

Confidentiality Requested:

Yes  No

**KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

**Form must be Typed**

**Form must be Signed**

**All blanks must be Filled**

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

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

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

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

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

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

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

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

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

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

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

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

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

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

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

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

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

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

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

Datum:  NAD27  NAD83  WGS84

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

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

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

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

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

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

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

Multiple Stage Cementing Collar Used?  Yes  No

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

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

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

**Drilling Fluid Management Plan**

*(Data must be collected from the Reserve Pit)*

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

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

Location of fluid disposal if hauled offsite:

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

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

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

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

**AFFIDAVIT**

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

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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

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

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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**OPERATOR**

Company: HERTEL OIL COMPANY LLC  
 Address: 704 E 12TH STREET  
 HAYS. KANSAS 67601

Contact Geologist: MIKE HERTEL  
 Contact Phone Nbr: 785-628-2445  
 Well Name: REICHERT # 1  
 Location: SW NE SE NE, SEC.9-TWP15S-RGE19W  
 API: 15-051-26,912-00-00  
 Pool: INFIELD  
 State: KANSAS  
 Field: REICHERT  
 Country: USA

**Scale 1:240 Imperial**

Well Name: REICHERT # 1  
 Surface Location: SW NE SE NE, SEC.9-TWP15S-RGE19W  
 Bottom Location:  
 API: 15-051-26,912-00-00  
 License Number: 33625  
 Spud Date: 5/17/2018 Time: 12:00 PM  
 Region: ELLIS COUNTY  
 Drilling Completed: 5/22/2018 Time: 9:08 AM  
 Surface Coordinates: 1700' FNL & 450' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2038.00ft  
 K.B. Elevation: 2046.00ft  
 Logged Interval: 2900.00ft To: 3717.00ft  
 Total Depth: 3717.00ft  
 Formation: LANSING-KANSAS CITY  
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: -99.4314924  
 Latitude: 38.7645888  
 N/S Co-ord: 1700' FNL  
 E/W Co-ord: 450' FEL

**LOGGED BY**

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

Phone Nbr: (785) 639-1337  
 Logged By: GEOLOGIST Name: HERB DEINES

**CONTRACTOR**

Contractor: DISCOVERY DRILLING INC.  
 Rig #: 1  
 Rig Type: MUD ROTARY  
 Spud Date: 5/17/2018 Time: 12:00 PM  
 TD Date: 5/22/2018 Time: 9:08 AM  
 Rig Release: 5/23/2018 Time: 8:45 AM

**ELEVATIONS**

K.B. Elevation: 2046.00ft Ground Elevation: 2038.00ft  
 K.B. to Ground: 8.00ft

**NOTES**

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF STRADDLE TEST AND LOG ANALYSIS.

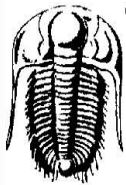
OPEN HOLE LOGS BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY LOG

DRILL STEM TESTING BY TRILOBITE TESTING INC: ONE(STRADDLE TEST)

	<b>REICHERT # 1</b>	<b>SCOTT # 1</b>	<b>WILLIE # 2</b>
	<b>SW NE SE NE</b>	<b>NE SW NW NW</b>	<b>S2 NW NE SE</b>
	<b>SEC.9-15S-19W</b>	<b>SEC.10-15-19W</b>	<b>SEC.9-15-19W</b>
	<b>KB 2046'</b>	<b>KB 2037'</b>	<b>KB 2038'</b>
<b>Anhydrite top</b>	<b>1276 +770</b>	<b>+ 769</b>	<b>+ 779</b>
<b>Anhydrite base</b>	<b>1310 +736</b>	<b>+ 732</b>	<b>+ 741</b>
<b>Topeka</b>	<b>3026 -980</b>	<b>-979</b>	<b>-976</b>
<b>Heebner Sh.</b>	<b>3302-1256</b>	<b>-1257</b>	<b>-1252</b>
<b>Toronto</b>	<b>3322-1276</b>	<b>-1275</b>	<b>-1276</b>
<b>LKC</b>	<b>3348-1302</b>	<b>-1301</b>	<b>-1300</b>
<b>BKC</b>	<b>3592-1546</b>	<b>-1545</b>	<b>-1540</b>
<b>Conglomerate sd</b>	<b>3665-1619</b>	<b>-1614</b>	<b>-1604</b>
<b>Arbuckle</b>	<b>3677-1631</b>	<b>-1621</b>	<b>-1620</b>
<b>RTD</b>	<b>3717-1671</b>	<b>-1712</b>	<b>-1707</b>

#### **SUMMARY OF DAILY ACTIVITY**

- 5-17-18** RU, spud 12:00 PM, set 8 5/8" surface casing to 220' w/ 150 sxs  
Common 2%gel 3%CC, slope 1/8 degree, plug down 5:45 PM
- 5-18-18** 665', drill plug 1:45 AM
- 5-19-18** 1980', drilling
- 5-20-18** 2665', drilling, displaced 2708' to 2730'
- 5-21-18** 3225', drilling, CFS 3385', drilling
- 5-22-18** 3675', CFS 3667', RTD 3717' @9:08 AM, short trip 25 stands, TOWB,  
logs, DST straddle test # 1 3490' to 3679'
- 5-23-18** 3717', finish DST # 1, decision to plug and abandon well



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Hertel Oil Company, LLC

**9-15s-19w Ellis KS**

704 E 12 ST  
Hays Ks 67601+3440

**Reichert #1**

Job Ticket: 63905

**DST#: 1**

ATTN: Herb Deines

Test Start: 2018.05.22 @ 19:36:00

### GENERAL INFORMATION:

Formation: **LKC 'I'- Cg Ss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:44:30

Time Test Ended: 02:36:15

Test Type: Conventional Straddle (Initial)

