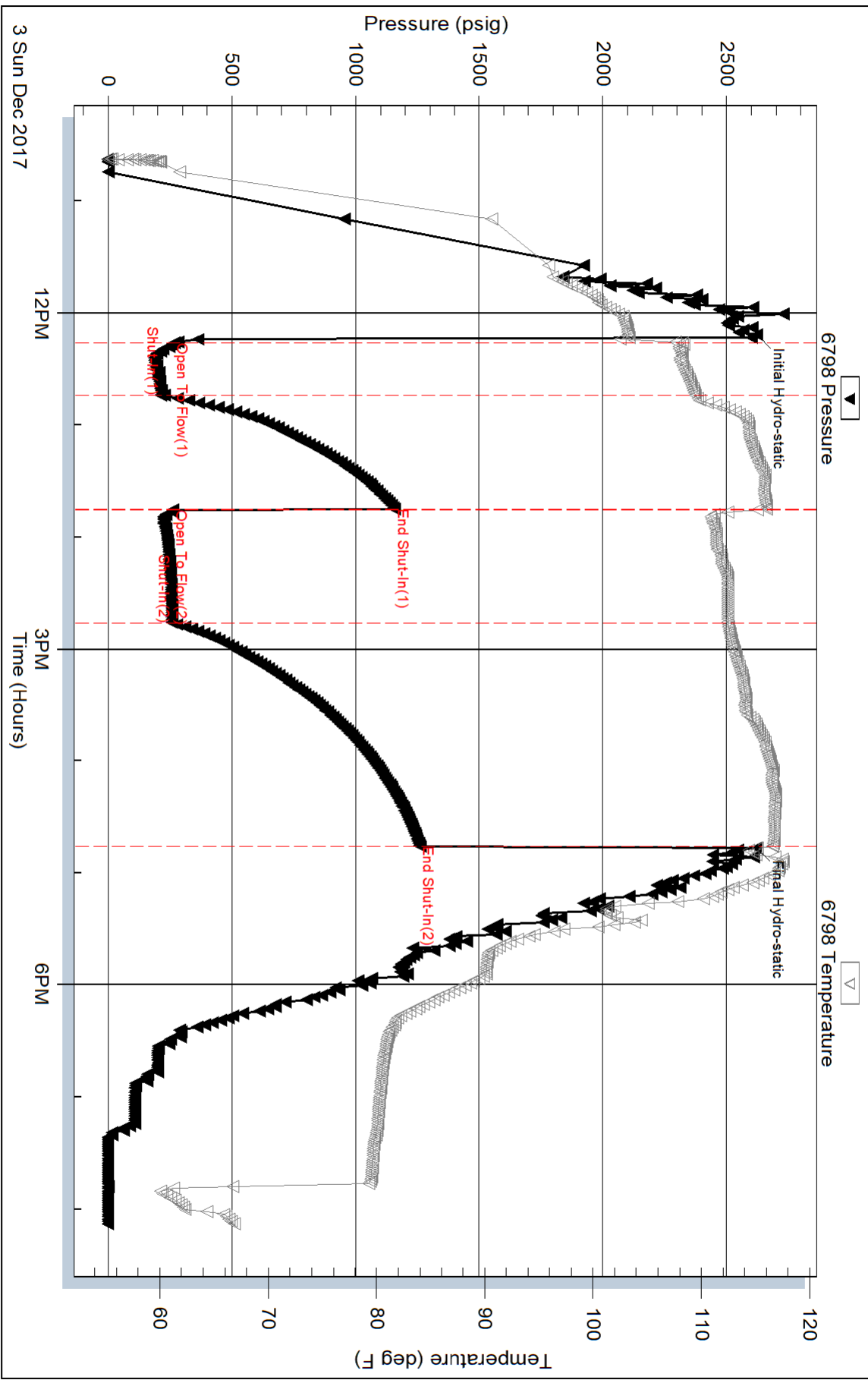
### Gas Rates Information

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	20	0.25	18.00	28.55
1	30	0.25	20.00	31.73
2	10	0.25	14.00	22.21
2	20	0.25	14.00	22.21
2	30	0.25	12.00	19.04
2	40	0.25	11.00	17.45
2	50	0.25	9.00	14.28
2	60	0.25	9.00	14.28

