



KANSAS CORPORATION COMMISSION 1085611  
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 # 3273  
Name: HERMAN L. LOEB, LLC  
Address 1: PO BOX 838  
Address 2: \_\_\_\_\_  
City: LAWRENCEVILLE State: IL Zip: 62439 + \_\_\_\_\_  
Contact Person: Jesse R. Middagh  
Phone: ( 618 ) 943-2227  
CONTRACTOR: License # 5142  
Name: Sterling Drilling Company  
Wellsite Geologist: Jim Hall  
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>05/26/2012</u>	<u>06/04/2012</u>	<u>07/13/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-195-22785-00-00

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

SE SW NE SE Sec. 19 Twp. 11 S. R. 22  East  West

1520 Feet from  North /  South Line of Section

985 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Trego

Lease Name: EVA RICHARDSON Well #: 4-19

Field Name: MONG

Producing Formation: Marmaton

Elevation: Ground: 2291 Kelly Bushing: 2302

Total Depth: 3990 Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: 250 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: 1881 Feet

If Alternate II completion, cement circulated from: 1881

feet depth to: 0 w/ 225 sx cmt.

Drilling Fluid Management Plan

(Date must be collected from the Reserve Pit)

Chloride content: 2600 ppm Fluid volume: 727 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 Garcia Date: 09/10/2012



1085611

Operator Name: HERMAN L. LOEB, LLC Lease Name: EVA RICHARDSON Well #: 4-19  
 Sec. 19 Twp. 11 S. R. 22  East  West County: Trego

**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:  DIL CDL/CNL MEL	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum Attached Attached 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	12.25	8.625	23	250	Basic	175	See Tkt# 06072
Production	7.875	5.5	15.5	3984	Basic	200	See Tkt# 06501A

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
3	14 foot interval, 42 shots	Shot, 42	3900 - 3914
		Frac 17,000 gal Profrac	3900 - 3914
		Acid, 1,000 gal INS	3900 - 3914
	CIBP		3971

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR: <u>08/11/2012</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 Bbls. <u>25</u>	Gas Mcf	Water Bbls. <u>3</u>
		Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input 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>3900 - 3914</u>
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Form	ACO1 - Well Completion
Operator	HERMAN L. LOEB, LLC
Well Name	EVA RICHARDSON 4-19
Doc ID	1085611

Tops

Anhydrite	1758	+544
Topeka	3314	-1210
Heebner	3531	-1229
Toronto	3552	-1250
Lansing A/B	3566	-1264
Lansing C	3608	-1306
Lansing D	3623	-1321
Lansing E	3642	-1340
Lansing F	3652	-1350
Lansing G	3667	-1365
Lansing H	3706	-1404
Lansing I	3727	-1425
Lansing J	3742	-1440
Lansing K	3762	-1460
Lansing L	3792	-1490
B/KC	3805	-1503
Marmaton	3888	-1586
Arbuckle	3972	-1670

# LITHOLOGY STRIP LOG

## WellSight Systems

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

Well Name: HERMAN L. LOEB LLC. EVA RICHARDSON #4-19  
Location: SE SW NE SE SEC. 19, T 11S, R 22W, TREGO CO. KANSAS  
License Number: 15-195-22785-00-00 Region: MONG  
Spud Date: 5/26/12 Drilling Completed: 6/4/12  
Surface Coordinates: 1,520' FSL, 985' FEL

### Bottom Hole Coordinates:

Ground Elevation (ft): 2,291 K.B. Elevation (ft): 2,302'  
Logged Interval (ft): 3,000' To: 3,990' Total Depth (ft): 3,990'  
Formation: RTD IN; Basal Pennsylvanian  
Type of Drilling Fluid: Native Mud to 2,994'. Chem. Gel. to RTD (3,990').

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

### OPERATOR

Company: HERMAN L. LOEB LLC.  
Address: PO BOX 838  
LAWRENCEVILLE IL 62439  
(812-453-0385)

### GEOLOGIST

Name: James R Hall (Well Site Supervision)  
Company: Black Gold Petroleum  
Address: 5530 N. Sedgwick  
Wichita, Kansas 67204-1828  
(316) 838-2574, (316)-217-1223

### Comments

**Drilling contractor: Sterling Drilling, Rig #2, Pusher: Uvaldo Martinez, Spud 5/26/12. RTD 6/4/12 3,990'.**

**Surface Casing: 8 5/8" set at 250' w/175sx, cmt. did circulate.**

**Production Casing: 5.5" ran 6/5/12.**

**Deviation Surveys: 0.75 @ 259', 0.75 @ 3,588', 1.0 @ 3,990'.**

#### **Bit Record:**

**#1 12 1/4" RR JZ HA1PGC, out @ 259' made 259' in 2hrs.**

**#2 7 7/8" JZ QX20 in @ 259', out @ 3,588', made 3,329' in 78.25hrs.**

**#3 7 7/8" RR JZ Qx20 in @ 3,588', out @ 3,990', made 402' in 26.75 hrs.**

**Drilling time commenced: @ 3,000'. Minimum 10' wet and dry samples commenced: @ 3,000' to RTD 3,990'.  
Samples delivered to Kansas Geological Sample Library at Wichita, Kansas.**

**Gas Detector: Sterling Drilling, unit #1. Tooke Daq. Hotwire gas values were lagged by the Tooke Daq and placed in the Geologic Strip Log, by the well site geologist.**

**Mud System: Mud-Co/Service Mud. Chemical Gel system @ 2,994' to RTD 3,990'. Mud Engineer: Gary Schmidtberger.**

**DST CO. Trilobite, Tester: Brian Fairbank, Hays Ks..**

**OH Logs: Log Tech (Hays Kansas),  
Operator: J Long.  
DIL, CDL/CNL, MEL.**

**Note: The open hole log gamma ray and caliper curves have been placed on this sample strip log, for better correlation. If there is a depth difference between the sample strip log and the open hole electric logs, the gamma ray and caliper curves have been shifted to reflect strip log drilling time depths.**

**OH Log Formation Tops: Anhydrite 1,758 (+544), Topeka 3,314 (-1210), Heebner 3,531 (-1229), Toronto 3,552 (-1250), Lansing "A" / "B" 3,566 (-1264), "C" 3,608 (-1306), "D" 3,623 (-1321), "E" 3,642 (-1340), "F" 3,652 (-1350), "G" 3,667 (-1365), "H" 3,706 (-1404), "I" 3,727 (-1425), "J" 3,742 (-1440), "K" 3,762 (-1460), "L" 3,792 (-1490), B/KC 3,805 (-1503), Marmaton 3,888 (-1586), Arbuckle 3,972 (-1670).**

### DSTs

DST #1 3,532' - 3,588' (56'), Toronto & Lansing "A/B", 15-45-30-60, IH 1805, IF 36-40 (surface blow dead in 3min), ISI 409, FF 46-48 (no blow, flush tool surface blow-died in 30sec), FSI 383, FH 1674, Rec; 5' drilling mud, BHT 112F.

DST #2 Lansing "C"-"D"-"E" 3,591' - 3,651' (60'), 15-45-45-90, IH 1763, IF 112-137 (weak 1inch), ISI 385, FF 141-164 (no blow first 4min, 1/4" by end of period), FSI 382, FH 1687, Rec; 205'mud (100% mud), 65' muddy water (85% water, 15% mud), Rwa 0.152 @ 65F (0.09 @ 111F), Chl 54,000ppm, Chl drilling mud 2,600ppm, BHT 111F. Had to slide tool approx. 8' to bottom.

DST #3 "H"-"I"-"J" 3,691' - 3,759' (68'), IH 1866, IF 35-45 (weak surface), ISI 750, FF 56-63 (surface blow, dead in 30sec, flush tool, surface blow dead in 17min), FSI 709, FH 1811, Rec: 5' drilling mud, 5' slightly gas & oil cut mud (5% gas, 5% oil), BHT 113F.



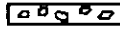
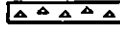


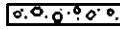









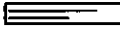

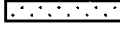

DST #4 Kansas City "K" & "L", 3,760' - 3,808', 15-45-30-60, IH 1912, IF 21-22 (surface bowl dead in 6min), ISI 758, FF 153-157 (no blow flush tool, surface blow, dead in 1min), FSI 831, FH 1848, Rec; 10' very slightly oil cut mud (5% oil, 95% mud), 240' drilling mud (100% mud), BHT 112F. Pressure data and large drilling mud recovery are due to tool valve failure after the tool was flushed (right after tool was flushed mud in the annulus fell 30' to 40'), during the second open. Therefore the data recorded on the charts after the tool being flushed and therefore the large mud recovery, are considered invalid.

DST #5 Marmaton 3,902' - 3,941' (39'), 15-45-60-120, IH 1937, IF 17-19 (surface blow dead in 4min), ISI 721, FF 21-26 (no blow), FSI 712, FH 1842, Rec; 5' mud cut oil (70% oil, 30% mud), BHT 116F.

### Classification

**AFTER DUNHAM: GRAIN;** any fossil, fossil fragment, sand grain, or other rock fragment within the rock. **MUDSTONE;** muddy carbonate rocks containing less than 10% grains. **WACKESTONE;** mud supported carbonate rocks with more than 10% grains. **PACKSTONE;** grain supported muddy carbonate rocks. **GRAINSTONE;** mud free carbonate rock, grain supported. **BOUNDSTONE;** carbonate rock bound together at deposition (coral, etc.). **CRYSTALLINE CARBONATE;** carbonate rock retaining to little of their depositional texture to be classified.

### ROCK TYPES

 Anhy  Bent  Brec  Cht  Clyst	 Coal  Congl  Dol  Gyp  Igne	 Lmst  Meta  Mrlst  Salt  Shale	 Shcol  Shgy  Sltst  Ss  Till
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### ACCESSORIES

#### MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl

- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

#### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral

- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

#### STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol

- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

#### TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

### OTHER SYMBOLS

#### POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

#### SORTING

- Well
- Moderate
- Poor

#### ROUNDING

- Rounded
- Subrnd
- Subang

- Angular

#### OIL SHOW

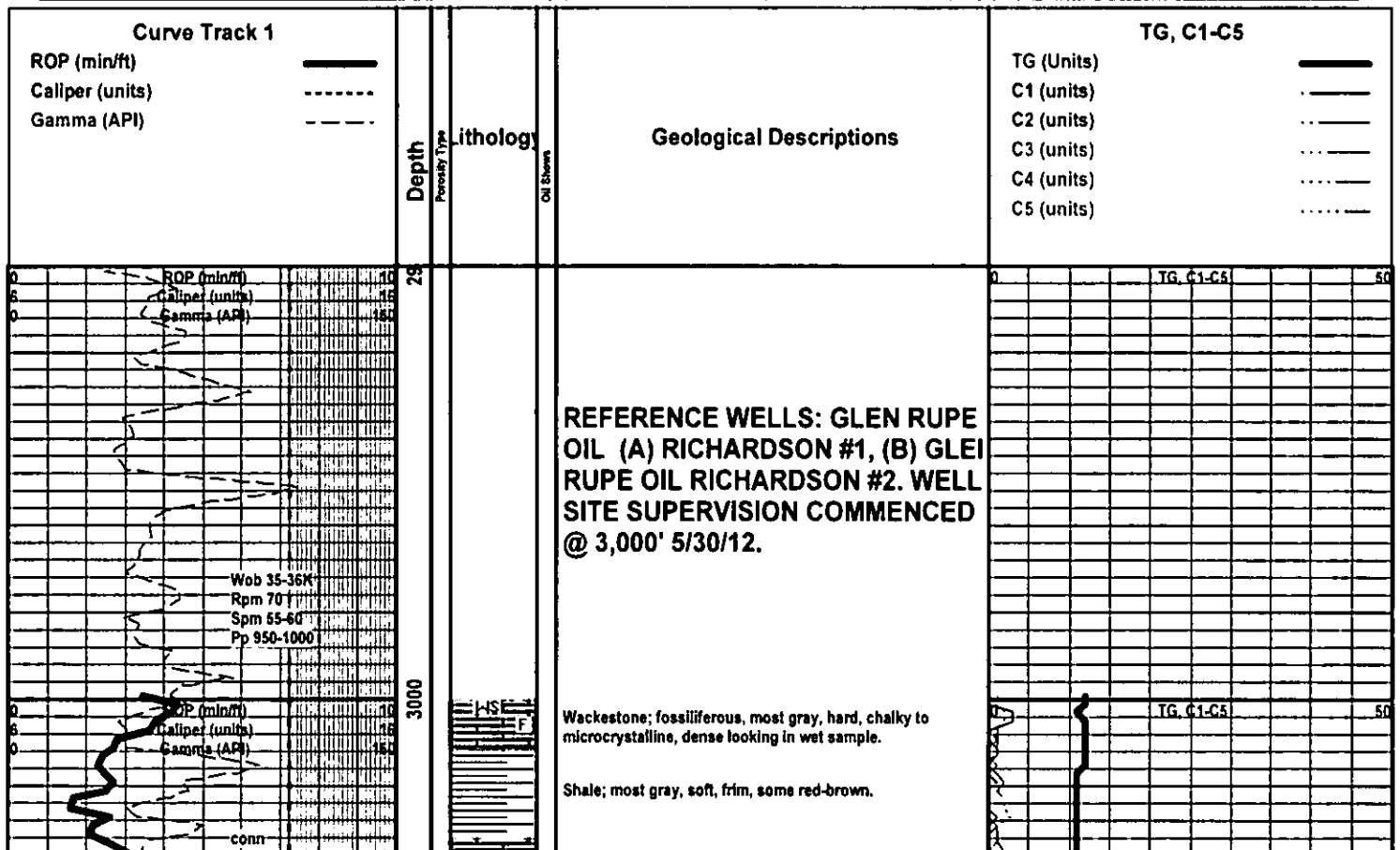
- Even
- Spotted
- Ques
- Dead

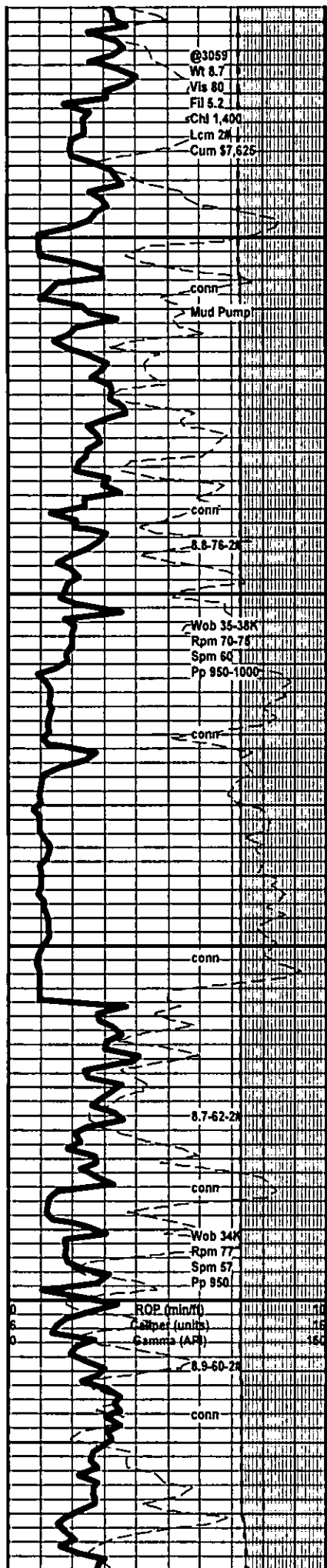
#### INTERVAL

- Core
- Dst

#### EVENT

- Rft
- Sidewall





3050  
3100  
3150  
3200



Wackestone; fossiliferous as above, scattered mudstone; gra occasionally cream, hard, microcrystalline to chalky, rare free tan chert and pyrite. Sample quality poor due to low mud weight!

Shale; most gray, some gray - green, trace red.

Wackestone; fossiliferous to oolitic, hard, gray to cream in color, microcrystalline to chalky matrix, looks dense in wet, and dry samples, no show, very dull yellow to gold mineral fluorescence only.

Shale; most gray, some pale gray-green, traces of red.

Mudstone; gray to cream, hard, microcrystalline to chalky, some fossils in the matrix, dense looking.

Wackestone; fossiliferous, some scattered fusulinids, hard, dense look in wet and dry, no show.

Shale; as above, most gray, sample quality poor to fair due to low mud weight.

Wackestone; fossiliferous to oolitic, cream, hard, microcrystalline to chalky matrix, some with chert inclusions, no show.

Shale; very colored, gray, dark gray to black, scattered green to red, some amorphous claystone, samples wash gray.

Wackestone; cream to gray, fossiliferous, dense.

Shale; most gray, dark gray, some black, less colored shales with depth here, sample wash heavy gray, most soft to very soft claystone, traces of light gray siltstone, some with micaceous look, soft to very friable.

**Stotler 3158 (-856) A -13 B -14**

Wackestone; fossiliferous, cream to tan in color, hard, microcrystalline to chalky matrix, looks dense in wet and dry, very dull mineral fluorescence only.

Mudstone; cream to tan, hard, microcrystalline to chalky, dense, some with fossil inclusions, sample quality still poor to fair due to low mud weight! Samples wash lighter gray!

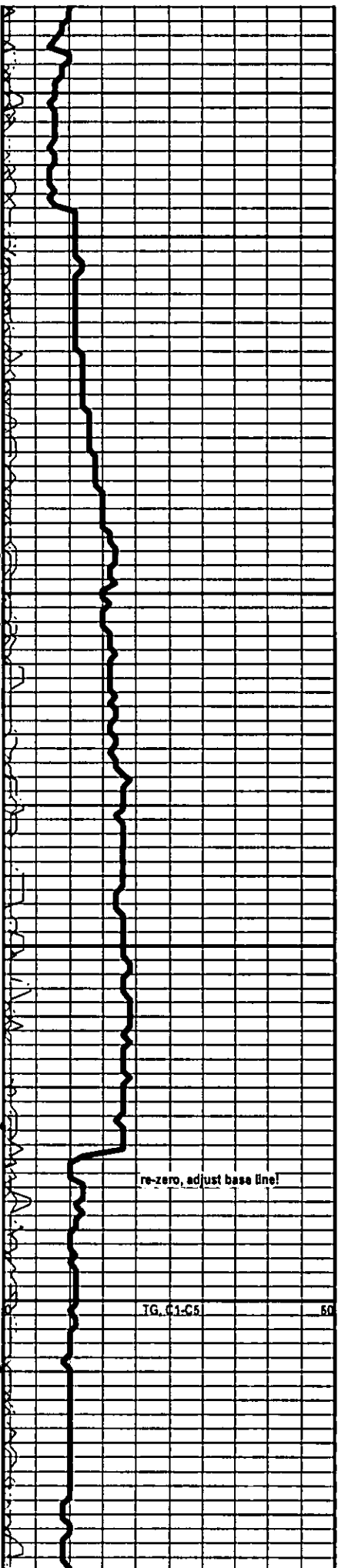
Shale; gray to black, most soft.

