



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1214521  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

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

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

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

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1214521

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Eternity Exploration, LLC
Well Name	Werth Family 1
Doc ID	1214521

Tops

Name	Top	Datum
Anhydrite	2262	+367
Base Anhydrite	2296	+333
Topeka	3694	-1065
Heebner	3852	-1223
Lansing	3891	-1262
Lansing B	3919	-1290
Lansing F	3972	-1343
Lansing K	4090	-1461
Base/Kansas City	4124	-1495
LTD	4160	-1531



# GLOBAL CEMENTING, L.L.C.

1335

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT:  
Russell, KS

DATE <u>5-16-14</u>	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Flagler</u>	WELL#.		LOCATION			COUNTY	STATE
OLD OR NEW (CIRCLE ONE)						<u>Sheridan</u>	<u>KS</u>

CONTRACTOR White Knight

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 222

CASING SIZE 8 5/8 DEPTH 211

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 20ft

PERFS

DISPLACEMENT 123/4

EQUIPMENT

PUMP TRUCK CEMENTER Heath

# P1 HELPER Cody

BULK TRUCK

# P1 DRIVER Brad

BULK TRUCK

# DRIVER

OWNER

CEMENT

AMOUNT ORDERED 150sv com 3 1/4 cc 2 1/2 gel

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC @

HANDLING @

MILEAGE @

TOTAL

REMARKS:

Run 5 Jts of 8 5/8 casing and landing jt

Est Circulation with mud pump

Hook up and mix 150sv and disp 12 3/4 bbl

of H2O - Shut in @ 200 ps

Cement Did Circulate to Surface

CHARGE TO: Fidelity Exploration

STREET

CITY STATE ZIP

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE

EXTRA FOOTAGE @


MILEAGE 2 1/2 @

MANIFOLD @

TOTAL

Global Cementing, L.L.C.,  
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.

PRINTED NAME

SIGNATURE 

PLUG & FLOAT EQUIPMENT

@

@

@

@

@

TOTAL

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS

# GLOBAL CEMENTING, L.L.C.

1342

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT: Russell, KS

DATE <u>5-23-14</u>	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START <u>2:30am</u>	JOB FINISH <u>3:30am</u>
LEASE <u>Eternity</u>	WELL #. <u>1</u>	LOCATION			COUNTY <u>Sheridan</u>	STATE <u>KS</u>	
OLD OR NEW (CIRCLE ONE) <input checked="" type="radio"/> OLD <input type="radio"/> NEW							

CONTRACTOR White Knight

TYPE OF JOB Rotary Plug

HOLE SIZE 7 7/8 T.D. 4155

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS \_\_\_\_\_

DISPLACEMENT \_\_\_\_\_

EQUIPMENT \_\_\_\_\_

PUMP TRUCK CEMENTER Heath

# P1 HELPER Cody

BULK TRUCK \_\_\_\_\_

# B1 DRIVER Eric

BULK TRUCK \_\_\_\_\_

# \_\_\_\_\_ DRIVER \_\_\_\_\_

OWNER \_\_\_\_\_

CEMENT AMOUNT ORDERED 250x60/40 4%gel

14#50

COMMON \_\_\_\_\_ @ \_\_\_\_\_

POZMIX \_\_\_\_\_ @ \_\_\_\_\_

GEL \_\_\_\_\_ @ \_\_\_\_\_

CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_

ASC \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

HANDLING \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

REMARKS:

1st Plug @ 2270 = 50sx  
2nd Plug @ 1350 = 100sx  
3rd Plug @ 270 = 50sx  
Came out of hole and push wiper plug  
top of it with 10sx  
RH = 30sx

CHARGE TO: Eternity Exploration

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

Global Cementing, L.L.C.,  
 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.

PRINTED NAME \_\_\_\_\_

SIGNATURE [Signature]

SERVICE

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE \_\_\_\_\_

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE 1342 @ \_\_\_\_\_

MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_ @ \_\_\_\_\_

B5/B wood plug @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

# LITHOLOGY STRIP LOG

## WellSight Systems

Scale 1:240 (5"=100') Imperial

Measured Depth Log

Well Name: Werth Family #1

Location: N2 SW NW NE

License Number: API: 15-179-21359-00-00

Spud Date: May 16, 2014

Region: Sheridan County, Kansas

Drilling Completed: May 22, 2014

Surface Coordinates: 825' FNL & 2310' FEL Section 9-TWP 10S - RNG 26 W

Bottom Hole Coordinates: Vertical Hole

Ground Elevation (ft): 2624

K.B. Elevation (ft): 2629

Logged Interval (ft): 3500 To: RTD

Total Depth (ft): 4160

Formation: Marmaton

Type of Drilling Fluid: Chemical Displace at 3350

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### OPERATOR

Company: Eternity Exploration, LLC

Address: 338 Spyglass Drive  
Coppell, Texas 75019+5430

### GEOLOGIST

Name: W. Scott Alberg

Company: Alberg Petroleum, LLC

Address: 609 Meadowlark Lane  
Pratt, Ks 67124

### COMMENTS

Surface Casing: Ran 5 joints new 23# 8 5/8" and set at 222', cement did circulate. Plug down at 8:45 pm, May 16, 2014.

Production Casing: None

Deviation Surveys: 1/4 degree @ 222'; 1 - 2875', 1 - 4033'.

