

1264924

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

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

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

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

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

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

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

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>			PRODUCTION INTERVAL: Top _____ Bottom _____	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:
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Form	ACO1 - Well Completion
Operator	Culbreath Oil & Gas Company, Inc.
Well Name	Boyd 2-3
Doc ID	1264924

Tops

Name	Top	Datum
Anhydrite	2562	+473
Base Anhy	2585	+450
Topeka	3782	-747
Heebner	4008	-973
Toronto	4026	-1017
Lansing	4052	-1017
BKC	4338	-1303
Pawnee	4476	-1441
Fort Scott	4530	-1495
Miss	4657	-1622



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Culbreath Oil & Gas Co, Inc

3 11s 32w Logan, Ks

3801 S.Yale Ave.
Tulsa, Oklahoma 74135

Boyd #2-3

Job Ticket: 61804

DST#: 1

ATTN: Steve Murphy

Test Start: 2015.07.18 @ 18:12:00

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:36:15

Time Test Ended: 02:14:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 69

Interval: 4014.00 ft (KB) To 4054.00 ft (KB) (TVD)

Reference Elevations: 3035.00 ft (KB)

Total Depth: 4054.00 ft (KB) (TVD)

3030.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8365 Inside

Press @ Run Depth: 793.88 psig @ 4015.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.18

End Date:

2015.07.19

Last Calib.:

2015.07.19

Start Time: 18:12:05

End Time:

02:14:44

Time On Btm:

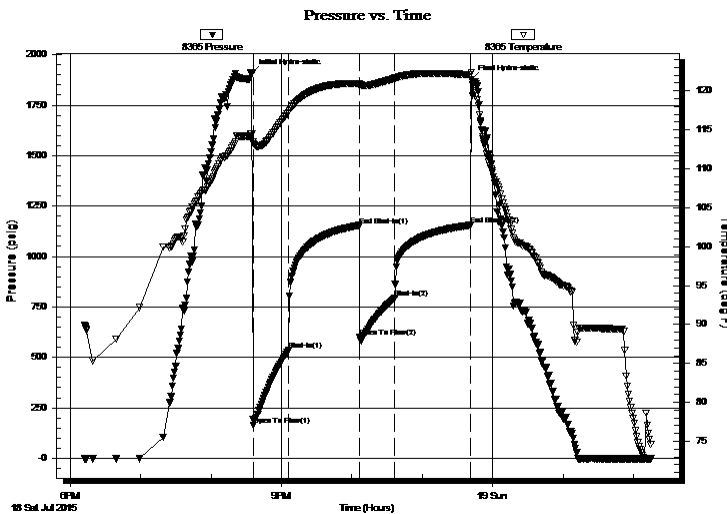
2015.07.18 @ 20:34:45

Time Off Btm:

2015.07.18 @ 23:41:45

TEST COMMENT: IF: BOB @ 1 min.
IS: No return.
FF: BOB @ 2 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1907.25	114.48	Initial Hydro-static
2	164.00	113.21	Open To Flow (1)
32	535.10	117.24	Shut-In(1)
92	1153.40	120.98	End Shut-In(1)
92	600.67	120.70	Open To Flow (2)
122	793.88	121.59	Shut-In(2)
186	1154.76	122.07	End Shut-In(2)
187	1877.62	122.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1215.00	mcw 2m 98w (w/ oil specs)	15.97
410.00	socw 5o 95w	5.75
5.00	oil 100o	0.07

Gas Rates

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



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DRILL STEM TEST REPORT

FLUID SUMMARY

Culbreath Oil & Gas Co, Inc

3 11s 32w Logan, Ks

3801 S.Yale Ave.
Tulsa, Oklahoma 74135

Boyd #2-3

Job Ticket: 61804

DST#: 1

ATTN: Steve Murphy

Test Start: 2015.07.18 @ 18:12:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

17 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

65000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1215.00	mcw 2m 98w (w / oil specs)	15.968
410.00	socw 5o 95w	5.751
5.00	oil 100o	0.070

Total Length: 1630.00 ft Total Volume: 21.789 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

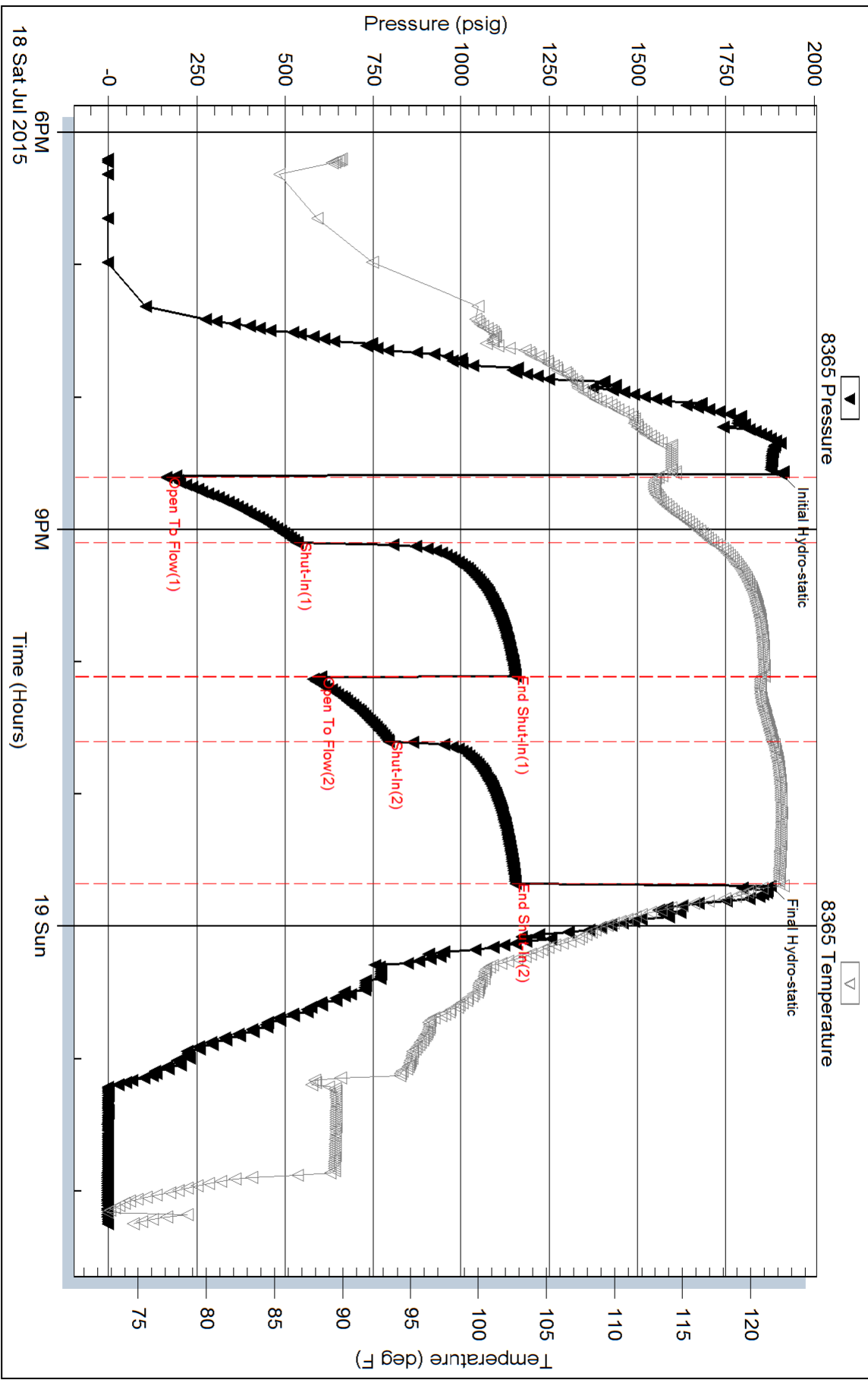
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .18 @ 70 = 65000ppm