Mudstone; cream to gray, some scattered off white, chalky, some with dark inclusions, no show.

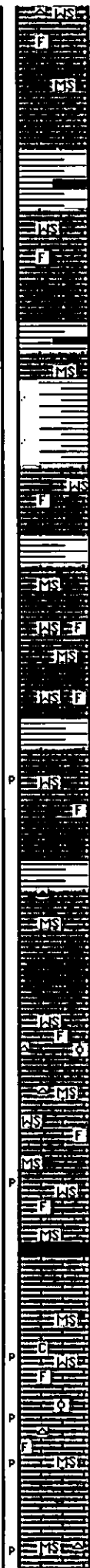
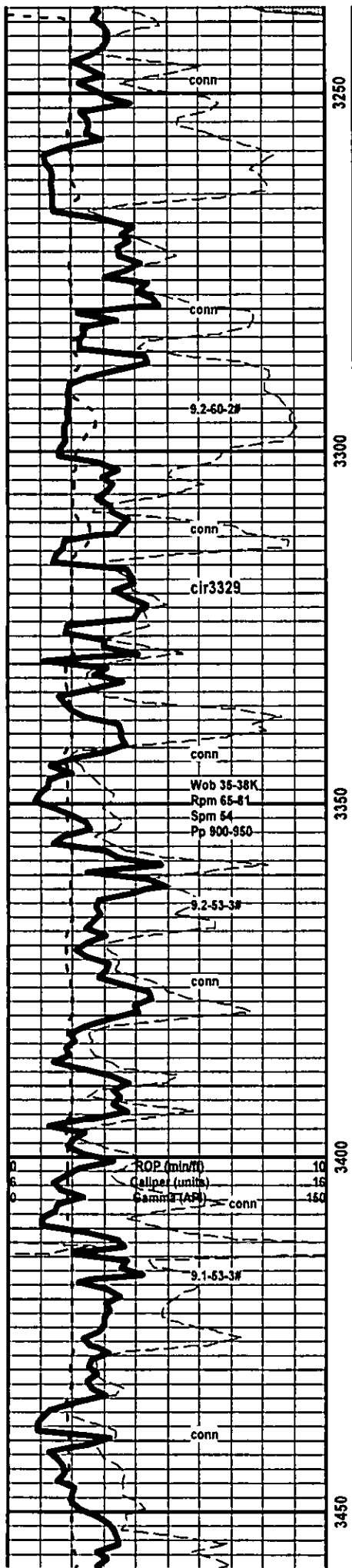
Wackestone; cream to gray, hard to brittle, fossiliferous, scattered crystalline-alky luster, rare barren pinpoint porosity in the dry sample.

Wackestone; cream, hard, most microcrystalline matrix with fossils and oolites, no show, dull mineral fluorescence only, rare glauconite.

Shale; gray, dark gray to black.







Wackestone; fossiliferous, cream, hard, some gray, some with chert inclusions, dense looking matrix, dull mineral fluorescence only, sample quality improving with depth.

Mudstone; cream to gray, microcrystalline to chalky, rare very fine crystalline texture.

Shale; gray to black, trace gray to light gray siltstone.

**Howard 3267 (-965) A -14 B -12**

Wackestone; cream to brown, some gray, fossiliferous, hard to firm, one sample with dark brown spotty stain-no cut, dull mineral fluorescence only, no visible porosity in the dry sample.

Shale; as above.

Mudstone; as above.

Shale; very colored, some arenaceous.

Wackestone; cream to tan, fossiliferous to oolitic, tight looking matrix, no show, poor sample quality, much shale here!

**Topeka 3316 (-1014) A -13 B -13**

Mudstone; cream to gray, hard, microcrystalline to chalky, spotty dead stain, no cut.

Wackestone; tan to cream, fossiliferous, hard to very fine crystalline, tight looking matrix, rare brown spotty stain, no cut, no odor, no visible show.

Wackestone; fossiliferous, hard, microcrystalline to chalky, no show.

Shale; most gray, soft to firm.

Wackestone; fossiliferous, cream to gray, hard, microcrystalline to very fine crystalline, dense look in wet, rare barren pinpoint porosity in dry.

Shale; most gray to dark gray, slight increase in black.

Mudstone; cream to gray, some with fossils in the matrix, most hard to brittle, microcrystalline to chalky, occasionally silky luster - crystalline, rare free dark chert.

Wackestone; fossiliferous to sub oolitic, hard to brittle, most cream in color, microcrystalline to chalky looking matrix, some very fine crystalline, no show, rare light gray free chert.

Mudstone; cream, hard, rare free blocky cream chert.

Wackestone; fossiliferous in tight looking matrix, no show.

Wackestone; cream, fossiliferous, hard, chalky to very fine crystalline matrix, scattered brown stain-no cut, rare barren pinpoint porosity, no live show.

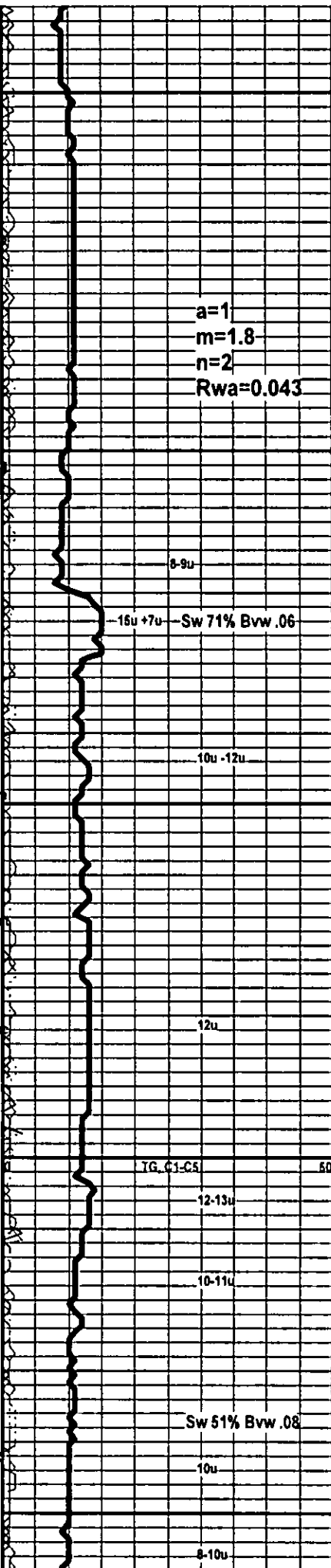
Shale; small influx black carbonaceous shale.

Mudstone; cream to gray, hard, microcrystalline to chalky, dense.

Mudstone; increase in light gray to off white chalky-soft to firm, increase in dull yellow mineral fluorescence.

Wackestone; fossiliferous, sub oolitic look, hard to brittle, chalky to microcrystalline, dense look in wet sample, rare off white chert, no show in wet sample, scattered barren pinpoint porosity in the dry sample.

Mudstone; cream to light gray, hard, rare white chert, rare barren pinpoint porosity.



a=1  
m=1.8  
n=2  
Rwa=0.043

8-9u  
16u +7u Sw 71% Bvw .06

10u -12u

12u

TG, C1-C5 50

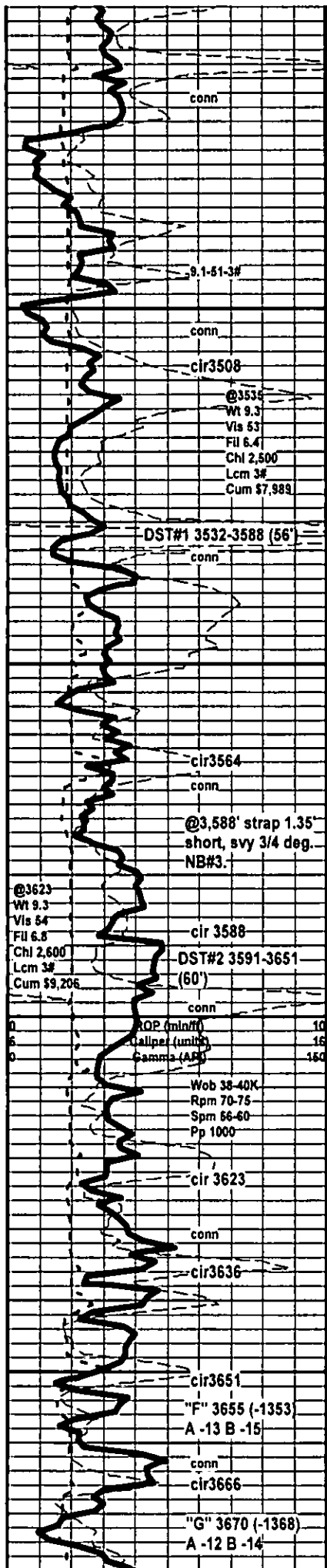
12-13u

10-11u

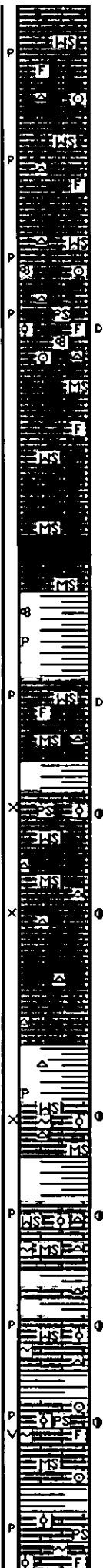
Sw 51% Bvw .08

10u

8-10u



3500  
3550  
3600  
3650



Wackestone; fossiliferous, light gray to buff, hard, looks tight in wet sample, no show wet, rare pinpoint barren porosity in the dry.

Wackestone; fossiliferous, cream, hard to brittle, chalky to microcrystalline matrix, free off white chert, rare chert inclusions, some chert fossiliferous, no show in wet, fair amount of very small barren pinpoint porosity in the dry sample.

Wackestone; fossiliferous to sub oolitic, cream to off white, microcrystalline to chalky, no show, rare crinoid and fusulinid

Packstone; oolitic to fossiliferous, hard, tight looking matrix in wet, rare secondary mineralization in the matrix, no show, rare spotty stain-no cut, rare crinoid and fusulinid, barren porosity in dry sample.

Wackestone; fossiliferous, off white to cream, hard to brittle, microcrystalline to chalky matrix, no show or visible porosity in the wet sample.

Heebner 3532 (-1230) A -12 B -15

Shale; black carbonaceous, some visible gas bubbles!

Shale; very colored, light gray, pale green, brown, most soft, some claystone, traces free pyrite, rare fusulinid.

Toronto 3553 (-1251) A -12 B -15

Wackestone; cream, fossiliferous, hard, microcrystalline to chalky, looks tight in wet, no show, no cut on dull gold fluorescence, one sample with spotty black stain - no cut, scattered barren pinpoint porosity.

Lansing 3569 (-1267) A -13 B -15

Packstone; oolitic, off white to cream, hard, scattered inter oolitic porosity with light brown oil stain, some filled with or lined with secondary calcite, instant milky cut, faint odor, no free oil.

Mudstone; cream, hard, microcrystalline to chalky, occasionally silky texture crystalline, most dense, rare scattered pinpoint, with light brown oil stain, and rare oolitic packstone with bleeding brown oil from pinpoint and vuggy porosity, instant cut, very faint sample odor, no free oil.

Mudstone; cream to light gray, hard, most silky - crystalline dense, free off white chert, some limestone with secondary calcite.

Lansing "C" 3611 (-1309) A -12 B -15

Wackestone; small oolitic, off white to light gray, hard, crystalline to chalky matrix, scattered very small inter oolitic porosity, rare bleed gas, light brown oil stain, dull gold fluorescence, slow milky cut, very faint sample odor, overall looks tight, in 60min sample rare oolitic WS with free oil when broken.

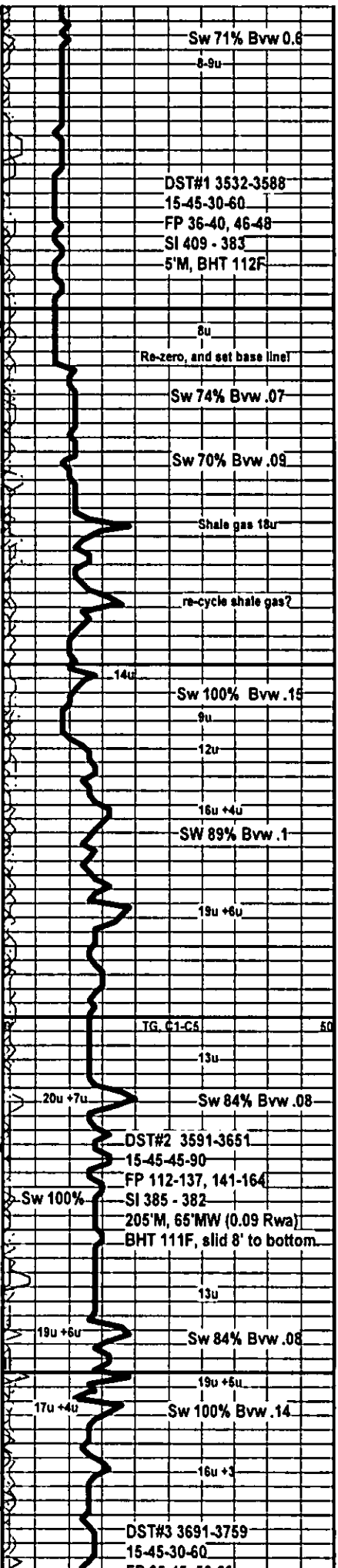
Lansing "D" 3626 (-1324) A -13 B -16

Wackestone; oolitic-fossiliferous, hard to brittle, rare spotty light brown oil stain, stain on scattered very small pinpoint porosity, mostly on edges, slow cut, no odor, no free oil, rare rainbow look when broken, some spicular chert, very poor show.

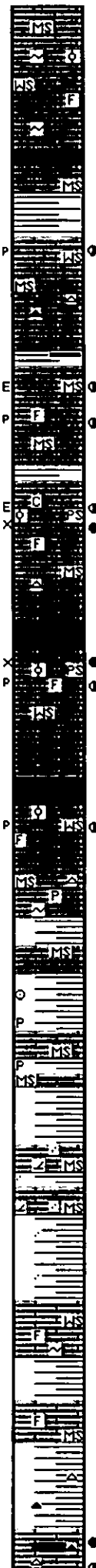
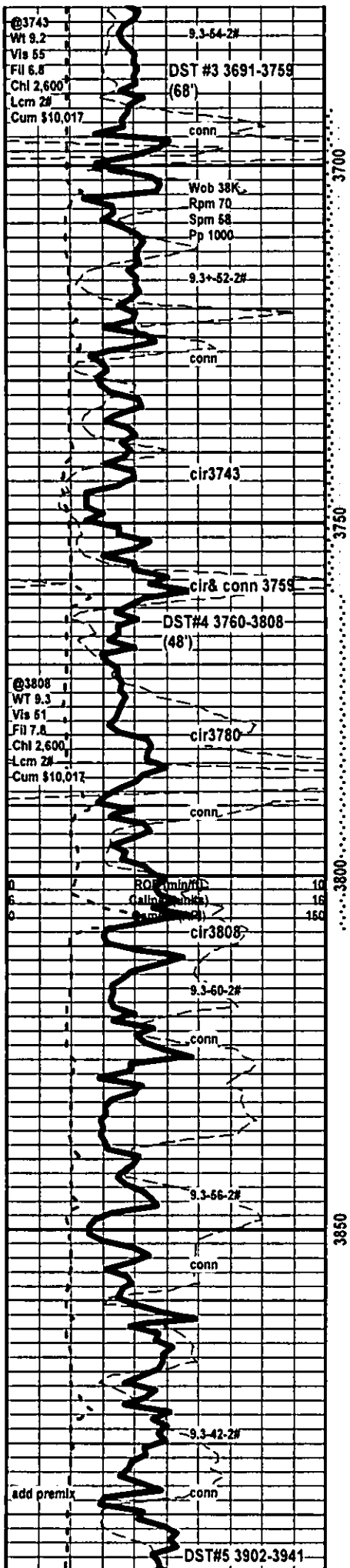
Lansing "E" 3642 (-1340) A -10 B -13

Wackestone; very small oolitic to fossiliferous, hard to rare friable, spotty very small pinpoint porosity, with light brown oil stain and rare light brown oil, milky cut, faint sample odor, no free oil in tray, looks tight.

Packstone; oolitic, most light gray, cream to rare off white, most dense, rare friable, scattered inter oolitic pp and very rare vgy porosity, black to light brown oil stain, rare bleeding, rare free oil when broken, rare recrystallized edges with show, majority of porosity in dry look barren, v rare vey stain in dry very faint odor, overall poor show.



Sw 71% Bvw 0.6  
8-9u  
DST#1 3532-3588  
15-45-30-60  
FP 36-40, 46-48  
SI 409 - 383  
5'M, BHT 112F  
8u  
Re-zero, and set base line!  
Sw 74% Bvw .07  
Sw 70% Bvw .09  
Shale gas 18u  
re-cycle shale gas?  
14u  
Sw 100% Bvw .15  
9u  
12u  
16u +4u  
SW 89% Bvw .1  
19u +6u  
TG, C1-C5  
60  
13u  
20u +7u  
Sw 84% Bvw .08  
DST#2 3591-3651  
15-45-45-90  
FP 112-137, 141-164  
SI 385 - 382  
205'M, 65'MW (0.09 Rwa)  
BHT 111F, slid 8' to bottom  
13u  
19u +6u  
Sw 84% Bvw .08  
19u +5u  
17u +4u  
Sw 100% Bvw .14  
16u +3  
DST#3 3691-3759  
15-45-30-60  
FP 36-40, 46-48



Mudstone; cream to off white, most silky texture crystalline, some chalky, most hard to brittle, some fossiliferous, scattered fossiliferous wackestone, chalky to crystalline mud like the mudstone, dense, no show.

Shale; black, hard, carbonaceous, some gassy when broken.

Mudstone; brown, crystalline, dense, some fossils.

"H" 3711 (-1409) A -12 B -15  
Wackestone; oolitic to fossiliferous, cream, most barren-light rare spotty brown oil and oil stain, very faint odor, poor show rare even stain in dry, most spotty, very fine scattered pp porosity.

Mudstone; light gray, cream, off white, most crystalline, free brown and off white chert.

"I" 3730 (-1428) A -12 B -14  
Mudstone; with weathered edges, spotty black dead looking stain and light brown stain, dull yellow to gold fluorescence, residual ring cut only, very faint sample odor, very poor show.

"J" 3745 (-1443) A -12 B -14  
Chalky limestone at the top, with black gilsonitic looking stain-bleed gas, instant milky cut, fair odor. Oolitic packstone hard, rare friable, bleeding oil, visible oil in scattered vuggy porosity, some calcite lined filled with brown oil, fair odor, instant milky cut, even brown and black stain in dry, some barren porosity noted, less show with depth, changing to mudstone - tight.

