Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1187134

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 5259
Name: Mai Oil Operations, Inc.
Address 1: 8411 PRESTON RD STE 800
Address 2:
City: DALLAS State: TX Zip: 75225 + 5520
Contact Person: Allen Bangert
Phone: (214) 219-8883
CONTRACTOR: License # 33350
Name: Southwind Drilling, Inc.
Wellsite Geologist: Jim Musgrove
Purchaser:

Designate Type of Completion:

☑ New Well ☐ Re-Entry ☐ Workover

☑ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☐ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ 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 ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

11/12/2013	11/19/2013	11/19/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-167-23914-00-00
Spot Description:
E2 - SW - SW - SE Sec. 11 Twp. 15 S. R. 14 ☐ East ☑ West
330 Feet from ☐ North / ☑ South Line of Section
2000 Feet from ☑ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Russell
Lease Name: Flegler 'C' Well #: 4
Field Name:
Producing Formation: Arbuckle
Elevation: Ground: 1857 Kelly Bushing: 1865
Total Vertical Depth: 3382 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 518 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: 70000 ppm Fluid volume: 80 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: Mai Oil Operations, Inc.
Lease Name: Flegler "B" License #: 5259
Quarter NW Sec. 11 Twp. 15 S. R. 14 ☐ East ☑ West
County: Russell Permit #: D30923

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: 02/05/2014
☑ **Confidential Release Date:** 02/05/2016
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 02/06/2014

[redacted] 1187134

Operator Name: Mai Oil Operations, Inc. Lease Name: Flegler 'C' Well #: 4

Sec. 11 Twp. 15 S. R. 14 ☐ East ☑ West County: Russell

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

CDNL
DIL
Micro

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

Name	Top	Datum
Tarkio Lime	2481	-616
Topeka	2756	-891
Heebner	2986	-1121
Toronto	3002	-1137
Lansing	3048	-1183
Arbuckle	3308	1443

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	518	60-40 POZ	250	2 % gel, 3% CC
Production	7.875	5.5	14	3376	60-40 POZ	200	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

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

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

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

PRODUCTION INTERVAL:
_____
_____

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Mai Oil Operations, Inc.
Well Name	Flegler 'C' 4
Doc ID	1187134

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	518	60-40 POZ	250	2 % gel, 3% CC
Production	7.875	5.5	14	3376	60-40 POZ	200	

Musgrove PETROLEUM CORPORATION
Claflin, Kansas

NOTES

Company:Mai Oil Operations, Inc.

Lease:Flegler "C" #4

Field:Trapp

Location:E2-SW-SW-SE (330' FSL & 2000' FEL)

Sec:11 Twsp:15S Rge:14W

County:Russell State:Kansas

KB:1865' GL:1857'

API #:15-167-23914-00-00

Contractor:Southwind Drilling Inc. (Rig #3)

Spud:11/12/2013 Comp:11/19/2013

RTD:3381' LTD:3382'