Pressure vs. Time





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Culbreath Oil & Gas Co, Inc
 3801 S.Yale Ave.
 Tulsa, Oklahoma 74135
 ATTN: Steve Murphy

3 11s 32w Logan, Ks
Boyd #2-3
 Job Ticket: 61805 **DST#: 2**
 Test Start: 2015.07.19 @ 12:36:00

GENERAL INFORMATION:

Formation: **LKC E**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 14:34:00 Tester: Bradley Walter
 Time Test Ended: 20:04:30 Unit No: 69
 Interval: **4116.00 ft (KB) To 4142.00 ft (KB) (TVD)** Reference Elevations: 3035.00 ft (KB)
 Total Depth: 4142.00 ft (KB) (TVD) 3030.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

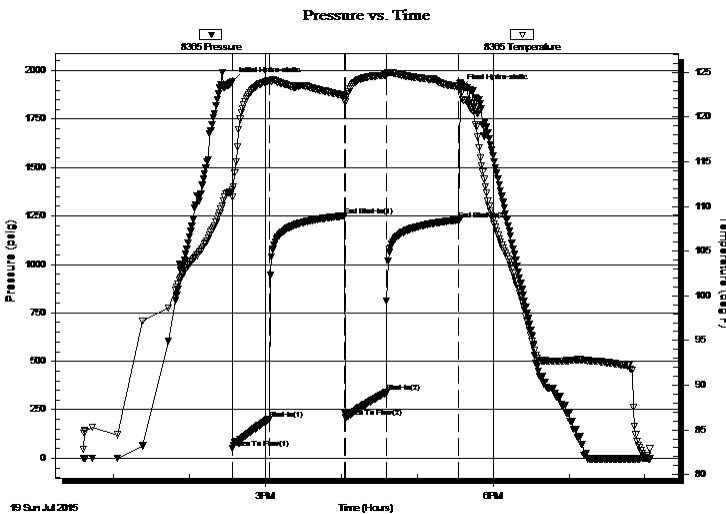
Serial #: 8365

Inside

Press @ Run Depth: 338.65 psig @ 4117.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.07.19 End Date: 2015.07.19 Last Calib.: 2015.07.19
 Start Time: 12:36:05 End Time: 20:04:29 Time On Btm: 2015.07.19 @ 14:33:45
 Time Off Btm: 2015.07.19 @ 17:34:00

TEST COMMENT: IF: BOB @ 5 min.
 IS: 7" return.
 FF: BOB @ 1 min.
 FS: BOB return @ 10 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1943.04	111.88	Initial Hydro-static
1	50.88	111.01	Open To Flow (1)
29	201.78	124.05	Shut-In(1)
89	1251.01	122.38	End Shut-In(1)
90	211.96	121.95	Open To Flow (2)
122	338.65	124.69	Shut-In(2)
179	1229.84	123.43	End Shut-In(2)
181	1909.01	123.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	mcw 5m 95w	3.27
120.00	gow cm 20g 20o 20w 40m	1.68
380.00	go 40g 60o	5.33
0.00	1140 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Culbreath Oil & Gas Co, Inc

3 11s 32w Logan, Ks

3801 S.Yale Ave.
Tulsa, Oklahoma 74135

Boyd #2-3

Job Ticket: 61805

DST#: 2

ATTN: Steve Murphy

Test Start: 2015.07.19 @ 12:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

42000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
310.00	mcw 5m 95w	3.274
120.00	gow cm 20g 20o 20w 40m	1.683
380.00	go 40g 60o	5.330
0.00	1140 GIP	0.000

Total Length: 810.00 ft Total Volume: 10.287 bbl

Num Fluid Samples: 0

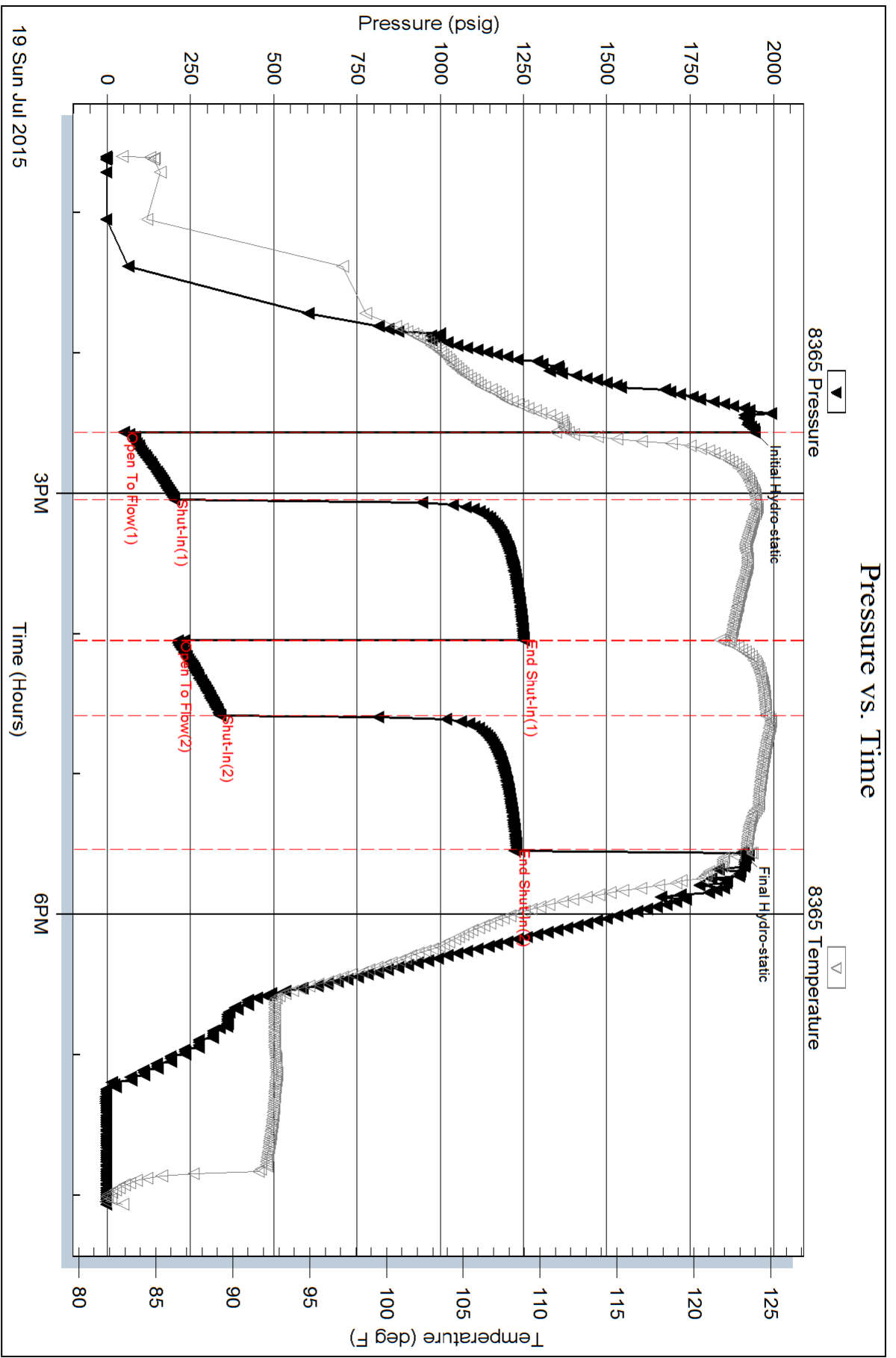
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is 160 @ 83 = 42,000ppm





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Culbreath Oil & Gas Co, Inc

3 11s 32w Logan, Ks

3801 S.Yale Ave.
Tulsa, Oklahoma 74135

Boyd #2-3

Job Ticket: 61806

DST#: 3

ATTN: Steve Murphy

Test Start: 2015.07.20 @ 16:26:00

GENERAL INFORMATION:

Formation: **LKC I & J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:22:00

Time Test Ended: 23:43:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4226.00 ft (KB) To 4278.00 ft (KB) (TVD)

Reference Elevations: 3035.00 ft (KB)

Total Depth: 4278.00 ft (KB) (TVD)

3030.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8365

Inside

Press @ Run Depth: 283.44 psig @ 4227.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.20

End Date:

2015.07.20

Last Calib.:

2015.07.20

Start Time:

16:26:05

End Time:

23:43:44

Time On Btm:

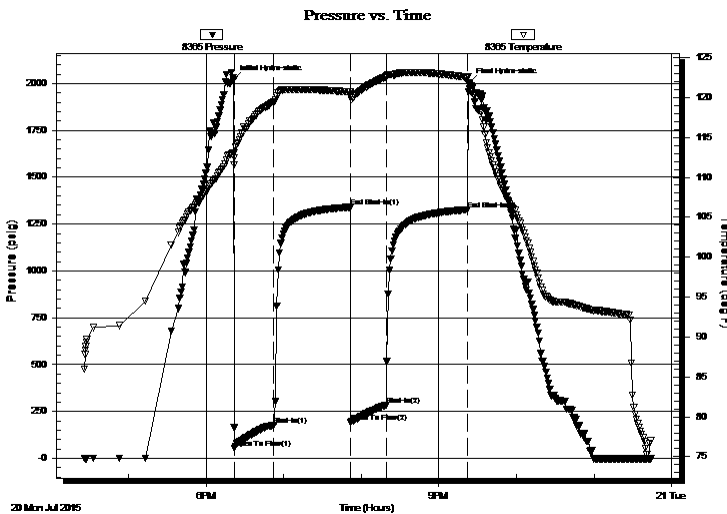
2015.07.20 @ 18:21:30

Time Off Btm:

2015.07.20 @ 21:23:15

TEST COMMENT: IF: BOB @ 5.5 min.
IS: BOB @ 11 min.
FF: BOB @ 1 min.
FS: BOB @ 5 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2022.58	113.02	Initial Hydro-static
1	52.10	112.45	Open To Flow (1)
31	175.99	119.43	Shut-In(1)
90	1340.28	120.68	End Shut-In(1)
91	194.10	120.10	Open To Flow (2)
118	283.44	122.60	Shut-In(2)
181	1327.01	122.53	End Shut-In(2)
182	2003.10	121.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
260.00	mcw 15m 85w (oil spots)	2.57
120.00	gmco 50g 30o 20m	1.68
300.00	go 45g 55o	4.21
0.00	1970 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Culbreath Oil & Gas Co, Inc

3 11s 32w Logan, Ks

3801 S.Yale Ave.
Tulsa, Oklahoma 74135

Boyd #2-3

Job Ticket: 61806

DST#: 3

ATTN: Steve Murphy

Test Start: 2015.07.20 @ 16:26:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

36000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
260.00	mcw 15m 85w (oil spots)	2.572
120.00	gmco 50g 30o 20m	1.683
300.00	go 45g 55o	4.208
0.00	1970 GIP	0.000

Total Length: 680.00 ft Total Volume: 8.463 bbl

Num Fluid Samples: 0

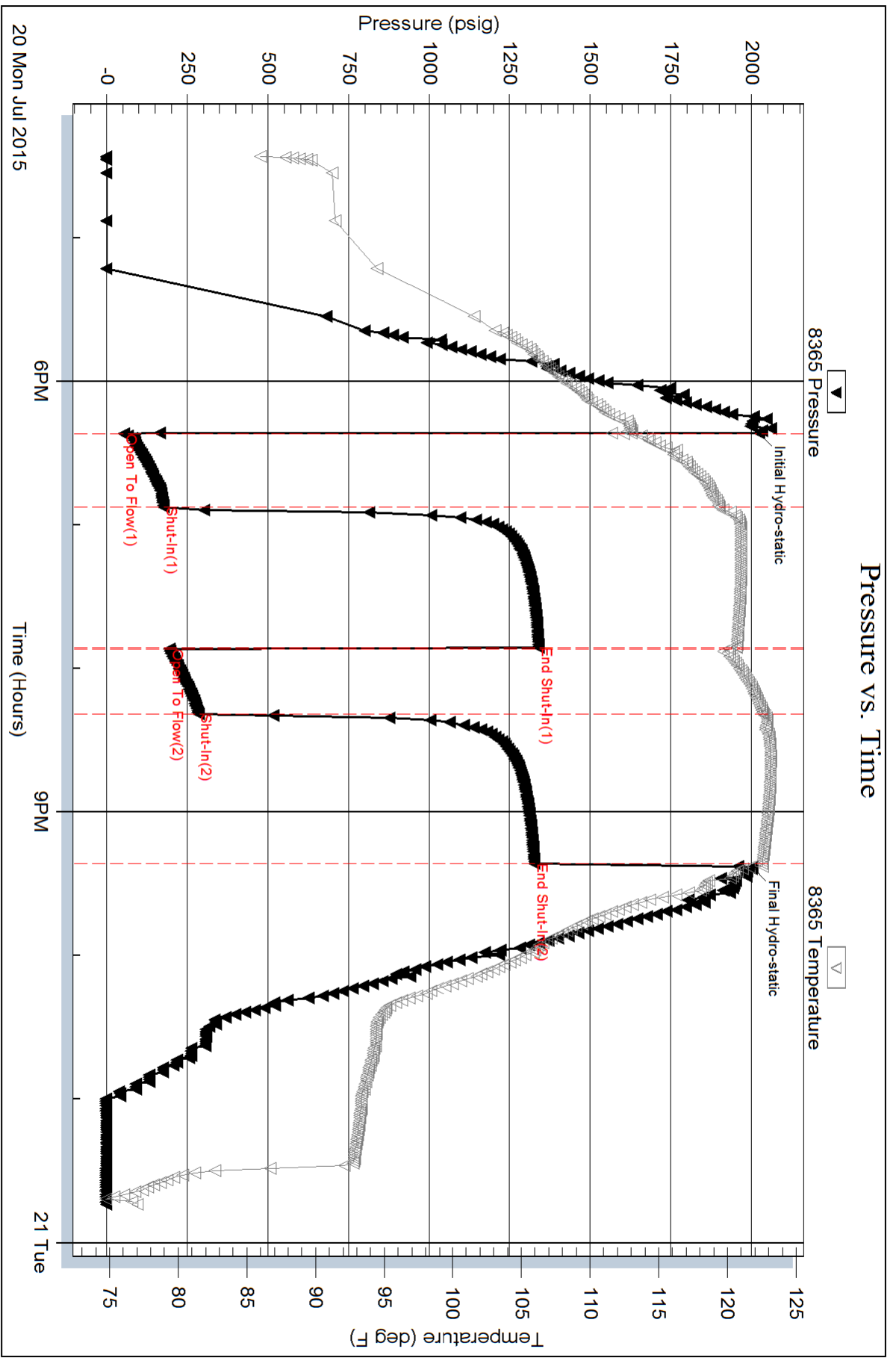
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .18 @77f = 36000ppm





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Culbreath Oil & Gas Co, Inc

3 11s 32w Logan, Ks

3801 S.Yale Ave.
Tulsa, Oklahoma 74135

Boyd #2-3

Job Ticket: 61807

DST#: 4

ATTN: Steve Murphy

Test Start: 2015.07.22 @ 15:00:00

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:31:15

Time Test Ended: 00:38:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 69

Interval: 4594.00 ft (KB) To 4630.00 ft (KB) (TVD)

Reference Elevations: 3035.00 ft (KB)

Total Depth: 4630.00 ft (KB) (TVD)

3030.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8365 Inside

Press@RunDepth: 812.47 psig @ 4595.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.22

End Date:

2015.07.23

Last Calib.: 2015.07.23

Start Time: 15:00:05

End Time:

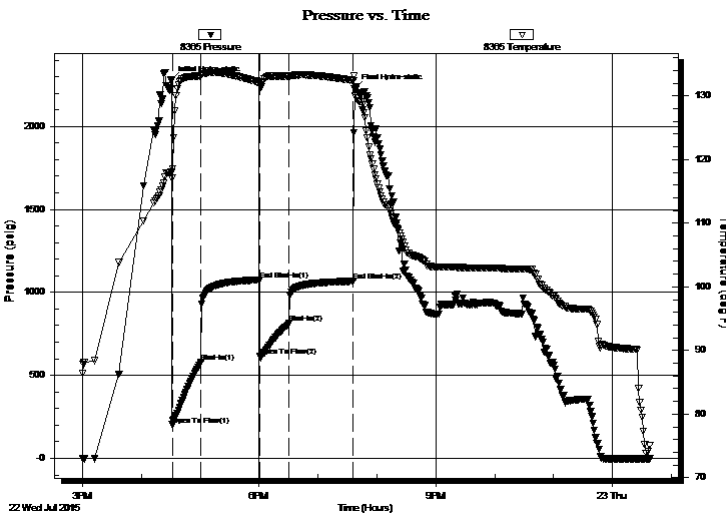
00:38:45

Time On Btm: 2015.07.22 @ 16:31:00

Time Off Btm: 2015.07.22 @ 19:37:00

TEST COMMENT: IF: BOB @ 1 min.
IS: 4 1/2" return.
FF: BOB @ 1 min.
FS: BOB @ 15 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2279.18	117.98	Initial Hydro-static
1	202.27	117.06	Open To Flow (1)
30	579.73	133.16	Shut-In(1)
90	1075.70	132.07	End Shut-In(1)
90	614.43	131.74	Open To Flow (2)
120	812.47	133.05	Shut-In(2)
185	1067.02	132.42	End Shut-In(2)
186	2229.81	131.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1930.00	go 25g 75o	26.00
180.00	go 30g 70o	2.52
0.00	850'GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Culbreath Oil & Gas Co, Inc

3 11s 32w Logan, Ks

3801 S.Yale Ave.
Tulsa, Oklahoma 74135

Boyd #2-3

Job Ticket: 61807

DST#: 4

ATTN: Steve Murphy

Test Start: 2015.07.22 @ 15:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

25 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1930.00	go 25g 75o	25.998
180.00	go 30g 70o	2.525
0.00	850'GIP	0.000

Total Length: 2110.00 ft Total Volume: 28.523 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8365

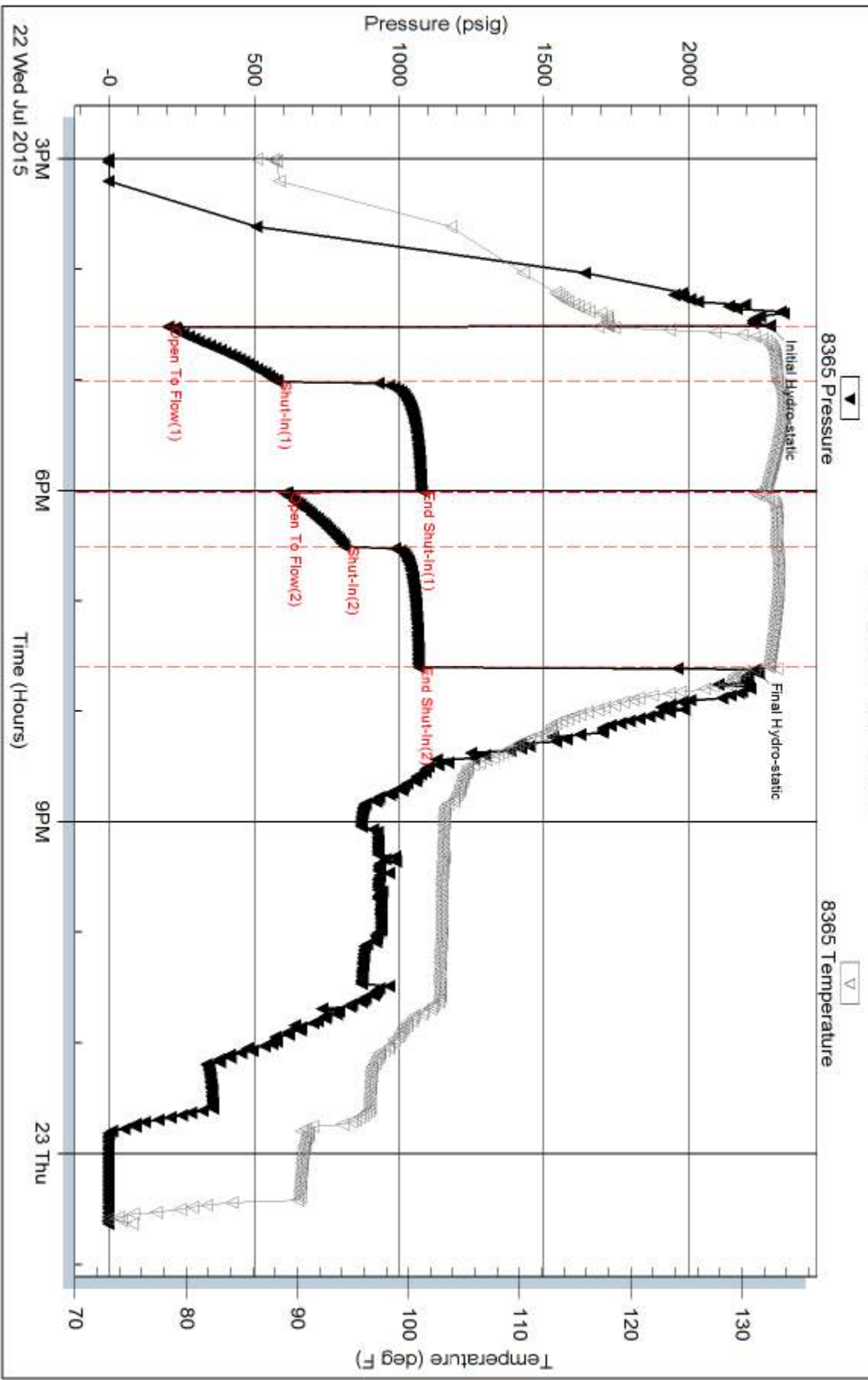
Inside

Culbreath Oil & Gas Co, Inc

Boyd #2-3

DST Test Number: 4

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 61807

Printed: 2015.07.23 @ 08:17:06



CONSOLIDATED
Oil Well Services, LLC

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

3634
3554
Invoice # 215069

TICKET NUMBER 49471
LOCATION Oakley, KS
FOREMAN Kelly Gabe
Miles Shaw

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
7-23-15	2777	Boyd B #2	3	12	32W	Logan
CUSTOMER Culbreath			Oakley			
MAILING ADDRESS			5 + 02nd Rd 1W 1/4 S E into			
CITY			STATE			
ZIP CODE			TRUCK #			
			DRIVER			
			TRUCK #			
			DRIVER			

JOB TYPE Prod-DV HOLE SIZE 7 7/8 HOLE DEPTH 4765 CASING SIZE & WEIGHT 5 1/2 15.5 #
CASING DEPTH 4759 DRILL PIPE _____ TUBING _____ OTHER DV @ 2558'
SLURRY WEIGHT 148-112 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 41.13
DISPLACEMENT 112 1/4, 60 3/4 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting, ran float equipment & TS centralizers
4, 6, 8, 10, 12, 14, 16, 18, 21, 53 baskets #5, 22, 54 scratchers
4, 5, 6, 12, 13, 14, 15, 16, 17, 18 4 per ST DV Top #54, ran pipe to
bottom & circulated for 1 1/2 hrs, mixed mud flush, pumped
10 bbl KCL, mixed 175 SKS Thickso Blend III (owc), washed out pump,
displaced with 50 bbl water 62 1/2 bbl mud, lit pressure 1100 #
plug landed @ 1700 # dropped DV bomb, opened tool @ 1100 #, circulated
for 3 hrs, mixed 30 SKS RH, 20 SKS MH, mixed 450 SKS 60/40 P 2 8 1/2 #
1/4 # flo-seal, released plug & displaced with 2 1/2 bbl water, lit pressure 500
plug landed @ 1200 # cement did circulate *Thank You Kelly & crew*

