



KANSAS CORPORATION COMMISSION 1092601
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 # 4058
Name: American Warrior, Inc.
Address 1: 3118 Cummings Rd
Address 2: PO BOX 399
City: GARDEN CITY State: KS Zip: 67846 + _____
Contact Person: Joe Smith
Phone: (620) 275-2963
CONTRACTOR: License # 5822
Name: Val Energy, Inc.
Wellsite Geologist: Jeff Lawler
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 #: _____

<u>08/09/2012</u>	<u>08/15/2012</u>	<u>08/15/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-065-23848-00-00

Spot Description: _____
NE SE SW SE Sec. 12 Twp. 8 S. R. 21 East West
339 Feet from North / South Line of Section
1400 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: Graham

Lease Name: Berland Well #: 1-12

Field Name: _____

Producing Formation: None

Elevation: Ground: 2031 Kelly Bushing: 2038

Total Depth: 3651 Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: 225 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: 14000 ppm Fluid volume: 80 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 Gertiso Date: 09/06/2012



1092601

Operator Name: American Warrior, Inc. Lease Name: Berland Well #: 1-12

Sec. 12 Twp. 8 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input 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: Dual Induction Porosity Sonic	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Attached Top Attached Datum Attached
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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	12.250	8.625	24	225	Common	170	3%CC,2%gel

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

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

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	American Warrior, Inc.
Well Name	Berland 1-12
Doc ID	1092601

Tops

Name	Top	Depth
Anhy	1572'	+466
B/Anhy	1606	+432
Heebner	3238'	-1200
Toronto	3262'	-1224
Lansing	3277'	-1739
B/KC	3482'	-1444
Marmaton	3516'	-1478
Arbuckle	3578'	-1540

ALLIED OIL & GAS SERVICES, LLC 056476

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Russell KS

DATE 8-9-12	SEC. 12	TWP. 8	RANGE 21	CALLED OUT	ON LOCATION	JOB START 9:30 AM	JOB FINISH 9:00 PM
LEASE Becklund	WELL# 1-12	LOCATION Damar 2 W 2 N Winto			COUNTY Graham	STATE KS	
OLD OR NEW (circle one)							

CONTRACTOR Val #3
 TYPE OF JOB surface
 HOLE SIZE 12 1/4 I.D. 2.25
 CASING SIZE 8 5/8 23" DEPTH 2.25
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX 2.50 MINIMUM
 MEAS. LINE SHOE JOINT 15'
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT 13 1/4 bbl

OWNER
 CEMENT AMOUNT ORDERED 170 can 39cc 2.9 gal
 COMMON 170 @ 16.25 2762.50
 POZ MIX @
 GEL 3 @ 21.25 63.75
 CHLORIDE 6 @ 58.20 349.20
 ASC @
 @
 @
 @
 @
 @
 @
 188.51 @ 2.10 385.37
 HANDLING 179 @
 MILEAGE 434.92 7/m x 2.35 1021.84
 TOTAL 4582.66

EQUIPMENT
 PUMP TRUCK CEMENTER Robert Y Glenn G
 # 417 HELPER Woody O
 BULK TRUCK
 # 481 DRIVER Walter K
 BULK TRUCK
 # DRIVER

REMARKS:
 run 5 joints of new 8 5/8 23" pipe
 receive circulation mix 170 can
 39cc 2.9 gal displac 13 1/4 bbl of
 water shut in with about 250 lbs
 wash up
 Cement Did Circulate

CHARGE TO: American Warrior, Inc
 STREET
 CITY STATE ZIP

SERVICE
 DEPTH OF JOB
 PUMP TRUCK CHARGE 1125
 EXTRA FOOTAGE @
 MILEAGE 52 HVMI @ 7.00 364.00
 MANIFOLD @ 4.00 208.00
 52 LVMI @
 TOTAL 1697.00

