



KANSAS CORPORATION COMMISSION 1091473  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
June 2009  
Form Must Be Typed  
Form must be Signed  
All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # 33922  
Name: Mustang Energy Corporation  
Address 1: PO BOX 1121  
Address 2: \_\_\_\_\_  
City: HAYS State: KS Zip: 67601 + \_\_\_\_\_  
Contact Person: Rodney Brin  
Phone: (785) 623-0533  
CONTRACTOR: License # 33575  
Name: WW Drilling, LLC  
Wellsite Geologist: Jeff Lawler  
Purchaser: Coffeyville

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  
 Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled    Permit #: \_\_\_\_\_  
 Dual Completion    Permit #: \_\_\_\_\_  
 SWD    Permit #: \_\_\_\_\_  
 ENHR    Permit #: \_\_\_\_\_  
 GSW    Permit #: \_\_\_\_\_

<u>05/09/2012</u>	<u>05/15/2012</u>	<u>05/30/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-163-24036-00-00

Spot Description: NE-NW-SW-SW

NE NW SW SW Sec. 10 Twp. 10 S. R. 20  East  West

1270 Feet from  North /  South Line of Section

460 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Rooks

Lease Name: Couture Well #: 3

Field Name: Marcotte

Producing Formation: Arbuckle

Elevation: Ground: 2205 Kelly Bushing: 2211

Total Depth: 3837 Plug Back Total Depth: 3791

Amount of Surface Pipe Set and Cemented at: 220 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: 3837

feet depth to: 0 w/ 575 sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: 18000 ppm Fluid volume: 400 bbls

Dewatering method used: Evaporated

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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: Deanna Garriso Date: 08/29/2012



1091473

Operator Name: Mustang Energy Corporation Lease Name: Couture Well #: 3  
 Sec. 10 Twp. 10 S. R. 20  East  West County: Rooks

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:  Micro Log Dual Induction Compensated Neutron Density	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name</td> <td style="width:20%;">Top</td> <td style="width:20%;">Datum</td> </tr> <tr> <td>Anhydrite</td> <td>1679</td> <td>+532</td> </tr> <tr> <td>Base</td> <td>1708</td> <td>+503</td> </tr> <tr> <td>Heebner</td> <td>3438</td> <td>-1227</td> </tr> <tr> <td>LKC</td> <td>3478</td> <td>-1267</td> </tr> <tr> <td>BKC</td> <td>3695</td> <td>-1484</td> </tr> <tr> <td>Arbuckle</td> <td>3771</td> <td>-1560</td> </tr> </table>	Name	Top	Datum	Anhydrite	1679	+532	Base	1708	+503	Heebner	3438	-1227	LKC	3478	-1267	BKC	3695	-1484	Arbuckle	3771	-1560
Name	Top	Datum																				
Anhydrite	1679	+532																				
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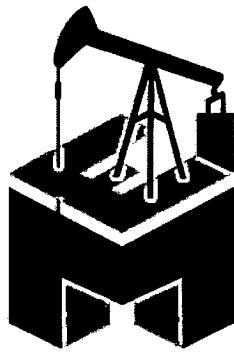
CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	220	Common	150	3%cc, 2% Gel
Production	7.875	5.5	15.5	3835	150 common, 425 QMDC	575	10% sll, 5% Gilsontite, 500 Gal mud cle

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				

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
4	3786-90	None	

TUBING RECORD: Size: <u>2.875</u> Set At: <u>3783</u> Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>06/03/2012</u>		Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbbs. <u>30</u>	Gas Mcf <u>0</u>	Water Bbbs. <u>5</u> Gas-Oil Ratio _____ Gravity _____

DISPOSITION OF GAS: <input checked="" 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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <u>3786-90</u>
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# **MUSTANG**

## **ENERGY CORPORATION**

Scale 1:240 Imperial

Well Name: COUTURE #3  
Surface Location: NE NW SW SW 10-10S-20W  
Bottom Location:  
API: 15-163-24036-000  
License Number: 33922  
Spud Date: 5/9/2012 Time: 3:34 PM  
Region: ROOKS Time: 4:23 PM  
Drilling Completed: 5/14/2012  
Surface Coordinates: 1270' FSL & 460' FWL  
Bottom Hole Coordinates:  
Ground Elevation: 2206.00ft  
K.B. Elevation: 2211.00ft  
Logged Interval: 0.00ft To: 3836.00ft  
Total Depth: 3837.00ft  
Formation:  
Drilling Fluid Type: FRESH WATER/CHEMICAL GEL

### **OPERATOR**

Company: MUSTANG ENERGY CORPORATION  
Address: P.O. BOX 1121  
HAYS, KS 67601  
Contact Geologist: ROD BRIN  
Contact Phone Nbr: (785) 623-0533  
Well Name: COUTURE #3  
Location: NE NW SW SW 10-10S-20W API: 15-163-24036-000  
Pool: MARCOTTE  
State: KANSAS Country: USA

### **SURFACE CO-ORDINATES**

Well Type: Vertical  
Longitude: -99.5477204 Latitude: 39.1941987  
N/S Co-ord: 1270' FSL  
E/W Co-ord: 460' FWL

### **LOGGED BY**



Company: SOLUTIONS CONSULTING  
Address: 108 W 35TH  
HAYS, KS 67601

Phone Nbr: (785) 259-3737  
 Logged By: Geologist

Name: JEFF LAWLER

**CONTRACTOR**

Contractor: WW DRILLING, LLC  
 Rig #: 8  
 Rig Type: MUD ROTARY  
 Spud Date: 5/9/2012  
 TD Date: 5/14/2012  
 Rig Release: 5/15/2012

Time: 3:34 PM  
 Time: 4:23 PM  
 Time: 10:00 AM

**ELEVATIONS**

K.B. Elevation: 2211.00ft  
 K.B. to Ground: 5.00ft  
 Ground Elevation: 2206.00ft

**NOTES**

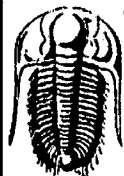
DUE TO STRUCTURAL POSITION, FAVORABLE LOWER ARBUCKLE LOG ANALYSIS, & DRILL STEM TEST RESULTS 5 1/2" X 15.5# PRODUCTION CASING WAS RUN TO FURTHER EVALUATE ZONES WITH PERFORATION. IF THE COUTURE #3 IS FOUND TO BE NON-COMMERCIAL THE WELL WILL BE CONVERTED TO A SALT WATER DISPOSAL.