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0453	1	PUMP CHARGE	3900.00	3900.00
CE0002	5 mi.	MILEAGE	7.15	35.75
CE0711	29.73 ton		17.5	660.00
CC5862	175 SKS	Thickso Blend III (owc)	26.00	4550.00
CC6077	875 #	Kal-seal	.50	437.50
CC5831	500 SKS	Lite weight Blend VII (60/40 8 1/2 #)	17.50	8750.00
CC6075	125 #	celloflake	3.00	375.00
CP8485	1	5 1/2 AEU Float shoe (w)	585.00	585.00
CP8254	1	5 1/2 latchdown Assy/w Plug (w)	400.00	400.00
CP8554	10	5 1/2 centralizer (w)	81.00	810.00
CP8629	3	5 1/2 basket (w)	385.00	1155.00
CP8801	1	5 1/2 DV Tool (w)	5970.00	5970.00
			Sub	27,628.35
AS Per bid			Less 3090	82,884.7
			total	19,339.78
			SALES TAX	1289.82
			ESTIMATED TOTAL	20629.60

Ravin 3737

AUTHORIZATION

TITLE _____

DATE 7-23-15

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

TERMS

In consideration of the prices to be charged for Consolidated Oil Well Services, LLC (COWS) services, equipment and products and for the performance of services and supplying of materials, Customer agrees to the following terms and conditions.

Terms. Cash in advance unless satisfactory credit is established. On credit sales, invoices are payable within 30 days of the invoice date. On all invoices not paid within 30 days, Customer agrees to pay COWS interest at the rate of 18% per annum or the maximum rate allowed by law, whichever is higher. In the event COWS retains an attorney to pursue collection of any account, Customer agrees to pay all collection costs and attorney's fees incurred by COWS.

Any applicable federal, state or local sales, use occupation, consumer's or emergency taxes shall be added to the quoted price. All process license fees required to be paid to others will be added to the scheduled prices.

All COWS' prices are subject to change without notice.

SERVICE CONDITIONS

Customer warrants that the well is in proper condition to receive the services, equipment, products and materials to be supplied by COWS. The Customer shall at all time have complete care, custody, and control of the well, the drilling and production equipment at the well, and the premises about the well. A responsible representative of the Customer shall be present to specify depths, pressures, or materials used for any service which is to be performed.

(a) COWS shall not be responsible for any claim, cause of action or demand (hereinafter referred to as a 'claim') for damage to property, or injury to or death of employees and representatives, of Customer or the well owner (if different from Customer), unless such damage, injury or death is caused by the willful misconduct or gross negligence of COWS, including but not limited to sub-surface damage and surface damage arising from sub-surface damage.

(b) Unless a claim is the result of the sole willful misconduct or gross negligence of COWS, Customer shall be responsible for and indemnify and hold COWS harmless from any claim for: (1) reservoir loss or damage, or property damage resulting from sub-surface pressure, losing control of the well and/or a well blowout; (2) damages as a result of a subsurface trespass, or an action in the nature thereof, arising from a service operation performed by COWS; (3) injury to or death of persons, other than employees of COWS, or damage to property (including, but not limited to, injury to the well), or any damages whatsoever, irrespective of cause, growing out of or in any way connected with the use of radioactive material in the well hole; and (4) well damage or reservoir damage caused by (i) loss of circulation, cement invasion, cement misplacement, pumping cement or cement plugs on wells with loss of circulation, including the failure to displace plug to proper depth, (ii) sub-surface pressure and resulting failure to complete pumping of cement or cement plug, including dehydration of cement slurry or flashing, plugged float shoe, annulus bridging or plugging, or (iii) down hole tools being lost or left in the well, or becoming stuck in the well for any reason and by any cause. COWS may furnish down hole tools and may supply supervision for the running and placement of such tools but will not be liable for any damage, loss or result caused by the use of such tools.

Furthermore, Customer will be responsible for the cost to replace such tools if they are lost or left in the well.

(c) COWS makes no guarantee of the effectiveness of any COWS' products, supplies or materials, or the results of any COWS' treatment or services.

(d) Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, COWS is unable to guarantee the accuracy of any chart interpretation, research analysis, job recommendation or other data furnished by COWS. COWS' personnel will use their best efforts in gathering such information and their best judgement in interpreting it, but Customer agrees that COWS shall not be responsible for any damage arising from the use of such information except where due to COWS' gross negligence or willful misconduct in the preparation or furnishing of it.

(e) COWS may buy and re-sell to Customer down hole equipment, including but not limited to float equipment, DV tools, port collars, type A & B packers, and Customer agrees that COWS is not an agent or dealer for the companies who manufacture such items, and further agrees that Customer shall be solely responsible for and indemnify COWS against any claims with regard to the effectiveness, malfunction of, or functionality of such items.

WARRANTIES - LIMITATION OF LIABILITY

COWS warrants title to the products, supplies and materials, and that the same are free from defects in workmanship and materials. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, NOR ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. COWS's liability and Customer's exclusive remedy in any claim (whether in contract, tort, breach of warranty or otherwise,) arising out of the sale or use of any COWS' products, supplies, materials or services is expressly limited to the replacement of such products, supplies, materials or services or their return to COWS or, at COWS' option, an allowance to Customer of credit for the cost of such items.

Customer waives and releases all claims against COWS for any special, incidental, indirect, consequential or punitive damages.



REMIT TO
 Consolidated Oil Well Services, LLC
 Dept. 970
 P.O. Box 4346
 Houston, TX 77210-4346

MAIN OFFICE
 P.O. Box 884
 Chanute, KS 66720
 620/431-9210, 1-800/467-8676
 Fax 620/431-0012

Currency: \$

CULBREATH OIL & GAS CO.INC
1532 S. PEORIA AVE
TULSA OK 74120

Account No.
2777

Statement
Date
8/5/2015

Terms
Net 30

Prior Period Balance \$ 30,846.51

Document	BP Ref. No.	Post. Date	Due Date	Details	Amount	Balance
RC 1988		07/09/15	07/09/15	Incoming Payments - 2777	-25,166.08	5,680.43
IN 805069	BOYD B #2	07/28/15	08/27/15	A/R Invoices - 2777	20,629.60	26,310.03
Total						\$ 26,310.03

	Balance Due	Future Remit	0 - 30	31 - 60	61 - 90	91 - 120	121+
Total	-4,536.48		-4,536.48				

Aging (%) 100.000 % 100.000 %

SCANNED



P.O. Box 205803
Dallas, TX 75320-5803

Voice: (832) 482-3742
Fax: (832) 482-3738

INVOICE

Invoice Number: 150222
Invoice Date: Jul 13, 2015
Page: 1

Federal Tax I.D.#: 20-8651475

Bill To:
Culbreath Oil & Gas Co., Inc. 3501 S Yale Ave Tulsa, OK 74135

Customer ID	Field Ticket #	Payment Terms	
Cul	67818	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Jul 13, 2015	8/12/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Boyd #2-3		
200.00	CEMENT MATERIALS	Class A Common	17.90	3,580.00
564.00	CEMENT MATERIALS	Chloride	1.10	620.40
210.00	CEMENT SERVICE	Cubic Feet Charge	2.48	520.80
1.00	CEMENT SERVICE	Ton Mileage Charge	380.00	380.00
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
5.00	CEMENT SERVICE	Pump Truck Mileage	7.70	38.50
5.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	22.00
1.00	CEMENT SUPERVISOR	Paul Beaver		
1.00	EQUIPMENT OPERATOR	Wayne McGhghy		
1.00	EQUIPMENT OPERATOR	Brandon Wilkinson		

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$

ONLY IF PAID ON OR BEFORE

Subtotal	6,673.95
Sales Tax	336.03
Total Invoice Amount	7,009.98
Payment/Credit Applied	
TOTAL	7,009.98



STEVEN P. MURPHY, P.G.