Pipe Strap - 1st - 3544' - 2.27' Short to Board.

2nd - 4033' - 1.53' Long to Board.

Contractor Bit Record: 1-12 1/4" out at 222'

2- 7 7/8" out at 2875'.

3 - 7 7/8" out at 4033'

4 - 7 7/8" out at 4155'.

Mud: Morgan Mud, Cade Lines, Engineer

Logs: Superior Well Services, Inc, DIL, CDL/CDL, Micro

LTD - 4160'.

Gas Detector: None

## FORMATION TOPS

	SAMPLE TOPS	LOG TOPS
ANHYDRITE		2262(+367)
BASE ANHYDRITE		2296(+333)
TOPEKA	3692(-1063)	3694(-1065)
HEEBNER	3851(-1222)	3852(-1223)
TORONTO	3873(-1244)	3875(-1246)
LANSING	3889(-1260)	3891(-1262)
'B' Zone	3918(-1289)	3919(-1290)
'F' Zone	3971(-1342)	3972(-1343)
'K' Zone	4089(-1460)	4090(-1461)
B/KC	4126(-1497)	4124(-1495)
RTD	4155(-1526)	
LTD		4160(-1531)

## DSTs

DST #1 4081 to 4160 (LTD) K Zone

Times 30-30-30-30

1st Opening - Fair blow, built to 4 inches, no blow back

2nd Opening - Fair blow, built to 5 inches, no blow back

Recovery - 20' GIP

25' OCM(30%% Oil, 70% M)

15' Free Oil

IFP 21-27# FFP 26-33#

ISIP 975# FSIP 853#

IHP/FHP 2119/2079#

Temp 123

## CREWS

Whote Knight Drilling, Rig #1

Tool Pusher - Terry Austin

Daylight Driller - Gary Chard

Evening Driller - Jerry Rowe

Morning Driller - Marlan Garcia

Relief Driller - Robert Galbavy

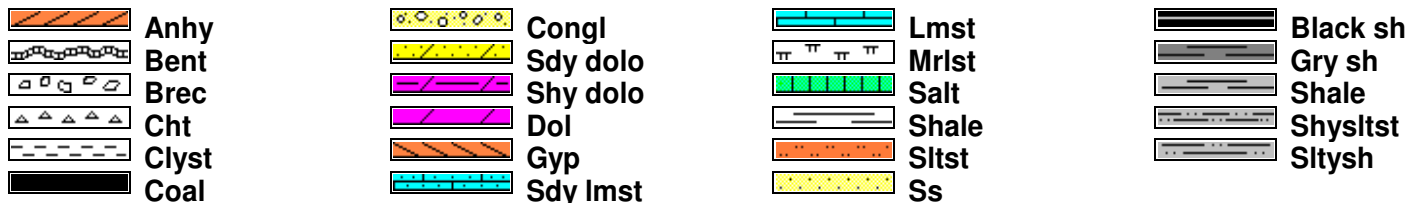
Based on sample shows, structural position and the results of the DST, it was recommended by all parties this test well be plugged and abandoned.