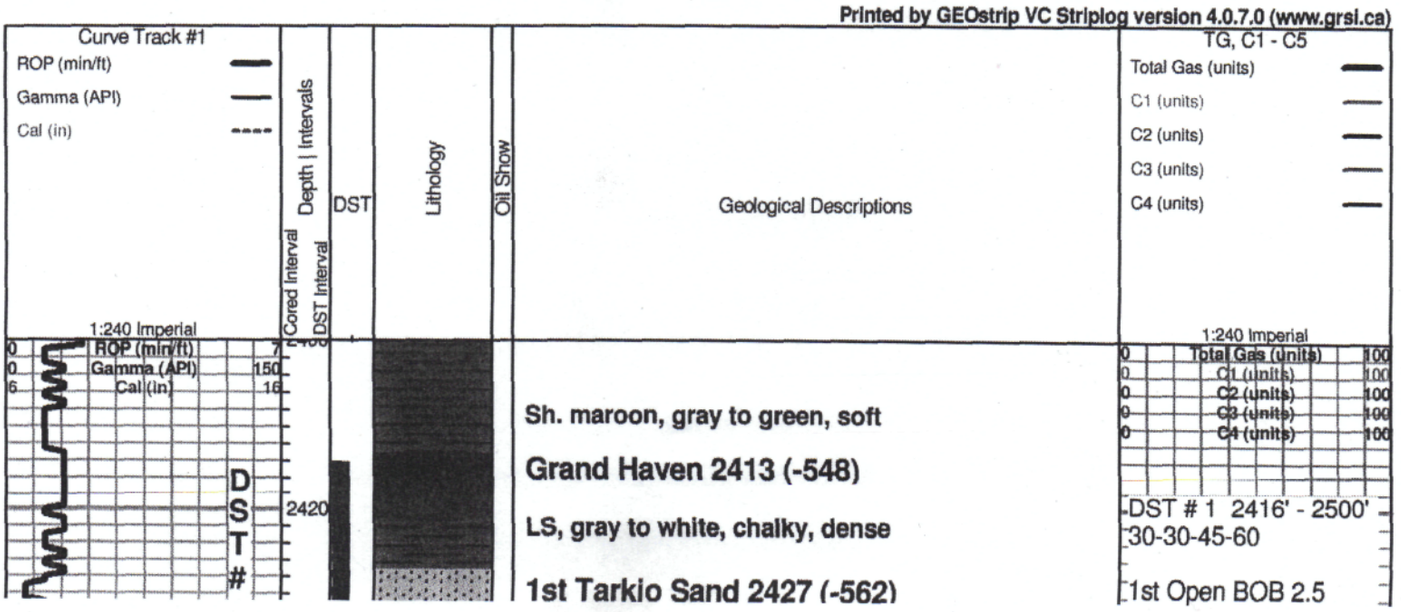
Mud Up: 2300' Type Mud: Chemical

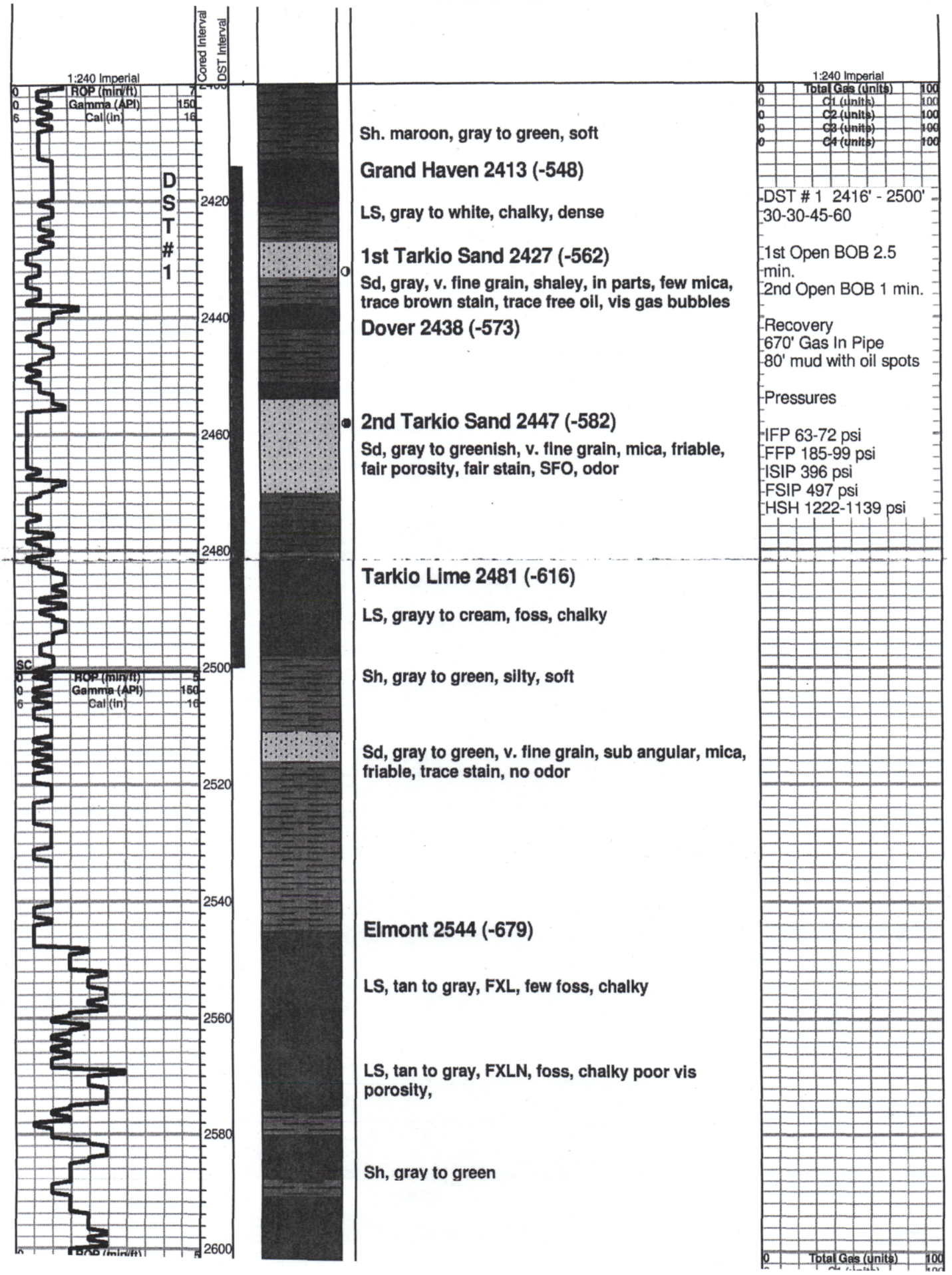
Samples Saved From: 2400' to RTD
Drilling Time Kept From:2400' to RTD
Samples Examined From: 2400' to RTD
Geological Supervision from:2400' to RTD
Geologist on Well: Kurt Talbott & Wyatt Urban

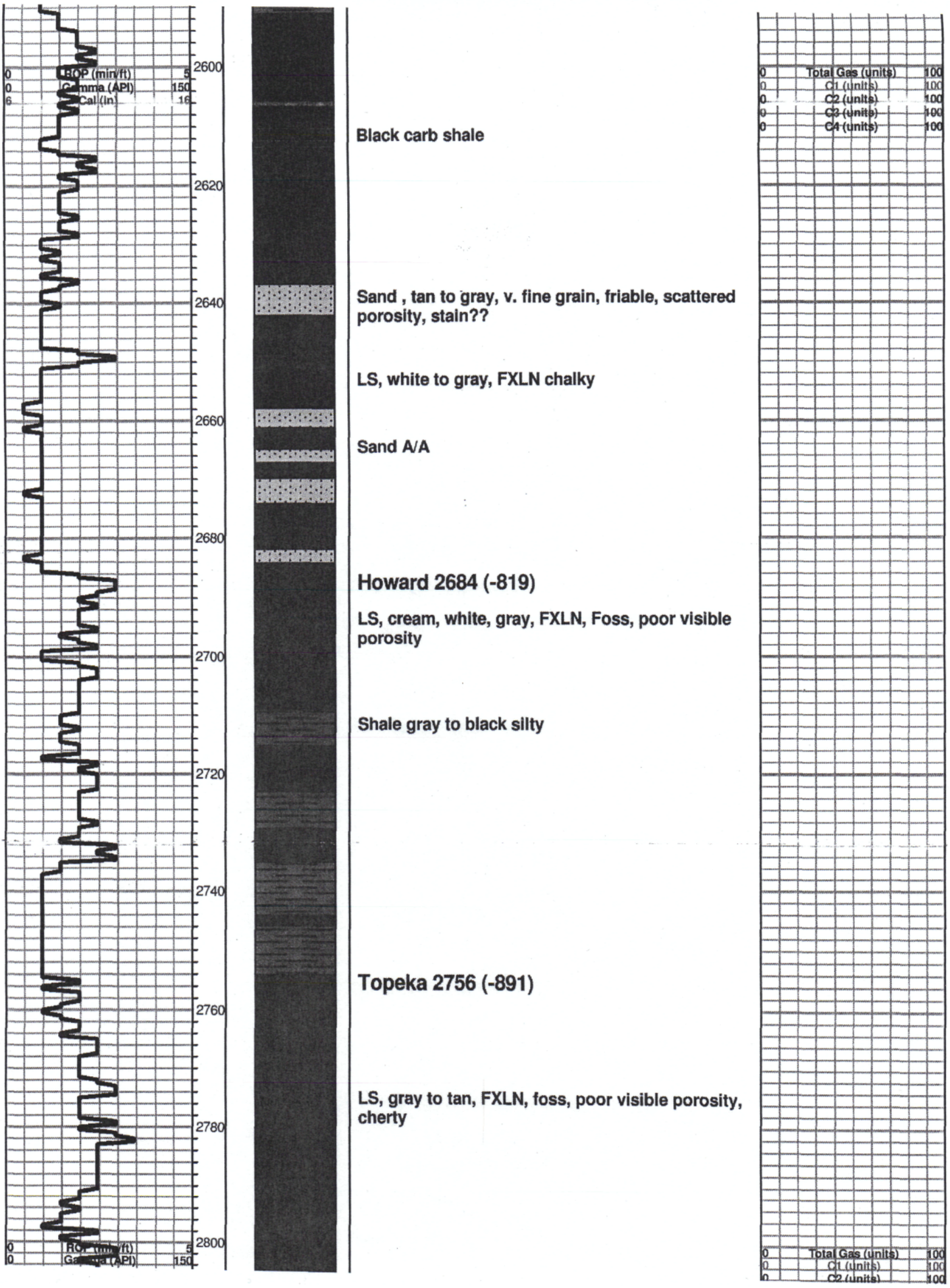
Surface Casing: 8 5/8@ 500'

