



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1222811
OIL & GAS CONSERVATION DIVISION

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 # _____

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 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 #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1222811

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

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

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

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

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

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

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 <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Mai Oil Operations, Inc.
Well Name	Kramer "A" 9
Doc ID	1222811

Tops

Name	Top	Datum
Anhydrite	882	+1017
Tarkio Lime	2517	-618
Topeka	2791	-892
Heebner	3019	-1120
Toronto	3035	-1136
Lansing	3081	-1182
Base Kansas City	3288	-1389
Arbuckle	3330	-1431



Musgrove

PETROLEUM CORPORATION
Clifflin, Kansas

NOTES

Company: Mai Oil Operations, Inc.

Lease: Kramer A #9

Field: Trapp

Location: S2-SE-SW-NW (2370' FNL & 990' FWL)

Sec: 14 Twsp: 15S Rge: 14W

County: Russell State: Kansas

KB: 1899' GL: 1891'

API #: 15-167-23947-00-00

Contractor: Southwind Drilling, Inc. (Rig #3)

Spud: 05/21/2014 Comp: 05/30/2014

RTD: 3400' LTD: 3400

Mud Up: 2200' Type Mud: Chemical

Samples Saved From: 2300' to RTD

Drilling Time Kept From: 2300' to RTD

Samples Examined From: 2300' to RTD

Geological Supervision from: 2300' to RTD

Geologist on Well: Wyatt Urban

Surface Casing: 8 5/8@514'


Electronic Surveys: Logged by Nabors Completion Services: DIL, MEL, CDL/CNL,

MAI OIL OPERATIONS, INC.

WELL COMPARISON SHEET

Formation	Mai Oil- Kramer A#9 S2-SE-SW-NW 14-15S-14W				Mai Oil- Kramer A#8 W2-NE-NE-SW 14-15S-14W				Mai Oil- Kramer A#7 W2-NW-NE-SW 14-15S-14W			
	1899 KB				1893 KB		Structural Relationship		1909 KB		Structural Relationship	
	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Anhydrite	881	1018	882	1017	872	1021	3	-4	887	1022	-4	-5
B. Anhydrite	914	985	915	984	911	982	-3	2	923	986	-1	-2
Grand Haven	2452	-553	2448	-549	2448	-555	2	6	2459	-550	-3	1
1st Tarkio Sd.	2462	-563	2457	-558	2457	-564	1	6	2470	-561	-2	3
Dover	2475	-576	2471	-572	2470	-577	1	5	2484	-575	-1	3
2nd Tarkio Sd.	2478	-579	2477	-578	2478	-585	6	7	2493	-584	5	6
Tarkio Lime	2518	-619	2517	-618	2518	-625	6	7	2530	-621	2	3
Elmont	2583	-684	2581	-682	2581	-688	4	6	2594	-685	1	3
Howard	2721	-822	2719	-820	2719	-826	4	6	2731	-822	0	2
Topeka	2792	-893	2791	-892	2790	-897	4	5	2803	-894	1	2
Heebner	3019	-1120	3019	-1120	3020	-1127	7	7	3031	-1122	2	2
Toronto	3032	-1133	3035	-1136	3025	-1132	-1	-4	3047	-1138	5	2
Lansing	3082	-1183	3081	-1182	3083	-1190	7	8	3094	-1185	2	3
BKC	3287	-1388	3288	-1389	3287	-1394	6	5	3295	-1386	-2	-3
Arbuckle	3330	-1431	3330	-1431	3333	-1440	6	5				

B. Anhydrite	914	985	915	984	911	982	-3	2	923	986	-1	-2
Grand Haven	2452	-553	2448	-549	2448	-555	2	6	2459	-550	-3	1
1st Tarkio Sd.	2462	-563	2457	-558	2457	-564	1	6	2470	-561	-2	3
Dover	2475	-576	2471	-572	2470	-577	1	5	2484	-575	-1	3
2nd Tarkio Sd.	2478	-579	2477	-578	2478	-585	6	7	2493	-584	5	6
Tarkio Lime	2518	-619	2517	-618	2518	-625	6	7	2530	-621	2	3
Elmont	2583	-684	2581	-682	2581	-688	4	6	2594	-685	1	3
Howard	2721	-822	2719	-820	2719	-826	4	6	2731	-822	0	2
Topeka	2792	-893	2791	-892	2790	-897	4	5	2803	-894	1	2
Heebner	3019	-1120	3019	-1120	3020	-1127	7	7	3031	-1122	2	2
Toronto	3032	-1133	3035	-1136	3025	-1132	-1	-4	3047	-1138	5	2
Lansing	3082	-1183	3081	-1182	3083	-1190	7	8	3094	-1185	2	3
BKC	3287	-1388	3288	-1389	3287	-1394	6	5	3295	-1386	-2	-3
Arbuckle	3330	-1431	3330	-1431	3333	-1440	9	9	3344	-1435	4	4
RTD	3400	-1501	3400	-1501	3395	-1502	1	1	3410	-1501	0	0
LTD	3400	-1501	3400	-1501	3396	-1503	2	2	3410	-1501	0	0