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

PLUG & FLOAT EQUIPMENT
 @
 @
 @
 @
 @
 TOTAL 0

PRINTED NAME Brad Madison
 SIGNATURE

SALES TAX (If Any) 239.74
 TOTAL CHARGES 6279.66
 DISCOUNT 20% 1255.93
 Net 4545.58 BS 8-10



CONSOLIDATED
OIL FIELD SERVICES, LLC

TICKET NUMBER 37065

LOCATION Oakley, KS

FOREMAN Kelly Gabe

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-15-12	1087	Berland 1-12 ✓	12	8	21	Graham ^{KS}
CUSTOMER <u>American Warrior</u>			Bogue E on Highway to 400 Ave 2 1/2 N Wind			
MAILING ADDRESS <u>3118 Cummings Rd Po Box 309</u>			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY <u>Golden City</u>			<u>399</u>	<u>Damon M</u>	<u>566</u>	<u>Cody R</u>
STATE <u>KS</u>	ZIP CODE <u>67046</u>					

JOB TYPE OTA HOLE SIZE 7 7/8 HOLE DEPTH 3650' CASING SIZE & WEIGHT _____
 CASING DEPTH _____ DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14² SLURRY VOL _____ WATER gal/ek _____ CEMENT LEFT in CASING _____
 DISPLACEMENT _____ DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: safety meeting, rigged up on val drilling rig #3, mixed cement plugs & displaced.
25 sks @ 5560
25 sks @ 1600
100 sks @ 903
40 sks @ 272
10 sks @ 40
30 sks RH
15 MH

Thank you Kelly & crew

ACCOUNT # CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5405 N	1	PUMP CHARGE	1325 ⁰⁰	1325 ⁰⁰
5406	50	MILEAGE	5 ⁰⁰	250 ⁰⁰
1131	245 sks	60/40 P02	15 ¹⁰	3699 ⁵⁰
115B	843*	Bentonite	.25	210 ⁷⁵
1107	61*	Flo-seal	2 ⁸³	172 ⁰³
5402A	10.35	Tan Mileage delivery	1 ⁰⁷	964 ⁵⁰
4432	1	8 5/8 Wooden Plug	96 ⁰⁰	96 ⁰⁰
				6617 ²²
				661 ²⁸
				5955 ⁰⁰
SALES TAX				283.91
ESTIMATED TOTAL				6239.90

Rev'n 3737
 AUTHORIZATION W. D. Anderson TITLE IP DATE 8-15-12

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form

252113

Scale 1:240 Imperial

Well Name: BERLAND #1-12
 Surface Location: NE SE SW SE 12-8S-21W
 Bottom Location:
 API: 15-065-23848-0000
 License Number: 4058
 Spud Date: 8/9/2012 Time: 11:00 PM
 Region: GRAHAM COUNTY
 Drilling Completed: 8/15/2012 Time: 12:30 AM
 Surface Coordinates: 339' FSL & 1400' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 2028.00ft
 K.B. Elevation: 2038.00ft
 Logged Interval: 2900.00ft To: 3651.00ft
 Total Depth: 3650.00ft
 Formation: LANSING-KANSAS CITY, ARBUCKLE
 Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR
 Company: AMERICAN WARRIOR INC.
 Address: 3118 CUMMINGS ROAD
 GARDEN CITY, KS 67846
 Contact Geologist: CECIL O'BRATE
 Contact Phone Nbr: (620) 275-2963
 Well Name: BERLAND #1-12
 Location: NE SE SW SE 12-8S-21W API: 15-065-23848-0000
 Pool: UNNAMED
 State: KANSAS Country: USA

SURFACE CO-ORDINATES
 Well Type: Vertical
 Longitude: -99.6076835 Latitude: 39.3661472
 N/S Co-ord: 339' FSL
 E/W Co-ord: 1400' 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: VAL ENERGY, INC.
 Rig #: 3
 Rig Type: MUD ROTARY
 Spud Date: 8/9/2012 Time: 11:00 PM
 TD Date: 8/15/2012 Time: 12:30 AM
 Rig Release: 8/15/2012 Time: 12:00 PM


ELEVATIONS
 K.B. Elevation: 2038.00ft Ground Elevation: 2028.00ft
 K.B. to Ground: 10.00ft

NOTES
 DUE TO STRUCTURAL POSITION, LACK OF ECONOMICAL RECOVERY ON DRILL STEM TEST, AND LOG ANALYSIS, DECISION WAS MADE TO PLUG AND ABANDON THE WELL.
 RESPECTFULLY SUBMITTED,
 JEFF LAWLER