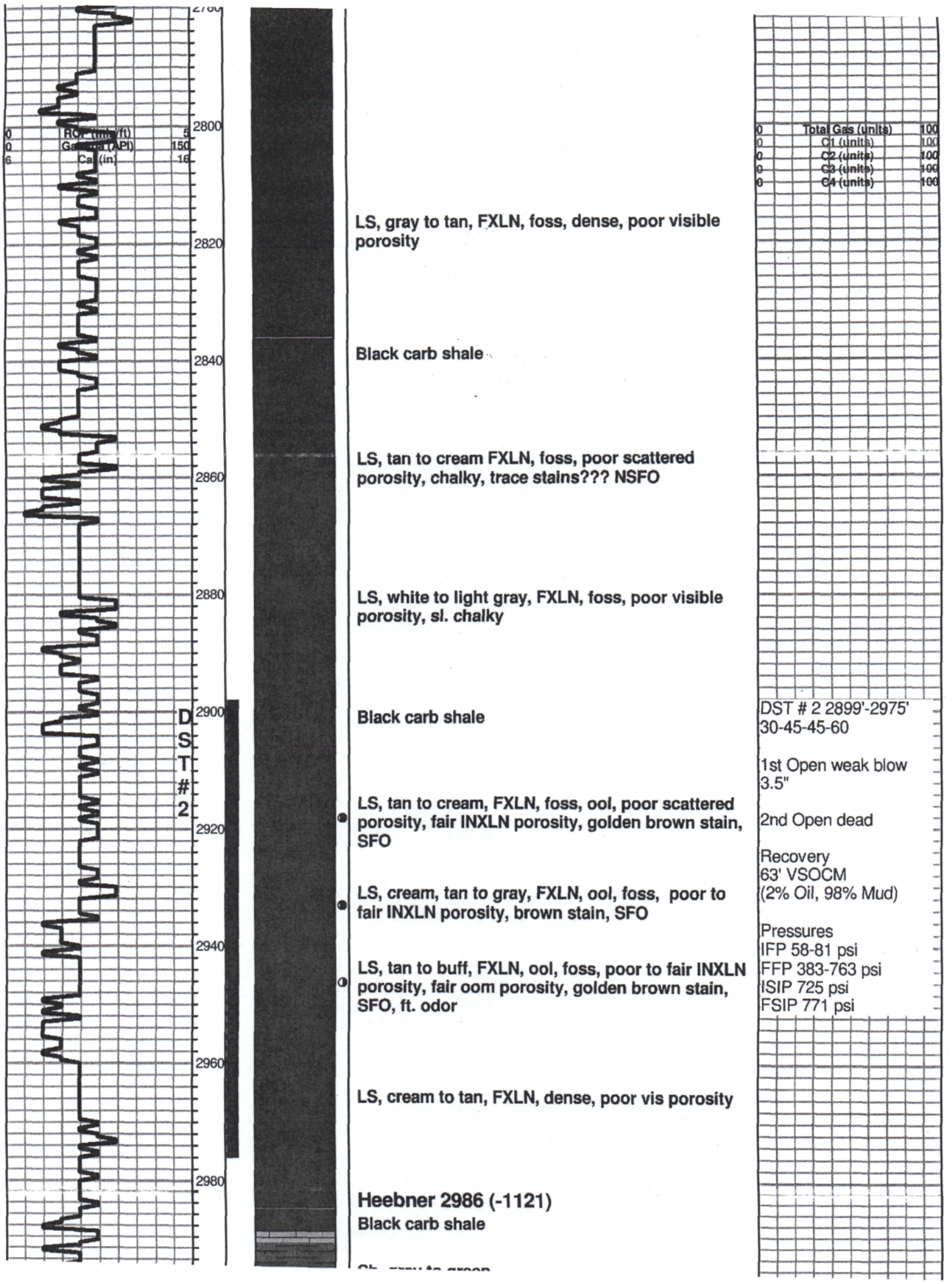
✳ Gas

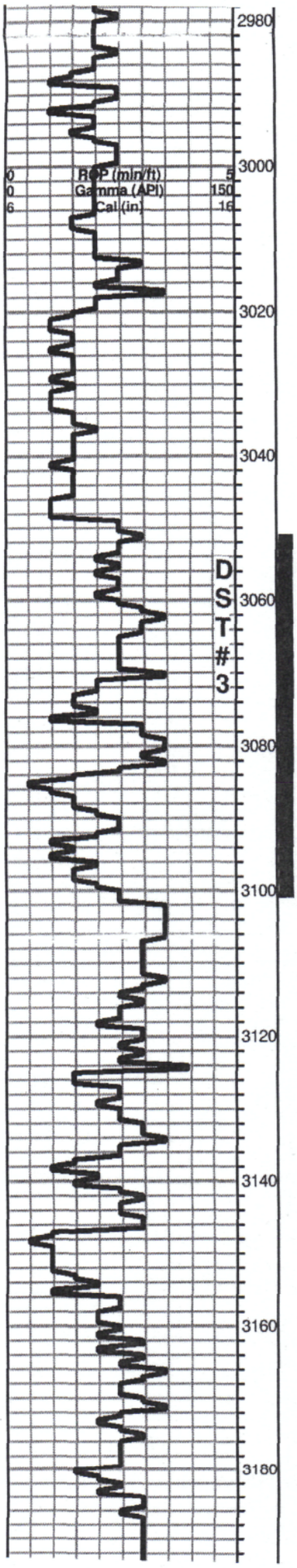
Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

