KOLAR Document ID: 1418736

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 # 5004
Name: Vincent Oil Corporation
Address 1: 200 W DOUGLAS AVE #725
Address 2:
City: WICHITA State: KS Zip: 67202 + 3013
Contact Person: M.L. Korphage
Phone: (316) 262-3573
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Tom Dudgeon
Purchaser: MV Purchasing

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 #:

4/21/2018 Spud Date or Recompletion Date
5/2/2018 Date Reached TD
7/2/2018 Completion Date or Recompletion Date

API No.: 15-057-20997-00-00
Spot Description:
__ - S2 - NW - NW Sec. 2 Twp. 29 S. R. 23 ☐ East ☑ West
1017 Feet from ☑ North / ☐ South Line of Section
755 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Ford
Lease Name: BROWN Well #: 1-2
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 2546 Kelly Bushing: 2559
Total Vertical Depth: 5400 Plug Back Total Depth: 5393
Amount of Surface Pipe Set and Cemented at: 687 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: 24700 ppm Fluid volume: 900 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Elk Energy Holdings LLC
Lease Name: Karla License #: 35420
Quarter SW Sec. 1 Twp. 29 S. R. 22 ☐ East ☑ West
County: Ford Permit #: D31368

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: 08/16/2018
☐ **Confidential Release Date:** 08/15/2020
☐ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Rene Stucky **Date:** 08/16/2018

Page Two

Operator Name: Vincent Oil Corporation Lease Name: BROWN Well #: 1-2

Sec. 2 Twp. 29 S. R. 23 ☐ East ☑ West County: Ford

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 *(Attach Additional Sheets)*	☑ Yes	☐ No	
Samples Sent to Geological Survey	☑ Yes	☐ No	
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	
Geologist Report / Mud Logs	☑ Yes	☐ No	

List All E. Logs Run: Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name: Attached Top: Attached Datum: Attached

CASING RECORD ☑ New ☐ 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
Surface	12.25	8.625	23	687	MDC & Common	275	2-4% Gel, 3% CC & 1/4# flo-seal/sx
Production	7.875	4.5	11.6	5393	Pro-C	175	10% Salt & 5# Kol-seal/sx

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: 7/2/2018

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	40		40		

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION: ☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
5270	5276

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
4	5270	5276			Ran tubing and acidized perfs with 1000 gal 15% MCA. Swabbed partial load with trace oil, SDFN
					Fluid level at 2300', swabbed 8 hrs at 8 to 20 bbls/hr, (10-50% Oil), sDFN
					Fluid at 3575', swabbed 10-20 bbls /hr,(30-90% Oil), ran DHP & rods
					Set surface equip and made connections, turned to production 7/2/2018

TUBING RECORD: Size: 2.3750 Set At: 5327 Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	BROWN 1-2
Doc ID	1418736

All Electric Logs Run

Dual Induction
Density - Neutron
Micro-log
Sonic

Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	BROWN 1-2
Doc ID	1418736

Tops

Name	Top	Datum
Heebner Shale	4377	(-1818)
Brown Limestone	4517	(-1958)
Lansing	4528	(-1969)
Stark Shale	4860	(-2301)
Base Kansas City	4979	(-2420)
Pawnee	5069	(-2510)
Cherokee Shale	5115	(-2556)
Base of Penn	5217	(-2658)
Mississippian	5238	(-2679)
RTD	5400	(-2841)

Form	ACO1 - Well Completion
Operator	Vincent Oil Corporation
Well Name	BROWN 1-2
Doc ID	1418736

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	687	MDC & Common	275	2-4% Gel, 3% CC & 1/4# flo-seal/sx
Production	7.875	4.5	11.6	5393	Pro-C	175	10% Salt & 5# Kol-seal/sx

QUALITY WELL SERVICE, INC.

6824

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	Sec.	Twp.	Range	County	State	On Location	Finish
4-24-13	2	29S	23W	Ford	Ks	3:05	5:30

Lease Brown — Well No. 1-2 — Location

Contractor Duke Rig #9

Type Job Surface

Hole Size 12¼ — T.D. 695'

Csg. 8⅝ 23# — Depth 687.66

Tbg. Size — Depth

Tool — Depth

Cement Left in Csg. 42.19 — Shoe Joint 42.19

Meas Line — Displace 41.31

Owner Vincent O.L

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.

Charge To Vincent oil

Street

City — State

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

Cement Amount Ordered

EQUIPMENT

Pumptrk 8	No.	~~Richard~~
Bulktrk 9	No.	Mike
Bulktrk 10	No.	
Pickup	No.	~~Todd~~

JOB SERVICES & REMARKS

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Ran 16 jts 8⅝ 23# csg

set @ 687

Baffle Plate 1ft 42.19

Break Circ w/ rig

Mix Pump 125 sx MDC

Mix Pump 150 sx Comm

Shut Down

Release 8⅝ Wooden Plug

Plug down @ 5:15 PM 600#

Release Held

Circ 15 Bbl to Pit

thanks

Please Call Again

Todd & Mike

X Signature Emerson Rupert

MDC	125 sx
Common	150 sx
Poz. Mix	
Gel.	11
Calcium	10
Hulls	
Salt	
Flowseal	66.25
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	296
Mileage	3500 1.05

FLOAT EQUIPMENT

Guide Shoe	8⅝
Centralizer	1 Ea Baffle
Baskets	1 Ea Wood Plug
AFU Inserts	
Float Shoe	
Latch Down	
	1 Ea Service Supervision
LMV	50
Pumptrk Charge	1 Ea
Mileage	100
Tax	
Discount	
Total Charge	4,967.13

QUALITY WELL SERVICE, INC. 6831

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 5-3-13	Sec. 2	Twp. 29S	Range 23W	County Ford	State Ks	On Location 12:30	Finish 4:00

Lease Brown | Well No. 1-2 | Location Kingsdown N to W. Lown Rd 3W 1/4S

Contractor Duke Drlg #9 | Owner Eight

Type Job 4½ L.S. | 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 7⅞ | T.D. 5400

Csg. 4½ 11.6# | Depth 5393 | Charge To Vincent Oil Corp

Tbg. Size | Depth | Street

Tool | Depth | City State

Cement Left in Csg. 21.78 | Shoe Joint 21.78 | The above was done to satisfaction and supervision of owner agent or contractor.

Meas Line | Displace 83.25 | Cement Amount Ordered 225sx Pro-C 10% Salt 5# Kolseal

EQUIPMENT

Pumptrk 8	No.	Derek
Bulktrk 10	No.	Dean
Bulktrk	No.	
Pickup	No.	Todd

JOB SERVICES & REMARKS

Rat Hole 20 sx

Mouse Hole 30 sx

Centralizers 1-3-5-7-9-11

Baskets

D/V or Port Collar

Ran 121 jts 4½ 11.6# csg set @ 5393'

AFU insert + csg @ shoe jt 21.78

csg on Bottom Drop Ball

Break Circ w/rig 1 hr

Pump 5 Bbls H2O 12 Bbls MF 5 Bbls H2O

Ran Plug R-M Holes 50sx

Mix Pump 175 sx Pro C

Shut down Wash up tk

Release 4½ Top Rubber Plug

Start Disp 5.5 Bbls 100' 2% KCL

71 Bbls Out Lift Ps 600#

Land Plug 1200# 83.25 at 3:45

Release Psi Float Held

Ran 20 Bbls to pit

Thank you Please Call Again Tim Derek

X Signature

Common	225	
Poz. Mix		
Gel.	4 sx	
Calcium		
Hulls		
Salt	29 sx	
Flowseal		
Kol-Seal	1125 lbs	
Mud CLR 48	500 gal	
CFL-117 or CD110 CAF 38		
Sand KCL	8 gal	
Handling	293	
Mileage	50	

FLOAT EQUIPMENT

Guide Shoe	1	4½
Centralizer	6	
Baskets		
AFU Inserts	1	
Float Shoe	1	
Latch Down	1	4½ Rubber Plug
Service supervision		
LMV 250		
Pumptrk Charge	1	L.S.
Mileage	100	
		Tax
		Discount
		Total Charge

DRILL STEM TEST REPORT

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59860 **DST#: 1**

Test Start: 2018.04.28 @ 18:52:34

GENERAL INFORMATION:

Formation: **Pawnee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:03:36
Time Test Ended: 02:38:36

Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 74

Interval: 5060.00 ft (KB) To 5087.00 ft (KB) (TVD)
Total Depth: 5087.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

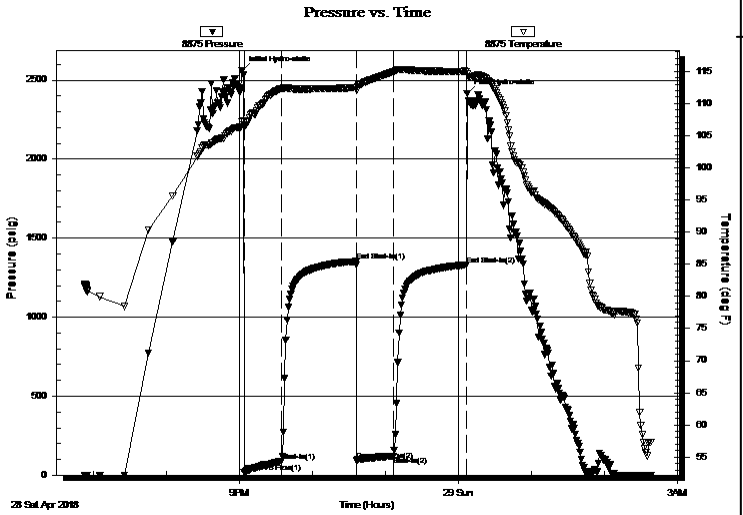
Reference Elevations: 2559.00 ft (KB)
2546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8875 **Inside**

Press@RunDepth: 120.91 psig @ 5061.00 ft (KB)
Start Date: 2018.04.28 End Date: 2018.04.29
Start Time: 18:52:35 End Time: 02:38:36

Capacity: psig
Last Calib.: 2018.04.29
Time On Btm: 2018.04.28 @ 21:02:06
Time Off Btm: 2018.04.29 @ 00:07:06

TEST COMMENT: IF: Weak Blow Built to 4 3/4 inch
ISI: No Blow Back
FF: Weak Blow Built to 4 1/4 inch
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2561.96	107.15	Initial Hydro-static
2	17.64	106.60	Open To Flow (1)
33	88.34	112.34	Shut-In(1)
94	1352.81	112.44	End Shut-In(1)
95	95.35	112.08	Open To Flow (2)
125	120.91	114.94	Shut-In(2)
184	1330.98	115.01	End Shut-In(2)
185	2415.58	114.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	120 GIP	0.00
120.00	MCW 15%M 85%W	0.59
63.00	SOCM 2%O 98%M	0.32

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59860 **DST#: 1**

Test Start: 2018.04.28 @ 18:52:34

GENERAL INFORMATION:

Formation: **Pawnee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:03:36
Time Test Ended: 02:38:36

Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 74

Interval: 5060.00 ft (KB) To 5087.00 ft (KB) (TVD)
Total Depth: 5087.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

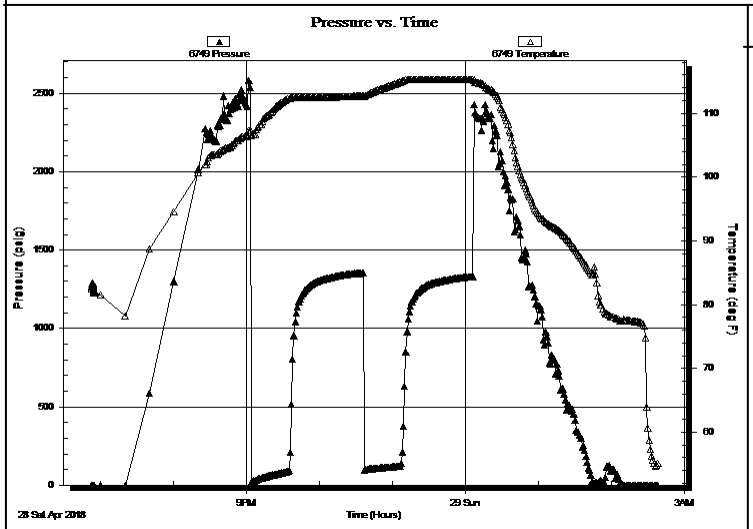
Reference Elevations: 2559.00 ft (KB)
2546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 6749 **Outside**

Press@RunDepth: psig @ 5061.00 ft (KB)
Start Date: 2018.04.28 End Date: 2018.04.29
Start Time: 18:52:54 End Time: 02:38:55

Capacity: psig
Last Calib.: 2018.04.29
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak Blow Built to 4 3/4 inch
ISI: No Blow Back
FF: Weak Blow Built to 4 1/4 inch
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	120 GIP	0.00
120.00	MCW 15%M 85%W	0.59
63.00	SOCM 2%O 98%M	0.32

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59860 **DST#: 1**

Test Start: 2018.04.28 @ 18:52:34

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:	53000 ppm
Viscosity:	49.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.38 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6900.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	120 GIP	0.000
120.00	MCW 15%M 85%W	0.590
63.00	SOCM 2%O 98%M	0.319