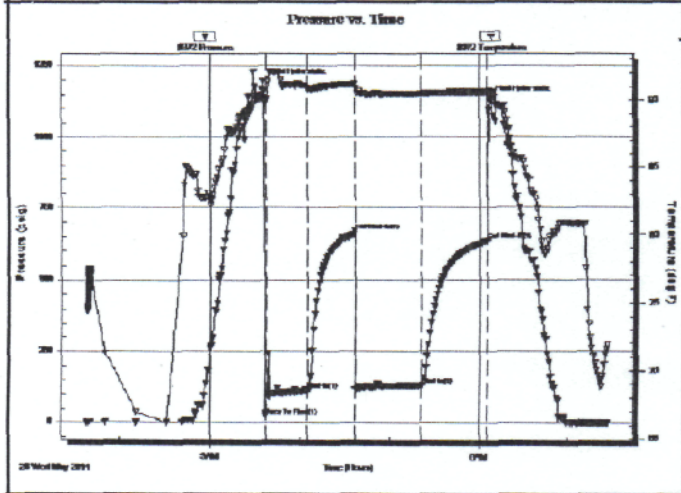
	DRILL STEM TEST REPORT	
	Mai Oil Operating, Inc. 8411 Preston Rd. Ste. 800 Dallas, TX 75225 ATTN: Wyatt Urban	14-15S-14W Russell, KS Kramer A#9 Job Ticket: 59236 DST#:1 Test Start: 2014.05.28 @ 01:38:15

GENERAL INFORMATION:

Formation:	Tarkio	Test Type:	Conventional Bottom Hole (Initial)
Deviated:	No Whipstock: ft (KB)	Tester:	Brannan L
Time Tool Opened:	03:37:15	Unit No:	48
Time Test Ended:	07:27:15	Reference Elevations:	1899.00 ft (KB) 1891.00 ft (CF)
Interval:	2440.00 ft (KB) To 2525.00 ft (KB) (TVD)	KB to GR/CF:	8.00 ft
Total Depth:	2525.00 ft (KB) (TVD)		
Hole Diameter:	7.88 inches	Hole Condition:	Fair

Serial #: 8372	Inside		
Press@RunDepth:	132.22 psig @ 2457.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2014.05.28	End Date:	2014.05.28
Start Time:	01:38:16	End Time:	07:27:15
		Last Calib.:	2014.05.28
		Time On Btm:	2014.05.28 @ 03:35:15
		Time Off Btm:	2014.05.28 @ 06:07:15

TEST COMMENT: 30- F- BOB 1min
 30- IS- No blow
 45- FF- Built slowly to 6.5"
 45- FS- No blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1193.20	90.08	Initial Hydro-static
2	23.61	89.94	Open To Flow (1)
30	116.29	90.86	Shut-in(1)
61	670.79	91.15	End Shut-in(1)
62	116.51	90.85	Open To Flow (2)
107	132.22	90.47	Shut-in(2)
151	636.19	90.56	End Shut-in(2)
152	1132.28	90.62	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
250.00	M w/ show of oil	2.38

Gas Rates			
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/c)	

Length (ft)	Description	Volume (bbl)
250.00	M w/ show of oil	2.38

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mai Oil Operating, Inc.
8411 Preston Rd.
Ste. 800
Dallas, TX 75225
ATTN: Wyatt Urban

14-15S-14W Russell, KS

Kramer A#9

Job Ticket: 59237 DST#: 2
Test Start: 2014.05.29 @ 13:13:00

GENERAL INFORMATION:

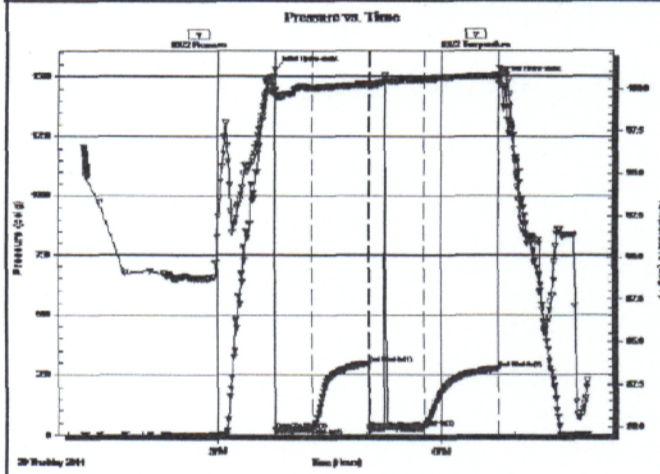
Formation: LKC "A-D"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:46:30
Time Test Ended: 19:59:00
Test Type: Conventional Bottom Hole (Reset)
Tester: Brannan L
Unit No: 48
Interval: 3090.00 ft (KB) To 3150.00 ft (KB) (TVD)
Total Depth: 3150.00 ft (KB) (TVD)
Reference Elevations: 1899.00 ft (KB)
1891.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair
KB to GR/CF: 8.00 ft

