

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1266066
OIL & GAS CONSERVATION DIVISION

Form ACO-1
November 2016
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 Recompletion Date	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: _____

1266066

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
TCores aken	<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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Culbreath Oil & Gas Company, Inc.
Well Name	K.S. Baker 1-21
Doc ID	1266066

Tops

Name	Top	Datum
Anhydrite	2497	+612
Base Anhy	2517	+592
Heebner	3947	-838
Lansing	3997	+888
BKC	4327	-1218
Marmaton	4371	-1262
Pawnee	4465	-1356
Fort Scott	4526	-1417
Cherokee	4556	-1447
Miss	4673	-1621



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Culbreath Oil & Gas

21-14S-34W Logan KS

3501 S. Yale Ave
Tulsa OK 74135

Baker #1-21

Job Ticket: 62775

DST#: 1

ATTN: Steve Murphy

Test Start: 2015.09.16 @ 00:47:00

GENERAL INFORMATION:

Formation: **LKC " L "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:03:20

Time Test Ended: 08:04:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols

Unit No: 78

Interval: 4252.00 ft (KB) To 4282.00 ft (KB) (TVD)

Reference Elevations: 3109.00 ft (KB)

Total Depth: 4282.00 ft (KB) (TVD)

3102.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6752

Inside

Press@RunDepth: 257.43 psig @ 4253.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.09.16

End Date:

2015.09.16

Last Calib.:

2015.09.16

Start Time: 00:47:01

End Time:

08:04:40

Time On Btm:

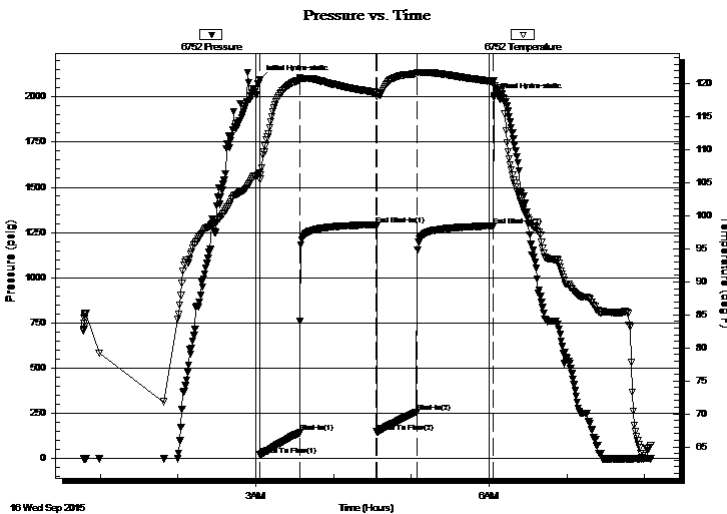
2015.09.16 @ 03:03:10

Time Off Btm:

2015.09.16 @ 06:04:00

TEST COMMENT: 30 IF - 1/2" blow built to BoB @ 11 1/2 mins
60 ISI - No return
30 FF - Surface blow started @ 1 min built to BoB @ 13 1/2 mins
60 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2095.05	106.51	Initial Hydro-static
1	18.46	105.56	Open To Flow (1)
31	142.16	120.57	Shut-In(1)
90	1293.42	118.68	End Shut-In(1)
90	146.45	118.10	Open To Flow (2)
121	257.43	121.53	Shut-In(2)
180	1286.54	120.35	End Shut-In(2)
181	1997.09	120.41	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
63.00	MCW - 30%M - 70%W	0.88
442.00	MCW - 10%M - 90%W	6.20
30.00	MCW - 20%M - 80%W	0.42

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Culbreath Oil & Gas

21-14S-34W Logan KS

3501 S. Yale Ave
Tulsa OK 74135

Baker #1-21

Job Ticket: 62775

DST#: 1

ATTN: Steve Murphy

Test Start: 2015.09.16 @ 00:47:00

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:

14000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 11000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	MCW - 30%M - 70%W	0.884
442.00	MCW - 10%M - 90%W	6.200
30.00	MCW - 20%M - 80%W	0.421

Total Length: 535.00 ft Total Volume: 7.505 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

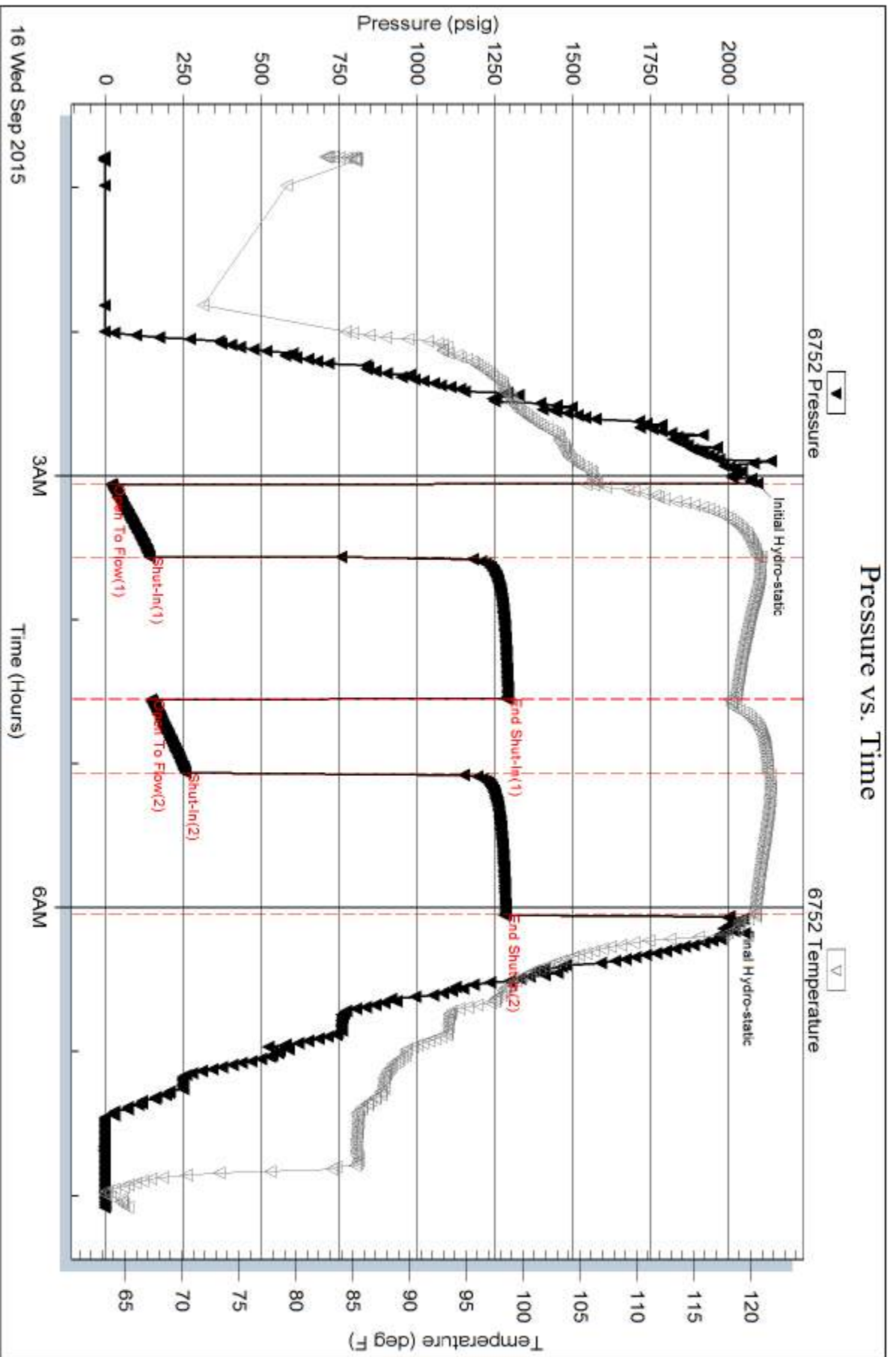
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .545 @ 60.7 DEG F