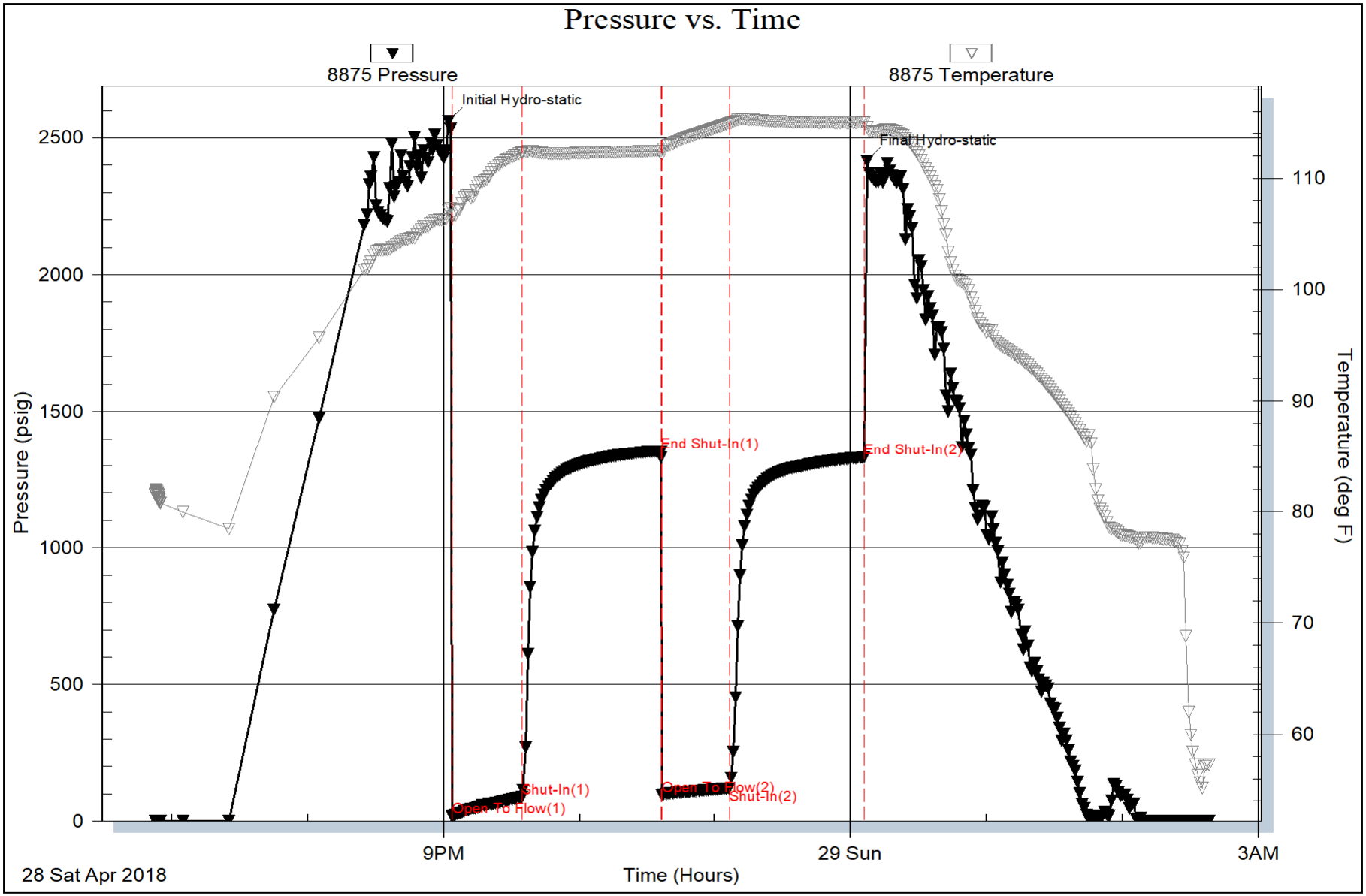
Total Length: 183.00 ft Total Volume: 0.909 bbl

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

Laboratory Name: Laboratory Location:

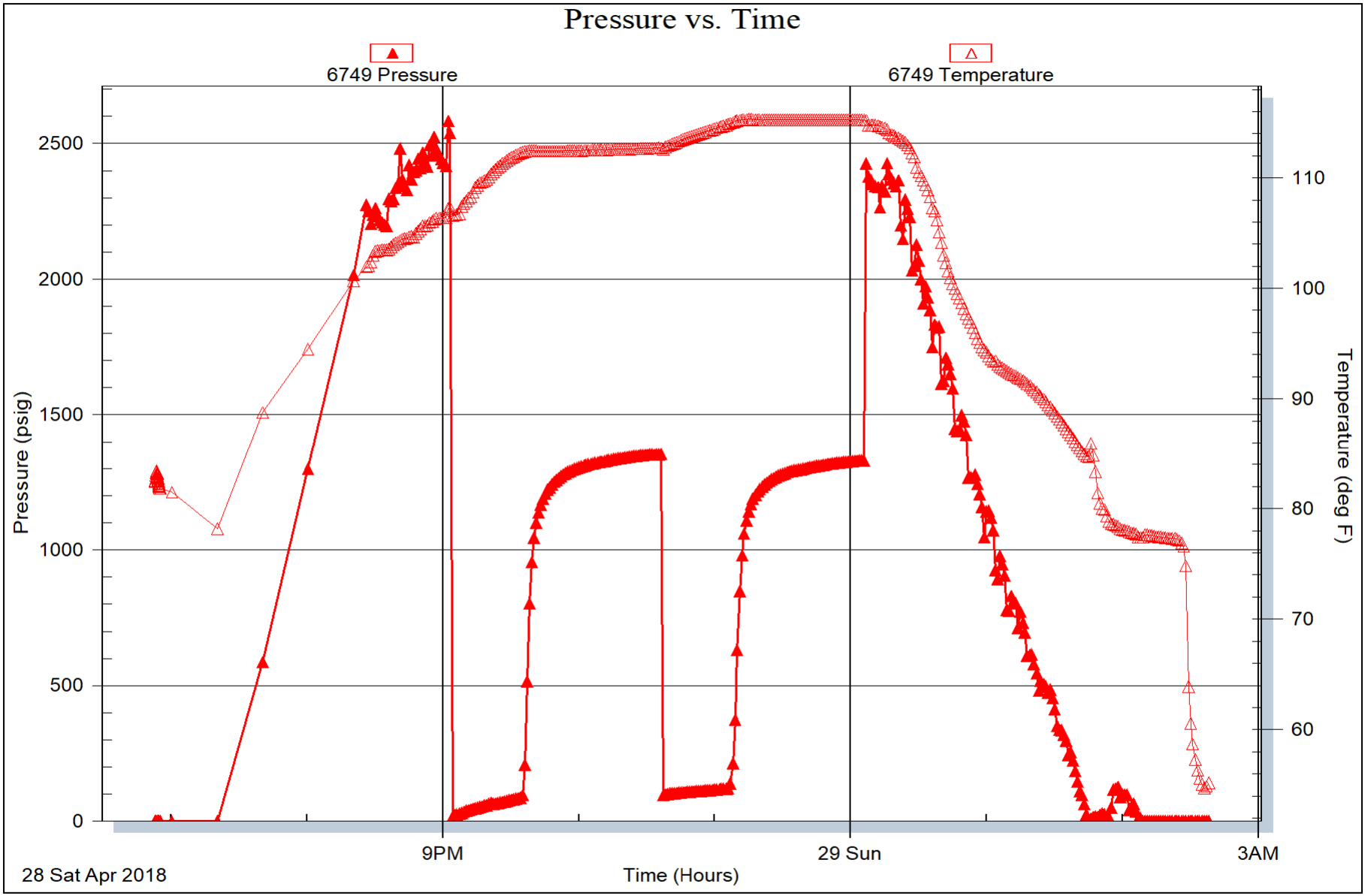
Recovery Comments: RW w as .2 @52 degrees

Serial #: 8875 **Inside** Vincent Oil Corporation Brow n 1-2 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 59860 Printed: 2018.04.29 @ 07:30:15

Serial #: 6749 **Outside** Vincent Oil Corporation Brown 1-2 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 59860 Printed: 2018.04.29 @ 07:30:15

DRILL STEM TEST REPORT

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59861 **DST#: 2**

Test Start: 2018.04.29 @ 22:50:01

GENERAL INFORMATION:

Formation: **Penn/Morrow**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:13:03
Time Test Ended: 08:11:48

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 74

Interval: 5160.00 ft (KB) To 5241.00 ft (KB) (TVD)
Total Depth: 5241.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

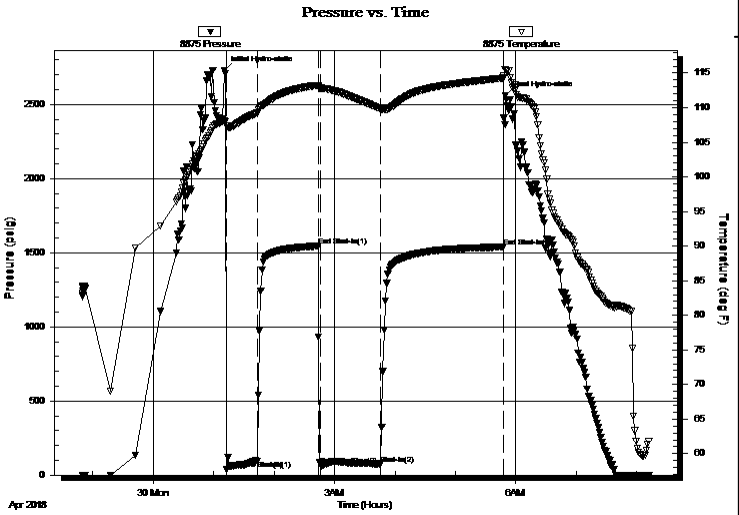
Reference Elevations: 2559.00 ft (KB)
2546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8875 **Inside**

Press@RunDepth: 75.93 psig @ 5161.00 ft (KB)
Start Date: 2018.04.29 End Date: 2018.04.30
Start Time: 22:50:02 End Time: 08:11:48

Capacity: psig
Last Calib.: 2018.04.30
Time On Btm: 2018.04.30 @ 01:10:33
Time Off Btm: 2018.04.30 @ 05:49:48

TEST COMMENT: IF: Strong Blow , BOB in 1 minute. GTS in in 11 minutes, Gauged & Caught Sample
ISI: No Blow Back
FF: Strong Blow , BOB & GTS Immediate, Gauged Gas
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2730.09	108.06	Initial Hydro-static
3	39.04	107.32	Open To Flow (1)
33	97.17	109.23	Shut-In(1)
94	1545.32	113.19	End Shut-In(1)
96	68.98	112.83	Open To Flow (2)
156	75.93	109.80	Shut-In(2)
277	1539.16	114.30	End Shut-In(2)
280	2559.97	115.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GTS	0.00
60.00	GCM 10%G 90%M	0.30

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	30.00	47.59
Last Gas Rate	0.38	42.00	153.86
Max. Gas Rate	0.38	52.00	190.49

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59861 **DST#: 2**

Test Start: 2018.04.29 @ 22:50:01

GENERAL INFORMATION:

Formation: **Penn/Morrow**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:13:03
Time Test Ended: 08:11:48

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 74

Interval: 5160.00 ft (KB) To 5241.00 ft (KB) (TVD)
Total Depth: 5241.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

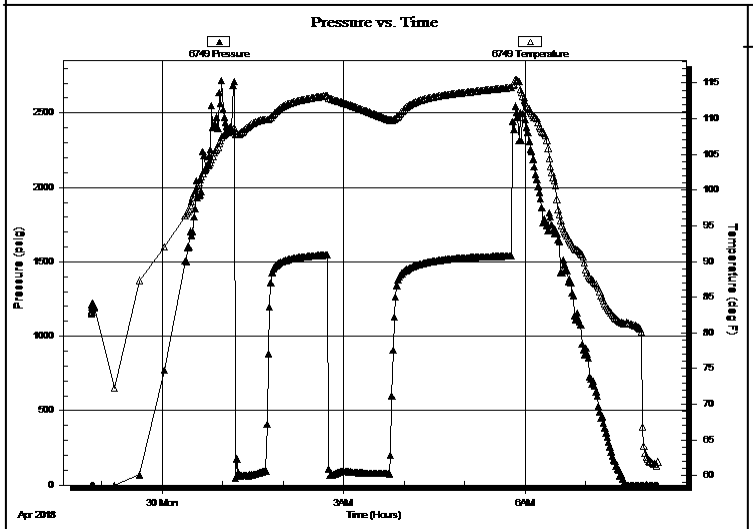
Reference Elevations: 2559.00 ft (KB)
2546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 6749 **Outside**

Press@RunDepth: psig @ 5161.00 ft (KB)
Start Date: 2018.04.29 End Date: 2018.04.30
Start Time: 22:50:04 End Time: 08:11:50

Capacity: psig
Last Calib.: 2018.04.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 1 minute. GTS in in 11 minutes, Gauged & Caught Sample
ISI: No Blow Back
FF: Strong Blow , BOB & GTS Immediate, Gauged Gas
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GTS	0.00
60.00	GCM 10%G 90%M	0.30

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	30.00	47.59
Last Gas Rate	0.38	42.00	153.86
Max. Gas Rate	0.38	52.00	190.49

DRILL STEM TEST REPORT

FLUID SUMMARY

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59861 **DST#: 2**

Test Start: 2018.04.29 @ 22:50:01

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8900.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GTS	0.000
60.00	GCM 10%G 90%M	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