### Pressure vs. Time

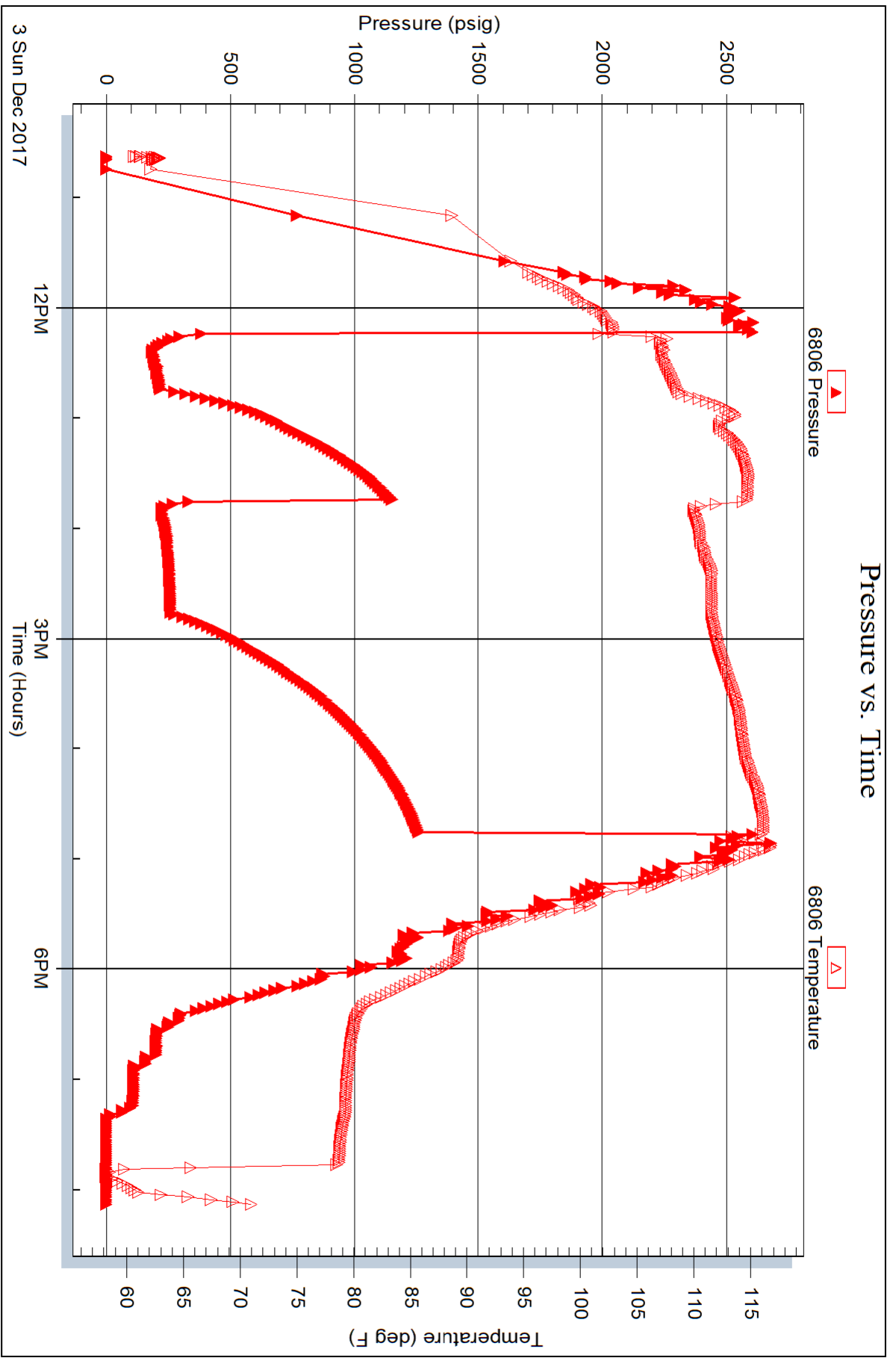


Serial #: 6806

Outside Vincent Oil Corporation

Keough 9-34

DST Test Number: 2





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Vincent Oil Corporation  
200 W Douglas Ste 725  
Wichita, KS 67202  
ATTN: Tom Dudgeon

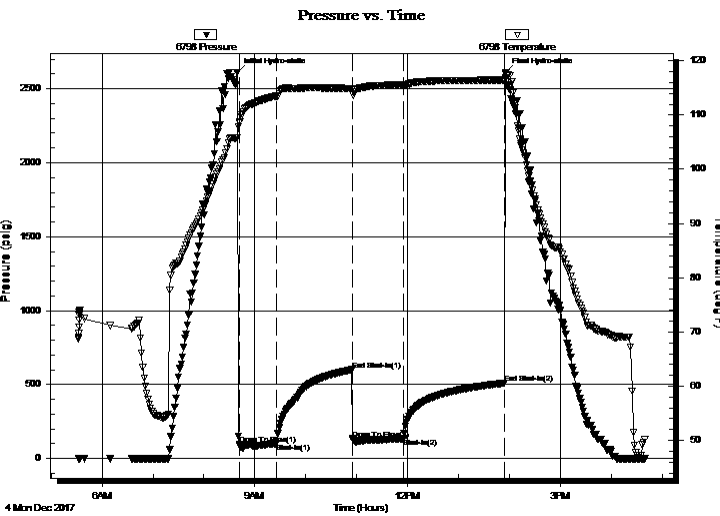
**34-28S-23W**  
**Keough 9-34**  
Job Ticket: 63637      **DST#: 3**  
Test Start: 2017.12.04 @ 05:32:19

## GENERAL INFORMATION:

Formation: **Mississippi**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened: 08:41:34  
Time Test Ended: 16:39:04  
Interval: **5258.00 ft (KB) To 5287.00 ft (KB) (TVD)**  
Total Depth: 5287.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches      Hole Condition: Good  
Reference Elevations: 2552.00 ft (KB)  
2540.00 ft (CF)  
KB to GR/CF: 12.00 ft

**Serial #: 6798      Inside**  
Press@RunDepth: 133.53 psig @ 5259.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2017.12.04      End Date: 2017.12.04      Last Calib.: 2017.12.04  
Start Time: 05:32:20      End Time: 16:39:04      Time On Btm: 2017.12.04 @ 08:39:04  
Time Off Btm: 2017.12.04 @ 13:54:49

**TEST COMMENT:** IF: Strong Blow , BOB in 1 minute, GTS in 26 minutes, Caught Sample, TSTM  
IS: Blow Back Built to 7 inches  
FF: Strong Blow , BOB in 2 minutes, GTS Immediate, TSTM  
FS: Blow Back Built to 2 inches



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2607.77	105.84	Initial Hydro-static
3	94.33	108.59	Open To Flow (1)
46	101.16	113.47	Shut-In(1)
136	600.15	114.93	End Shut-In(1)
137	132.91	113.94	Open To Flow (2)
196	133.53	115.65	Shut-In(2)
316	509.75	116.42	End Shut-In(2)
316	2607.07	117.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4947 GIP	0.00
63.00	MCW 10%M 90%W	0.88
252.00	GWMCO 10%G 10%W 25%M 55%O	3.53

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Vincent Oil Corporation  
200 W Douglas Ste 725  
Wichita, KS 67202  
ATTN: Tom Dudgeon

**34-28S-23W**

**Keough 9-34**

Job Ticket: 63637

**DST#: 3**

Test Start: 2017.12.04 @ 05:32:19

## GENERAL INFORMATION:

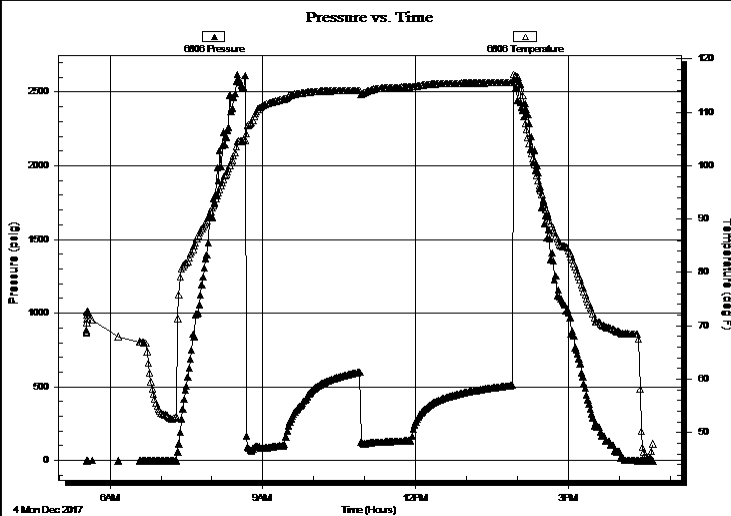
Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:41:34  
 Time Test Ended: 16:39:04  
 Interval: **5258.00 ft (KB) To 5287.00 ft (KB) (TVD)**  
 Total Depth: 5287.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 2552.00 ft (KB)  
 2540.00 ft (CF)  
 KB to GR/CF: 12.00 ft

**Serial #: 6806**

**Outside**

Press@RunDepth: psig @ 5259.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.12.04 End Date: 2017.12.04 Last Calib.: 2017.12.04  
 Start Time: 05:32:20 End Time: 16:39:04 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF: Strong Blow , BOB in 1 minute, GTS in 26 minutes, Caught Sample, TSTM  
 IS: Blow Back Built to 7 inches  
 FF: Strong Blow , BOB in 2 minutes, GTS Immediate, TSTM  
 FS: Blow Back Built to 2 inches



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4947 GIP	0.00
63.00	MCW 10%M 90%W	0.88
252.00	GWMCO 10%G 10%W 25%M 55%O	3.53

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Vincent Oil Corporation

**34-28S-23W**

200 W Douglas Ste 725  
Wichita, KS 67202

**Keough 9-34**

Job Ticket: 63637

**DST#: 3**

ATTN: Tom Dudgeon

Test Start: 2017.12.04 @ 05:32:19

### 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:

59000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6600.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4947 GIP	0.000
63.00	MCW 10%M 90%W	0.884
252.00	GWMCO 10%G 10%W 25%M 55%O	3.535