CHLORIDES = 14,000 PPM





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Culbreath Oil & Gas

21-14S-34W Logan KS

3501 S. Yale Ave
Tulsa OK 74135

Baker #1-21

Job Ticket: 62778

DST#: 2

ATTN: Steve Murphy

Test Start: 2015.09.16 @ 19:48:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:48:20

Time Test Ended: 01:26:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 78

Interval: 4374.00 ft (KB) To 4384.00 ft (KB) (TVD)

Reference Elevations: 3109.00 ft (KB)

Total Depth: 4384.00 ft (KB) (TVD)

3102.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6752

Inside

Press@RunDepth: 20.78 psig @ 4375.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.09.16

End Date:

2015.09.17

Last Calib.:

2015.09.17

Start Time: 19:48:01

End Time:

01:26:10

Time On Btm:

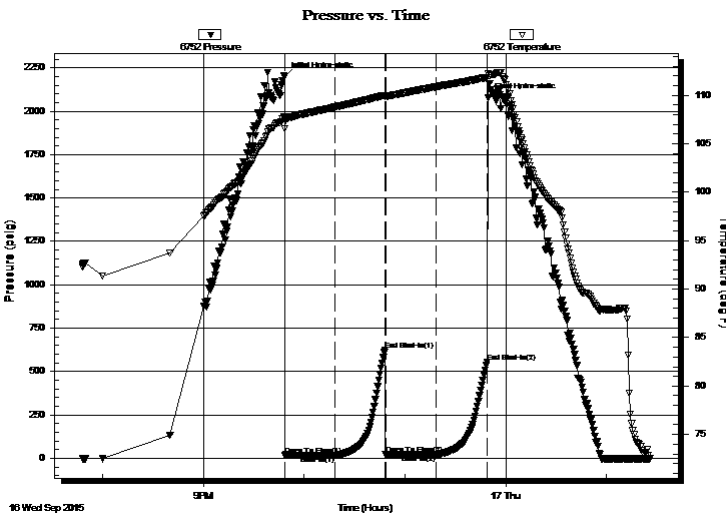
2015.09.16 @ 21:48:10

Time Off Btm:

2015.09.16 @ 23:49:40

TEST COMMENT: 30 IF - Surface blow
30 ISI - No return
30 FF - No blow
30 FSI - No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2198.45	107.73	Initial Hydro-static
1	19.10	106.55	Open To Flow (1)
30	18.15	108.78	Shut-In(1)
60	624.17	110.00	End Shut-In(1)
61	20.53	109.86	Open To Flow (2)
91	20.78	110.88	Shut-In(2)
121	552.38	111.85	End Shut-In(2)
122	2079.80	112.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM - 10%o - 90%M	0.28

* 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

21-14S-34W Logan KS

3501 S. Yale Ave
Tulsa OK 74135

Baker #1-21

Job Ticket: 62778

DST#: 2

ATTN: Steve Murphy

Test Start: 2015.09.16 @ 19:48:00

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	OCM - 10%o - 90%M	0.281

Total Length: 20.00 ft Total Volume: 0.281 bbl

Num Fluid Samples: 0

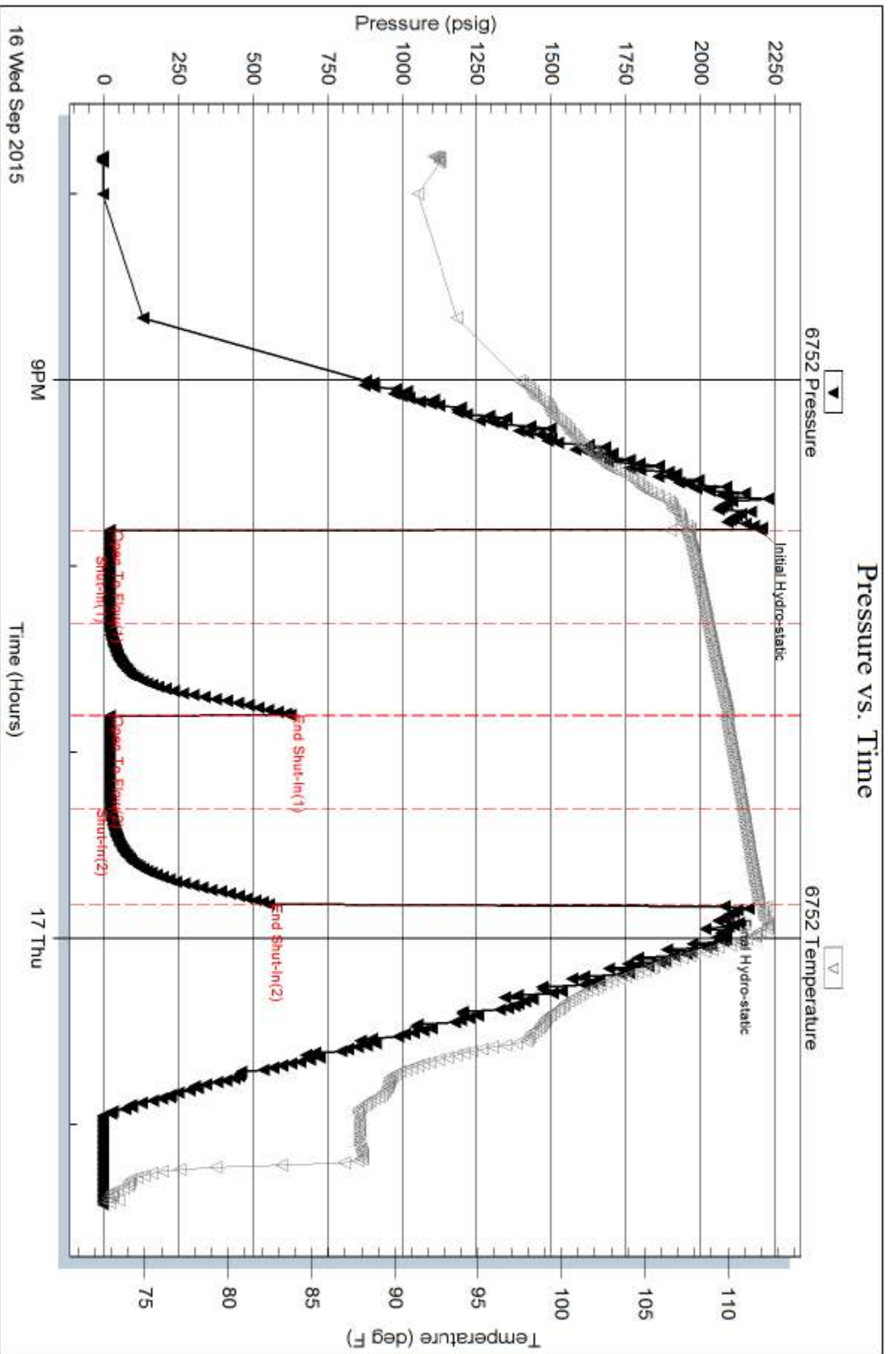
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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: Baker #1-21