DRILL STEM TEST REPORT

GAS RATES

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59861 **DST#: 2**

Test Start: 2018.04.29 @ 22:50:01

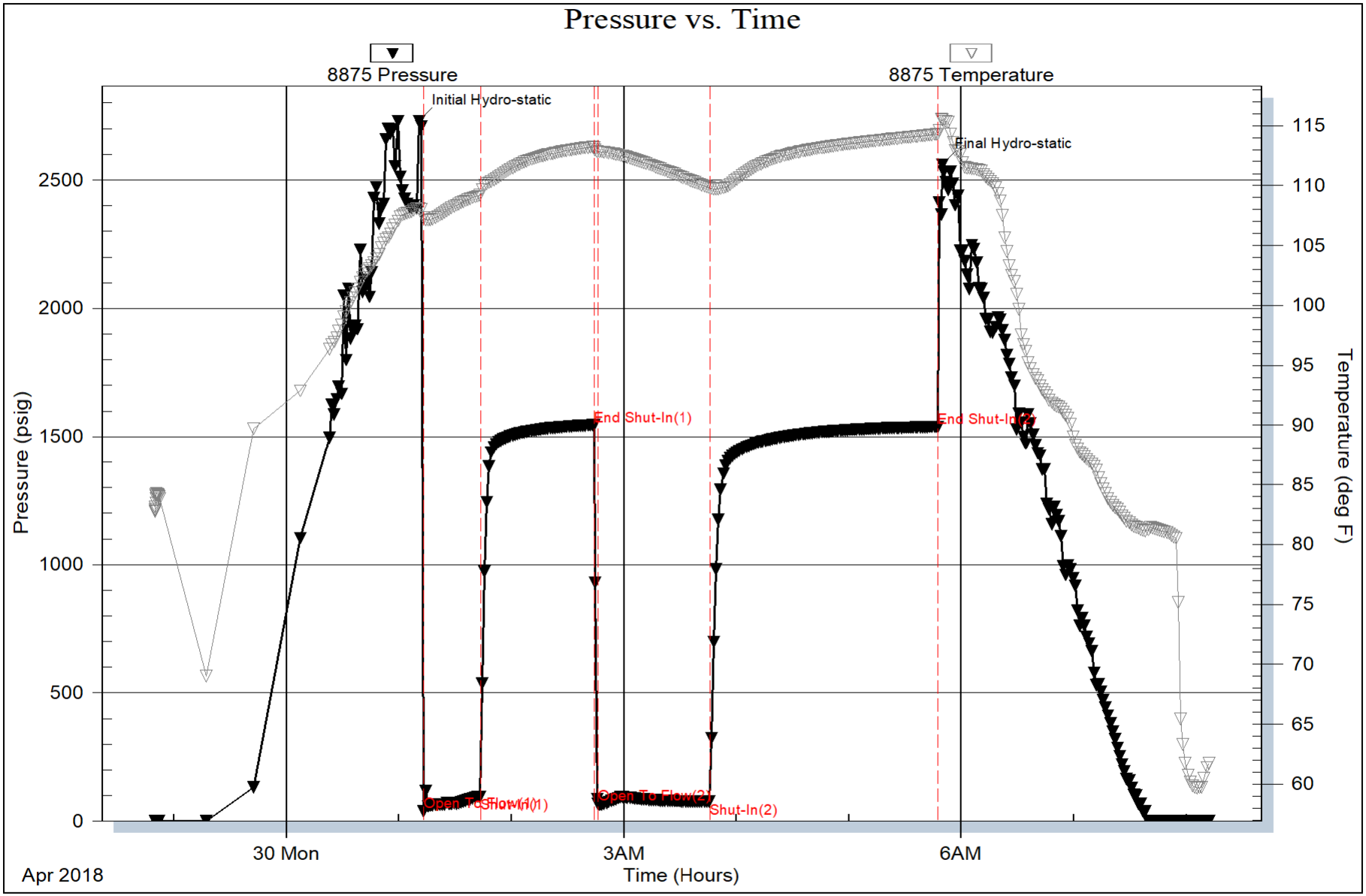
Gas Rates Information

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

Gas Rates Table

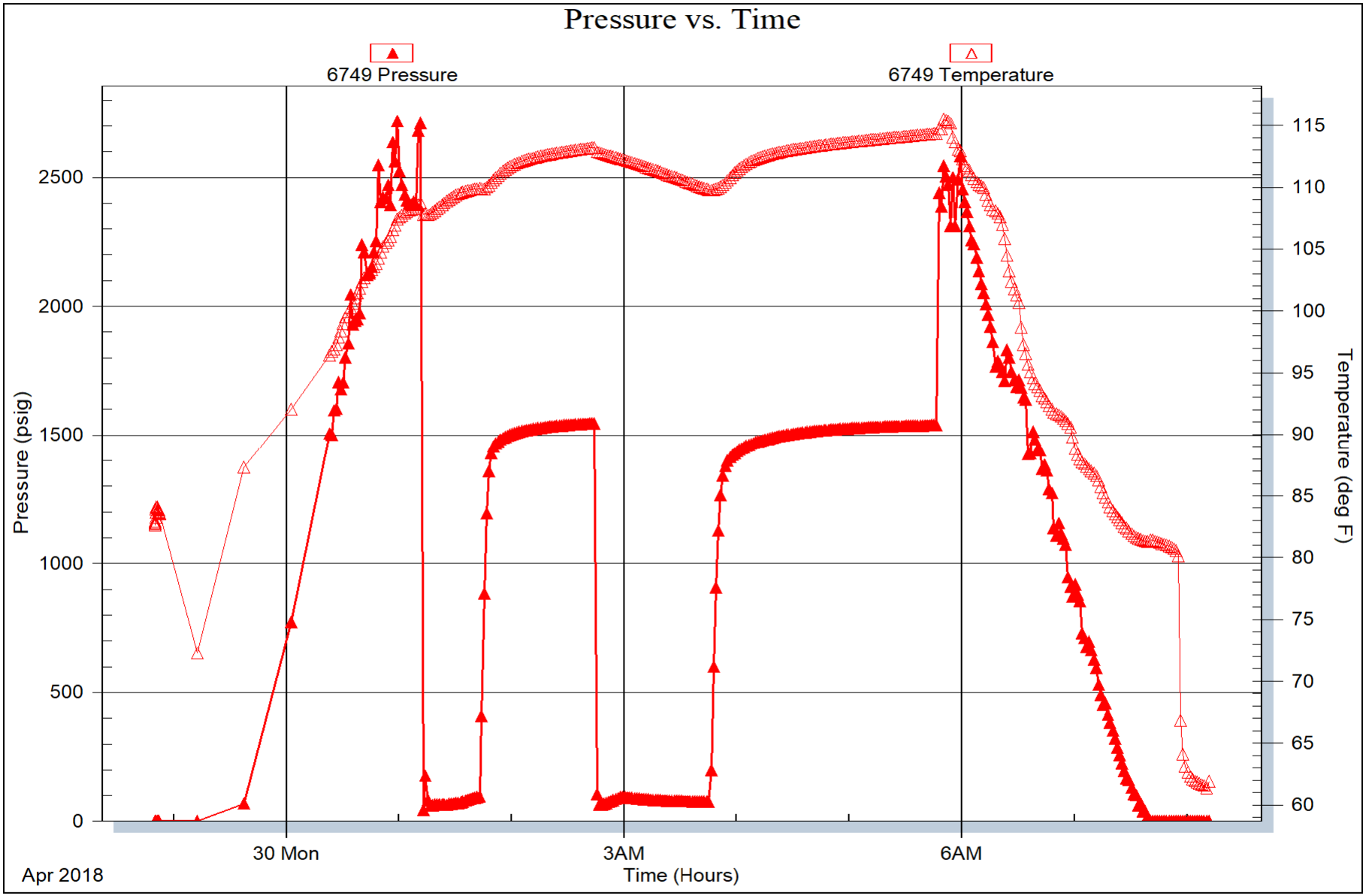
Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	20	0.25	30.00	47.59
1	20	0.25	30.00	47.59
1	30	0.25	46.00	72.97
2	10	0.25	49.00	77.73
2	20	0.38	52.00	190.49
2	30	0.38	46.00	168.51
2	40	0.38	43.00	157.52
2	50	0.38	42.00	153.86

Serial #: 8875 **Inside** Vincent Oil Corporation Brow n 1-2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 59861 Printed: 2018.04.30 @ 09:22:42

Serial #: 6749 **Outside** Vincent Oil Corporation Brown 1-2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 59861 Printed: 2018.04.30 @ 09:22:42

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59862 **DST#: 3**

Test Start: 2018.04.30 @ 17:44:53

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:49:10
Time Test Ended: 00:38:55

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 74

Interval: 5246.00 ft (KB) To 5271.00 ft (KB) (TVD)
Total Depth: 5271.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

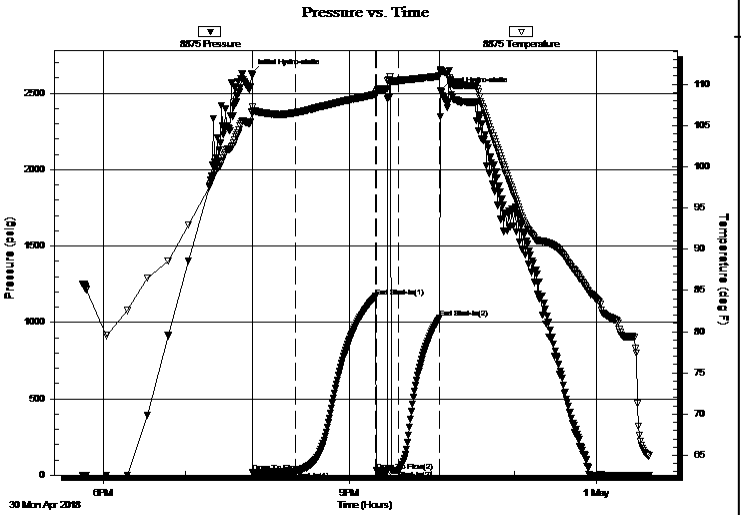
Reference Elevations: 2559.00 ft (KB)
2546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8875 **Inside**

Press@RunDepth: 32.89 psig @ 5247.00 ft (KB)
Start Date: 2018.04.30 End Date: 2018.05.01
Start Time: 17:44:54 End Time: 00:38:55

Capacity: psig
Last Calib.: 2018.05.01
Time On Btm: 2018.04.30 @ 19:48:10
Time Off Btm: 2018.04.30 @ 22:06:25

TEST COMMENT: IF: Weak 1 inch Blow
ISI: No Blow Back
FF: No Blow , Flushed Tool, Weak Surface Blow
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2630.68	106.60	Initial Hydro-static
1	16.54	106.49	Open To Flow (1)
33	25.89	106.56	Shut-In(1)
91	1169.01	108.79	End Shut-In(1)
92	27.13	108.73	Open To Flow (2)
100	28.02	109.47	Flushed Tool
108	32.89	110.43	Shut-In(2)
138	1027.11	111.02	End Shut-In(2)
139	2514.39	111.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59862 **DST#: 3**

Test Start: 2018.04.30 @ 17:44:53

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:49:10
Time Test Ended: 00:38:55

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 74

Interval: 5246.00 ft (KB) To 5271.00 ft (KB) (TVD)
Total Depth: 5271.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

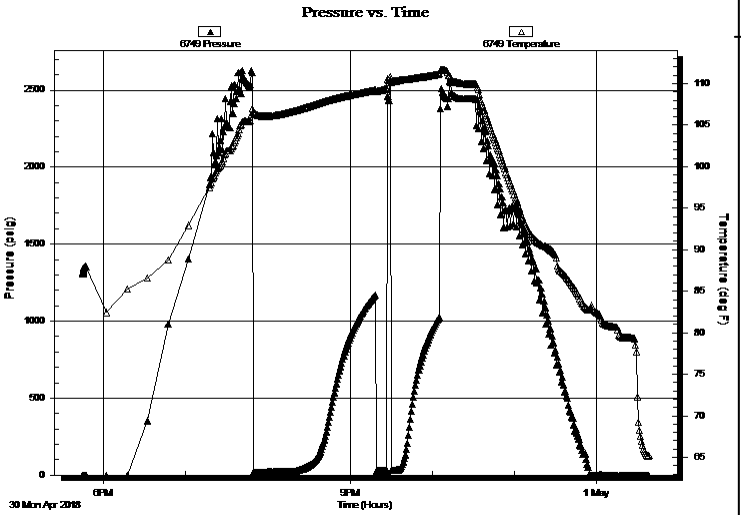
Reference Elevations: 2559.00 ft (KB)
2546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 6749 **Outside**

Press@RunDepth: psig @ 5247.00 ft (KB)
Start Date: 2018.04.30 End Date: 2018.05.01
Start Time: 17:44:36 End Time: 00:38:37

Capacity: psig
Last Calib.: 2018.05.01
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak 1 inch Blow
ISI: No Blow Back
FF: No Blow , Flushed Tool, Weak Surface Blow
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59862 **DST#: 3**

Test Start: 2018.04.30 @ 17:44:53

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:	bbl		
Water Loss:	13.19 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	11200.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

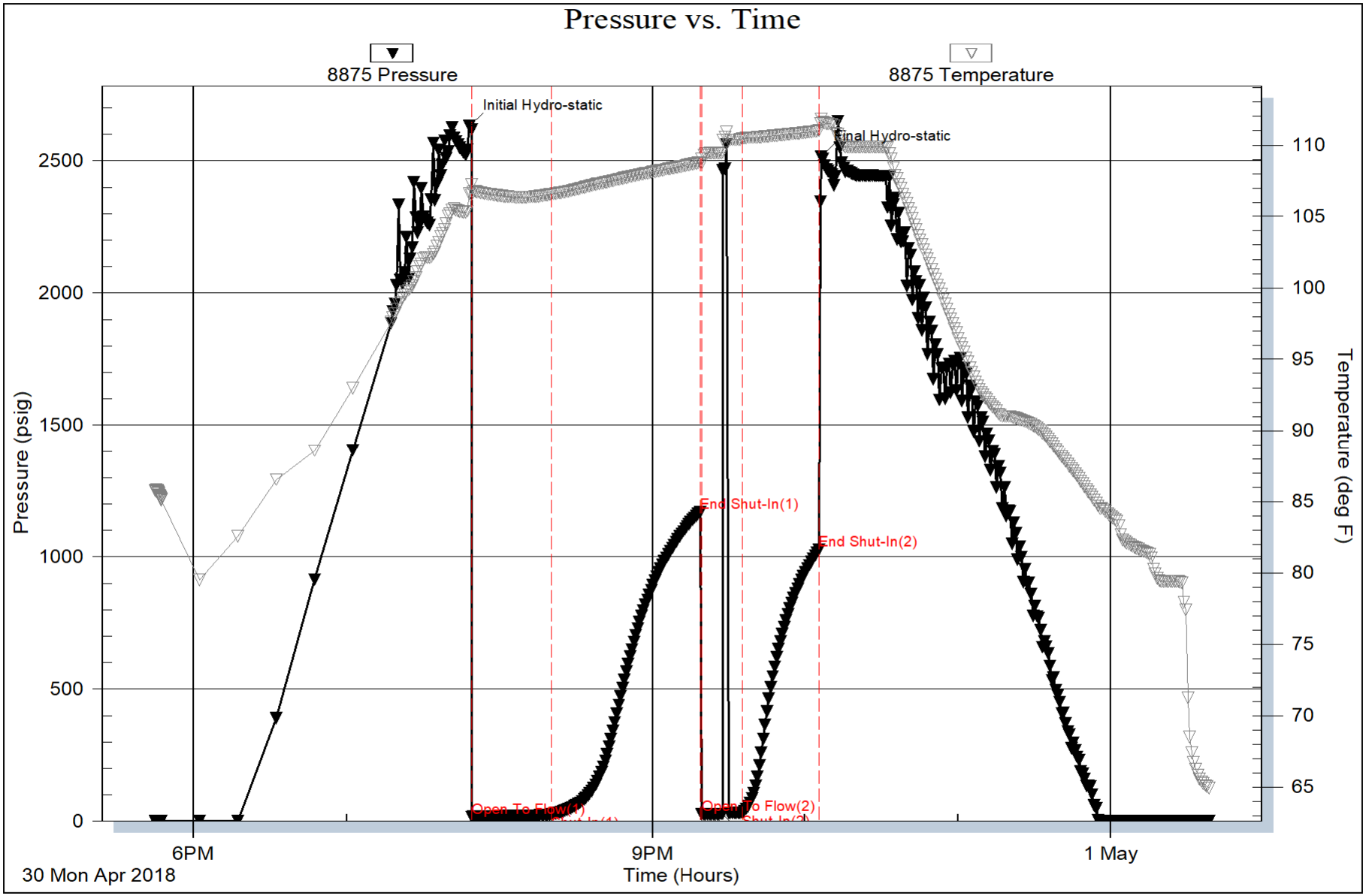
Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