Petroleum Geologist (KS #228)

Cell 620.639.3030

Fax 785.387.2400

RR#1, Box 69

Otis, Kansas 67565

geomurphy@gbta.net

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

Well Name: Boyd #2-33

API: 15-109-21424-00-00

Location: Logan County

License Number: 34344

Spud Date: 7/13/15

Surface Coordinates: 2286' FNL & 1627' FWL (NW SW SE NW)

33-T11S-R32W

Bottom Hole Coordinates: Same as above (Vertical well w/minimal deviation)

Region: Kansas

Drilling Completed: 7/24/15

Ground Elevation (ft): 3030'

K.B. Elevation (ft): 3035'

Logged Interval (ft): 3600

To: TD

Total Depth (ft): RTD-4765'/LTD-4756'

Formation: Topeka through Mississippian

Type of Drilling Fluid: Chemical/Polymer/Gel (KDT- Ken Rupp, Mud Engineer)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Culbreath Oi & Gas

Address: 1532 S. Peoria Ave.

Tulsa, OK 74120

GEOLOGIST

Name: Steven P. Murphy, PG

Company: Consulting Petroleum Geologist (License #228)

Address: 3365 County Rd 390

Otis, KS 67565

Cell: 620-639-3030

REMARKS

Halliburton performed the open-hole wireline logging with stacked Dual Compensated Porosity, Dual Induction, and Microresistivity Logs.

The following are log tops of formations with associated datums (in parentheses) referenced to sea level:

Anhydrite Top - 2562(+473))

Anhydrite Base - 2585 (+450)

Topeka - 3782 (-747)

Heebner - 4008 (-973)

Toronto - 4026 (-991)

Lansing - 4052 (-1017)

Muncie Creek - 4187 (-1152)

Stark - 4272 (-1237)

Hushpuckney - 4309 (-1274)

Base KC - 4338 (-1303)

Marmaton - 4387 (-1352)

Pawnee - 4476 (-1441)

Myrick Station - 4512 (-1477)

Fort Scott - 4530 (-1495)

Cherokee - 4554 (-1519)

Johnson Zone - 4686 (-1551)

Mississippian - 4657 (-1622)

ROCK TYPES

LITHOLOGY

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal
	Congl
	Dol
	Gyp
	Igne
	Lmst
	Meta
	Mrst
	Salt
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Till
	Sltstn
	Shale
	Sandylms
	Lms
	Gry sh
	Dtd
	Dol
	Carb sh
	pipesymbol
	unknown lith
	Red shale

FOSSIL

	Oomoldic
	Fuss
	Algae

MINERAL

	Sltly
	Sand
	Dol
	Chlorite
	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	Dol

Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite
Ostra
Pelec
Pellet
Pisolite
Plant
Strom

STRINGER

	Red shale
	Sh
	Sandylms
	Lms
	Gryslt
	Grysh
	Dol
	Clystn
	Carbsh
	Anhy
	Arg
	Bent
	Coal
	Dol
	Gyp
	Ls
	Mrst

Feldspar
Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

	Sltstrg
	Ssstrg

TEXTURE

	Boundst
	Chalky
	Cryxln
	Earthy
	Finexln
	Grainst
	Lithogr
	Microxln
	Mudst
	Packst
	Wackest

OIL SHOW

	Gas show
	Good
	Fair
	Poor
	Dead

INTERVAL

	Dst
	Core
	Dst
	Straddle test tail pip

EVENT

	Rft
	Sidewall
	Dst
	Open hole
	Perforations

DSTs

Drillstem testing was performed by Bradley Walter w/Trilobite Testing, Inc (Scott City shop):

DST #1 4014-4054 (Toronto)

30:60:30:60

IF: BOB 1 min, NR

FF: BOB 2 min, NR

Recovery: 5' Oil (17 gravity),

410' SOCW (5%O, 95% W),

1215' SMCW (98%W, 2% M)

IHP: 1907 FHP: 1878

IFP: 164-535 ISIP: 1153

FFP: 601-794 FSIP: 1155

BHT - 127 F

DST #2 4116-4142 (LKC "E")

30:60:30:60

IF: BOB 5 min, 7" return

FF: BOB 1 min, BOB return 10 min

Recovery: 1140' GIP,

380' Gsy Oil (40%G, 60%O),

120' GOWCM (20%G, 20%O, 20%W, 40%M),

310' MCW (95%W, 5%M)

IHP: 1943 FHP: 1909

IFP: 51-202 ISIP: 1251

FFP: 212-339 FSIP: 1230

Oil Gravity - 40 API

Chlorides - 42,000 ppm

DST #3 4226-4278 (LKC "I-J")

30:60:30:60

IF: BOB 5.5 min, return BOB 11 min

FF: BOB 1 min, return BOB 5 min

Recovery: 1970' GIP,

300' Gsy Oil (45%G, 55%O),

120' GMCO (50%G, 30%O, 20%M),

260' MCW (85%W, 15%M)

IHP: 2023 FHP: 2003

IFP: 52-176 ISIP: 1340

FFP: 194-283 FSIP: 1327

Oil Gravity - 37 API

Chlorides - 36,000 ppm

BHT - 123 F

DST #4 4594-4630 (Johnson)

30:60:30:60

IF: BOB 1 min, return 4.5 in

FF: BOB 1 min, return BOB 15 min

Recovery: 850' GIP,

1930' Gsy Oil (25%G, 75%O),

180' Gsy Oil (30%G, 70%O)

IHP: 2279 FHP: 2230

IFP: 202-580 ISIP: 1076

FFP: 614-812 FSIP: 1067

Oil Gravity - 25 API

BHT - 132 F

COMMENTS

WW Drilling Co - Rig #2 (Toolpusher - Lonnie Lang)

Deviation surveys were taken at the following depths:

- 311' - 3/4 deg
- 832' - 3/4 deg
- 1341' - 3/4 deg
- 1849' - 3/4 deg
- 2423' - 3/4 deg
- 2964' - 1/2 deg
- 3473' - 3/4 deg
- 3980' - 1 deg
- 4142' - 1 deg
- 4632' - 1 deg
- 4765' - 1-1/2 deg

Pipe was strapped @4054' (DST #1) - 1.41' long to board. No corrections were made to the geolograph and/or the mudlog. NOTE: LTD (4756') was 9' short to the RTD(4765')