Serial #: 8372

Inside

Press@RunDepth: 32.01 psig @ 3091.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.05.29 End Date: 2014.05.29 Last Calib.: 2014.05.29
Start Time: 13:13:01 End Time: 19:59:00 Time On Blm: 2014.05.29 @ 15:46:00
Time Off Blm: 2014.05.29 @ 18:47:30

TEST COMMENT: 30- F- Surface blow built very slowly to 1/2"
45- IS- No blow
45- FF- No blow
60- FSI- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1532.84	99.92	Initial Hydro-static
1	20.48	99.49	Open To Flow (1)
30	28.21	100.03	Shut-in(1)
75	295.82	100.24	End Shut-in(1)
76	27.78	100.19	Open To Flow (2)
120	32.01	100.53	Shut-in(2)
180	274.26	100.75	End Shut-in(2)
182	1489.68	101.14	Final Hydro-static

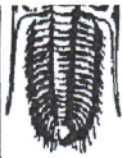
Recovery

Length (ft)	Description	Volume (bbl)
25.00	M	0.34

* Recovery from multiple tests

Gas Rates

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



TESTING, INC

8411 Preston Rd.
Ste. 800
Dallas, TX 75225
ATTN: Wyatt Urban

Kramer A#9

Job Ticket: 59238 DST#: 3
Test Start: 2014.05.30 @ 10:59:58

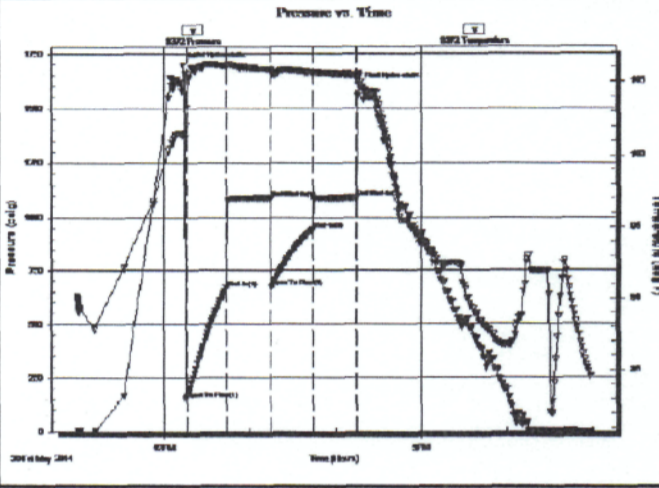
GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 12:15:58 Tester: Brannan L
 Time Test Ended: 16:58:28 Unit No: 48

Interval: **3283.00 ft (KB) To 3334.00 ft (KB) (TVD)** Reference Elevations: 1899.00 ft (KB)
 Total Depth: 3334.00 ft (KB) (TVD) 1891.00 ft (CF)
 Hole Diameter: 7.88 inches-Hole Condition: Fair KB to GRVCF: 8.00 ft

Serial #: 8372 Inside
 Press@RunDepth: 942.96 psig @ 3284.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.30 End Date: 2014.05.30 Last Calib.: 2014.05.30
 Start Time: 10:59:59 End Time: 16:58:28 Time On Btm: 2014.05.30 @ 12:13:28
 Time Off Btm: 2014.05.30 @ 14:15:58

TEST COMMENT: 30- F- BOB 30secs
 30- IS- No blow
 30- FF- BOB 1min
 30- FS- No blow



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1698.39	101.40	Initial Hydro-static
3	152.05	102.01	Open To Flow (1)
30	667.31	106.04	Shut-in(1)
61	1089.93	105.83	End Shut-in(1)
62	670.69	105.59	Open To Flow (2)
91	942.96	105.61	Shut-in(2)
121	1089.97	105.41	End Shut-in(2)
123	1602.52	105.52	Final Hydro-static

Length (ft)	Description	Volume (bbl)
700.00	MW, 5%M 95%W	9.56
1450.00	GMOW, 5%G 10%M 35%O 50%W	19.81

