



KANSAS CORPORATION COMMISSION 1105431
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: Herb Deines

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

09/12/2012 09/16/2012 09/26/2012

Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 15-065-23855-00-00

Spot Description: _____

E2 NW NW NE Sec. 11 Twp. 10 S. R. 21 East West

330 Feet from North / South Line of Section

2060 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: Graham

Lease Name: DeYoung Well #: 2

Field Name: Copper

Producing Formation: Arbuckle

Elevation: Ground: 2262 Kelly Bushing: 2267

Total Depth: 3990 Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: 217 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: 3990

feet depth to: 0 w/ 610 sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: 18000 ppm Fluid volume: 300 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 Garrison Date: 12/27/2012



1105431

Operator Name: Mustang Energy Corporation Lease Name: DeYoung Well #: 2
 Sec. 11 Twp. 10 S. R. 21 East West County: Graham

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 type="checkbox"/> Yes <input checked="" 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;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Top</th> <th style="text-align: left;">Datum</th> </tr> </thead> <tbody> <tr> <td>Anhydrite</td> <td>1744</td> <td>+523</td> </tr> <tr> <td>Base</td> <td>1780</td> <td>+487</td> </tr> <tr> <td>Heebner</td> <td>3478</td> <td>-1211</td> </tr> <tr> <td>LKC</td> <td>3519</td> <td>-1252</td> </tr> <tr> <td>BKC</td> <td>3745</td> <td>-1478</td> </tr> <tr> <td>Arbuckle</td> <td>3820</td> <td>-1553</td> </tr> </tbody> </table>	Name	Top	Datum	Anhydrite	1744	+523	Base	1780	+487	Heebner	3478	-1211	LKC	3519	-1252	BKC	3745	-1478	Arbuckle	3820	-1553
Name	Top	Datum																				
Anhydrite	1744	+523																				
Base	1780	+487																				
Heebner	3478	-1211																				
LKC	3519	-1252																				
BKC	3745	-1478																				
Arbuckle	3820	-1553																				

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	217	common	150	3% cc, 2% gel
Production	7.875	5.5	15.5	3989	QMDC	610	10% salt, 5% Gil

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 checked="" type="checkbox"/> Plug Off Zone	3838-3841	common	50	60/40, 3% CC
	3832-3834	common	50	60/40, 3% CC

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
2	3822-29		

TUBING RECORD: Size: <u>2.875</u> Set At: <u>3811</u> Packer At: <u> </u> Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>01/01/2013</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) <u> </u>
Estimated Production Per 24 Hours	Oil Bbls. <u>15</u> Gas Mcf <u> </u> Water Bbls. <u>480</u> Gas-Oil Ratio <u> </u> Gravity <u> </u>

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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) <u> </u>	PRODUCTION INTERVAL: <u> </u> <u> </u>
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QUALITY OILWELL CEMENTING, INC.

F

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

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

No. 5235

Date	9-12-12	Sec.	11	Twp.	10	Range	21	County	Graham	State	KS	On Location	Finish
Lease	De Young	Well No.	2		Location Palo S to RD x W to 390 1/2 S W to								
Contractor	WV 6							Owner					
Type Job	Surface							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.					
Hole Size	18 1/4		T.D.		218		Charge To						
Csg.	8 5/8		Depth		217.85		Mustang Energy						
Tbg. Size			Depth				Street						
Tool			Depth				City			State			
Cement Left in Csg.	17 ft		Shoe Joint		17 ft		The above was done to satisfaction and supervision of owner agent or contractor.						
Meas Line			Displace		12.34		Cement Amount Ordered			150 380 2% gel			

EQUIPMENT

Pumptrk	16	No.	Cementer	Helper	Matt	Common	130
Bulktrk	10	No.	Driver	Driver	frans	Poz. Mix	
Bulktrk	pu	No.	Driver	Driver	drag	Gel.	3

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
	Sand
Cement did Circulate	Handling 138
	Mileage

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge	Surface
Mileage	43

	Tax
	Discount
	Total Charge

X Signature

QUALITY OILWELL CEMENTING, INC.