WELL COMPARISON SHEET

FORMATION	I BERLAND #1-12				II MARMATON #1-20				P&A 9-08				AAA PRODUCTION			
	DEPTH	DATE	LOG #	LOG #	DEPTH	DATE	LOG #	LOG #	DEPTH	DATE	LOG #	LOG #	DEPTH	DATE	LOG #	LOG #
ARBUCKLE	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
HOWARD	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
TOPSILE	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
MEEBERDALE	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
TOWNSHIP	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
KCC	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
BCC	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
MARMATON	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
CONGLOMERATE	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
CONGLOMERATE SAND	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
ARBUCKLE	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
RTI	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486
LTD	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486	1572	8/9/12	486	486

DST #1 MARMATON CONGLOMERATE SAND 3478' - 3548'



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

American Warrior Inc. 12-8-21 Graham, KS

PO Box 399 Garden City KS 67846 Berland #1-12

Job Ticket: 47052 DST#: 1

ATTN: Jeff Lawler Test Start: 2012.08.14 @ 08:35:00

GENERAL INFORMATION:

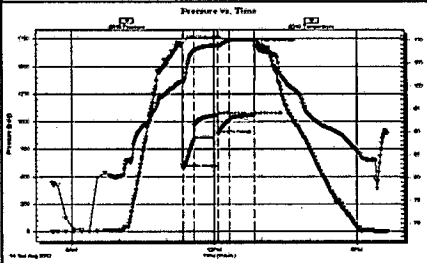
Formation: Marmaton-Cong. Sd. ft (KB)
 Deviated: No Whipstoc
 Time Tool Opened: 11:21:00
 Time Test Ended: 16:38:30

Test Type: Conventional Bottom Hole (hbls)
 Tester: Brett Dickinson
 Unit No: 69

Interval: 3478.00 ft (KB) To 3548.00 ft (KB) (TVD) Reference Elevations: 2038.00 ft (KB)
 Total Depth: 3548.00 ft (KB) (TVD) 2028.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 8319 Outside
 Press@RunDepth: 1008.03 psig @ 3478.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.08.14 End Date: 2012.08.14 Last Calc: 2012.08.14
 Start Time: 08:35:05 End Time: 15:38:29 Time On Btm: 2012.08.14 @ 11:20:00
 Time Off Btm: 2012.08.14 @ 12:53:00

TEST COMMENT: F-BOB in 1/2 min
 IS-No blow
 FF-BOB in 1/2 min
 FS-No blow



Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1709.88	100.98	Initial Hydro-static
1	577.08	100.83	Open To Flow (1)
15	833.02	107.73	Shut-In(1)
45	1058.20	108.81	End Shut-In(1)
45	886.52	108.78	Open To Flow (2)
60	1008.03	109.87	Shut-In(2)
91	1061.46	109.96	End Shut-In(2)
93	1633.83	110.06	Final Hydro-static