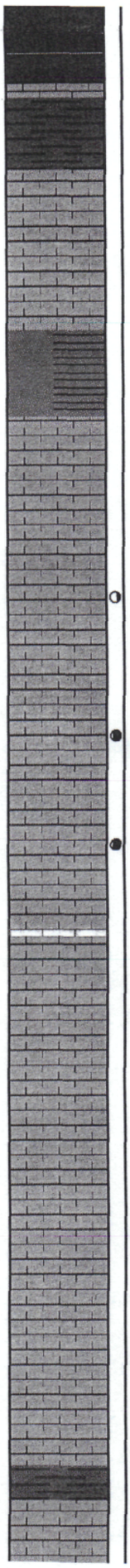



1:240 Imperial
Cored Interval
DST Interval
ROP (min/ft)
Gamma (API)
Cal (in)
DST #1
2420
2440
2460
2480
SC
2500
2520
2540
2560
2580
2600
Sh. maroon, gray to green, soft
Grand Haven 2413 (-548)
LS, gray to white, chalky, dense
1st Tarkio Sand 2427 (-562)
Sd, gray, v. fine grain, shaley, in parts, few mica, trace brown stain, trace free oil, vis gas bubbles
Dover 2438 (-573)
2nd Tarkio Sand 2447 (-582)
Sd, gray to greenish, v. fine grain, mica, friable, fair porosity, fair stain, SFO, odor
Tarkio Lime 2481 (-616)
LS, grayy to cream, foss, chalky
Sh, gray to green, silty, soft
Sd, gray to green, v. fine grain, sub angular, mica, friable, trace stain, no odor
Elmont 2544 (-679)
LS, tan to gray, FXL, few foss, chalky
LS, tan to gray, FXLN, foss, chalky poor vis porosity,
Sh, gray to green
1:240 Imperial
Total Gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
DST # 1 2416' - 2500'
30-30-45-60
1st Open BOB 2.5 min.
2nd Open BOB 1 min.
Recovery
670' Gas In Pipe
80' mud with oil spots
Pressures
IFP 63-72 psi
FFP 185-99 psi
ISIP 396 psi
FSIP 497 psi
HSH 1222-1139 psi
Total Gas (units)


0 ROP (min/ft) 5
0 Gamma (API) 150
6 Cal (in) 16
2600
2620
2640
2660
2680
2700
2720
2740
2760
2780
2800
0 ROP (min/ft) 5
0 Gamma (API) 150
Black carb shale
Sand , tan to gray, v. fine grain, friable, scattered porosity, stain??
LS, white to gray, FXLN chalky
Sand A/A
Howard 2684 (-819)
LS, cream, white, gray, FXLN, Foss, poor visible porosity
Shale gray to black silty
Topeka 2756 (-891)
LS, gray to tan, FXLN, foss, poor visible porosity, cherty
0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100
0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100


0 ROP (min/ft) 5
0 Gamma Ray (API) 150
6 Cal (in) 16
2800
2820
2840
2860
2880
2900
2920
2940
2960
2980
DST #2
0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100
LS, gray to tan, FXLN, foss, dense, poor visible porosity
Black carb shale
LS, tan to cream FXLN, foss, poor scattered porosity, chalky, trace stains??? NSFO
LS, white to light gray, FXLN, foss, poor visible porosity, sl. chalky
Black carb shale
LS, tan to cream, FXLN, foss, ool, poor scattered porosity, fair INXLN porosity, golden brown stain, SFO
LS, cream, tan to gray, FXLN, ool, foss, poor to fair INXLN porosity, brown stain, SFO
LS, tan to buff, FXLN, ool, foss, poor to fair INXLN porosity, fair oom porosity, golden brown stain, SFO, ft. odor
LS, cream to tan, FXLN, dense, poor vis porosity
Heebner 2986 (-1121)
Black carb shale
DST # 2 2899'-2975'
30-45-45-60
1st Open weak blow 3.5"
2nd Open dead
Recovery
63' VSOCM
(2% Oil, 98% Mud)
Pressures
IFP 58-81 psi
FFP 383-763 psi
ISIP 725 psi
FSIP 771 psi





Heebner 2986 (-1121)

Black carb shale

Sh. gray to green

Toronto 3002 (-1137)

LS, white to cream, FXLN, few foss, poor INXLN porosity, golden brown stains, NSFO, Trc. gas bubbles

Sh, gray, green, brown

Lansing 3048 (-1183)

LS, cream to white, FXLN dense, poor PPT porosity, poor INXLN porosity, Sl. chalky, trc. SFO, light brown stain

LS, tan to buff, FXLN, poor-fair INXLN porosity, golden brown stain, SFO, odor

LS, white to cream , FXLN, ool, poor to fair INXLN porosity, golden brown stains, SFO, odor