RESPECTFULLY SUBMITTED,  
 JEFF LAWLER

**WELL COMPARISON SHEET**

FORMATION	COUTURE #3				2221				2170				2211				2165							
	LOG TOPS		SAMPLE TOPS		COMP. CARD		LOG		SMPL		COMP. CARD		LOG		SMPL		COMP. CARD		LOG		SMPL			
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR	CORR	DEPTH	DATUM	CORR	CORR	DEPTH	DATUM	CORR	CORR	DEPTH	DATUM	CORR	CORR	DEPTH	DATUM	CORR	CORR
	ANHYDRITE TOP	1679	532	1675	596	1690	591	15	15	1640	590	21	21	1666	545	13	13	1690	595	19	19	1690	595	19
BASE	1708	503	1709	502									1700	511	19	19								
TARPO																								
TOPEKA	3237	1026	3238	1027	3252	-1031	5	5					3230	-1019	7	7								
OREAD																								
HEBNER SHALE	3438	1227	3440	1229	3460	-1239	12	12	3403	-1233	10	10	3431	-1220	11	11								
TORONTO	3459	1248	3458	1247									3453	1242	6	6								
DOUGLAS																								
BROWN LIME																								
LKC	3478	1267	3478	1267	3492	-1271	11	11	3441	-1271	11	11	3471	-1260	7	7	3434	-1269	12	12				
BKC	3695	1484	3692	1481	3714	-1493	11	11					3686	1475	9	9								
CONGLOMERATE					3748	-1527			3687	-1517														
SIMPSON									3723	-1553														
ARBUCKLE	3771	1560	3771	1560	3825	-1604	14	14	3756	-1586	16	16	3754	-1543	17	17	3722	-1557	13	13	3722	-1557	13	13
REAGAN																								
KTD			3837	1626	3841	1620			3776	1606			3762	1551	20	20	3730	1565	15	15				
LTD	3836	1625											3761	-1550	15	15								

**DST #1 LKC "C-F"**



**TRIOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Mustang Energy Corporation

10-10s-20w Rooks, KS

P.o. Box 1121  
 Hays, KS. 67601

Couture #3

ATTN: Jeff Lawler

Job Ticket: 47176 DST#: 1

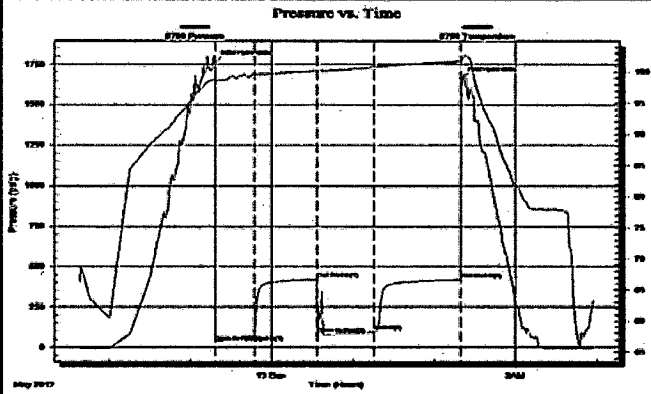
Test Start: 2012.05.12 @ 21:38:00

**GENERAL INFORMATION:**

Formation: KC "C-F"  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:18:30  
 Time Test Ended: 03:57:30  
 Interval: 3500.00 ft (KB) To 3565.00 ft (KB) (TVD)  
 Total Depth: 3565.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Cody Bloedorn  
 Unit No: 54  
 Reference Elevations: 2205.00 ft (KB)  
 2200.00 ft (CF)  
 KB to GR/CF: 5.00 ft

Serial #: 8789 Outside  
 Press@RunDepth: 95.45 psig @ 3536.00 ft (KB)  
 Start Date: 2012.05.12 End Date: 2012.05.13  
 Start Time: 21:38:02 End Time: 03:57:30  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.05.13  
 Time On Btm: 2012.05.12 @ 23:18:15  
 Time Off Btm: 2012.05.13 @ 02:20:00

TEST COMMENT: 30 - IF- 3 1/2" blow  
 45 - ISI- No blow back  
 45 - FF- 1/2" blow  
 60 - FSI- No blow back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1765.14	98.95	Initial Hydro-static
1	30.82	98.04	Open To Flow(1)
30	71.17	99.60	Shut-In(1)
75	420.15	100.21	End Shut-In(1)
76	78.87	100.07	Open To Flow(2)
117	95.45	100.77	Shut-In(2)
182	418.21	101.77	End Shut-In(2)
182	1663.01	102.21	Final Hydro-static

**Recovery**

Length(ft)	Description	Volume(bbl)
124.00	W/M, 40%W, 60%M	0.61
20.00	Mud, 100%M	0.28

**Gas Rates**

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

Trilobite Testing, Inc

Ref. No: 47176

Printed: 2012.05.13 @ 09:16:07

**DST #2 LKC "I,J,K"**



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Mustang Energy Corporation

**10-10s-20w Rooks,KS**

P.o. Box 1121  
 Hays, KS, 67601

**Couture #3**

ATTN: Jeff Lawler

Job Ticket: 47177

DST#: 2

Test Start: 2012.05.13 @ 13:28:00

**GENERAL INFORMATION:**

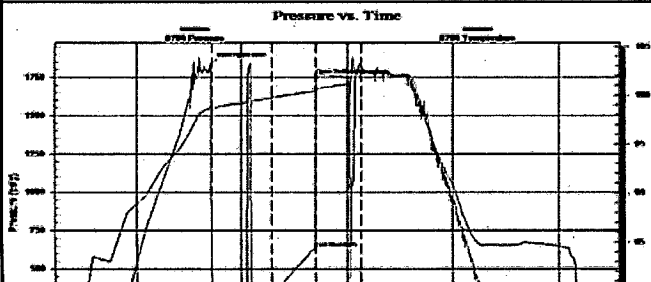
Formation: KC "I,J,K"  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:43:00  
 Time Test Ended: 18:19:45  
 Interval: 3613.00 ft (KB) To 3670.00 ft (KB) (TVD)  
 Total Depth: 3670.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Cody Bloedorn  
 Unit No: 54  
 Reference Elevations: 2205.00 ft (KB)  
 2200.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8789**