Respectfully,

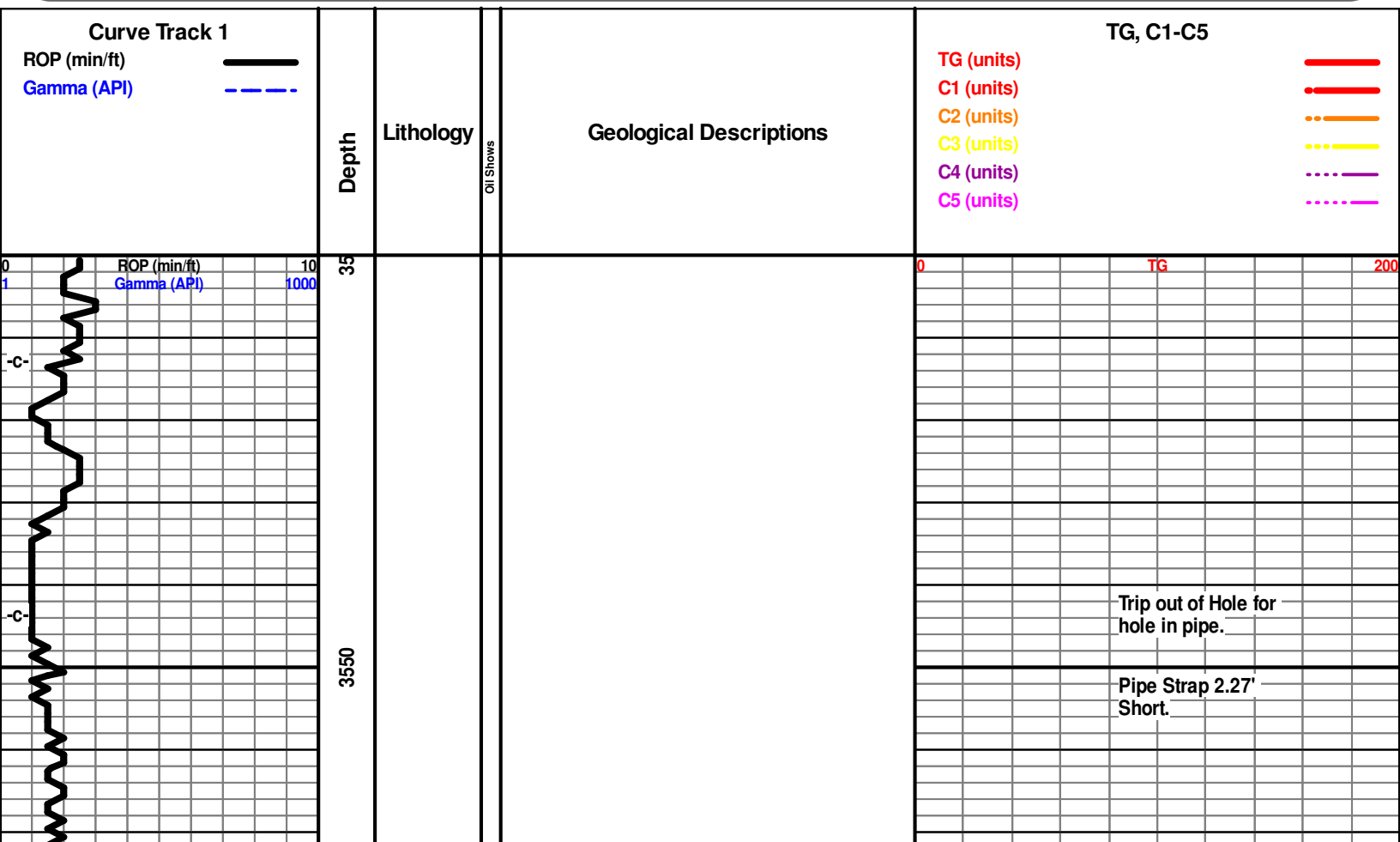
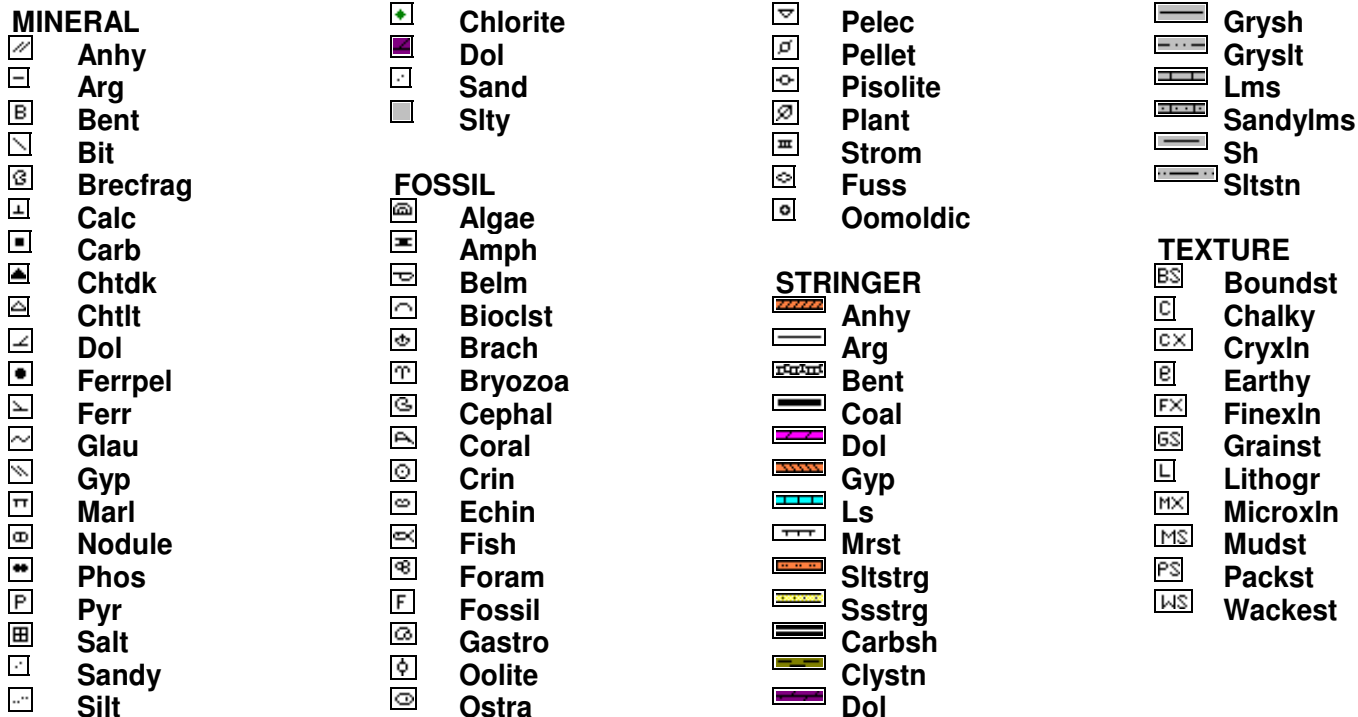
W. Scott Alberg