* Recovery from multiple tests

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

ROCK TYPES

Dolprim
 shale, grn
 Carbon Sh
 Ss
 Lmst fw<7
 shale, gry
 shale, red

ACCESSORIES

FOSSIL

F Fossils < 20%
 φ Oolite
 ⚙ Oomoldic

STRINGER

••• Sandstone

TEXTURE

C Chalky
 FX Finexln

OTHER SYMBOLS

Oil Show

● Good Show

DST

■ DST Int

FOSSIL
 F Fossils < 20%
 φ Oolite
 ⊕ Oomoldic

STRINGER
 . . . Sandstone

TEXTURE
 C Chalky
 FX Finexln

OTHER SYMBOLS

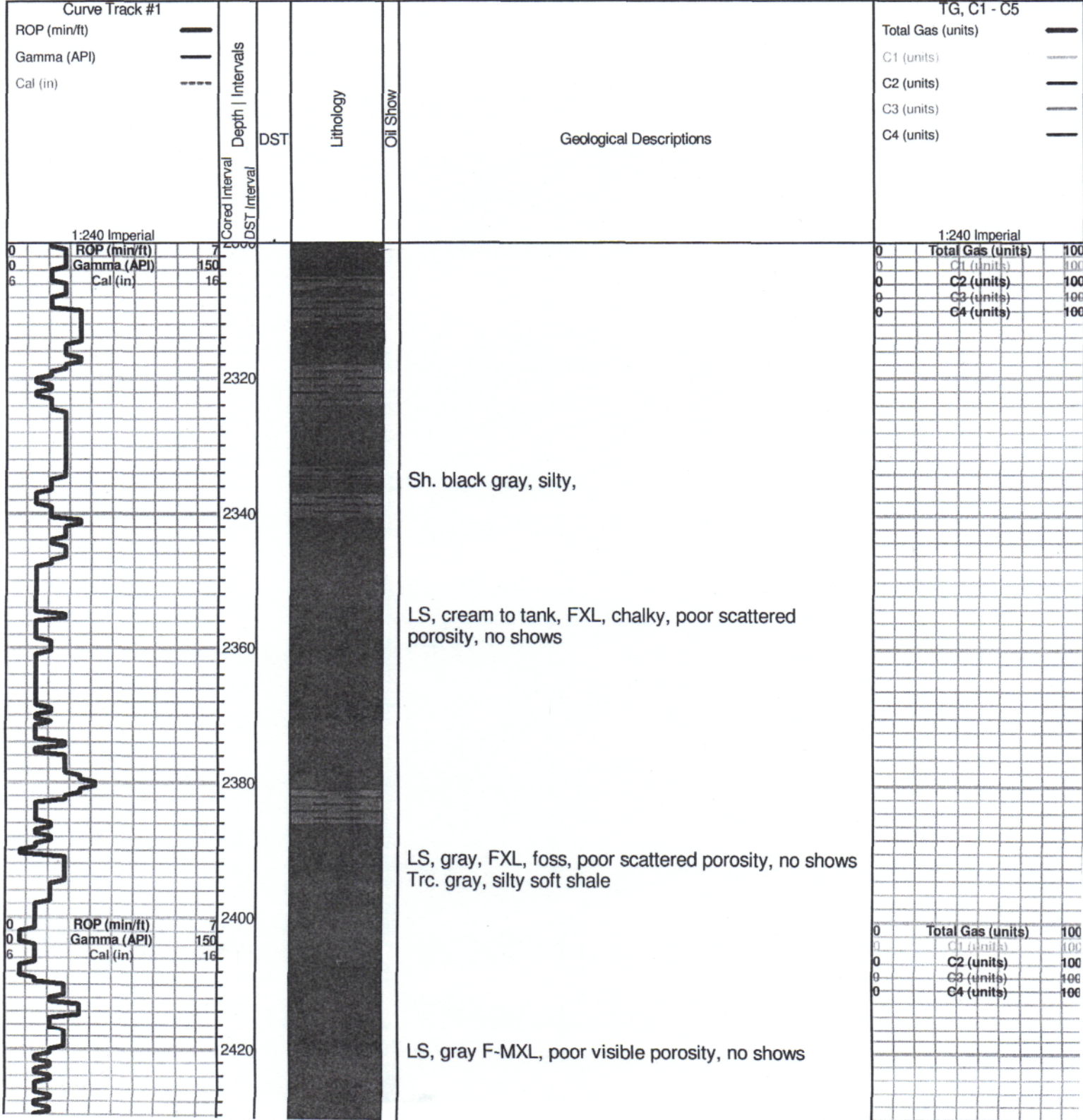
Oil Show

- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Strn
- D Dead Oil Strn
- Fluorescence
- * Gas

DST

- DST Int
- DST alt
- Core
- || tail pipe

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



Sh. black gray, silty,

LS, cream to tank, FXL, chalky, poor scattered porosity, no shows

LS, gray, FXL, foss, poor scattered porosity, no shows
 Trc. gray, silty soft shale