Tester: Spencer J. Staab

Unit No: 84

**Interval: 3490.00 ft (KB) To 3679.00 ft (KB) (TVD)**

Reference Elevations: 2048.00 ft (KB)

Total Depth: 3717.00 ft (KB) (TVD)

2041.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 9120**

**Inside**

Press@RunDepth: 151.75 psig @ 3491.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.22

End Date:

2018.05.23

Last Calib.: 2018.05.23

Start Time: 19:36:15

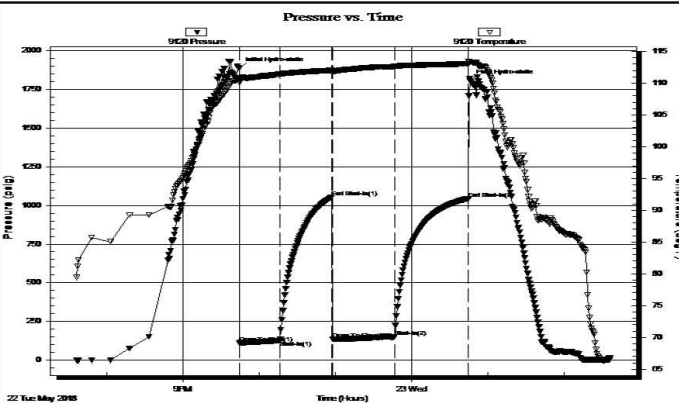
End Time:

02:36:15

Time On Btm: 2018.05.22 @ 21:44:15

Time Off Btm: 2018.05.23 @ 00:46:15

**TEST COMMENT:** 30-IF-Weak Blow ; Built to 4&1/2"  
45-ISI-No Return  
45-FF-Weak Blow ; Built to 5"  
60-FSI-No Return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1884.79	110.66	Initial Hydro-static
1	112.26	110.07	Open To Flow (1)
32	127.28	111.46	Shut-In(1)
73	1054.35	112.03	End Shut-In(1)
74	136.56	111.70	Open To Flow (2)
123	151.75	112.64	Shut-In(2)
181	1044.43	113.05	End Shut-In(2)
182	1801.77	113.26	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
100.00	OCM 10%O 90%M	0.73
20.00	MCO 20%M 80%O	0.15