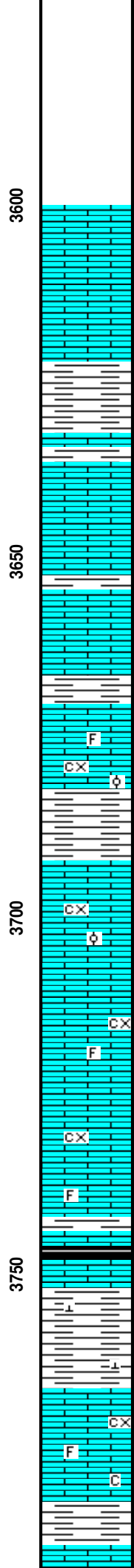
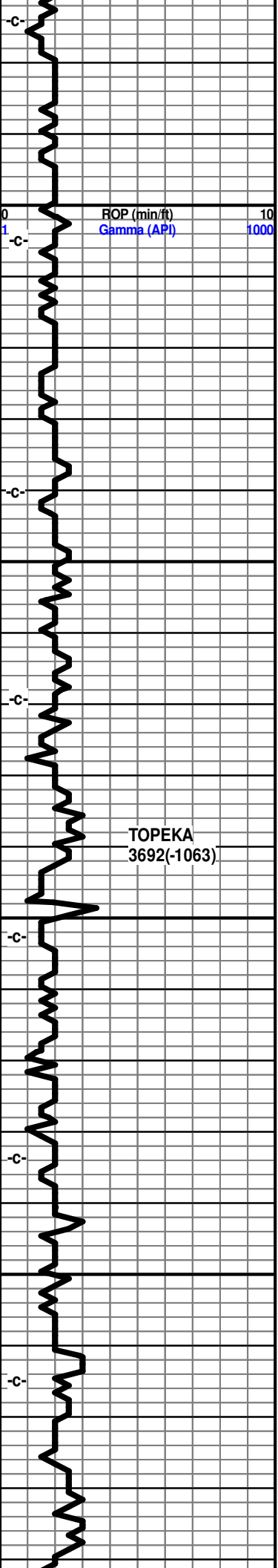


## ROCK TYPES



## ACCESSORIES





Limestone, cream, tan, grey, crystalline, fossils, oolites.

Shale, grey, red.

Limestone, cream, tan, finely crystalline, oolitic, trace oolitic porosity, barren.

Limestone, tan-white, cream, crystalline, dense, chalky, trace fossils.

Limestone, cream, grey-white, crystalline, dense, trace fossils.

Shale, grey-black.

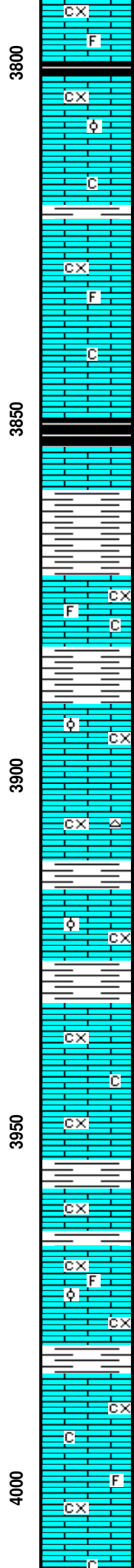
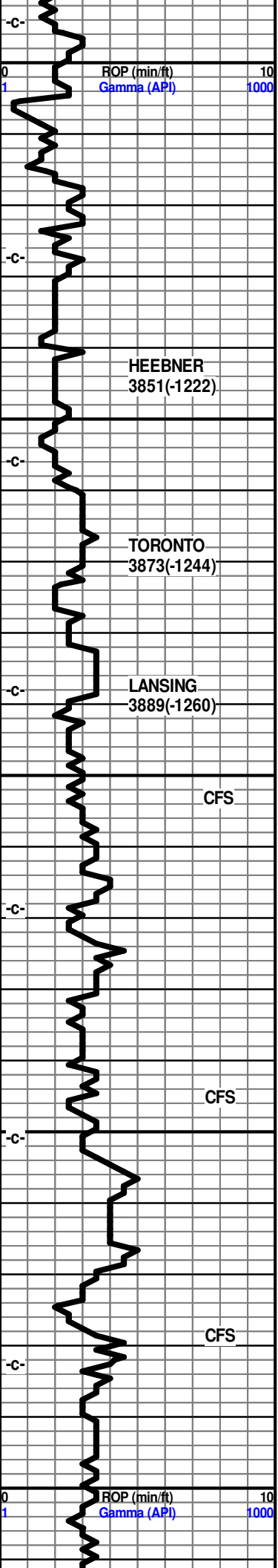
Shale, grey-red, red, sandy, calcitic.

Limestone, cream-white, finely crystalline, trace fossils, fossiliferous porosity, chalky.

Shale, grey, red.

Limestone, cream, tan, finely crystalline

Vis 54 Wt 8.8 LCM 2#
TG
Vis 54 Wt 8.9
KB 2629'
Vis 50 Wt 8.9
Morgan Mud Mud Check Vis 50 Wt 8.9 pH 10.5 WL 8.4 Chlor 3900 ppm LCM 1#



Limestone, cream, tan, finely crystalline, dense in part, fossils, trace fossilcast porosity, chalky.

Shale, grey-black.

Limestone, cream-tan, finely crystalline oolitic, oolimoldic porosity, trace chalky, no shows.

Shale grey.

Limestone, tan-white, cream, dense, trace fossils, chalky.

Shale, grey-black.

Limestone, grey-white, dense.

Shale, grey-white, red, firm.