"K" 3768 (-1466) A -15 B -13  
Packstone; small oolitic to fossiliferous, faint odor, most spotty oil stain and very small inter foss./ool porosity, some even oil stain, again very small pp porosity, some bleeding brown oil, rare free oil in tray, overall looks tight, however be % of show, 10%-20% of sample.

"L" 3790 (-1488) A -16 B -13  
Wackestone; fossiliferous, to sub oolitic, rare pinpoint porosity with spotty brown oil stain, most on edges, rare visible oil in pore space, very faint odor.

Mudstone; cream, off white to light gray, chalky-crystalline, dense, rare brown.

B/KC 3806 (-1504) A -15 B -14  
Shale; black, gray, gray-green, some red and occasional red-brown, firm to soft.

Mudstone; off white, cream to light gray, microcrystalline to chalky some with fossils.

Shale; very colored as above, firm to soft, platy to blocky, most earthy texture.

Mudstone; off white, cream to light gray, rare arenaceous looking dolomitic limestone.

Shale; increase in red and red-brown, sample wash red here! some are arenaceous-quartz.

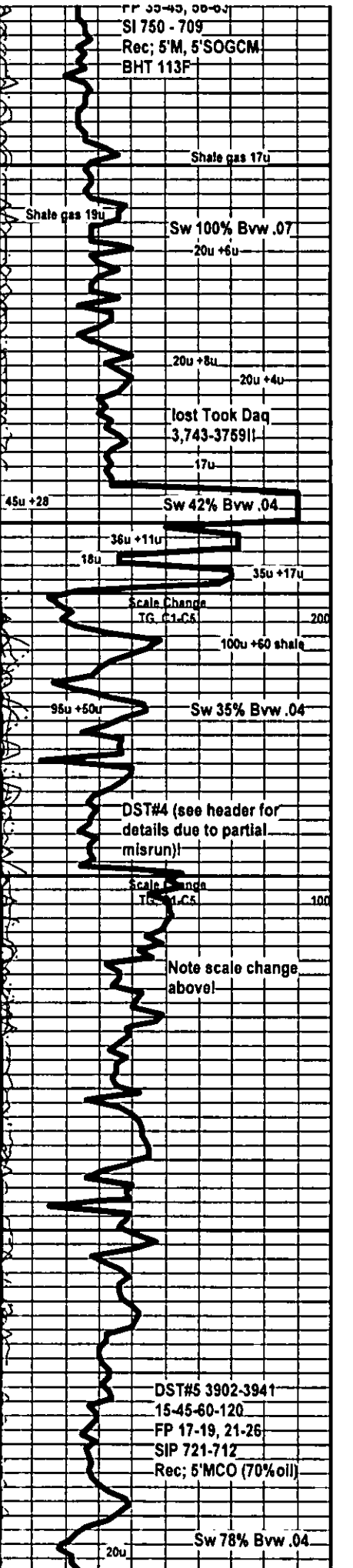
Wackestone; fossiliferous, off white, light gray, hard, dense, some with secondary calcite nodules.

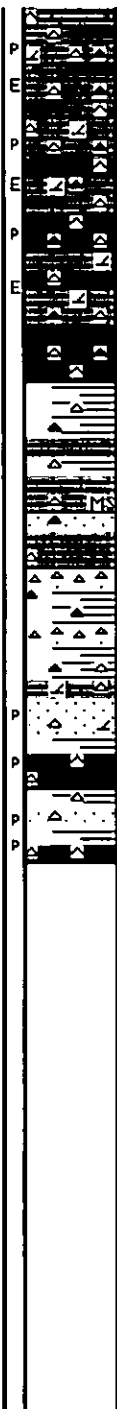
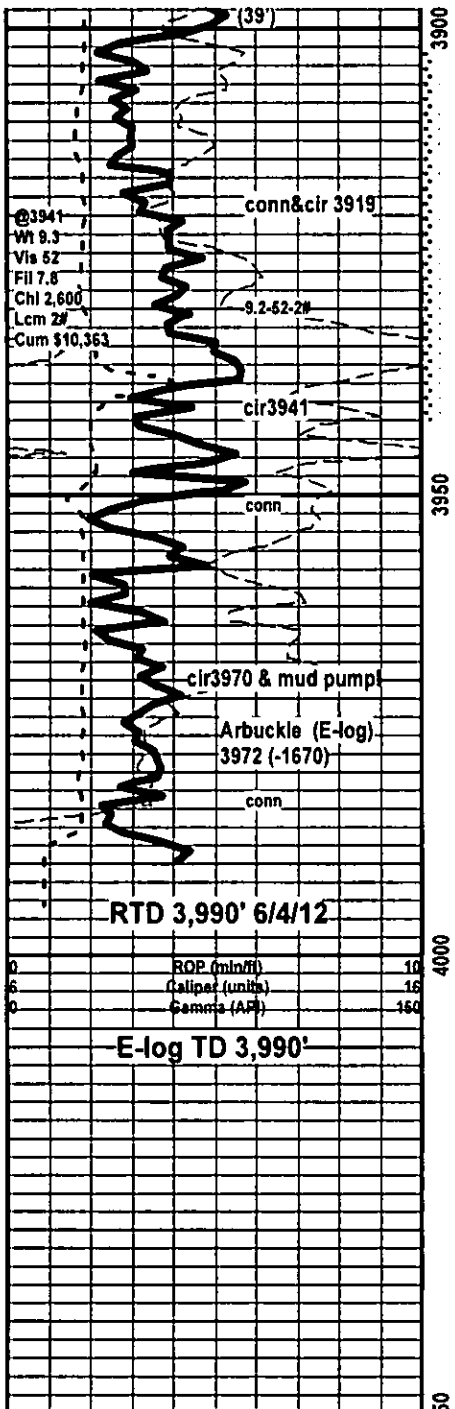
Shale; as above.

Mudstone; microcrystalline to chalky, some fossiliferous, dense looking.

Shale; as above; very colored, influx pink, red and off white chert here!

Marmaton 3892 (-1590) A -16 B -11  
Mudstone; chalky to microcrystalline some very fine





crystalline, spotty oil stain, rare oil droplets, mixed w/ Dolomitic lime and Dolomite; very fine sucrosic, dull, hard to very hard, spotty to even brown stain, rare oil droplets, earthy to scattered very fine pinpoint porosity, instant cut to slow residual ring cut, faint odor, abundant chert, most off white to bone white, some with weathered edges oil droplets and brown stain, faint odor, rare free oil, samples look very tight overall!

As above; abundant chert, cream, off white and bone white, most look fresh, some with weathered edges with even stain and oil droplets, Mix of dolomite and siliceous dolomite, also dolomitic limestone, less even brown stain with depth, less sample odor with depth, earthy looking and scattered very fine pinpoint porosity, some with bleeding dark brown oil.

Shale; slight increase in black, pale green and gray-green shales here.

Sandstone; quartz, clear, med gm, rnd, wsrtd, free in tray, no show, one cluster, black dead looking stain, no fluorescence, very slow milky cut, no odor.

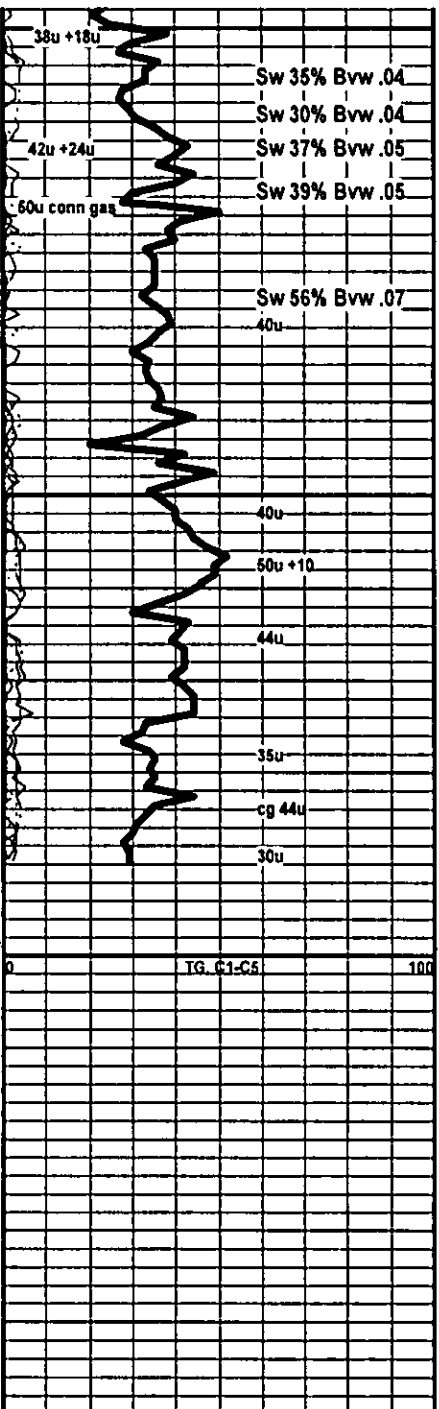
Chert; clear to off white, to vary colored, spotty black tar like stain, no fluorescence, slow milky cut, no odor, no live show.

Shale; vary colored, sample wash red!

Sandstone; dolomitic, off white, hard to friable, vfg, wsrtd, spotty black stain, some visible black oil droplets on scattered porosity, no odor, no fluorescence, slow milky cut.

Sandstone; quartz, off white to clear, cons, mg, rnd, wsrtd, black tar like stain, visible black oil droplets, rare dark brown oil with broken, no odor, rare very dull fluorescence, instant milky cut, most with no fluorescence, overall looks dead.

Dolomite; cream light tan, siliceous, like above microcrystalline look, much like Marmaton dolomite, very hard spotty black stain, rare black to dark brown droplets of oil, no odor, slow milky cut.





**BASIC**  
ENERGY SERVICES

760502  
6420

PAGE	CUST NO	INVOICE DATE
1 of 1	1007589	05/30/2012
INVOICE NUMBER		
1718 - 90916945		

Pratt (620) 672-1201  
 B HERMAN L LOEB LLC  
 I PO Box: 838  
 L LAWRENCEVILLE  
 L IL US 62439  
 T  
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Eva Richardson 4-19  
 O LOCATION  
 B COUNTY Trego  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE	
40469137	27463		Net - 30 days	06/29/2012	
<b>For Service Dates: 05/26/2012 to 05/26/2012</b>					
0040469137					
171808072A.Cement-New Well Casing/Pi 05/26/2012					
Cement 8 5/8" Surface: LANCE & LANCE					
60740 POZ					
		QTY	U of M	UNIT PRICE	INVOICE AMOUNT
		175.00	EA	9.60	1,680.00
		44.00	EA	2.96	130.24
		453.00	EA	0.84	380.52
		100.00	MI	3.40	340.00
		200.00	MI	5.60	1,120.00
		755.00	EA	1.28	966.40
		1.00	EA	800.00	800.00
		175.00	BAG	1.12	196.00
		1.00	EA	140.00	140.00
PLEASE REMIT TO: SEND OTHER CORRESPONDENCE TO:					
BASIC ENERGY SERVICES, LP		BASIC ENERGY SERVICES, LP		SUB TOTAL	5,753.16
PO BOX 841903		PO BOX 10460		TAX	148.97
DALLAS, TX 75284-1903		MIDLAND, TX 79702		INVOICE TOTAL	5,902.13



**BASIC**  
ENERGY SERVICES  
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61  
P.O. Box 8613  
Pratt, Kansas 67124  
Phone 620-672-1201

FIELD SERVICE TICKET

1718 06072 A

DATE \_\_\_\_\_ TICKET NO. \_\_\_\_\_

DATE OF JOB <u>5-26-12</u> DISTRICT <u>PRATT KS</u>		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:							
CUSTOMER <u>HERMAN LOEB</u>		LEASE <u>EVA - Roberts</u> 4-19 WELL NO.							
ADDRESS		COUNTY <u>TREGO</u> STATE <u>KS</u>							
CITY STATE		SERVICE CREW <u>Sullivan, Pittbull, Young</u>							
AUTHORIZED BY		JOB TYPE: <u>cnw 8 1/2 Senter</u>							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM/PM	TIME
<u>27467</u>	<u>30</u>					<u>5-26-12</u>	<u>5-26-12</u>		<u>10:30</u>
<u>70959-19918</u>	<u>30</u>					ARRIVED AT JOB			<u>2:45</u>
<u>37900</u>						START OPERATION			<u>7:05</u>
						FINISH OPERATION			<u>7:30</u>
						RELEASED			<u>8:15</u>
						MILES FROM STATION TO WELL			<u>100</u>

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: Roland Nease  
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 103	1 1/2" puz con T	SK	125		2,110.00
CC 102	Callblock	1b	44		162.50
CC 107	Calcium chloride	1b	453		475.25
E 100	pickup oil	mi	100		475.00
E 101	Heavy Egypt oil	mi	200		1,400.00
E 113	Bulk Oiling	TM	755		1,209.00
CE 200	Depth charge 0-500'	SA	1		1,000.00
CE 250	Blanching - mica	SK	175		245.00
SCM 3	Stannous Superoxide	SA	1		175.00

SUB TOTAL DLS 5753.16

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
<u>Thank you</u>	TOTAL	

SERVICE REPRESENTATIVE <u>Robert [Signature]</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>Roland Nease</u> (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
--	--

FIELD SERVICE ORDER NO.

# BASIC

energy services, L.P.

## TREATMENT REPORT

Customer <i>HERMAN Web</i>	Lease No.	Date <i>05-26-12</i>
Lease <i>EVA-Richardson</i>	Well # <i>4-19</i>	
Field Order # <i>6072</i>	Station <i>PRATT 1cs</i>	Casing <i>8 5/8</i>
Type Job <i>CNW 8 5/8 Zipline</i>	Depth <i>259'</i>	County <i>TREGO</i>
	Formation	State <i>KS</i>
		Legal Description <i>14-11-22</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>8 5/8</i>								5 Min.
Depth <i>259'</i>	Depth	From	To	Pre Pad	Max			10 Min.
Volume <i>15</i>	Volume	From	To	Pad	Min			15 Min.
Max Press <i>300</i>	Max Press	From	To	Frac	Avg			Annulus Pressure
Well Connection <i>SWS 90</i>	Annulus Vol.	From	To		HHP Used			Total Load
Plug Depth <i>245</i>	Packer Depth	From	To	Flush	Gas Volume			

Customer Representative	Station Manager <i>DAVE SCOTT</i>	Treater <i>Robert [Signature]</i>
-------------------------	--------------------------------------	--------------------------------------

Service Units	<i>37900</i>	<i>27463</i>	<i>70959</i>	<i>19918</i>					
Driver Names	<i>Sullivan</i>	<i>Mittell</i>	<i>Young</i>						

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>2:45</i>					<i>on the soft mat</i>
					<i>Run 6 5/8 23' CSG.</i>
<i>6:35</i>					<i>CASING ON BOTTOM</i>
<i>6:45</i>					<i>Hook Dip con</i>
<i>7:05</i>	<i>250</i>		<i>3</i>	<i>2</i>	<i>St Sparcon</i>
				<i>5</i>	<i>mix 175 st 60/41 per cent</i>
			<i>37</i>		<i>cut mixed</i>
				<i>4.5</i>	<i>St Dip</i>
<i>7:30</i>	<i>300</i>		<i>15</i>		<i>plug down</i>
					<i>give 15 min cut to pit</i>
					<i>50B complete</i>
					<i>Thank you</i>



**BASIC**  
ENERGY SERVICES

76928  
9430

PAGE 1 of 1	CUST NO 1007589	INVOICE DATE 06/07/2012
INVOICE NUMBER 1718 - 90923350		

Pratt (620) 672-1201  
 B HERMAN L LOEB LLC  
 I PO Box: 838  
 L LAWRENCEVILLE  
 L IL US 62439  
 T  
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Eva Richardson 4-19  
 O LOCATION  
 B COUNTY Trego  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40472397	20920		Net - 30 days	07/07/2012
<b>For Service Dates: 06/06/2012 to 06/06/2012</b>				
0040472397				
171806501A Cement-New Well Casing/Pi 06/06/2012				
Cement 5 1/2" Longstring				
50/50 POZ		250.00	EA 8.80	2,200.00
Celloflake		63.00	EA 2.96	186.48
Gypsum		1,050.00	EA 0.60	630.00
FLA-322		105.00	EA 6.00	630.00
Gilsonite		1,500.00	EA 0.54	804.00
KCL, Potassium Chloride		566.00	EA 1.20	679.20
"5 1/2" Port Collar "		1.00	EA 2,800.00	2,800.00
"Latch Down Plug & Baffle, 5 1/2" (Blu		1.00	EA 320.00	320.00
"Auto Fill Float Shoe 5 1/2" (Blue)"		1.00	EA 288.00	288.00
"Turbolizer, 5 1/2" (Blue)"		12.00	EA 88.00	1,056.00
"5 1/2" Basket (Blue)"		1.00	EA 232.00	232.00
"Cement Scratchers Cable Type, 5 1/2" "		5.00	EA 60.00	300.00
Mud Flush		1,000.00	EA 0.69	688.00
"Unit Mileage Chg (PU, cars one way)"		100.00	MI 3.40	340.00
Heavy Equipment Mileage		200.00	MI 5.60	1,120.00
"Proppant & Bulk Del. Chgs., per ton mil		1,050.00	EA 1.28	1,344.00
Depth Charge; 3001-4000'		1.00	EA 1,728.00	1,728.00
Blending & Mixing Service Charge		250.00	BAG 1.12	280.00
Plug Container Util. Chg.		1.00	EA 200.00	200.00
"Service Supervisor, first 8 hrs on loc.		1.00	EA 140.00	140.00
<b>PLEASE REMIT TO:</b>				<b>SUB TOTAL</b>
BASIC ENERGY SERVICES, LP				15,965.68
PO BOX 841903				<b>TAX</b>
DALLAS, TX 75284-1903				395.60
<b>SEND OTHER CORRESPONDENCE TO:</b>				<b>INVOICE TOTAL</b>
BASIC ENERGY SERVICES, LP				16,361.28
PO BOX 10460				
MIDLAND, TX 79702				





**BASIC**  
ENERGY SERVICES  
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61  
P.O. Box 8613  
Pratt, Kansas 67124  
Phone 620-672-1201

1146-17097  
FIELD SERVICE TICKET  
1718 06501 A

DATE \_\_\_\_\_ TICKET NO. CONT

DATE OF JOB <u>06-06-12</u> DISTRICT <u>PRATT KS</u>		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:							
CUSTOMER <u>HERMAN LOCH LLC</u>		LEASE <u>EVA Richardson</u> 4-19 WELL NO.:							
ADDRESS _____		COUNTY <u>Trego</u> STATE <u>KS</u>							
CITY _____ STATE _____		SERVICE CREW <u>Sullivan, Wright, Phye</u>							
AUTHORIZED BY _____		JOB TYPE: <u>OPW 5 1/2" LANSKY</u>							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AMP	TIME
<u>33708-20970</u>	<u>45 mi</u>						<u>06-05-12</u>	<u>11:00</u>	
<u>19959-17860</u>	<u>45 mi</u>					ARRIVED AT JOB			<u>6:00</u>
<u>37900</u>						START OPERATION	<u>06-06-12</u>		<u>12:45</u>
						FINISH OPERATION			<u>1:30</u>
						RELEASED			<u>2:15</u>
						MILES FROM STATION TO WELL			<u>100</u>