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

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

No. 5362
7:45 AM

Date	9-17-12	Sec.	11	Twp.	10	Range	21	County	Graham	State	Ks	On Location	Finish
Lease	DeYoung	Well No.	2		Location	Palco Ks - S to Y Rd, 3 W to 380 H							
Contractor	W-W #6				Owner	Rd, 1 1/4 S W into							
Type Job	Production				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.								
Hole Size	7 7/8"		T.D.	3990'		Charge To	Mustang Energy						
Csg.	5 1/2"		Depth	3989'		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.	42.17'		Shoe Joint	42.17'		Cement Amount Ordered 500 gal Mud Clear 48, 450 QM.C.							
Meas Line			Displace	BLS		1/4# Flowseal, 150 Sx Common 10% Salt, 5% Gilsomite							

EQUIPMENT

Pumptrk	9	No.	Cementor	Brett	Helper	Rick	Common	450 QMDC 150	
Bulktrk	13	No.	Driver	Lonnie	Driver		Poz. Mix		
Bulktrk	14	No.	Driver	Levy	Driver		Gel.		

JOB SERVICES & REMARKS

Remarks:	pipe on bottom, break Circulation	Mud	
Rat Hole	pump 500 gal Mud Clear 48	Salt	13
Mouse Hole	plug Rat hole w/ 30 Sx 420	Flowseal	112#
Centralizers	Hook to Casing + mix 40 Sx	Kol-Seal	250#
Baskets	QMDC 1/4# Flowseal per sack	Mud CLR 48	500 gal
D/V or Port Collar	1/50 Sx Common 10% Salt 5% Gilsomite. Shut down, wash pump + lines, Released plug + Displaced with 1 BLS of water	CFL-117 or CD110 CAF 38	
		Sand	
		Handling	610
		Mileage	

FLOAT EQUIPMENT

Released + held	Guide Shoe	
Lift pressure 1300 #	Centralizer	12
Land plug to 2000 #	Baskets	3
	AFU Inserts	
	Float Shoe	1 Cement did circulate
	Latch Down	1

Pumptrk Charge	prod Larry Brad Br	Tax	
Mileage	45	Discount	
Signature	Brad Brin	Total Charge	



MUSTANG ENERGY CORPORATION

Scale 1:240 Imperial

Well Name: DEYOUNG #2
 Surface Location: E2 NW NW NE 11-10S-21W
 Bottom Location:
 API: 15-065-23855-0000
 License Number: 33922
 Spud Date: 9/12/2012 Time: 11:00 PM
 Region: GRAHAM
 Drilling Completed: 9/16/2012 Time: 5:50 PM
 Surface Coordinates: 330' FNL & 2060' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 2262.00ft
 K.B. Elevation: 2267.00ft
 Logged Interval: 2400.00ft To: 3892.00ft
 Total Depth: 3990.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER

OPERATOR

Company: MUSTANG ENERGY CORPORATION
 Address: PO BOX 1121
 HAYS, KS 67601

Contact Geologist: ROD BRIN
 Contact Phone Nbr: (785) 623-0533
 Well Name: DEYOUNG #2
 Location: E2 NW NW NE 11-10S-21W API: 15-065-23855-0000
 Pool: Field: COOPER
 State: KANSAS Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.6306577 Latitude: 39.2045062
 N/S Co-ord: 330' FNL
 E/W Co-ord: 2060' FEL

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 #: 6
 Rig Type: MUD ROTARY
 Spud Date: 9/12/2012 Time: 11:00 PM
 TD Date: 9/16/2012 Time: 5:50 PM
 Rig Release: 9/17/2012 Time: 12:00 AM

ELEVATIONS

K.B. Elevation: 2267.00ft Ground Elevation: 2262.00ft
 K.B. to Ground: 5.00ft

NOTES

DUE TO STRUCTURAL POSITION AND FAVORABLE LOG ANALYSIS DECISION WAS MADE TO DEEPEN THE WELL 100' AFTER LOG FOR POSSIBLE USAGE AS A DISPOSAL WELL IN THE FUTURE. 5 1/2" PRODUCTION CASING WAS RAN.