Limestone, buff, cream-white, finely crystalline, partly dense, trace fossils, trace pin point porosity, chalky in part, no visible shows.

Shale, grey, light grey.

Limestone, cream, tan, finely crystalline, trace oolites, fossils, trace small vugs, trace crystalline porosity, very faint odor, spotty show dark oil, dull fluorescence, trace pyrite, chalky.

Limestone, cream-white, crystalline, dense, chalky, trace grey chert no shows.

Shale, light grey, red-brown.

Limestone, cream, tan, finely crystalline, partly dense, oolitic in part, trace light stain, trace crystalline porosity, inter oolitic porosity, no odor, very dull fluorescence, trace oolitic porosity.

Shale grey-red.

Limestone, cream, buff, finely crystalline, dense, trace crystalline, porosity, trace flakey dark oil, no odor, chalky in part, trace patchy stain, poorly developed.

Limestone, cream-white, finely crystalline, dense, trace fossils, chalky, trace chert.

Shale, grey, dark grey.

Limestone, tan, buff, crystalline, no odor, no fluorescence.

Shale, grey, dark grey.

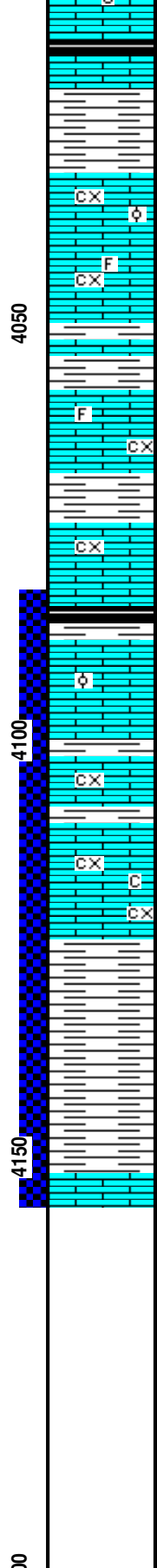
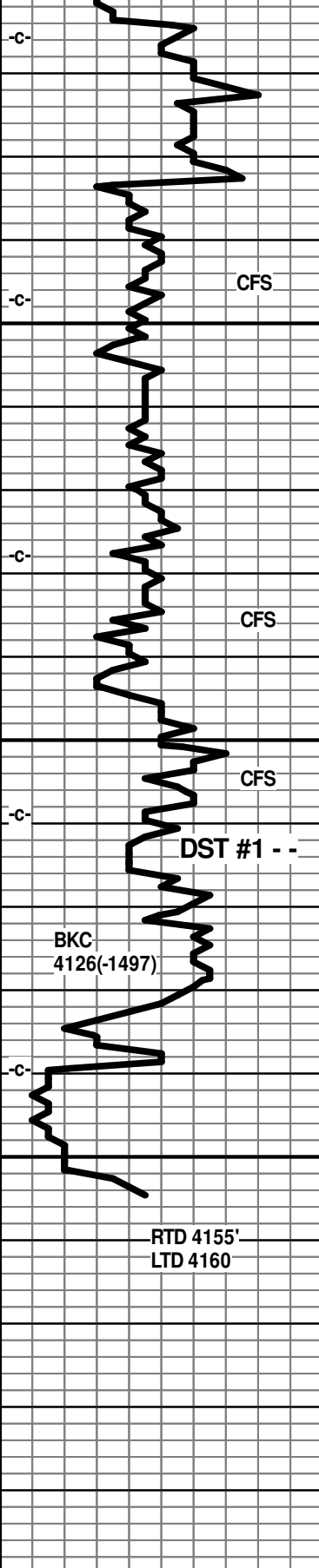
Limestone, cream-white, finely crystalline, partly dense, oolitic, trace flakey oil, no odor, dull fluorescence, light spotty stain, interoolitic porosity, trace crystalline porosity.

Shale, grey, red.

Limestone, cream-white, crystalline, dense, trace chalky, trace fossils.

Limestone, cream-tan-white, finely crystalline, dense, chalky, cherty in part.

0	TG	200
	Vis 57	Wt 9.0
	Vis 55	Wt 9.3
	Vis 59	Wt 9.3
	Vis 68	Wt 9.4
	Vis 60	Wt 9.4
	Samples Very Poor	
0	TG	200



Shale, grey-black.

VERY POOR SAMPLES ????

Limestone, cream, tan, finely crystalline, slightly oolitic, trace stain, no odor, NSFO.

Limestone, cream-white, finely crystalline dense, trace fossils, no odor, dull spotty fluorescence, NSFO.

Shale, grey-red, blue-green.

Limestone, cream, tan, finely crystalline, mostly dense, trace fossils, patchy brown stain, no odor, NSFO, poor porosity.

Shale, grey-red, dark grey.

Limestone, cream, tan-white, finely crystalline, succrosic texture, trace crystalline porosity, spotty light to dark stain, no odor, NSFO.

Shale, grey, dark grey, reddish-brown.

Limestone, cream-white oolitic, inter oolitic porosity, trace show light oil, very faint fleeting odor, trace crystalline porosity, spotty brown stain, some darker stain.

Shale, grey, red-brown.

Limestone, buff, light grey, crystalline, dense, trace chert, crystalline, chalky in part, no visible shows.

Shale, red-brown, grey.