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).  
The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: Robert J. [Signature]  
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 104	50/50 pot cement	SK	200		2,200 00
CP 104	50/50 pot cement	CK	50		550 00
CC 102	Coltoko	16	63		233 10
CC 113	940502	16	1050		787 50
CC 129	76A-327	16	105		787 50
CC 201	940502	16	1500		1,050 00
C 700	Potassium Chloride	16	526		849 00
CF 481	Pond Gliner 5 1/2"	9A	1		3,500 00
CF 607	Lathe down Plug	9A	1		400 00
CF 1251	Auto Fill stop	9A	1		360 00
CF 1651	Tubaliner	9A	12		1,320 00
CF 1901	Basket	9A	1		290 00
CF 2001	cont Scaffolding	9A	5		375 00
CC 151	myd fluid	9A	1000		360 00
E 100	poly mi	mi	400		425 00
E 101	Heavy fluid mi	mi	200		1,400 00

CHEMICAL / ACID DATA:			

SUB TOTAL		
SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		

DL5  
Thank you

SERVICE REPRESENTATIVE Robert J. [Signature] THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Robert J. [Signature]  
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO. \_\_\_\_\_



**BASIC**  
ENERGY SERVICES  
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61  
P.O. Box 8613  
Pratt, Kansas 67124  
Phone 620-672-1201

FIELD SERVICE TICKET

~~1718-08502-2~~

Continuation of

DATE TICKET NO. 171806501A

DATE OF JOB 06-06-12		DISTRICT Pratt KS		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/>		PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/>		CUSTOMER ORDER NO.:	
CUSTOMER HERMAN Koch				LEASE CVA Richards			4-15		WELL NO.
ADDRESS					COUNTY Trego		STATE KS		
CITY				STATE		SERVICE CREW Sullivan, Wright, Mye			
AUTHORIZED BY					JOB TYPE: CN W 5 1/2 6 1/2 ST-1				
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM PM	TIME
						ARRIVED AT JOB		AM PM	
						START OPERATION	6-6-12	AM PM	1245
						FINISH OPERATION		AM PM	130
						RELEASED		AM PM	215
						MILES FROM STATION TO WELL			

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: *Robert Mye*  
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
E 113 A	Bulk Diesel	TM	1050		1680.00
CE 204	Depth charger 3000-4000	FA	1		2160.00
CE 240	Blend mix	SK	250		350.00
CE 904	Plug Material - Rental	SR	1		250.00
5003	Service Supervise	SP	1		175.00

SUB TOTAL *DLS* 15,965.68

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$

TOTAL

*Thank you!*

SERVICE REPRESENTATIVE <i>Robert Mye</i>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <i>Robert Mye</i> (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
--	--

FIELD SERVICE ORDER NO.

# BASIC

energy services, L.P.

## TREATMENT REPORT

Customer <i>H. R. LUB</i>	Lease No.	Date <i>06-06-12</i>
Lease <i>VA - Richardson</i>	Well # <i>4-17</i>	
Field Order # <i>6561</i>	Station # <i>Ph 21 K1</i>	Casing <i>5 1/2</i>
Type Job <i>CNW 5" Lined String</i>	Depth <i>3189</i>	County <i>TRCO</i>
		State <i>KS</i>
	Formation	Legal Description <i>12-11-72</i>

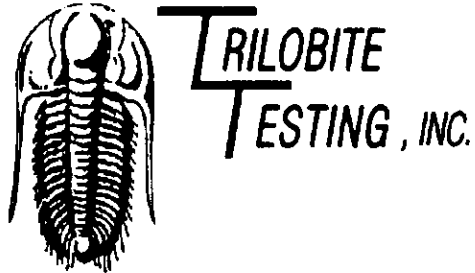
PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>5 1/2</i>							5 Min.	
Depth <i>3757</i>	Depth	From	To	Pre Pad	Max			
Volume <i>44</i>	Volume	From	To	Pad	Min		10 Min.	
Max Press <i>2,000</i>	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection <i>P.C</i>	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth <i>2911</i>	Packer Depth	From	To	Flush	Gas Volume		Total Load	

Customer Representative	Station Manager <i>DAVE SCOTT</i>	Treater <i>Robert Lull...</i>
-------------------------	--------------------------------------	----------------------------------

Service Units <i>2700</i>	<i>2270</i>	<i>2097</i>	<i>1975</i>	<i>1980</i>						
Driver Names <i>Swain</i>	<i>Wright</i>	<i>Phyllis</i>								

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>6:00</i>					<i>on h. 5.89 viscosity</i>
					<i>Run 95 5.89 5" 7.5" cap</i>
					<i>at 1.2.5 - 6.5 in 14. 20. 25. 45. 50</i>
					<i>1.2.5 4x P. 1.2.5 1850'</i>
<i>11:30</i>					<i>Check on Bottom</i>
<i>11:40</i>					<i>Hook up</i>
<i>12:45</i>	<i>200</i>		<i>24</i>	<i>3</i>	<i>at 11:40 Hook</i>
			<i>5</i>		<i>100'</i>
			<i>49</i>	<i>5</i>	<i>mix in 1.2.5 1.2.5 1.2.5 1.2.5 1.2.5 1.2.5</i>
					<i>run 1.2.5 1.2.5 1.2.5 1.2.5 1.2.5 1.2.5</i>
					<i>Bottom Plug</i>
				<i>6</i>	<i>at 11:40</i>
	<i>350</i>		<i>66</i>		<i>lift P.</i>
	<i>600</i>			<i>4</i>	<i>Stress Rate</i>
<i>1:30</i>	<i>1500</i>		<i>95</i>	<i>2.5</i>	<i>Flow down</i>
			<i>7</i>		<i>Flow 1.2.5 1.2.5 1.2.5 1.2.5 1.2.5 1.2.5</i>
			<i>5</i>		<i>Flow 1.2.5 1.2.5 1.2.5 1.2.5 1.2.5 1.2.5</i>
					<i>500 6.5 1.2.5</i>

*Thank*



## DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jim Hall

**Eva Richardson #4-19**

**19-11s-22w Trego,KS**

Start Date: 2012.05.31 @ 17:39:05

End Date: 2012.06.01 @ 00:41:35

Job Ticket #: 47137                      DST #: 1

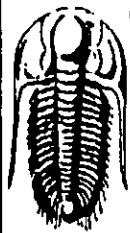
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.06.13 @ 16:10:00

Herman L. Loeb LLC  
19-11s-22w Trego,KS  
Eva Richardson #4-19  
DST # 1  
Toronto - LKC "A"  
2012.05.31



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

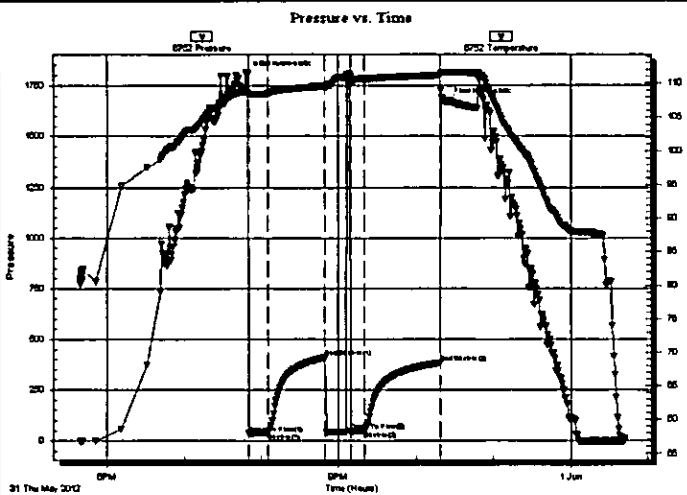
19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47137      DST#: 1  
Test Start: 2012.05.31 @ 17:39:05

### GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:50:35  
 Time Test Ended: 00:41:35  
 Interval: **3532.00 ft (KB) To 3588.00 ft (KB) (TVD)**  
 Total Depth: **3588.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Good**  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Tester: **Brian Fairbank**  
 Unit No: **41**  
 Reference Elevations: **2302.00 ft (KB)**  
**2291.00 ft (CF)**  
 KB to GR/CF: **11.00 ft**

**Serial #: 6752**      **Inside**  
 Press@RunDepth: **48.14 psig @ 3570.00 ft (KB)**  
 Start Date: **2012.05.31**      End Date: **2012.06.01**      Capacity: **8000.00 psig**  
 Start Time: **17:39:06**      End Time: **00:41:35**      Last Calib.: **2012.06.01**  
 Time On Btm: **2012.05.31 @ 19:49:05**  
 Time Off Btm: **2012.05.31 @ 22:24:35**

**TEST COMMENT:** IFP - sur blow - died 3 min  
 ISI - no blow back  
 FFP - no blow - flush - sur blow - died 30 sec  
 FSI - no blow back



### PRESSURE SUMMARY

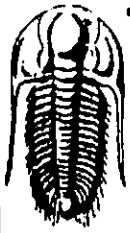
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1804.91	108.73	Initial Hydro-static
2	35.56	108.51	Open To Flow (1)
16	39.67	108.55	Shut-In(1)
61	408.80	109.66	End Shut-In(1)
80	45.68	111.01	Open To Flow (2)
91	48.14	110.62	Shut-In(2)
150	382.77	111.17	End Shut-In(2)
156	1673.96	111.63	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	drl mud 100%	0.02

### Gas Rates

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



# TRILOBITE TESTING, INC

## DRILL STEM TEST REPORT

Herman L. Loeb LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jim Hall

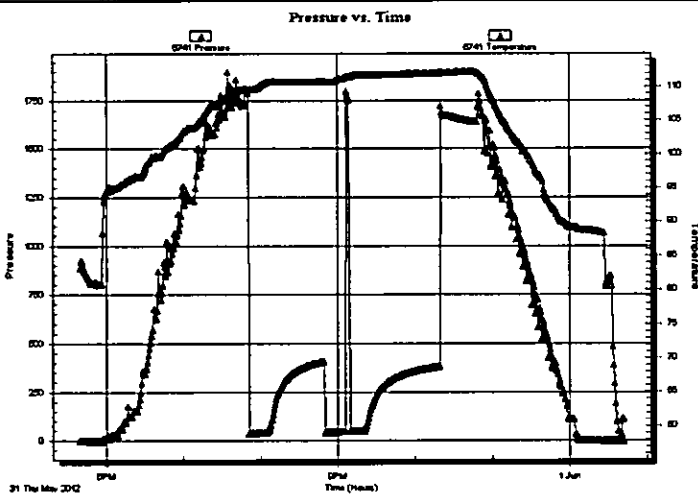
19-11s-22w Trego,KS  
 Eva Richardson #4-19  
 Job Ticket: 47137 DST#: 1  
 Test Start: 2012.05.31 @ 17:39:05

### GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:50:35  
 Time Test Ended: 00:41:35  
 Interval: **3532.00 ft (KB) To 3588.00 ft (KB) (TVD)**  
 Total Depth: 3588.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Brian Fairbank  
 Unit No: 41  
 Reference Elevations: 2302.00 ft (KB)  
 2291.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 6741 Outside**  
 Press@RunDepth: psig @ 3570.00 ft (KB)  
 Start Date: 2012.05.31 End Date: 2012.06.01  
 Start Time: 17:39:21 End Time: 00:42:04  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.06.01  
 Time On Btm:  
 Time Off Btm:

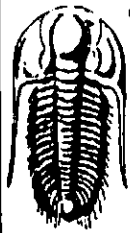
TEST COMMENT: IFP - sur blow - died 3 min  
 ISI - no blow back  
 FFP - no blow - flush - sur blow - died 30 sec  
 FSI - no blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	drl mud 100%	0.02

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L. Loeb LLC

**19-11s-22w Trego, KS**

PO Box 838  
Lawrenceville, IL 62439

**Eva Richardson #4-19**

Job Ticket: 47137

**DST#: 1**

ATTN: Jim Hall

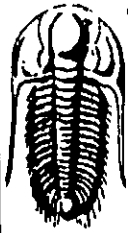
Test Start: 2012.05.31 @ 17:39:05

### Tool Information

Drill Pipe:	Length: 3285.00 ft	Diameter: 3.80 inches	Volume: 46.08 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 47.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	3532.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut in Tool	5.00			3510.00	
Hydraulic tool	5.00			3515.00	
Jars	5.00			3520.00	
Safety Joint	2.00			3522.00	
Packer	5.00			3527.00	27.00 Bottom Of Top Packer
Packer	5.00			3532.00	
Stubb	1.00			3533.00	
Perforations	3.00			3536.00	
Change Over Sub	1.00			3537.00	
Blank Spacing	32.00			3569.00	
Change Over Sub	1.00			3570.00	
Recorder	0.00	6752	Inside	3570.00	
Recorder	0.00	6741	Outside	3570.00	
Perforations	15.00			3585.00	
Bullnose	3.00			3588.00	56.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>83.00</b>				



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47137      DST#: 1  
Test Start: 2012.05.31 @ 17:39:05

**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: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: inches			

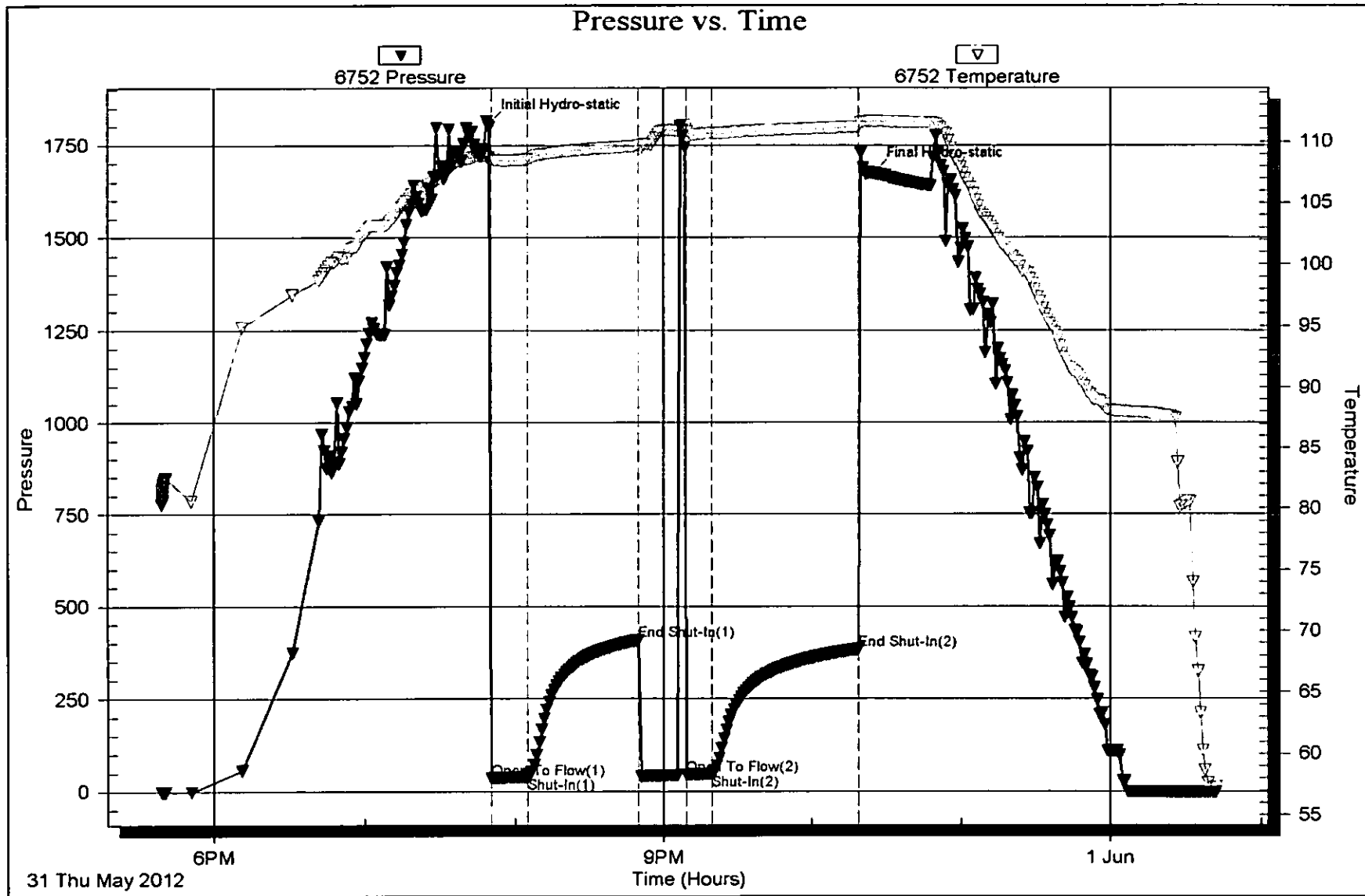
**Recovery Information**

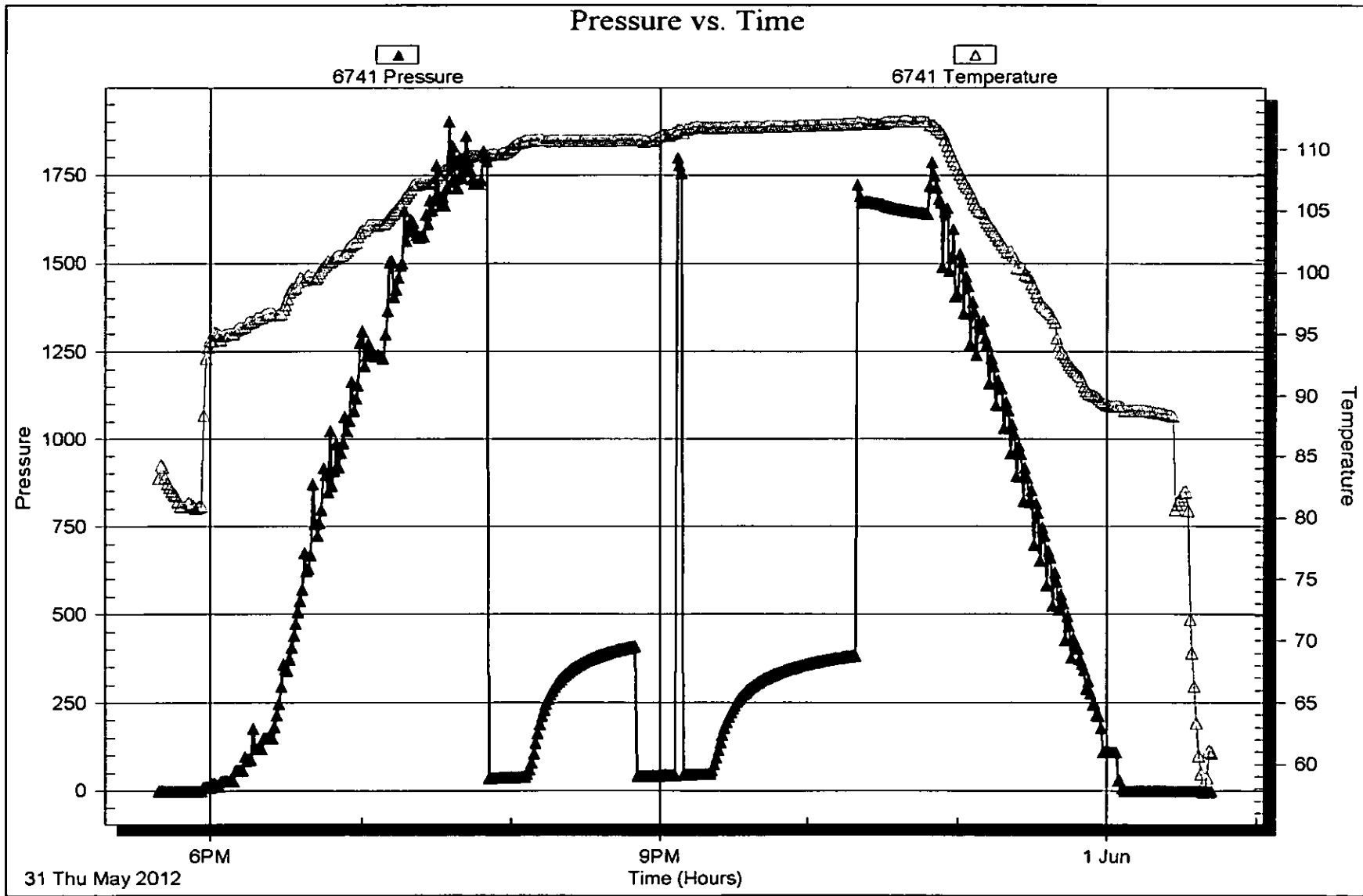
Recovery Table

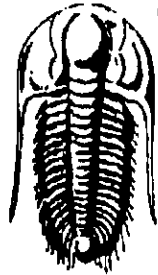
Length ft	Description	Volume bbl
5.00	dri mud 100%	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:









**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jim Hall

**Eva Richardson #4-19**

**19-11s-22w Trego,KS**

Start Date: 2012.06.01 @ 13:44:13

End Date: 2012.06.01 @ 20:58:43

Job Ticket #: 47138                      DST #: 2

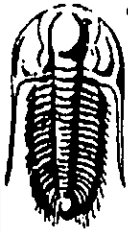
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.06.13 @ 16:09:17

Herman L. Loeb LLC  
19-11s-22w Trego,KS  
Eva Richardson #4-19  
DST # 2  
LKC "C-E"  
2012.06.01



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

**19-11s-22w Trego, KS**  
**Eva Richardson #4-19**  
Job Ticket: 47138      **DST#: 2**  
Test Start: 2012.06.01 @ 13:44:13

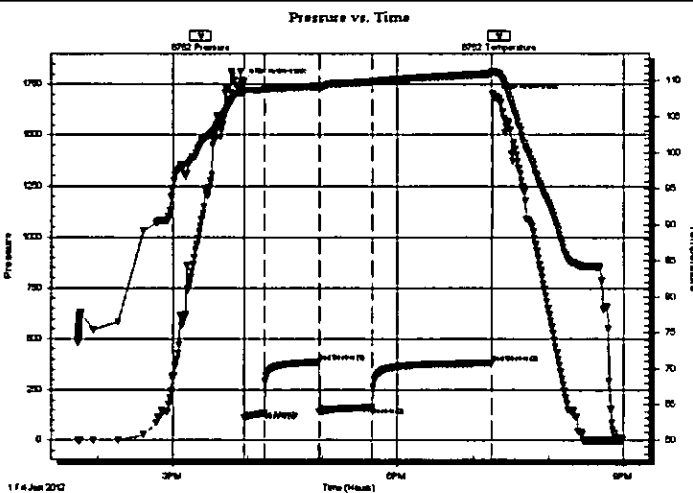
### GENERAL INFORMATION:

Formation: **LKC "C-E"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 15:57:13  
Time Test Ended: 20:58:43  
Interval: **3591.00 ft (KB) To 3651.00 ft (KB) (TVD)**  
Total Depth: **3651.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**

Test Type: **Conventional Bottom Hole (Reset)**  
Tester: **Brian Fairbank**  
Unit No: **41**  
Reference Elevations: **2302.00 ft (KB)**  
**2291.00 ft (CF)**  
KB to GR/CF: **11.00 ft**

**Serial #: 6752**      **Inside**  
Press@RunDepth: **164.00 psig @ 3628.00 ft (KB)**  
Start Date: **2012.06.01**      End Date: **2012.06.01**  
Start Time: **13:44:14**      End Time: **20:58:43**  
Capacity: **8000.00 psig**  
Last Calib.: **2012.06.01**  
Time On Btm: **2012.06.01 @ 15:55:43**  
Time Off Btm: **2012.06.01 @ 19:17:13**

**TEST COMMENT:** IFP - weak blow throughout sur - 1"  
ISI - no blow back  
FFP - no blow 4 min - 1/4"  
FSI - no blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1762.49	108.40	Initial Hydro-static
2	111.55	108.71	Open To Flow (1)
17	136.84	108.72	Shut-In(1)
61	385.25	109.23	End Shut-In(1)
62	141.02	109.18	Open To Flow (2)
104	164.00	109.85	Shut-In(2)
199	381.63	110.96	End Shut-In(2)
202	1686.98	111.20	Final Hydro-static

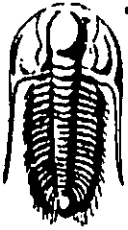
### Recovery

Length (ft)	Description	Volume (bbl)
65.00	MW 85%W, 15%M	0.32
205.00	DRL MUD 100%	1.19

\* Recovery from multiple tests

### Gas Rates

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



# TRILOBITE TESTING, INC

## DRILL STEM TEST REPORT

Herman L. Loeb LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jim Hall

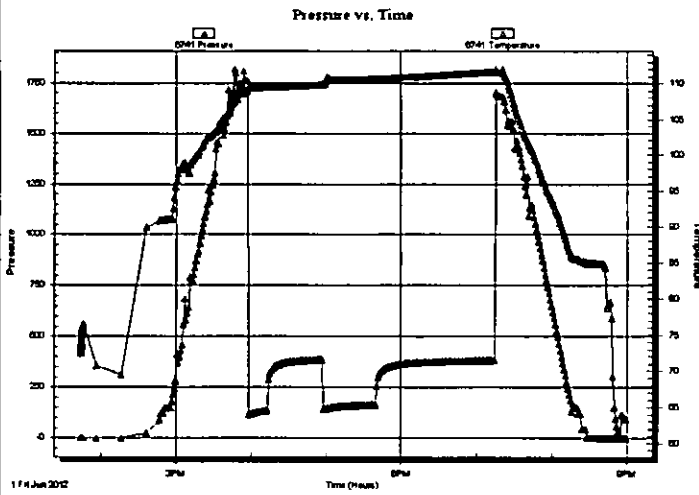
19-11s-22w Trego, KS  
 Eva Richardson #4-19  
 Job Ticket: 47138 DST#: 2  
 Test Start: 2012.06.01 @ 13:44:13

### GENERAL INFORMATION:

Formation: **LKC "C-E"**  
 Deviated: **No Whipstock** ft (KB)  
 Test Type: **Conventional Bottom Hole (Reset)**  
 Time Tool Opened: 15:57:13  
 Tester: **Brian Fairbank**  
 Time Test Ended: 20:58:43  
 Unit No: **41**  
 Interval: **3591.00 ft (KB) To 3651.00 ft (KB) (TVD)**  
 Reference Elevations: **2302.00 ft (KB)**  
 Total Depth: **3651.00 ft (KB) (TVD)**  
 2291.00 ft (CF)  
 Hole Diameter: **7.88 inches** Hole Condition: **Good**  
 KB to GR/CF: **11.00 ft**

**Serial #: 6741** **Outside**  
 Press@RunDepth: psig @ **3628.00 ft (KB)**  
 Capacity: **8000.00 psig**  
 Start Date: **2012.06.01** End Date: **2012.06.01** Last Calib.: **2012.06.01**  
 Start Time: **13:44:13** End Time: **20:58:42** Time On Btmr  
 Time Off Btmr

TEST COMMENT: IFP - weak blow throughout sur - 1"  
 ISI - no blow back  
 FFP - no blow 4 min - 1/4"  
 FSI - no blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

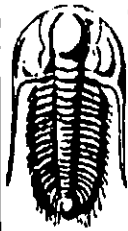
### Recovery

Length (ft)	Description	Volume (bbl)
65.00	MW 85%W, 15%M	0.32
205.00	DRL MUD 100%	1.19

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

**19-11s-22w Trego,KS**  
**Eva Richardson #4-19**  
Job Ticket: 47138      **DST#: 2**  
Test Start: 2012.06.01 @ 13:44:13

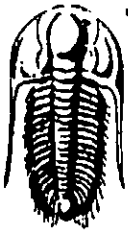
**Tool Information**

Drill Pipe:	Length: 3317.00 ft	Diameter: 3.80 inches	Volume: 46.53 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose: 105000.0 lb
			<u>Total Volume: 47.76 bbl</u>	Tool Chased 8.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	3591.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	87.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3569.00	
Hydraulic tool	5.00			3574.00	
Jars	5.00			3579.00	
Safety Joint	2.00			3581.00	
Packer	5.00			3586.00	27.00      Bottom Of Top Packer
Packer	5.00			3591.00	
Stubb	1.00			3592.00	
Perforations	2.00			3594.00	
Change Over Sub	1.00			3595.00	
Blank Spacing	32.00			3627.00	
Change Over Sub	1.00			3628.00	
Recorder	0.00	6752	Inside	3628.00	
Recorder	0.00	6741	Outside	3628.00	
Perforations	20.00			3648.00	
Bullnose	3.00			3651.00	60.00      Bottom Packers & Anchor

**Total Tool Length: 87.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Herrman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47138      **DST#: 2**  
Test Start: 2012.06.01 @ 13:44:13

### Mud and Cushion Information

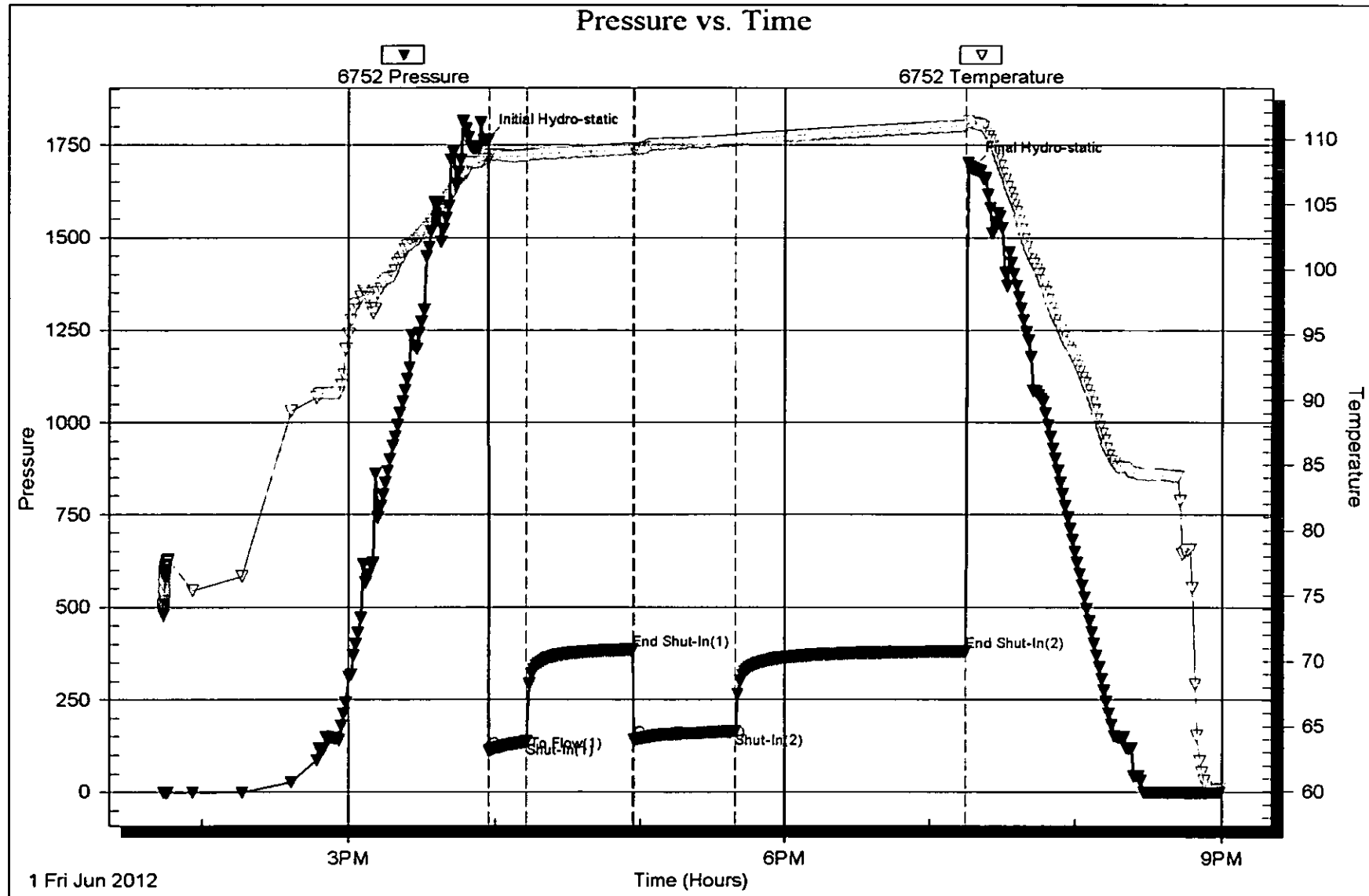
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 54000 ppm	
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2600.00 ppm			
Filter Cake: inches			

### Recovery Information

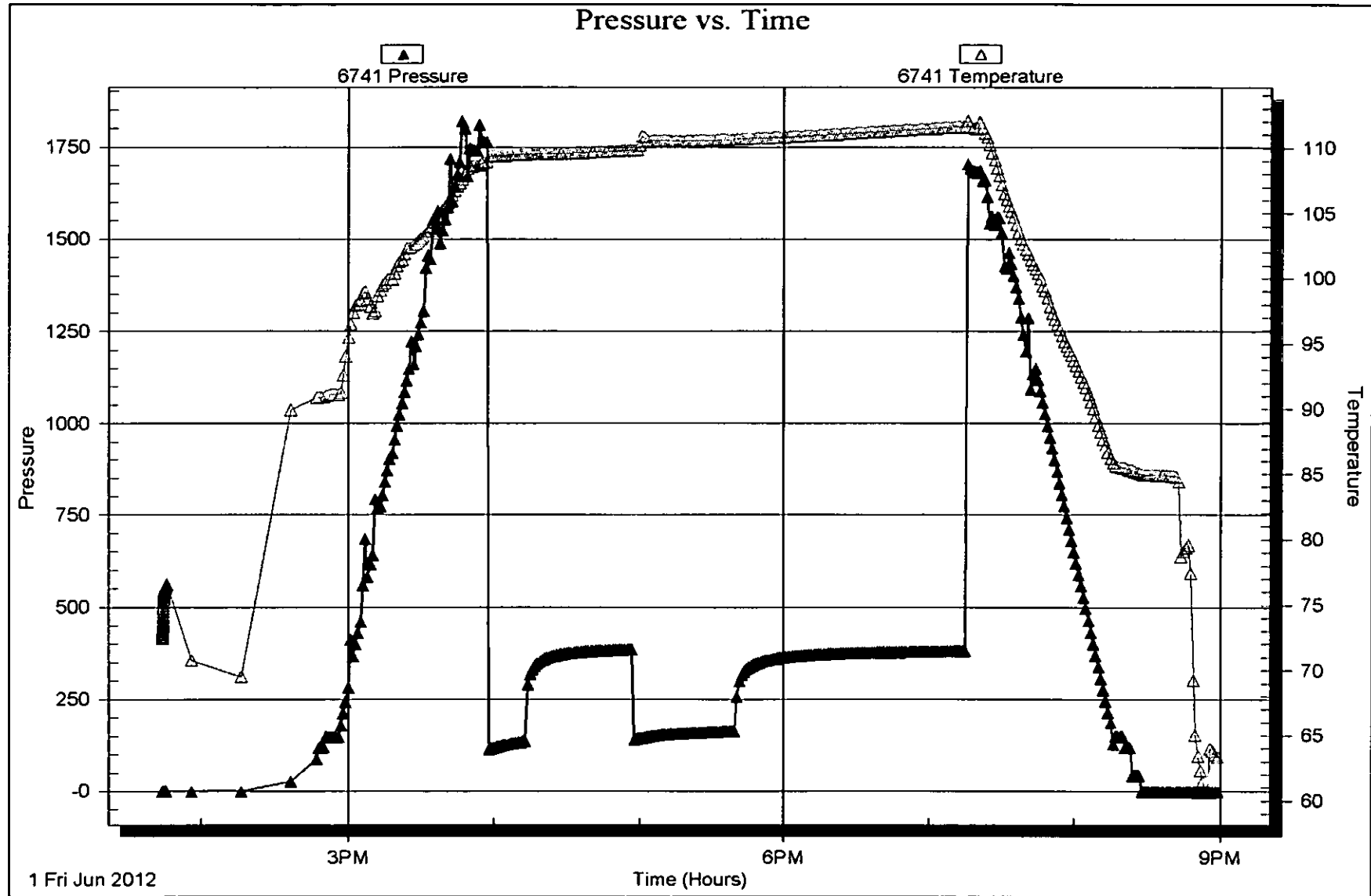
Recovery Table

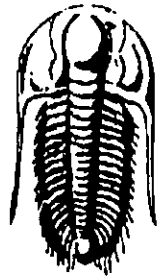
Length ft	Description	Volume bbl
65.00	MW 85%W, 15%M	0.320
205.00	DRL MUD 100%	1.190

Total Length: 270.00 ft      Total Volume: 1.510 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:









**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jim Hall

**Eva Richardson #4-19**

**19-11s-22w Trego,KS**

Start Date: 2012.06.02 @ 11:32:20

End Date: 2012.06.02 @ 18:02:50

Job Ticket #: 47139                      DST #: 3

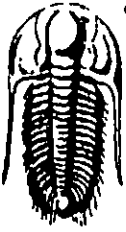
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.06.13 @ 16:08:25

Herman L. Loeb LLC    19-11s-22w Trego,KS    Eva Richardson #4-19    DST # 3    LKC "H-J"    2012.06.02