### Gas Rates

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

**ROCK TYPES**

Dolprim	Lmst fw7>	shale, grn	Carbon Sh	Ss
Dol Lime	Lscongl	shale, gry	shale, red	

**ACCESSORIES**

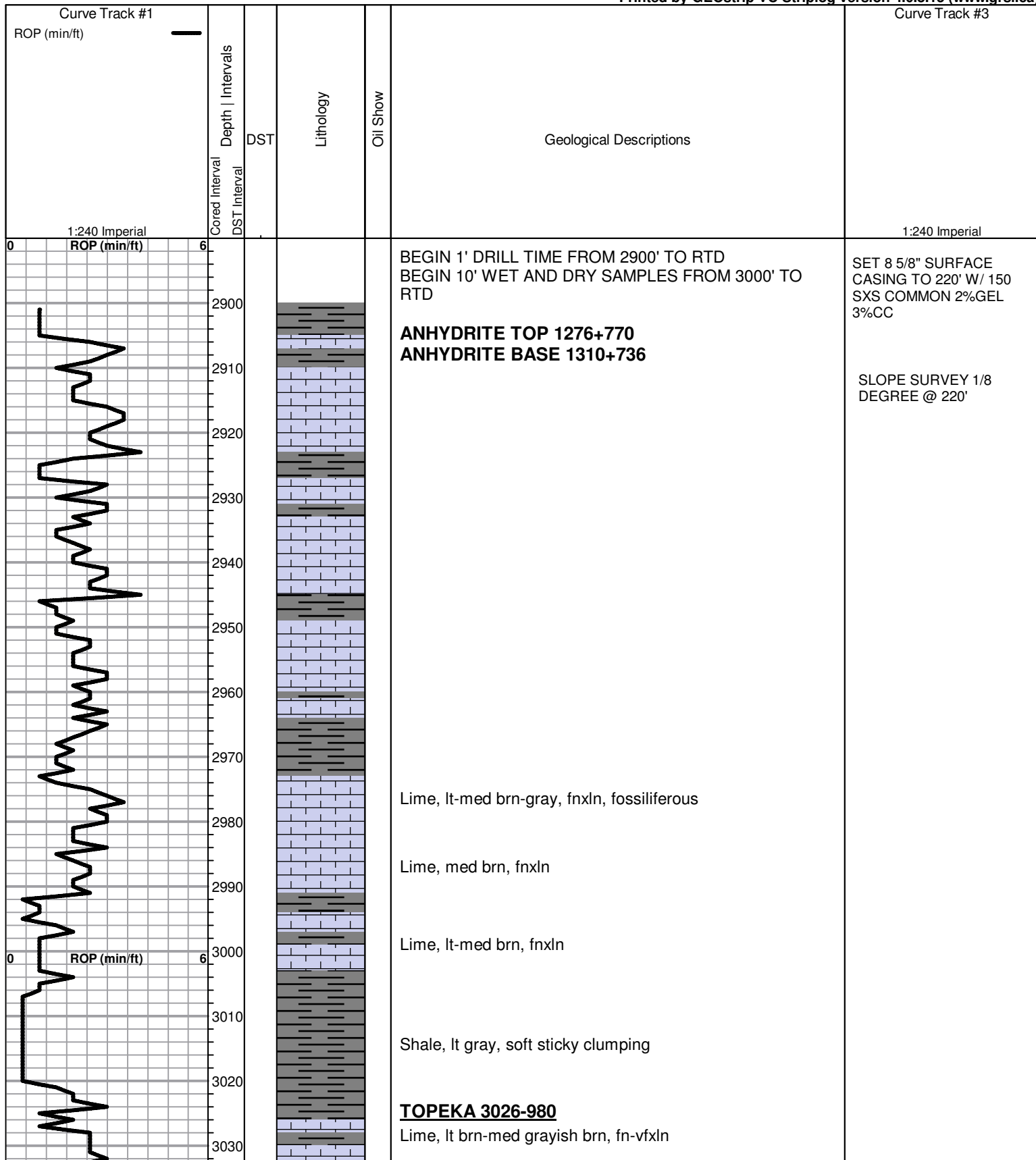
**MINERAL**

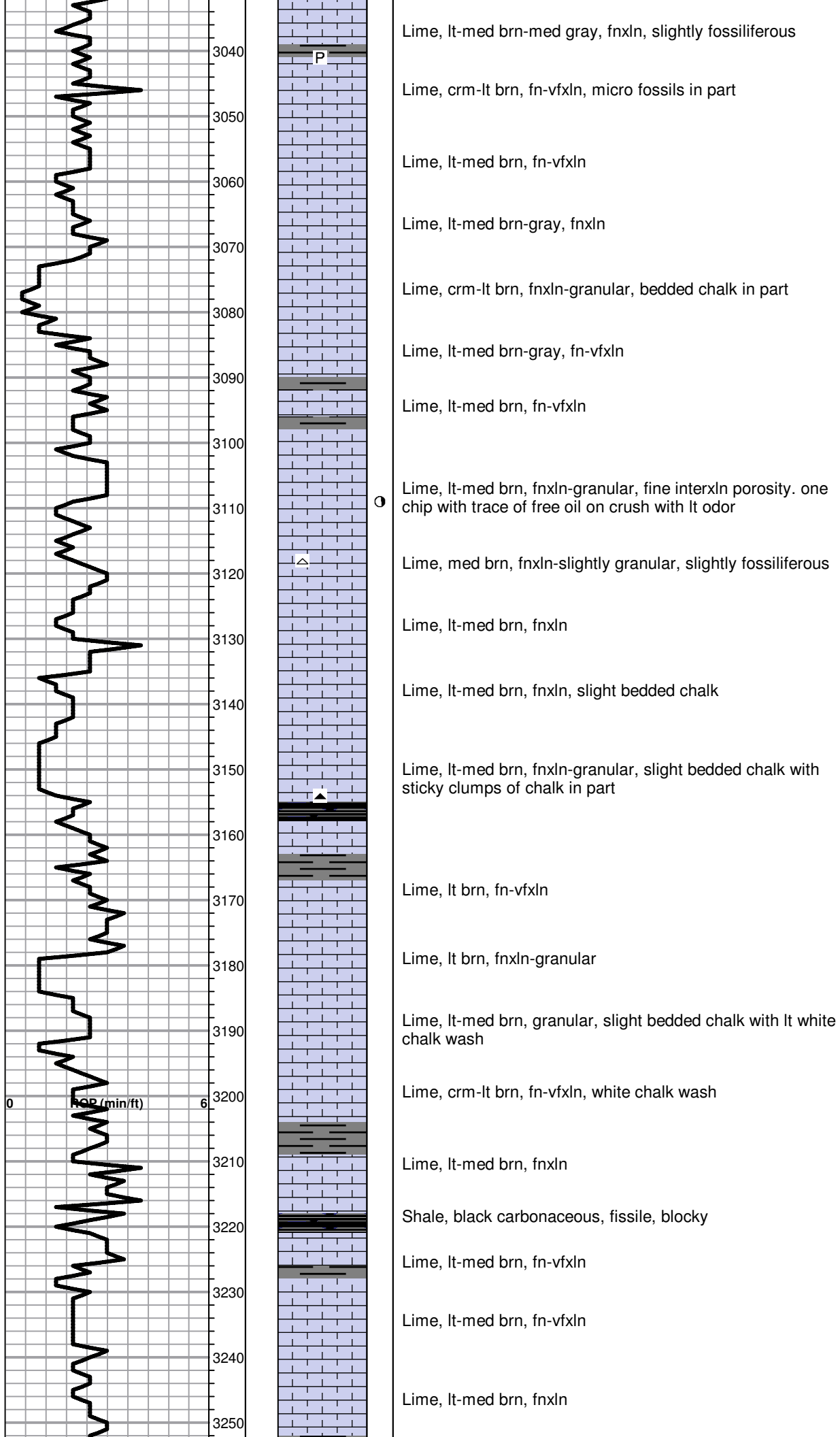
- ▲ Chert, dark
- P Pyrite
- △ Chert White

**FOSSIL**

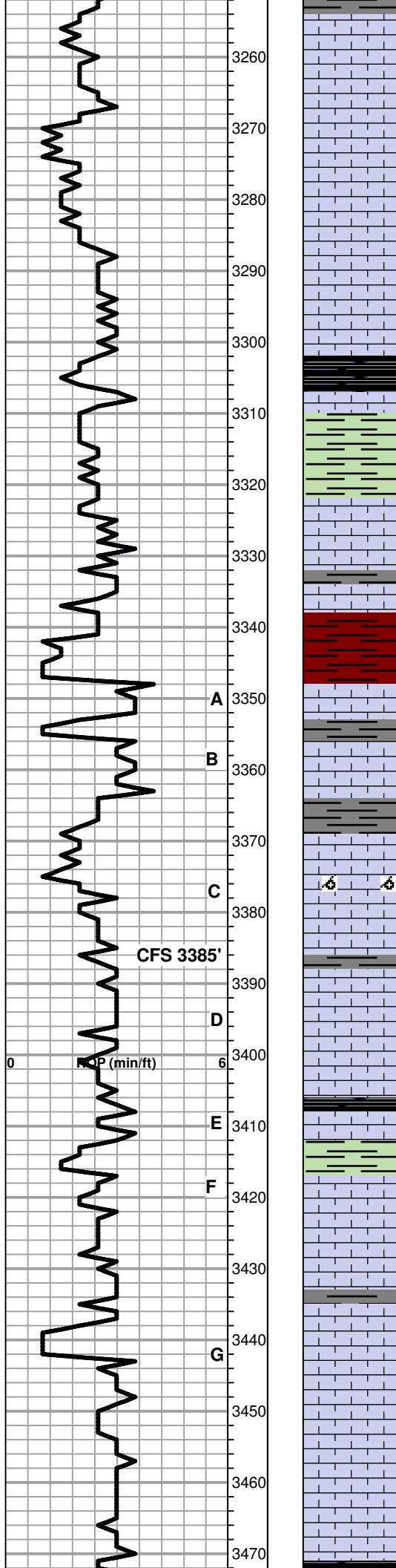
- ⚡ Oomoldic

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)









