

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 1662

Date	2-27-17	Sec.	16	Twp.	16	Range	10	County	Ellsworth	State	Ks	On Location		Finish	6:30 AM
Lease								Location		Wilson - S to P Rd, 3 E to 4th Rd					
Olivia								Well No.		1					
Contractor								Owner		3/4 N, W into					
Southwind								To Quality Oilwell Cementing, Inc.		You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Type Job								Charge To		Pauley 0-8					
Plug								Street							
Hole Size								Depth		3431'					
7 7/8"								T.D.		3431'					
Csg.								Depth							
Tbg. Size								City		State					
4 1/2" D.P.								Depth		3413'					
Tool								Depth		The above was done to satisfaction and supervision of owner agent or contractor.					
Cement Left in Csg.								Shoe Joint		Cement Amount Ordered 240 60/40 4% Gel 1/4#					
Meas Line								Displace		H2O/mud Flo-seal					
EQUIPMENT								Common		144					
Pumptrk								Poz. Mix		96					
20 No. Cementer								Gel.		9					
3 No. Driver								Calcium							
Bulktrk								Hulls							
3 No. Driver								Salt							
Bulktrk								Flowseal							
p.u. No. Driver								Kol-Seal		50#					
Ride								Mud CLR 48							
JOB SERVICES & REMARKS								CFL-117 or CD110 CAF 38							
Remarks: 3413' - 35 SX								Sand							
Rat Hole 1300' - 35 SX								Handling		249					
Mouse Hole 950' - 35 SX								Mileage							
Centralizers 483' - 35 SX								FLOAT EQUIPMENT							
Baskets 60' - 25 SX								Guide Shoe		Big hole plug					
DV or Port Collar Rathole - 30 SX								Centralizer							
Mousehole - 20 SX								Baskets							
Cement did								AFU Inserts							
Circulate								Float Shoe							
								Latch Down							
								Pumptrk Charge		plug					
								Mileage		34					
X Signature								Tax							
Kamp...								Discount							
								Total Charge							

Quality Oilwell
Cementing



DRILL STEM TEST REPORT

Prepared For: **PAULEY GATYdba PAULEY OIL**

314 5th STREET
CLAFLIN, KANSAS 67525

ATTN: JIM MUSGROVE

OLIVIA 1

16=15S-10W ELLSWORTH

Start Date: 2017.02.26 @ 03:31:00

End Date: 2017.02.26 @ 00:00:00

Job Ticket #: 01154 DST #: 2

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2017.02.26 @ 09:29:35

PAULEY GATYdba PAULEY OIL 16=15S-10W ELLSWORTH OLIVIA 1 DST # 2 ARBUCKLE 2017.02.26



DRILL STEM TEST REPORT

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01154

DST#: 2

ATTN: JIM MUSGROVE

Test Start: 2017.02.26 @ 03:31:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3319.00 ft (KB) To 3421.00 ft (KB) (TVD)**

Reference Elevations: 1875.00 ft (KB)

Total Depth: 3421.00 ft (KB) (TVD)

1865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 9139

Inside

Press@RunDepth: 839.07 psia @ 3416.76 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.02.26

End Date: 2017.02.26

Last Calib.: 2017.02.26

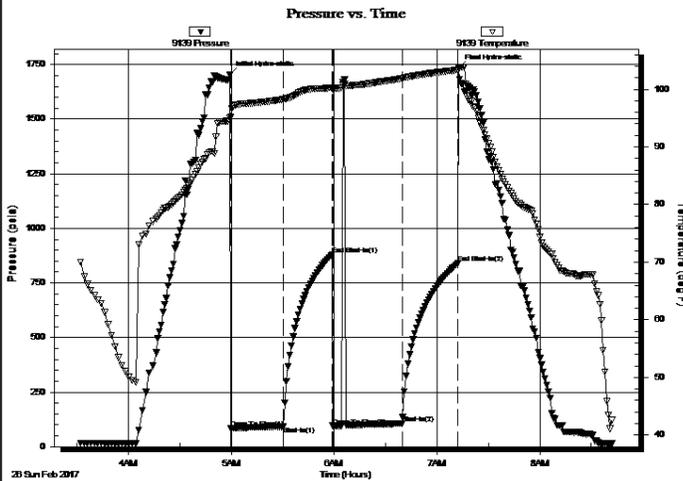
Start Time: 03:32:00

End Time: 08:42:00

Time On Btm: 2017.02.26 @ 04:59:00

Time Off Btm: 2017.02.26 @ 07:12:30

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK SURFACE BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 30 MINUTES NO BLOW BACK
2ND OPENING 40 MINUTES NO BLOW-FLUSHED TOOL-GOOD SURGE-NO HELP
2ND SHUT-IN 30 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1702.39	94.96	Initial Hydro-static
1	85.02	95.12	Open To Flow (1)
32	91.88	98.23	Shut-In(1)
60	879.18	100.29	End Shut-In(1)
60	95.63	99.87	Open To Flow (2)
101	106.46	101.88	Shut-In(2)
134	839.07	103.33	End Shut-In(2)
134	1735.83	103.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	CLEAN OIL ON TOP	0.01
65.00	SLIGHTLY OIL CUT MUD 7 OIL 93 MUD	0.91
0.00	THERE WAS A REAL GOOD SHOW OF	0.00
0.00	CLEAN OIL BETWEEN THE TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01154

DST#: 2

ATTN: JIM MUSGROVE

Test Start: 2017.02.26 @ 03:31:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3319.00 ft (KB) To 3421.00 ft (KB) (TVD)**

Reference Elevations: 1875.00 ft (KB)

Total Depth: 3421.00 ft (KB) (TVD)

1865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 91716 Outside

Press@RunDepth: 834.57 psia @ 3416.76 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.02.26

End Date: 2017.02.26

Last Calib.: 2017.02.26

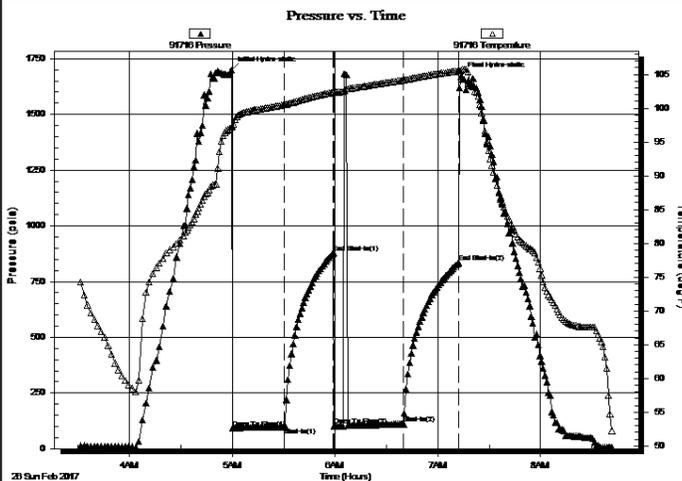
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Time Off Btm: 2017.02.26 @ 07:13:30

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK SURFACE BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 30 MINUTES NO BLOW BACK
2ND OPENING 40 MINUTES NO BLOW-FLUSHED TOOL-GOOD SURGE-NO HELP
2ND SHUT-IN 30 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1700.04	97.13	Initial Hydro-static
1	93.82	97.27	Open To Flow (1)
31	97.81	100.51	Shut-In(1)
60	878.33	102.38	End Shut-In(1)
60	102.73	102.42	Open To Flow (2)
101	111.06	104.16	Shut-In(2)
133	834.57	105.52	End Shut-In(2)
134	1672.15	105.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	CLEAN OIL ON TOP	0.01
65.00	SLIGHTLY OIL CUT MUD 7 OIL 93 MUD	0.91
0.00	THERE WAS A REAL GOOD SHOW OF	0.00
0.00	CLEAN OIL BETWEEN THE TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01154

