



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1312152  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

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

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

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

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

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

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

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

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

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

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

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

Designate Type of Completion:

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

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

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

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

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

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

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

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

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

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

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

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

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

Datum:  NAD27       NAD83       WGS84

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

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

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

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

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

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

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

Multiple Stage Cementing Collar Used?  Yes  No

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

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

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

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

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

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

Location of fluid disposal if hauled offsite:

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

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

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

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

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

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

1312152

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

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

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

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

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

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

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

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

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

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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# Mud-Co / Service Mud Inc.

100 S. Main St., Suite #310, Wichita, Ks. 67202

Report: 1

## Daily Drilling Mud Report

Date: **04/27/16** Depth: **0**

Operator <b>Habit Petroleum, LLC.</b>	Contractor <b>Shields Drilling Company, Inc.</b>	Rig No. <b>1</b>
Address <b>Rig</b>	Address <b>Rig</b>	Spud Date <b>05/02/16</b>
Report for Mr. <b>Irvin E. Haselhorst/Duane Stecklein</b>	Report for Mr. <b>George Begler</b>	Section <b>23</b> Iwp <b>15S</b> Range <b>17W</b>
Well Name & No. <b>K. Leiker #2 EI: 1960 GL est.</b>	County <b>Ellis</b>	State <b>Kansas</b>

Operation <b>RURT</b>	Casing <b>8 5/8 in. at 0</b>	Mud Volume (BBL) Hole <b>0</b> Pits <b>300</b>	Liner Size <b>6</b> Stroke <b>14</b>	Opposite Drill Pipe <b>66</b>	Pump Pressure <b>650</b>
Bit Size (in.) <b>12 1/4</b> No <b>1</b>	Intermediate in. at	Total Circulating Vol. <b>300</b>	Est. Hole/DC capacities <b>2.342</b>	Opposite Drill Collars	Pump Make <b>Bethlehem</b>
Drill pipe sz <b>4 1/2</b> Type <b>XH</b>	Production / Liner in. at	Volume in Storage	BBL/ Strk <b>0.139</b> Strk / Min. <b>57</b>	Bottoms Up (Min.)	Pump Model <b>225</b>
Drill Collar size <b>6 1/4</b>   <b>233</b>	Drilling mud type <b>Gel/Lime</b>		BBL/Min. <b>7.9</b> GAL/Min. <b>348</b>	System Total (Min.) <b>48</b>	

Sample from Flowline ___ or Pit ___	Daily Mud Cost <b>0.00</b>	Cumulative Mud Cost <b>0.00</b>
Flowline Temperature	Mud Properties	

Time Sample Taken	
Depth (Ft.)	<b>0</b>
Weight (lb/gal.)	
Mud Gradient (psi/ft.)	
Funnel Viscosity (Sec/qt. API)	
Plastic Viscosity cp	
Yield Point (lb/100 sq.ft.)	
Gel Strength 10 sec/10 min.	
pH	
Filtrate API (ml/30 min.)	
Cake Thickness 32nd	
Alkalinity, Mud (Pm)	
Alkalinity, Filtrate (Pf/Mf)	
Chloride Content, ppm	
Calcium, ppm	
Sand Content (% by Vol.)	
Solids Content (% by Vol.)	
Oil Content (% by Vol.)	
Water Content (% by Vol.)	
LCM, lbs/bbl.	
Reynold's #DP	<b>#DIV/0!</b>
Reynold's # DC	<b>#DIV/0!</b>
ECD lb/gal	<b>#DIV/0!</b>

MUD PROPERTIES SPECIFICATIONS			
Mud Wt. (lbs/gal.)	Viscosity	Filtrate	LCM
<b>10</b>	<b>36-40</b>	<b>No Cont</b>	<b>2-3 ppb.</b>

**Suggest for surface hole:**

1. Spud with 36-40 vis of gel and lime slurry. Start out with low volume and let mud wt. build to 9.8-10.0 by 400 ft.
2. Add 6-10 sx. Hulls for LCM of 2-3 ppb. To surface TD.
3. Maintain mud wt. of 10.0 ppg. From 400 ft. to surface TD.