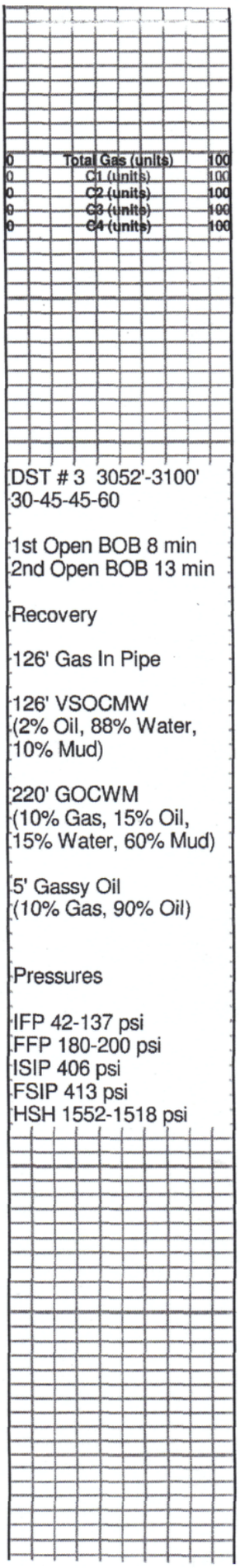
LS, white to light gray, FXLN, slightly ool, chalky, poor visible porosity

LS, gray to tan, FXLN, ool, poor visible porosity,

LS, white to cream, FXLN, ool, poor oomoldic porosity, trace stain, faint odor

LS, white to light gray, FXLN, ool, scattered poor OOM porosity, chalky

Shale gray to green



DST # 3 3052'-3100'
30-45-45-60

1st Open BOB 8 min
2nd Open BOB 13 min

Recovery

126' Gas In Pipe

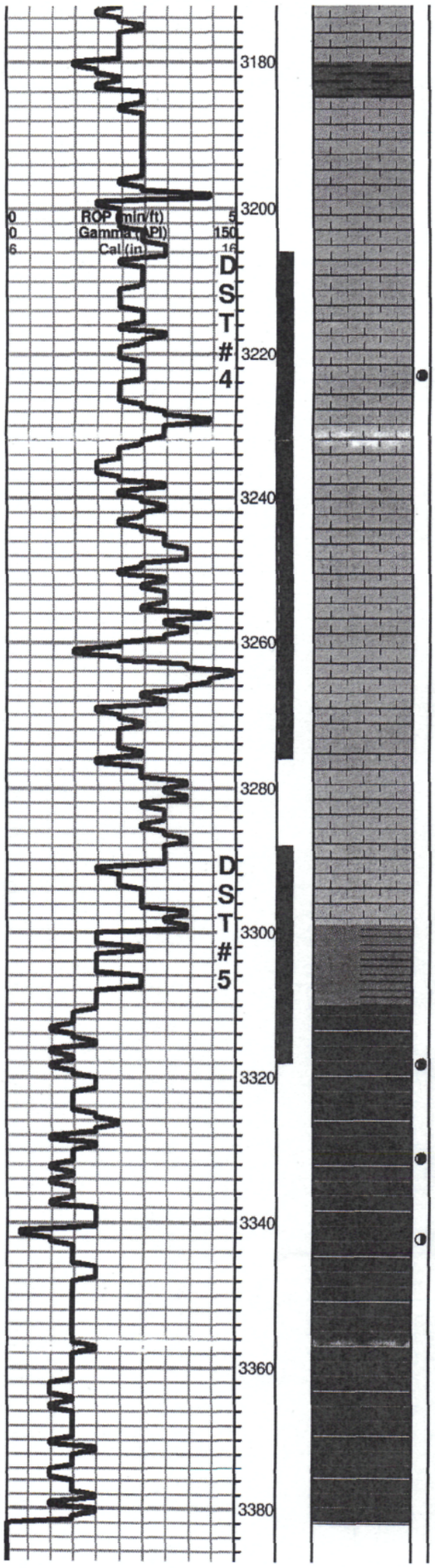
126' VSOCMW
(2% Oil, 88% Water,
10% Mud)

220' GOCWM
(10% Gas, 15% Oil,
15% Water, 60% Mud)

5' Gassy Oil
(10% Gas, 90% Oil)

Pressures

IFP 42-137 psi
FFP 180-200 psi
ISIP 406 psi
FSIP 413 psi
HSH 1552-1518 psi



Shale gray to green

LS, white to light gray, FXLN, poor visible porosity, chalky, no shows

LS, cream to tan, FXLN, ool, poor INXLN porosity, golden brown stain, SFO, odor

LS, cream to light gray, FXLN, poor scattered porosity, chalky, trace brown stain, no shows

LS, cream to white, FXLN, ool, poor to fair INXLN porosity, poor oomoldic porosity, Sl. chalky, light goldne brown stain, SFO, odor

LS, cream to white, FXLN, poor visible porosity, dense

Shale, maroon to gray

Arbuckle 3308 (-1443)

Dol, white to cream, F-Med XLN, rhomb, poor to fair INXLN porosity, golden brown stain, SFO, odor

Dol, white to cream, MXLN, good scattered porosity, fair SFO, good odor

Dol, white to cream, F-MXLN, fair scattered porosity, Light SFO, good odor

Dol white, FXLN, poor INXLN porosity, trace black stain, NSFO, faint odor

Dol, white, FXLN, dense, poor INXLN porosity, no shows

RTD 3381'

DST # 4 3206'-3275'
30-45-45-60

1st Open 5.5"
2nd Open weak blow died in 20 min

Recovery

60' Mud with Oil spots

Pressures

IFP 42-61 psi
FFP 532-673 psi
ISIP 619 psi
FSIP 695 psi
HSH 1466-1611 psi

DST # 5 3288-3318
30-30-30-30

1st Open weak blow
2nd Open no blow

Recovery

15' mud

IFP 18-19 psi
FFP 189-572 psi
ISIP 360 psi
FSIP 387 psi
HSH 1655-1617 psi

DST #6 3288-3331
30-30-45-60

1st Open BOB 10 min
2nd Open BOB 13 min

Recovery
220' Gas In Pipe

189' GHOCM
(10% Gas, 35% Oil, 55% Mud)

221' Gassy Oil
(20% Gas, 80% Oil)

Pressures

IFP 21-83 psi
FFP 90-162 psi
ISIP 1034 psi
FSIP 1032 psi
HSH 1618-1600 psi

DRILL STEM TEST REPORT

Mai Oil Operations

8411 Preston RD Ste 800
Dallas TX 75225-5520

ATTN: Jim Musgrove

11-15s-14w Russell,KS

Flegler C #4

Job Ticket: 039756 **DST#: 1**

Test Start: 2013.11.15 @ 05:23:45

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:56:15
Time Test Ended: 11:13:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Jeff Brown
Unit No: 67