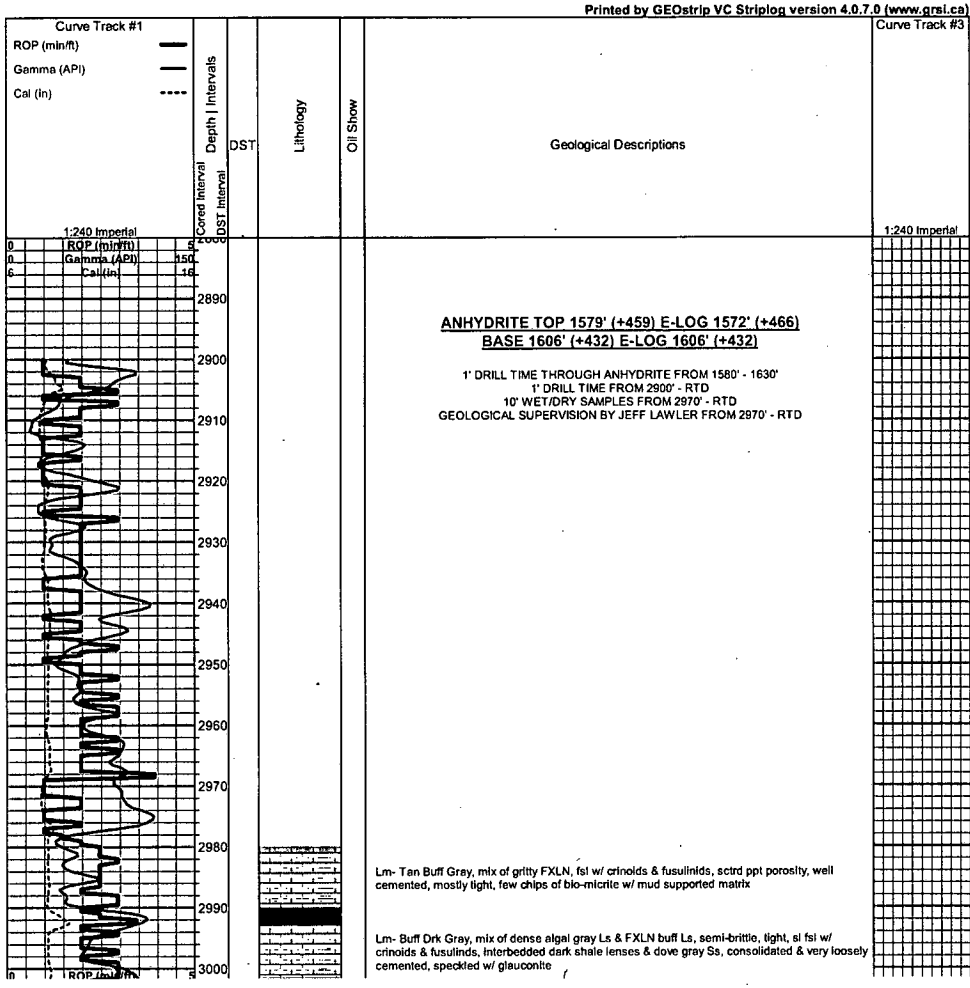
Length (ft)	Description	Volume (M)
1810.00	Water	25.39
560.00	WCM 25%W 75%M	7.86

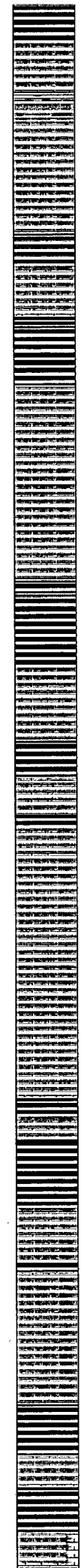
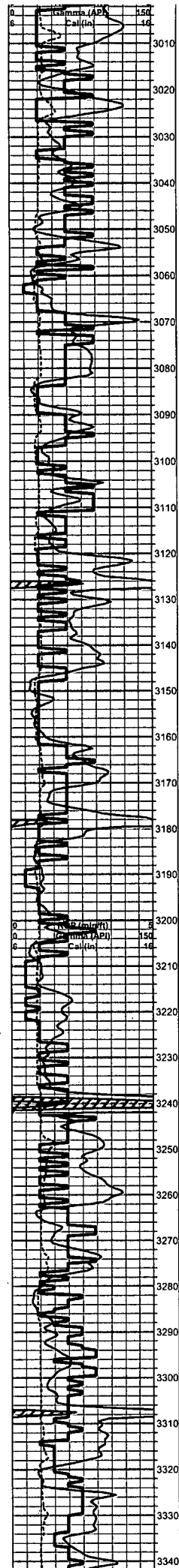
Gas Rates		
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Triobite Testing, Inc. Ref. No: 47092 Printed: 2012.08.14 @ 16:27:34

ROCK TYPES							
▲▲▲▲	Cht	■	Lmst fw7>	■	Carbon Sh	□	Ss
▲▲▲▲	Cht vari	■	shale, gm	■	shale, red		
■	Dolprim	■	shale, gry	■	Shcol		

OTHER SYMBOLS	
■	DST Int
■	DST alt





Sh- Maroon, soft

Lm- Cream Gray, mix of FXLN, sl granular & massive, tight & well cemented, dense matrix, scrd clear crystal inclusions, scrd vry fn ppt porosity, FXLN trash gray Ls, brittle

Sh/Ss- Lm Green, sl waxy, soft & blocky, Dove Gray Ss, Fm gm, consolidated & well sorted, **TOPEKA 3026' (-988) E-LOG 3026' (-988)** Lm- Tan Yellowish tint Gray, VF-FXLN, dense, densely packed fusulinids in sparry cement, very well cemented, minimal visible porosity