RESPECTFULLY SUBMITTED,
 JEFF LAWLER

WELL COMPARISON SHEET

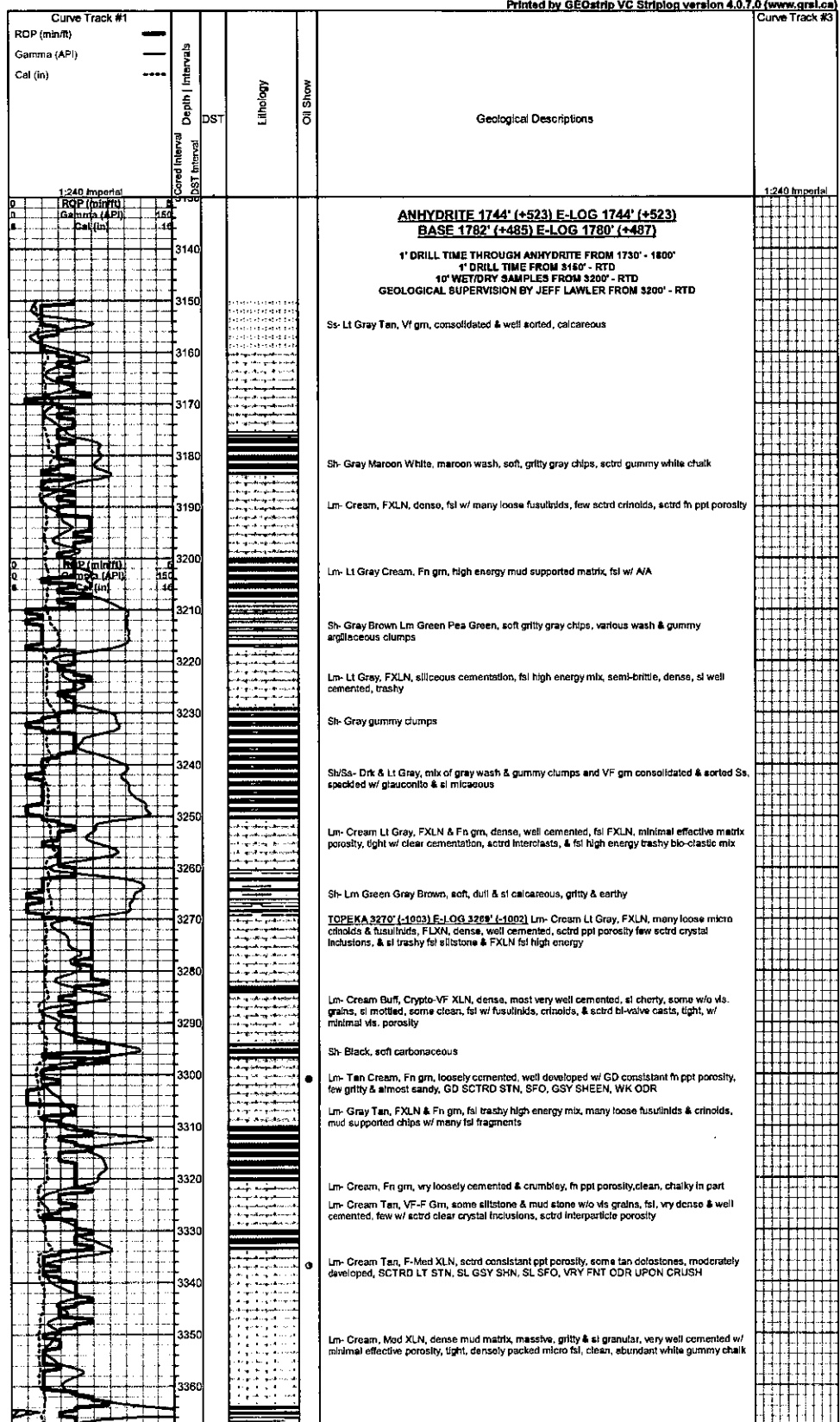
FORMATION	P&A 9-89										P&A 8-81									
	DEYOUNG #2					DEYOUNG #1					DEYOUNG #3					DEYOUNG #4				
	LOG TOPS	LOG BOTTOM	DEPTH	DATE	LOG	LOG TOPS	LOG BOTTOM	DEPTH	DATE	LOG	LOG TOPS	LOG BOTTOM	DEPTH	DATE	LOG	LOG TOPS	LOG BOTTOM	DEPTH	DATE	LOG
ARBUCKLE	2267	2262	5	9/12/12	2267	2262	5	9/12/12	2267	2262	5	9/12/12	2267	2262	5	9/12/12	2267	2262	5	9/12/12
STARKS	2262	2257	5	9/12/12	2262	2257	5	9/12/12	2262	2257	5	9/12/12	2262	2257	5	9/12/12	2262	2257	5	9/12/12
WYANDOTT	2257	2252	5	9/12/12	2257	2252	5	9/12/12	2257	2252	5	9/12/12	2257	2252	5	9/12/12	2257	2252	5	9/12/12
WYANDOTT	2252	2247	5	9/12/12	2252	2247	5	9/12/12	2252	2247	5	9/12/12	2252	2247	5	9/12/12	2252	2247	5	9/12/12
WYANDOTT	2247	2242	5	9/12/12	2247	2242	5	9/12/12	2247	2242	5	9/12/12	2247	2242	5	9/12/12	2247	2242	5	9/12/12
WYANDOTT	2242	2237	5	9/12/12	2242	2237	5	9/12/12	2242	2237	5	9/12/12	2242	2237	5	9/12/12	2242	2237	5	9/12/12
WYANDOTT	2237	2232	5	9/12/12	2237	2232	5	9/12/12	2237	2232	5	9/12/12	2237	2232	5	9/12/12	2237	2232	5	9/12/12
WYANDOTT	2232	2227	5	9/12/12	2232	2227	5	9/12/12	2232	2227	5	9/12/12	2232	2227	5	9/12/12	2232	2227	5	9/12/12
WYANDOTT	2227	2222	5	9/12/12	2227	2222	5	9/12/12	2227	2222	5	9/12/12	2227	2222	5	9/12/12	2227	2222	5	9/12/12
WYANDOTT	2222	2217	5	9/12/12	2222	2217	5	9/12/12	2222	2217	5	9/12/12	2222	2217	5	9/12/12	2222	2217	5	9/12/12
WYANDOTT	2217	2212	5	9/12/12	2217	2212	5	9/12/12	2217	2212	5	9/12/12	2217	2212	5	9/12/12	2217	2212	5	9/12/12
WYANDOTT	2212	2207	5	9/12/12	2212	2207	5	9/12/12	2212	2207	5	9/12/12	2212	2207	5	9/12/12	2212	2207	5	9/12/12
WYANDOTT	2207	2202	5	9/12/12	2207	2202	5	9/12/12	2207	2202	5	9/12/12	2207	2202	5	9/12/12	2207	2202	5	9/12/12
WYANDOTT	2202	2197	5	9/12/12	2202	2197	5	9/12/12	2202	2197	5	9/12/12	2202	2197	5	9/12/12	2202	2197	5	9/12/12
WYANDOTT	2197	2192	5	9/12/12	2197	2192	5	9/12/12	2197	2192	5	9/12/12	2197	2192	5	9/12/12	2197	2192	5	9/12/12
WYANDOTT	2192	2187	5	9/12/12	2192	2187	5	9/12/12	2192	2187	5	9/12/12	2192	2187	5	9/12/12	2192	2187	5	9/12/12
WYANDOTT	2187	2182	5	9/12/12	2187	2182	5	9/12/12	2187	2182	5	9/12/12	2187	2182	5	9/12/12	2187	2182	5	9/12/12
WYANDOTT	2182	2177	5	9/12/12	2182	2177	5	9/12/12	2182	2177	5	9/12/12	2182	2177	5	9/12/12	2182	2177	5	9/12/12
WYANDOTT	2177	2172	5	9/12/12	2177	2172	5	9/12/12	2177	2172	5	9/12/12	2177	2172	5	9/12/12	2177	2172	5	9/12/12
WYANDOTT	2172	2167	5	9/12/12	2172	2167	5	9/12/12	2172	2167	5	9/12/12	2172	2167	5	9/12/12	2172	2167	5	9/12/12
WYANDOTT	2167	2162	5	9/12/12	2167	2162	5	9/12/12	2167	2162	5	9/12/12	2167	2162	5	9/12/12	2167	2162	5	9/12/12
WYANDOTT	2162	2157	5	9/12/12	2162	2157	5	9/12/12	2162	2157	5	9/12/12	2162	2157	5	9/12/12	2162	2157	5	9/12/12
WYANDOTT	2157	2152	5	9/12/12	2157	2152	5	9/12/12	2157	2152	5	9/12/12	2157	2152	5	9/12/12	2157	2152	5	9/12/12