**Suggest to mud up:**

1. Run plenty of fresh water and jet as needed
2. Flush hole as needed with the following:  
40 bbls. Fresh water  
10-15 sx. Gel  
1/2 sx. Lime (Add just before adding to system)
3. If hole pulls tight, add 2-3 gallons of Poly Plus down the pipe on connections.
4. If loss circulation does occur, mix and add the following:  
80 bbls. Fresh water  
20 sx. Gel  
18 sx. c/s hulls  
1/2 sx. Lime (Add just before adding to system)
5. Displace @ 2800' (or per Geo's orders)
6. Fill frac tank with the following:  
80 bbls. Fresh water  
23 sx. Gel  
3 sx. Soda ash  
1 sx. Caustic soda  
1 sx. Lignite  
1/3 sx. Pac  
3 sx. c/s hulls
7. Always Keep Hole Full!
8. Always Circulate Hole Clean Before Trips.
9. Always Keep Mud Skids Covered.

**Thank You**

DRILLING MUD INVENTORY					
Products:	Delivery	Transfer	On Hand	Used	Cost
Premium Gel	280		280		
Lime	6		6		
Soda Ash	28		28		
Caustic Soda	19		19		
Lignite	15		15		
C/S Hulls	150		150		
Drill Pak	6		6		
Desco	2		2		
Poly Plus	2		2		
Florigel					
Xcide					
Sapp					
Barite					
Multi Seal					

Mud-Co / Service Mud Representative <b>Gary Schmidtberger</b> Cell# 785-259-2757	Home Address <b>Hays, Kansas</b> Warehouse Location <b>Hays, Kansas</b>	Telephone Number <b>785-625-4931</b> Telephone Number <b>785-621-4232</b>
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# Mud-Co / Service Mud, Inc.

100 S. Main St., Suite #310, Wichita, Ks. 67202

Report: 2

## Daily Drilling Mud Report

Date: **05/03/16** Depth: **0**

Operator <b>Habit Petroleum, LLC.</b>	Contractor <b>Shields Drilling Company, Inc.</b>	Rig No. <b>1</b>
Address <b>Rig</b>	Address <b>Rig</b>	Spud Date <b>05/03/16</b>
Report for Mr. <b>Irvin E. Haselhorst/Duane Stecklein</b>	Report for Mr. <b>George Begler</b>	Section <b>23</b> Twp <b>15S</b> Range <b>17W</b>
Well Name & No. <b>K. Leiker #2 EI: 1960 GL est.</b>	County <b>Ellis</b>	State <b>Kansas</b>

Operation		Casing	Mud Volume (BBL)		Circulation Data			
Present Activity	<b>8 5/8</b>	in. at	Hole <b>0</b>	Pits <b>300</b>	Liner Size <b>6</b>	Stroke <b>14</b>	Opposite Drill Pipe <b>63</b>	Pump Pressure <b>500</b>
Bit Size (in.)	<b>12 1/4</b>	No <b>1</b>	Total Circulating Vol. <b>300</b>		Est. Hole/DS capacities <b>9 1.1463</b>		Opposite Drill Collars <b>74</b>	Pump Make <b>Bethlehem</b>
Drill pipe sz	<b>4 1/2</b>	Type <b>XH</b>	Volume in Storage		BBV/Strk <b>0.139</b>	Strk / Min. <b>57</b>	Bottoms Up (Min.) <b>0</b>	Pump Model <b>225</b>
Drill Collar size	<b>6 1/4</b>	233	Drilling mud type <b>Gel/Lime</b>		BBL/Min. <b>7.9</b>	GAL/Min. <b>333</b>	System Total (Min) <b>38</b>	

Flowline Temperature	Mud Properties	Daily Mud Cost <b>374.74</b>	Cumulative Mud Cost <b>374.74</b>
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Time Sample Taken	7:55 AM
Depth (Ft.)	<b>0</b>
Weight (lb/gal.)	
Mud Gradient (psi/ft.)	
Funnel Viscosity (Sec/qt. API)	
Plastic Viscosity cp	
Yield Point (lb/100 sq.ft.)	
Gel Strength 10 sec/10 min.	
pH	
Filtrate API (ml/30 min.)	
Cake Thickness 32nd	
Alkalinity, Mud (Pm)	<b>Makeup</b>
Alkalinity, Filtrate (Pf/Mf)	<b>Water</b>
Chloride Content, ppm	<b>410</b>
Calcium, ppm	<b>195</b>
Sand Content (% by Vol)	
Solids Content (% by Vol.)	
Oil Content (% by Vol.)	
Water Content (% by Vol.)	
LCM, lbs/bbl.	
Reynold's #DP	<b>#DIV/0!</b>
Reynold's # DC	<b>#DIV/0!</b>
ECD lb/gal	<b>#DIV/0!</b>