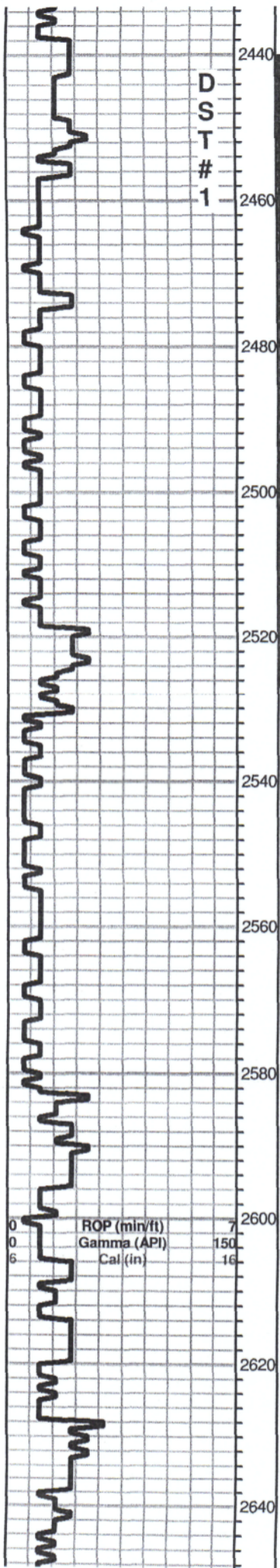
LS, gray F-MXL, poor visible porosity, no shows

DST #1 2440 2505

Blow: BOB 1 min.

Recovery:
250' Mud w/ Show of oil

Pressures:
ISIP 671psi
FSIP 636 psi
IFP 24-116 psi
FFP 117-132 psi
HSH 1193-1132



LS, cream to tan, FXL, foss, chaky in part, poor visible porosity no shows

Grand Haven 2452 (-553)

LS, tan to brown, FXL, dense, foss, poor scattered porosity, no shows

Sd. gray, F. Grain, well sorted, Lt. black stain, no SFO, no odor

Dover 2472 (-573)

Sd. gray, F. grain, well sorted, SFO, odor, golden brown stain

Sh. black gray, silty, trace Sd. Lt. SFO, faint odor, Lt. brown stain

Tarkio Lime 2518 (-619)

LS, tan to brown, FX, slightly halky, poor scattered porosity, few foss

Sh. blk, gray, maroon,

LS, tan, cream, white, chalky, few foss, no shows

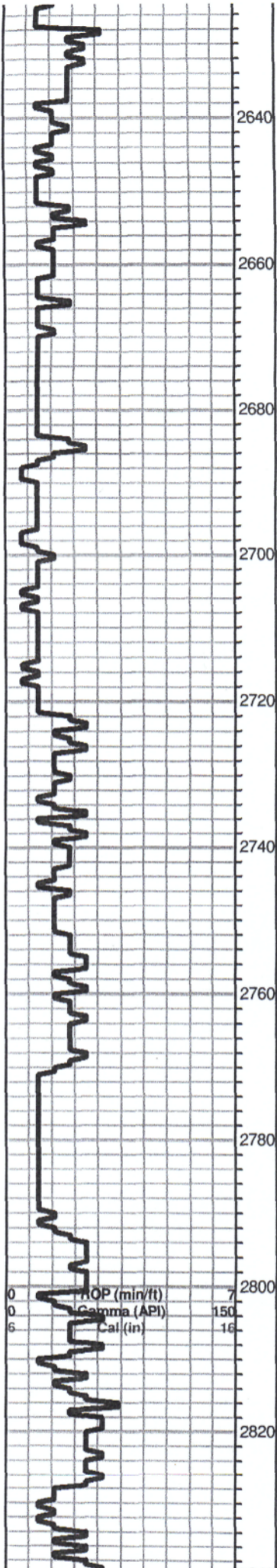
Elmont 2583 (-684)

LS, cream, FXL, poor visible porosity, no shows

LS, gray, cream, FXL, dns, poor scattered porosity, no shows



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



LS, gray, cream, FXL, dns, poor scattered porosity, no shows

LS, A/A, trc. shale, gray, black silty

Sh. gray, silty

Howard 2721 (-822)