DST#: 2

ATTN: JIM MUSGROVE

Test Start: 2017.02.26 @ 03:31:00

Tool Information

Drill Pipe:	Length: 3330.00 ft	Diameter: 3.80 inches	Volume: 46.71 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 46.71 bbl</u>	Tool Chased 8.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 32.00 lb
Depth to Top Packer:	3319.00 ft			Final 32.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	102.76 ft			
Tool Length:	122.76 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3304.00	
Hydraulic tool	5.00			3309.00	
Top Packer	5.00			3314.00	
Packer	5.00			3319.00	20.00 Bottom Of Top Packer
Anchor	5.00			3324.00	
Change Over Sub	0.75			3324.75	
Drill Pipe	62.26			3387.01	
Change Over Sub	0.75			3387.76	
Anchor	29.00			3416.76	
Recorder	0.00	9139	Inside	3416.76	
Recorder	0.00	91716	Outside	3416.76	
Bullnose	5.00			3421.76	102.76 Anchor Tool

Total Tool Length: 122.76



DRILL STEM TEST REPORT

FLUID SUMMARY

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01154

DST#: 2

ATTN: JIM MUSGROVE

Test Start: 2017.02.26 @ 03:31:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 2000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	CLEAN OIL ON TOP	0.014
65.00	SLIGHTLY OIL CUT MUD 7 OIL 93 MUD	0.912
0.00	THERE WAS A REAL GOOD SHOW OF	0.000
0.00	CLEAN OIL BETWEEN THE TOOLS	0.000

Total Length: 66.00 ft Total Volume: 0.926 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 9139