API: 15-109-21434-00-00

Location: Logan County

License Number: 34344

Spud Date: 9/10/15

Region: Kansas

Drilling Completed: 9/19/15

Surface Coordinates: 525' FNL & 2412' FEL (Approx. SW NW NE)

Section 21-T14S-R34W

Bottom Hole Coordinates: Vertical well, same as above

Ground Elevation (ft): 3102'

K.B. Elevation (ft): 3109'

Logged Interval (ft): 3500'

To: TD

Total Depth (ft): RTD - 4820' / LTD - 4817'

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 Oil & Gas Co, LLC

Address: 1532 S. Peoria Ave
Tulsa, OK 74120

GEOLOGIST

Name: Steven P. Murphy, PG (KS License #228)

Company: Consulting Petroleum Geologist

Address: 3365 CR 390
Otis, KS 67565

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 - 2497 (+612)
Anhydrite Base - 2517 (+592)
Topeka - 3661 (-552)
Heebner - 3947 (-838)
Toronto - 3968 (-868)
Lansing - 3997 (-888)
Muncie Creek - 4160 (-1051)
Stark - 4248 (-1139)
Hushpuckney - 4291 (-1182)
Base KC - 4327 (-1218)
Marmaton - 4371(-1262)
Altamont - 4391 (-1282)
Pawnee - 4465 (-1356)
Myrick Station - 4510 (-1401)
Fort Scott - 4526 (-1417)
Cherokee - 4556 (-1447)
Johnson Zone - 4599 (-1490)
Morrow Shale - 4657 (-1548)
Morrow Sst - 4697 (-1588)
Mississippian - 46730 (-1621)

DSTs

Drillstem testing was performed by Trilobite Testing, Inc (Oberlin shop):

DST #1 4252-4282 (LKC "K")

30:60:30:60

IF: BOB 11 min, NR

FF: BOB 13 min, NR

Recovery: 30' MCW (80%W, 20%M),

442' MCW (90%W, 10%M),

63' MCW (70%W, 30%M)

IHP: 2095 FHP: 1997

IFP: 18-142 ISIP: 1293

FFP: 146-257 FSIP: 1287

BHT - 120 F

Chlorides - 14,000 ppm

DST #2 4374-4384 (Marmaton)

30:30:30:30

IF: Surface blow, NR

FF: No blow, NR

Recovery: 20' OCM (10%O, 90%M)

IHP: 2198 FHP: 2080

IFP: 19-18 ISIP: 624

FFP: 21-21 FSIP: 552

BHT - 112 F

DST #3 4378-4408 (Altamont "A")

30:60:30:60

IF: BOB 5.5 min, 2" return

FF: BOB 7 min, 1.5" return died to 3/4"

Recovery: 472' GIP,

95' GO (10%G, 90%O),

378' GO (205G, 80%O),

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

126' GMCO (40%G, 40%O, 20%M)

Total Fluid - 850'

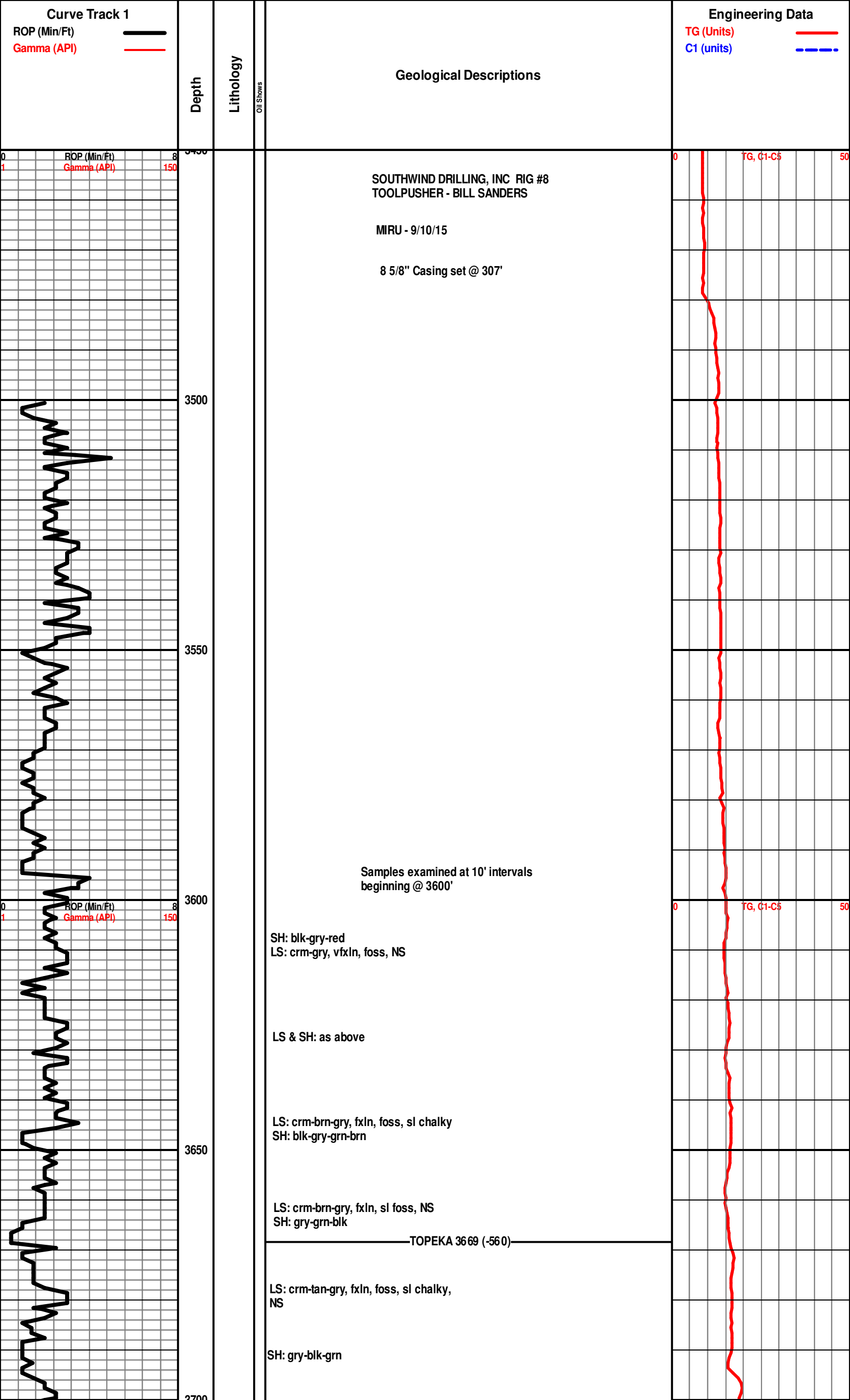
IHP: 2200 FHP: 2071

IFP: 25-161 ISIP: 1321

FFP: 166-279 FSIP: 1320

Oil Gravity - 34 API

BHT - 121 F



Curve Track 1
 ROP (Min/Ft) ———
 Gamma (API) ———

Depth
Lithology
 Oil Shows

Geological Descriptions

Engineering Data
 TG (Units) ———
 C1 (units) - - - -

ROP (Min/Ft) 0 8
 Gamma (API) 1 150

TG, C1-C5 0 50

SOUTHWIND DRILLING, INC RIG #8
 TOOLPUSHER - BILL SANDERS
 MIRU - 9/10/15
 8 5/8" Casing set @ 307'