WYANDOTT	2152	2147	5	9/12/12	2152	2147	5	9/12/12	2152	2147	5	9/12/12	2152	2147	5	9/12/12	2152	2147	5	9/12/12
WYANDOTT	2147	2142	5	9/12/12	2147	2142	5	9/12/12	2147	2142	5	9/12/12	2147	2142	5	9/12/12	2147	2142	5	9/12/12
WYANDOTT	2142	2137	5	9/12/12	2142	2137	5	9/12/12	2142	2137	5	9/12/12	2142	2137	5	9/12/12	2142	2137	5	9/12/12
WYANDOTT	2137	2132	5	9/12/12	2137	2132	5	9/12/12	2137	2132	5	9/12/12	2137	2132	5	9/12/12	2137	2132	5	9/12/12
WYANDOTT	2132	2127	5	9/12/12	2132	2127	5	9/12/12	2132	2127	5	9/12/12	2132	2127	5	9/12/12	2132	2127	5	9/12/12
WYANDOTT	2127	2122	5	9/12/12	2127	2122	5	9/12/12	2127	2122	5	9/12/12	2127	2122	5	9/12/12	2127	2122	5	9/12/12
WYANDOTT	2122	2117	5	9/12/12	2122	2117	5	9/12/12	2122	2117	5	9/12/12	2122	2117	5	9/12/12	2122	2117	5	9/12/12
WYANDOTT	2117	2112	5	9/12/12	2117	2112	5	9/12/12	2117	2112	5	9/12/12	2117	2112	5	9/12/12	2117	2112	5	9/12/12
WYANDOTT	2112	2107	5	9/12/12	2112	2107	5	9/12/12	2112	2107	5	9/12/12	2112	2107	5	9/12/12	2112	2107	5	9/12/12
WYANDOTT	2107	2102	5	9/12/12	2107	2102	5	9/12/12	2107	2102	5	9/12/12	2107	2102	5	9/12/12	2107	2102	5	9/12/12
WYANDOTT	2102	2097	5	9/12/12	2102	2097	5	9/12/12	2102	2097	5	9/12/12	2102	2097	5	9/12/12	2102	2097	5	9/12/12
WYANDOTT	2097	2092	5	9/12/12	2097	2092	5	9/12/12	2097	2092	5	9/12/12	2097	2092	5	9/12/12	2097	2092	5	9/12/12
WYANDOTT	2092	2087	5	9/12/12	2092	2087	5	9/12/12	2092	2087	5	9/12/12	2092	2087	5	9/12/12	2092	2087	5	9/12/12
WYANDOTT	2087	2082	5	9/12/12	2087	2082	5	9/12/12	2087	2082	5	9/12/12	2087	2082	5	9/12/12	2087	2082	5	9/12/12
WYANDOTT	2082	2077	5	9/12/12	2082	2077	5	9/12/12	2082	2077	5	9/12/12	2082	2077	5	9/12/12	2082	2077	5	9/12/12
WYANDOTT	2077	2072	5	9/12/12	2077	2072	5	9/12/12	2077	2072	5	9/12/12	2077	2072	5	9/12/12	2077	2072	5	9/12/12
WYANDOTT	2072	2067	5	9/12/12	2072	2067	5	9/12/12	2072	2067	5	9/12/12	2072	2067	5	9/12/12	2072	2067	5	9/12/12
WYANDOTT	2067	2062	5	9/12/12	2067	2062	5	9/12/12	2067	2062	5	9/12/12	2067	2062	5	9/12/12	2067	2062	5	9/12/12
WYANDOTT	2062	2057	5	9/12/12	2062	2057	5	9/12/12	2062	2057	5	9/12/12	2062	2057	5	9/12/12	2062	2057	5	9/12/12
WYANDOTT	2057	2052	5	9/12/12	2057	2052	5	9/12/12	2057	2052	5	9/12/12	2057	2052	5	9/12/12	2057	2052	5	9/12/12
WYANDOTT	2052	2047	5	9/12/12	2052	2047	5	9/12/12	2052	2047	5	9/12/12	2052	2047	5	9/12/12	2052	2047	5	9/12/12
WYANDOTT	2047	2042	5	9/12/12	2047	2042	5	9/12/12	2047	2042	5	9/12/12	2047	2042	5	9/12/12	2047	2042	5	9/12/12
WYANDOTT	2042	2037	5	9/12/12	2042	2037	5	9/12/12	2042	2037	5	9/12/12	2042	2037	5	9/12/12	2042	2037	5	9/12/12
WYANDOTT	2037	2032	5	9/12/12	2037	2032	5	9/12/12	2037	2032	5	9/12/12	2037	2032	5	9/12/12	2037	2032	5	9/12/12
WYANDOTT	2032	2027	5	9/12/12	2032	2027	5	9/12/12	2032	2027	5	9/12/12	2032	2027	5	9/12/12	2032	2027	5	9/12/12
WYANDOTT	2027</																			