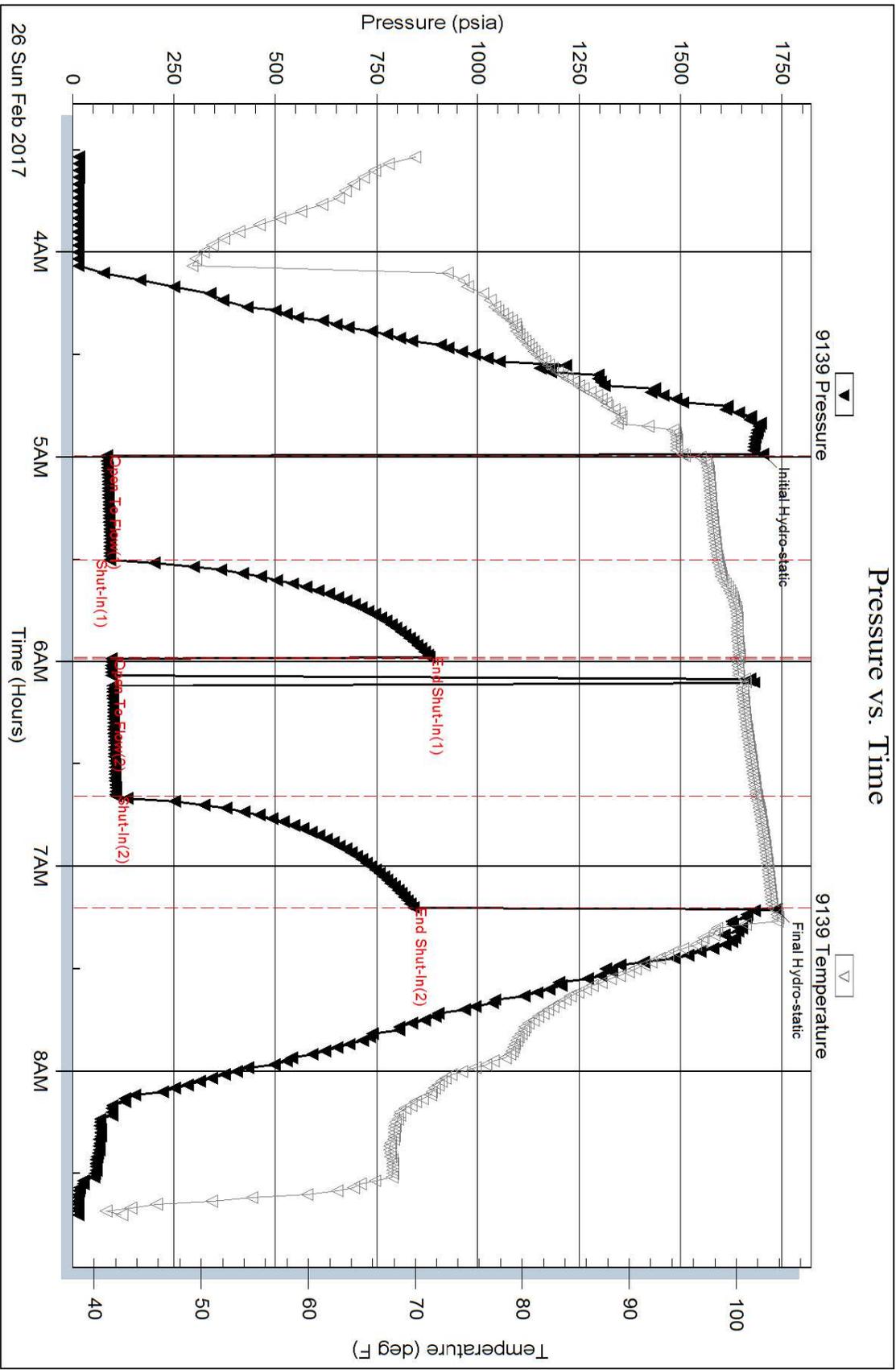
Inside

PAULEY GATY dba PAULEY OIL

OLMVA 1

DST Test Number: 2

Pressure vs. Time



Eagle Testers

Ref. No: 01154

Printed: 2017.02.26 @ 09:29:38

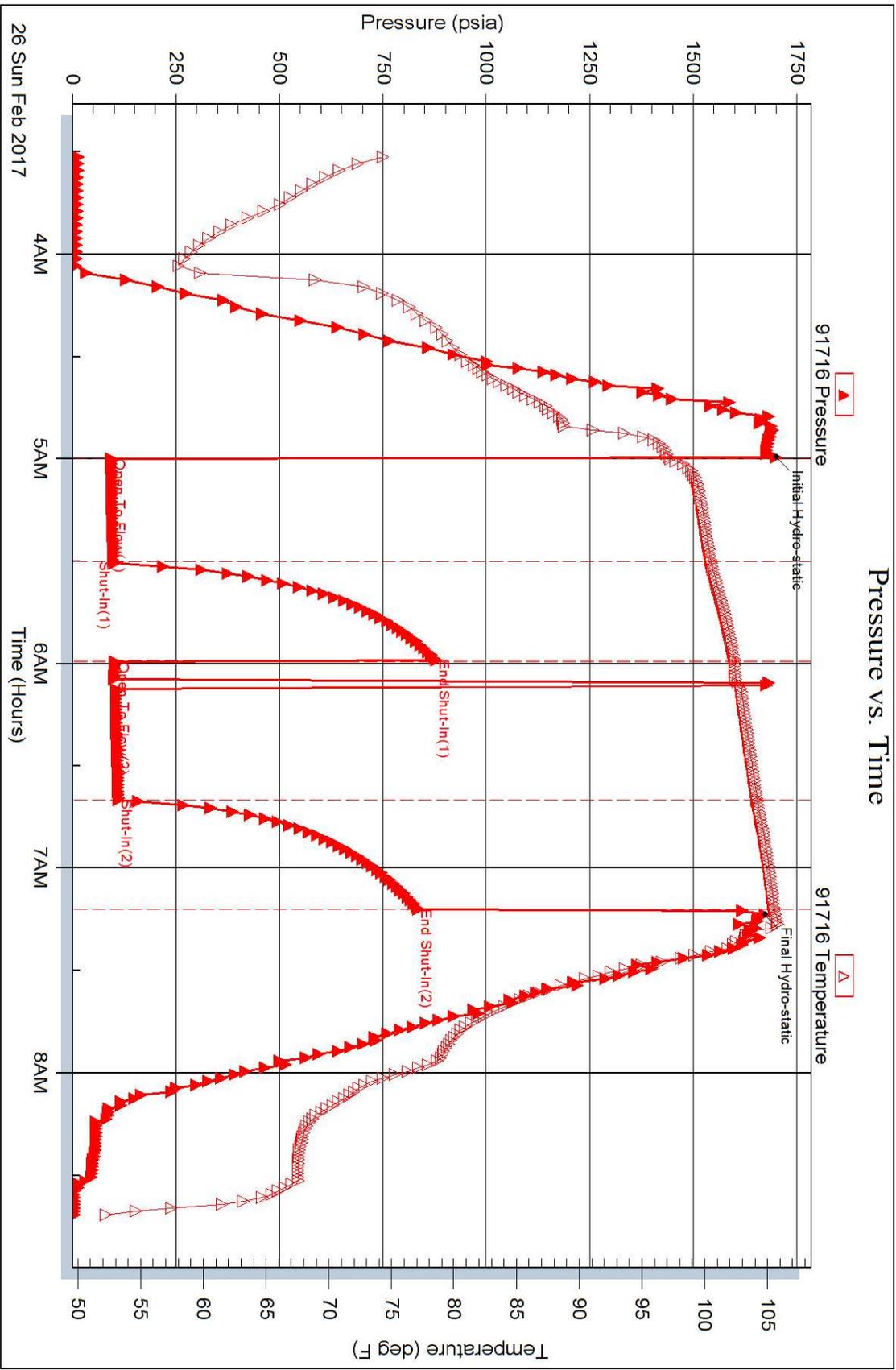
Serial #: 91716

Outside PAULEY GATY dba PAULEY OIL

OLIVA 1

DST Test Number: 2

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **PAULEY GATYdba PAULEY OIL**

314 5th STREET
CLAFLIN, KANSAS 67525

ATTN:

OLIVIA 1

16=15S-10W ELLSWORTH

Start Date: 2017.02.25 @ 15:54:00

End Date: 2017.02.25 @ 09:24:00

Job Ticket #: 01153 DST #: 1

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2017.02.25 @ 21:42:46

PAULEY GATYdba PAULEY OIL 16=15S-10W ELLSWORTH OLIVIA 1 DST # 1 ARBUCKLE 2017.02.25



DRILL STEM TEST REPORT

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01153

DST#: 1

ATTN:

Test Start: 2017.02.25 @ 15:54:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:46:00

Time Test Ended: 09:24:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1-

Interval: **3319.00 ft (KB) To 3415.00 ft (KB) (TVD)**

Reference Elevations: 1875.00 ft (KB)

Total Depth: 3415.00 ft (KB) (TVD)

1865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 9139 Inside

Press@RunDepth: 746.39 psia @ 3409.78 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.02.25

End Date: 2017.02.25

Last Calib.: 2017.02.25

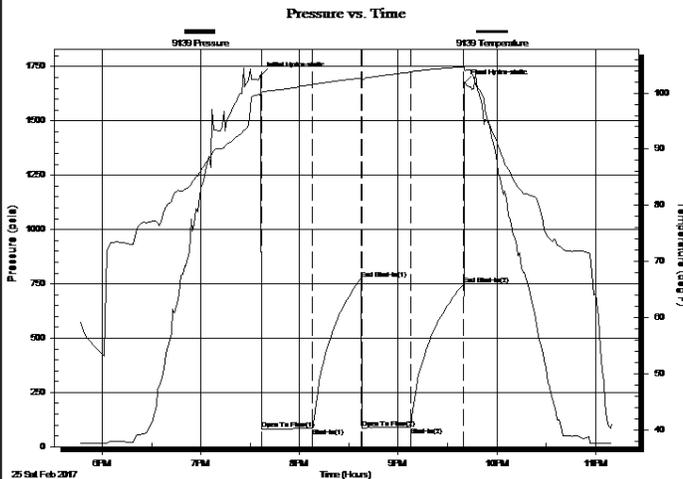
Start Time: 17:46:00

End Time: 23:10:00

Time On Btm: 2017.02.25 @ 19:36:30

Time Off Btm: 2017.02.25 @ 21:40:30

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK SURFACE BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 30 MINUTES NO BLOW BACK
2ND OPENING 30 MINUTES WEAK SURFACE BLOW DECREASED TO WEAK INTERMITTANT
2ND SHUT-IN 30 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1707.00	99.97	Initial Hydro-static
1	79.55	100.04	Open To Flow (1)
32	85.08	101.50	Shut-In(1)
61	772.61	102.62	End Shut-In(1)
62	86.66	102.41	Open To Flow (2)
91	91.05	103.75	Shut-In(2)
123	746.39	104.64	End Shut-In(2)
124	1673.48	104.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	SLIGHTLY OIL CUT MUD 3 OIL 97 MUD	0.49
0.00	THERE WAS A REAL GOOD SHOW OF	0.00
0.00	FREE OIL BETWEEN THE TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01153

DST#: 1

ATTN:

Test Start: 2017.02.25 @ 15:54:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:46:00

Time Test Ended: 09:24:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1-

Interval: **3319.00 ft (KB) To 3415.00 ft (KB) (TVD)**

Reference Elevations: 1875.00 ft (KB)

Total Depth: 3415.00 ft (KB) (TVD)

1865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: **91716** Outside

Press@RunDepth: 747.61 psia @ 3409.78 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.02.25

End Date: 2017.02.25

Last Calib.: 2017.02.25

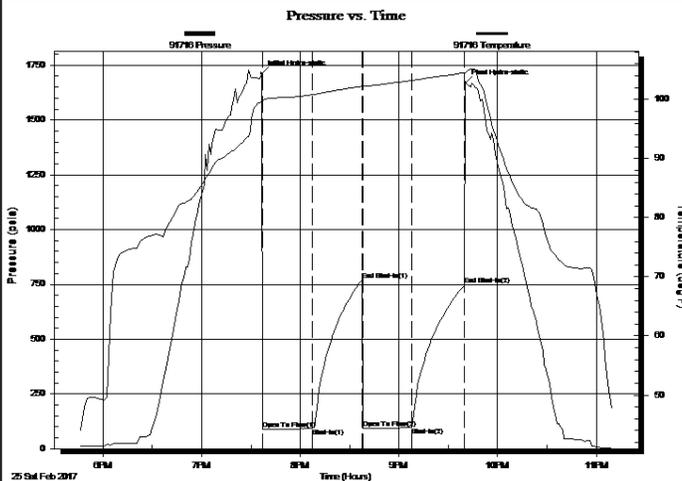
Start Time: 17:46:00

End Time: 23:10:00

Time On Btm: 2017.02.25 @ 19:36:30

Time Off Btm: 2017.02.25 @ 21:40:30

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK SURFACE BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 30 MINUTES NO BLOW BACK
2ND OPENING 30 MINUTES WEAK SURFACE BLOW DECREASED TO WEAK INTERMITTANT
2ND SHUT-IN 30 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1710.90	99.71	Initial Hydro-static
1	90.61	99.82	Open To Flow (1)
31	91.87	100.81	Shut-In(1)
61	770.47	102.26	End Shut-In(1)
62	95.46	102.27	Open To Flow (2)
92	98.67	103.20	Shut-In(2)
124	747.61	104.49	End Shut-In(2)
124	1667.58	104.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	SLIGHTLY OIL CUT MUD 3 OIL 97 MUD	0.49
0.00	THERE WAS A REAL GOOD SHOW OF	0.00
0.00	FREE OIL BETWEEN THE TOOLS	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01153