3500

3550

3600

3650

3700

Samples examined at 10' intervals
 beginning @ 3600'

SH: blk-gry-red
 LS: crm-gry, vfxln, foss, NS

LS & SH: as above

LS: crm-brn-gry, fxln, foss, sl chalky
 SH: blk-gry-grn-brn

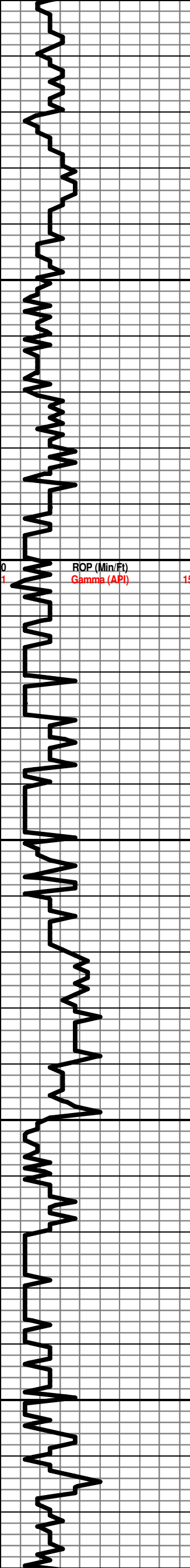
LS: crm-brn-gry, fxln, sl foss, NS
 SH: gry-grn-blk

TOPEKA 3669 (-560)

LS: crm-tan-gry, fxln, foss, sl chalky,
 NS

SH: gry-blk-grn

TG, C1-C5 0 50



3700
3750
3800
3850
3900
3950

LS: crm-gry, fxln, dense, sl foss, sl chalky, NS
SH: gry-brn-grn

LS & SH: as above

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

LS: as above
SH: gry-grn-red

LS & SH: as above

LS & SH: as above

SH: blk-gry-grn-red Begin 10' sample examination @ 3800'

LS: crm-brn-gry, vfxln, dense, foss, chalky, NS

LS: as above

SH: gry-grn-red

LS: crm-tan-gry, fxln, dense, foss, NS

SH: blk-gry-grn

SH: as above
LS: crm-gry, fxln, fr vug por, foss, sl chalky, NS

LS: as above

SH: blk-gry-grn

LS: crm-tan-gry, fxln, sl foss, sl chalky, NS

LS: as above

SH: blk-red-gry-grn

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

SH: blk

LS: crm-gry, fxln, sl foss, chalky, dense, NS

LS: as above

LS: crm-tan-gry, fxln, sl chalky, NS

LS: as above

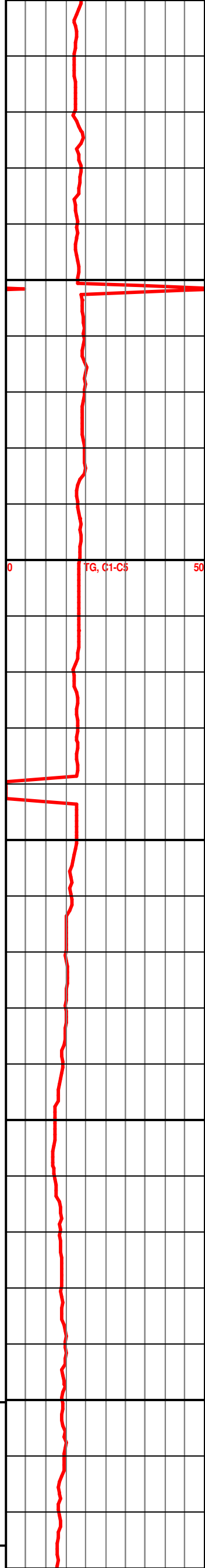
LS: wht-tan-gry, vfxln, dense, oolitic, NS

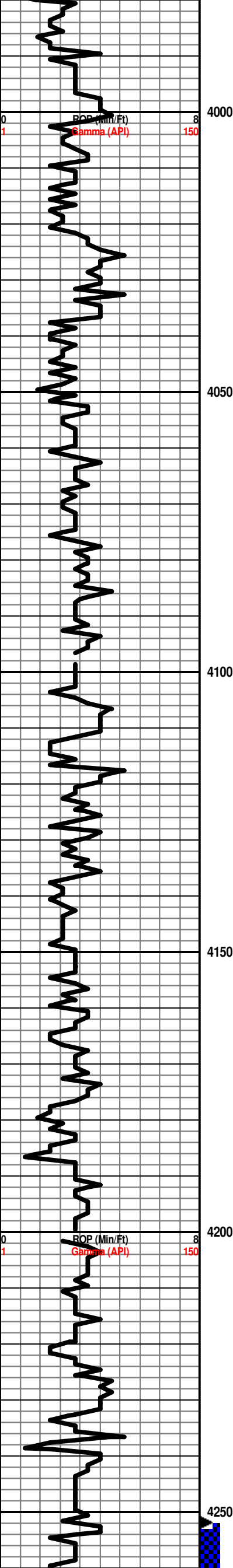
HEEBNER 3951 (-851)

SH: blk, carb

SH: gry-grn-red

TORONTO 3977 (-868)





LS: crm-tan-gry, vfxln, dense, NS

LS: as above

SH: gry-brn-grn-blk

LANSING 4001 (-892)

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

LS: as above

SH: blk-brn-grn-gry-

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

LS: as above

LS: wht-crm-gry, f-vfxln, mostly dense,
rare fr vug por, sl ool, chalky, NS

LS: as above, dense, NS

SH: blk-brn-gry-red

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

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

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

LS: wht-tan-gry, vfxln, dense, sl foss,
oolitic, chalky, NS

LS: wht-tan-gry, vfxln, dense, oolitic in
pt, NS

MUNCIE CRK 4137 (-1028)

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

Short trip @ 4154'

LS: crm-tan-gry, fxl, dense, sl ool,
chalky, NS

MUNCIE CRK 4164 (-1055)

SH: blk, gry

LS: as above

LS: wht-brn-gry, vfxln, dense, oolitic,
sl chalky, cherty, NS (w/blk-gry-brn
shale)

LS & SH: as above

LS: wht-brn, vfxln, dense, sl oolitic,
chalky, minor chert, NS
(w/blk-gry-grn-brn shale)