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

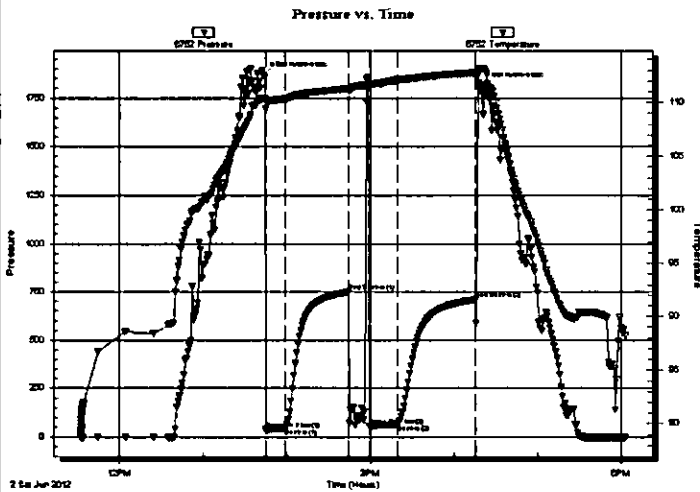
**19-11s-22w Trego, KS**  
**Eva Richardson #4-19**  
Job Ticket: 47139      **DST#: 3**  
Test Start: 2012.06.02 @ 11:32:20

## GENERAL INFORMATION:

Formation: **LKC "H-J"**  
Deviated: **No Whipstock:**      ft (KB)  
Time Tool Opened: 13:44:20  
Time Test Ended: 18:02:50  
Interval: **3691.00 ft (KB) To 3759.00 ft (KB) (TVD)**  
Total Depth: **3759.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**  
Test Type: **Conventional Bottom Hole (Reset)**  
Tester: **Brian Fairbank**  
Unit No: **41**  
Reference Elevations: **2302.00 ft (KB)**  
**2291.00 ft (CF)**  
KB to GR/CF: **11.00 ft**

**Serial #: 6752**      **Inside**  
Press@RunDepth: **62.66 psig @ 3731.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2012.06.02**      End Date: **2012.06.02**      Last Calib.: **2012.06.02**  
Start Time: **11:32:21**      End Time: **18:02:50**      Time On Btmr: **2012.06.02 @ 13:42:50**  
Time Off Btmr: **2012.06.02 @ 16:18:20**

**TEST COMMENT:** IFF - sur blow throughout  
ISI - no blow back  
FFP - sur blow - died 30 sec - flush - sur blow - died 17 min  
FSI - no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1866.45	110.35	Initial Hydro-static
2	34.94	109.38	Open To Flow (1)
16	44.98	110.33	Shut-In(1)
62	749.55	111.27	End Shut-In(1)
76	56.18	111.69	Open To Flow (2)
96	62.66	112.12	Shut-In(2)
153	709.37	112.76	End Shut-In(2)
156	1810.56	113.14	Final Hydro-static

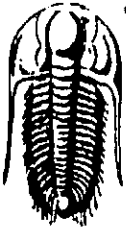
## Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSGOCM 5%G, 5%O, 90%M	0.02
5.00	DRL MUD 100%	0.02

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

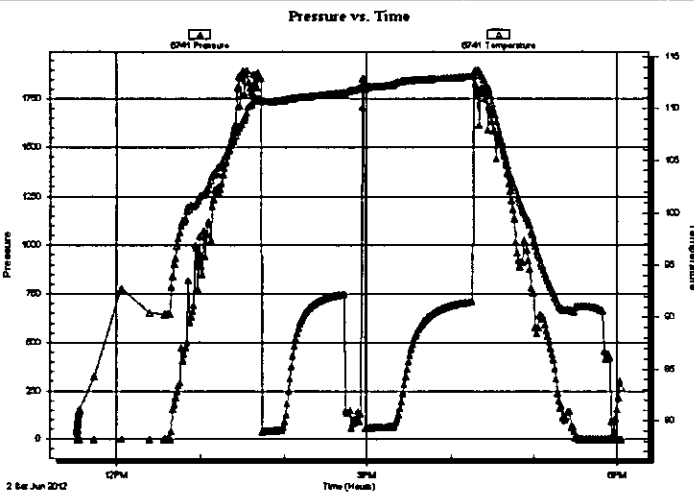
**19-11s-22w Trego,KS**  
**Eva Richardson #4-19**  
Job Ticket: 47139      **DST#: 3**  
Test Start: 2012.06.02 @ 11:32:20

### GENERAL INFORMATION:

Formation: **LKC "H-J"**  
Deviated: **No** Whipstock: **ft (KB)**      Test Type: **Conventional Bottom Hole (Reset)**  
Time Tool Opened: **13:44:20**      Tester: **Brian Fairbank**  
Time Test Ended: **18:02:50**      Unit No: **41**  
**Interval: 3691.00 ft (KB) To 3759.00 ft (KB) (TVD)**      Reference Elevations: **2302.00 ft (KB)**  
**Total Depth: 3759.00 ft (KB) (TVD)**      **2291.00 ft (CF)**  
**Hole Diameter: 7.88 inches** Hole Condition: **Good**      **KB to GR/CF: 11.00 ft**

**Serial #: 6741**      **Outside**  
Press@RunDepth:      psig @      3731.00 ft (KB)      Capacity:      8000.00 psig  
Start Date:      2012.06.02      End Date:      2012.06.02      Last Calib.:      2012.06.02  
Start Time:      11:32:08      End Time:      18:02:37      Time On Btm:       
Time Off Btm:     

**TEST COMMENT:** IFP - sur blow throughout  
ISI - no blow back  
FFP - sur blow - died 30 sec - flush - sur blow - died 17 min  
FSI - no blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

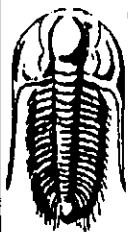
### Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSGOCM 5%G, 5%O, 90%M	0.02
5.00	DRL MUD 100%	0.02

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

**19-11s-22w Trego, KS**  
**Eva Richardson #4-19**  
Job Ticket: 47139      **DST#: 3**  
Test Start: 2012.06.02 @ 11:32:20

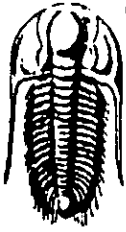
### Tool Information

Drill Pipe:	Length: 3446.00 ft	Diameter: 3.80 inches	Volume: 48.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 49.57 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 83000.00 lb
Depth to Top Packer:	3691.00 ft			Final 83000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3669.00	
Hydraulic tool	5.00			3674.00	
Jars	5.00			3679.00	
Safety Joint	2.00			3681.00	
Packer	5.00			3686.00	27.00      Bottom Of Top Packer
Packer	5.00			3691.00	
Stubb	1.00			3692.00	
Perforations	5.00			3697.00	
Change Over Sub	1.00			3698.00	
Blank Spacing	32.00			3730.00	
Change Over Sub	1.00			3731.00	
Recorder	0.00	6752	Inside	3731.00	
Recorder	0.00	6741	Outside	3731.00	
Perforations	25.00			3756.00	
Bullnose	3.00			3759.00	68.00      Bottom Packers & Anchor

**Total Tool Length: 95.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47139      DST#: 3  
Test Start: 2012.06.02 @ 11:32:20

### Mud and Cushion Information

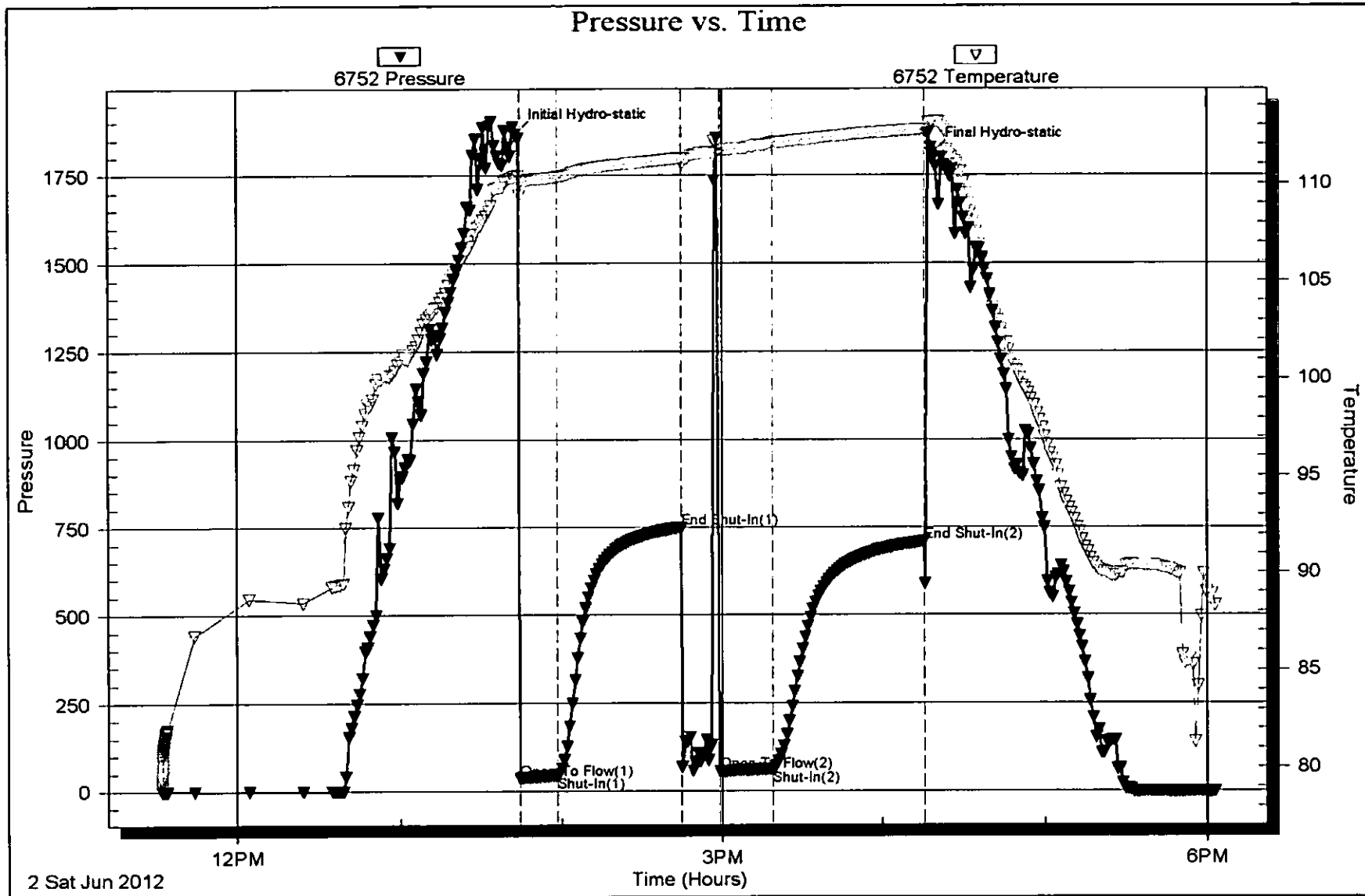
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2600.00 ppm			
Filter Cake: inches			

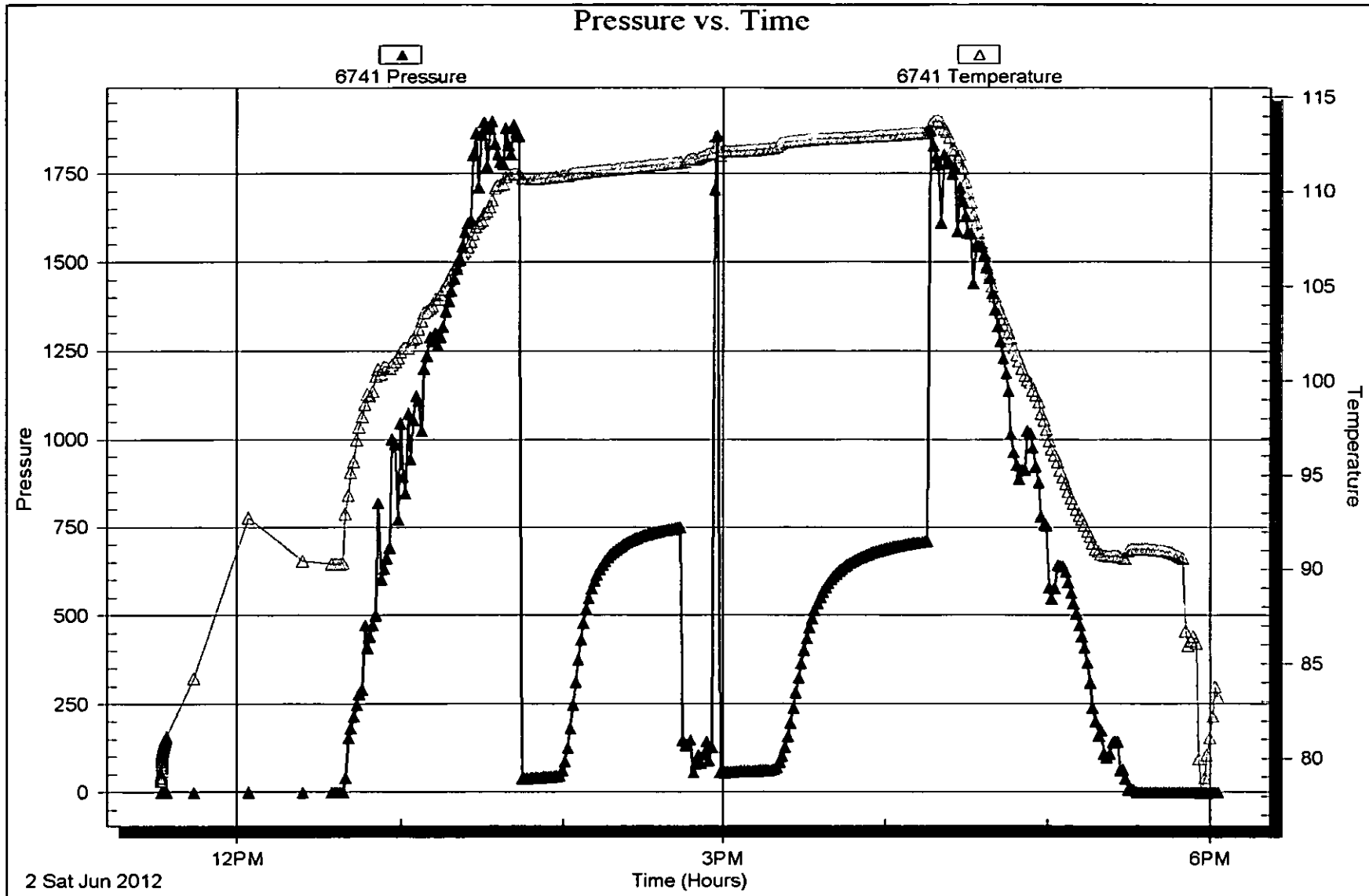
### Recovery Information

Recovery Table

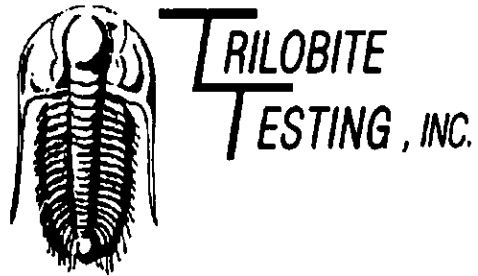
Length ft	Description	Volume bbl
5.00	VSGOCM 5%G, 5%O, 90%M	0.025
5.00	DRL MUD 100%	0.025

Total Length: 10.00 ft      Total Volume: 0.050 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jim Hall

**Eva Richardson #4-19**

**19-11s-22w Trego,KS**

Start Date: 2012.06.03 @ 06:25:03

End Date: 2012.06.03 @ 12:54:03

Job Ticket #: 47140                      DST #: 4

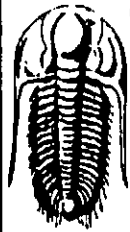
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.06.13 @ 16:07:38

Herman L. Loeb LLC    19-11s-22w Trego,KS    Eva Richardson #4-19    DST # 4    LKC "K.L."    2012.06.03



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

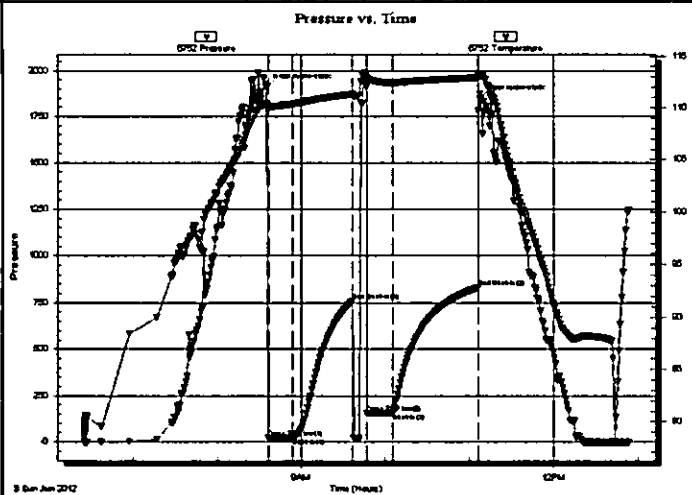
19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47140 DST#: 4  
Test Start: 2012.06.03 @ 06:25:03

### GENERAL INFORMATION:

Formation: **LKC "K-L"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:36:33  
 Time Test Ended: 12:54:03  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brian Fairbank  
 Unit No: 41  
 Interval: 3760.00 ft (KB) To 3808.00 ft (KB) (TVD)  
 Reference Elevations: 2302.00 ft (KB)  
 Total Depth: 3808.00 ft (KB) (TVD)  
 2291.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 KB to GR/CF: 11.00 ft

Serial #: **6752** Inside  
 Press@RunDepth: 157.36 psig @ 3800.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.06.03 End Date: 2012.06.03 Last Calib.: 2012.06.03  
 Start Time: 06:25:04 End Time: 12:54:03 Time On Btmr: 2012.06.03 @ 08:35:03  
 Time Off Btmr: 2012.06.03 @ 11:08:03

TEST COMMENT: IFP - sur blow - died 6 min  
 ISI - no blow back  
 FFP - no blow - flush - sur blow - died 1 min  
 FSI - no blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1911.59	110.44	Initial Hydro-static
2	20.67	109.90	Open To Flow (1)
19	22.36	110.39	Shut-In(1)
62	758.47	111.33	End Shut-In(1)
72	153.15	112.91	Open To Flow (2)
91	157.36	112.43	Shut-In(2)
151	831.22	112.92	End Shut-In(2)
153	1847.94	113.15	Final Hydro-static

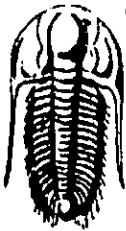
### Recovery

Length (ft)	Description	Volume (bbl)
240.00	DRL MUD 100%	1.18
10.00	VSOCM 5%O, 95%M	0.05