Shale, red-brown, orangish grey.

	Vis 55 Wt 9.4
Morgan Mud Mud Check 4033' @ 11:15 am May 21, 2014 Vis 51 Wt 9.3 pH 8.5 WL 10.0 LCM 1#	Pipe Strap 1.53 Long Pull Bit At 4033' Adjust Sample Box
	Vis 59 Wt 9.3
DST #1 4081 to 4060(LTD) Times 30-30-30-30 1st Opening - Fair blow built to 4 inches, no blow back. 2nd Opening - Fair blow builds to 5 inches, no blow back. Recovery: 20' GIP 25' OCM (30% O, 70 % M) 15' Free Oil IFP 21-27# FFP 26-33# ISIP 975# FSIP 853# IHP 2119# FHP 2079# Temp 123	Vis 58 Wt 9.3 Vis 58 Wt 9.2
	Vis 52 Wt 9.5



## DRILL STEM TEST REPORT

Prepared For: **Eternity Exploration LLC**

338 Spyllass Dr  
Coppell TX 75019

ATTN: Scott Alberg

### **Werth Family #1**

#### **9-10s-26w Sheridan,KS**

Start Date: 2014.05.22 @ 11:21:02

End Date: 2014.05.22 @ 16:29:52

Job Ticket #: 58938                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.23 @ 09:41:43



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Eternity Exploration LLC

**9-10s-26w Sheridan,KS**

338 Spylas Dr  
Coppell TX 75019

**Werth Family #1**

Job Ticket: 58938

**DST#: 1**

ATTN: Scott Alberg

Test Start: 2014.05.22 @ 11:21:02

## GENERAL INFORMATION:

Formation: **LKC K-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:01:02

Time Test Ended: 16:29:52

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 49

**Interval: 4081.00 ft (KB) To 4160.00 ft (KB) (TVD)**

Reference Elevations: 2629.00 ft (KB)

Total Depth: 4160.00 ft (KB) (TVD)

2624.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8898 Outside**

Press@RunDepth: 32.58 psig @ 4092.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.22

End Date:

2014.05.22

Last Calib.:

2014.05.22

Start Time: 11:21:03

End Time:

16:29:52

Time On Btm:

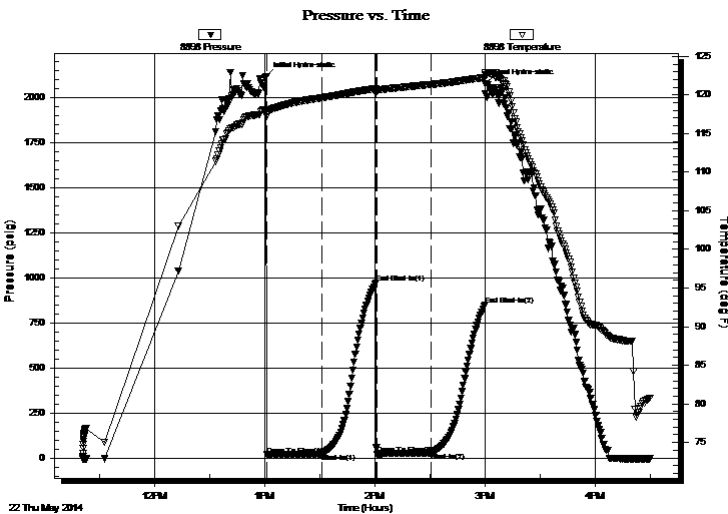
2014.05.22 @ 13:00:52

Time Off Btm:

2014.05.22 @ 15:00:12

**TEST COMMENT:** Fair blow built to 4"  
Dead no blow back  
Fair Blow built to 5"  
Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2118.68	118.09	Initial Hydro-static
1	21.14	117.18	Open To Flow (1)
31	26.83	119.63	Shut-In(1)
60	975.12	120.81	End Shut-In(1)
61	25.80	120.57	Open To Flow (2)
90	32.58	121.36	Shut-In(2)
119	853.39	122.24	End Shut-In(2)
120	2078.59	122.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	OCM 30%O 70%M	0.35
15.00	Oil 100%O	0.21
0.00	20 GIP	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Eternity Exploration LLC

**9-10s-26w Sheridan,KS**

338 Spylas Dr  
Coppell TX 75019

**Werth Family #1**

Job Ticket: 58938

**DST#: 1**

ATTN: Scott Alberg

Test Start: 2014.05.22 @ 11:21:02

## Tool Information

Drill Pipe:	Length: 4078.00 ft	Diameter: 3.80 inches	Volume: 57.20 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	0.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 57.20 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	4081.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	79.00 ft				
Tool Length:	99.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4066.00	
Hydraulic tool	5.00			4071.00	
Packer	5.00			4076.00	20.00 Bottom Of Top Packer
Packer	5.00			4081.00	
Stubb	1.00			4082.00	
Perforations	10.00			4092.00	
Recorder	0.00	8897	Inside	4092.00	
Recorder	0.00	8898	Outside	4092.00	
Change Over Sub	1.00			4093.00	
Drill Pipe	63.00			4156.00	
Change Over Sub	1.00			4157.00	
Bullnose	3.00			4160.00	79.00 Bottom Packers & Anchor