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

LS: as above

SH: blk-gry-brn-grn

LS: wht-brn-gry, vfxln, v. dense, sl
chalky, NS

LS: as above

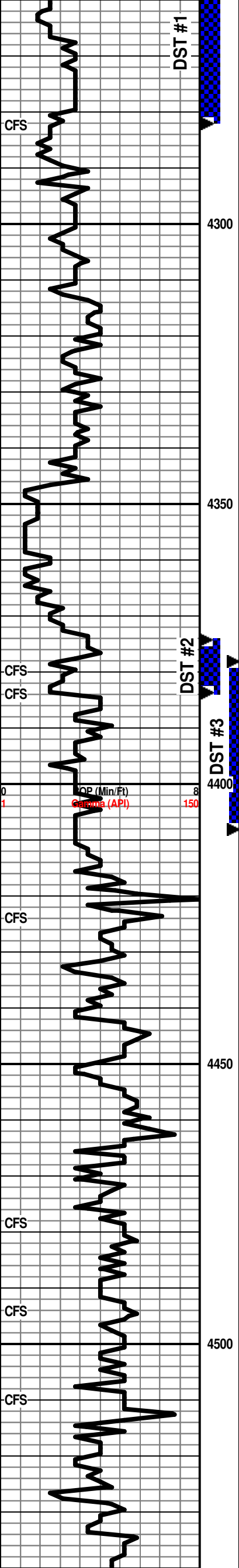
LS: as above

Strap @ 4282' - 0.55' short to board

STARK 4259 (-1150)

TG, C1-C5

TG, C1-C5



LS: wht-tan-brn, fxln, oolitic, pr-fr inter-ool por, fsfo, spotty dk stn, sl odor
 LS: as above
 LS: wht-brn-gry, fxln, v. chalky, fr inxln por, ssfo on brk, v. spotty lite stn, no odor
 LS: wht-brn-gry, vfxln, dense, chalky, vssfo, NVP, tr dead stn, no odor

DST #1 4252-4282 (LKC "K")
 30:60:30:60
 IF: BOB 11 min, NR
 FF: BOB 13 min, NR
 Recovery: 30' MCW (80%W, 20%M), 442' MCW (90%W, 10%M), 63' MCW (70%W, 30%M)
 IHP: 2095 FHP: 1997
 IFP: 18-142 ISIP: 1293
 FFP: 146-257 FSIP: 1287
 BHT - 120 F
 Chlorides - 14,000 ppm

HUSHPUCKNEY 4301 (-1192)
 LS: wht-tan-gry, vfxln, v. dense, chalky, minor chert, NS (w/abund blk-gry-red shale)
 LS & SH: as above
 LS: wht-tan-gry, vfxln, v. dense, v. chalky, NS (w/abund blk-gry-red shale)

BKC 4328 (-1219)
 SH: blk-gry-red-brn
 LS: crm-brn-gry, vfxln, dense, chalky, NS
 w/shale as above
 LS: as above

DST #2 4374-4384 (Marmaton)
 30:30:30:30
 IF: Surface blow, NR
 FF: No blow, NR
 Recovery: 20' OCM (10%O, 90%M)
 IHP: 2198 FHP: 2080
 IFP: 19-18 ISIP: 624
 FFP: 21-21 FSIP: 552
 BHT - 112 F

MARMATON 4373 (-1264)
 SH: blk-gry-red-grn (silty)
 SH: as above

LS: wht-brn-gry, fxln, oolitic, ssfo on brk, spotty dk stn, fr inter-ool por, sl odor (show in 60 min sample only-drilled another 4' for test)

ALTAMONT 4391 (-1282)
 SH: gry-blk-brn-red
 LS: wht-tan-gry, fxln, oolitic, fr inter-ool por, ssfo, spotty lite stn, fr odor
 SH: blk-gry-grn-brn-red

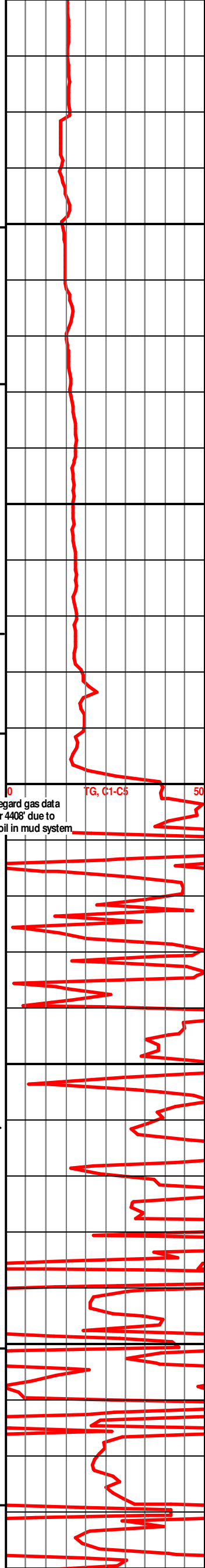
DST #3 4378-4408 (Altamont "A")
 30:60:30:60
 IF: BOB 5.5 min, 2" return
 FF: BOB 7 min, 1.5" return died to 3/4"
 Recovery: 472' GIP, 95' GO (10%G, 90%O), 378' GO (205G, 80%O), 251' GMCO (30%G, 50%O, 20%M), 126' GMCO (40%G, 40%O, 20%M)
 Total Fluid - 850'
 IHP: 2200 FHP: 2071
 IFP: 25-161 ISIP: 1321
 FFP: 166-279 FSIP: 1320
 Oil Gravity - 34 API
 BHT - 121 F

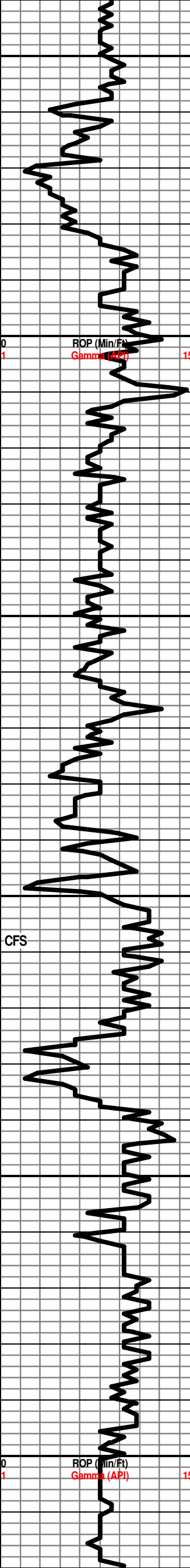
LS: wht-tan, fxln, oolitic, pr inter-ool por, tr fo on brk, tr lite stn, sl odor
 LS: wht-tan, vfxln, oolitic in pt, tite, ff spotty stn, sl odor
 SH: gry-grn-blk-brn
 LS: wht-brn, vfxln, v. dense, chalky, NS
 SH: blk-gry
 LS: wht-tan-brn, vfxln, v. dense, sl cherty, NS
 LS: wht-tan-gry, vfxln, v. dense, NS
 SH: blk

PAWNEE 4462 (-1353)
 LS: wht-tan-gry, vfxln, dense, chalky, NS
 LS: as above
 LS: wht-tan-gry, vfxln, v. dense, sl chalky, NS
 LS: as above
 SH: blk, carb