Outside

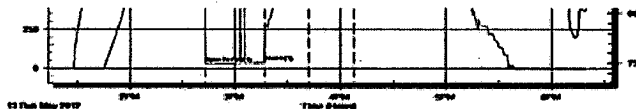
Press@RunDepth: 36.82 psig @ 3649.00 ft (KB)  
 Start Date: 2012.05.13 End Date: 2012.05.13  
 Start Time: 13:28:02 End Time: 18:19:45  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.05.13  
 Time On Btm: 2012.05.13 @ 14:42:45  
 Time Off Btm:

TEST COMMENT: 34 - IF- Surfaceblow, died in 13 Min. Flushed @20 Min, surged, died, waited 10 Min. then shut it in.  
 45 - ISI- No blow back.  
 03 - FF- Opened tool, packer failure, pulled tool, bled off pressure, reset packers, packer failure, pulled tool out.



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1840.11	98.85	Initial Hydro-static
1	30.76	98.03	Open To Flow(1)
35	36.82	99.68	Shut-In(1)
59	631.77	100.44	End Shut-In(1)
60	1764.55	100.88	Open To Flow(2)
85	1804.45	102.46	Shut-In(2)



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**Recovery**

Length (ft)	Description	Volume(bbl)
541.00	Mud, 100%M	6.46

Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 47177

**Gas Rates**

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

Printed: 2012.05.13 @ 18:45:43

**DST #3 ARBUCKLE**



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Mustang Energy Corporation

10-10s-20w Rooks,KS

P.o. Box 1121  
Hays, KS, 67601

Couture #3

ATTN: Jeff Lawler

Job Ticket: 47178

DST#: 3

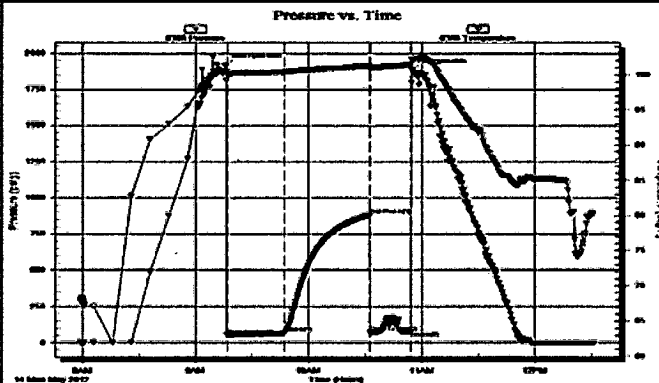
Test Start: 2012.05.14 @ 07:59:00

**GENERAL INFORMATION:**

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:17:00  
 Time Test Ended: 12:31:15  
 Interval: 3676.00 ft (KB) To 3774.00 ft (KB) (TVD)  
 Total Depth: 3774.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Cody Bloedom  
 Unit No: 54  
 Reference Elevations: 2205.00 ft (KB)  
 2200.00 ft (CF)  
 KB to GR/CF: 5.00 ft

Serial #: **8366** Inside  
 Press@RunDepth: 64.56 psig @ 3743.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.05.14 End Date: 2012.05.14 Last Calib.: 2012.05.14  
 Start Time: 07:59:02 End Time: 12:31:15 Time On Btm: 2012.05.14 @ 09:16:30  
 Time Off Btm: 2012.05.14 @ 10:55:00

TEST COMMENT: 30 - IF- 1 1/4" blow  
 45 - ISI- No blow back  
 20 - FF- No blow after 20Min. \*\*\*Pulled tool\*\*\*



03 Print May 2012

**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1918.18	100.51	Initial Hydro-static
1	50.57	99.88	Open To Flow(1)
31	64.56	100.33	Shut-In(1)
76	878.24	101.23	End Shut-In(1)
77	69.82	101.00	Open To Flow(2)
98	75.06	101.40	Shut-In(2)
99	1882.31	102.14	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume(bbl)
62.00	OCM, 85% M, 15% O	0.30

Recovery from multiple tests

Trilobite Testing, Inc






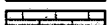






Ref. No: 47178

**Gas Rates**

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

Printed: 2012.05.14 @ 13:24:32

### ROCK TYPES

 Chtcongl	 Lmst fw<7	 shale, gry	 Ss
 Dolprim	 Lmst fw7>	 Carbon Sh	 Arg/Shale
 Dolsec	 shale, grn	 shale, red	 Lscongl