Interval: 2416.00 ft (KB) To 2500.00 ft (KB) (TVD)
Total Depth: 2500.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

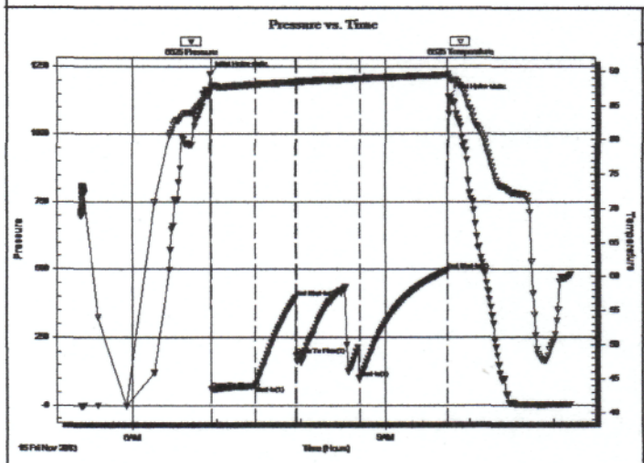
Reference Elevations: 1865.00 ft (KB)
1857.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Outside**

Press@RunDepth: 98.95 psig @ 2483.00 ft (KB)
Start Date: 2013.11.15 End Date: 2013.11.15
Start Time: 05:23:46 End Time: 11:12:45

Capacity: 8000.00 psig
Last Calib.: 2013.11.01
Time On Btm: 2013.11.15 @ 06:55:15
Time Off Btm: 2013.11.15 @ 09:44:45

TEST COMMENT: IFP=Strong blow BOB in 2-1/2 min
ISI=Weak surface blow back
FFP=Strong blow BOB in 1 min
FSI=Weak surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1222.22	87.01	Initial Hydro-static
1	62.76	87.88	Open To Flow (1)
32	71.81	88.17	Shut-In(1)
61	395.62	88.49	End Shut-In(1)
62	185.44	88.48	Open To Flow (2)
107	98.95	89.06	Shut-In(2)
169	497.25	89.53	End Shut-In(2)
170	1138.58	89.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	Mud with oil spot's	0.39
0.00	670=GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Mai Oil Operations

8411 Preston RD Ste 800
Dallas TX 75225-5520

ATTN: Jim Musgrove

11-15s-14w Russell,KS

Flegler C #4

Job Ticket: 039757 **DST#: 2**

Test Start: 2013.11.16 @ 07:20:16

GENERAL INFORMATION:

Formation: **Topeka/Plattsmouth**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:22:46
Time Test Ended: 12:58:46

Test Type: Conventional Bottom Hole (Reset)
Tester: Jeff Brown
Unit No: 67

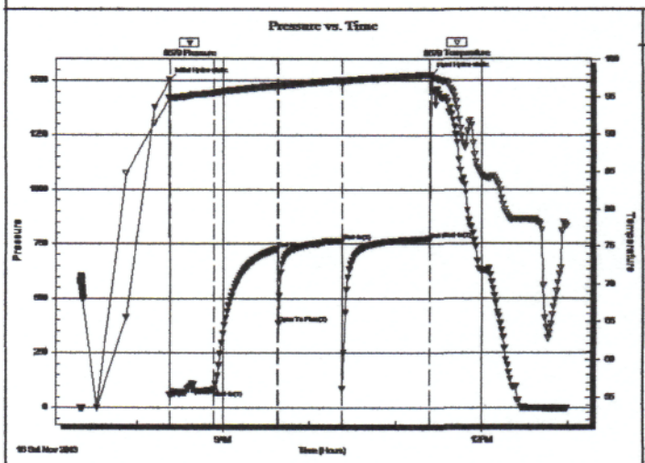
Interval: 2899.00 ft (KB) To 2975.00 ft (KB) (TVD)
Total Depth: 2975.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1865.00 ft (KB)
1857.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8679 **Inside**
Press@RunDepth: 762.50 psig @ 2966.00 ft (KB)
Start Date: 2013.11.16 End Date: 2013.11.16
Start Time: 07:20:17 End Time: 12:58:46

Capacity: 8000.00 psig
Last Calib.: 2013.11.02
Time On Btm: 2013.11.16 @ 08:22:16
Time Off Btm: 2013.11.16 @ 11:24:46

TEST COMMENT: IFP=Weak blow built to 3 1/2"
ISI=Weak surface blow back died out in 6 min
FFP=Weak surface blow
FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1503.13	94.85	Initial Hydro-static
1	58.48	94.69	Open To Flow (1)
31	80.94	95.53	Shut-In(1)
76	725.34	96.51	End Shut-In(1)
76	383.21	96.43	Open To Flow (2)
120	762.50	97.20	Shut-In(2)
182	771.03	97.93	End Shut-In(2)
183	1526.08	97.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	VSOCM 2%O 98%M	0.31

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Mai Oil Operations

8411 Preston RD Ste 800
Dallas TX 75225-5520

ATTN: Jim Musgrove

11-15s-14w Russell,KS

Flegler C #4

Job Ticket: 039758 **DST#: 3**

Test Start: 2013.11.17 @ 22:39:57

GENERAL INFORMATION:

Formation: **LKC A-C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:44:57
Time Test Ended: 05:18:27

Test Type: Conventional Bottom Hole (Reset)
Tester: Jeff Brown
Unit No: 67

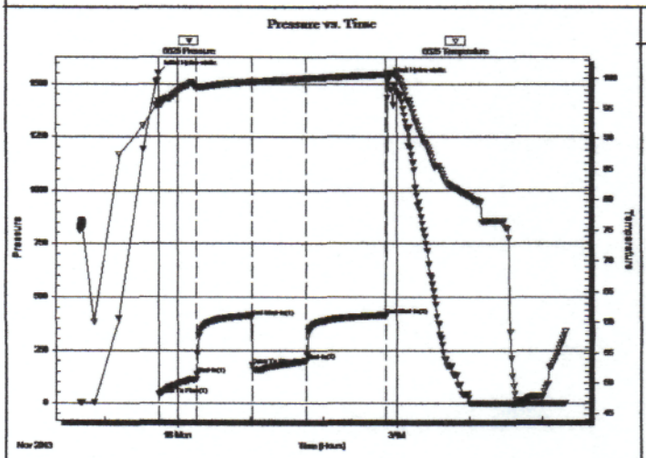
Interval: 3052.00 ft (KB) To 3100.00 ft (KB) (TVD)
Total Depth: 3100.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1865.00 ft (KB)
1857.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Outside**
Press@RunDepth: 199.87 psig @ 3088.00 ft (KB)
Start Date: 2013.11.17 End Date: 2013.11.18
Start Time: 22:39:58 End Time: 05:18:27