MYRICK STA 4501 (-1389)
 LS: crm-tan-gry, vfxln, v. dense, cherty, NS
 LS: as above
 LS: crm-tan, vfxln, v. dense, oolitic, nsfo, spotty stn, sl odor
 SH: blk, carb

FT SCOTT 4529 (-1420)
 LS: wht-tan-gry, vfxln, v. dense, cherty, NS





4550

LS: crm-brn-gry, vfxln, dense, cherty, tr fo on brk, v. spotty stn, sl odor

LS: as above

CHEROKEE 4558 (-1449)

SH: blk, carb

LS: crm-brn, vfxln, dense, chalky, NS (w/abnd blk shale)

LS: wht-brn, vfxln, dense, chalky, oolitic, NS (w/abund blk-gry shale)

LS & SH: as above

LS: crm-brn-gry, vfxln, v. dense, cherty, NS (w/abund blk-gry shale)

4600

JOHNSON 4602 (-1493)

LS: wht-brn-gry, vfxln, v. dense, oolitic, cherty, NS (w/abund blk shale)

LS & SH: as above

LS: crm-tan-gry, vfxln, dense, quest fract por?, tr fo on brk, v. spotty stn, sl odor (w/abund blk-gry shale)

LS & SH: as above

LS & SH: as above

4650

LS & SH: as above (no show)

MORROW SH 4657 (-1548)

SH: blk-gry-grn-red & LS: crm-brn-gry, dense, NS

SH: blk-gry-grn-brn-red-olive

SH: as above

SH: as above

SH: as above

Sst: clr-grn, f-gr, friable, well-std, NS

4700

LS: crm-tan-gry, vfxln, dense, sand inclusions, sl chalky, NS (w/shale as above)

LS & SH: as above

LS & SH: as above

MORROW SST 4725 (-1616)

SST: clr-wht-grn, f-m gr, sub-rd, poorly std, firm to friable, fr-gd intergran por, sl cherty, NS

MISS 4738 (-1629)

4750

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

LS: as above

LS: as above

LS: as above

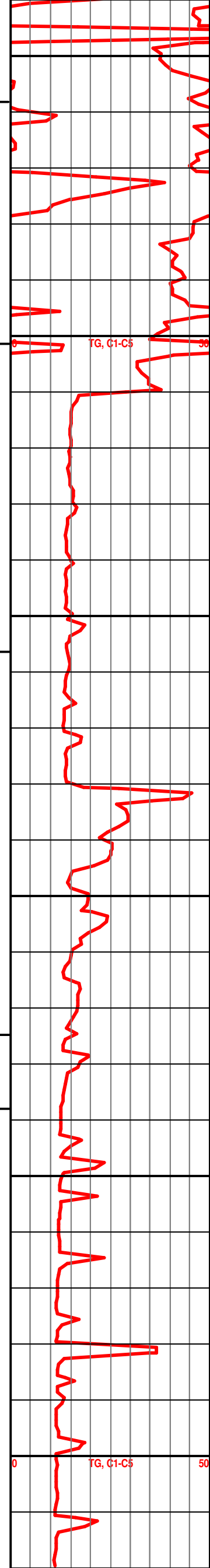
LS: as above

4800

LS: crm-brn-gry, vfxln, v. dense, chalky,

LS: as above

LS: as above



ALLIED OIL & GAS SERVICES, LLC

Federal Tax I.D. #20-5975804

117212
067679
c.288

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Quilley 15

DATE <u>9/16/15</u>	SEC. <u>01</u>	TWP. <u>19</u>	RANGE <u>39</u>	CALLED OUT	ON LOCATION	JOB START <u>2:00</u>	JOB FINISH <u>3:30</u>
LEASE <u>Baker</u>	WELL # <u>1-21</u>	LOCATION <u>Russell Springs 5 To Indian</u>			COUNTY <u>Logan</u>	STATE <u>ky</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>4E 1N Winto</u>			

CONTRACTOR Southwind
 TYPE OF JOB Spuds
 HOLE SIZE 8 1/4 T.D. 307
 CASING SIZE 8 1/8 DEPTH 320
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT 19.4
 EQUIPMENT

PUMP TRUCK CEMENTER Alex Ryan
 # 822 HELPER Logan Ryan
 BULK TRUCK
 # 323 DRIVER Paul - M.L.
 BULK TRUCK
 # DRIVER

OWNER Emp
 CEMENT AMOUNT ORDERED 200 Can 390cc
290 gal

COMMON 200 @ 17.90 3580.00
 POZMIX @
 GEL 376 @ 50 18800
 CHLORIDE 564 @ 100 620.40
 ASC @

TOTAL 4,388.40
 DISCOUNT 48% 2106.43

REMARKS:

Run, Circulate, Mix Cement, Displace Cement
Shut-in
Cement Bed Circulate
Job OK
Alex, Kevin, Paul

SERVICE

HANDLING 216.27 @ 2.50 536.68
 MILEAGE 25 70/mile 9.87 for 1221 41
 DEPTH OF JOB
 PUMP TRUCK CHARGE 1572.25
 EXTRA FOOTAGE @
 HV MILEAGE 45 @ 7.20 324.00
 LV MILEAGE 45 @ 4.50 198.00
8 1/8 Snelgrove @ 2.75 225.00

TOTAL 4,089.51
 DISCOUNT 48% 1962.96

CHARGE TO: Colbreath
 STREET _____
 CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

@ _____
 @ _____
 @ _____
 @ _____
 @ _____
 TOTAL _____
 DISCOUNT _____ %

To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME _____
 SIGNATURE William Schaefer

SALES TAX (If Any) _____
 TOTAL CHARGES 8,477.91
 DISCOUNT 4,069.39 (48%) IF PAID IN 30 DAYS
 NET TOTAL 4,408.51 IF PAID IN 30 DAYS



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1000939	1718	09/28/2015
INVOICE NUMBER			
91926721			

Pratt (620) 672-1201
 B CULBREATH OIL & GAS CO INC
 I 3501 SOUTH YALE AVE
 L TULSA
 L OK US 74135
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME K.S. Baker 1-21
 O LOCATION
 B COUNTY Logan
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE	
40878456	19905		Net - 30 days	10/28/2015	
		QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 09/20/2015 to 09/20/2015					
0040878456					
171812714A Cement-New Well Casing/Pi 09/20/2015 Cement 5 1/2" Two Stage Longstring					
50/50 POZ 200.00 EA 5.06 1,012.00 T					
A-Con Blend Common 500.00 EA 8.28 4,140.00 T					
Celloflake 125.00 EA 1.70 212.75 T					
Calcium Chloride 1,410.00 EA 0.48 681.03 T					
C-41P 42.00 EA 1.84 77.28 T					
FLA-322 101.00 EA 3.45 348.45 T					
Super Flush 250.00 EA 1.13 281.75 T					
Gilsonite 1,000.00 EA 0.31 308.20 T					
Salt 1,114.00 EA 0.23 256.22 T					
"Two Stage Cement Collar, 5 1/2" (Blue) 1.00 EA 2,070.00 2,070.00					
"Auto Fill Float Shoe 5 1/2" (Blue)" 1.00 EA 165.60 165.60					
"Turbolizer, 5 1/2" (Blue)" 10.00 EA 50.60 506.00					
"Cement Scratchers Cable Type, 7"" 40.00 EA 34.50 1,380.00					
"5 1/2" Basket (Blue)" 3.00 EA 133.40 400.20					
"Unit Mileage Chg (PU, cars one way)" 100.00 MI 2.07 207.00					
Heavy Equipment Mileage 300.00 MI 3.45 1,035.00					
"Proppant & Bulk Del. Chgs., per ton mil 3,190.00 EA 1.15 3,668.50					
Depth Charge; 4001'-5000' 1.00 EA 1,159.20 1,159.20					
Blending & Mixing Service Charge 700.00 BAG 0.64 450.80					
Plug Container Util. Chg. 1.00 EA 115.00 115.00					
"Service Supervisor, first 8 hrs on loc. 1.00 EA 80.50 80.50					