MUD PROPERTIES SPECIFICATIONS			
Mud Wt. (lbs/gal.)	Viscosity	Filtrate	LCM
<b>10 ppg or better</b>	<b>36-40</b>	<b>No Cont</b>	<b>2-3 ppb.</b>

- Suggest for surface hole:**
1. Spud with 36-40 vis of gel and lime slurry. Start out with low volume and let mud wt. build to 9.8-10.0 by 400 ft.
  2. Add 6-10 sx. Hulls for LCM of 2-3 ppb. To surface TD.
  3. Maintain mud wt. of 10.0 ppg. Or better from 400 ft. to surface TD.
- Suggest for mud up:**
1. Run plenty of fresh water and jet as needed.
  2. Flush hole as needed with the following:  
40 bbls. Fresh water  
10-15 sx. Gel  
1/2 sx. Lime (Add just before adding to system)
  3. If hole pulls tight, add 2-3 gallons of Poly Plus down the pipe on connections.
  4. If loss circulation does occur, mix and add the following:  
80 bbls. Fresh water  
20 sx. Gel  
18 sx. c/s hulls  
1/2 sx. Lime (Add just before adding to system)
  5. Displace @ 2800' (or per Geo's orders)
  6. Fill frac tank with the following:  
80 bbls. Fresh water  
23 sx. Gel  
3 sx. Soda ash  
1 sx. Caustic soda  
1 sx. Lignite  
1/3 sx. Pac  
3 sx. c/s hulls
  7. Always Keep Hole Full!
  8. Always Circulate Hole Clean Before Trips.
  9. Always Keep Mud Skids Covered.

**Thank You**

DRILLING MUD INVENTORY					
Products:	Prior Day	Delivery	On Hand	Used	Cost
Premium Gel	280		262	18	307.98
Lime	6		6		
Soda Ash	28		28		
Caustic Soda	19		19		
Lignite	15		15		
C/S Hulls	150		146	4	66.76
Drill Pak	6		6		
Desco	2		2		
Poly Plus	2		2		
s.bicarb					
Xcide					
Sapp					
Barite					
Multi Seal					

Mud-Co / Service Mud Representative <b>Gary Schmidtberger</b>	Home Address <b>Hays, Ks</b>	Telephone Number <b>785-259-2757</b>
Cell: <b>785-259-2757</b>	Warehouse Location <b>Hays, Ks</b>	Telephone Number <b>785-621-4232</b>

# Mud-Co / Service Mud, Inc.

100 S. Main St., Suite #310, Wichita, Ks. 67202

Report: **3**

## Daily Drilling Mud Report

Date: **05/06/16** Depth: **754**

Operator <b>Habit Petroleum, LLC.</b>	Contractor <b>Shields Drilling Company, Inc.</b>	Rig No. <b>1</b>
Address <b>Rig</b>	Address <b>Rig</b>	Spud Date <b>05/05/16</b>
Report for Mr. <b>Irvin E. Haselhorst/Duane Stecklein</b>	Report for Mr. <b>George Begler</b>	Section <b>23</b> Twp <b>15S</b> Range <b>17W</b>
Well Name & No. <b>K. Leiker #2 EI: 1960 GL est.</b>	County <b>Ellis</b>	State <b>Kansas</b>

Operation Present Activity	Casing <b>8 5/8 in. at</b>	Mud Volume (BBL) Hole <b>63</b> Pits <b>300</b>	Liner Size <b>6</b> Stroke <b>14</b>	Opposite Drill Pipe <b>63</b>	Pump Pressure <b>600</b>
Bit Size (in.) <b>12 1/4</b>	No <b>1</b>	Total Circulating Vol. <b>363</b>	Est. Hole/DC capacities <b>1.1463</b>	Opposite Drill Collars <b>74</b>	Pump Make <b>Bethlehem</b>
Drill pipe sz <b>4 1/2</b>	Type <b>XH</b>	Volume in Storage	BB/ Strk <b>0.139</b> Strk / Min. <b>57</b>	Bottoms Up (Min.) <b>7</b>	Pump Model <b>225</b>
Drill Collar size <b>6 1/4</b>	Drilling mud type <b>Gel/Lime</b>		BBL/Min. <b>7.9</b> GAL/Min. <b>333</b>	System Total (Min) <b>46</b>	Critical GPM DC/DP <b>#DIV/0! #DIV/0!</b>