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Herman L. Loeb LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jim Hall

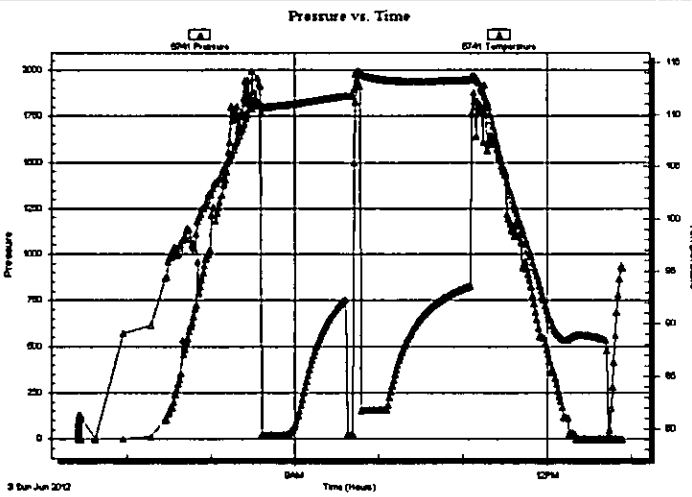
**19-11s-22w Trego, KS**  
**Eva Richardson #4-19**  
 Job Ticket: 47140      **DST#: 4**  
 Test Start: 2012.06.03 @ 06:25:03

## GENERAL INFORMATION:

Formation: **LKC "K-L"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:36:33  
 Time Test Ended: 12:54:03  
 Interval: **3760.00 ft (KB) To 3808.00 ft (KB) (TVD)**  
 Total Depth: **3808.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brian Fairbank  
 Unit No: 41  
 Reference Elevations: 2302.00 ft (KB)  
 2291.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 6741      Outside**  
 Press@RunDepth: psig @ 3800.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.06.03      End Date: 2012.06.03      Last Calib.: 2012.06.03  
 Start Time: 06:25:03      End Time: 12:54:02      Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IFP - sur blow - died 6 min  
 ISI - no blow back  
 FFP - no blow - flush - sur blow - died 1 min  
 FSI - no blow back

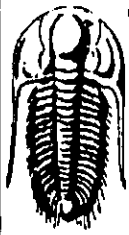


PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
240.00	DRL MUD 100%	1.18
10.00	VSOCM 5%O, 95%M	0.05

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

\* Recovery from multiple tests  
 TriLOBITE Testing, Inc



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47140      **DST#: 4**  
Test Start: 2012.06.03 @ 06:25:03

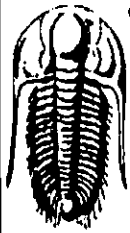
### Tool Information

Drill Pipe:	Length: 3509.00 ft	Diameter: 3.80 inches	Volume: 49.22 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose: 105000.0 lb
			<u>Total Volume: 50.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 83000.00 lb
Depth to Top Packer:	3760.00 ft			Final 83000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	75.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: lost 30' mud when flush tool

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3738.00	
Hydraulic tool	5.00			3743.00	
Jars	5.00			3748.00	
Safety Joint	2.00			3750.00	
Packer	5.00			3755.00	27.00      Bottom Of Top Packer
Packer	5.00			3760.00	
Stubb	1.00			3761.00	
Perforations	5.00			3766.00	
Change Over Sub	1.00			3767.00	
Blank Spacing	32.00			3799.00	
Change Over Sub	1.00			3800.00	
Recorder	0.00	6752	Inside	3800.00	
Recorder	0.00	6741	Outside	3800.00	
Perforations	5.00			3805.00	
Bullnose	3.00			3808.00	48.00      Bottom Packers & Anchor

**Total Tool Length: 75.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47140      DST#: 4  
Test Start: 2012.06.03 @ 06:25:03

**Mud and Cushion Information**

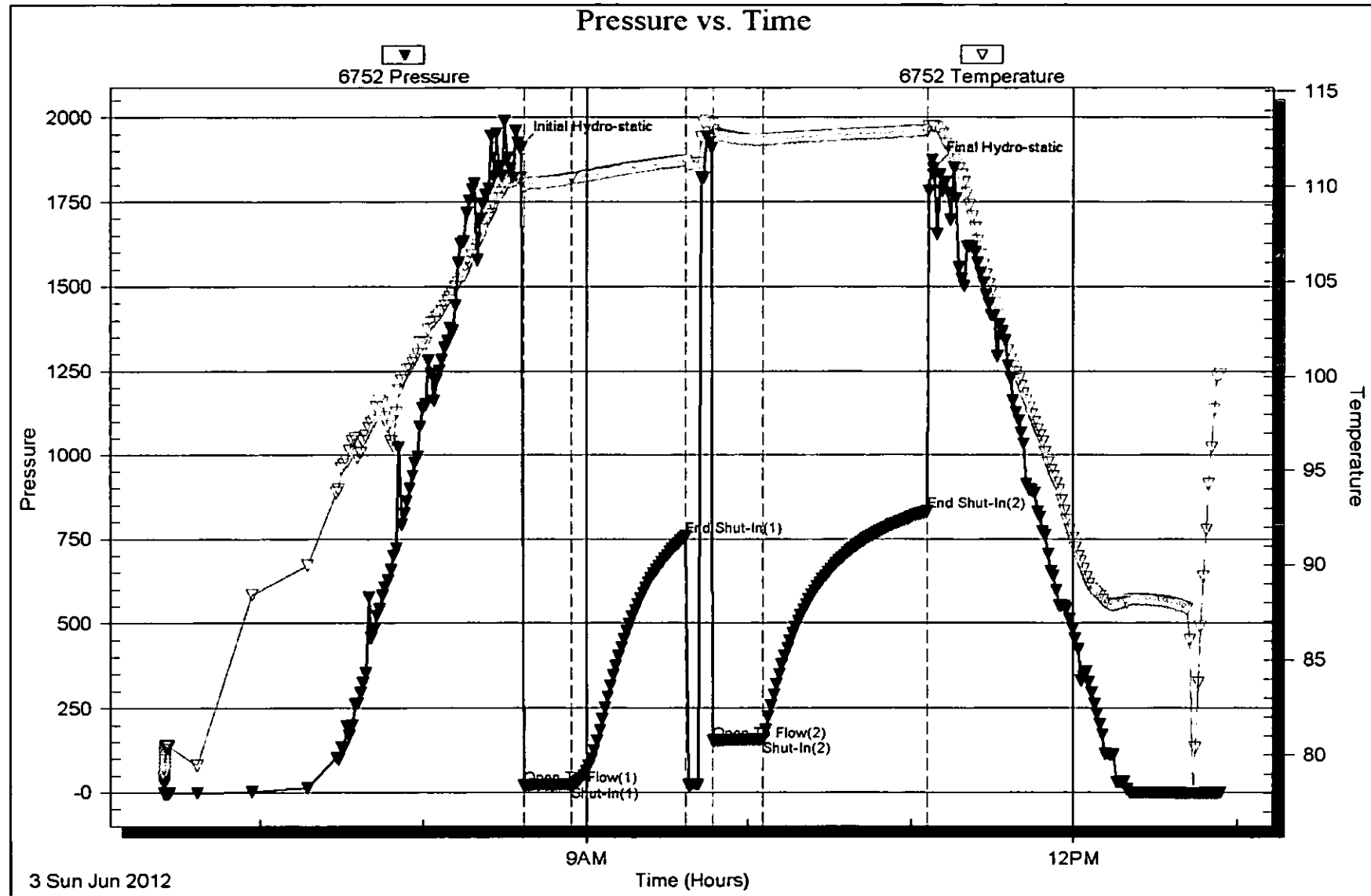
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2600.00 ppm			
Filter Cake: inches			

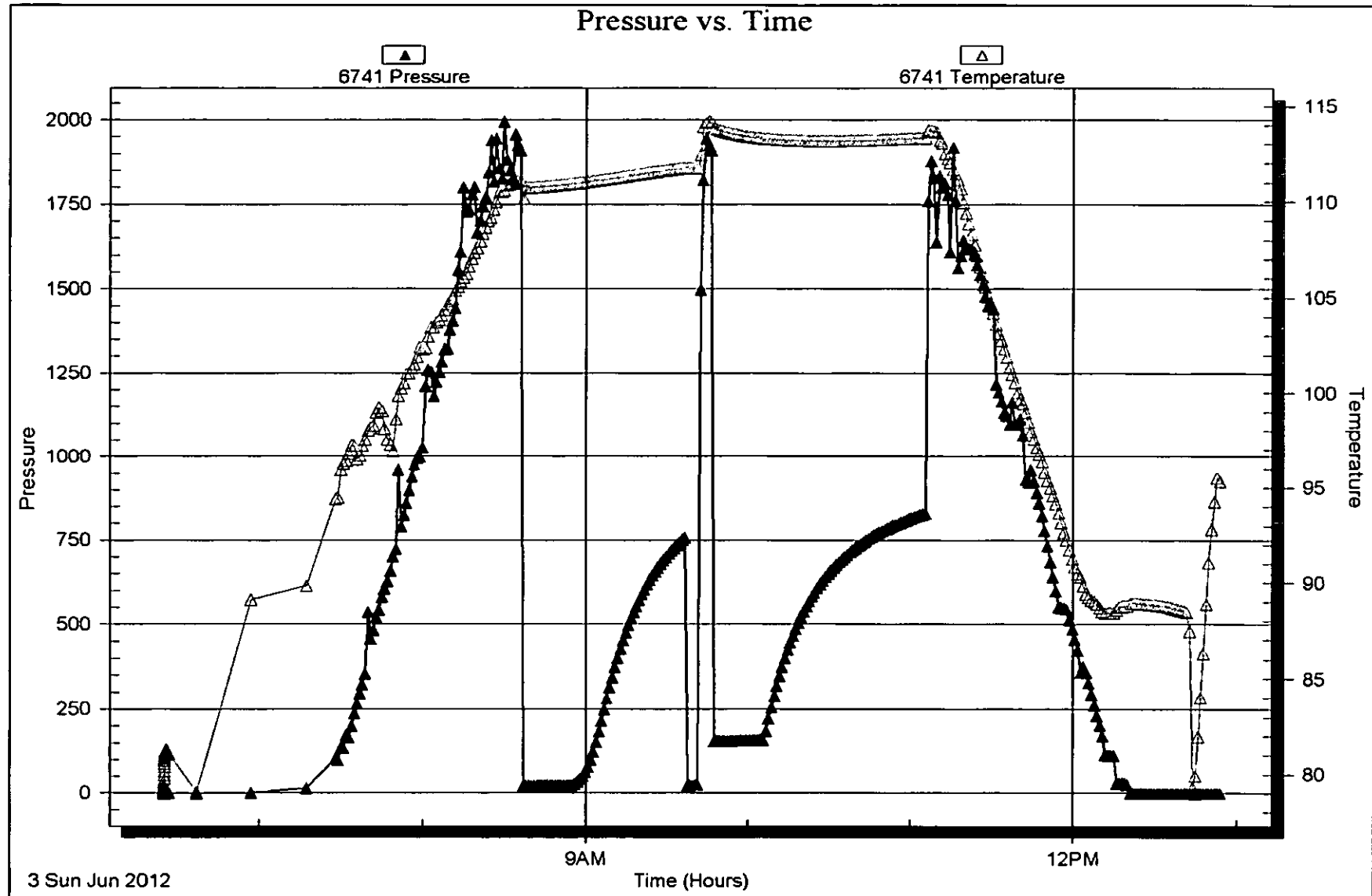
**Recovery Information**

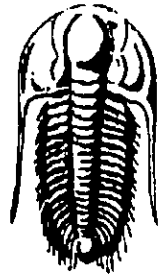
Recovery Table

Length ft	Description	Volume bbl
240.00	DRL MUD 100%	1.180
10.00	VSOCM 5%O, 95%M	0.049

Total Length: 250.00 ft      Total Volume: 1.229 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:







**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jim Hall

**Eva Richardson #4-19**

**19-11s-22w Trego,KS**

Start Date: 2012.06.04 @ 05:40:46

End Date: 2012.06.04 @ 14:33:46

Job Ticket #: 47141                      DST #: 5

Trilobite Testing, Inc

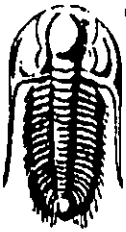
PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.06.13 @ 16:06:44

Herman L. Loeb LLC  
19-11s-22w Trego,KS  
Eva Richardson #4-19  
DST # 5  
Marmaton  
2012.06.04





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

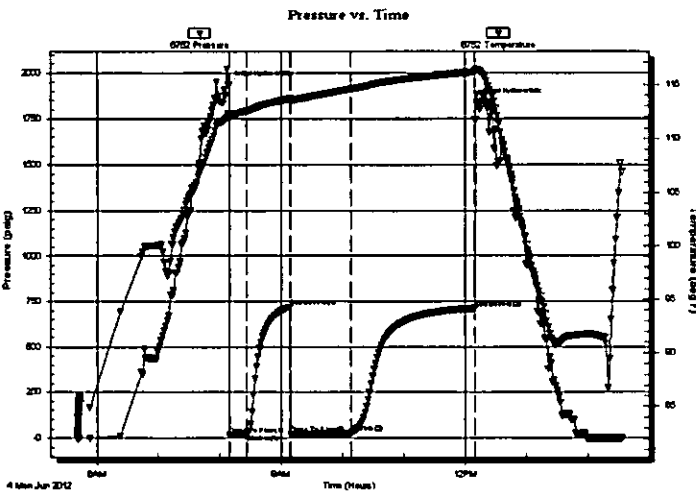
**19-11s-22w Trego,KS**  
**Eva Richardson #4-19**  
Job Ticket: 47141      **DST#: 5**  
Test Start: 2012.06.04 @ 05:40:46

### GENERAL INFORMATION:

Formation: **Marmaton**  
Deviated: **No Whipstock:**      **ft (KB)**  
Time Tool Opened: 08:09:16  
Time Test Ended: 14:33:46  
Interval: **3902.00 ft (KB) To 39441.0 ft (KB) (TVD)**  
Total Depth: **3941.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**  
Test Type: **Conventional Bottom Hole (Reset)**  
Tester: **Brian Fairbank**  
Unit No: **41**  
Reference Elevations: **2302.00 ft (KB)**  
**2291.00 ft (CF)**  
KB to GR/CF: **11.00 ft**

**Serial #: 6752**      **Inside**  
Press@RunDepth: **25.73 psig @ 3938.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2012.06.04**      End Date: **2012.06.04**      Last Calib.: **2012.06.04**  
Start Time: **05:40:47**      End Time: **14:33:46**      Time On Btm: **2012.06.04 @ 08:08:16**  
Time Off Btm: **2012.06.04 @ 12:12:46**

**TEST COMMENT:** IFF - sur blow - died 4 min  
ISI - no blow back  
FFP - no blow  
FSI - no blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1936.85	112.26	Initial Hydro-static
1	17.46	112.06	Open To Flow (1)
18	19.10	112.53	Shut-In(1)
61	720.64	113.67	End Shut-In(1)
61	20.52	113.53	Open To Flow (2)
120	25.73	114.55	Shut-In(2)
242	711.59	116.14	End Shut-In(2)
245	1841.80	116.32	Final Hydro-static

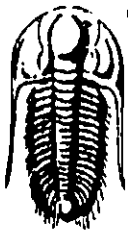
### Recovery

Length (ft)	Description	Volume (bbl)
5.00	MCO 70%O, 30%M	0.02

\* Recovery from multiple tests

### Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Herman L. Loeb LLC

19-11s-22w Trego, KS

PO Box 838 Lawrenceville, IL 62439

Eva Richardson #4-19

Job Ticket: 47141

DST#: 5

ATTN: Jim Hall

Test Start: 2012.06.04 @ 05:40:46

GENERAL INFORMATION:

Formation: Marmaton

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:09:16

Time Test Ended: 14:33:46

Test Type: Conventional Bottom Hole (Reset)

Tester: Brian Fairbank

Unit No: 41

Interval: 3902.00 ft (KB) To 3944.1.0 ft (KB) (TVD)

Reference Elevations: 2302.00 ft (KB)

Total Depth: 3941.00 ft (KB) (TVD)

2291.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 6741

Outside

Press@RunDepth: psig @ 3938.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.06.04

End Date:

2012.06.04

Last Calib.:

2012.06.04

Start Time: 05:40:19

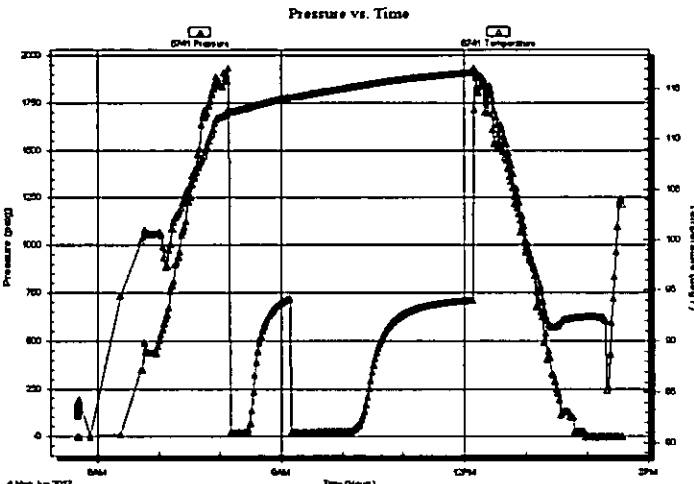
End Time:

14:33:48

Time On Bttr

Time Off Bttr

TEST COMMENT: IFP - sur blow - died 4 min
ISI - no blow back
FFP - no blow
FSI - no blow back



PRESSURE SUMMARY

Table with 4 columns: Time (Min.), Pressure (psig), Temp (deg F), Annotation.

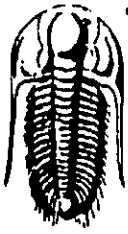
Recovery

Table with 3 columns: Length (ft), Description, Volume (bbl).

\* Recovery from multiple tests

Gas Rates

Table with 4 columns: Choke (inches), Pressure (psig), Gas Rate (Mcf/d).