Total Length: 315.00 ft      Total Volume: 4.419 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .15 @ 60 degrees

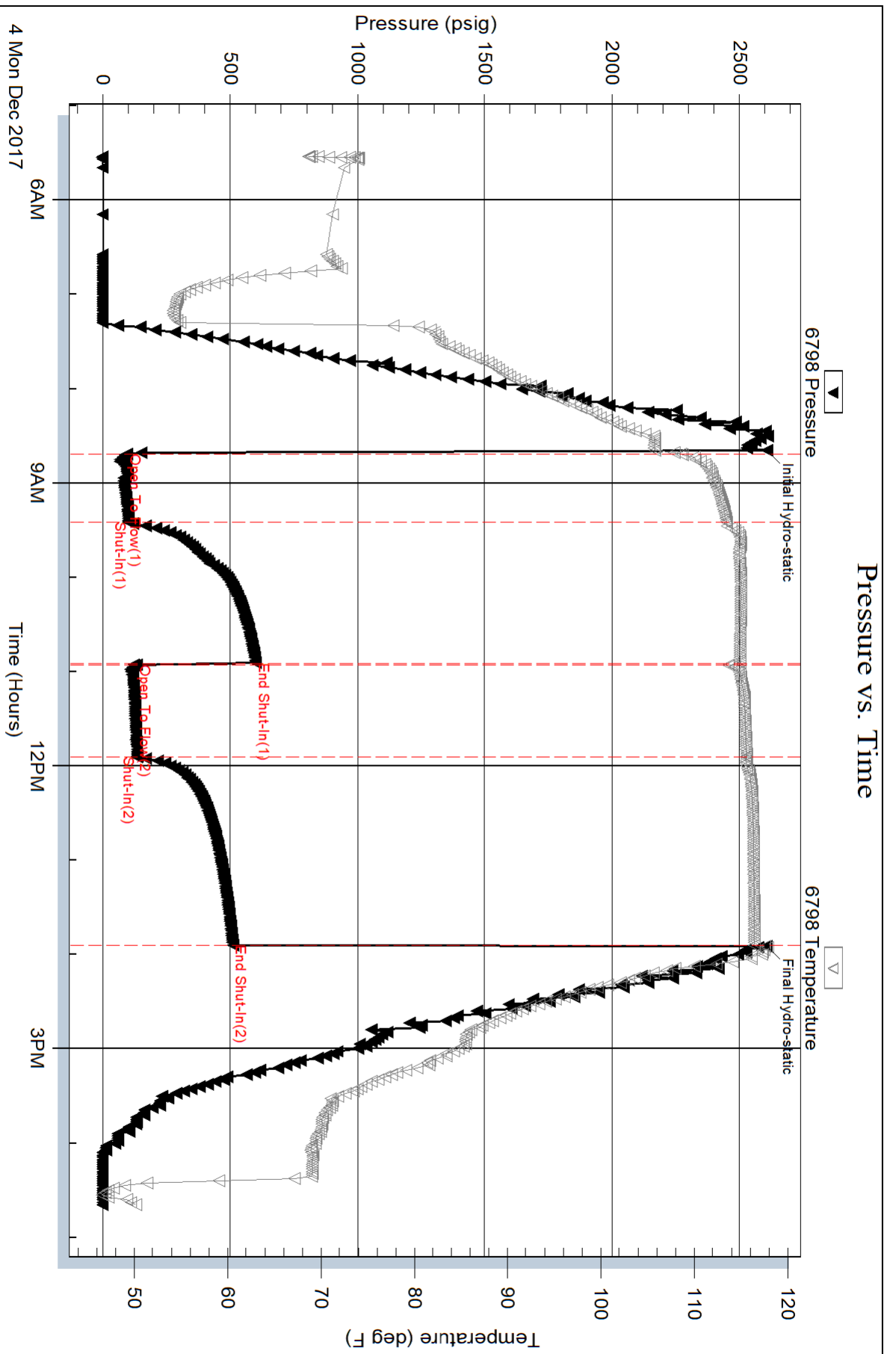
Serial #: 6798

Inside

Vincent Oil Corporation

Keough 9-34

DST Test Number: 3

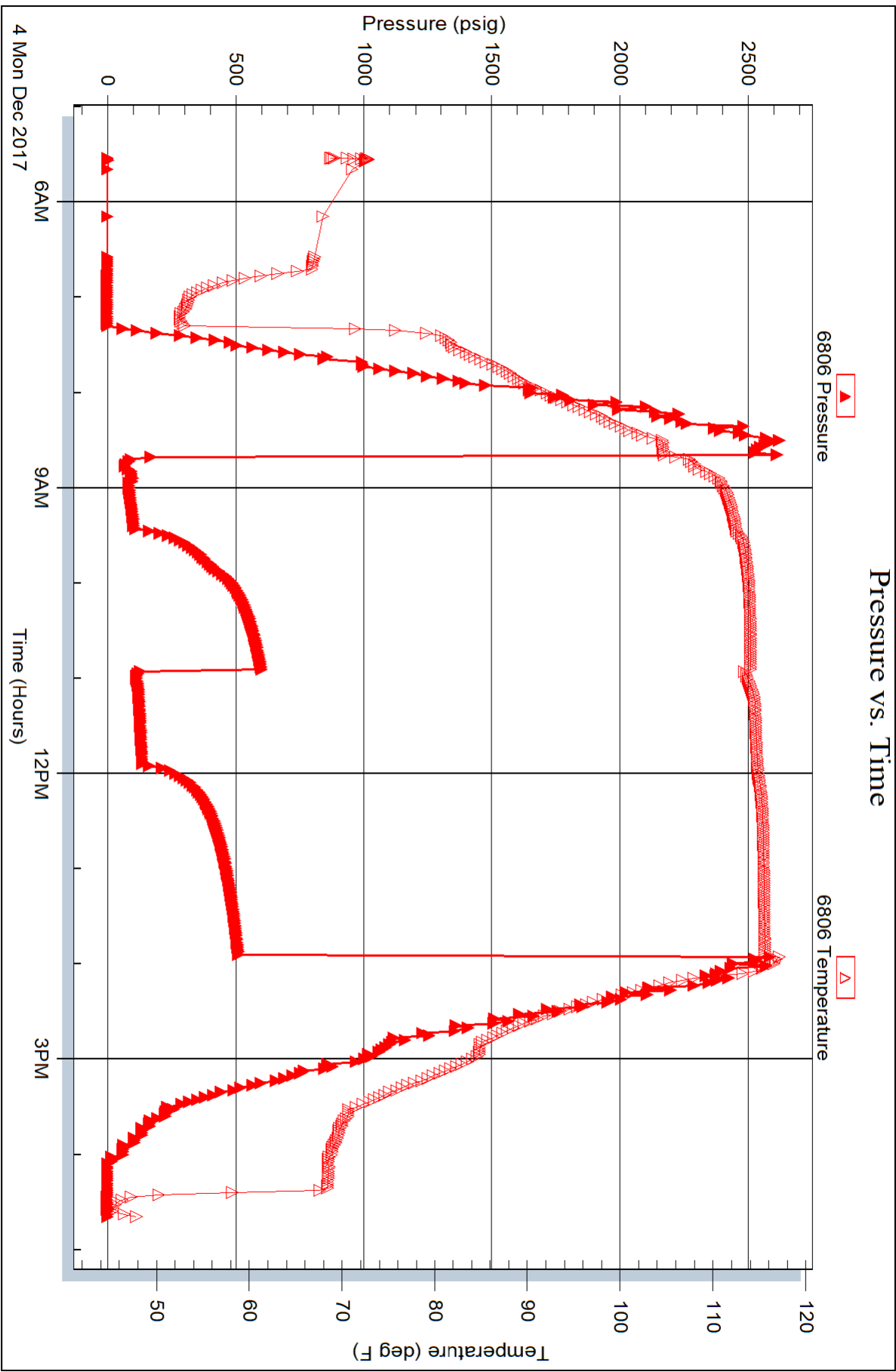


Serial #: 6806

Outside Vincent Oil Corporation

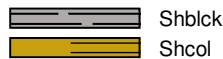
Keough 9-34

DST Test Number: 3





### ROCK TYPES



### ACCESSORIES

#### MINERAL

- ▲ Chert, dark
- △ Dolomitic
- ∩ Glauconite
- Heavy, dark minerals
- Sandy
- Silty
- ∕ Euhed rhombs of dol or c
- △ Chert White

#### FOSSIL

- ∩ Bioclastic or Fragmental
- ∩ Brachiopod
- Crinoids
- F Fossils < 20%
- φ Oolite

#### STRINGER

- ▨ Dolomite
- Sandstone

#### TEXTURE

- C Chalky
- CX Cryptocrystalline
- e Earthy
- MX Microxln

### OTHER SYMBOLS

#### POROSITY TYPE

- x Intercrystalline
- φ Interoolitic
- V Vuggy
- P Pinpoint
- ∕ Moldic
- O Organic
- F Fracture
- e Earthy
- Fenestral

#### OIL SHOWS

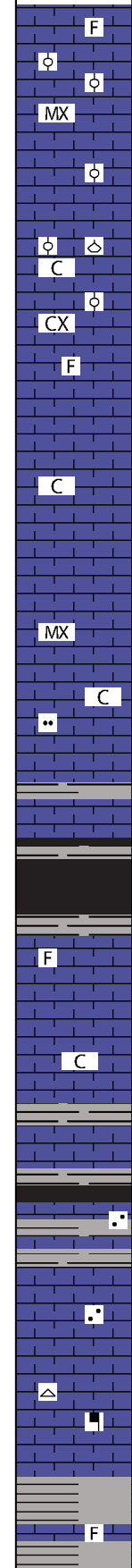
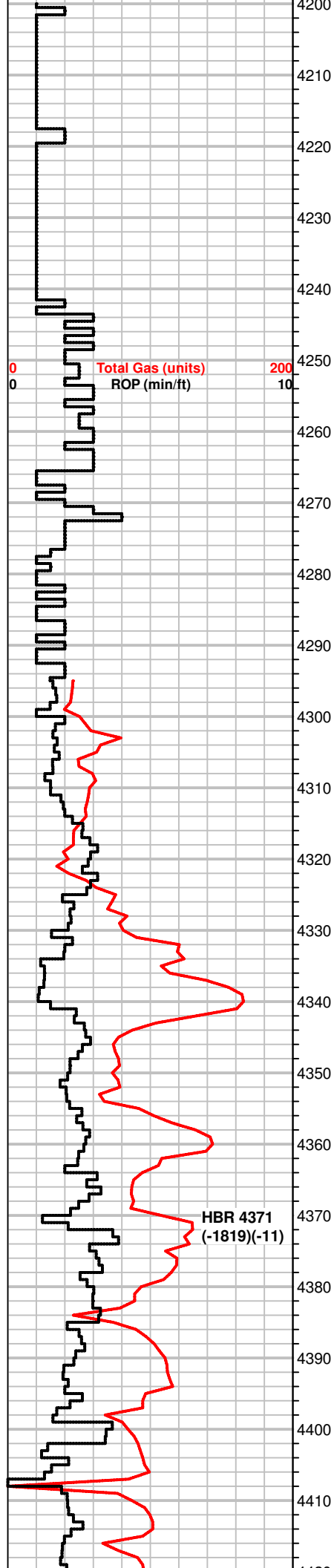
- Even Stn
- Spotted Stn 50 - 75 %
- Spotted Stn 25 - 50 %
- Spotted Stn 1 - 25 %
- Questionable Stn
- D Dead Oil Stn
- Fluorescence

#### INTERVALS

- Core
- DST

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

Curve Track #01		Depth   Intervals	Porosity Types	Interpreted Lithology	Oil Shows	Geological Descriptions	Comment
Total Gas (units)	ROP (min/ft)						
1:240 Imperial							
0	200	4100					
0	10	4110					
		4120					
		4130					
		4140				GEO ON LOC.@ 12:00 PM 11/29/2017 BLOODHOUND GAS DETECTION UNIT 5279, PROVIDED BY BLUESTEM LABS	
		4150					