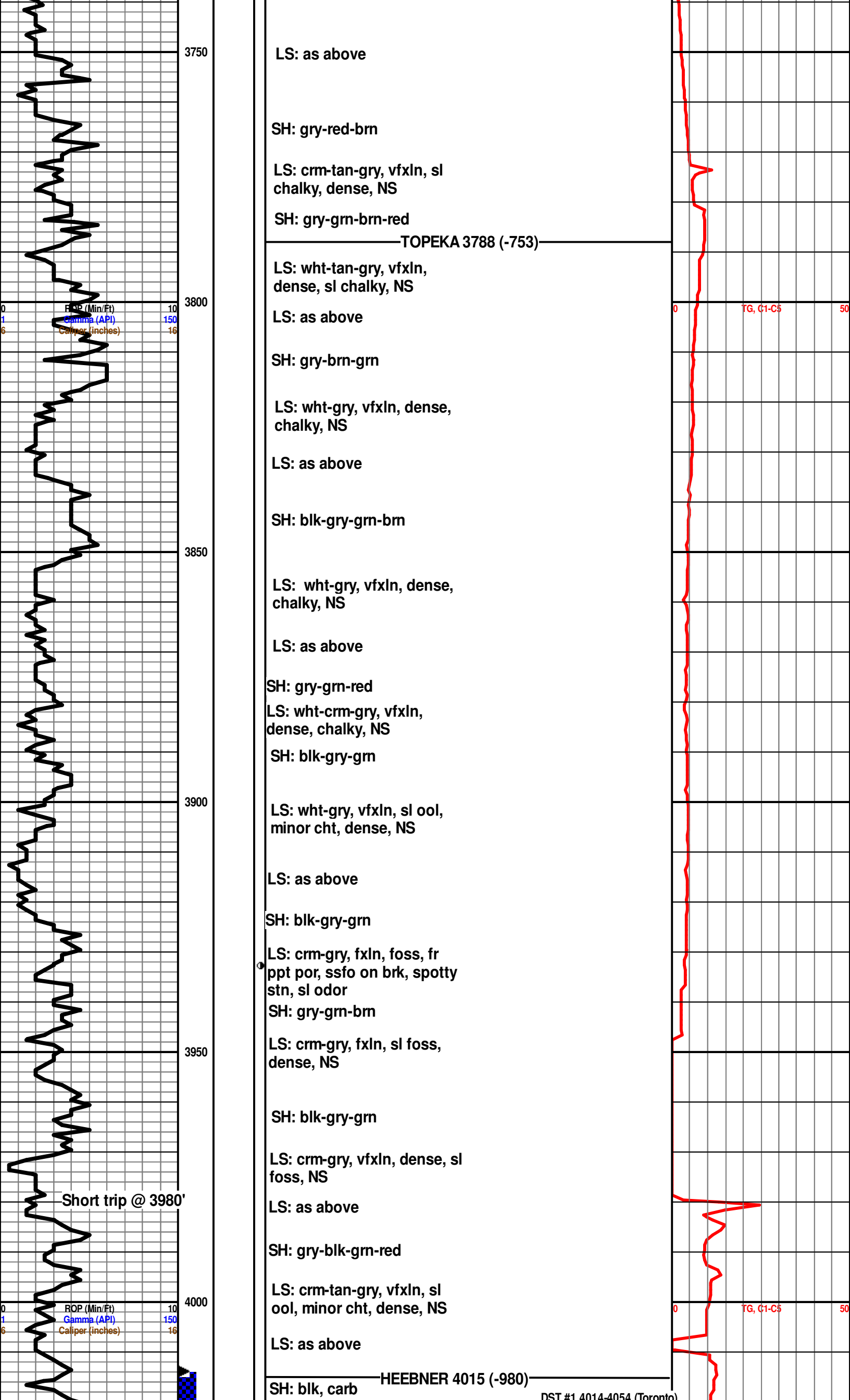
Based on the results of excellent drillstem tests, and log & sample analysis, it was determined that 5-1/2" casing should be run to complete the well in the Johnson Zone and LKC.

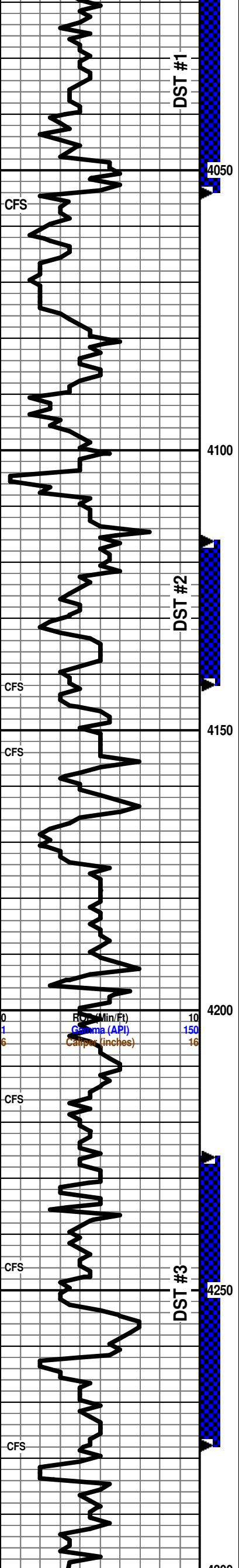
Well samples were collected for the Kansas Well Sample Library.

Respectfully submitted,

Steven P. Murphy, PG
Kansas License #228

Curve Track 1		Depth	Lithology <small>Oil Shows</small>	Geological Descriptions	Engineering Data	
ROP (Min/Ft)	Gamma (API)				Caliper (inches)	TG (Units)
				<p align="center">WW Rig #2</p> <p>8 5/8" Surface Casing @ 310'</p> <p>Top Anhydrite - 2571 (+464) Base Anhydrite - 2596 (+439)</p> <p>The following formation tops are estimates based on ROP & sample analysis. Please refer to the header section above for actual log tops.</p> <p>NOTE: LTD (4756') was 9' short to the RTD (4765')</p> <p>Begin sample examination @ 3700'</p> <p>LS: crm-brn-gry, fxln, dense, sl foss, sl chalky, NS</p> <p>LS: as above</p>		





SH: gry-grn-blk-red

SH: as above

TORONTO 4040 (-1005)

LS: crm-tan, fxlN, ool, fr vug & ppt por, fsfo, even sat stn, fr odor

LANSING 4054 (-1019)

LS: wht-tan-gry, vfxln, sl chalky, NS

LS: as above

SH: gry-grn-blk-brn

LS: crm-gry, vfxln, sl chalky, dense, NS

LS: wht-crm-gry, vfxln, sl chalky, dense, NS

SH: gry-grn-blk-red

LS: crm-tan, fxlN, oolic, fr-gd vug por, ssfo, even sat stn, str odor

SH: gry-grn-brn

LS: crm-tan, fxlN, sl ool, mostly dense, rare fr ppt por, ssfo on brk, spotty hvy stn, fr odor

SH: gry-brn-grn

LS: wht-tan, vfxln, dense, chalky, NS

LS: as above

MUNCIE CRK 4193 (-1158)

SH: blk, carb

SH: gry-blk-brn-grn

LS: crm-tan-brn, vfxln, dense, sl chalky, nsfo, sl odor

LS: wht-tan-gry, vfxln, dense, cherty, chalky, NS

SH: gry-grn-brn

LS: crm-tan-gry, vfxln, dense, sl chalky, minor cht, NS

LS: crm-tan, fxlN, ool, fr int-ool por, ssfo, spotty lite stn, fr odor

LS: crm-tan, fxlN, ool, fr-gd ppt por, ssfo, spotty lite stn, fr odor

STARK 4281 (-1246)

SH: blk, carb

LS: crm-brn, vfxln, dense, chalky, cherty, NS

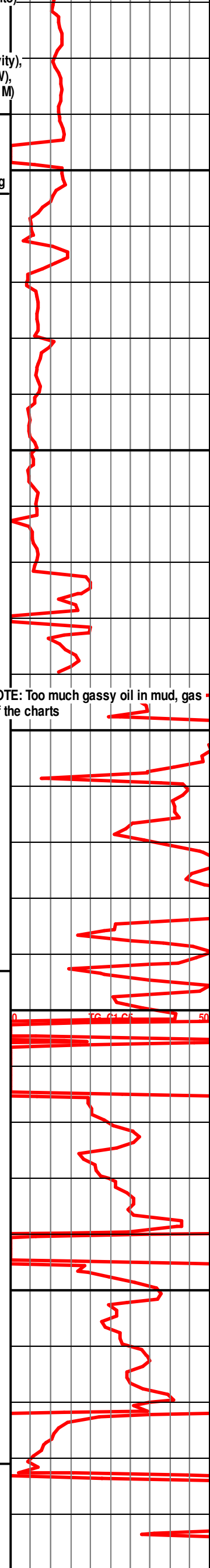
LS: crm-brn-gry, vfxln, ool, mottled, dense, chalky, NS