### ACCESSORIES

#### STRINGER

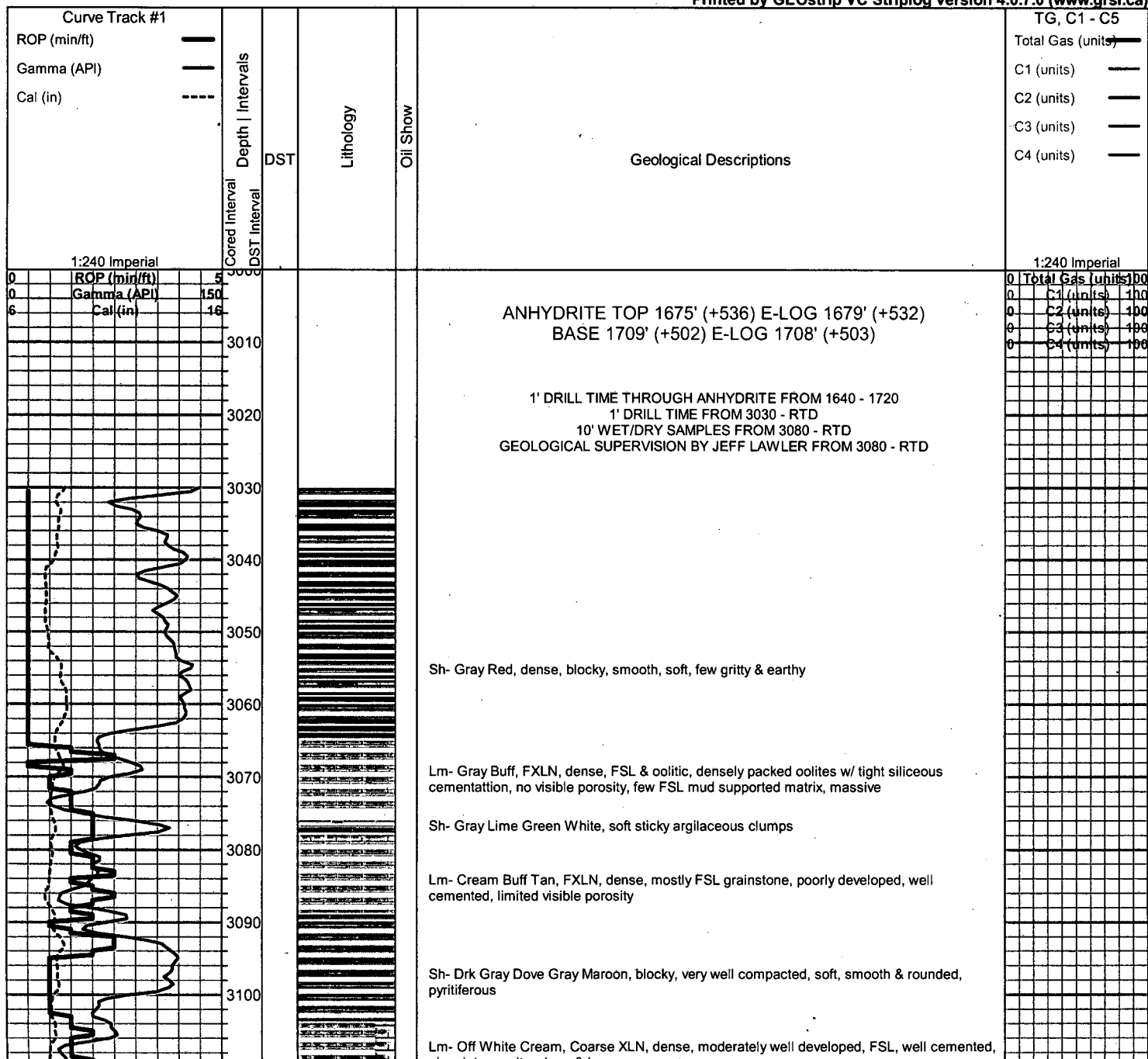
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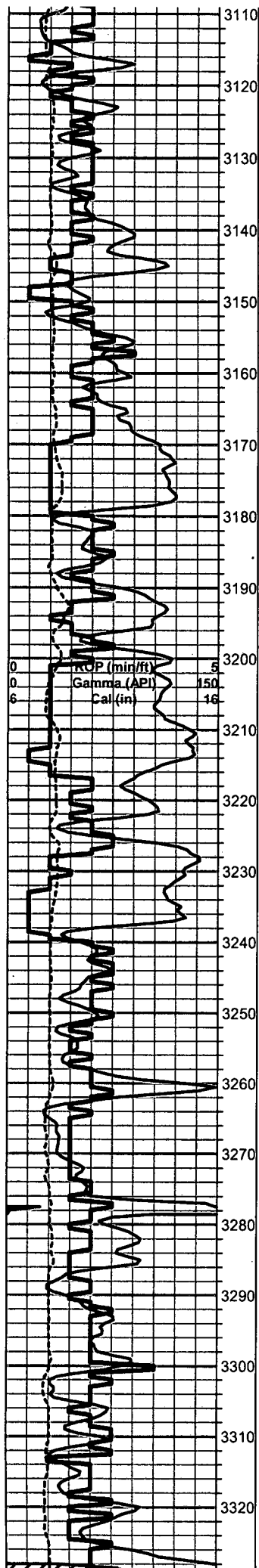
### OTHER SYMBOLS

#### DST

-  DST Int
-  DST alt
-  Core

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





pinpoint porosity, clean & barren

Lm- Buff Cream Tan, Fine grn., dense, well cemented, sl. FSL, chalky in part, limited visible porosity, few chips bio-clastic w/ FSL fragments

Lm- Cream Tan, Med XLN, gritty & granular, dense, well cemented, FSL, chalky in part, limited visible porosity

Lm- Gray Buff, Med grn., high energy rip-clasts, FSL fragments, recrystallized bi-valve casts, some mud supported matrix

Sh- Gray Red White, soft, smooth slivers, gritty & earthy, white chalky clumps

Lm- Gray Cream, F-Med grn., chalky in part, fusulinid & FSL fragments, high energy, limited visible porosity

Sh- Drk Gray Lt Gray, soft, smooth, numerous sticky argillaceous clumps, few fine grn. well sorted Ss chips w/ dark minerals

Lm- Cream Gray, mix of mudstone & grainstone, trashy, bio-clastic, mostly high energy w/ limited visible porosity

Lm- Brown Gray, Med XLN, dense, semi-brittle, high energy rip-up clasts w/ abundant amount of FSL fragments & interbedded gray shale

Sh- Gray Brown Lime Green, soft slivers, gritty & earthy, abundant soft argillaceous clumps, few chips of dove gray Ss, speckled w/ dark minerals

Lm- Cream Tan, Med XLN, well cemented, FSL, gritty & grainy, poorly developed w/ tight fenestral porosity

**TOPEKA 3238' (-1027) 3237' (-1026)** Lm- Buff Cream, Med XLN, dense, sl. FSL, poorly developed, chalky in part, limited visible porosity

Lm- Buff Tan, FXLN, dense, very well cemented, cryptocrystalline, no visible porosity