Lime, lt-med brn, fnxn-granular with oomoldic sections, few chips with dark hvy oil staining, NFO, No Odor, many of chips with shows had fine interxn porosity.

Lime, lt-dark brn, fnxn

Lime, crm-lt brn, fnxn-granular

Lime, crm-lt brn, fnxn

Lime, lt-med brn, fn-vfxln

**HEEBNER SHALE 3302-1256**  
 Shale, black carbonaceous, fissile, blocky  
 Lime, lt brn, vfxln, hard on crush  
 Shale, lime green soft sticky mud

**TORONTO 3322-1276**  
 Lime, crm, fn-vfxln, NS

Lime, crm-lt brn, fn-vfxln

Shale, red-reddish brn, soft with lt red wash

**LKC 3348-1302**  
 Lime, crm-lt brn, fn-vfxln

Lime, lt-med brn-lt gray, fn-vfxln

Lime, crm-lt brn, fnxn, few chips saturated with dark stain, NFO or odor, fine interxn porosity with scattered oomolds

Lime, lt brn, fn-vfxln

Lime, crm-lt brn, fnxn, hard bedded chalk, NS

Lime, crm-lt brn-lt gray, fn-vfxln

Shale, black carbonaceous  
 Lime, lt gray, fnxn

Lime, crm, fnxn, slightly fossiliferous, trace lt spotty stain, NFO, no odor

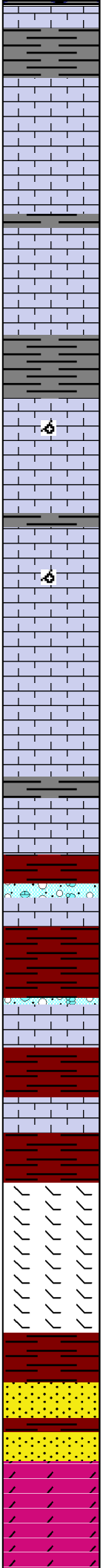
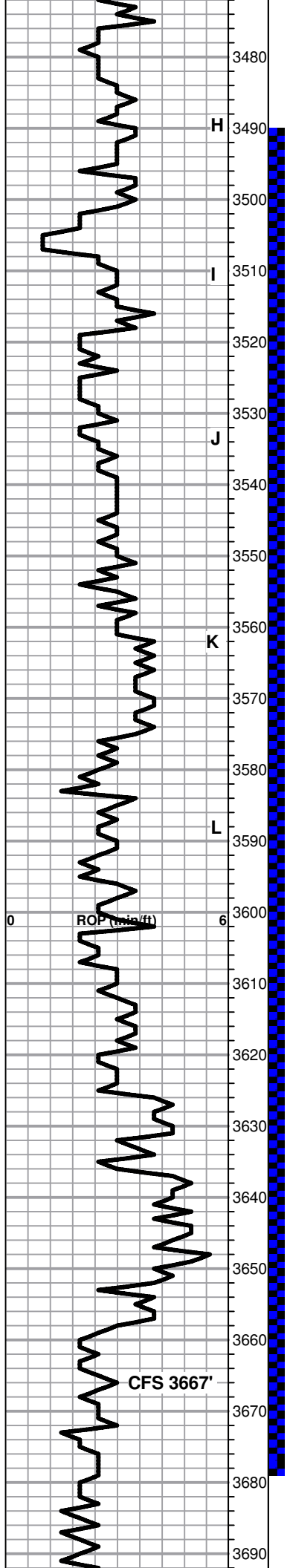
Lime, med -dark brn, fnxn

Lime, crm, fnxn, scattered oolitic and oomoldic, NS

Lime, crm, fn-vfxln

Lime, crm-tan, fn-micro xln

Lime, crm-tan, fn-micro xln  
 Shale, black carbonaceous, fissile, blocky



Shale, black carbonaceous, fossil, blocky

Lime, crm-lt brn, fn-micro xln, NS

Lime, crm-lt brn, fn-micro xln

Lime, crm-lt brn-dark brn, fn-micro xln

Lime, crm-tan, fnxln, scattered spotty stain, very lt odor, NFO, scattered pinpoint porosity, not well developed

Lime, crm-tan, fnxln, few oomoldic chips with spotty staining, very lt odor, NFO

Lime, crm, fn-vfxln

Lime, crm, fnxln, few oomoldic chips, scattered stain, NFO, no odor

Lime, crm-lt brn, fn-micro xln

Lime, crm, fn-micro xln

Lime, crm-tan, fn-micro xln

Lime, crm-tan, fn-micro xln

**BKC 3592-1546**  
Shale, red-reddish brn, soft blocky

Lime, crm-lt brn, fn-micro xln, some clastic lime in part

Shale, red, soft with red wash

Lime, crm-lt brn, fn-micro xln with clastic lime and red shale

Shale, red wash

Lime, lt brn, vf-micro xln

Shale, red wash

Lime, lt brn, fn-micro xln, slightly dolomitic, orange chert fragments in part

Lime, as above

Shale, vari colored with lt red wash

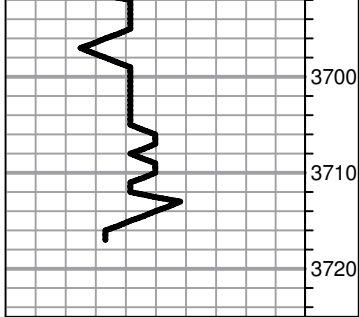
**CONGLOMERATE SAND 3565-1619**  
Sandstone, fine grained, fair sorting, saturated dark staining in few chips, NFO, very lt odor