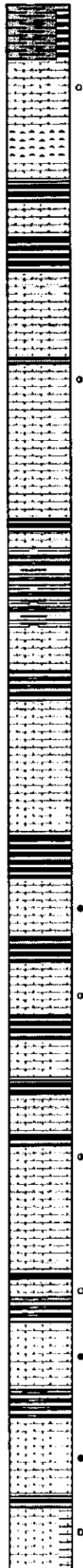
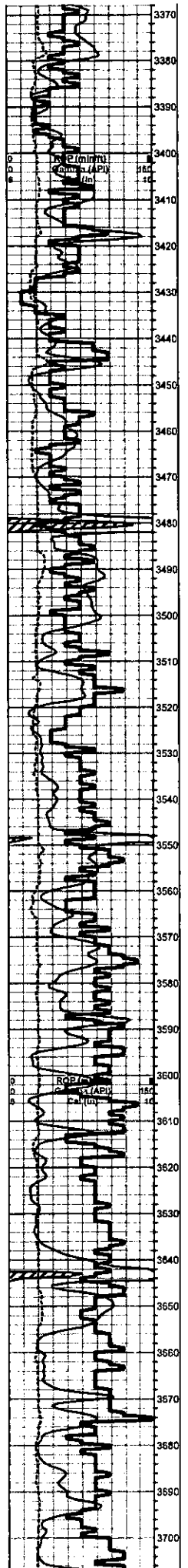
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ROCK TYPES					
Cht	Dolsec	shale, gm	shale, red	Lscong	
Congl	Lmst fw<7	shale, gry	Shcol		
Dolprim	Lmst fw>7	Carbon Sh	Sa		