Lm- Tan Cream, FXLN, dense, sl. FSL, scattered development, mostly tight, few chips w/ dense micro pinpoint porosity, LT GSY STN, 1-2 CHIPS W/ GSY DISSOLUTION UNDER LAMP, SL SFO, FNT ODR

Lm- Cream Tan, FXLN, dense, semi-brittle, sub-cryptocrystalline, gritty, few chips of dove gray FSL sl. dolomitic chert

Sh- Black Gray Dove Gray, fissile, carbonaceous, slaty, soft, sticky argillaceous gray clumps

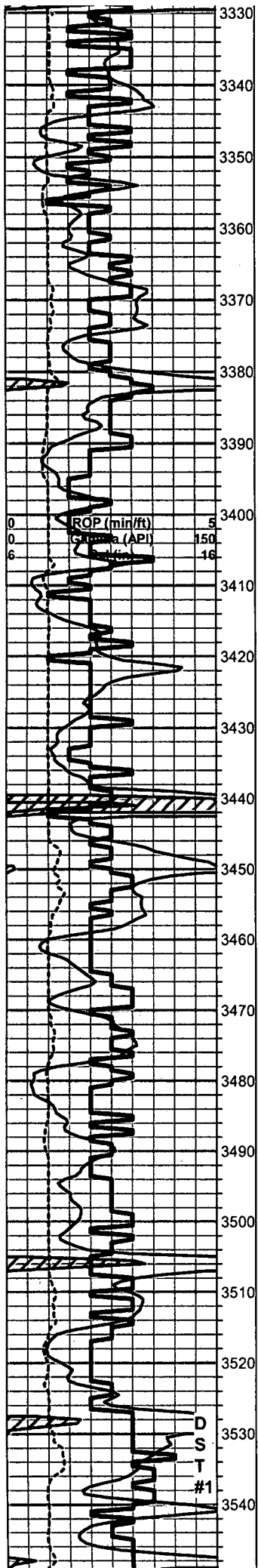
Lm- Tan, F-Med XLN, dense, well cemented, scattered porosity, mostly micro crystalline, few chips w/ consistent pinpoint porosity throughout, LT GSY SCATTERED STN, NO SFO, FR ODR OPON CRUSH

Lm- Cream Tan, FXLN, FSL, scattered development, dense fenestral porosity, some mud supported matrix chips, few chips of smokey gray FSL bedded chert, clean & barren

Sh- Buff White, pastey sticky clumps

|   |                   |     |
|---|-------------------|-----|
| 0 | Total Gas (units) | 00  |
| 0 | C1 (units)        | 100 |
| 0 | C2 (units)        | 400 |
| 0 | C3 (units)        | 400 |
| 0 | C4 (units)        | 100 |





Sh- Black Gray, fissile, carbonaceous, slaty, soft, smooth

Sh- Lime Green Mint Green Red, soft, waxy, sandy sticky limes, white chalky clumps

Lm- Off White Cream, VFXLN, dense, cryptocrystalline, no visible porosity

Lm- Cream Tan, F-Med XLN, FSL, massive, well cemented, minimal development, scattered pinpoint porosity at best, chips of highly FSL bedded chert

Lm- Cream Tan, FXLN, dense, chalky in part, sl. FSL, minimal development w/ dense fenestral porosity, clean & barren

Sh- Black Maroon Brown Lime Green, fissile, well compacted, slaty, gritty & earthy, lime green & brown wash shale

Lm- Cream Tan, VFXLN, dense, sub-cryptocrystalline, tight, limited visible porosity, chips of sharp angular bedded chert

Lm- Cream Buff Gray, VFXLN, dense, very well cemented, massive, very scattered pinpoint porosity, DRK SCATTERED STN, SL SFO, FR ODR, BRIGHT FLOR & WET CUT

Sh- Gray Cream Off White, dense slivers, chalky clumps

Lm- Cream Off White, FXLN, chalky in part, few chips of golden brown bedded chert, some dense cherty Ls, limited visible porosity, clean & barren

**HEEBNER 3440' (-1229) E-LOG 3438' (-1227)** Sh- Black Gray, fissile, soft, carbonaceous, some soft gray wash shale

Sh- Gray Brown Lime Green, soft wash shales, few sticky clumps transitioning into dense, mostly well compacted chips, few soft & gritty, earthy

**TOPEKA 3458' (-1247) 3459' (-1248)** Lm- Cream Tan FXLN, dense, well cemented, sl. FSL, mostly tight sub-cryptocrystalline w/ very limited porosity, few FSL mud supported siltstone

Sh- Gray Deep Purple Maroon, thin slivers, gritty & earthy, sl. unconsolidated

**LKC 3478' (-1267) E-LOG 3478' (-1267)** Lm- Cream Off White, F-Med XLN, FSL, densely packed oolites w/ clear siliceous cementation, few chips of smokey gray bedded chert, some oolitic mudstone, chalky in part, dense well cemented oomoldic chip, 1 CHIP W/ DRK STN, NO SFO, NO ODR

Lm- Cream Tan, VFXLN, tight, no real development, cryptocrystalline, few chips of FXLN sucrosic dolomite, clean & barren

Sh- Black Drk Gray Red Lime Green, dense, gritty, well compacted, few clumps of sticky argillaceous green lime