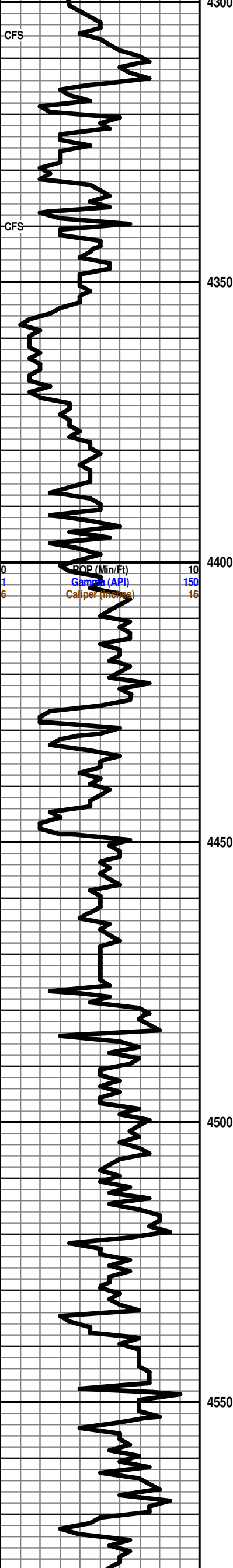
30:60:30:60
IF: BOB 1 min, NR
FF: BOB 2 min, NR
Recovery: 5' Oil (17 gravity),
410' SOCW (5%O, 95% W),
1215' SMCW (98%W, 2% M)
IHP: 1907 FHP: 1878
IFP: 164-535 ISIP: 1153
FFP: 601-794 FSIP: 1155
BHT - 127 F

Strap @ 4054' - 1.41' long

DST #2 4116-4142 (LKC "E")
30:60:30:60
IF: BOB 5 min, 7" return
FF: BOB 1 min, BOB return 10 min
Recovery: 1140' GIP,
380' Gsy Oil (40%G, 60%O),
120' GOWCM (20%G, 20%O, 20%W,
40%M),
310' MCW (95%W, 5%M)
IHP: 1943 FHP: 1909
IFP: 51-202 ISIP: 1251
FFP: 212-339 FSIP: 1230
Oil Gravity - 40 API
Chlorides - 42,000 ppm

NOTE: Too much gassy oil in mud, gas off the charts





HUSHPUCKNEY 4315
SH: blk, carb (-1280)
LS: wht-tan-gry, vfxln, dense, chalky, NS
LS: as above
LS: as above

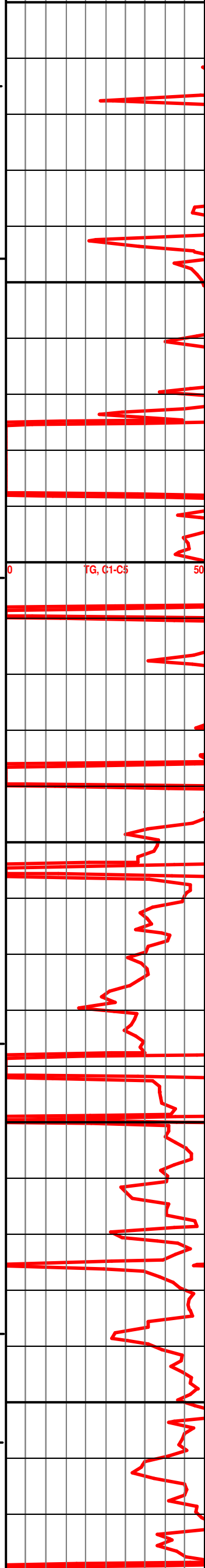
BKC 4346 (-1311)
SH: gry-grn-brn-red
Sst & Slst: red, vfg clusters, NS
Sst & Slst: as above
Sst & Slst: as above
SH: red-blk-grn-gry-brn
SH: as above

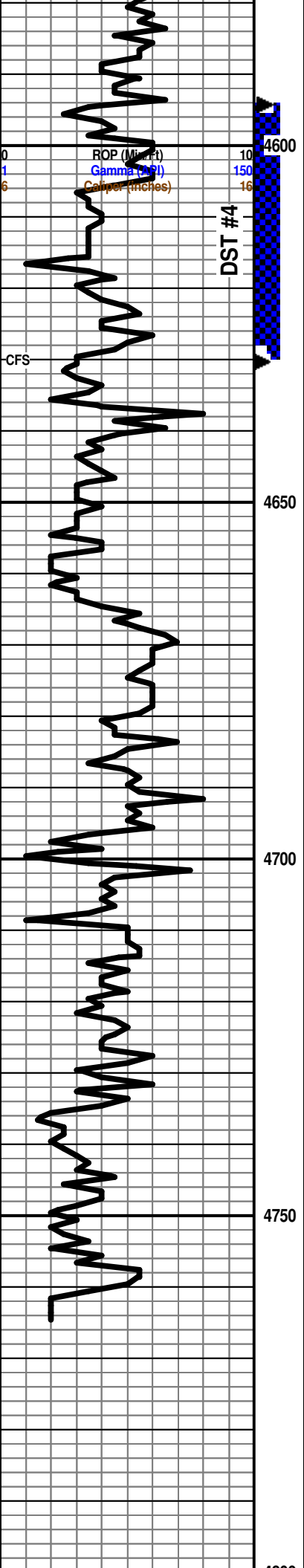
MARMATON 4403 (-1368)
LS: wht-tan-brn, vfxln, dense, sl chalky, minor cht, NS
SH: gry-blk-grn-brn
LS: wht-tan-gry, vfxln, dense, sl foss, minor cht, NS
SH: gry-blk-grn-brn
LS: wht-brn-gry, vfxln, dense, sl chalky, NS
LS: as above, NS
SH: blk-gry-grn

PAWNEE 4486 (-1451)
LS: wht-tan, vfxln, dense, sl cherty, NS
LS: crm-tan, vfxln, dense, abund chert, sl ool, NS
SH: blk-gry
LS: crm-tan-gry, vfxln, minor chert, dense, NS
SH: blk, carb

FT SCOTT 4538 (-1503)
LS: crm-tan-gry, vfxln, sl ool, minor chert, dense, NS

CHEROKEE 4558 (-1523)
SH: blk, carb
LS: wht-tan-brn, vfxln, dense, NS
LS: as above w/abund blk gry chert





blk-gry shale

SH: blk-gry-brn-gm-red

JOHNSON 4597 (-1562)

LS: tan-brn-gry, fxlIn, sl
foss, fr inxln & vug por,
ssfo, even sat stn, fr odor
(abund interbed sh)

LS: crm-tan-brn, fxlIn, sl
foss, gd ppt & vug por,
gsfo, sat stn, str odor
(w/shale stringers)

SST: wht-grn, f-gr clusters,
firm-friable, sub-ang, NS

SH: yel, gry-grn-blk-gry

SST & SH: as above
(interbedded)

MISS 4665 (-1630)

LS: wht-crm, vfxln, dense,
pelletal, chalky, NS

LS: as above

LS: as above w/abund
blk-gry-brn shale

LS & SH: as above

LS: wht-crm-tan, vfxln,
pelletal, sl chalky, dense,
NS

DOL: tan-gry, vfxln,
mottled, dense, sl foss, sl
chalky, NS

DOL: wht-tan-gry, vfxln,
dense, mottled, sl foss, sl
chalky, NS

RTD - 4765'
LTD - 4756'

DST #4 4594-4630 (Johnson)
30:60:30:60
IF: BOB 1 min, return 4.5 in
FF: BOB 1 min, return BOB 15 min
Recovery: 850' GIP,
1930' Gsy Oil (25%G, 75%O),
180' Gsy Oil (30%G, 70%O)
IHP: 2279 FHP: 2230
IFP: 202-580 ISIP: 1076
FFP: 614-812 FSIP: 1067
Oil Gravity - 25 API
BHT - 132 F