Capacity: 8000.00 psig
Last Calib.: 2013.11.03
Time On Btm: 2013.11.17 @ 23:44:27
Time Off Btm: 2013.11.18 @ 02:52:57

TEST COMMENT: IFP=Good blow BOB in 8 min
ISI=Dead no blow back
FFP=Good blow BOB in 13 min
FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1552.00	96.17	Initial Hydro-static
1	41.74	95.95	Open To Flow (1)
32	136.71	98.54	Shut-In(1)
77	406.12	99.37	End Shut-In(1)
77	179.87	99.36	Open To Flow (2)
122	199.87	99.90	Shut-In(2)
187	413.16	100.60	End Shut-In(2)
189	1517.58	100.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	VSOCMW 2%O 10%M 88%W	1.77
220.00	GOCWM 10%G 15%O 15%W 60%M	3.09
5.00	Gassy Oil 10%G 90%O	0.07
0.00	126=GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Mai Oil Operations

8411 Preston RD Ste 800
Dallas TX 75225-5520

ATTN: Jim Musgrove

11-15s-14w Russell,KS

Flegler C #4

Job Ticket: 039759 **DST#: 4**

Test Start: 2013.11.17 @ 21:23:24

GENERAL INFORMATION:

Formation: **LKC H-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:25:24
Time Test Ended: 03:48:54

Test Type: Conventional Bottom Hole (Initial)
Tester: Jeff Brown
Unit No: 67

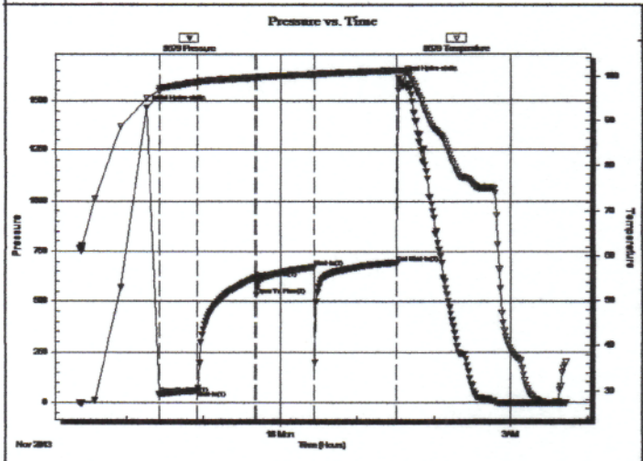
Interval: 3206.00 ft (KB) To 3275.00 ft (KB) (TVD)
Total Depth: 3275.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1865.00 ft (KB)
1857.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8679 **Inside**
Press@RunDepth: 672.70 psig @ 3242.00 ft (KB)
Start Date: 2013.11.17 End Date: 2013.11.18
Start Time: 21:23:25 End Time: 03:42:54

Capacity: 8000.00 psig
Last Calib.: 2013.11.04
Time On Btm: 2013.11.17 @ 22:15:24
Time Off Btm: 2013.11.18 @ 01:32:24

TEST COMMENT: IFP=Fair blow Built to 5 1/2"
ISI=Dead no blow back
FFP=Weak surface blow died out in 20 min
FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1466.09	95.13	Initial Hydro-static
10	41.76	96.74	Open To Flow (1)
40	60.68	98.68	Shut-In(1)
85	619.22	99.73	End Shut-In(1)
86	532.11	99.74	Open To Flow (2)
131	672.70	100.42	Shut-In(2)
196	695.37	101.22	End Shut-In(2)
197	1610.65	101.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Mud with oil spots	0.84

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Mai Oil Operations

8411 Preston RD Ste 800
Dallas TX 75225-5520

ATTN: Jim Musgrove

11-15s-14w Russell,KS

Flegler C #4

Job Ticket: 039760 **DST#: 5**

Test Start: 2013.11.18 @ 11:42:32

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:11:32
Time Test Ended: 16:33:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Jeff Brown
Unit No: 67

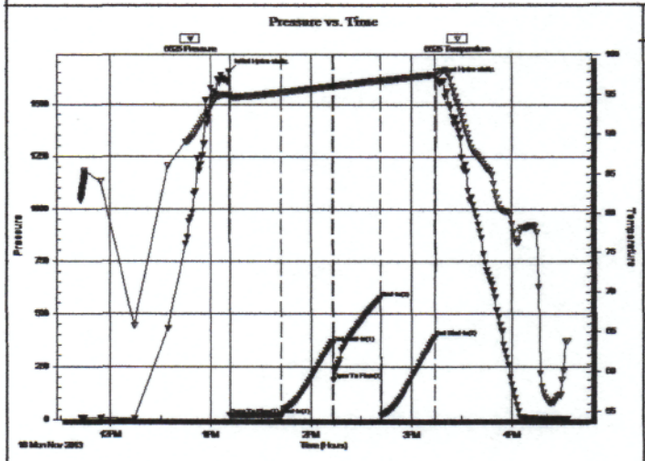
Interval: 3288.00 ft (KB) To 3318.00 ft (KB) (TVD)
Total Depth: 3318.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1865.00 ft (KB)
1857.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Outside**
Press@RunDepth: 572.17 psig @ 3291.00 ft (KB)
Start Date: 2013.11.18 End Date: 2013.11.18
Start Time: 11:42:33 End Time: 16:33:02

Capacity: 8000.00 psig
Last Calib.: 2013.11.04
Time On Btm: 2013.11.18 @ 13:11:02
Time Off Btm: 2013.11.18 @ 15:15:02