DST#: 1

ATTN:

Test Start: 2017.02.25 @ 15:54:00

Tool Information

Drill Pipe:	Length: 3330.00 ft	Diameter: 3.80 inches	Volume: 46.71 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 46.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3319.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.78 ft			
Tool Length:	115.78 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3304.00	
Hydraulic tool	5.00			3309.00	
Top Packer	5.00			3314.00	
Packer	5.00			3319.00	20.00 Bottom Of Top Packer
Anchor	5.00			3324.00	
Change Over Sub	0.75			3324.75	
Drill Pipe	63.28			3388.03	
Change Over Sub	0.75			3388.78	
Anchor	21.00			3409.78	
Recorder	0.00	9139	Inside	3409.78	
Recorder	0.00	91716	Outside	3409.78	
Bullnose	5.00			3414.78	95.78 Anchor Tool

Total Tool Length: 115.78



DRILL STEM TEST REPORT

FLUID SUMMARY

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01153

DST#: 1

ATTN:

Test Start: 2017.02.25 @ 15:54:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.00 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 2000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	SLIGHTLY OIL CUT MUD 3 OIL 97 MUD	0.491
0.00	THERE WAS A REAL GOOD SHOW OF	0.000
0.00	FREE OIL BETWEEN THE TOOLS	0.000

Total Length: 35.00 ft Total Volume: 0.491 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 9139