		4160				KEY WELL FOR STRUCTURAL RELATIONSHIP- KEOUGH #6- 34 SW NW NE SW 34-28S-23W	
		4170					
		4180					
		4190					



4200

4210

4220

4230

4240 MS-WS, crm to off wht, f-xln to chalky txt, soft to firm, fossilif. (fusulinids/micro oolitic), dull fluor, NS

4240 MS-WS, crm to off wht, tan, mostly f-xln, firm to hard, NS scatt SH, green, gray

4250 MS, tan to crm, f-xln, scatt mic-xln pcs, dense, scatt fossils, some pcs w/ chalky mtrx, soft, NS, SH, gray

4260 SH, gray, green, brn, sandy, MS, tan to crm, brn, f-xln to chalky, firm to soft, some fossils, shaly pcs, mottled in part  
SH, gray, green

4270 SH, gray, green, blk, fossils, MS, crm to brn, mic-xln, some pcs crip-xln, fossils, dense, dull fluor, NS

4280 SH, A.A., pyrite, MS, gray to crm, f to mic-xln, chalky pcs scatt, hard to firm, NS

4290 MS-WS, crm to tan, f-xln to massive, gritty txt, firm, fossils, NS

4300 MS-WS, crm to tan, A.A., chalky in part, NS  
scatt SH, gray, green

4310 MS, crm to tan, chalky to f-xln, firm to hard, gritty in part, some dense, fossils, Scatt SH, gray

4320 MS-WS, crm to brn, mottled, f-xln, fossils/mineral frgmts, Chert, white, rare  
scatt SH, gray, green

4330 Influx SH, blk, dk. gray, carbonaceous

4340 SH, Blk, gray, dk. gray, carb.  
MS, off wht, chalky to f-xln, fossils, dense pcs, most soft, NS

4350 MS, crm to off wht, chalky, soft  
scatt SH, grays

4360 MS, crm to gray, f-xln, chalky, firm to hard, NS  
SH, blk, grays

4370 SH, blk  
MS, crm to off wht, f-xln, chalky pcs scatt, most hard, fossils, sandy in part

4380 SH, blk to lt. gray, MS, crm to tan, gray, f-xln, rare mic-xln, dense to firm, sandy pcs scatt, rare mottled pcs, NS