D15034

205

Long String

9/15
Di

SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	18,555.48
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	585.41
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	19,140.89
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



DRILL STEM TEST REPORT

Prepared For: **Culbreath Oil & Gas**

3501 S. Yale Ave
Tulsa OK 74135

ATTN: Steve Murphy

K.S. Baker #1-21

21-14s-34w Logan KS

Start Date: 2015.09.17 @ 08:36:00

End Date: 2015.09.17 @ 15:46:39

Job Ticket #: 62779 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.11.25 @ 09:23:45



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Culbreath Oil & Gas

21-14s-34w Logan KS

3501 S. Yale Ave
Tulsa OK 74135

K.S. Baker #1-21

ATTN: Steve Murphy

Job Ticket: 62779

DST#: 3

Test Start: 2015.09.17 @ 08:36:00

GENERAL INFORMATION:

Formation: **Altamont "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:27:50

Time Test Ended: 15:46:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Nichols

Unit No: 78

Interval: 4378.00 ft (KB) To 4408.00 ft (KB) (TVD)

Reference Elevations: 3109.00 ft (KB)

Total Depth: 4408.00 ft (KB) (TVD)

3102.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6752 Inside

Press@RunDepth: 279.49 psig @ 4379.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.09.17

End Date: 2015.09.17

Last Calib.: 2015.09.17

Start Time: 08:36:01

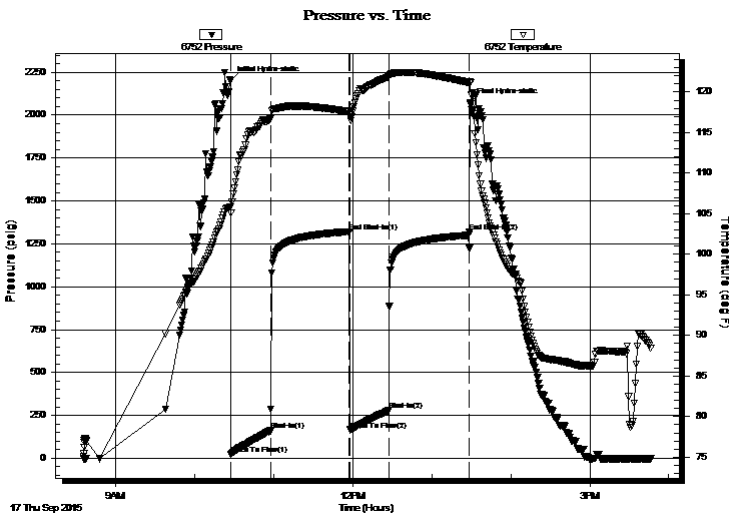
End Time: 15:46:40

Time On Btm: 2015.09.17 @ 10:27:40

Time Off Btm: 2015.09.17 @ 13:29:20

TEST COMMENT: 30 IF - 1/2" blow built to BoB @ 5 1/2 mins
60 FSI - Surface blow built to 2" @ 8 mins died back to 1"
30 FF - 1/2" blow built to BoB @ 7 mins
60 FSI - Surface blow built to 1 1/2" @ 15 mins died back to 3/4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2199.63	105.83	Initial Hydro-static
1	25.00	105.08	Open To Flow (1)
30	160.96	116.67	Shut-In(1)
90	1320.76	117.58	End Shut-In(1)
91	166.03	116.99	Open To Flow (2)
120	279.49	121.87	Shut-In(2)
182	1319.92	121.14	End Shut-In(2)
182	2071.01	121.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	GMCO - 20%M - 40%G - 40%o	1.77
251.00	GMCO - 30%G - 20%M - 50%o	3.52
378.00	GO - 20%G - 80%o	5.30
95.00	GO - 10%G - 90%o	1.33
0.00	472' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Culbreath Oil & Gas

21-14s-34w Logan KS

3501 S. Yale Ave
Tulsa OK 74135

K.S. Baker #1-21

Job Ticket: 62779

DST#: 3

ATTN: Steve Murphy

Test Start: 2015.09.17 @ 08:36:00

Tool Information

Drill Pipe:	Length: 4362.00 ft	Diameter: 3.80 inches	Volume: 61.19 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 61.19 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	4378.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 ft				
Tool Length:	50.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4359.00	
Shut In Tool	5.00			4364.00	
Hydraulic tool	5.00			4369.00	
Packer	5.00			4374.00	20.00 Bottom Of Top Packer
Packer	4.00			4378.00	
Stubb	1.00			4379.00	
Recorder	0.00	6752	Inside	4379.00	
Recorder	0.00	8322	Outside	4379.00	
Perforations	26.00			4405.00	
Bullnose	3.00			4408.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Culbreath Oil & Gas

21-14s-34w Logan KS

3501 S. Yale Ave
Tulsa OK 74135

K.S. Baker #1-21

Job Ticket: 62779

DST#: 3

ATTN: Steve Murphy

Test Start: 2015.09.17 @ 08:36:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 10.38 in³
Resistivity: ohm.m
Salinity: 11000.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 34 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