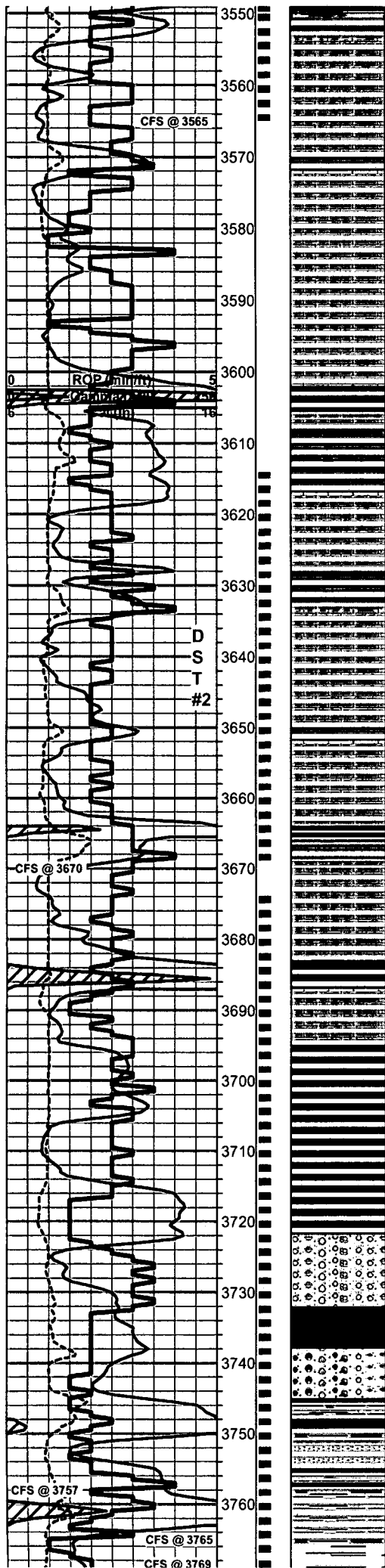
Lm- Cream Tan, F-Med XLN, moderately well developed, sl. FSL, scattered pinpoint porosity, few dense chips w/ limited porosity, LT GSY SCATTERED STN, GD GSY SHEEN, DULL FLOR & SLOW STREAMING WET CUT, FNT ODR, SL SFO UPON CRUSH

Lm- Cream Tan, FXLN, dense, poorly developed, scattered secondary XLN porosity, clean & barren

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

|                        |         |
|------------------------|---------|
| <b>SHORT TRIP</b>      |         |
| STRAP                  | 3581.88 |
| BOARD                  | 3583.82 |
| STRAP                  | - 1.94  |
| SLOPE 1 dgr.           |         |
| <b>DST#1 LKC "C-F"</b> |         |
| 3500' - 3565'          |         |



Sh- Black Red Gray Lime Green, soft, gritty & earthy

Lm- Cream Tan, Med-Coarse XLN, moderately well developed, scattered pinpoint to sub-vugular porosity, scattered recrystallization, LT GSY SCATTERED STN, GD GSY SHEEN, SL SHOW OF LT GSY FO, FNT ODR

Lm- Cream Tan, VFXLN, dense cryptocrystalline, poorly developed, chalky on top of bench grading into tight XLN w/ very limited visible porosity, few chips of semi-translucent & smokey gray bedded chert

Sh- Black Gray, fissile, carbonaceous, dense, well compacted

Lm- Cream Tan Buff, F-Med XLN, chalky in part, scattered development, few chips of gritty sl. dolomitic Ls, mostly dense, semi-brittle XLN w/ limited visible porosity, clean & barren

Lm- Tan Cream, FXLN, sl. FSL, moderately well developed, few soft chips w/ constant pinpoint porosity throughout, mostly scattered pinpoint porosity, mostly all small chips, LT GSY STN, GSY SHEEN, 1-2 CHIPS W/ VERY THIN GSY OILY FILM ON TOP, FR ODR UNDER LAMP, WEAK FLOR, 1-2 W/ SLOW STREAMING WET CUT, FEW W/ INSTANT FLOR UPON CRUSH

Lm- Brown, VF grn., dense, soft, well developed w/ constant pinpoint porosity throughout, GD GSY SHEEN COVERING LARGE PORTION OF TRAY, DRK BRWN SATUARED STN, GD SFO, FR ODR

Sh- Black Red Brown Lime Green, sl. unconsolidated, soft, gritty & earthy

Lm- Cream Tan, FXLN, sl. FSL, moderate development, scattered pinpoint porosity, LT SCATTERED STN, NO SFO, FNT ODR

Lm- Cream Off White, FXLN, sl. fsl, dense, chalky in part, mostly tight sub-cryptocrystalline w/ very limited visible porosity

Lm- Cream F-Med XLN, good constant pinpoint porosity throughout, well developed, DRK SAT STN, THICK GSY SHEEN COVERING TRAY, GD SFO, GD ODR

**BKC 3692' (-1481) E-LOG 3695' (-1484)** Sh- Maroon Gray Lime Green Purple Red, soft, sl. unconsolidated & pebbly, red wash

Lm- Off White, FXLN, dense, chalky, sl. fsl

Sh- Gray Red Lime Green

Conglomerate- various colored shales and eroded cherty Ls, few chips of lt. yellow eroded chert

Sh- Red wash shale

Chert- White Red Mustard Yellow, mix of sl. granular dolomitic chert and sharp angular bedded chert

Sh/Ss- Mint Green Red, mix of waxy dense and sticky argillaceous mint green sh & red Ss, well sorted, well cemented & consolidated

Sh- Mint Green, dense, waxy slivers, soft sticky clumps

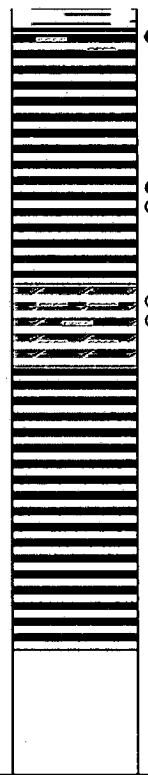
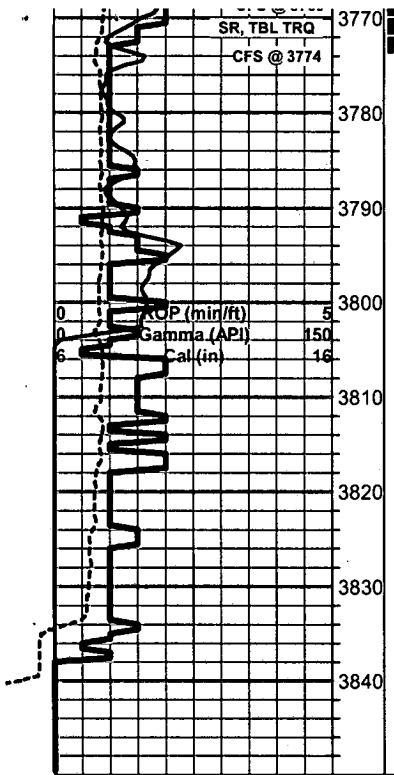
Sh- White, abundant sticky white clumps