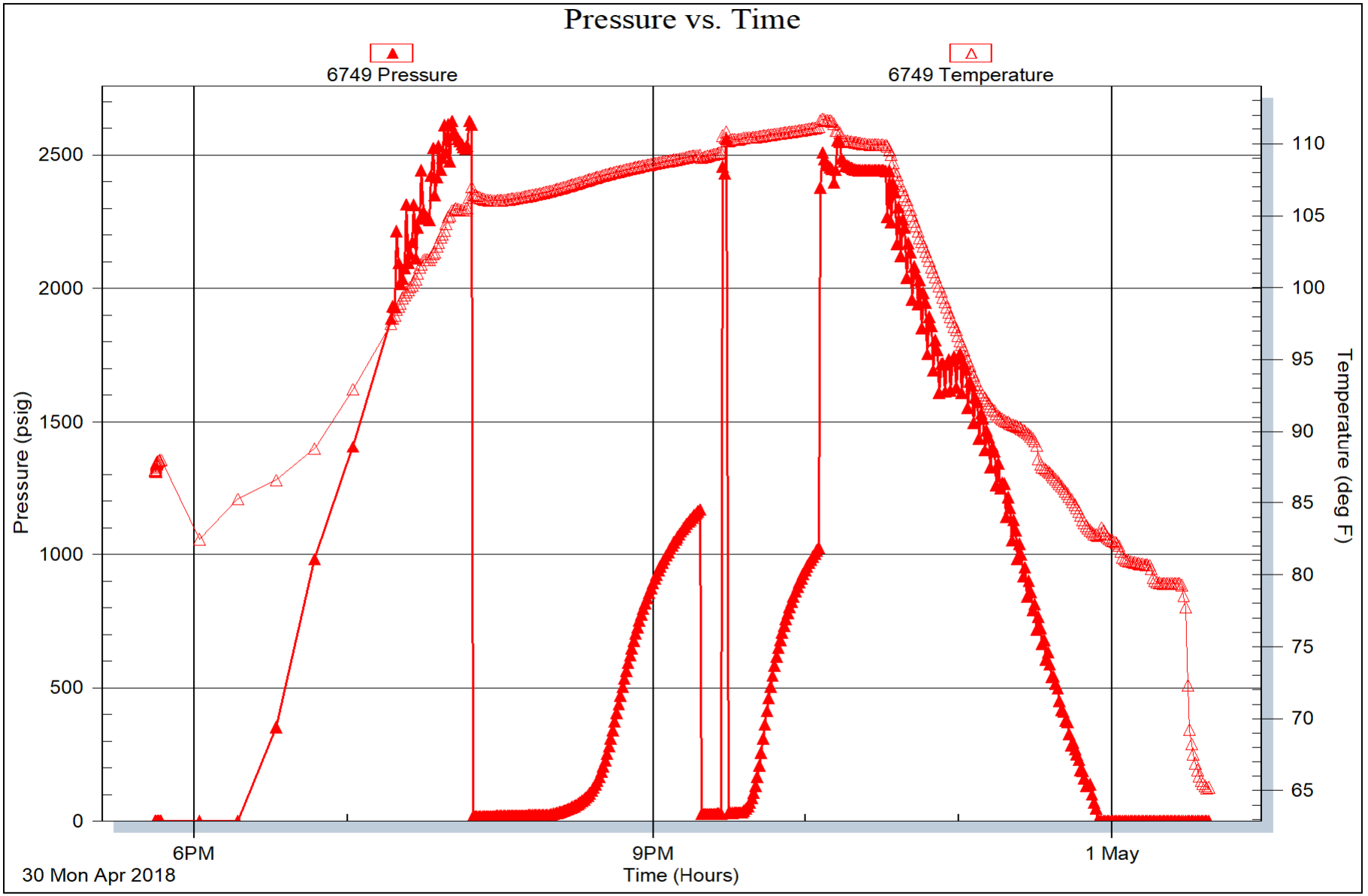
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8875 **Inside** Vincent Oil Corporation Brow n 1-2 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 59862 Printed: 2018.05.01 @ 07:09:56

Serial #: 6749 **Outside** Vincent Oil Corporation Brow n 1-2 DST Test Number: 3



DRILL STEM TEST REPORT

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59863 **DST#: 4**

Test Start: 2018.05.01 @ 09:50:30

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:54:47
Time Test Ended: 18:52:32

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 74

Interval: 5273.00 ft (KB) To 5297.00 ft (KB) (TVD)
Total Depth: 5297.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

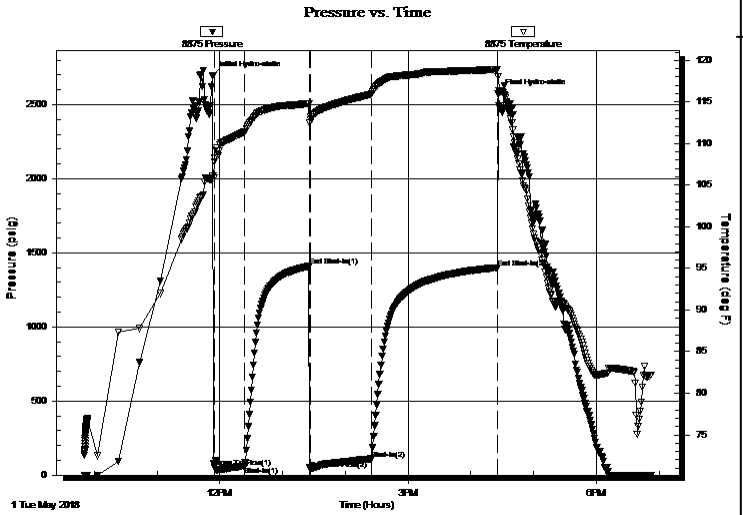
Reference Elevations: 2559.00 ft (KB)
2546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8875 **Inside**

Press@RunDepth: 108.49 psig @ 5274.00 ft (KB)
Start Date: 2018.05.01 End Date: 2018.05.01
Start Time: 09:50:31 End Time: 18:52:32

Capacity: psig
Last Calib.: 2018.05.01
Time On Btm: 2018.05.01 @ 11:53:02
Time Off Btm: 2018.05.01 @ 16:26:02

TEST COMMENT: IF: Strong Blow , BOB in 3 minutes, Built to 157 inches
ISI: No Blow Back
FF: Strong Blow , BOB immediate, Built to 316 inches
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2695.52	106.12	Initial Hydro-static
2	53.43	107.85	Open To Flow (1)
31	61.92	111.47	Shut-In(1)
93	1409.82	114.80	End Shut-In(1)
94	40.92	112.83	Open To Flow (2)
152	108.49	115.97	Shut-In(2)
273	1400.66	118.90	End Shut-In(2)
273	2571.29	118.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4368 GIP	0.00
62.00	MCW 30%M 70%W	0.30
183.00	GMWCO 10%G 14%M 22%W 54%O	1.47
30.00	GMCO 10%G 40%M 50%O	0.42

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59863 **DST#: 4**

Test Start: 2018.05.01 @ 09:50:30

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:54:47
Time Test Ended: 18:52:32

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 74

Interval: 5273.00 ft (KB) To 5297.00 ft (KB) (TVD)
Total Depth: 5297.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

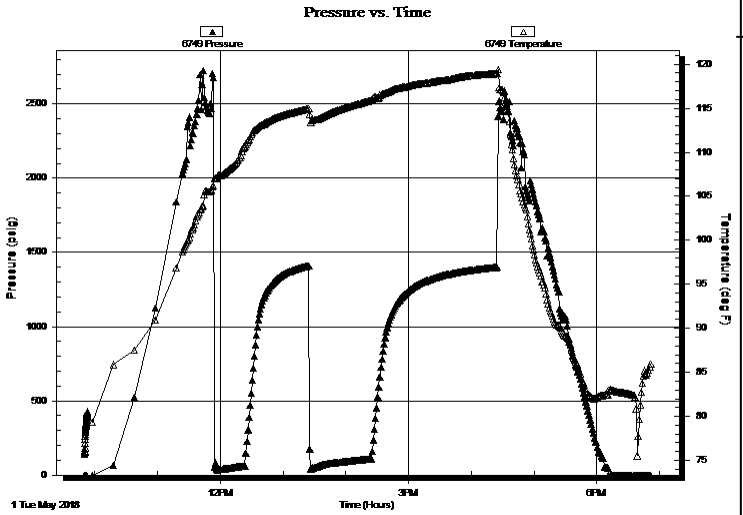
Reference Elevations: 2559.00 ft (KB)
2546.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 6749 **Outside**

Press@RunDepth: psig @ 5274.00 ft (KB)
Start Date: 2018.05.01 End Date: 2018.05.01
Start Time: 09:50:20 End Time: 18:52:21

Capacity: psig
Last Calib.: 2018.05.01
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 3 minutes, Built to 157 inches
ISI: No Blow Back
FF: Strong Blow , BOB immediate, Built to 316 inches
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4368 GIP	0.00
62.00	MCW 30%M 70%W	0.30
183.00	GMWCO 10%G 14%M 22%W 54%O	1.47
30.00	GMCO 10%G 40%M 50%O	0.42

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Vincent Oil Corporation

200 W Douglas Ave #725
Wichita, KS 67202

ATTN: Tom Dudgeon

2-29S-23W Ford

Brown 1-2

Job Ticket: 59863 **DST#: 4**

Test Start: 2018.05.01 @ 09:50:30

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:	55000 ppm
Viscosity:	70.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	9400.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4368 GIP	0.000
62.00	MCW 30%M 70%W	0.305
183.00	GMWCO 10%G 14%M 22%W 54%O	1.474
30.00	GMCO 10%G 40%M 50%O	0.421

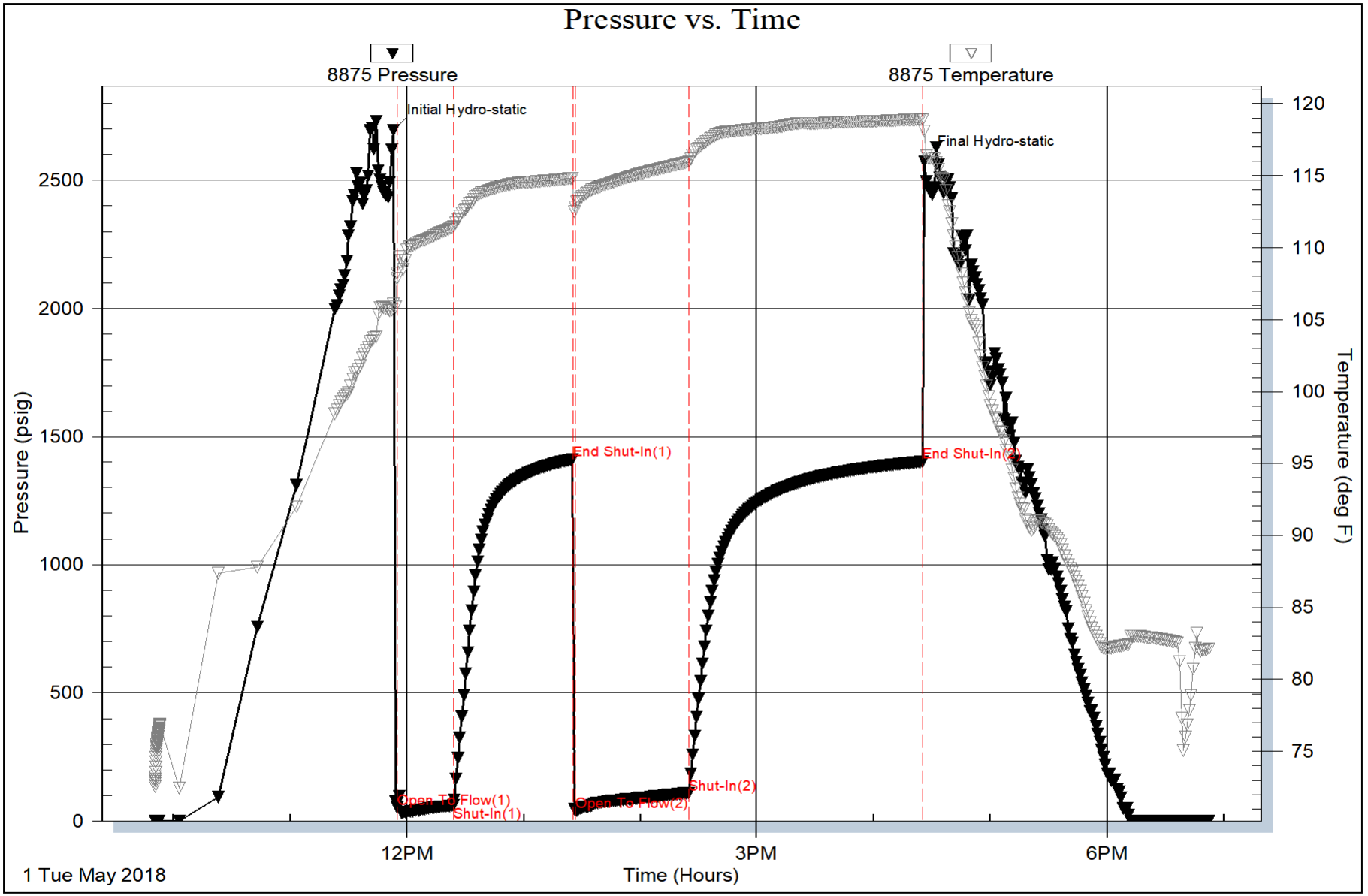
Total Length: 275.00 ft Total Volume: 2.200 bbl