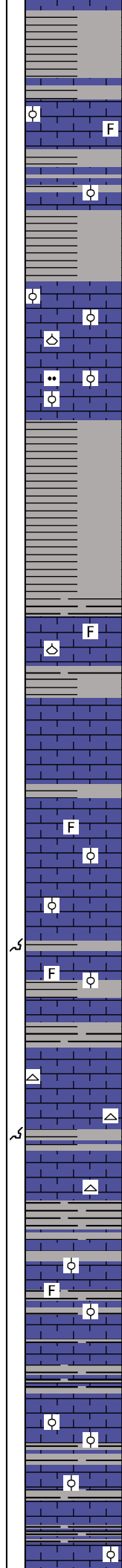
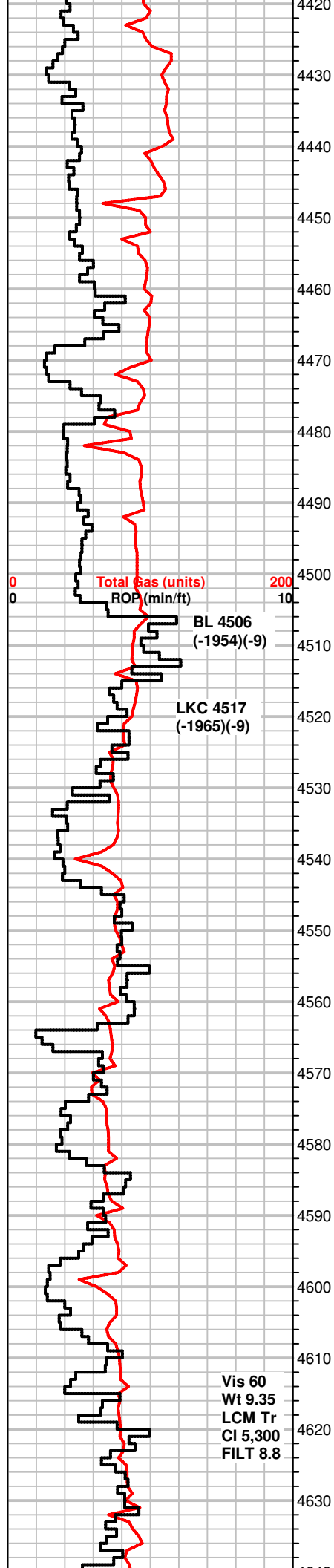
4390 SH, lt. to dk. grays  
MS, crm to gray, brn, mic to f-xln, dense, fossils, some pcs chalky, mineral specs, Chert, yellow/crm

4400

4410 SH, blk(carrying?), scatt grays  
MS, off wht/bone wht, massive, dense, some fossils, NS

**+80-100 UGK shale gas**

**+45 UGK shale gas**



MS, off wht to bone wht, f-xln to massive txt, chalky pcs rare, fenestrae

MS-WS, crm to tan, f-xln, soft/brittle, chalky pcs scatt, mottled, fossils, SH, brn, grays

WS-MS, tan to brn, f-xln, oolitic, m-gr, fossils, some pcs chalky mtrx, firm to soft, NS SH, dk. grays, green,

MS-WS, crm to tan, f-xln to massive txt, scatt fossils, gritty in part, NS

WS, brn to gray, f-xln to chalky, mottled, fossils/oolitic SH, gray

MS-WS, crm, tan, gray, brn, mottled, A.A., f-xln to massive, earthy in part, fossils, NS

SH, grays  
scatt MS, tan to brn, f-xln, firm to brittle, scatt fossils, shaly in part

SH, gray, brn, sandy pcs

MS, brn to crm, f-xln to mic-xln, brittle to dense, massive brn pcs, fossils scatt, pyrite, NS  
SH, gray, blk

MS, crm to brn, f-xln, massive, dense, scat fossils  
SH, gray, dk. gray, silty

MS, crm to tan, brn, f-xln to chalky, fossils, soft to firm, NS

MS, crm to gray, chalky, f-xln, gritty pcs, micro oolitic txt, fossils, dull fluor, NS

MS, tan to crm, f-xln to massive, dense, scatt fossils, poor moldic por. NS

MS, crm to tan, massive to f-xln, A.A., some fractured pcs

SH, dk. gray, to lt. gray  
MS, crm to crm, f-xln to massive, some gritty in part, rare fossil frgmts, NS, Chert, wht, tan

WS-MS, off wht to crm, m-xln, gritty looking, f to m-gr oolitic pcs, hard, dull fluor, poor moldic por.

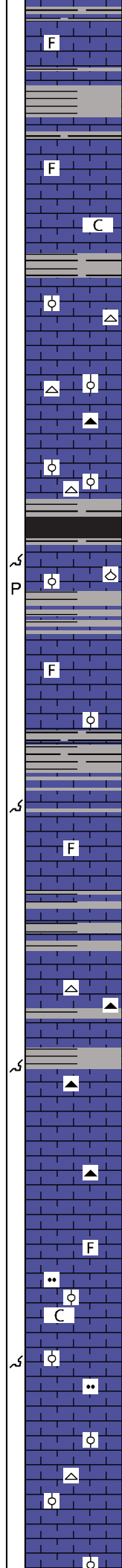
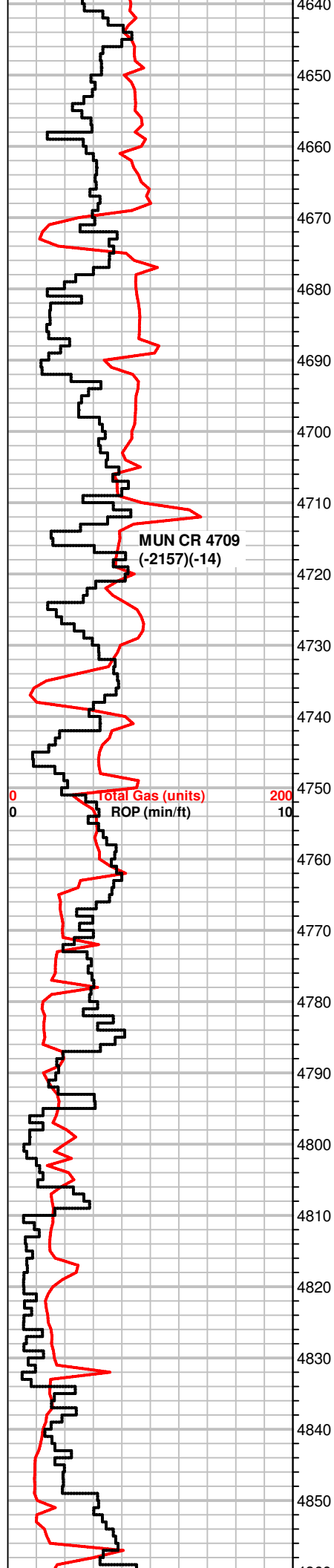
MS, A.A., scatt WS, scandy pcs, fossilif., dense, NS, Chert, tan, off wht  
SH, dk grays