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47141      **DST#: 5**  
Test Start: 2012.06.04 @ 05:40:46

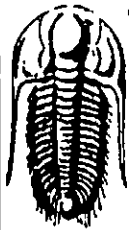
### Tool Information

Drill Pipe:	Length: 3636.00 ft	Diameter: 3.80 inches	Volume: 51.00 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 52.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 85000.00 lb
Depth to Top Packer:	3902.00 ft			Final 85000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	66.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3880.00	
Hydraulic tool	5.00			3885.00	
Jars	5.00			3890.00	
Safety Joint	2.00			3892.00	
Packer	5.00			3897.00	27.00      Bottom Of Top Packer
Packer	5.00			3902.00	
Stubb	1.00			3903.00	
Perforations	1.00			3904.00	
Change Over Sub	1.00			3905.00	
Blank Spacing	32.00			3937.00	
Change Over Sub	1.00			3938.00	
Recorder	0.00	6752	Inside	3938.00	
Recorder	0.00	6741	Outside	3938.00	
Bullnose	3.00			3941.00	39.00      Bottom Packers & Anchor

**Total Tool Length: 66.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Herman L. Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jim Hall

19-11s-22w Trego, KS  
Eva Richardson #4-19  
Job Ticket: 47141      DST#: 5  
Test Start: 2012.06.04 @ 05:40:46

**Mud and Cushion Information**

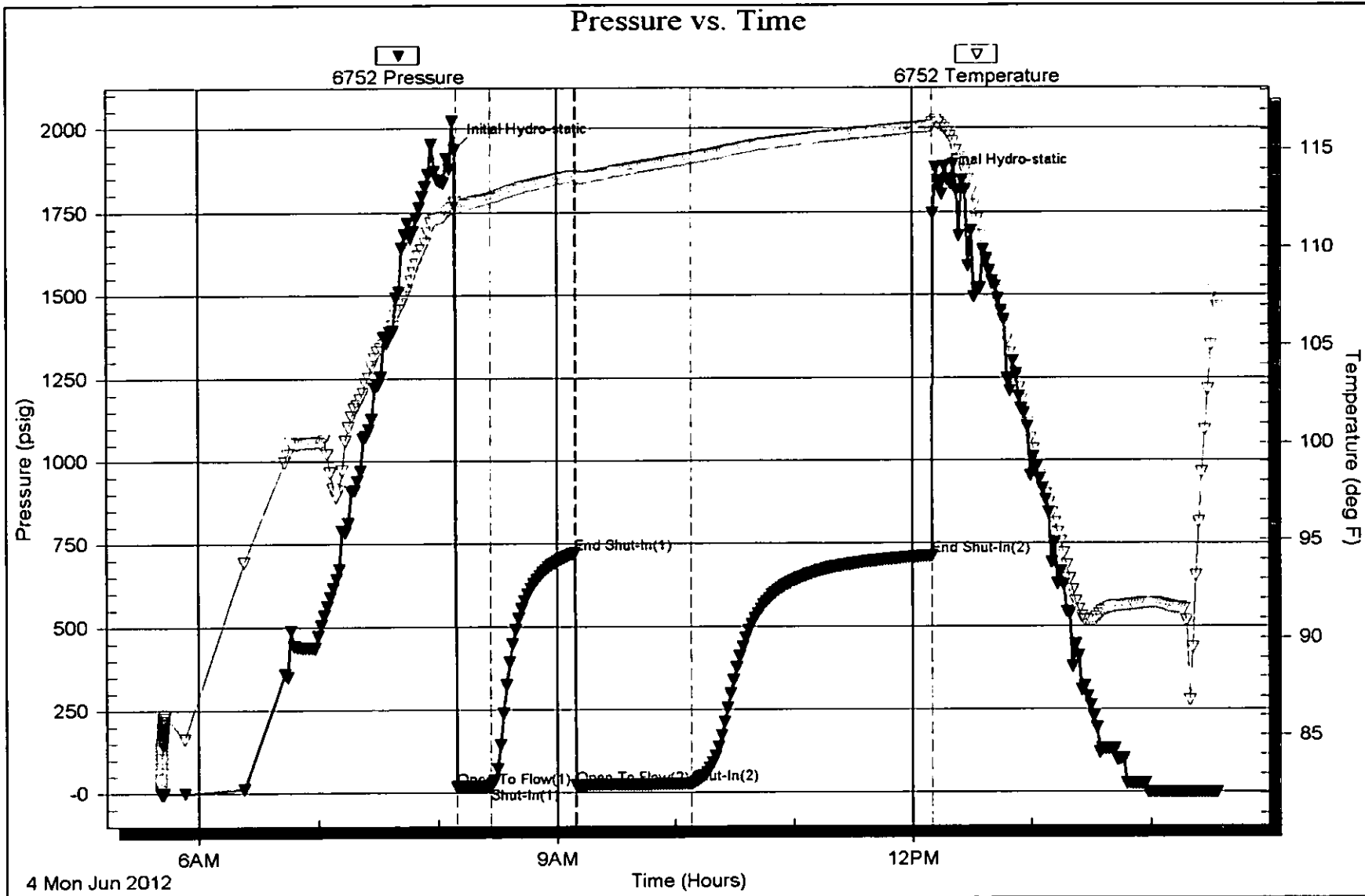
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: inches			

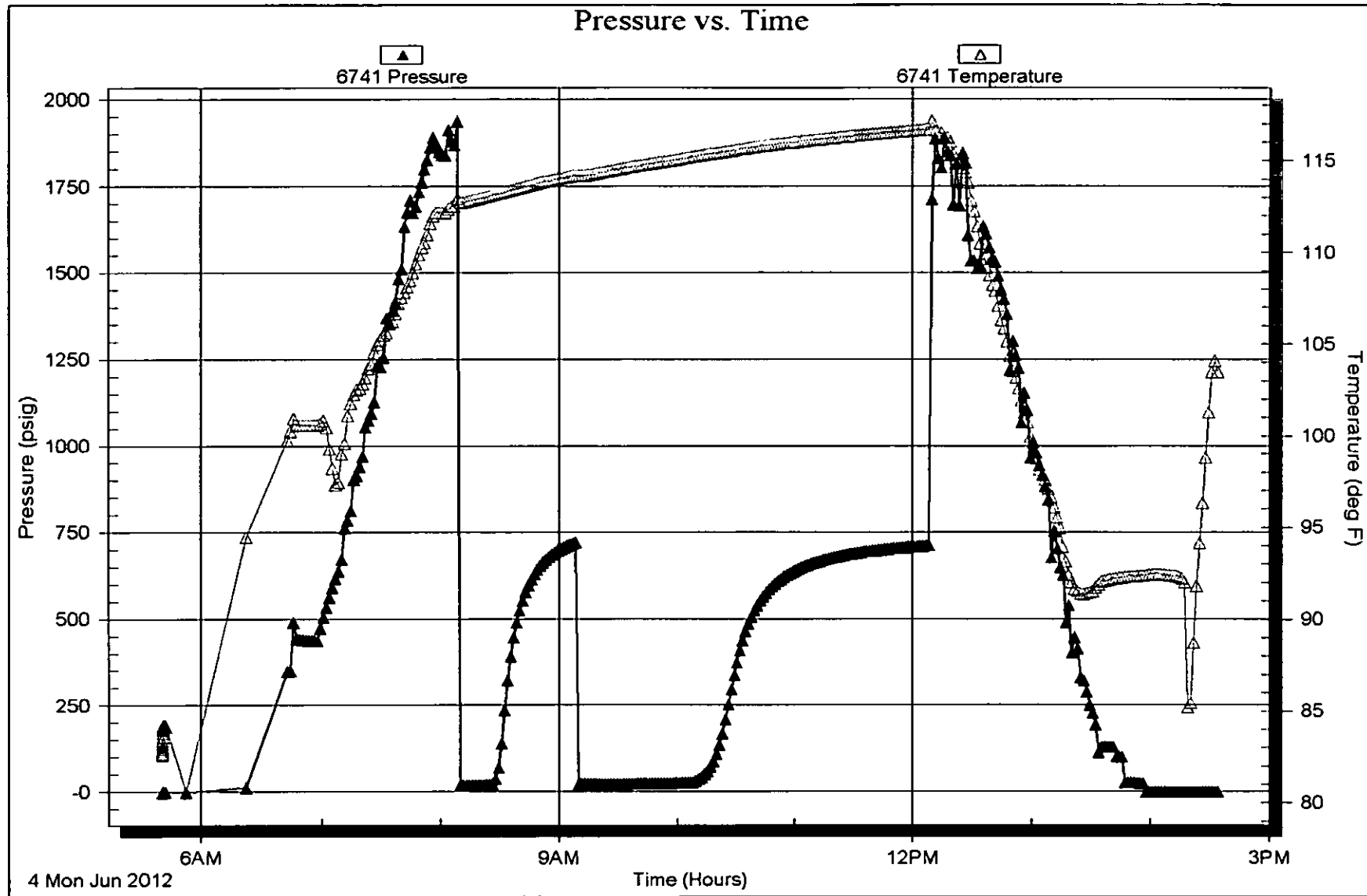
**Recovery Information**

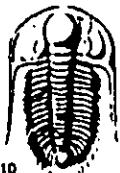
Recovery Table

Length ft	Description	Volume bbl
5.00	MCO 70%O, 30%M	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:







# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 47137

Well Name & No. Eva Richardson 4-19 Test No. L Date 5-31-12  
 Company Herman L. Loeb LLC Elevation 2302 KB 2291 GL  
 Address PO Box 838 Lawrenceville, IL 62439  
 Co. Rep / Geo. Jim Hill Rig Sterling 2  
 Location: Sec. 19 Twp. 11 Rge. 22 Co. Trego State Kr

Interval Tested 3532-3588 Zone Tested Toronto-LICA  
 Anchor Length 56 Drill Pipe Run 3285 Mud Wt. 9.3  
 Top Packer Depth 3527 Drill Collars Run 250 Vis 53  
 Bottom Packer Depth 3532 Wt. Pipe Run \_\_\_\_\_ WL 6.4  
 Total Depth 3588 Chlorides 2500 ppm System LCM

Blow Description IFP - sur blow died 3 min  
ISI - no blow back  
FFP - no blow - flush - sur blow - died 30 sec  
FST - no blow back

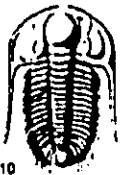
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>dri mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 112 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ F Chlorides \_\_\_\_\_ ppm  
 (A) Initial Hydrostatic 1805  Test \_\_\_\_\_ T-On Location 1606  
 (B) First Initial Flow 36  Jars 250 T-Started 1739  
 (C) First Final Flow 40  Safety Joint 75 T-Open 1950  
 (D) Initial Shut-In 409  Circ Sub \_\_\_\_\_ T-Pulled 2220  
 (E) Second Initial Flow 46  Hourly Standby \_\_\_\_\_ T-Out 2442  
 (F) Second Final Flow 48  Mileage 73 RT 113.15 Comments \_\_\_\_\_  
 (G) Final Shut-In 383  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1674  Straddle \_\_\_\_\_  Ruined Shale Packer  
 Shale Packer \_\_\_\_\_  Ruined Packer  
 Extra Packer \_\_\_\_\_  Extra Copies  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1588.15  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

Initial Open 15  
 Initial Shut-In 45  
 Final Flow 15 - flush - 15  
 Final Shut-In 60  
 Sub Total 1588.15

Approved By \_\_\_\_\_ Our Representative Brian Farbank

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 47138

Well Name & No. Eva Richardson 4-19 Test No. 2 Date 6-1-12  
 Company Herman Loeb Elevation 2302 KB 2291 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Jim Hall Rig Sterling 2  
 Location: Sec. 19 Twp. 11 Rge. 22 Co. Trego State KJ

Interval Tested 3591 - 3651 Zone Tested LKC "C-E"  
 Anchor Length 60 Drill Pipe Run 3317 Mud Wt. 9.3  
 Top Packer Depth 3586 Drill Collars Run 250 Vis 54  
 Bottom Packer Depth 3591 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
 Total Depth 3651 Chlorides 2600 ppm System LCM \_\_\_\_\_  
 Blow Description IFF - weak blow throughout sur - 1"  
ISI - no blow back  
FFP - no blow 4 min - 1/4"  
FSI - no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>205</u>	<u>drl mud</u>			<u>100%</u>	
<u>65</u>	<u>MW</u>			<u>85%</u>	<u>15%</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

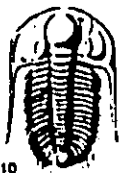
Rec Total 270 BHT 111 Gravity \_\_\_\_\_ API RW 152 @ 65° F Chlorides 54,000 ppm  
 (A) Initial Hydrostatic 1763  Test \_\_\_\_\_ T-On Location 1309  
 (B) First Initial Flow 112  Jars 250 T-Started 1344  
 (C) First Final Flow 137  Safety Joint 75 T-Open 1558  
 (D) Initial Shut-In 385  Circ Sub \_\_\_\_\_ T-Pulled 1913  
 (E) Second Initial Flow 141  Hourly Standby \_\_\_\_\_ T-Out 2059  
 (F) Second Final Flow 164  Mileage 113.15 Comments Tool slid 8'  
 (G) Final Shut-In 382  Sampler \_\_\_\_\_ to bottom  
 (H) Final Hydrostatic 1687  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 15  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Ruined Packer \_\_\_\_\_  
 Final Flow 45  Extra Copies \_\_\_\_\_  
 Final Shut-In 90 Sub Total 0  
 Total 1588.15  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1588.15

Approved By \_\_\_\_\_ Our Representative Brian Fairbank

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 47139

Well Name & No. Eva Richardson 4-19 Test No. 3 Date 6-2-12  
 Company Herman Loeb Elevation 2302 KB 2291 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Jim Hall Rig Sterling 2  
 Location: Sec. 19 Twp. 11 Rge. 22 Co. Trego State K

Interval Tested 3691-3759 Zone Tested LKC "H-J"  
 Anchor Length 68 Drill Pipe Run 3446 Mud Wt. 9.2  
 Top Packer Depth 3686 Drill Collars Run 250 Vis 55  
 Bottom Packer Depth 3691 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
 Total Depth 3759 Chlorides 2600 ppm System LCM \_\_\_\_\_

Blow Description FFP - sur blow throughout  
FSI - no blow back  
FFP - sur blow - died 30 sec - flush sur blow - died 17 min  
FSI - no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>drt mud</u>			<u>90</u>	
<u>5</u>	<u>USGDCM</u>	<u>5</u>	<u>5</u>	<u>90</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 113 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1866  Test \_\_\_\_\_ T-On Location 1053  
 (B) First Initial Flow 35  Jars 250 T-Started 1132  
 (C) First Final Flow 45  Safety Joint 75 T-Open 1344  
 (D) Initial Shut-In 750  Circ Sub \_\_\_\_\_ T-Pulled ~~7659~~ 1614  
 (E) Second Initial Flow 56  Hourly Standby \_\_\_\_\_ T-Out 1802  
 (F) Second Final Flow 63  Mileage 113.15 Comments \_\_\_\_\_  
 (G) Final Shut-In 709  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1811  Straddle \_\_\_\_\_

Initial Open 15  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Ruined Packer \_\_\_\_\_  
 Final Flow 10 - flush - 20 (45) 30  Extra Copies \_\_\_\_\_  
 Final Shut-In 72 60  Sub Total 0  
 Sub Total 1588.15 Total 1588.15 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Brian Fairbank

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 47140

Well Name & No. Eva Richardson 4-19 Test No. 4 Date 6-3-12  
 Company Herman Loeb Elevation 2302 KB 2291 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Jim Hall Rig sterling 2  
 Location: Sec. 19 Twp. 11 Rge. 22 Co. Trego State ks

Interval Tested 3760-3808 Zone Tested LAC "K-L"  
 Anchor Length 48 Drill Pipe Run 3509 Mud Wt. 9.3  
 Top Packer Depth 3755 Drill Collars Run 250 Vis SI  
 Bottom Packer Depth 3760 Wt. Pipe Run \_\_\_\_\_ WL 7.8  
 Total Depth 3808 Chlorides 2600 ppm System LCM \_\_\_\_\_

Blow Description IFP - sur blow - died 6 min  
ISI - no blow back  
FFP - no blow - 8 1/2' - sur blow - died 1 min  
FSTI - no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>USDCM</u>	<u>5</u>		<u>95</u>	
<u>240</u>	<u>drl mud</u>			<u>60</u>	
____	____	____	____	____	____
____	____	____	____	____	____

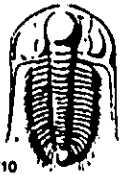
Rec Total	BHT	Gravity	API RW	@	F Chlorides	ppm
<u>250</u>	<u>112</u>	<input checked="" type="checkbox"/> Test			T-On Location <u>0527</u>	
(A) Initial Hydrostatic <u>1912</u>		<input checked="" type="checkbox"/> Jars <u>250</u>			T-Started <u>0625</u>	
(B) First Initial Flow <u>21</u>		<input checked="" type="checkbox"/> Safety Joint <u>75</u>			T-Open <u>0837</u>	
(C) First Final Flow <u>22</u>		<input type="checkbox"/> Circ Sub _____			T-Pulled <u>1107</u>	
(D) Initial Shut-In <u>758</u>		<input type="checkbox"/> Hourly Standby _____			T-Out <u>1254</u>	
(E) Second Initial Flow <u>153</u>		<input checked="" type="checkbox"/> Mileage <u>113.15</u>			Comments <u>lost 30' mud</u>	
(F) Second Final Flow <u>157</u>		<input type="checkbox"/> Sampler _____			<u>when flushed tool</u>	
(G) Final Shut-In <u>831</u>		<input type="checkbox"/> Straddle _____			<input type="checkbox"/> Ruined Shale Packer _____	
(H) Final Hydrostatic <u>1848</u>		<input type="checkbox"/> Shale Packer _____			<input type="checkbox"/> Ruined Packer _____	

Initial Open 15  
 Initial Shut-In 45  
 Final Flow 5-8 1/2' - 25 (30)  
 Final Shut-In 60

Sub Total 1588.15

Approved By \_\_\_\_\_ Our Representative Brian Fairbank

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 47141

Well Name & No. Eva Richardson 4-19 Test No. 5 Date 6-4-12  
 Company Herman Loeb Elevation 2302 KB 2291 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Jim Hall Rig Sterling 2  
 Location: Sec. 19 Twp. 11 Rge. 22 Co. Trego State Ks

Interval Tested 3902-3941 Zone Tested Marmston  
 Anchor Length 39 Drill Pipe Run 3636 Mud Wt. 9.3  
 Top Packer Depth 3897 Drill Collars Run 250 Vis 52  
 Bottom Packer Depth 3902 Wt. Pipe Run \_\_\_\_\_ WL 7.8  
 Total Depth 3941 Chlorides 2600 ppm System LCM \_\_\_\_\_  
 Blow Description IFP - sur blow - died 4 min  
ISI - no blow back  
FFP - no blow  
FSI - no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>MCO</u>		<u>70</u>		<u>30</u>
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 5 BHT 116 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ F Chlorides \_\_\_\_\_ ppm  
 (A) Initial Hydrostatic 1937  Test \_\_\_\_\_ T-On Location 0426  
 (B) First Initial Flow 17  Jars 250 T-Started 0540  
 (C) First Final Flow 19  Safety Joint 75 T-Open 0808  
 (D) Initial Shut-In 721  Circ Sub \_\_\_\_\_ T-Pulled 1208  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 1433  
 (F) Second Final Flow 26  Mileage 113.15 Comments \_\_\_\_\_  
 (G) Final Shut-In 712  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1842  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 15  
 Initial Shut-In 45  
 Final Flow 60  
 Final Shut-In 120  
 Sub Total 1588.15  
 Total 1588.15  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Brian Fairbank

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