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

Laboratory Name: Laboratory Location:

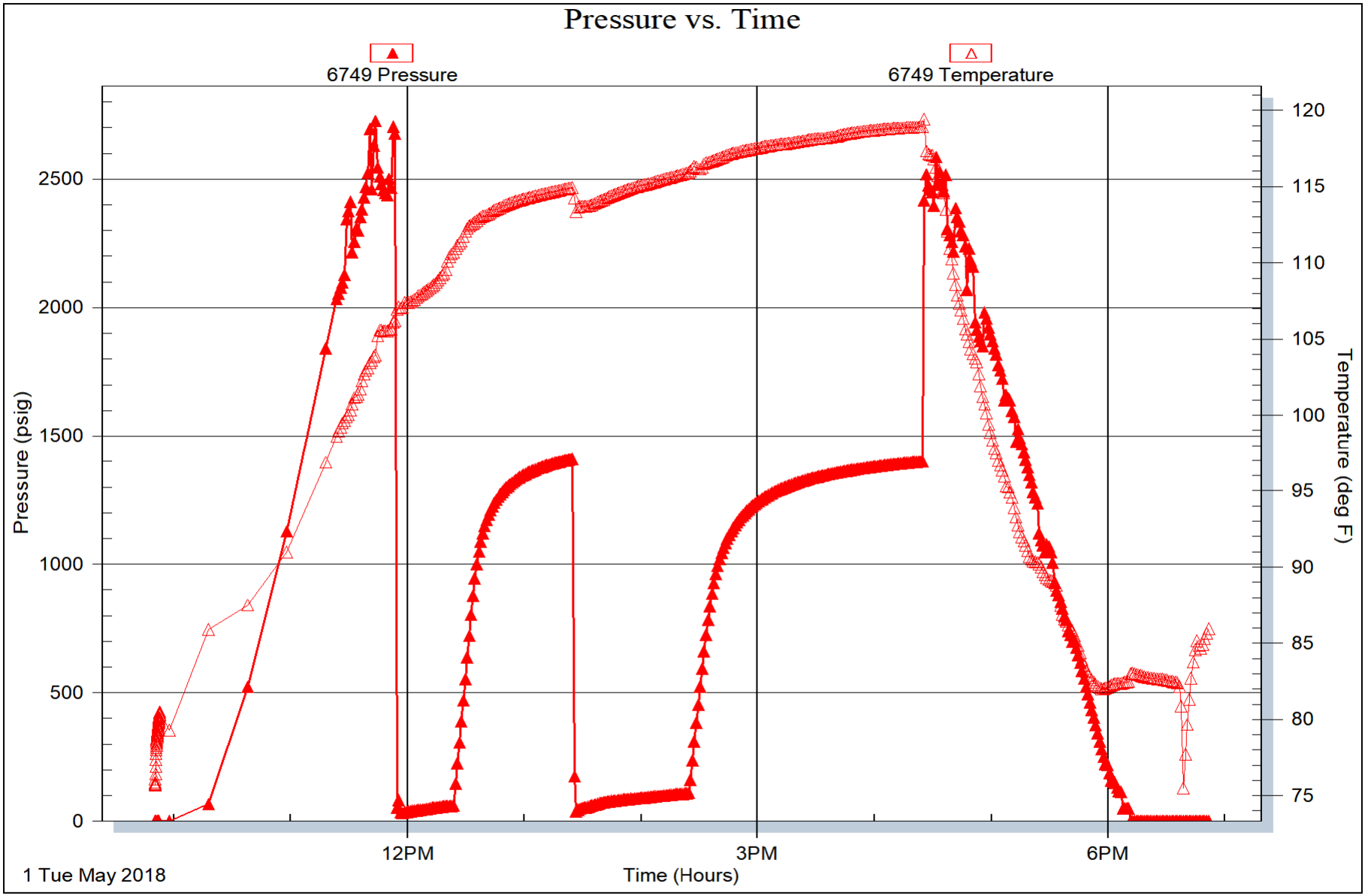
Recovery Comments: RW was .16 @ 70degrees

Serial #: 8875 **Inside** Vincent Oil Corporation Brown 1-2 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 59863 Printed: 2018.05.01 @ 19:35:36

Serial #: 6749 **Outside** Vincent Oil Corporation Brown 1-2 DST Test Number: 4



Scale 1:240 Imperial

Well Name:	Brown #1-2		
Surface Location:	2-29S23W -- 1017' FNL 755' FWL -- S/2 NW NW		
Bottom Location:			
API:	15-057-20997-00-00		
License Number:	5004		
Spud Date:	4/21/2018	Time:	7:00 AM
Region:	SW KS		
Drilling Completed:	5/2/2018	Time:	3:20 AM
Surface Coordinates:	1017' FNL & 755' FWL		
Bottom Hole Coordinates:			
Ground Elevation:	2546.00ft		
K.B. Elevation:	2559.00ft		
Logged Interval:	4250.00ft	To:	5400.00ft
Total Depth:	5400.00ft		
Formation:	Mississippian		
Drilling Fluid Type:	Chemical Mud		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:	-99.8105164	Latitude:	37.5542477
N/S Co-ord:	1017' FNL		
E/W Co-ord:	755' FWL		

OPERATOR

Company:	Vincent Oil Corporation		
Address:	200 W Douglas Ave Ste 725 Wichita, KS 67202		
Contact Geologist:	Dick Jordan		
Contact Phone Nbr:	316.262.3573		
Well Name:	Brown #1-2		
Location:	2-29S23W -- 1017' FNL 755' FWL -- S/2 NW	API:	15-057-20997-00-00
Pool:	Developement	Field:	Sodville
State:	Kansas	Country:	USA

CONTRACTOR

Contractor:	Duke Drilling Co., Inc.		
Rig #:	9		
Rig Type:	Rotary		
Spud Date:	4/21/2018	Time:	7:00 AM
TD Date:	5/2/2018	Time:	3:20 AM
Rig Release:	5/3/2018	Time:	7:00 AM

LOGGED BY

Company:	Vincent Oil Corporation
Address:	

Phone Nbr:	316.262.3573		
Logged By:	Geologist	Name:	Tom Dudgeon

ELEVATIONS

K.B. Elevation:	2559.00ft	Ground Elevation:	2546.00ft
K.B. to Ground:	13.00ft		

TOTAL DEPTH

Measurement Type:	Measurement Depth:	TVD:
RTD	5400.00	5398.00
LTD	5398.00	5398.00

DRILLING FLUID SUMMARY

Type	Date	From Depth	To Depth
Chemical Mud	4/25/2018	3795.00ft	5398.00ft

OPEN HOLE LOGS

Logging Company:	ELI		
Logging Engineer:	Jeff Luebbers		
Truck #:	922339		
Logging Date:	5/2/2018	Time Spent:	4.5
# Logs Run:	4	# Logs Run Successful:	4

LOGS RUN

Tool	Logged Interval	Logged Interval	Hours	Remarks	Run #
DI	0.00ft	5398.00ft	2.00		1
ND/NEU/PE	4200.00ft	5398.00ft	2.00		1
Micro	4200.00ft	5398.00ft	2.50		2
Sonic	0.00ft	5398.00ft	2.50		2

LOGGING OPERATION SUMMARY

Date	From	To	Description Of Operation
5/3/2018	0.00ft	5398.00ft	All logs ran successfully

CASING SUMMARY

	Surface	Intermediate	Main
Bit Size	12.25 in		7.88 in
Hole Size	12.25 in		7.88 in

	Size	Set At	Type	# of Joints	Drilled Out At
Surf Casing	8.625 in	687 ft	23#	16	4/22/2018 12:00 AM
Int Casing					
Prod Casing	4.5 in	5393 ft	11.6#	121	

CASING SEQUENCE

Type	Hole Size	Casing Size	At
Suface	12.25 in	8.63	687.00 ft
Production	7.88 in	4.50	5393.00 ft

NOTES

Rock descriptions based on Dunhams classification

MS- Mudstone-less than 10% Grains
WS- Wackestone-more than 10% Grains
PS- Packstone-Grain Supported
GS-Grainstone-Lacks Mud
BS-Boundstone

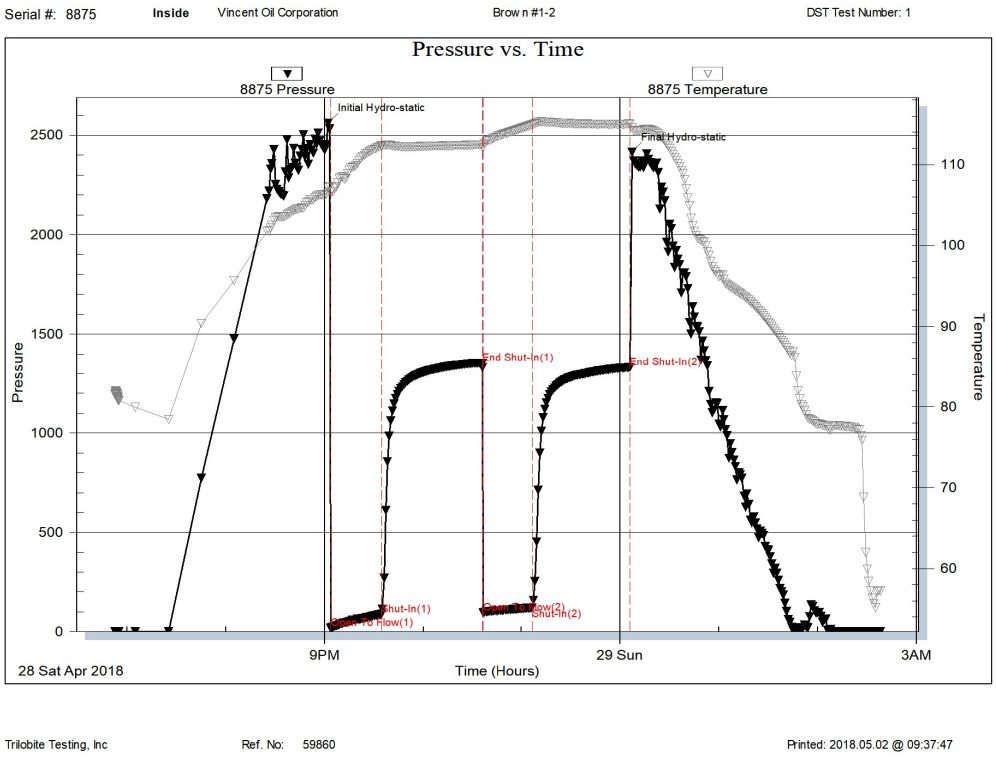
REFERENCE WELLS

A- Hitz 1-35 680' FSL & 470' FWL 35-28S-23W
B- Perkins 1-3 1325' FNL & 2387' FEL 3-29S-23W

Pipe Strap was 2' long to board @ 5087' -- No correction was made

DST #1 5060-5087	DST #2 5160-5241	DST #3 5246-5271	DST #4 5272-5296
Pawnee Lm	Penn Lm/Morrow	Mississippian	Mississippian
30-60-30-60	30-60-60-120	30-60-15-30	30-60-60-120
WB blt to 4.75"	SB BOB GTS/11 min	WB 1 inch	SB Blt to 159"
NBB	GA 1/4 in Choke	NBB	NBB
WB blt to 4.25"	65.6 MCFG/20 min	NB, died, flushed tool	SB Blt to 316"
NBB	90.05 MCFG/30 min	Weak surface blow	NBB
120' GIP	NBB	NBB	4368' GIP
Rec: 63' SOCM (2o,98m)	SB GTS/immed	Rec: 5' Mud	Rec: 275' Total
120 MCW (15m,85w)	GA 3/8 in Choke	IH 2631#	30' GMCO (10g,50o,40m)
IH 2562#	93.73 MCFG/10 min	IF 16-26#	183' GMWCO
IF 18-88#	228.79 MCFG/20 min	ISIP 1169#	(10g,54o,14m,22w)
ISIP 1353#	207.86 MCFG/30 min	FF 27-33#	62' MCW (30m 70w)
FF 95-121#	198.32 MCFG/40 min	FSIP 1027#	IH 2695#
FSIP 1331#	192.75 MCFG/50 min	FH 2514#	IF 53-62#
FH 2415#	188.92 MCFG /60 min	Temp 111*F	ISIP 1410#
Temp 115*F	NBB		FF 41-108#
API Rw .2 @ 52*F	5088' GIP		FSIP 1401#
Cl 53,000ppm	Rec: 60' GCM (10g,90m)		FH 2571#
	IH 2730#		Temp 119*F
	IF 39-97#		API Rw .16 @ 70*F
	ISIP 1545#		Cl 55,000 ppm
	FF 69-76#		
	FSIP 1539#		
	FH 2560#		
	Temp 115*F		