MS-WS, crm, tan, gray, f to m-xln, hard to firm, chalky pcs scatt, fossilif., calcite, micro-oolitic pcs rare, NS  
some SH, lt. gray

MS, crm, chalky, soft, dull fluor, NS  
rare SH, green, gray

MS, crm, gray, tan, f-xln, dense to chalky pcs, sub oolitic, hard, mottled pcs rare, NS,  
SH, brn to gray

SH, blk(rare), gray, MS-WS, crm to brn, mic-xln to f-xln, dense, oolitic m-gr, tite mtrx



4640 MS, crm, tan, grayish-brn, f-xln, dense, fossilif, pcs, some chalky, brittle, NS  
SH, green, gray

4650 SH, brn to dk. gray, sandy, MS, crm to gray, A.A>, calcite, dull fluor, NS

4660 SH, gray, green, MS, crm to tan, f-xln, dense, fossils scatt, NS

4670 scatt SH, sea green, gray, platy, fossils, MS, crm to brn, chalky to f-xln, scatt co-gr fossil frgmts, NS

4680 Influx SH, dk. gray, gray, green  
MS, crm to tan, f-xln, firm, chalky pcs throughout, rare Chert, wht, blocky

4690 MS-WS, crm to brn, f- to m-xln, oolitic in tite mtrx, some chalky, soft, Chert, wht, gray  
SH, grays, silty, pyrite

4700 MS-WS, crm to brn, rare mottled pcs, fossilif., Chert, wht, brn  
SH, gray

4710 MS, crm, f-xln to chalky mtrx, rare fossils, hard pcs scatt, NS, Chert, wht  
SH, dk. gray, gray, green

4720 SH, dk. gray, grays  
MS, crm to tan, chalky, some pcs mic-xln, dense, hard, scatt fossils, rare pp and moldic por., NS

4730 SH, grays, silty, pyrite  
MS, crm to brn, f-xln, firm, brittle, scatt fossils, chalky mtrx in part.

4740 MS, crm to tan, f-xln, fossils, firm, calcite  
SH, dk. gray, gray, silty, blk pcs scatt, pyrite

4750 MS, crm to brn, f-xln, dense, A.A., m-gr oolitic in tite mtrx, moldic por., NS

4760 MS, crm to tan, f-xln, gritty txt, micro fossils, tite, friable, SH, blk, green

4770 MS, tan to gray, A.A., gritty to sandy pcs, most dense, NS, rare SH, grays

4780 MS, crm to tan, chalky, calcite, f-xln pcs, rare fossilif./mottled pcs, friable, Chert, wht, brn

4790 MS, crm, f-xln, chalky pcs scatt, gritty, fossils, moldic por. NS  
Chert, gray  
SH, brn, gray, green, silty, pyrite

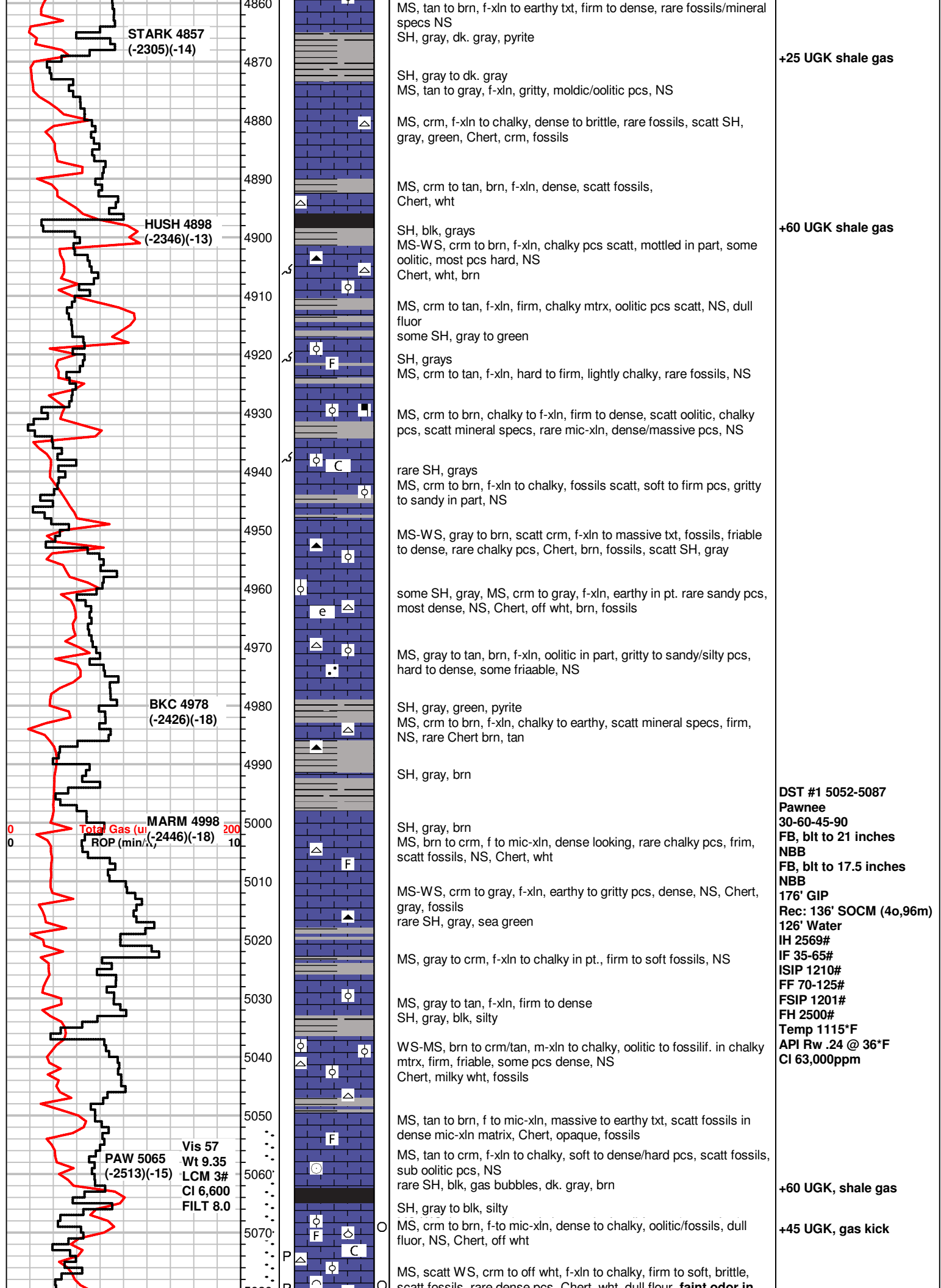
4800 MS-WS, crm to brn, f-xln, fossils, waxy looking, scatt chalky pcs, some pcs sandy, scatt oolitic pcs, rare Chert, brn  
SH, brn, gray