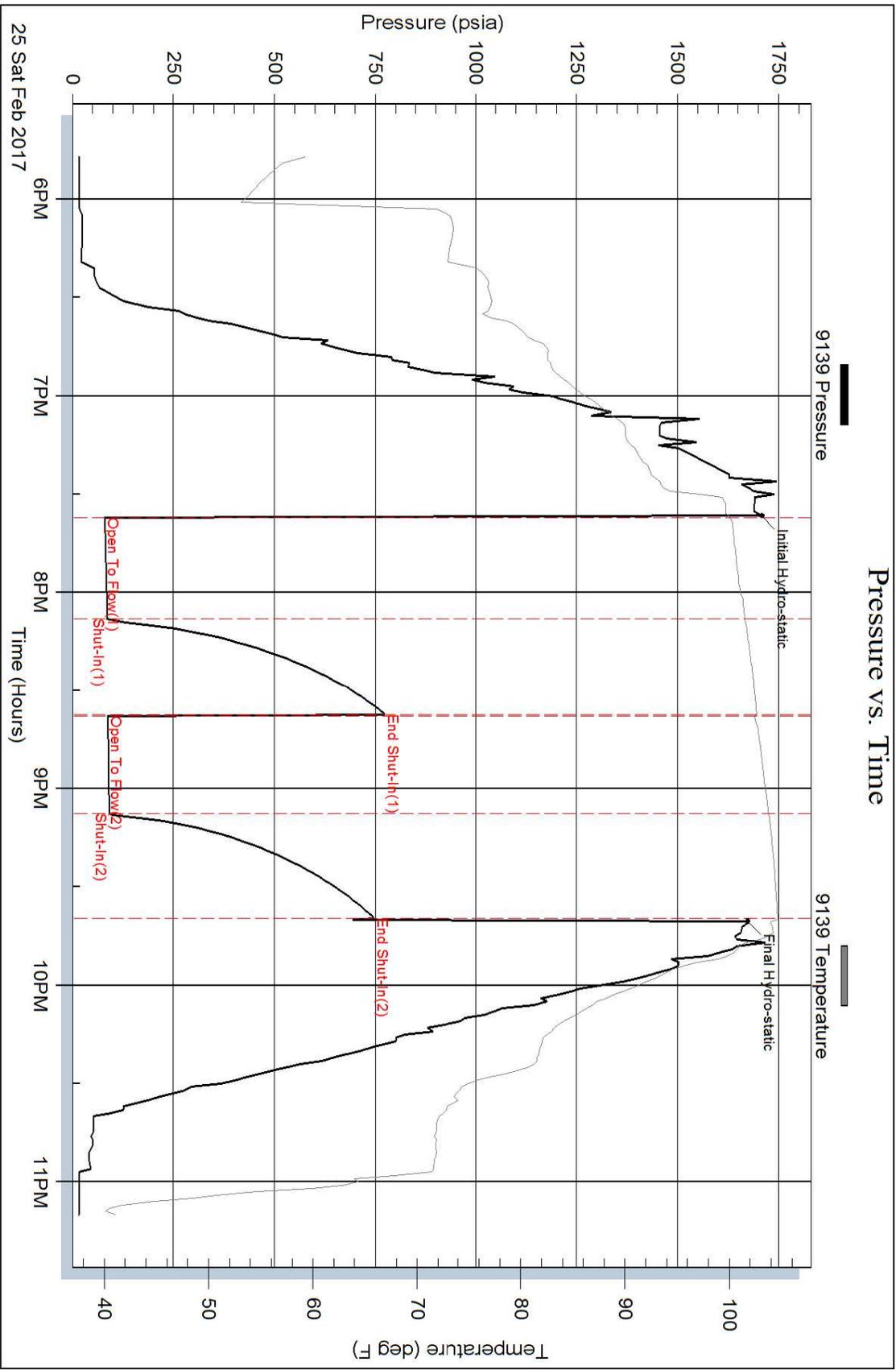
Inside

PAULEY GATY dba PAULEY OIL

OLVIA 1

DST Test Number: 1

Pressure vs. Time



Eagle Testers

Ref. No: 01153

Printed: 2017.02.25 @ 21:42:48

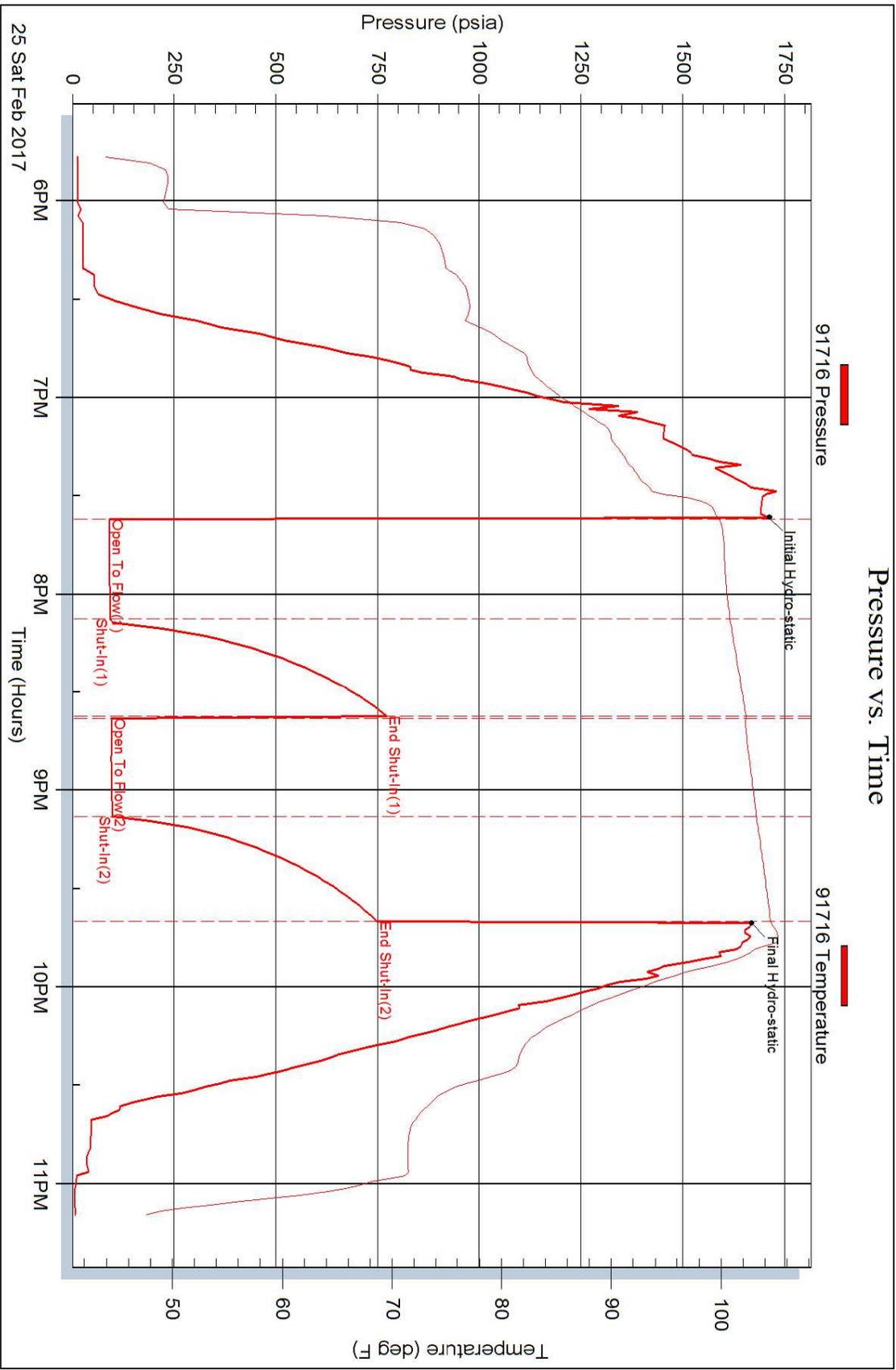
Serial #: 91716

Outside PAULEY GATY dba PAULEY OIL

OLVIA 1

DST Test Number: 1

Pressure vs. Time



Eagle Testers

Ref. No: 01153

Printed: 2017.02.25 @ 21:42:48



DRILL STEM TEST REPORT

Prepared For: **PAULEY GATYdba PAULEY OIL**

314 5th STREET
CLAFLIN, KANSAS 67525

ATTN: JIM MUSGROVE

OLIVIA 1

16=15S-10W ELLSWORTH

Start Date: 2017.02.26 @ 16:28:00

End Date: 2017.02.26 @ 09:18:00

Job Ticket #: 01155 DST #: 3

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2017.02.26 @ 21:34:59

PAULEY GATYdba PAULEY OIL 16=15S-10W ELLSWORTH OLIVIA 1 DST # 3 ARBUCKLE 2017.02.26



DRILL STEM TEST REPORT

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01155

DST#: 3

ATTN: JIM MUSGROVE

Test Start: 2017.02.26 @ 16:28:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:00:00

Time Test Ended: 09:18:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3319.00 ft (KB) To 3431.00 ft (KB) (TVD)**

Reference Elevations: 1875.00 ft (KB)

Total Depth: 3431.00 ft (KB) (TVD)

1865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: **9139** Inside

Press@RunDepth: 974.75 psia @ 3426.28 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.02.26

End Date: 2017.02.26

Last Calib.: 2017.02.26

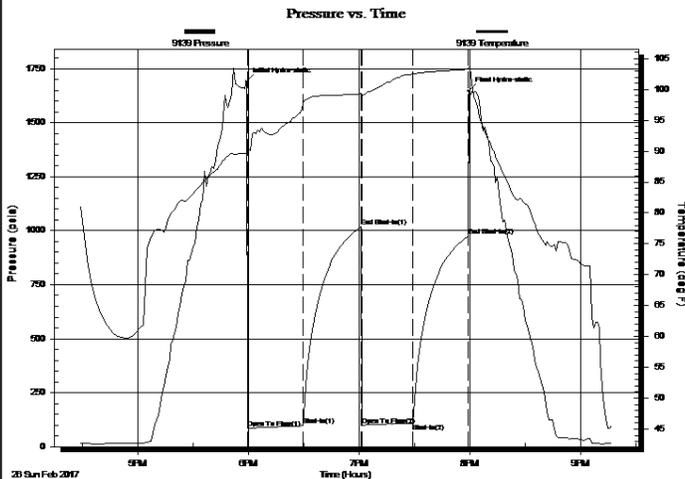
Start Time: 16:28:00

End Time: 21:17:30

Time On Btm: 2017.02.26 @ 17:59:00

Time Off Btm: 2017.02.26 @ 19:59:30

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 30 MINUTES NO BLOW BACK
2ND OPENING 30 MINUTES VERY WEAK SURFACE BLOW THROUGH OUT
2ND SHUT-IN 30 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1690.12	89.67	Initial Hydro-static
1	85.72	89.37	Open To Flow (1)
31	98.12	97.65	Shut-In(1)
62	1017.17	99.27	End Shut-In(1)
63	100.43	99.04	Open To Flow (2)
90	108.72	102.47	Shut-In(2)
120	974.75	103.24	End Shut-In(2)
121	1647.25	103.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
55.00	DRILLING MUD WITH A SLIGHT TRACE OIL	0.77

Gas Rates

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



DRILL STEM TEST REPORT

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01155

DST#: 3

ATTN: JIM MUSGROVE

Test Start: 2017.02.26 @ 16:28:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:00:00

Time Test Ended: 09:18:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1

Interval: **3319.00 ft (KB) To 3431.00 ft (KB) (TVD)**

Reference Elevations: 1875.00 ft (KB)

Total Depth: 3431.00 ft (KB) (TVD)

1865.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 91716 Outside

Press@RunDepth: 1012.07 psia @ 3426.28 ft (KB)

Capacity: 5000.00 psia

Start Date: 2017.02.26

End Date: 2017.02.26

Last Calib.: 2017.02.26

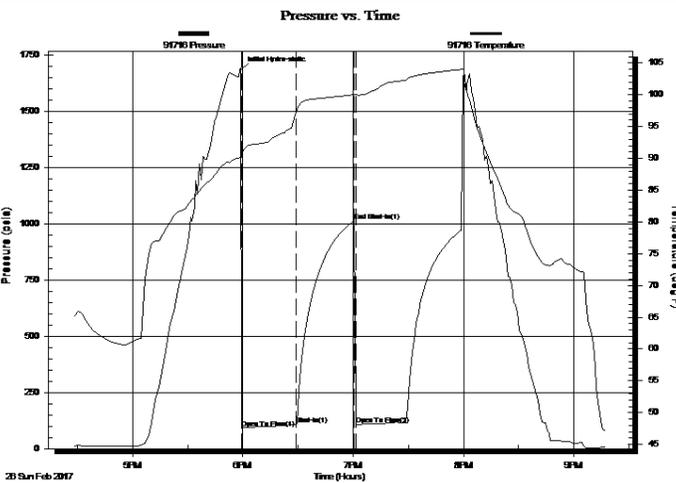
Start Time: 16:28:00

End Time: 21:17:30

Time On Btm: 2017.02.26 @ 17:59:00

Time Off Btm:

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK BLOW FOR 12 MINUTES AND DIED
1ST SHUT-IN 30 MINUTES NO BLOW BACK
2ND OPENING 30 MINUTES VERY WEAK SURFACE BLOW THROUGH OUT
2ND SHUT-IN 30 MINUTES NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1682.60	90.29	Initial Hydro-static
1	93.02	90.47	Open To Flow (1)
30	107.33	97.26	Shut-In(1)
62	1012.07	100.01	End Shut-In(1)
63	108.29	100.01	Open To Flow (2)

Recovery

Length (ft)	Description	Volume (bbl)
55.00	DRILLING MUD WITH A SLIGHT TRACE OIL	0.77

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01155

DST#: 3

ATTN: JIM MUSGROVE

Test Start: 2017.02.26 @ 16:28:00

Tool Information

Drill Pipe:	Length: 3330.00 ft	Diameter: 3.80 inches	Volume: 46.71 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 46.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3319.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	112.28 ft			
Tool Length:	132.28 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3304.00	
Hydraulic tool	5.00			3309.00	
Top Packer	5.00			3314.00	
Packer	5.00			3319.00	20.00 Bottom Of Top Packer
Anchor	0.00			3319.00	
Change Over Sub	0.75			3319.75	
Drill Pipe	94.78			3414.53	
Change Over Sub	0.75			3415.28	
Anchor	11.00			3426.28	
Recorder	0.00	9139	Inside	3426.28	
Recorder	0.00	91716	Outside	3426.28	
Bullnose	5.00			3431.28	112.28 Anchor Tool

Total Tool Length: 132.28



DRILL STEM TEST REPORT

FLUID SUMMARY

PAULEY GATY dba PAULEY OIL

16=15S-10W ELLSWORTH

314 5th STREET
CLAFLIN, KANSAS 67525

OLIVIA 1

Job Ticket: 01155

DST#: 3

ATTN: JIM MUSGROVE

Test Start: 2017.02.26 @ 16:28:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 42.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.20 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 5000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
55.00	DRILLING MUD WITH A SLIGHT TRACE OF OIL	0.772

Total Length: 55.00 ft Total Volume: 0.772 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 9139