Lm- Tan, FXLN, mottled, sl trashy, few chips of sl unconsolidated & fsl, some mud supported matrix, interbedded shales, chalky in part

Lm- Gray Tan, mostly trashy high energy mix w/ few loose crinoid fragments, fsl FXLN w/ fsl fragments, 1-2 pcs cream fsl & sl oolitic, tight w/ minimal visible porosity, more interbedded maroon shale & scrd white chalk

AA w/ more cream fsl & oolitic, scrd ppt porosity, poor intraoolite porosity, chalky in part

Sh- Lt Gray Drk Gray, some soft & smooth, some dense & compacted, few sl unconsolidated & fsl, scrd chalk & calcareous sl sandy lime

Lm- Cream, FXLN, fsl, some chalky in part, sl granular, poorly developed, scrd ppt porosity, some tight & gritty

Sh- Black, soft carbonaceous

Lm- Cream, some w/ Yellow tint, FXLN & mostly fn gm., mix of fsl & densely packed small oolites in sparry cement w/o vs. porosity w/ some calcareous chalky matrix & sl granular w/ pearl shaped oolite inclusions

Lm- Cream Tan Gray, mix of some argillaceous Ls w/ few crystal interclasts, tight VF-FXLN w/ minimal visible porosity, & FXLN, fsl, light & well cemented, vry scrd fn ppt porosity, all clean & barren

Lm- Cream Lt Gray, mix of FXLN, sl, developed, densely packed w/ small oolites, sp. w/ glauconite w/ scrd fn ppt porosity, and FXLN, sl, trashy, tight & well cemented sl. oolitic & fsl lt gray Ls, vry minimal visible porosity, no shows noted

Lm- Lt Gray, mix of FXLN, semi-brittle, mottled & fsl w/ fn gm, mud supported matrix, chalky & calcareous in part

Lm- Cream White Tan, F-Med XLN, FR development, mix of massive, sl, granular, fsl, w/ mostly consistent fn ppt por., NS, Fm gm, gritty & calcareous siltstone, FXLN, fsl, semi-brittle & tight, and few chips of sharp angular bedded chert

Sh- Black Gray, sl fissile, dense & well compacted, semi-lithified, carbonaceous

Sh- Maroon Gray White, gritty & earthy, soft, white chalk

Lm- Cream Tan, FXLN, poorly developed, gritty & sl granular, tight, heavily mottled, sl, fsl, chalky

Lm- Cream, Med XLN, mod. development, sl granular, sl, fsl, loosely cemented, some w/ scrd fn ppt por., few scrd recrystallization interclasts, NS, chalky in part, some gritty sl, cherty Ls

Sh- Maroon Gray Lm Green, soft, gritty & earthy, blocky & dense, sl, waxy

Lm- Cream Tan, F-Med XLN, gritty & sl, cherty, some semi-brittle & dense, some w/ scrd fn ppt por, mottled, clean & barren

Sh- Black Maroon Gray, thin fissile chips, carbonaceous, soft & earthy

Lm-Cream Off White, F-Med XLN, mod. developed, granular, sl, dolomitic, vry fn ppt por, loosely cemented, heavily chalky

Lm- Cream Tan, Med XLN, mod. developed, granular & gritty, mix of dolomitic Ls, cherty dolomite & Med XLN Ls, mostly w/ fn ppt por, all clean & barren, chips of fsl sharp angular bedded chert w/ conchoidal fracturing

Lm- Cream, Med XLN, oolitic, oolitic, partial skeletal dissolution, poor intracastec connectivity w/ scrd vuggy porosity, loosely cemented, all clean & barren

Lm- Cream Lt Gray, FXLN, oolitic & fsl, sl cherty Ls, tight, minimal vis. porosity, well to loosely cemented

Lm- Cream Tan, FXLN, gritty & sl granular, dolomitic Ls & dolomitic fsl chert w/ fusulinids, most well cemented, constant to scrd vry fn ppt por., clean & barren, chalky

HEBNER 3239' (-1201) E-LOG 3238' (-1200) Sh- Black Maroon Gray, fissile, carbonaceous, thin gritty & earthy chips