ACCESSORIES		
MINERAL Sandy	STRINGER Chert	TEXTURE Chaiky

OTHER SYMBOLS	
DST	
DST Int	
DST alt	





Sh- black Gray Lm green Cream Off white, dense, fissile, carbonaceous, soft, silty gummy im green chips & sandy lime, much heavily mottled cream & off white silty chalk, few chips of argillaceous siltstone/mudstone

3380 Lm- Buff Tan, Mod gm, massive, very well cemented, gritty sil dolomitic La, consistent in ppt porosity, few chips w/ WK SPOTTY STN, NSFO, VRY FNT GSY SHEEN, NO ODR

3390 Lm- Tan Lt Gray, VF-FXLN, very well cemented, sil w/ loose fusulinids & crinoids, tight w/ scrd XLN porosity, mottled

3400 Chen- Golden Brown sil fresh bedded chert

3410 Lm- Cream Tan, Med XLN, chalky matrix high energy, scrd sil fragments, crumbly & loosely cemented

3420

3430 Chert/Lm- Golden Brown Cream Smokey Gray Semi-translucent, most sil fresh bedded chert, few chips of gritty sil dolomitic chert, cream FXLN dense, well cemented, sil cherty La, clean & barren

3440

3450 Lm- Cream Off White, FXLN, dense, well cemented, tight w/ scrd microXLN porosity, DRK EDGE STN, HVY & SL TARRY, NO ODR

3460 Lm- Cream Lt Gray Tan, F-Med XLN, sil, dense, well cemented, scrd ppt & XLN porosity, clean & barren, few chips of sil cherty La

3470 Lm- Cream Buff, Fm gm & VF-FXLN, tight, scrd mottling, sil sil, no - minimal vs. porosity

3480 **HEBNER 3479' (-1212) E-LOG 3478' (-1211) Sh- Black Gray Brown, fissile, dense, soft, carbonaceous, gritty & earthy, dull Lm Green shivers**

3490 Sh- Lm Green Gray, gritty, sil sandy, dense, well compacted, semi-lithified

3500 **TORONTO 3511' (-1244) E-LOG 3509' (-1238) Lm- FXLN, sil sil, mix of tight cherty La, gritty sil dolomitic sil chert, & FXLN, loosely cemented, sil crumbly La w/ GD XLN porosity, clean & barren**

3510

3520 **[KC 3522' (-1266) -LOG 3518' (-1262) Lm- Cream White Off White, Crypto - Med XLN, top of bench sil sil, well developed w/ GD ppt - sub vuggy porosity, SCTRD LT STN, VRY SL SFO, SL GSY SHN, FNT GSY ODR, transitioning into crypto XLN, tight w/ vs. grains, sil chalky in part**

3530

3540 Lm- Cream Off White, Crypto - VF XLN, dense, well cemented, tight, no - minimal vs. porosity, few chips of white fresh chert, very clean & barren

3550 Sh- Gray Maroon Lm Green Brown, gritty & earthy, soft, sil unconsolidated & trashy gray shale

3560 Lm- Cream Tan, F-Med XLN, sil & oolitic, well developed w/ GD interoolite porosity throughout, loosely cemented, LT GSY STN, SL GSY SHN, NSFO, GD GSY ODR, STN SEM-FLAKEY

3570 Sh- Brick Red Brown, dense & blocky, waxy, slick, gritty & earthy

3580 Lm- Cream Tan, VF-FXLN, dense, tight & vry well cemented, sil sil, scrd XLN & in ppt porosity, DRK SCTRD STN, NSFO, NO ODR