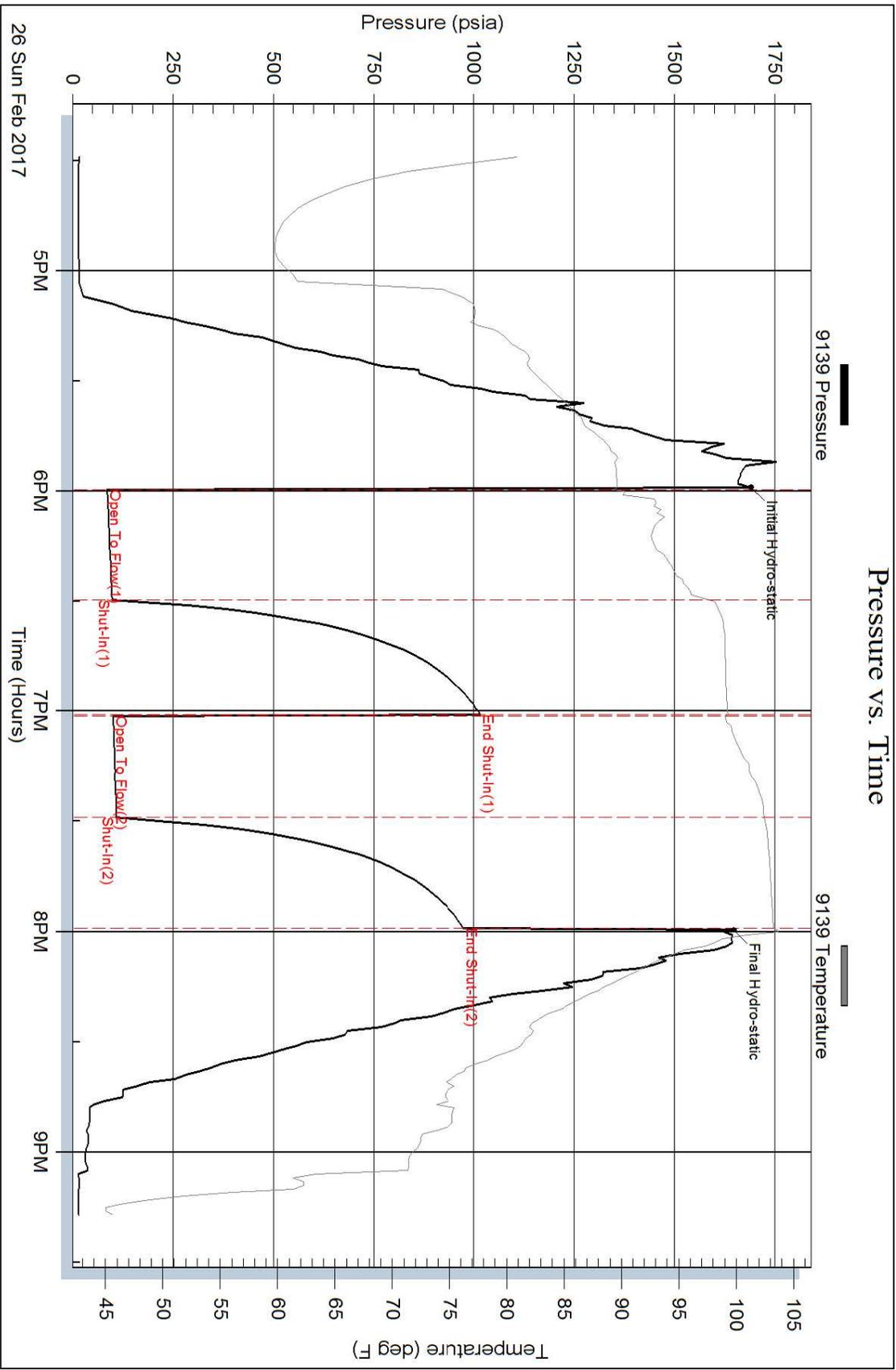
Inside

PAULEY GATY dba PAULEY OIL

OLIVA 1

DST Test Number: 3

Pressure vs. Time



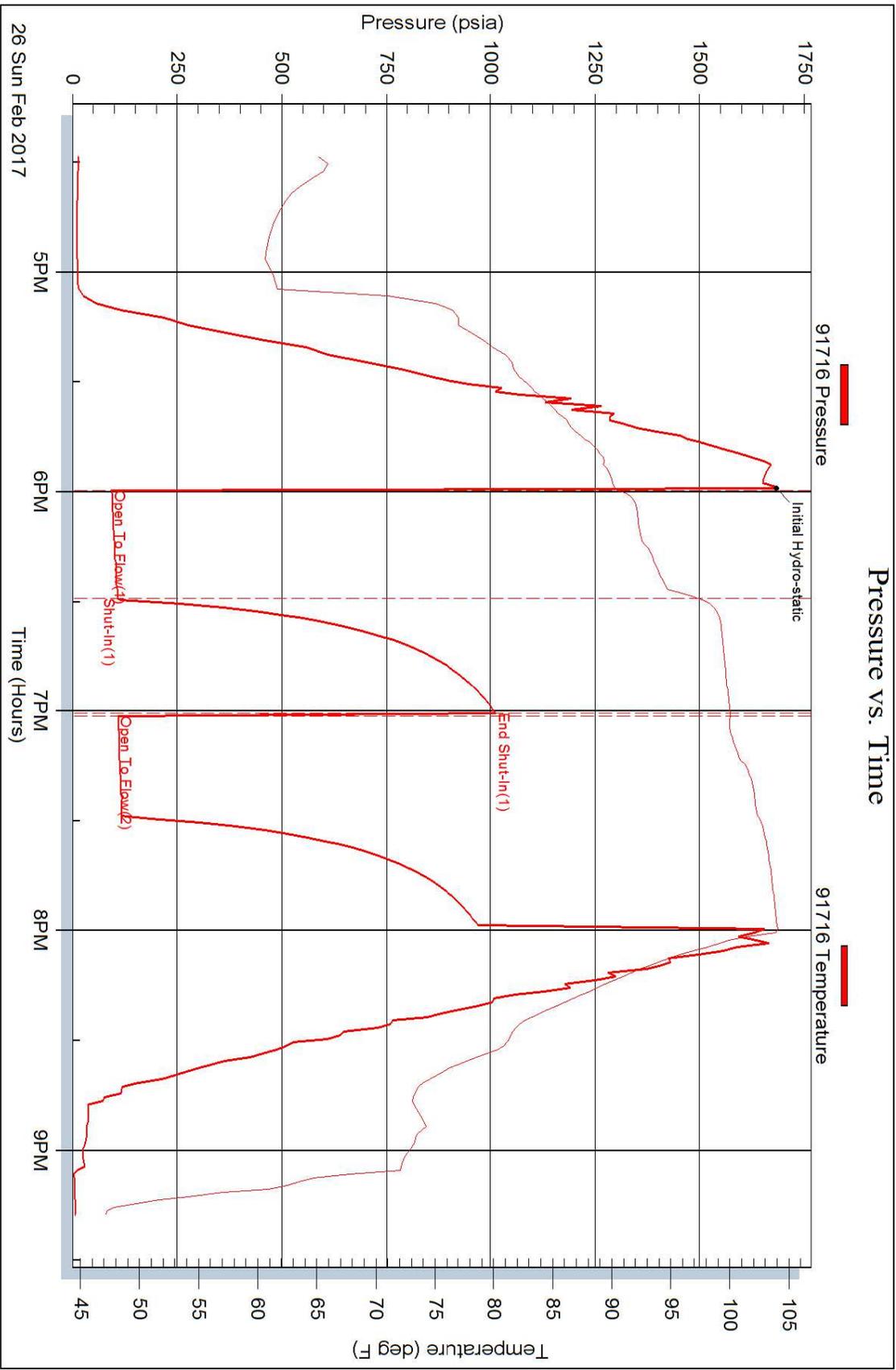
Serial #: 91716

Outside PAULEY GATY dba PAULEY OIL

OLIVA 1

DST Test Number: 3

Pressure vs. Time



Eagle Testers

Ref. No: 01155

Printed: 2017.02.26 @ 21:35:01

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 3146

Date 2-21-17 Sec. 16 Twp. 16 Range 10 County Ellsworth State Ks On Location _____ Finish 7:30 AM

Location Wilson - S to Rd P, 3E to 4th Rd

Lease Olivia Well No. 1 Owner 3/4 N, W 1/4 into

Contractor Southwind 1 To Quality Oilwell Cementing, Inc.

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

Hole Size 12 1/4" T.D. 418' Charge To Pawley oil

Csg. 32# 8 5/8" Depth 418' Street _____

Tbg. Size _____ Depth _____ City _____ State _____

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

Cement Left in Csg. 15' Shoe Joint 15' Cement Amount Ordered 190 80/100 3% CC 2% Gel

Meas Line _____ Displace 26 1/2 BLS

EQUIPMENT

Pumptrk 18 No. 1 Cementer Travis Common 152

Bulktrk 14 No. 1 Driver Nick Poz. Mix 40 38

Bulktrk pu. No. 1 Driver Rick Gel. 3

Calcium ?

JOB SERVICES & REMARKS

Remarks: Cement did Circulate Hulls _____

Rat Hole _____ Salt _____

Mouse Hole _____ Flowseal _____

Centralizers _____ Kol-Seal _____

Baskets _____ Mud CLR 48 _____

D/V or Port Collar _____ CFL-117 or CD110 CAF 38 _____

_____ Sand _____

_____ Handling 200 _____

_____ Mileage _____

FLOAT EQUIPMENT

_____ Guide Shoe _____

_____ Centralizer _____

_____ Baskets _____

_____ AFU Inserts _____

_____ Float Shoe _____

_____ Latch Down _____

_____ _____

_____ _____

_____ Pumptrk Charge Surface _____

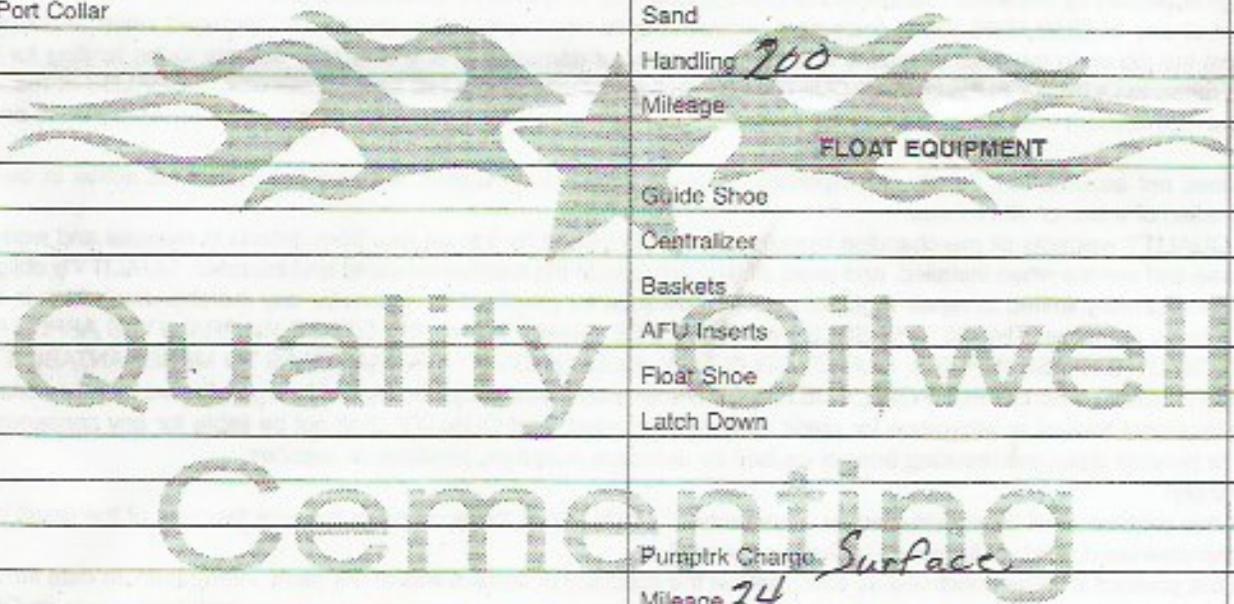
_____ Mileage 34 _____

_____ Tax _____

_____ Discount _____

_____ Total Charge _____

X Signature Larry Beavers





Mudgrove

Petroleum Geology
212 Main Street, Claflin KS

NOTES

Company: Pauley Oil

Lease: Olivia #1

Location: NW-NE-SE-NE (1330' FNL & 390' FEL)

Sec: 16 Twsp: 16S Rge: 10W

County: Ellsworth State: Kansas

Field: Stoltenberg

KB: 1865' GL: 1855'

Contractor: Southwind Drilling, Inc. (Rig #1)

Spud: 02/20/2017 Comp: 02/27/2017

RTD: 3431'