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

DST #2 LKC "I,J,K"  
3613-3670

MINI TRIP

DST #3 ARBUCKLE  
3674 - 3774



**ARBUCKLE 3771' (-1560) E-LOG Dolomite- Buff Off white, F-Med XLN, mostly well consolidated FXLN w/ consistant pinpoint porosity throughout, semi-friable, some dense, very well cemented, good development w/ pinpoint to small vuggy porosity, few chips of sl. cherty dolomite, all w/ SAT DRK STN, GD SFO, SOME BLEEDING STN, GD ODR**

Dolomite- Buff Tan Salmon, F-Coarse XLN, Rx transgress from A/A to dense well cemented salmon colored cherty dolomite, coarse XLN, massive, sl. oolitic, SCATTERED DRK STN TO SL BARREN EDGE STN, SCATTERED SFO, GD ODR, porosity mostly tight sub-pinpoint, few chips of friable sandy dolomite w/ sat stn.

Dolomite/Sh/Chert- mix of buff med-coarse XLN dolomite w/ large visible rhombs, limited visible porosity w/ scattered STN PARTIAL BARREN, Bone white chert & cherty dolomite MOSTLY BARREN, and sticky white chalky clumps

Dolomite- Buff Cream, FXLN, dense, very well cemented, tight w/ scattered micro porosity, mostly clean & barren

Dolomite- Off White Cream, Coarse XLN, massive chunks, rough, good large visible rhombs, scattered pinpoint porosity, SCATTERED BLACK STN, WET APPEARANCE

Dolomite- A/A, med XLN

**RTD 3837' (-1626) LTD 3836' (-1625) @ 16:24 5/14/2012**

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

CTCH 1 1/2 HR.

# QUALITY OILWELL CEMENTING, INC.

No. **652**

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

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

|       |          |      |          |      |    |                                     |    |        |         |       |    |             |    |        |        |
|-------|----------|------|----------|------|----|-------------------------------------|----|--------|---------|-------|----|-------------|----|--------|--------|
| Date  | 5-9-12   | Sec. | 10       | Twp. | 10 | Range                               | 20 | County | ROCK S. | State | KS | On Location | 16 | Finish | 9:30am |
| Lease | Contract |      | Well No. | 3    |    | Location <i>W. S. HARDY 1E Unit</i> |    |        |         |       |    |             |    |        |        |

|                     |         |  |                       |                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---------|--|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| Contractor          | W.W. #8 |  | 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. |  |  |  |  |  |  |  |  |  |  |  |
| Type Job            | Surface |  | Charge To             | Mustang                                                                                                                                                                     |  |  |  |  |  |  |  |  |  |  |  |
| Hole Size           | 12 1/4  |  | T.D.                  | 220                                                                                                                                                                         |  |  |  |  |  |  |  |  |  |  |  |
| Csg.                | 8 5/8   |  | Depth                 | 220                                                                                                                                                                         |  |  |  |  |  |  |  |  |  |  |  |
| Tbg. Size           |         |  | Street                |                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |
| Tool                |         |  | City                  |                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |
| Cement Left in Csg. | 15      |  | State                 |                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |
| Meas Line           |         |  | Depth                 |                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |
|                     |         |  | Shoe Joint            |                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |
|                     |         |  | Displace              | 1334                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |  |  |
|                     |         |  | Cement Amount Ordered | 150 Com. 3 1/2" x 12 1/4" x 1                                                                                                                                               |  |  |  |  |  |  |  |  |  |  |  |

**EQUIPMENT**

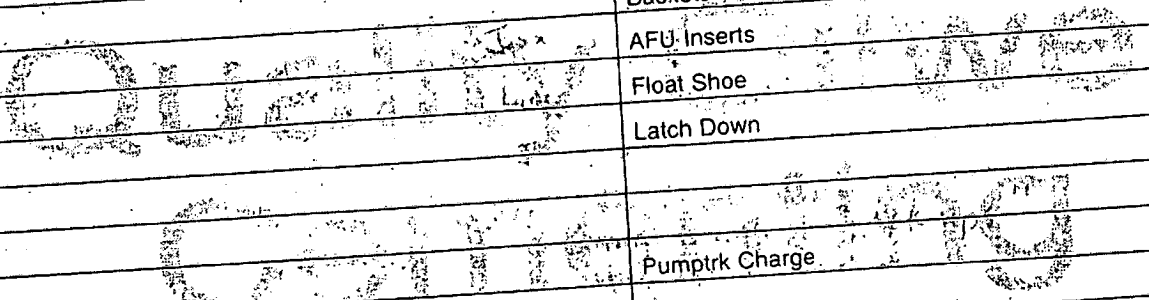
|         |    |     |          |      |        |  |          |
|---------|----|-----|----------|------|--------|--|----------|
| Pumptrk | 5  | No. | Cementer | 16.9 | Helper |  | Common   |
| Bulktrk |    | No. | Driver   | 1000 | Driver |  | Poz. Mix |
| Bulktrk | 14 | No. | Driver   | 8.00 | Driver |  | Gel.     |
|         |    |     | Driver   |      |        |  | Calcium  |

**JOB SERVICES & REMARKS**

|                    |                                         |                         |
|--------------------|-----------------------------------------|-------------------------|
| Remarks:           |                                         | Hulls                   |
| Rat Hole           |                                         | Salt                    |
| Mouse Hole         |                                         | Flowseal                |
| Centralizers       |                                         | Kol-Seal                |
| Baskets            |                                         | Mud CLR 48              |
| D/V or Port Collar |                                         | CFL-117 or CD110 CAF 38 |
|                    | 8 5/8 in. D. + top. EST. calculator mix | Sand                    |
|                    | 1500 x Displace                         | Handling                |
|                    |                                         | Mileage                 |