**Total Tool Length: 99.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Eternity Exploration LLC

**9-10s-26w Sheridan,KS**

338 Spylas Dr  
Coppell TX 75019

**Werth Family #1**

Job Ticket: 58938

**DST#: 1**

ATTN: Scott Alberg

Test Start: 2014.05.22 @ 11:21:02

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 4300.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	OCM 30%O 70%M	0.351
15.00	Oil 100%O	0.210
0.00	20 GIP	0.000

Total Length: 40.00 ft      Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

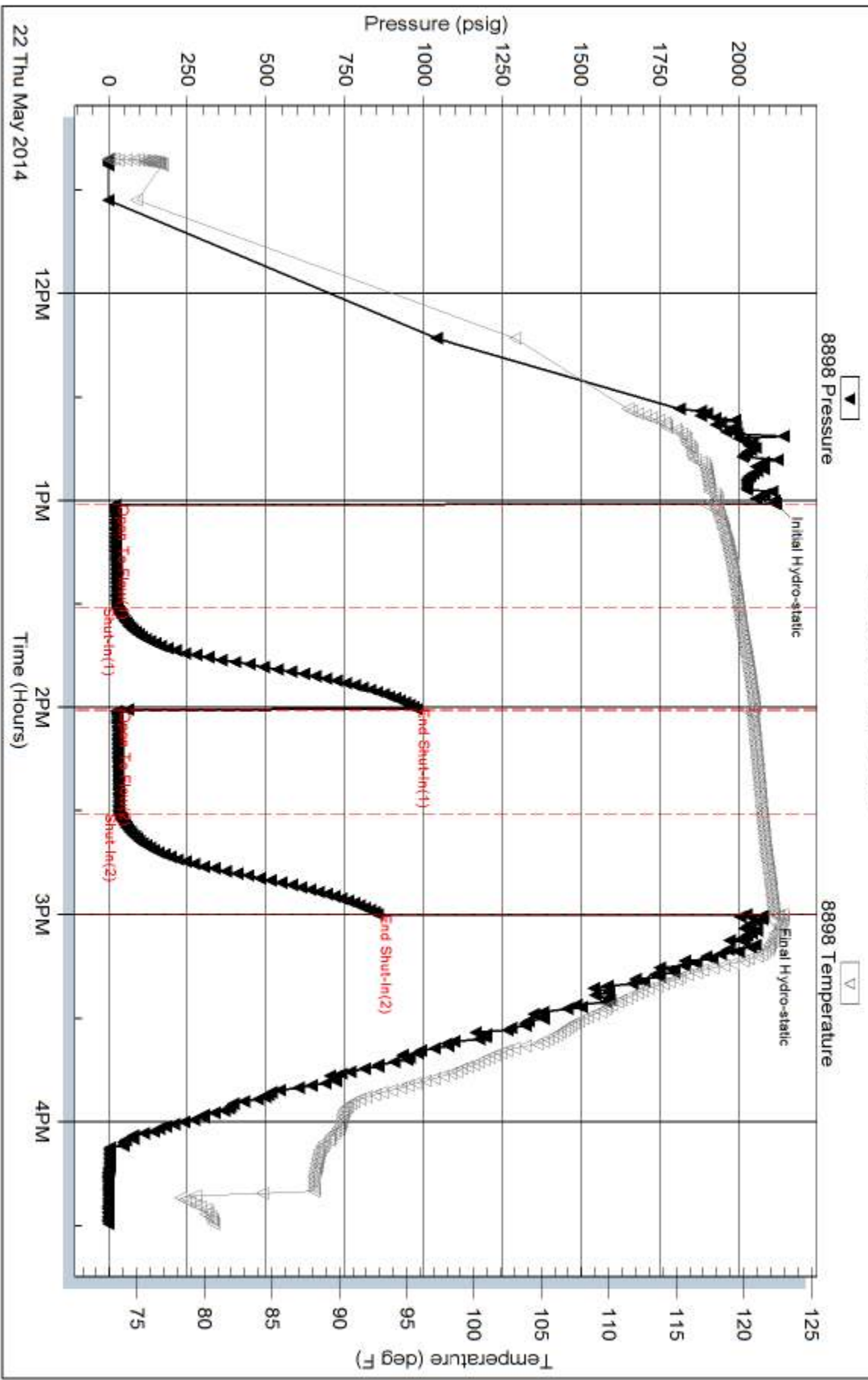
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time