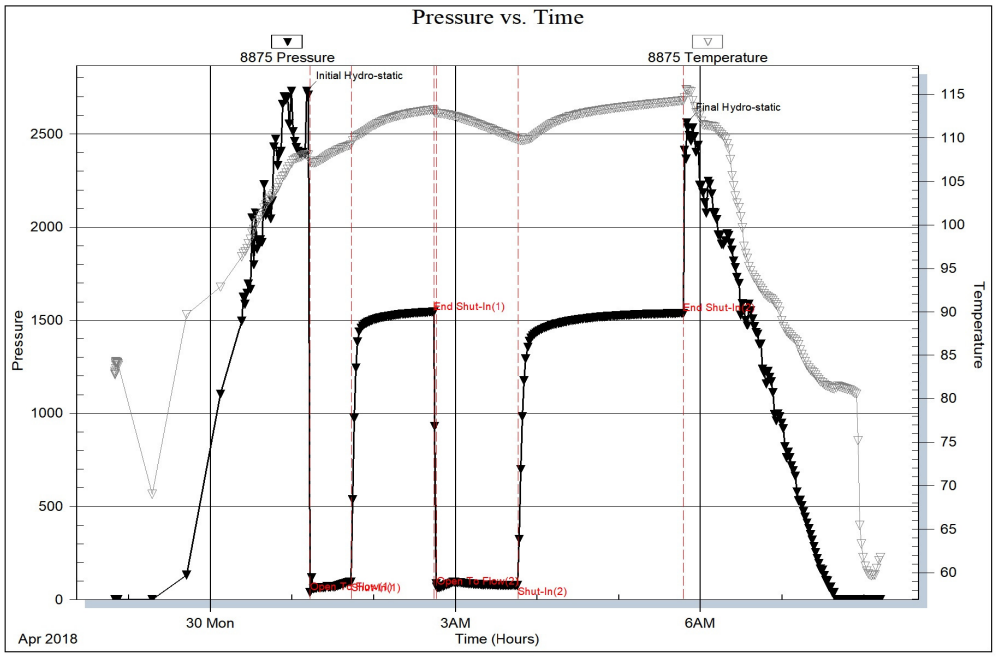
DST #1



Trilobite Testing, Inc Ref. No: 59860 Printed: 2018.05.02 @ 09:37:47

DST #2

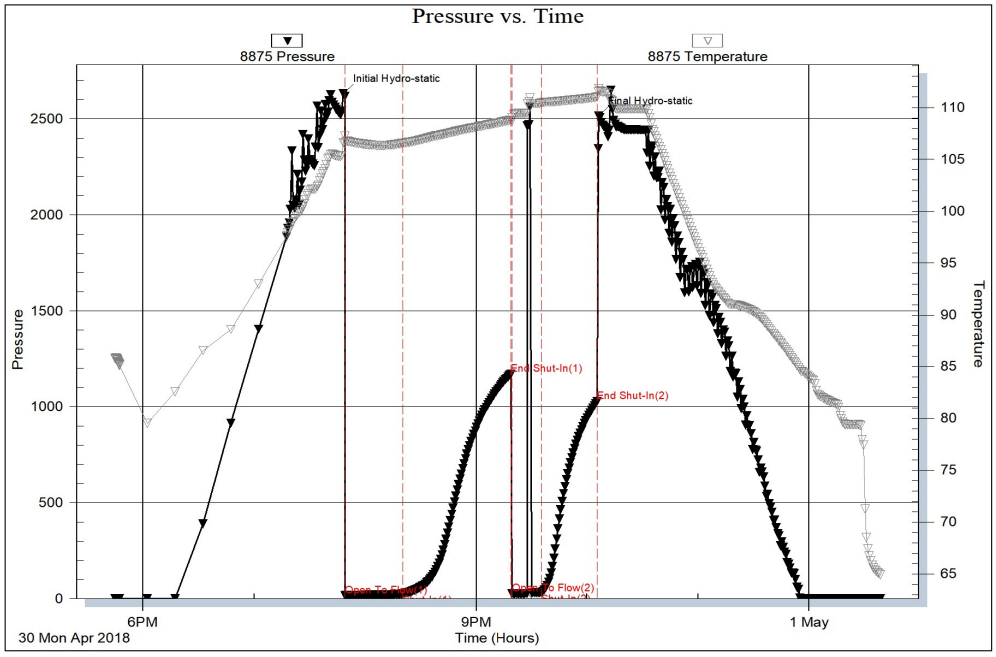
Serial #: 8875 **Inside** Vincent Oil Corporation Brow n #1-2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 59861 Printed: 2018.05.02 @ 10:22:48

DST #3

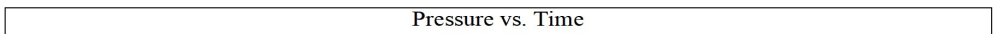
Serial #: 8875 **Inside** Vincent Oil Corporation Brow n #1-2 DST Test Number: 3

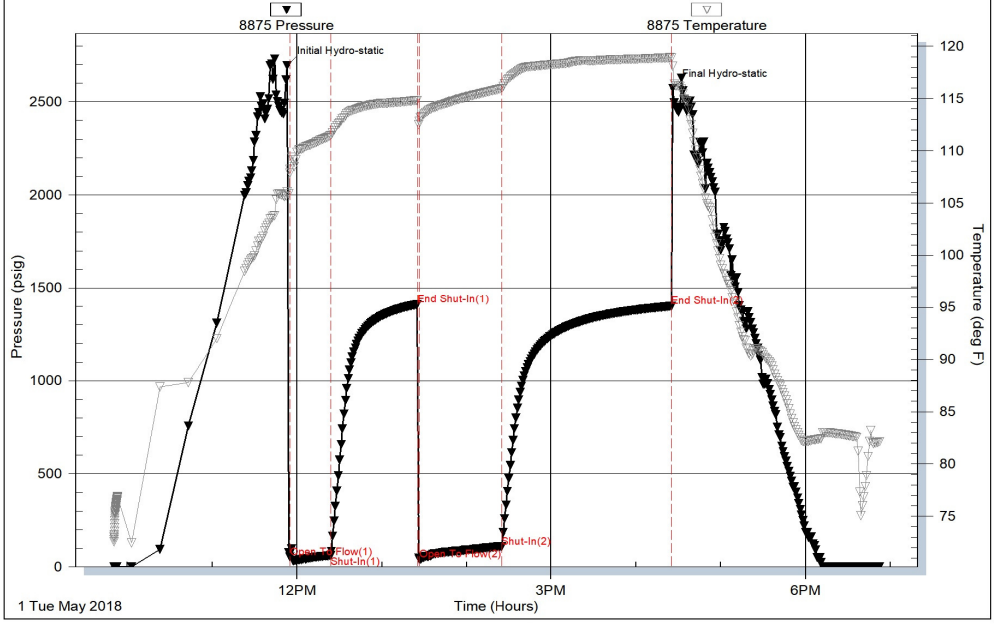


Trilobite Testing, Inc Ref. No: 59862 Printed: 2018.05.02 @ 09:37:17

DST #4

Serial #: 8875 **Inside** Vincent Oil Corporation Brow n #1-2 DST Test Number: 4





Trilobite Testing, Inc Ref. No: 59863 Printed: 2018.05.02 @ 09:33:32

ROCK TYPES

Cht, Coal, Dolsec, Lmst fw<7, Lmst fw7>, Ss, Shgy, Shblck, Shcol

ACCESSORIES

MINERAL
- Calcareous
- Carbonaceous Flakes
- Chert, dark
- Dolomitic
- Glauconite
- Heavy, dark minerals
- P Pyrite
- Sandy
- Silty
- Chert White

FOSSIL
- Bioclastic or Fragmental
- Brachiopod
- Bryozoa
- Crinoids
- Foraminifera
- F Fossils < 20%
- Gastropod
- Oolite

STRINGER
- Dolomite
- Sandstone
- Shale

TEXTURE
- C Chalky
- CX Cryptocrystalline
- e Earthy
- FX FinexIn
- MX MicroxIn

OTHER SYMBOLS

POROSITY TYPE
- Intercrystalline
- Interoolitic
- V Vuggy
- P Pinpoint
- Moldic
- O Organic
- F Fracture
- e Earthy
- Fenestral

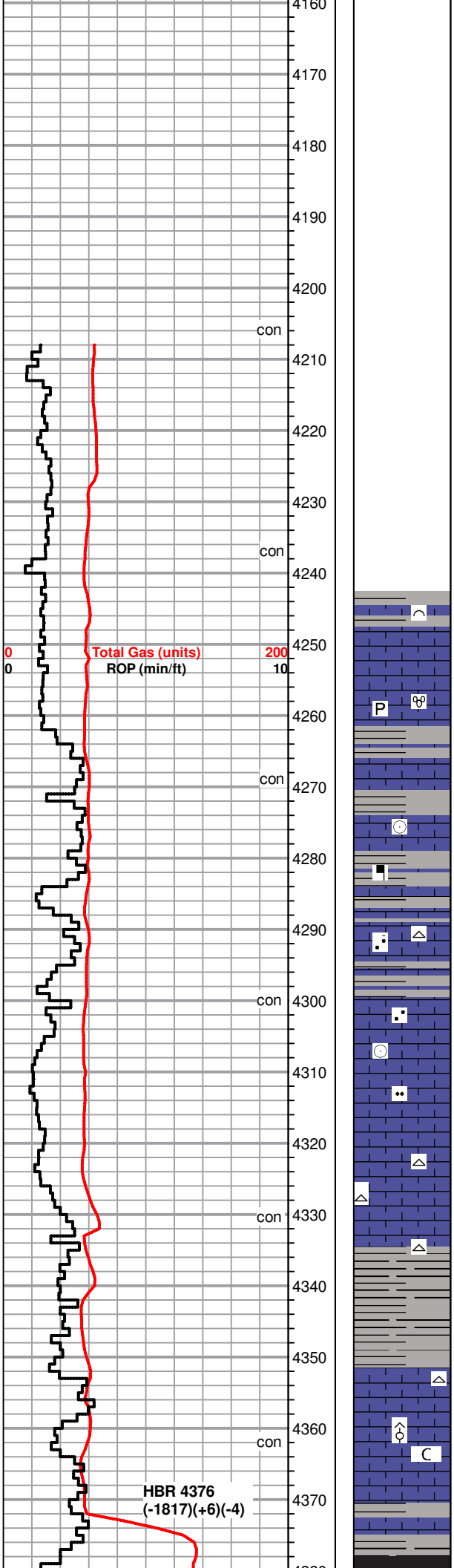
OIL SHOWS
- Even Stn
- Spotted Stn 50 - 75 %
- Spotted Stn 25 - 50 %
- Spotted Stn 1 - 25 %
- O Questionable Stn
- D Dead Oil Stn
- Fluorescence

INTERVALS
- Core
- DST

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

Curve Track #01
Total Gas (units)
ROP (min/ft)
1:240 Imperial
0 Total Gas (units) 200
0 ROP (min/ft) 10

Depth | Intervals (Cored Interval / DST Interval)	Porosity Types	Interpreted Lithology	Oil Shows	Geological Descriptions	Comment
4150				Geologist on Location @ 10:30 AM 4/26/2018	
4200					



Bloodhound Gas Detector (Unit 5259) provided by Bluestem Labs

REFERENCE WELLS
A- Hitz 1-35 680' FSL & 470' FWL 35-28S-23W
B- Perkins 1-3 1325' FNL & 2387' FEL 3-29S-23W

MS, crm to tan, vf-xlnm chalky in part, some fossil frgmts, scatt pyrite, some dark mineral specs, NS
scatt SH, grays

MS-WS, crm to lt. gray, chalky , fossilif, some brn, vf-xln, massive in part, rare SH, gray

some SH, blk, gray, MS, mostly wht, crm, chalky, fossilif., soft, pyrite(rare), NS

MS, wht to crm, crip-xln to vf-xln, NS
scatt SH, grays, blk

Increasing SH, blk, grays, silty, MS, crm to lt. gray, vf-gr, gritty txt, chalky in part, scatt fossils, NS

MS-WS, crm to lt. gray, mottled, f-xln, fossilf, scatt sub oolitic pcs, mineral specs, SH, gray, blk

MS, brn to tan, crm, f-xln, some pcs chalky, scatt fossils, Chert, wht, SH, gray, blk, sandy to silty

MS-WS, crm to brn, vf-xln, some mottled pcs, sandy in pt, SH, gray, red, green

MS, lt. gray to crm, f-xln, chalky, vf-gr gritty txt in pat, NS
SH, grays, blk, scatt

MS, A.A, no change in lithology, scatt SH, blk, gray, sample representation poor.

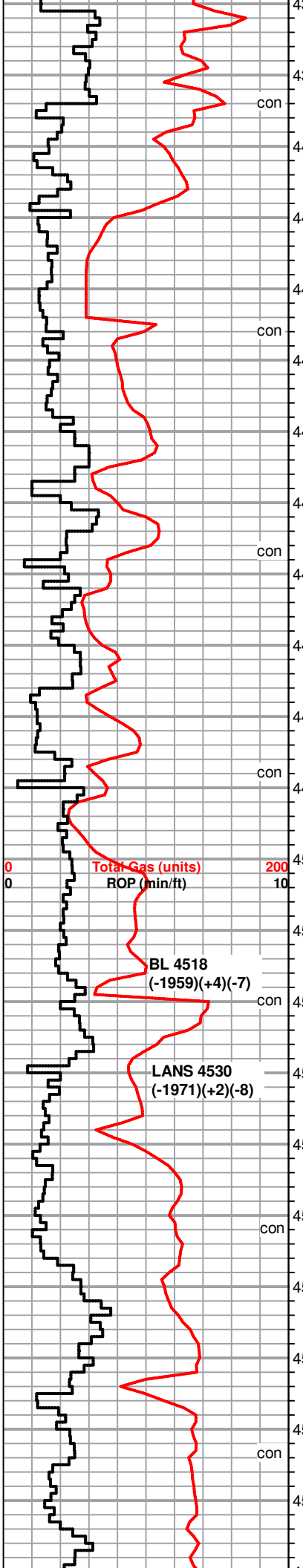
SH, gray
scatt MS, crm to tan, vf-gr, gritty txt, fossils, Chert, wht, fossils

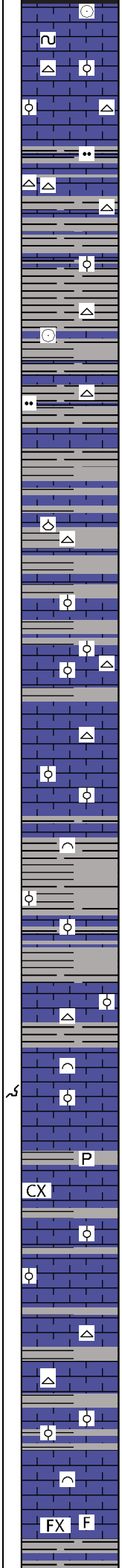
influx SH, blk, brn, sli carb.
MS, gray to crm, f-xln, fossils, calcite veins, NS, Chert, wht, gray

MS, crm to gray, scatt tan pcs, vf-xln to massive txt, chalky in pt, rare SH, A.A., lesser amt.