Sh- Maroon Gray Lm Green, gritty & earthy, soft thin silvers, few striated, lm gm & brown wash

TORONTO 3263' (-1225) E-LOG 3262' (-1224) Lm- Cream Lt Gray, VF-FXLN, well cemented & tight, minimal visible porosity, some w/ sl chalky matrix, dense & sl crumbly, clean & barren

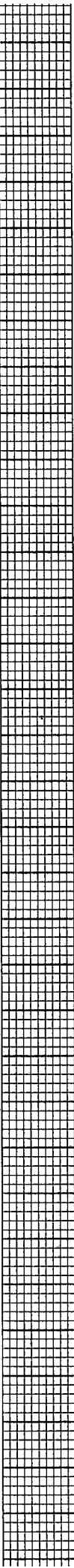
LKC 3281' (-1243) E-LOG 3277' (-1239) Cream Off White, F-Med XLN, loosely cemented, fsl, scrd crystal interclasts, mod. developed w/ mostly consistent ppt porosity, clean & barren, chips of white sharp angular bedded chert

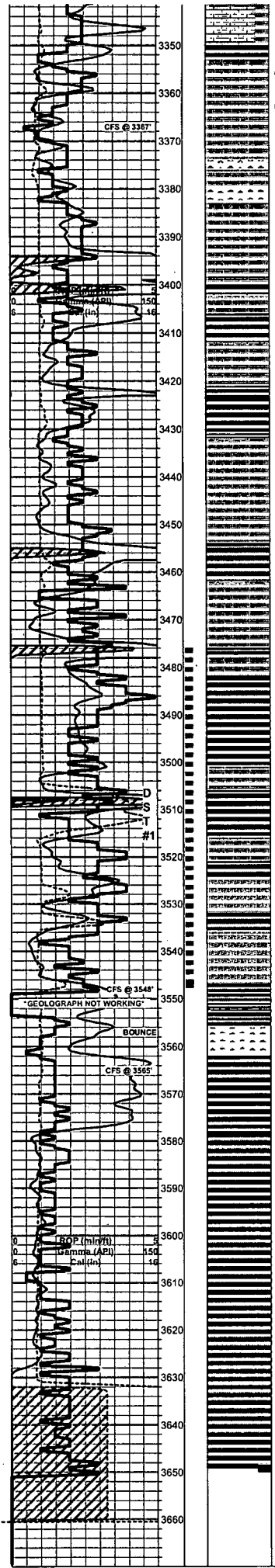
Lm- Cream Buff, FXLN, mix of gritty, sl dolomitic Ls, tight w/ limited visible porosity, and tight, sub-crypto XLN, semi-brittle, vry scrd XLN porosity, few pcs of white and tan bedded chert, scrd dense chalk

Sh- Maroon, Gray, soft, thin, gritty & earthy

Lm- Cream Tan, VF-FXLN, tight, some crypto XLN, all with minimal visible porosity, several chips w/ BLK TARRY STN, scrd white chalk

Lm- Cream Tan, FXLN, sl fsl, mostly tight & poorly developed, some sl cherty Ls, minimal





Visible porosity, chips of salmon colored bedded chert

Lm- Cream, FXLN, dense, semi-brittle, poor porosity, sl. fsl, 2-3 chps w/ DRK EDGE STN, VSSFO UPON CRUSH, NO ODR, DULL FLOR.

Lm- Cream Tan, FXLN, gritty, moderately developed w/ scrd fn ppt porosity, loosely cemented, chalky in part, lime cementation, scrd crystal inclusions, 3-4 chps w/ VRY FNT DRK STN, NSFO, NO ODR, NO FLOR OR WET CUT

Chert- White Tan Semi-Translucent Salmon, mix of sharp angular bedded & white oolitic, sl massive bedded chert

Lm- Cream Off White, VFXLN, dense, brittle, mix of crypto XLN & sub crypto XLN, mostly w/o vs. grains, light, minimal to no vs. porosity

MUNCIE CREEK SHALE 3402' (-1364) E-LOG 3399' (-1361) Sh- Black Gray, slaty & carbonaceous, well compacted, soft & crumbly