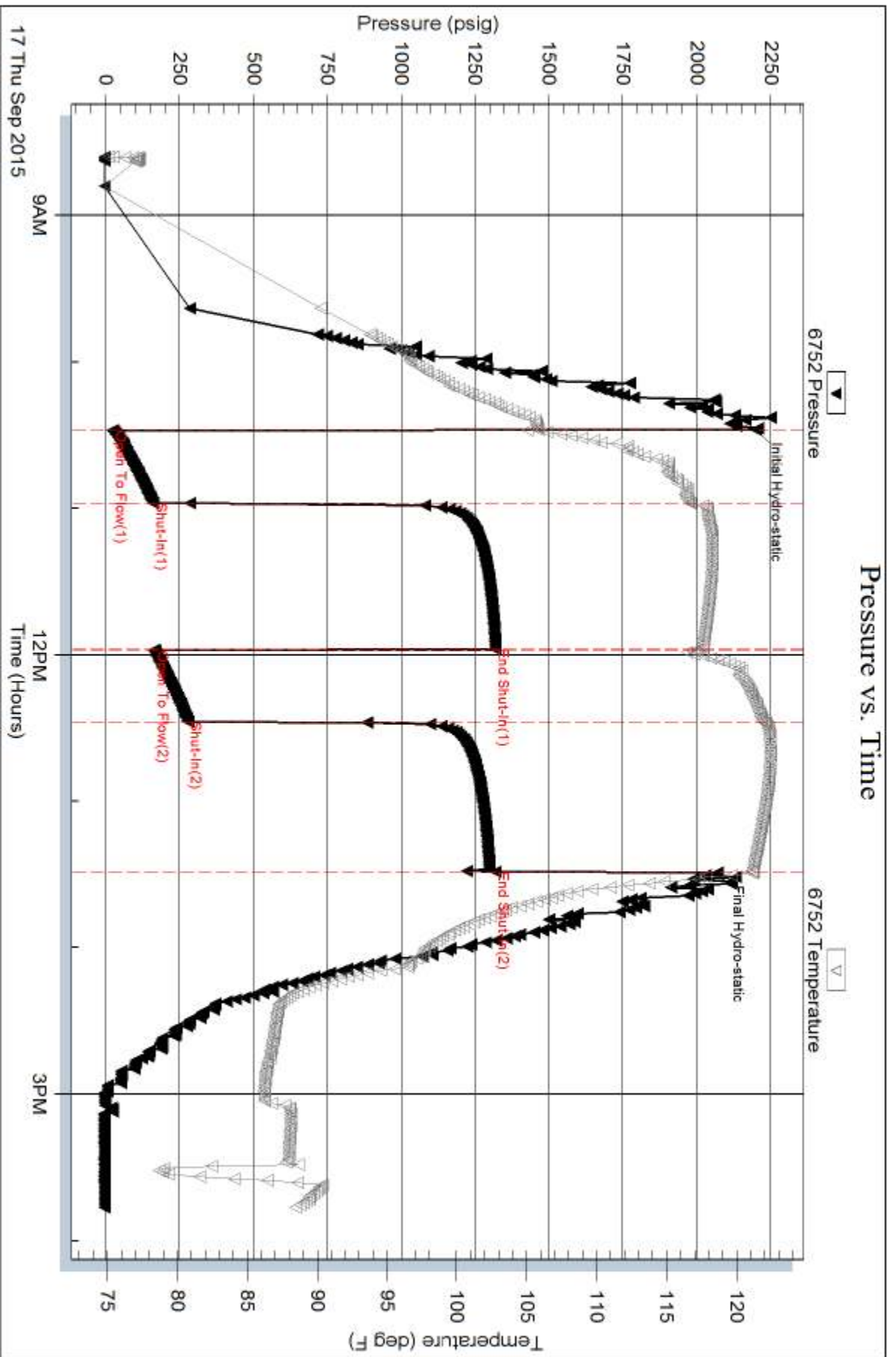
Length ft	Description	Volume bbl
126.00	GMCO - 20%M - 40%G - 40%o	1.767
251.00	GMCO - 30%G - 20%M - 50%o	3.521
378.00	GO - 20%G - 80%o	5.302
95.00	GO - 10%G - 90%o	1.333
0.00	472' GIP	0.000

Total Length: 850.00 ft Total Volume: 11.923 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: OIL API = 36 @ 80 DEG F = 34 COR 60 DEG F

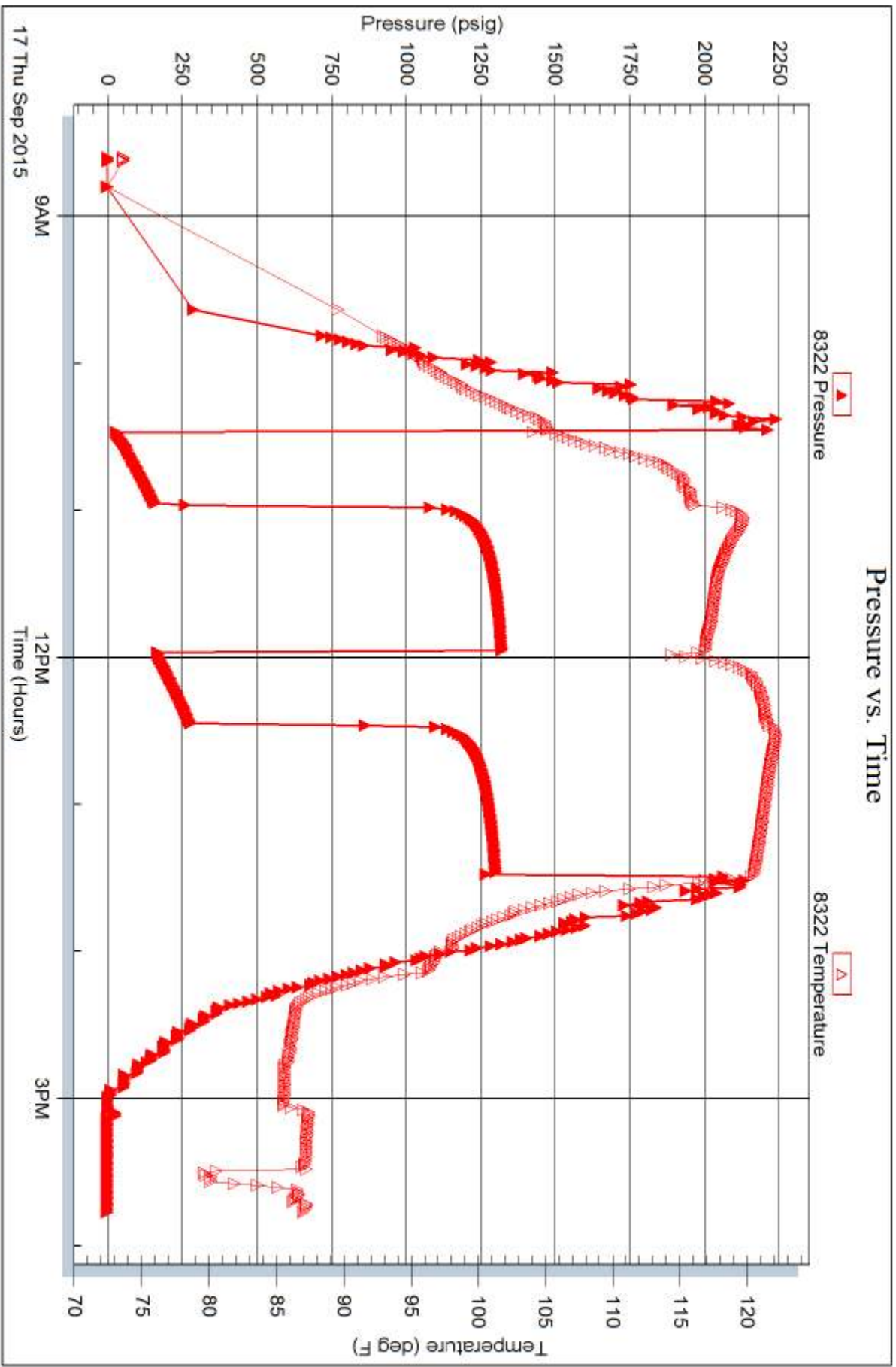


Serial #: 8322

Outside Culbreath Oil & Gas

K.S. Baker #1-21

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62779

Printed: 2015.11.25 @ 09:23:46