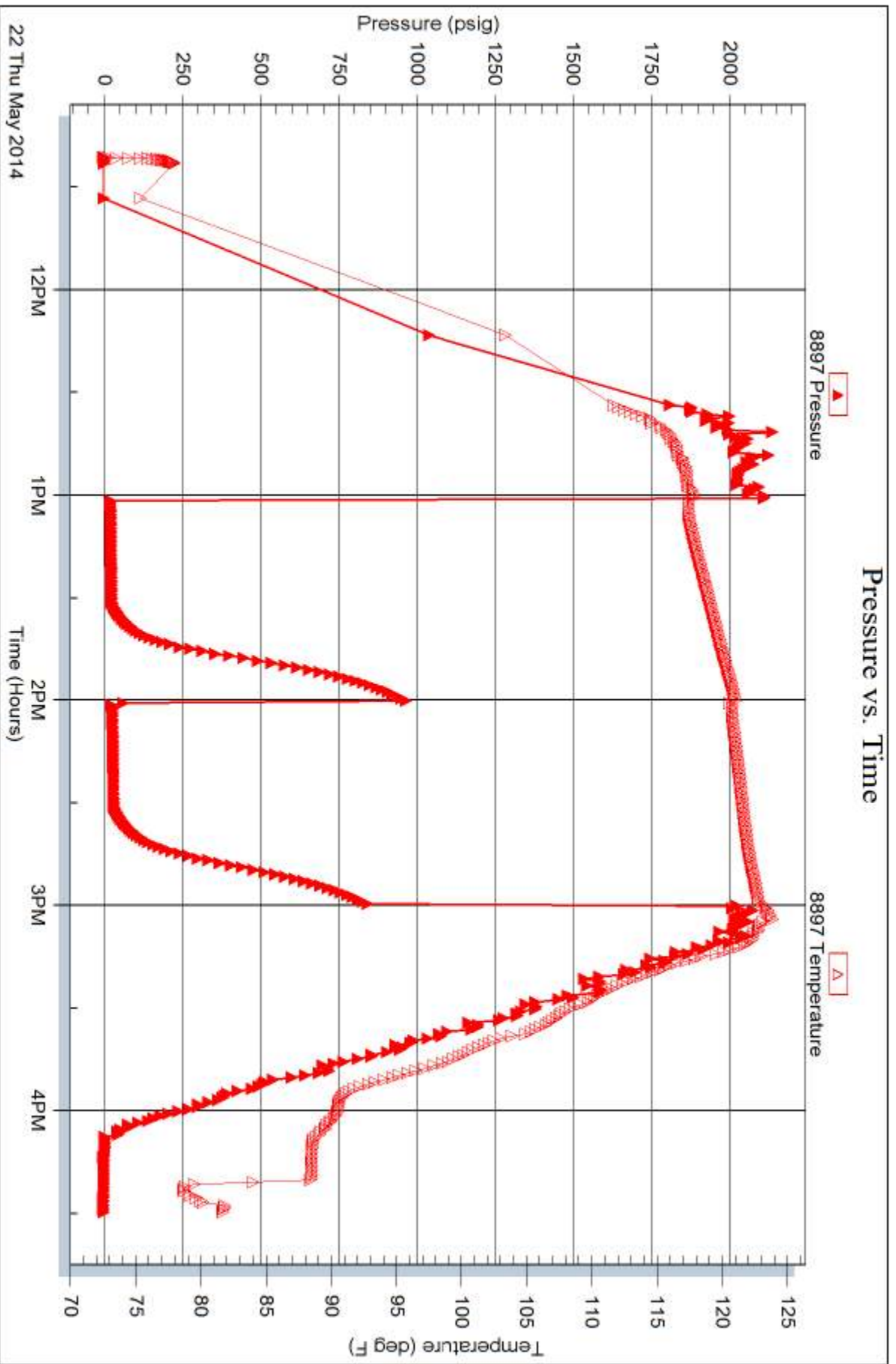
Serial #: 8897

Inside

Eernity Exploration LLC

Werth Family #1

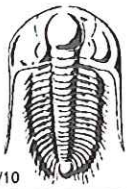
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 58938

Printed: 2014.05.23 @ 09:41:44



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58938

4/10

Well Name & No. Westh Family #1 Test No. 1 Date 5-22-14  
 Company Eternity Exploration LLC Elevation 2629 KB 2624 GL  
 Address 338 Spyglass Dr. Coppell Texas 75019  
 Co. Rep / Geo. Scott Alberg Rig White Knight #1  
 Location: Sec. 9 Twp. 10S Rge. 26W Co. Sheridan State KS

Interval Tested 4081 4160 Zone Tested KH Zone  
 Anchor Length 79' Drill Pipe Run 1078 Mud Wt. 9.3  
 Top Packer Depth 4076 Drill Collars Run 0 Vis 51  
 Bottom Packer Depth 4081 Wt. Pipe Run 0 WL 10.0  
 Total Depth 4160 LTD Chlorides 4300 ppm System LCM 1#

Blow Description Fair blow built to 4 in  
Dead no blow back  
Fair blow built to 5 in  
Dead no blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>25</u>	Feet of <u>OCM</u>	%gas	<u>30%</u> oil	%water	<u>70%</u> mud
Rec <u>15</u>	Feet of <u>Oil</u>	%gas	<u>100%</u> oil	%water	%mud
Rec <u>0</u>	Feet of <u>20GIP</u>	<u>100%</u> gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 122 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 219  Test 1250 T-On Location 10:50  
 (B) First Initial Flow 21  Jars 250 T-Started 11:21  
 (C) First Final Flow 27  Safety Joint 75 T-Open 13:01  
 (D) Initial Shut-In 975  Circ Sub \_\_\_\_\_ T-Pulled 15:01  
 (E) Second Initial Flow 26  Hourly Standby \_\_\_\_\_ T-Out 16:29  
 (F) Second Final Flow 3  Mileage 136 R/H Comments \_\_\_\_\_  
 (G) Final Shut-In 33  Sampler 120rt 186 \_\_\_\_\_  
 (H) Final Hydrostatic 2079  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1761  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30

Sub Total 1761

Approved By \_\_\_\_\_ Our Representative [Signature]  
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