3590

3600 Lm- Cream Off White, VF-FXLN, most loosely cemented, & crumbly, scrd XLN porosity, few chips w/ dense secondary recrystallized porosity, very clean

3610 Lm- Cream Off White Buff, F-Med XLN, gritty & granular, dense, vry well cemented, sil dolomitic

3620 Lm- Cream Off White, F-Med XLN, oolitic & sil, densely packed small oolites in tight matrix, scrd ppt porosity, loosely cemented, 2-3 chips w/ scrd interoolite porosity, LT GSY STN, SL SFO, NO ODR

3630 Lm- Cream Off White, VF-FXLN, dense, tight, well cemented, most w/ few vs. grains & rare vs. porosity, chalky in part

3640 Sh- Black Gray Lm Green, soft, fissile, carbonaceous, massive, sil unconsolidated gray chips

3650 Lm- Tan Drk Gray, F-Med XLN, oolitic, dense matrix & well cemented, scrd in ppt interoolite porosity, WK SCTRD STN, NSFO, NO ODR

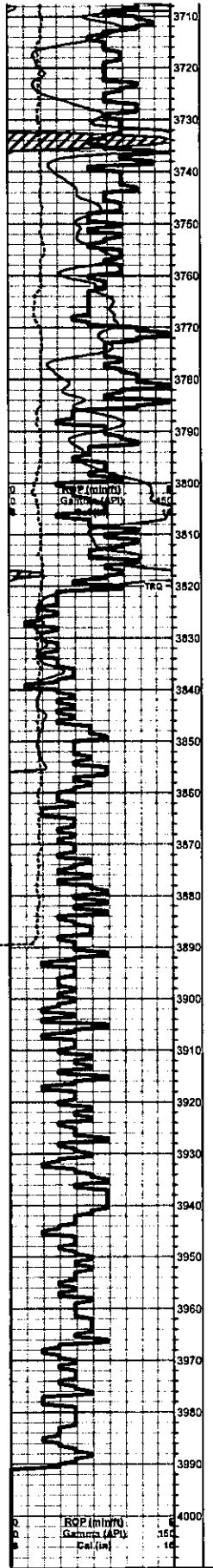
3660 Lm/Dolomite- Cream Tan, FXLN, dense, vry well cemented, gritty sil cherty dolomite, scrd ppt to sub-vuggy porosity, DRK BRWN STN, NSFO, FNT ODR, INSTANT BRIGHT FLOR & WET CUT, few scrd chips of fresh angular chert

3670 Sh- Gray Lm Green Maroon, gritty, sil unconsolidated, waxy

3680 Lm- Cream Tan, F-Med XLN, sil sil, well developed w/ consistent in ppt porosity, loosely cemented, LT GSY STN, FR GSY SHN, FR ODR

3690

3700 Lm- Cream Off White, VF-FXLN, dense, vry well cemented, tight, sil cherty La, minimal vs. porosity, SCTRD DRK GILSONITE STN, NSFO, NO ODR, chalky in part



STARK SHALE 3708' (-1441) E-LOG 3707' (-1440) Sh- Black Gray Ln Green Brown Maroon, soft, carbonaceous, gritty & earthy, some sl waxy

Ln- Cream Tan, FXLN, fl & sl oolitic mbr of dolomite & Ls, well developed w/ consistent fn ppt porosity, GD GSY STN, MOSTLY SAT, SOME FLOATING FO GLOBULES, FR ODR

Sh- Black Maroon Gray, dense, well compacted, fissile, silty, carbonaceous, soft, gritty & sl unconsolidated

Ln- Cream Buff, VF-F gm, dense, well cemented, algal Ls, minimal vis. porosity, tight

BKC 3747' (-1480) E-LOG 3745' (-1478) Sh- Maroon Brown, gritty & earthy, soft

Sh- Gray Maroon Brown, crumbly, soft

Ln Conglomerate- Reddish & Purpleish tint, soft, sl shaley matrix, crumbly, actrd white chalk, few chips w/ SCTR'D STN, SL SFO, NO ODR, few small chips of tan, salmon, & pink chert

Sh- Lt Purple sandy lime

Ss- Lt Gray Buff Lt Purple, soft, vry friable, some calcareous sandy lime, various dark colored shales