Mud Up: 2700' Type Mud: Chemical

API #: 15-053-21352-00-00

Samples Saved From: 2800' to RTD

Drilling Time Kept From: 2800' to RTD

Samples Examined From: 2800' to RTD

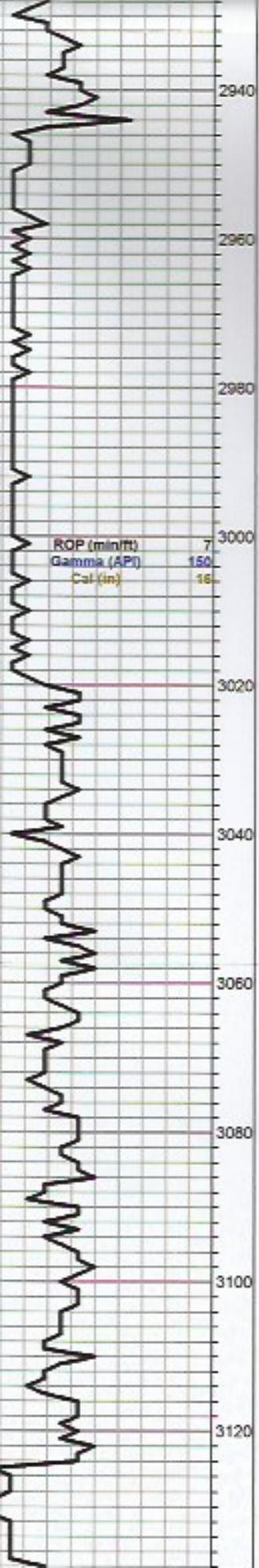
Geological Supervision from: 2800' to RTD

Geologist on Well: Jim Musgrove

Surface Casing: 8 5/8"@ 408'

Production Casing: None

Electronic Surveys: None



Toronto 2931.0 (-1066.0)

LS, white, cream, slightly dolomitic, tr. LS, tan, dense

Douglas 2943.0 (-1078.0)

Sh, red/maroon, soft

Tr. maroon, gry, green shale,
plus gry, greenish, sd. vfg, slity

Sh, a/a, tr. sd, gry, gryish, green, vfg, mica few friable,
n/s

Sh, a/a

Brown Lime 3020.0 (-1155.0)

LS, tan, brown, fxl, dense

Lansing 3038.0 (-1173.0)

LS, white, tan, fxl, sub oom, chalky, poor visible
porosity, no shows

LS, gry, white, chalky, n/s

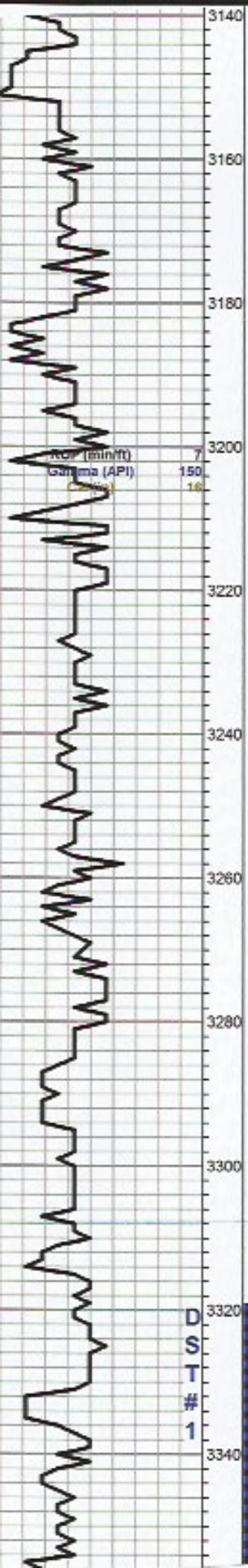
LS, white, cream, sub oom, chalky, poorly developed,
n/s

LS, gry, white, ool, sub oom, chalky, poor visible
porosity, no shows

LS, white, gry, foss/ool in pts, scattered porosity, no
shows

LS, tan, gry, ool, oom, fair-good oom porosity, no
shows

0 Total Gas (units)
0 C1 (units)
0 C2 (units)
0 C3 (units)
0 C4 (units)



LS, tan, brown oom, fair oom porosity (barren)

LS, tan, brown, dense, plus gry, white, chalky

Sh, black carb, with coal black chert

LS, white, tan, fxl, sub oom chalky in pts, n/s

LS, tan, white, oom, ool in pts, scattered oom porosity, no shows

LS, tan, gry, foss, slightly cherty (dense)

Sh, black carb

LS, white, gry, foss, slightly cherty, (dense)

Slug gry, greenish shale

LS, gry, tan, foss in pts, (dense), with white chert

Tr. amber cherts, gry, glauc. LS

Base Kansas City 3310.0 (-1445.0)

Sh, gry, dark gry

LS, gry, f-med xln, chalky

LS, white, fxl, foss, dense, plus amber chert

Conglomerate 3346.0 (-1481.0)

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

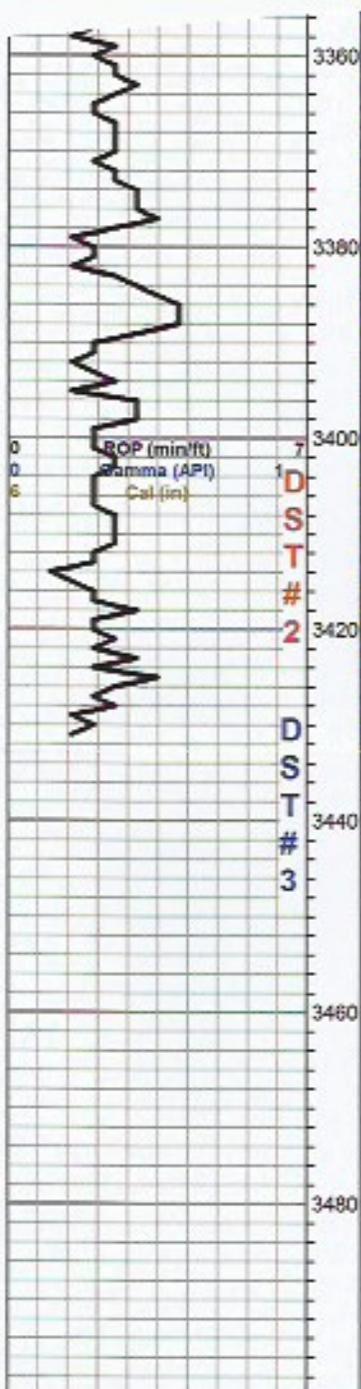
DST#1 3319-3415

30-30-30-30

1st Open:
Weak

Recovery:
35' Slightly mud cut oil
(3%O, 98%M)

Pressures:
ISIP 772 psi
FSIP 746 psi
IFP 79-85 psi
FFP 86-91 psi
HSH 1707-1673



V.C. cherts, orange, amber, yellow, opaque

LS, mar. tinted, plus cherts A/A

A/A

Sd. white, clear, vfg, friable in pts, n/s

Simpson 3399.0 (-1534.0)

Sh, blue green, sub-waxy

Arbuckle 3413.0 (-1548.0)

Dol. tan, med xln, suc. scattered porosity, tr. fo, ??? odor

Dol. tan, white, med xln, scattered tr. poor stain, wk. sfo. (decreasing from above) no odor

RTD 3431.0 (-1566.0)

DST #2 3319-3421

30-30-30-30

1st Open:
Weak

Recovery:
1' Clean Oil

65' Slight Oil
(7%O, 53%M)

Pressures:
ISIP 879 psi
FSIP 839 psi
IFP 85-91 psi
FFP 95-106 psi
HSH 1702-1735 psi

DST#3 3319-3431

30-30-30-30

1st Open:
Blow, weak

Recovery:
55' mud w/ tr. oil

Pressures:
ISIP 1017 psi
FSIP 974 psi
IFP 85-98 psi
FFP 100-108 psi
HSH 1690-1647 psi