SH, blk, grays, MS, A.A., dec. amt.

influx, SH, blk, gray, carb
MS, lt. gray to crm, f-xln to vf-xln gritty pcs, fossils scatt., rare





glauc.

Scatt SH, blk to dk. brn, gray
MS, crm to tan, brn, vf-xln, earthy to massive txt, some fossils scatt, Chert, opaque

SH, blk to gray, green, silty to carb. in pt.,
MS, gray to crm, vf-xln, some pcs gritty, fossils, some chalky, Chert, frgmts, wht,

SH, blk, gray
MS, off wht, mic-xln, massive suboolitic pcs rare, fossils rare, forams

MS, A.A., poor samples, shaly pcs, fossils throughout, Chert, wht.

Influx SH, gray, brn, green, blk
MS-WS, crm to gray, gritty to chalky, fossils scatt, Chert, wht

SH, blk, gray, brn, green
MS-WS, gray to crm, brn, f-xln, firm to soft, chalky pcs scatt., some fossil frgmts, NS

SH, blk, brn, green, gray, MS-WS, gray to crm, brn, fxln, firm to soft, chalky pcs scatt, some fossils, Chert, opaque

MS, gray to brn, vf- to f-xln, earthy in pt., hard to dense, some fossils, SH, A.A.

MS, crm to gray, f-xln, dense to soft, f-gr oolitic/gritty txt, fossils, Chert, tan, wht

SH, gray, blk, brn, WS-MS, crm to lt. tan, brn, vf to f-xln, dense, gritty to granular looking, scatt fossils, NS, Chert, wht

MS, crm to tan, chalky matrix in pt, shaly, scatt fossils, gritty pcs scatt, sub oolitic brn pcs, SH, grays, blk

MS, tan to crm, crip-xln to vf-xln, dense to soft pcs, scatt chalky to suboolitic pcs, mottled in pt., NS
SH, blk green, gray, brn, abundant

MS-WS, crm to lt. gray, vf-xln, sub oolitic to gritty pcs, dense, hard, NS

SH, blk, gray, green

MS, brn, crm, gray, chalky to sub oolitic, gritty txt, NS, Chert, wht

SH, grays, brn, silty, MS, crm to gray, chalky to dense pcs, scatt fossils, rare moldic por., NS

MS, gray to crm, vf-xln, dense, hard to firm, fossils scatt, NS
SH, gray, waxy, pyrite

SH, grays, green, blk, brn, pyrite
MS, crm to brn, crip-xln to vf-xln, gritty/suboolitic txt, chalky in pt., NS

MS, A.A., suboolitic to chalky, soft, NS

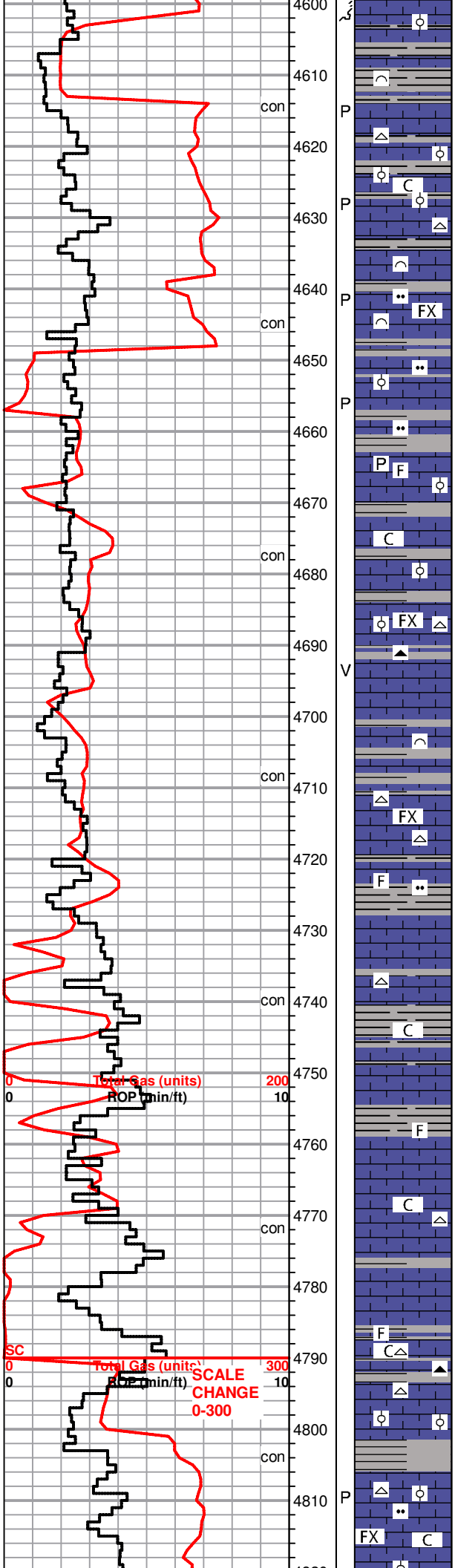
MS, crm to gray, vf-xln, dense, fossils, Chert, tan, SH, gray sandy pcs

MS, crm tan, brn, vf-xln, rare mottled pcs, oolitic in pt, f-gr., Chert, wht, tan, fossils
scatt SH, grays, green

MS, gray to crm, girtty/silty txt, some pcs mottled, hard to firm, scatt fossils, some pcs chalky, rare dead stn dry, rare SH, gray

SH, gray, green

Vis 49
Wt 9.15
LCM 0#
Filt 11.6
Cl 6,100



MS-WS, crm to gray, vf-xln, gritty txt to massive pcs, chalky matrix, fossils, sandy, dull fluor, NS

MS-WS, A.A., dense/massive pcs, NS, Chert, blk
SH, blk, gray, red, silty

MS-WS, crm to off wht, lt. gray, chalky soft matrix, oolitic pcs scatt, friable, scatt pp por., NS, Chert, wht
scatt SH, blk, gray

SH, dk. gray, green, sandy, carrying MS, A.A., lesser gray pcs,vf-xln, fossilis, Chert, wht, pyrite

SH, gray(lesser), brn, silty, MS, crm to tan, vf-xln, chalky to dense, gritty txt in pcs, fossils, NS, pp por.

MS, gray to lt. gray, f-xln, chalky matrix, fossils, gritty in pt, HS, brn, gray

Rezeroed gas detector to 20 units, dropped below zero, rezeroed to 50 units

MS, brn to gray, dense, silty looking, earthy, fossils, pyrite, NS
SH, grays

WS, lt. gray to tan, dense, gritty looking, A.A., oolitic pcs, fosils, hard, NS, SH, gray, green

Scatt SH, gray
MS-WS, crn to lt. gray, chalky, soft to firm, fossils, Chert, wht, fossils

MS, brn to crm, vf-xln, gritty txt, hard, scatt fossils, Chert, gray, fossils, rare vuggy por.
SH, gray, dk. gray(rare)

MS, brn, crm, gray, crip-xln to chalky, dense to soft pcs, scatt fossils, Chert, gray, tan
SH, grays

MS, crm to brn, mottled pcs scatt, dense to chalky, Chert, tan, wht, fossils, NS, scatt SH, gray, green

Inc. in SH, dk. gray, gray, green, MS, crm, vf-xln, gritty/silty txt, soft to firm, fossils, NS,

Influx SH, grays, green, blk, carb. flakes
MS, carrying A.A.

Scatt SH, blk, gray, MS, crm to brn, vf-xln, chalky pcs, some hard, dense, NS, Chert, wht

MS, crm to off wht, chalky to vf-xln, firm to soft, brn pcs vf-xln, dense, NS, rare SH, dk. gray

MS, crm to tan, vf-xlnk, dense to chalky, rare fossils, NS, scatt SH, blk, gray

MS-WS, crm to tan, vf-xln to f-xln, fossils, some chalky pcs, Chert, wht, some SH's, blk

MS, tan to crm, vf-xln, lesser fossils, some pcs dense, earthy, NS

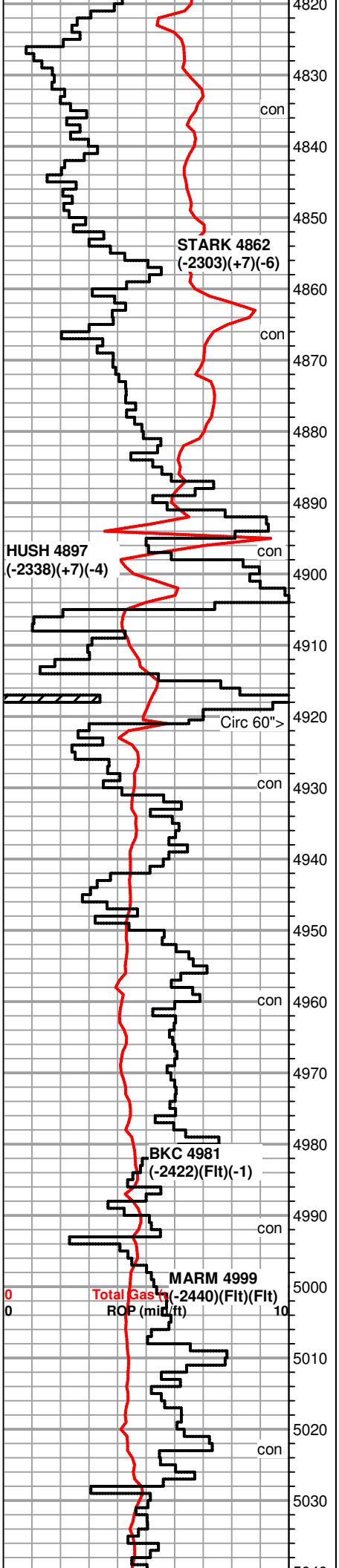
MS, gray to crm, vf-xln, barren, dense to sli. chalky, softer pcs, scatt fossils, Chert, gray, brn, fossilif., SH, gray, green

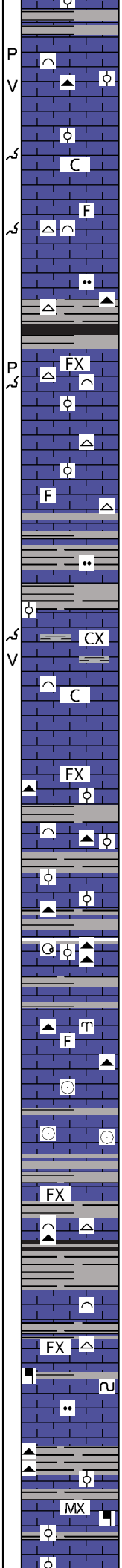
Rezeroed gas detector to 100 units- Gas zero wandering all over

WS-MS, crm to brn, crip-xln to vf-xln, massive in pt., co-gr fossil frgmts, some f-gr oolitic pcs, dull fluor, NS, Chert, wht fossils, SH, gray, green

MS, A.A., crm to off wht, chalky, soft, shaly in part, Chert, wht, rare pp por.

rare SH, gray, brn, sandy





MS, crm to lt. gray, vf-xln, chalky to earthy, scatt fossils, Chert, gray, smoky

WS-MS, crm to gray, vf-xln, scatt chalky looking pcs, dense, some fossil frgmts, NS, Chert, dk. gray, pp to vuggy por.

MS, crm to lt. brn, vf-xln, gritty txt, dense, scatt fossils in chalky mtrx, firm, NS, rare moldic por.

MS, crm to brn, vf-xln, gritty, chalky in pt, some fossils, scatt massive/dense pcs, NS, rare Chert, wht

MS, gray to crm, vf-xln, to crip-xln, dense, scatt mineral specs, fossils rare, Chert, wht, gray

SH, blk, gray, green, red, silty
MS, gray to crm, vf-xln, dense, scatt m-xln, calcite veins, fossils rare, NS, fair moldic to pp por.

+75 UGK, Shale Gas

Vis 47
Wt 9.3
LCM 1#
Filt 10.4
Cl 7,200

MS, off wht to crm, crip-xln to massive txt, dense to soft chalky pcs, scatt fossils, Chert, wht, fossils, dull fluor, NS

scatt SH, grays, dk. gray, green, MS, crm to off wht, mic-xln, chalky in pt, scatt fossils, dense to brittle, no fluor, NS, Chert, wht

+85 UGK, Shale gas

Influx SH, blk, dk. gray, gray, green, brn, silty
MS, off wht to crm, massive/crip-xln txt, dense, some fossils, brittle pcs A.A., NS, vuggy to moldic por.

SH, gray, green, scatt dk. gray, silty
MS, gray to crm, shaly in part, f-xln, some dense, chalky mtrx w/ fossils, no fluor, NS

Drill String Bouncing !!