**ARBUCKLE 3677-1631**  
Dolomite, crm-lt brn, fnxln-slightly granular, NS

Dolomite, crm, fnxln with oolitic chert in part

DST # 1 STRADDLE TEST  
3490' TO 3679' SEE  
HEADER FOR TEST  
SUMMARY

1st plug @ 3649' w/ 50 sxs  
2nd plug @ 1290' w/ 50 sxs  
3rd plug @ 540' w/ 100 sxs  
4th plug @ 270' w/ 50 sxs  
5th plug @ 40' w/ 10 sxs  
Rathole w/ 30 sxs  
Mousehole w/ 15 sxs

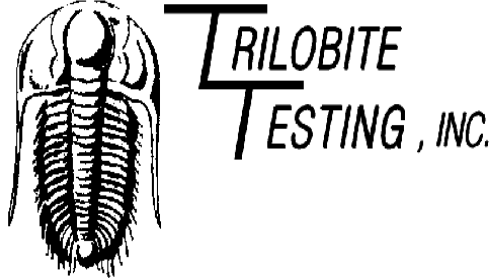


Dolomite, crm-lt brn, fnxln

Dolomite, crm-lt brn, fnxln-granular, sucrosic in part, NS

**RTD 3717-1671 LTD 3720-1674**

Ordered 305 sxs 60/40 pos  
4% gel, 1/4# flocele per sx.  
Quality Cementing



## DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Company, LLC**

704 E 12 St  
Hays KS 67601+3440

ATTN: Herb Deines

### **Reichert #1**

### **9-15s-19w Ellis,KS**

Start Date: 2018.05.22 @ 19:36:00

End Date: 2018.05.23 @ 02:36:15

Job Ticket #: 63905                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.23 @ 08:46:01



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Hertel Oil Company, LLC  
 704 E 12 St  
 Hays KS 67601+3440  
 ATTN: Herb Deines

**9-15s-19w Ellis,KS**

**Reichert #1**

Job Ticket: 63905

**DST#: 1**

Test Start: 2018.05.22 @ 19:36:00

## GENERAL INFORMATION:

Formation: **LKC 'I' - Conglomer**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:44:30

Time Test Ended: 02:36:15

Test Type: Conventional Straddle (Initial)

Tester: Spencer J. Staab

Unit No: 84

**Interval: 3490.00 ft (KB) To 3679.00 ft (KB) (TVD)**

Reference Elevations: 2048.00 ft (KB)

Total Depth: 3717.00 ft (KB) (TVD)

2041.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 9120**

**Inside**

Press@RunDepth: 151.75 psig @ 3491.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.22

End Date:

2018.05.23

Last Calib.:

2018.05.23

Start Time: 19:36:15

End Time:

02:36:15

Time On Btm:

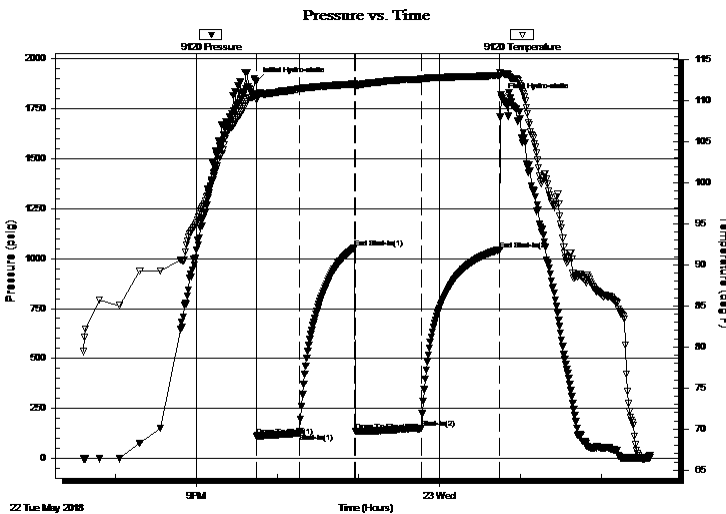
2018.05.22 @ 21:44:15

Time Off Btm:

2018.05.23 @ 00:46:15

**TEST COMMENT:** 30-IF-Weak Blow ; Built to 4 1/2"  
 45-ISI-No Return  
 45-FF-Weak Blow ; Built to 5"  
 60-FSI-No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1884.79	110.66	Initial Hydro-static
1	112.26	110.07	Open To Flow (1)
32	127.28	111.46	Shut-In(1)
73	1054.35	112.03	End Shut-In(1)
74	136.56	111.70	Open To Flow (2)
123	151.75	112.64	Shut-In(2)
181	1044.43	113.05	End Shut-In(2)
182	1801.77	113.26	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
100.00	OCM 10%O 90%M	0.73
20.00	MCO 20%M 80%O	0.15

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hertel Oil Company, LLC

**9-15s-19w Ellis, KS**

704 E 12 St  
Hays KS 67601+3440

**Reichert #1**

Job Ticket: 63905

**DST#: 1**

ATTN: Herb Deines

Test Start: 2018.05.22 @ 19:36:00

## Tool Information

Drill Pipe:	Length: 3379.00 ft	Diameter: 3.82 inches	Volume: 47.90 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 120.00 ft	Diameter: 2.75 inches	Volume: 0.88 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 48.78 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3490.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	3679.00 ft			
Interval between Packers:	189.00 ft			
Tool Length:	250.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		
Tool Comments:				