**FLOAT EQUIPMENT**

|             |
|-------------|
| Guide Shoe  |
| Centralizer |
| Baskets     |
| AFU Inserts |
| Float Shoe  |
| Latch Down  |



|                |  |              |
|----------------|--|--------------|
| Pumptrk Charge |  | Tax          |
| Mileage        |  | Discount     |
|                |  | Total Charge |

X Signature *[Handwritten Signature]*

# QUALITY OILWELL CEMENTING, INC.

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

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

No. 419

| Date                                          | Sec. | Twp.                                 | Range    | County                                                                                                                                                                         | State | On Location | Finish   |
|-----------------------------------------------|------|--------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|----------|
| 5-15-12                                       | 10   | 10                                   | 20       | Rooks                                                                                                                                                                          | Ks    |             | 10:00 AM |
| Lease <u>Couture</u>                          |      | Well No. <u>3</u>                    |          | Location <u>Palco Ks - 5 to AARd, IE, N/Ino</u>                                                                                                                                |       |             |          |
| Contractor <u>W-W #8</u>                      |      |                                      |          | Owner                                                                                                                                                                          |       |             |          |
| Type Job <u>Production</u>                    |      |                                      |          | To Quality Oilwell Cementing, Inc.<br>You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |       |             |          |
| Hole Size <u>7 7/8"</u>                       |      | T.D. <u>3837'</u>                    |          | Charge To <u>Mustang Energy</u>                                                                                                                                                |       |             |          |
| Csg. <u>5 3/8"</u>                            |      | Depth <u>3835'</u>                   |          | Street                                                                                                                                                                         |       |             |          |
| Tbg. Size                                     |      | Depth                                |          | City                                                                                                                                                                           |       |             |          |
| Tool                                          |      | Depth                                |          | State                                                                                                                                                                          |       |             |          |
| Cement Left in Csg. <u>42.12'</u>             |      | Shoe Joint <u>42.12'</u>             |          | The above was done to satisfaction and supervision of owner agent or contractor.                                                                                               |       |             |          |
| Meas Line                                     |      | Displace <u>90 1/4 BLS</u>           |          | Cement Amount Ordered <u>150 Sx Common 10% Salt 5% Gilsomite</u>                                                                                                               |       |             |          |
| EQUIPMENT                                     |      |                                      |          | <u>425 Sx QMDC 1 1/2" - 500 gal</u>                                                                                                                                            |       |             |          |
| Pumptrk <u>9</u>                              | No.  | Cement Helper <u>Matt P. W. Rick</u> | Common   |                                                                                                                                                                                |       |             |          |
| Bulktrk <u>4</u>                              | No.  | Driver <u>C. Ryan</u>                | Poz. Mix |                                                                                                                                                                                |       |             |          |
| Bulktrk <u>14</u>                             | No.  | Driver <u>Cody</u>                   | Gel.     |                                                                                                                                                                                |       |             |          |
| JOB SERVICES & REMARKS                        |      |                                      |          | Calcium                                                                                                                                                                        |       |             |          |
| Remarks: <u>Cement Did Circulate</u>          |      |                                      |          | Hulls                                                                                                                                                                          |       |             |          |
| Rat Hole <u>30 Sx</u>                         |      |                                      |          | Salt                                                                                                                                                                           |       |             |          |
| Mouse Hole <u>N/A</u>                         |      |                                      |          | Flowseal                                                                                                                                                                       |       |             |          |
| Centralizers <u>1, 3, 5, 7, 9, 15, 41, 52</u> |      |                                      |          | Kol-Seal                                                                                                                                                                       |       |             |          |
| Baskets <u>2, 16, 42, 53</u>                  |      |                                      |          | Mud CLR 48                                                                                                                                                                     |       |             |          |
| D/V or Port Collar                            |      |                                      |          | CFL-117 or CD110 CAF 38                                                                                                                                                        |       |             |          |
| <u>pipe on bottom, break circulation</u>      |      |                                      |          | Sand                                                                                                                                                                           |       |             |          |
| <u>425 Sx QMDC pump 500 gal</u>               |      |                                      |          | Handling                                                                                                                                                                       |       |             |          |
| <u>Mud Cleaner 48 gal</u>                     |      |                                      |          | Mileage                                                                                                                                                                        |       |             |          |
| <u>W/ 35 Sx Hook 1/4" 5 3/8" Casin</u>        |      |                                      |          | FLOAT EQUIPMENT                                                                                                                                                                |       |             |          |
| <u>+ mix 395 Sx QMDC 1 1/2" Fl. seal</u>      |      |                                      |          | Guide Shoe                                                                                                                                                                     |       |             |          |
| <u>+ mix 150 Sx Common 10% Salt, 5%</u>       |      |                                      |          | Centralizer <u>8</u> <u>trucks</u>                                                                                                                                             |       |             |          |
| <u>Gilsomite - shut down wash</u>             |      |                                      |          | Baskets <u>4</u>                                                                                                                                                               |       |             |          |
| <u>1 1/2" pins, Released latch down</u>       |      |                                      |          | AFU Inserts                                                                                                                                                                    |       |             |          |
| <u>plug &amp; displaced with 90 1/4"</u>      |      |                                      |          | Float Shoe <u>1</u>                                                                                                                                                            |       |             |          |
| <u>BLS of water</u>                           |      |                                      |          | Latch Down <u>1</u>                                                                                                                                                            |       |             |          |
| <u>L:LL pressure 1000 #</u>                   |      |                                      |          | 1 - Ratat in P. W. Ass'y                                                                                                                                                       |       |             |          |
| <u>Land plug to 1500 #</u>                    |      |                                      |          | Pumptrk Charge                                                                                                                                                                 |       |             |          |
|                                               |      |                                      |          | Mileage                                                                                                                                                                        |       |             |          |
|                                               |      |                                      |          | Tax                                                                                                                                                                            |       |             |          |
|                                               |      |                                      |          | Discount                                                                                                                                                                       |       |             |          |
| Signature <u>[Signature]</u>                  |      |                                      |          | Total Charge                                                                                                                                                                   |       |             |          |