LS, cream to tan, FXL, chalky, few foss, poor visible porosity, no shows

LS, brown, tan, FX, dense, poor visible porosity, no shows

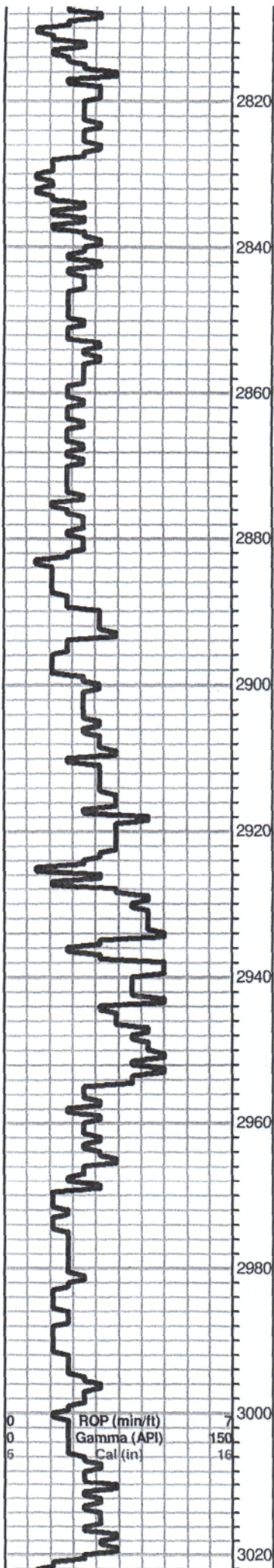
LS, brown to tan, FXL, cherty in parts, few foss, poor scattered porosity, no shows

Sh. gray, black carb

Topeka 2792 (-893)

LS, tan to brown, FXL, few foss, poor scattered porosity, no shows

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



LS, tan to brown, FXL, few foss, poor scattered porosity, no shows

LS, cream to tan, FXL, dense, no shows

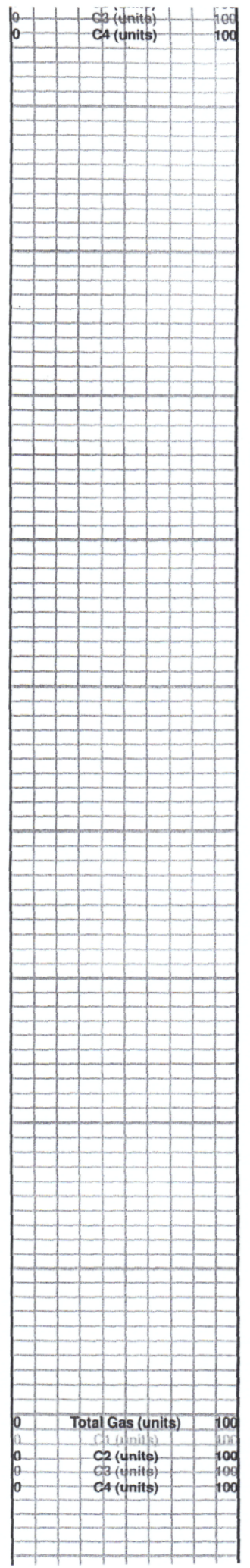
LS, tan, FXL, dense, poor visible porosity, no shows, trace black carb

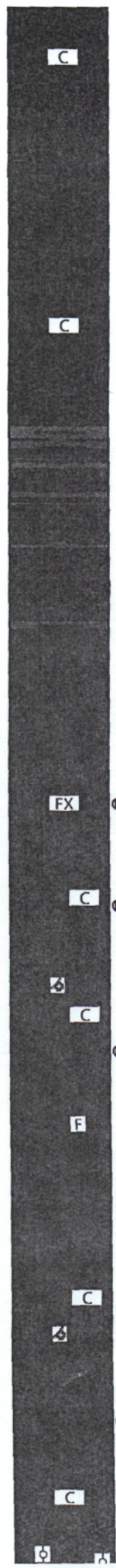
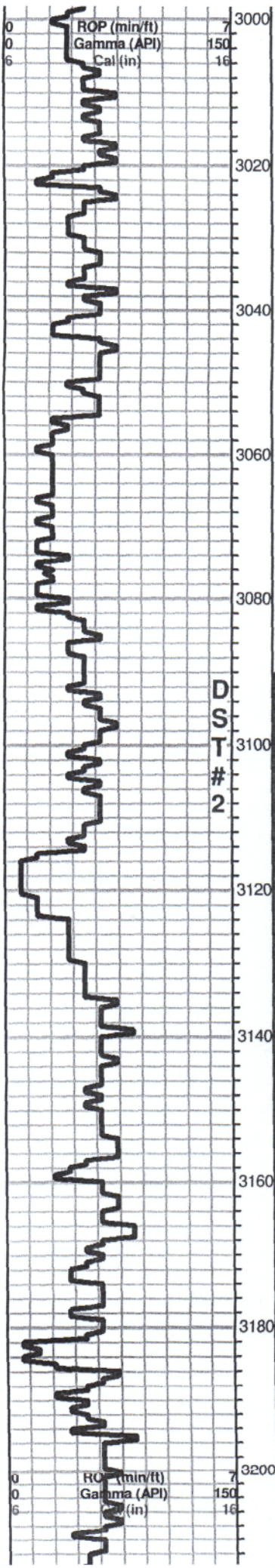
LS, cream to white, FXL, dense, poor visible porosity, cherty no shows, Trc. brown chert