Conglomerate- Dolomite/Sand/Chert/Sh- Salmon/Yellowish gritty dolomite, FXLN, well cemented w/ BLK DO STN, NSFO, Sand- Clear, Rnd-Sub md clusters, consolidated - unconsolidated, vry friable - semi-cemented, SAT BLK DO STN, NSFO, Chert- Salmon Yellowish, fresh bedded, NO ODR

A/A increasing amounts of chert, few sl cleaner chips of dolomite, Sh- Mint Green, slick & waxy

ARBuckle 3820' (-1553) E-LOG 3820' (-1553) Dolomite- Cream Tan Buff, F-Coarse XLN, mix of sacroic & friable (BEST SAT STN) to well cemented, few w/ GD euhedral vis. rhombs, Mod XLN, dense, well cemented w/ actrd fn ppt-sub vuggy porosity, Coarse XLN- GD euhedral rhombic sacroic clusters, actrd siliceous cementation, all w/ SCTR'D TO SAT FLAKEY STN, NSFO, FR ODR

Dolomite- Cream Tan, F-Med XLN, sacroic, most vry friable, many rhombic clusters constant vry - fn ppt porosity, SAT DRK STN, FD-GD SFO, SOME BLEEDING, GD ODR

Dolomite- Tan, Med XLN, sl sacroic, some well cemented, well developed w/ ppt porosity throughout, SAT DRK STN, SL SFO, GD ODR, some shaley & speckled w/ pyrite inclusions

Dolomite/Chert- Cream Salmon White, Med XLN, most well cemented & dense, much barren porosity, waxy mint green interbedded shale bench, mix of dolomite & cherty dolomite, SCTR'D DRK STN, SL SFO, GD ODR

Dolomite- Cream Off White Tan, Mod-Coarse XLN, mostly sacroic, well developed w/ ppt porosity throughout, few w/ glazed texture & minimal vis. porosity, GD SCTR'D DRK STN, FR SFO, GD ODR

Dolomite- FXLN, loosely cemented, ppt porosity, mostly barren, Mod XLN, sacroic w/ euhedral rhombs to well cemented & tight, barren porosity to SCTR'D STN, SL SFO, FR ODR, Cra XLN, sacroic w/ euhedral rhombs, vuggy porosity, SCTR'D BLK STN, NSFO, FR ODR

40' smpt- Dolomite- Cream Tan, Med-Cra XLN, much sacroic w/ GD euhedral rhombs, friable, GD vuggy porosity, much gunny white chalk, GD GSY STN, GD SHEEN, SL GSY SFO, GD ODR

Dolomite- Cream Tan, Med - Cra XLN, dense, very well cemented, tight w/ actrd ppt porosity, SCTR'D BLK DO STN, NSFO, much barren porosity

Dolomite- Cream Off White Tan, Cra XLN, actrd development, ppt-actrd vuggy porosity, GD euhedral rhombic clusters, actrd siliceous cementation, few w/ pyrite inclusions, few cubic euhedral pyrite clusters

Dolomite- Cream Tan, F-Med XLN, dense, well cemented, actrd fn ppt porosity, few oolitic chips, mostly tight, actrd white chalk

Chert/Dolomite- more fresh oolitic chert, VF-FXLN tan cherty dolomite, tight w/ actrd vry fn ppt porosity

Dolomite- Tan, Med-Cra XLN, loosely to well cemented MXLN, vry fn - fn ppt porosity, sl sacroic, Salmon & Tan Cra XLN, sacroic, GD euhedral clusters, loosely cemented w/ ppt - vuggy porosity

Sh-Mustard Yellow Deep Purple Gray Drk Brown, soft, semi-waxy

Dolomite- White, Fn-Med gm sandy dolomite, clear rounded to sub-rounded grns, sl unconsolidated, vry friable, white loose cementation

Dolomite- Cream Buff Salmon, VF-FXLN, dense, most well cemented, few semi-soft, dense, tight, cherty dolomite, gritty, few chips w/ minimal vis. grains

Dolomite- White Off White, VFXLN, dense, sl sandy, speckled w/ glauconite, some gritty & sl sacroic, semi-soft, actrd white chalky & mint green waxy shale

Chert/Dolomite- Cream White Buff Semi-Translucent, VF-FXLN, cherty dolomite, some gritty, well cemented, dense & tight, minimal vis. porosity

A/A w/ more buff chert

RTD 3980' (-1723) LTD 3892' (-1625) @ 22:21 9/16/2012

3390'
SHORT TRIP
SURVEY 1 dgr.
CTCH
TOH FOR LOG

(AFTER LOG
DEEPEMED MOLE
100')
LTD 3892'
(-1625)