TEST COMMENT: IFP=Weak blow built to 1/8"
ISI=Dead no blow back
FFP=Dead no blow
FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1654.61	95.06	Initial Hydro-static
1	18.63	94.78	Open To Flow (1)
31	17.65	95.32	Shut-In(1)
62	359.50	96.13	End Shut-In(1)
63	188.61	96.10	Open To Flow (2)
91	572.17	96.85	Shut-In(2)
123	387.21	97.57	End Shut-In(2)
124	1616.76	97.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud with oil spots	0.21

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Mai Oil Operations

8411 Preston RD Ste 800
Dallas TX 75225-5520

ATTN: Jim Musgrove

11-15s-14w Russell,KS

Flegler C #4

Job Ticket: 039761 **DST#: 6**

Test Start: 2013.11.18 @ 22:56:46

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:24:46
Time Test Ended: 06:52:46

Test Type: Conventional Bottom Hole (Reset)
Tester: Jeff Brown
Unit No: 67

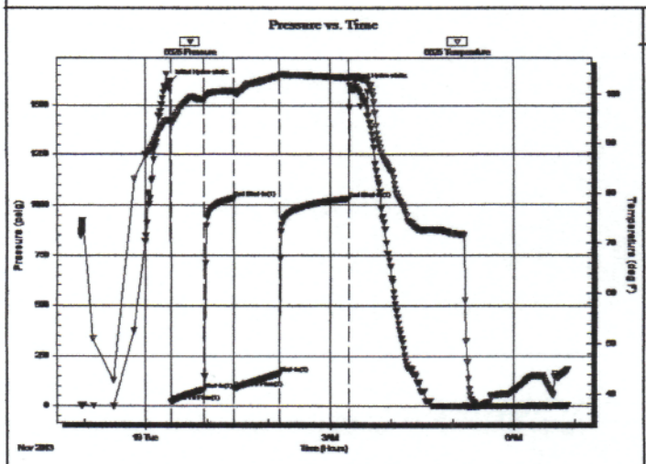
Interval: 3288.00 ft (KB) To 3331.00 ft (KB) (TVD)
Total Depth: 3331.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1865.00 ft (KB)
1857.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Outside**
Press@RunDepth: 161.52 psig @ 3324.00 ft (KB)
Start Date: 2013.11.18 End Date: 2013.11.19
Start Time: 22:56:47 End Time: 06:52:46

Capacity: 8000.00 psig
Last Calib.: 2013.11.05
Time On Btm: 2013.11.19 @ 00:24:16
Time Off Btm: 2013.11.19 @ 03:19:46

TEST COMMENT: IFP=Good blow BOB in 10 min
ISI=Weak blow back built to 2"
FFP=Good blow BOB 13 min
FSI=Weak blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1618.35	94.49	Initial Hydro-static
1	21.05	93.97	Open To Flow (1)
33	82.91	98.89	Shut-In(1)
62	1034.37	100.56	End Shut-In(1)
62	90.31	100.32	Open To Flow (2)
106	161.52	103.54	Shut-In(2)
175	1032.02	103.19	End Shut-In(2)
176	1600.59	103.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
189.00	GHOCM 10%G 35 %O 55%M	2.65
221.00	Gassy Oil 20 %G 80%O	3.10
0.00	220=GIP	0.00

* Recovery from multiple tests

Gas Rates

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

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 7608
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
11-13-13	11	15	14	Russell	KS		5:30 AM

Location Russell S to Interset RD ½ E

Lease Fleeler "C" Well No. 4

Owner 3 N Westinto

Contractor Southwind 3

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 Surface

Hole Size 12¼ T.D. 518 ft

Charge To Mai Oil

Csg. 8⅝ Depth 518 ft

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. 20 ft Shoe Joint 20 ft

Cement Amount Ordered 250 60/40 3%CC 2% gel

Meas Line Displace 31.5 BBL

EQUIPMENT

Pumptrk 5 No. Cementer / Helper Matt

Bulktrk 3 No. Driver / Driver Lonnie L

Bulktrk pu No. Driver / Driver Chad M

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Cement did circulate

Common	
Poz. Mix	
Gel.	
Calcium	
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	
Mileage	
FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
2 Cup plug	
Pumptrk Charge	
Mileage	
Tax	
Discount	
Total Charge	

X Signature Joey Ihrig

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 **Home Office P.O. Box 32 Russell, KS 67665** **No. 7014**
Cell 785-324-1041

	Sec.	Twp.	Range	County	State	On Location	Finish
Date 11-19-13	11	15	14	Russell	KS		12:30 AM

Location Russell S to Wilson sch 3/4 E 3/4 N

Lease Ziegler "C" Well No. #4

Contractor Southwind #3

Type Job Production String

Hole Size 7 7/8 T.D. 3391'

Csg. 5 1/2 Depth 3376'

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 22.15' Shoe Joint 22.15

Meas Line Displace 80 bbl

EQUIPMENT

Pumptrk	No.	Cementer	
		Helper	Brett Matt
Bulktrk	3 No.	Driver	
		Driver	Jason
Bulktrk	4 No.	Driver	
		Driver	Chad

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 sx

Mouse Hole

Centralizers - 1 - 10 - 21 - 23

Baskets - 1 - 11

D/V or Port Collar

Pump 1000 Gal Mud Flush
Plugged Rat Hole
Mixed 170 sx 18% Salt
then 100 sx 10% Salt
Displaced 60 bbl water
Lift pressure 600 PSI
Landed @ 1800 PSI
Plug held

X Signature Virgil

Owner

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.

Charge To Mai Oil

Street

City State

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

Cement Amount Ordered 100 60/40 18% Salt 2% Gel 1/4 Flo
100 60/40 10% Salt 2% Gel 1/4 Flo

Common	
Poz. Mix	
Gel.	
Calcium	
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	1000 Gal Mud Flush
CFL-117 or CD110 CAF 38	
Sand	
Handling	
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	12
Baskets	2
AFU Inserts	
Float Shoe	1
Latch Down	1
Rubber Plug	1
Pumptrk Charge	
Mileage	
Tax	
Discount	
Total Charge	