Lm- Cream Off White, F-Med XLN, fsl, scrd development, FR interstitial porosity, ppt porosity, SCTRDR LT GSY STN, LT GSY SHEEN, VLSLFO GSY FO UPON CRUSH, FNT ODR

Lm- Cream Off White, Fn Gm, dense algal Ls, chalky in part

Lm- Cream Tan, FXLN, sl fsl, few loose fusulinds, dense, semi-brittle, well cemented, tight w/ scrd XLN porosity, clean & barren

Lm- Cream Off White, FXLN, sl. fsl, loosely cemented, chalky, scrd fn ppt por., SCTRDR LT GSY STN, FLAKEY, NSFO, FNT GSY ODR, DULL HALO FLOR., SL STRM WET CUT

STARK SHALE 3458' (-1420) E-LOG 3454' (-1416) Sh- Black Gray, fissile, carbonaceous, soft, gritty & earthy, sl. argillaceous

Lm- Cream Off White, FXLN, fsl w/ small fusulinds, sl oolitic, poorly developed, XLN & scrd ppt por., SCTRDR DRK STN, NSFO, FNT ODR, chalky in part

Lm- Off White, VF-FXLN, dense, well cemented to chalky in part, tight w/ scrd XLN porosity, very clean

BKC 3487' (-1449) E-LOG 3482' (-1444) Sh- Maroon Gray Lm Green, gritty, semi-lithified, dense, soft gray chps sp. w/ dark minerals

Sh- Red Brown Gray, soft, sl. sandy lime, red wash

Lm- Cream Off White, FXLN, sl fsl, dense, well cemented, very clean

MARMATON 3516' (-1478) E-LOG 3516' (-1478) Lm- Cream Off White, F-Med XLN, fsl & oolitic, loosely cemented, some w/ dense XLN porosity, scrd fn ppt porosity, clean & barren

Sh- Red White, abundant sticky argillaceous clumps

Ss- White, VF gr, sorted & consolidated, vry friable, dolomitic cementation, near complete dissolution w/ HCL, SAT DRK STN, VLSLFO, INSTANT BRIGHT STRM WET CUT & FLOR.

CONGLOMERATE SAND 3536' (-1499) Conglomerate Snd- Clear to Frosted, white Ca cementation, mix of sandy sticky lime, well cemented matrix w/ fn gm inclusions, & friable sub-rnd sl unconsolidated clusters, SOME W/ DRK GILSONITE STN, MOSTLY W/ DRK SCTRDR - MOSTLY SAT DRK STN, VLSLFO, GD ODR, DULL FLOR W/ STRM WET CUT

Chert- Mix of various colored chert, some fsl, all sharp angular bedded chert

Sh- Gray Maroon Lm Green, abundant waxy shale, some sandy, soft

ARBUCKLE 3581' (-1543) E-LOG 3578' (-1540) Dolomite- Snow White, mix of FXLN, well cemented, tight, w/ fn ppt porosity and Med XLN, loosely cemented, sl sucrosic w/ visible euhedral rhombs, all w/ SCTRDR BLK DO STN, 2-3 CHPS W/ VLSLFO UPON CRUSH, NO ODR, much barren porosity, white gummy chalk

Dolomite- Tan Buff, FXLN, gritty, very well cemented, tight w/ vry fn ppt porosity, clean & barren

Dolomite- White Off White, mix of FXLN, well cemented & tight, and Coarse XLN, sucrosic w/ good visible euhedral rhombs, sl cherty w/ scrd siliceous cementation, SCTRDR BLK DO STN, NSFO, NO ODR, much barren porosity

A/A w/ few pcs of pink and yellow oolitic chert

A/A, Med XLN, well cemented, sucrosic w/ vry scrd vuggy porosity, clean & barren

Dolomite- Tan, M-Crs XLN, sucrosic, moderately well developed, some sl cherty dolomite, good ppt porosity w/ scrd small vuggy porosity, clean & barren

RTD 3650' (-1612) LTD 3651' (-1613) @ 12:30 AM 8/15/2012

SHORT TRIP
SLOPE 1 dgr.
STRAP +4.90
(BREEZY)

DST #1
MARMATON &
CONGLOM.
SND
3478 - 3548

ABUNDANT
AMOUNT OF
CARRYOVER IN
SAMPLES