SH, green, dk. grays, MS, crm to tan, vf-xln, massive to chalky txt, NS

Bit Trip @ 4921'

MS, crm to brn, vf-xln, massive to gritty txt, dense to friable, chalky, some fossils, m-gr oolitic pcs(rare), Chert, wht, brn, scatt SH, grays

SH, blk to brn, MS-WS, gray to vrn, vf-xln, massive pcs, dense in pt, shaly pcs, rare mottled fossilif, NS Chert, m-gr oolitic brn, blk pcs scatt

WS-MS, crm to tan, f-xln, firm to friable, fossilif (oolites/crinoids/brachs/gastropod) frgmts, NS, Chert, gray, blk scatt SH, grays

influx SH, blk, gray, silty, limey in pt.
MS, crm to brn, gray, f-xln, chalky to shaly pcs, scatt fossils, Chert, blk

MS, gray to dk. gray, crm, dense, fossils(crinoid sections), NS SH, rare, green to gray

MS, gray to crm, A.A., shaly, fossils(crinoid sections), NS
SH. blk, grays, limey in part, silty pcs

MS, crm to tan, vf-xln, chalky in pt, shaly pcs A.A., decres. amt. Chert, blk, tan, fossils

Vis 49
Wt 9.2
LCM 3#
Filt 10.4
Cl 6,900

SH, blk, gray,

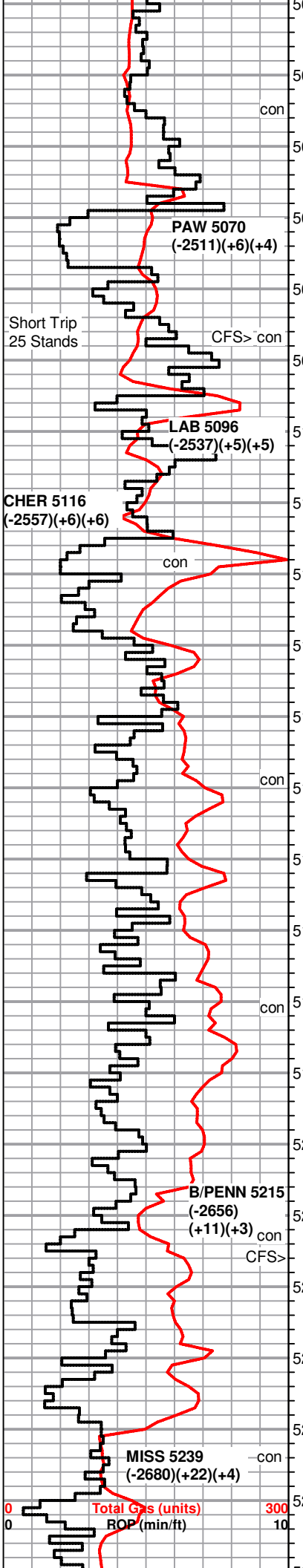
SH, blk, gray, green, limey
MS-WS, crm to brn, vf- to f-xln, fossilif., brittle in pt., most dense, scatt Chert, wht

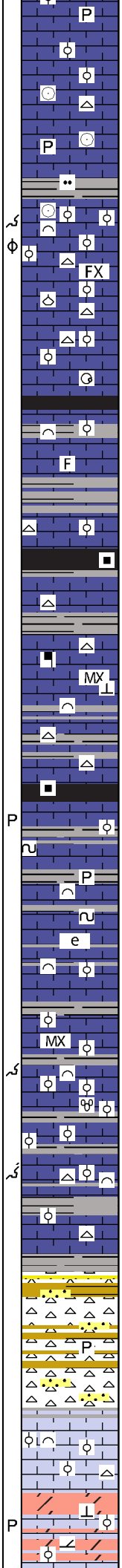
DST #1 5060-5087
Pawnee Lm
30-60-30-60
WB blt to 4.75"
NBB
WB blt to 4.25"
NBB
120' GIP
Rec: 63' SOCM (2o,98m)
120 MCW (15m,85w)
IH 2562#
IF 18-88#
ISIP 1353#

MS, crm, vf-xln, f to m-gr oolitic pcs, dense, mineral specs, rare glauc, scatt brn, gritty pcs, NS

SH, blk, gray, green, MS, gray to tan, mic-xln to massive txt, some pcs A.A., Chert, gray

Influx MS, crm to lt. tan, brn, micr-xln to vf-xln, suboolitic in pt., mineral specs, dull fluor, NS
SH, blk, gray





MS-WS, crm to tan, crip-xln, earthy to suboolitic, dense, gritty pcs, scatt mineral specs
some SH, gray, green

MS, crm to tan, earthy to crip-xln, dense, suboolitic A.A., Chert, tan, NS, SH, gray, brn, green, silty

MS, crm to tan, earthy to sli. chalky, rare fossils(crinoids), rare pyrite, no fluor, NS, lesser SH, gray

SH. blk, gray, green, silty to striated in pcs

PS-WS, crm to off wht, tan, vf-xln, oolitic/bioclastic pcs, firm to brittle, chalky in part, no odor, **very lt. spty stn, very lt spoty bright fluor, inst cut when broken, lt. edge stn dry**, no free oil, Chert, wht fossils, moldic to pp por.,

WS-MS, crm to tan, micro-xln, massive pcs, suboolitic to fossilif, scatt chalky pcs, Chert, wht, no flour, NS

SH, dk. gray, gray, brn, green
MS-WS, brn to crm, mic-xln, scatt chalky pcs, dense to friable, massive barren pcs to m-gr oolitic/fossilif pcs, dull fluor, NS

SH, blk, green gray,
MS, tan to crm, vf-xln, massive, dense, scatt fossils, NS

dec SH, blk, green, grays
MS, brn to tan, f-xln, fossilif., brittle, no fluor, NS, Chert, wht, fossils

SH, blk, dk. gray, carb, platy pcs
MS, crm to tan, lt. gray, vf-xln, dense, sctt fossilif. pcs, gritty in pt., scatt Chert, wht, dead stn in some pcs

WS-PS, crm to tan, mic-xln, f to m-gr oolitic/fossilif pcs, dense, tite calcite mtrx, scatt mineral specs
rare SH, blk, green, gray

some SH, blk to gray, ,MS, gray to crm, vf-xln, dense, scatt fossils, chalky pcs abdnt, dull fluor, NS, Chert, tan to opaque

SH, blk, gray, carb, gas bubbles, MS-WS, mic-xln to f-xln, dense to friable, scatt chalky/shaly pcs, Chert, wht, gray, fossils, rare glauc specs, NS

SH, blk, gray, geen, Pyrite
MS, scatt WS, crm to tan, vf to mic-xln, dense, earthy/mottled pcs, some suboolitic in chalky to tite calcite mtrx, fossils, rare glauc, NS

WS-MS, crm to brn, gray, mic to f-xln, mottled, suboolitic to fossilif., massive barren pcs, rare Chert, wht, dull fluor, NS

SH, blk, brn, gray
MS-WS, crm to tan, scatt brn, mic-f-xln, most pcs massive, some fossilif/oolitic to suboolitic, hard, brittle, rare glauc specs,

MS-WS, crm to tan, f-xln, oolitic to sub oolitit, fossils(forams) scatt, dense, hard to frim, pyrite, mineral fluor, no cut, NS, Chert, opaque to wht, SH, blk, gray, brn, silty to limey.

WS-MS, tan to brn, scatt crm, vf-xln to massive, earthy to mottled pcs, oolitic, some pcs w/ scatt fossils, dense, poor moldic por., Chert, wht, opaque SH, blk, brn

MS-WS, crm, tan, off wht, chalky to mic-xln, dense to mostly friable pcs, scatt oolitic to fossilif., **scatt bright fluor(<5% tray), rare live oil droplets, pcs w/ lt. stn on por. and on edge, slow milky to inst. streaming cut**, Chert, wht

SH, blk, sea green, gray, pyrite
rare SS clusters, gray, f-gr, rnded to sub-rnded, well sorted, friable to firm, NS, rare Chert, varicolored,

influx Chert, bone wht to tan, blk, blocky to angular/platy pcs, tripolitic to wthrd, some w/ fair vuggy por., **faint odor, few pcs w/ good even stn to saturation, milky cut, gas bubbles, live oil droplets,** MS-WS, crm to off wht, vf-xln, suboolitic, firm to hard, NS

WS-PS, crm to off wht, vf to crip-xln, dense to massive pcs rare, chalky in part, oolitic to suboolitic(m-gr), SH, scatt, A.A.

PS-WS, off wht to crm, oolitic/fossilif, NS some pcs vf-sucrosic dolomitic, dull fluor, NS

WS-PS, crm to off wht, f-xln to chalky, sandy in pt. co-gr to vf-gr qtz xtals in dolomitic mtrx, rare Dolo, crm to lt. gray, vf-x sucrosic,

FF 95-121#
FSIP 1331#
FH 2415#
Temp 115*F
API Rw .2 @ 52*F
Cl 53,000ppm

+60 UGK, Shale Gas

+30 UGK GAS KICK

30 UGK Shale Gas recycle

PIPE STRAP 2' Long to Board, no correction

+120 UGK, Shale Gas

+180 UGK, Shale Gas

+60 UGK, Shale Gas

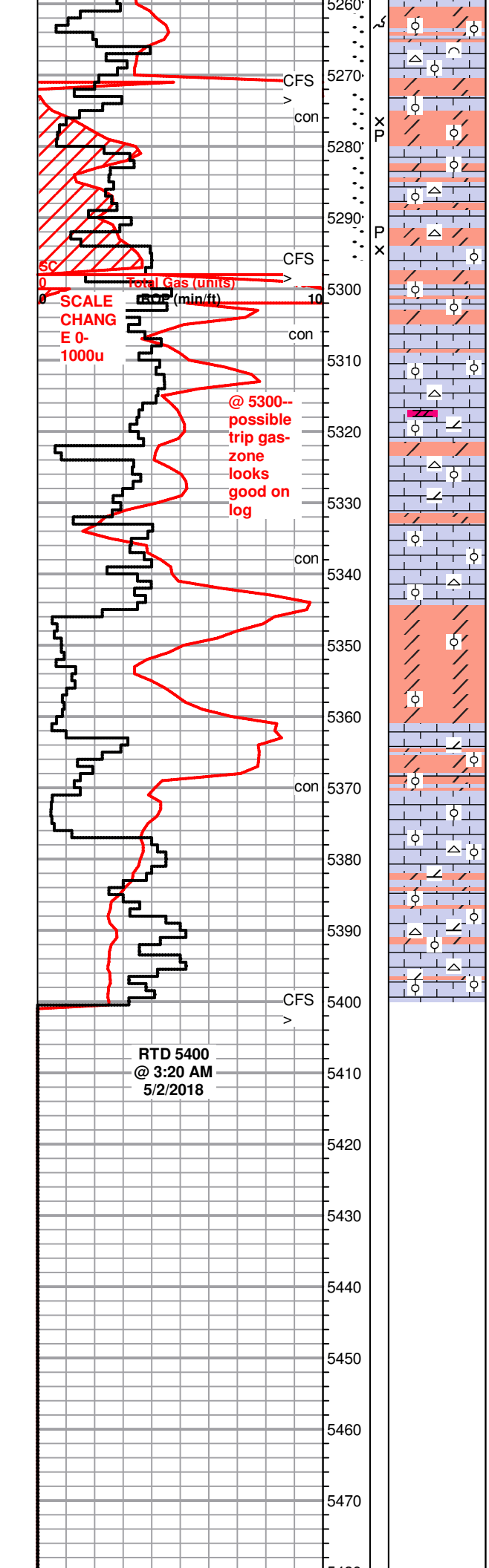
+30 UGK, +22 UGK recycle

Vis 54 --------->@5287
Wt 9.3
LCM 2#
Filt 13.2
CL 11,200ppm

+48 UGK

+35 UGK

DST #2 5160-5241
Penn Lm/Morrow
30-60-60-120
SB BOB GTS/11 min
GA 1/4 in Choke
65.6 MCFG/20 min
90.05 MCFG/30 min



soft/friable, **scatt bright fluor, milkly cut,** no odor

Dolo crm to gray, vf-xln, sucrosic txt, most dull fluor, some scatt bright flour(<2% of tray)**, inst. streaming cut, some pcs cut when broken, rare pcs w/ free oil on surface, flash odor in tray,** scatt moldic to pp por.

Dolo, crm to brn, some gray, limey to chalky in pt., sucrosic txt, v.f-xln some pcs w/ co to f-gr fossil frgmts, **rare bright flour, fair odor in tray, v. spty, bright flour, most pcs w/ mineral fluor, cut when crushed, residual ring cut,**

Dolo, lt. gray to lt. brn, f to m-xln, sucrosic to fossillif., scatt oolites in friable sucrosic mtrx., **fair odor, rare bleeding oil, mineral fluor, scatt inst. to milky cut, lt. oil stn, spty to even sat. pcs dry**., pp por., int-xln. por.

WS-PS, crm to off wht, mic=xln, dense, fossilif., oolitic, Chert, wht, fossils
rare Dolo., tan to brn, f-xln, gritty txt, dull flour, NS

WS-PS, crm to off wht, mic-xln, dense pcs scatt, chalky in pt., oolitic to fossils, firm, NS, Chert, wht.

WS-PS, off wht, mic-xln to chalky, A.A., NS

rare Dolo. gray to tan, vf-xln, sucrosic txt, soft, dull fluor, NS
WS-PS, lt. tan to crm, chalky to oolitic in chalky mtrx, some pcs dense, Chert, wht

Scatt Dolo, brn to tan, f-xln sucrosic txt in pt. friable, rare co-xln pcs, dull fluor, rare milky cut from some pcs(carrying?), most w/ NS
PS-WS, crm to off wht, oolitic, chakly in pt.

Dolo, gray grayish green, tan, vf-xln, gritty txt in pt. rare pcs oolitic in pt. dull mineral fluor, NS

Dolo, gray to crm, tan, m-to vf-xln, oolitic pcs to vf- sucrosic, splotchy pattern gray/blk/greenish, dull mineral fluor, NS

PS-WS, off wht, oolitic, NS

Dolo, brn to gray, scatt blk specs, oolitic in pt., friable, dull mineral fluor, NS

WS-PS, off wht to crm, mic-xln, oolitic in chalky mtrx, dull fluor, NS, assoc. Chert, wht, fossilif.

MS-PS, off wht to crm, chalky A.A, oolitic pcs, Chert, wht, fossils
Scatt Dolo, crm to tan, vf-xln, sucrosic txt, firm to friable, dull fluor, NS

NBB
SB GTS/immed
GA 3/8 in Choke
93.73 MCFG/10 min
228.79 MCFG/20 min
207.86 MCFG/30 min
198.32 MCFG/40 min
192.75 MCFG/50 min
188.92 MCFG /60 min
NBB
5088' GIP
Rec: 60' GCM (10g,90m)
IH 2730#
IF 39-97#
ISIP 1545#
FF 69-76#
FSIP 1539#
FH 2560#
Temp 115*F

DST #3 5246-5271
Mississippian
30-60-15-30
WB 1 inch
NBB
NB, died, flushed tool, weak surface blow
NBB
Rec: 5' Mud
IH 2631#
IF 16-26#
ISIP 1169#
FF 27-33#
FSIP 1027#
FH 2514#
Temp 111*F

DST #4 5272-5296
Mississippian
30-60-60-120
SB Blt to 159"
NBB
SB Blt to 316"
NBB
4368' GIP
Rec: 275' Total
30' GMCO (10g,50o,40m)
183' GMWCO (10g,54o,14m,22w)
62' MCW (30m 70w)
IH 2695#
IF 53-62#
ISIP 1410#
FF 41-108#
FSIP 1401#
FH 2571#
Temp 119*F
API Rw .16 @ 70*F
Cl 55,000 ppm


5480
5490