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3468.00	
Shut In Tool	5.00			3473.00	
Hydraulic tool	5.00			3478.00	
Safety Joint	3.00			3481.00	
Packer	5.00			3486.00	23.00 Bottom Of Top Packer
Packer	4.00			3490.00	
Stubb	1.00			3491.00	
Recorder	0.00	9120	Inside	3491.00	
Recorder	0.00	8368	Outside	3491.00	
Change Over Sub	1.00			3492.00	
Drill Pipe	155.00			3647.00	
Change Over Sub	1.00			3648.00	
Perforations	26.00			3674.00	
Blank Off Sub	1.00			3675.00	
top of s.packer	4.00			3679.00	189.00 Tool Interval
Packer	0.00			3679.00	
Stubb	1.00			3680.00	
Perforations	1.00			3681.00	
Change Over Sub	1.00			3682.00	
Recorder	0.00	8934	Below	3682.00	
Drill Pipe	31.00			3713.00	
Change Over Sub	1.00			3714.00	
Bullnose	3.00			3717.00	38.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>250.00</b>				





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hertel Oil Company, LLC

**9-15s-19w Ellis,KS**

704 E 12 St  
Hays KS 67601+3440

**Reichert #1**

Job Ticket: 63905

**DST#: 1**

ATTN: Herb Deines

Test Start: 2018.05.22 @ 19:36:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	OCM 10%O 90%M	0.735
20.00	MCO 20%M 80%O	0.147

Total Length: 120.00 ft

Total Volume: 0.882 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

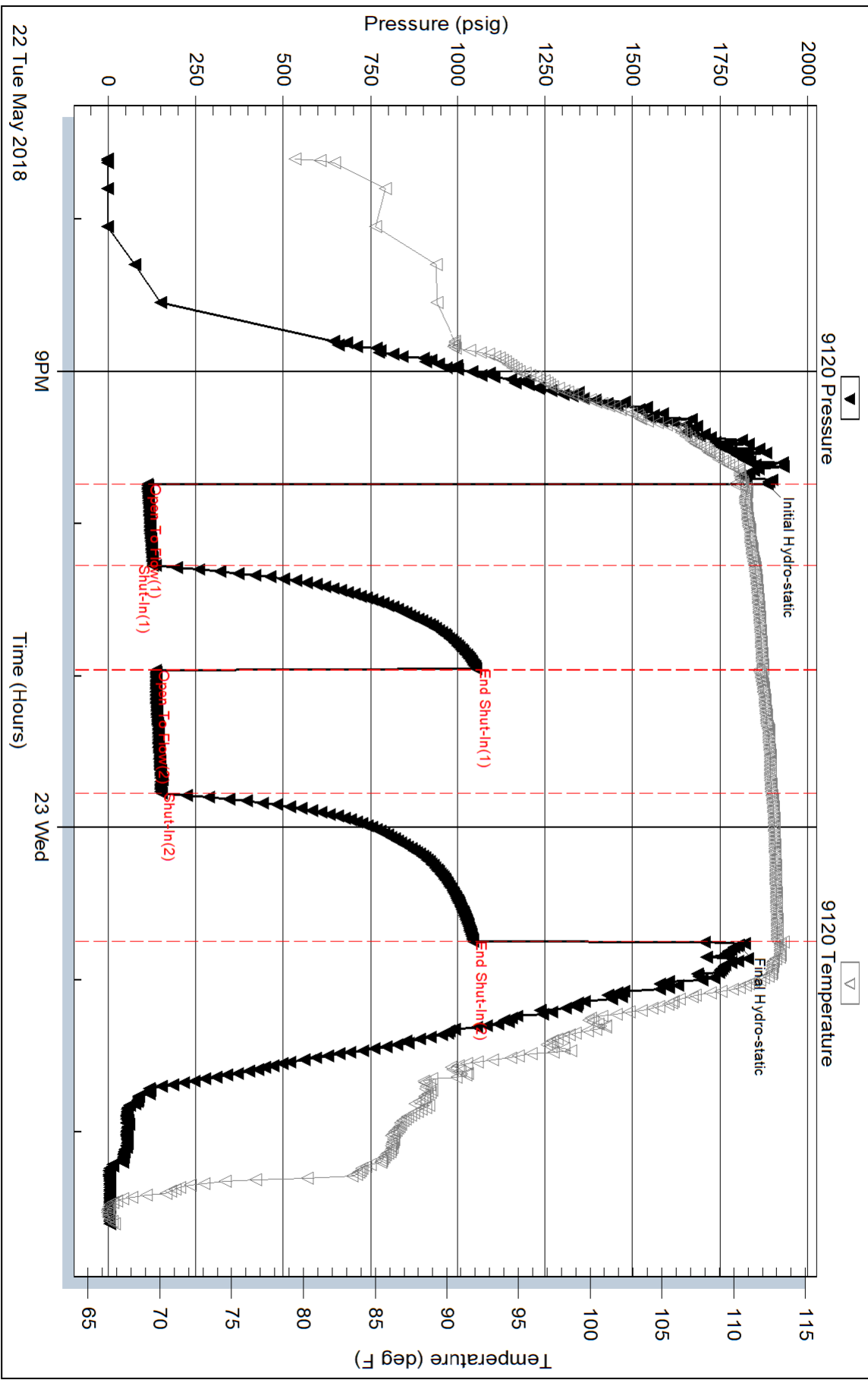
Serial #:

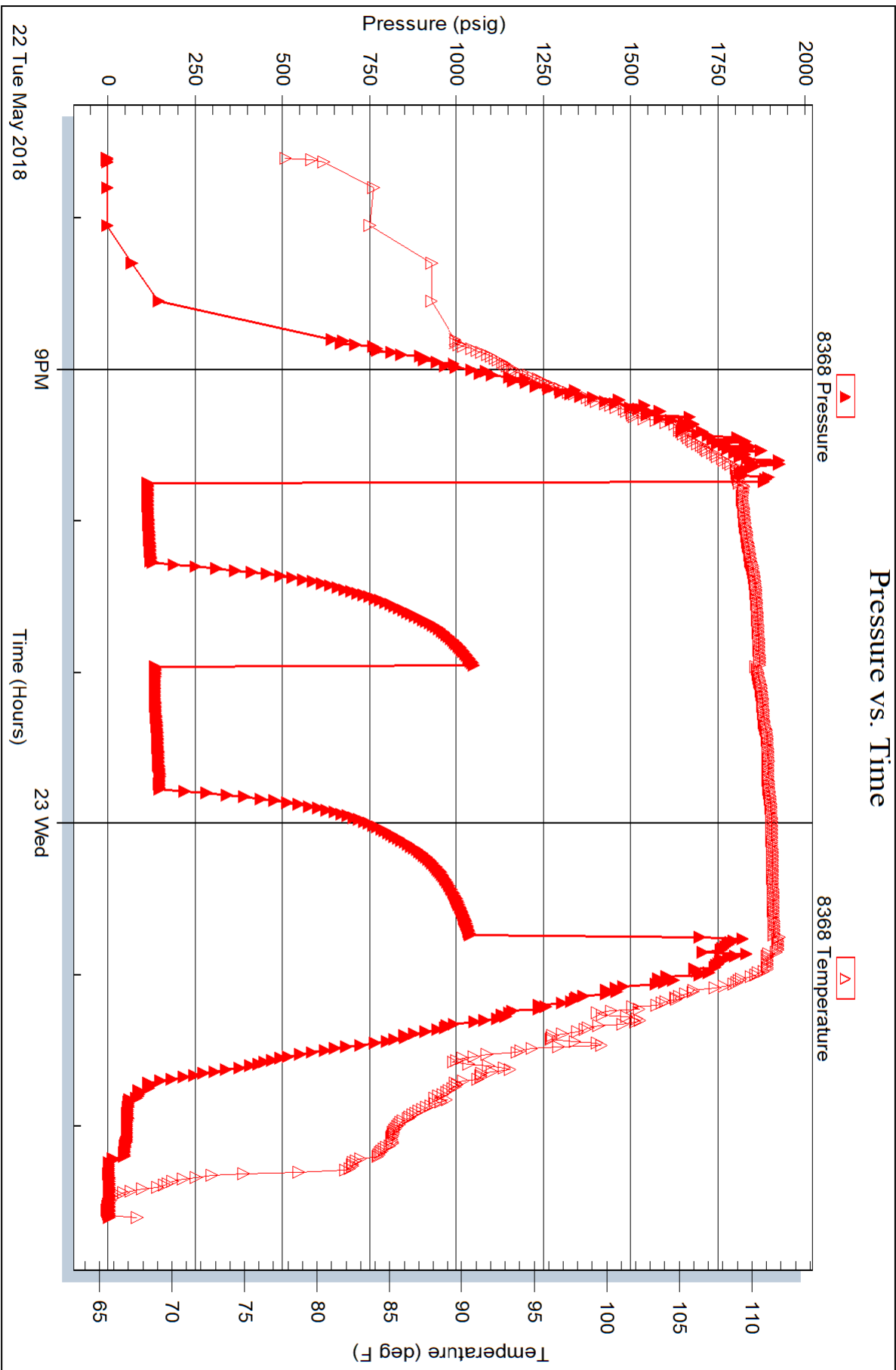
Laboratory Name:

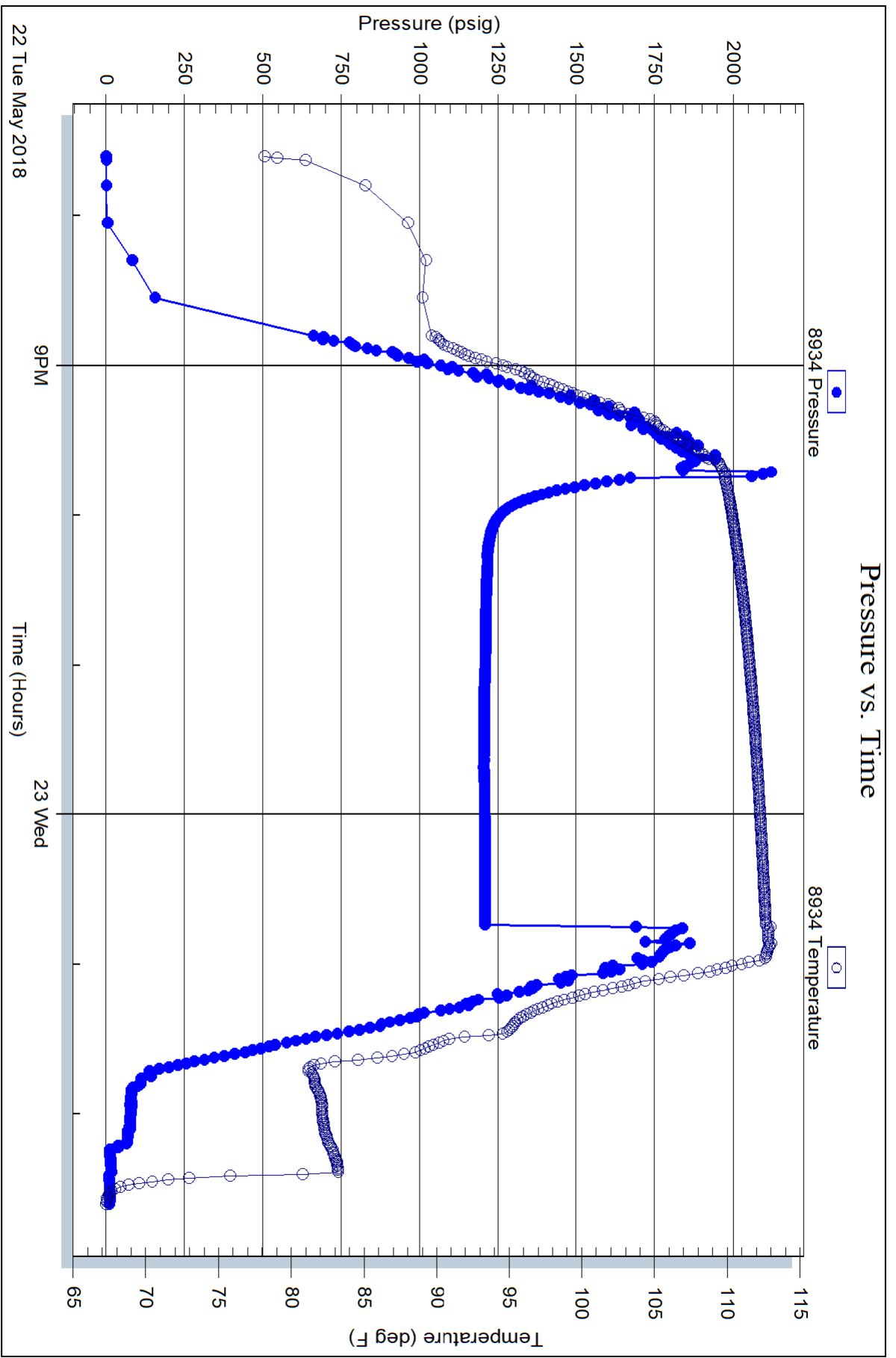
Laboratory Location:

Recovery Comments: 2#LCM

# Pressure vs. Time









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63905

Well Name & No. Reichert #1 Test No. 1 Date 05/22/2018  
 Company Hertel Oil Company, LLC Elevation 2048 KB 2041 GL  
 Address 704 E 1257 Hays Ks 67601 +3440  
 Co. Rep / Geo. Herb Deines Rig Discovery #1  
 Location: Sec. 9 Twp 15s Rge. 19w Co. Ellis State Ks

Interval Tested 3490' - 3679' Zone Tested LRC 'D' - Cg Ss  
 Anchor Length 189' 38' tail Drill Pipe Run 3379' Mud Wt. 9.4  
 Top Packer Depth 3490' Drill Collars Run — Vls 60  
 Bottom Packer Depth 3679' Wt. Pipe Run 120' WL 6.4  
 Total Depth 3717' Chlorides 5000 ppm System LCM 2#

Blow Description 67-Weak Blow; Built to 4 1/2"  
55- No Return  
77-Weak Blow; Built to 5"  
75- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>100'</u>	<u>OCM</u>	<u>10</u>	<u>—</u>	<u>90</u>	<u>—</u>
<u>20'</u>	<u>MCO</u>	<u>80</u>	<u>—</u>	<u>20</u>	<u>—</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 120 BHT \_\_\_\_\_ Gravity 33° API RW — @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1884  Test 1050 T-On Location 18:41  
 (B) First Initial Flow 112  Jars \_\_\_\_\_ T-Started 19:36  
 (C) First Final Flow 127  Safety Joint \_\_\_\_\_ T-Open 21:43  
 (D) Initial Shut-In 1054  Circ Sub \_\_\_\_\_ T-Pulled 00:43  
 (E) Second Initial Flow 136  Hourly Standby \_\_\_\_\_ T-Out 02:35  
 (F) Second Final Flow 151  Mileage 32 RT 32 Comments Loaded tools  
 (G) Final Shut-In 1044  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1801  Straddle 600  Ruined Shale Packer \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  
 Final Flow 45  Extra Recorder \_\_\_\_\_  
 Final Shut-In 60  Day Standby \_\_\_\_\_  
 Sub Total 1682  Accessibility \_\_\_\_\_  
 Total 1682 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Spencer J. Juel Thanks!

TriLOBITE TESTING Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

785-259-0056

C1517

# GLOBAL OIL FIELD SERVICES, LLC

REMIT TO 24 S. Lincoln  
Russell, KS 67665

SERVICE POINT Russell

DATE <u>5-17-15</u>	SEC <u>9</u>	TWP. <u>13</u>	RANGE <u>19</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>5:45 PM</u>
LEASE <u>Reichert</u>	WELL.# <u>1</u>	LOCATION <u>Antwining 2W14S</u>			COUNTY <u>Ellis</u>	STATE <u>KS</u>	
OLD OR NEW (CIRCLE ONE)							

CONTRACTOR DISCOVERY

TYPE OF JOB SURFACE

HOLE SIZE 12 1/4 T.D. 220

CASING SIZE 5 1/2 DEPTH

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX. MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15

PERFS

DISPLACEMENT 13 bbls

OWNER

CEMENT AMOUNT ORDERED 150 M Con 3-2

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC @

HANDLING @

MILEAGE @

TOTAL

EQUIPMENT

PUMP TRUCK CEMENTER 13, 11

# HELPER John Moody

BULK TRUCK DRIVER Rullet

# DRIVER

### REMARKS:

Run 5 hrs of P & S at 220

Con 150M Con 3-2

Pump plug w/ 13 bbls

Cement did cure.

CHARGE TO: Hertel Oil Co

STREET 704 E 12th

CITY HAYS STATE KS ZIP 67601-3440

Global Oil Field Services, LLC

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

PRINTED NAME

SIGNATURE [Signature]

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE

EXTRA FOOTAGE @

MILEAGE @

MANIFOLD @

TOTAL

### PLUG & FLOAT EQUIPMENT

@

@

@

@

@

TOTAL

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT

IF PAID IN 30 DAYS