4810 MS-WS, tan, f-xln to mic-xln, gritty/oolitic txt, f to m-gr ooids in hard friable mtrx, NS, moldic por, dense

4820 WS-MS, tan to crm, f-xln to m-xln, dense, m-gr oolitic to f-gr fossilif/gritty pcs, some chalky, moldic por.  
rare SH, gray, platy

4830 WS-MS, crm to gray, chalky, soft, mottled pcs, fossils  
rare Chert, wht, fossils

+45 UGK shale gas



**STARK 4857**  
(-2305)(-14)

**HUSH 4898**  
(-2346)(-13)

**BKC 4978**  
(-2426)(-18)

**MARM 4998**  
(-2446)(-18)

**PAW 5065**  
(-2513)(-15)  
Vis 57  
Wt 9.35  
LCM 3#  
CI 6,600  
FILT 8.0

**+25 UGK shale gas**

**+60 UGK shale gas**

**DST #1 5052-5087**  
**Pawnee**  
**30-60-45-90**  
**FB, blt to 21 inches**  
**NBB**  
**FB, blt to 17.5 inches**  
**NBB**  
**176' GIP**  
**Rec: 136' SOCM (40,96m)**  
**126' Water**  
**IH 2569#**  
**IF 35-65#**  
**ISIP 1210#**  
**FF 70-125#**  
**FSIP 1201#**  
**FH 2500#**  
**Temp 1115°F**  
**API Rw .24 @ 36°F**  
**CI 63,000ppm**

**+60 UGK, shale gas**

**+45 UGK, gas kick**

MS, tan to brn, f-xln to earthy txt, firm to dense, rare fossils/mineral specs NS  
SH, gray, dk. gray, pyrite

SH, gray to dk. gray  
MS, tan to gray, f-xln, gritty, moldic/oolitic pcs, NS

MS, crm, f-xln to chalky, dense to brittle, rare fossils, scatt SH, gray, green, Chert, crm, fossils

MS, crm to tan, brn, f-xln, dense, scatt fossils, Chert, wht

SH, blk, grays  
MS-WS, crm to brn, f-xln, chalky pcs scatt, mottled in part, some oolitic, most pcs hard, NS  
Chert, wht, brn

MS, crm to tan, f-xln, firm, chalky mtrx, oolitic pcs scatt, NS, dull fluor  
some SH, gray to green

SH, grays  
MS, crm to tan, f-xln, hard to firm, lightly chalky, rare fossils, NS

MS, crm to brn, chalky to f-xln, firm to dense, scatt oolitic, chalky pcs, scatt mineral specs, rare mic-xln, dense/massive pcs, NS

rare SH, grays  
MS, crm to brn, f-xln to chalky, fossils scatt, soft to firm pcs, gritty to sandy in part, NS

MS-WS, gray to brn, scatt crm, f-xln to massive txt, fossils, friable to dense, rare chalky pcs, Chert, brn, fossils, scatt SH, gray

some SH, gray, MS, crm to gray, f-xln, earthy in pt. rare sandy pcs, most dense, NS, Chert, off wht, brn, fossils

MS, gray to tan, brn, f-xln, oolitic in part, gritty to sandy/silty pcs, hard to dense, some friable, NS

SH, gray, green, pyrite  
MS, crm to brn, f-xln, chalky to earthy, scatt mineral specs, firm, NS, rare Chert brn, tan

SH, gray, brn

SH, gray, brn  
MS, brn to crm, f to mic-xln, dense looking, rare chalky pcs, frim, scatt fossils, NS, Chert, wht

MS-WS, crm to gray, f-xln, earthy to gritty pcs, dense, NS, Chert, gray, fossils  
rare SH, gray, sea green

MS, gray to crm, f-xln to chalky in pt., firm to soft fossils, NS

MS, gray to tan, f-xln, firm to dense  
SH, gray, blk, silty

WS-MS, brn to crm/tan, m-xln to chalky, oolitic to fossilif. in chalky mtrx, firm, friable, some pcs dense, NS  
Chert, milky wht, fossils

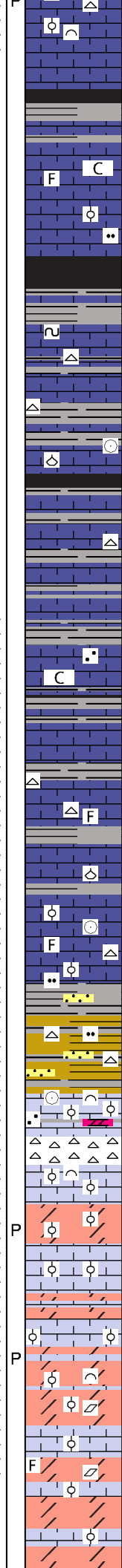
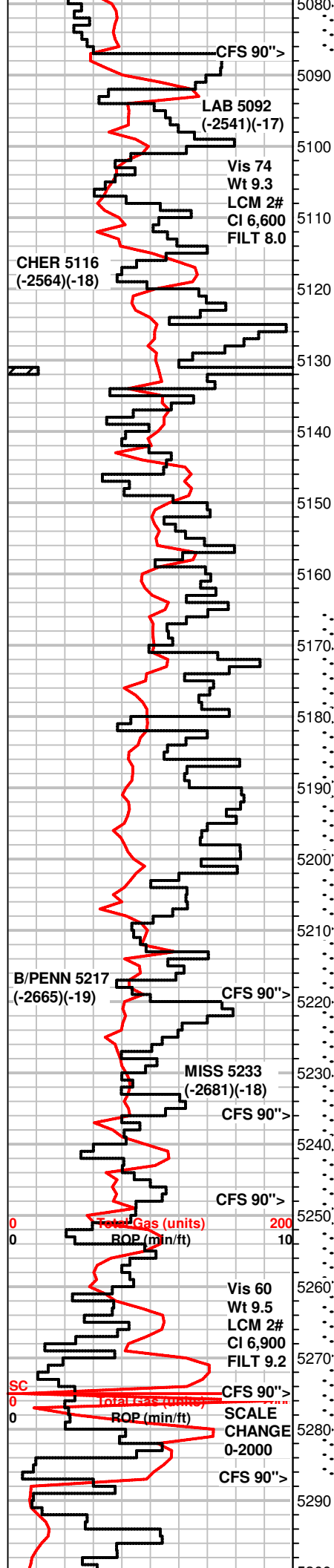
MS, tan to brn, f to mic-xln, massive to earthy txt, scatt fossils in dense mic-xln matrix, Chert, opaque, fossils

MS, tan to crm, f-xln to chalky, soft to dense/hard pcs, scatt fossils, sub oolitic pcs, NS  
rare SH, blk, gas bubbles, dk. gray, brn

SH, gray to blk, silty

MS, crm to brn, f to mic-xln, dense to chalky, oolitic/fossils, dull fluor, NS, Chert, off wht

MS, scatt WS, crm to off wht, f-xln to chalky, firm to soft, brittle, scatt fossils, rare dense pcs, Chert, wht, dull fluor, faint odor in



scatt fossils, rare dense pcs, Chert, wht, dull flour, faint odor in bag, rare v. spty bright fluor-no cut, PP por., rare very lt spotty stn