LS, cream to white, FXL, chalky, poor scattered porosity, SFO, fair odor

LS, cream to tan, chalky, poor visible porosity, no shows

Hebner 2010 / 1100





LS, cream to tan, chalky, poor visible porosity, no shows

Heebner 3019 (-1120)

Black carb shale

LS, cream to tan, Chalky, poor visible porosity, no shows

Douglas 3082 (-1183)

Sh. gray, black, maroon

Sh. A/A

Lansing 3082 (-1183)

LS, tan, cream, poor scattered porosity, chalky, Lt. spotty SFO, fair odor, trace golden brown stain

LS, tan, brown, FXL, scattered porosity, chalky, Lt. SFO, odor,

LS, tan, chalky, oom, good vuggy porosity, SFO, fair odor

LS, cream to white, FXL, foss, poor scattered porosity, Lt. spotty show of free oil, Lt. brown stain

LS, cream to tan, FXL, poor scattered porosity, trace black, gray sh.

LS, cream to white, chalky, oom, poor to fair scattered porosity, no shows

LS, white to cream, FXL, chalky, Lt. brown stain, trace SFO, faint odor

LS, tan FXL, ool, por scattered porosity, odor???, Lt. floor cut

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

DST # 2 3090'-3150'
30-45-45-60

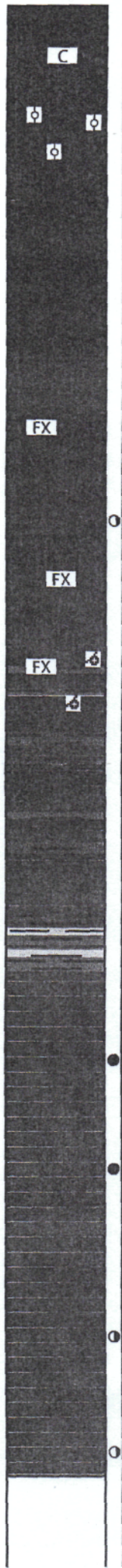
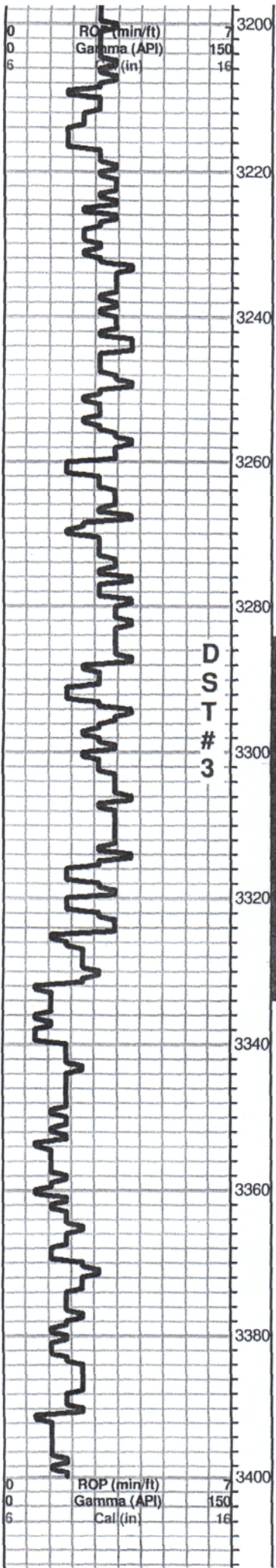
Blow: Surface blow 1/2"

Recovery: 25' Mud

Pressures

ISIP 296psi
FSIP 274psi
IFP 20-28psi
FFP 28-32psi
HSH 1533-1490psi

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



LS, tan FXL, ool, por scattered porosity, odor???, Lt. flor. cut

Black carb shale

LS, tan to gray, FXL, slightly cherty, poor visible porosity, no shows

LS, tan, brown, FXL, dense, no visible porosity, no shows

LS, cream to tan, FXL, poor to fair vuggy porosity, Lt. SFO, no odor

BKC 3288 (-1389)

LS, cream, FXL, poor scattered porosity, slightly chalky, poor visible porosity, no shows

Sh. gray, black, maroon,

Sh. A/A

Sh. gray, greenish, maroon

Arbuckle 3330 (-1431)

Dol. white, gray FXL, fair scattered porosity, SFO, strong odor, golden brown stain

Dol. white to cream, FXL, fair scattered porosity, Lt. SFO, fair odor, Lt. brown stain

Dol. white, cream, FXL, poor scattered porosity, Lt. SFO, faint odor

Dol. White, FXL, poor scattered porosity, dense, Trc. Lt. brown stain, faint odor

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

DST # 3 3285 - 3334
30-30-30-30

Blow: BOB 30 Sec.