SH, blk to dk. gray  
scatt MS, crm to brn, f-xln, hard, some pcs chalky, NS

MS, crm to brn, f- to mic-xln, chalky pcs scatt, mostly dense pcs, fossils  
SH, blk, dk gray, gray

MS, crm to lt. gray, f-xln, dense, scatt fossils, rare gritty pcs

SH, blk to gray, silty pcs, rare gas bubbles

SH, gray to blk  
MS, crm to tan, mic to f-xln, dense, rare glauc, scatt fossils

MS, brn to gray, f-xln to chalky, calcite, rare fossils, NS  
Chert, wht  
SH, gray to blk

Influx MS-WS, crm to tan, f-xln, dense, fossils  
(crinoids, brachs, fusilids, frgmts), some pcs brittle, NS  
rare SH, dk. gray

MS-WS, crm to brn, mic to f-xln, massive txt, dense, fossils, dull fluor, NS, Chert, milky wht  
SH, blk, gray

MS-scatt WS, brn to crm, f-xln, dense, some pcs fractured, fossils  
scatt, NS, SH, gray, dk. gray

SH, gray to blk, silty, MS-WS, brn to crm/tan, f-xln to sandy, fossil frgmts, oolitic in chalky mtrx, NS

WS-MS, cray to brn, crm, f-xln to massive, dense, fossilif., scatt mottled pcs, hard, NS  
SH, gray

MS-WS, crm to lt. gray, f-xln, chalky soft pcs to hard/dense, fossils  
scatt, Chert, wht  
SH, gray, rare blk

MS, crm, gry, brn, f-xln, dense, fossils, NS, scatt SH, gray to blk

MS-WS, crm to brn, f- to mic-xln, dense, oolitic, fossilif. sli. chalky pcs, **scatt bright fluor, asphaltic stn(wormy), rare pcs w/ live oil droplets, fair/faint odor in bag, milky to instant cut, rare assoc. wht Chert,**  
SH, gray to blk, scatt sea green to mustard yellow, rare SS clutster, gray, f-gr, rnded, well sorted, friable, NS

Vari-colored SH, sea green, maroon, mustard yellow, silty, striated pcs, SS clusters, gray, f-gr, **rare pcs gassy, spotty bright fluor, inst cut.**  
MS-WS, crm to brn, f-xln, dense to brittle, sub oolitic, dull fluor, rare Chert, wht to opaque  
rare Dolo, gray, vf-xln, gritty/silty looking, tite, limey in pt. NS

Chert, bone wht fresh to wthrd(tripolitic), varicolord pcs scatt, **dead stn scatt, no odor, rare live oil in tray, inst cut on select pcs w/ spotty bright fluor, some pcs w/ vuggy por.**

Dolo, gray, vf-xln, dense, vf-sucrosic, dull fluor, **inst cut 1 pc, dull fluor**

WS-PS, crm to off wht, f-xln, dense, some pcs chalky and friable, dull fluor, NS

Dolo, brn to gray, f-xln, scatt fossils, dull fluor, NS, **faint odor in bag**

Dolo, crm to brn, f-xln, some pcs fossilif/bioclastic, most firm to hard, dull fluor, **good odor in bag, rare milky to inst cut., lt stn, pp por. spty stn dry**

WS-PS, crm to off wht, f-xln, oolitic, fossilif., dense, NS

Dolo, brn to gray, some pcs co-gr sugary txt to vf-xln, gray pcs hard, brn pcs friable, **spotty to even stn, good odor in bag, inst cut rare, most slow milky cut,**

Dolo, crm to gray, limey, vf to m-xln, some pcs hard, most brittle to friable, dull fluor, 1 pc w/ slow milky cut, no stn  
WS, crm to brn, f-xln, oolitic/fossilif., NS

**PIPE STRAP 1.16' Short**

**+60 UGK, shale gas**

**+50 UGK, shale gas**

**DST #2 5165-5275  
B/Penn, Cong, Miss  
30-60-60-120  
SB BOB/1min, GTS 11min  
GA 1/4in  
28.555MCF/20min  
31.728MCF/30min  
NBB  
SB BOB, GTS/immed  
GA 1/4in  
22.210MCF/10min  
22.210MCF/20min  
19.037MCF/30min  
17.450MCF/40min  
14.278MCF/50min  
14.278MCF/60min  
BB blt to 4 inch  
4599' GIP  
Rec: 315 GOCM  
(20g, 10o, 70m)  
252' GMCO(20g, 60o, 20m)  
IH 2623#  
IF 267-213#  
ISIP 1156#  
FF 261-257#  
FSIP 1260#  
FH 2620#  
Temp 117°F**

**+40 UGK, 20 UGK recycle**

**+45 UGK, +12 UGK recycle**

**+45 UGK**

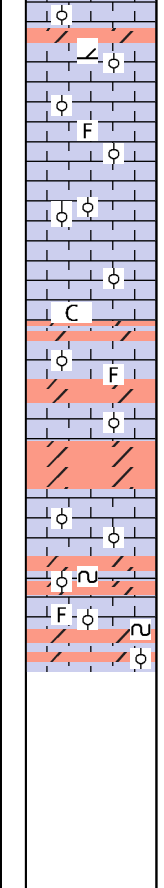
**+45 UGK**

**+80 UGK**

**DST #3 5258-5287  
MISS  
15-22-60-120**

CFS 90">  
Vis 59  
Wt 9.15  
LCM 3#  
CI 7,100  
FILT 8.0

5300  
5310  
5320  
5330  
5340  
5350  
5360  
5370  
5380  
5390



Dolo, brn to gray, vf-xln, gritty, tite, dull fluor, NS  
MS-PS, crm to off wht, f-xln, fossil/oolitic, hard, NS

MS-PS, off wht to crm, f-xln, m-gr oolitic, tite, scatt friable pcs, dolomitic in part, NS

MS-WS, off wht to lt. brn, f-xln, earthy, fossils, NS

WS-PS, crm to off wht, f-xln, friable, fossils, chalky mtrx, scatt MS, brn, vf-xln, dense, dolomitic in part, no fluor, NS

WS-PS, crm to off wht, f-xln some pcs earthy, fossilif to m-gr oolitic, glauc, NS  
Dolo, brn to gray, vf-xln, dense, NS, dull fluor

Dolo, brn, vf-xln, gritty txt, dense, A.A., some pcs friable, dull mineral fluor, NS

Dolo, brn, vf-xln, some pcs w/ sugary f to m-xln txt, scatt fossils/oolitic pcs, dull fluor, glauc scatt

45-90-60-120  
SB BOB/1min, GTS  
26/min TSTM  
BB/7in  
SB BOB 2/min,  
GTS/immed, TSTM  
BB/2in  
4947' GIP  
252' GWMCO  
(10g,55o.25m,10w)  
63' MCW  
(10m,90w)  
IH 2608#  
IF 94-101#  
ISIP 600#  
FF 133-134#  
FSIP 510#  
FH 2607#  
Temp 117°F  
API Rw .15 @ 60°F  
CI 59,000ppm

RTD 5370  
@ 4:00 AM  
12/5/2017