Recovery:
1450' GMOW
(5%G, 35%O, 50%W, 10%M)

700' MW
(95%W, 5%M)

Pressures:
ISIP 1090 psi
FSIP 1090 psi
IFP 152-667 psi
FFP 671-943 psi
HSH 1698-1603

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

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

one 785-483-2025
cell 785-324-1041

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

No. 130

Date	5-21-2014	Sec.	14	Twp.	15	Range	14	County	Russell	State	KANSAS	On Location		Finish	7:30 PM
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Lease	KRAMER	Well No.	A-9	Owner	9 1/2 S 1/4 W
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Contractor	SOUTHWIND DRILLING Big #3 "Jay"	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.			
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Type Job	LONG SURFACE	Charge To	MAI OIL OPERATIONS
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Hole Size	12 1/4	T.D.	514'	Street	
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Csg.	8 5/8 NEW	Depth	514'	City		State	
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Tbg. Size	2 3/8 CSG.	Depth		The above was done to satisfaction and supervision of owner agent or contractor		
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Tool		Depth		Cement Amount Ordered	250 sx 40 28 GAL
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Cement Left In Csg.	20'	Shoe Joint			390 cc
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Meas Line		Displace	3 1/4 / BBL		
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EQUIPMENT			Common
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Pumptrk	18	No.	Cementer Helper	GLENN G.	Poz. Mix
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Bulktrk	14	No.	Driver	CODY B.	Gel.
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Bulktrk		No.	Driver	CLAYTON B.	Calcium
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JOB SERVICES & REMARKS			Hulls
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Remarks:		Salt
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Rat Hole		Flowseal
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Mouse Hole		Kol-Seal
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Centralizers		Mud CLR 48
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Baskets		CFL-117 or CD110 CAF 38
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D/V or Port Collar		Sand
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Handling		
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Mileage		
---------	--	--

FLOAT EQUIPMENT		
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2-Cup WOODEN WIPER		
--------------------	--	--

Centralizer		
-------------	--	--

Baskets		
---------	--	--

AFU Inserts		
-------------	--	--

Float Shoe		
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Latch Down		
------------	--	--

Cement Did Circulate To Surface		
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THANK'S		
---------	--	--

Pumptrk Charge		
----------------	--	--

Mileage		
---------	--	--

Tax		
-----	--	--

Discount		
----------	--	--

Total Charge		
--------------	--	--

x A		
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 138

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-31-14	14	15	14 W	Russell	Kansas		12:30 PM
Lease				Location			
KRAMER "A"				Russell KS, 8 S OF I-70 EXIT 1/4 W 1/4 N			
Well No. #9		Owner					
Contractor Southwind Dalg. Rig #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 PRODUCTION STRING		Charge To		MAT OIL OPERATIONS			
Hole Size 7 7/8		T.D. 3400'					
Csg. 5 1/2 New 14# ^{sq}		Depth 3399'		Street			
Tbg. Size		Depth		City State			
Tool LATCH DN ASSY		Depth @ 3379'		The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg. 20 ⁴⁰		Shoe Joint 20 ⁴⁰		Cement Amount Ordered 100SX ⁴⁰ 10% SALT 2% GEL 1/4# ^{FBS}			
Meas Line		Displace 82.45		100SX ⁴⁰ 18% SALT 2% GEL 1/4# ^{FBS} SEAL			
EQUIPMENT				Common			
Pumptrk #78	No.	Cementer	Glenn G.				
		Helper	ODY B.	Poz. Mix			
Bulktrk #14	No.	Driver	CRAIG B.	Gel.			
Bulktrk #1	No.	Driver	CHAD M.	Calcium			
JOB SERVICES & REMARKS				Hulls			
Remarks: JT. 65/83 OUT				Salt			
Rat Hole 30 SX				Flowseal			
Mouse Hole				Kol-Seal			
Centralizers #1-10 #21, 23				Mud CLR 48/1000 gal			
Baskets #11				CFL-117 or CD110 CAF 38			
D/V or Port Collar				Sand			
RAN 81 NEW JOINTS OF 14# GSS.				Handling			
SET @ 3379', RECIPE CIRCULATION				Mileage			
DROP AFU BALL, CIRCULATE 3/4 HR				5 1/2 FLOAT EQUIPMENT			
PUMP 1000 GAL MID-FLUSH				Guide Shoe			
14# CEMENT w/ 70 SX ⁴⁰ 2% GEL 18% SALT				Centralizer 12 TR "TURBO"			
15# CEMENT w/ 100 SX ⁴⁰ 2% GEL 10% SALT				Baskets 1 - WEATHERFORD			
Clear-Line + Release LATCH-DN				AFU Inserts			
Plug. Displace A TOTAL OF				Float Shoe 1 TR			
82 1/2 BBL H ₂ O, LAND PLUG				Latch Down 1 TR			
@ 1500#.							
Release Pressure + AFU-LATCH PLUG				Pumptrk Charge			
"HELD"				Mileage			
THANK'S							
Signature				Tax			
				Discount			
				Total Charge			