Sample from Flowline ___ or Pit ___	Daily Mud Cost <b>0.00</b>	Cumulative Mud Cost <b>374.74</b>
Flowline Temperature	Mud Properties	

Time Sample Taken 7:45 AM	MUD PROPERTIES SPECIFICATIONS		
Depth (Ft.) <b>754</b>	Mud Wt. (lbs/gal.) <b>10.5-11.0</b>	Viscosity <b>36-40</b>	Filtrate <b>No Cont</b> LCM <b>2-3 ppb.</b>

Weight (lb/gal.)	<b>11.6</b>
Mud Gradient (psi/ft.)	<b>0.603</b>
Funnel Viscosity (Sec/qt. API)	<b>49</b>
Plastic Viscosity cp	
Yield Point (lb/100 sq.ft.)	
Gel Strength 10 sec/10 min.	
pH	
Filtrate API (ml/30 min.)	
Cake Thickness 32nd	
Alkalinity, Mud (Pm)	
Alkalinity, Filtrate (Pf/Mf)	
Chloride Content, ppm	
Calcium, ppm	
Sand Content (% by Vol)	
Solids Content (% by Vol.)	
Oil Content (% by Vol.)	
Water Content (% by Vol.)	<b>100.0</b>
LCM, lbs/bbl.	<b>2</b>
Reynold's #DP	<b>#DIV/0!</b>
Reynold's # DC	<b>#DIV/0!</b>
ECD lb/gal	<b>#DIV/0!</b>

### Suggest for surface hole:

1. Spud with 36-40 vis of gel and lime slurry. Start out with low volume and let mud wt. build to 9.8-10.0 by 400 ft.
2. Add 6-10 sx. Hulls for LCM of 2-3 ppb. To surface TD.
3. Maintain mud wt. of 10.5-11.0 ppg. from 400 ft. to surface TD.

### Suggest for mud up:

1. Run plenty of fresh water and jet as needed.
2. Flush hole as needed with the following:  
40 bbls. Fresh water  
10-15 sx. Gel  
1/2 sx. Lime (Add just before adding to system)
3. If hole pulls tight, add 2-3 gallons of Poly Plus down the pipe on connections.
4. If loss circulation does occur, mix and add the following:  
80 bbls. Fresh water  
20 sx. Gel  
18 sx. c/s hulls  
1/2 sx. Lime (Add just before adding to system)
5. Displace @ 2800' (or per Geo's orders)
6. Fill frac tank with the following:  
80 bbls. Fresh water  
23 sx. Gel  
3 sx. Soda ash  
1 sx. Caustic soda  
1 sx. Lignite  
1/3 sx. Pac  
3 sx. c/s hulls

7. Always Keep Hole Full!
8. Always Circulate Hole Clean Before Trips.
9. Always Keep Mud Skids Covered.

**Thank You**

DRILLING MUD INVENTORY					
Products:	Prior Day	Delivery	On Hand	Used	Cost
Premium Gel	262		262		
Lime	6		6		
Soda Ash	28		28		
Caustic Soda	19		19		
Lignite	15		15		
C/S Hulls	146		146		
Drill Pak	6		6		
Desco	2		2		
Poly Plus	2		2		
Florigel					
Xcide					
Sapp					
Barite					
Multi Seal					

Mud-Co / Service Mud Representative  
**Gary Schmidtberger**

Cell: 785-259-2757

Home Address  
**Hays, Ks**

Warehouse Location  
**Hays, Ks**

Telephone Number  
**785-259-2757**

Telephone Number  
**785-621-4232**

# Mud-Co / Service Mud, Inc.

100 S. Main St., Suite #310, Wichita, Ks. 67202

Report: **4**

## Daily Drilling Mud Report

Date: **05/07/16**

Depth: **1099**

Operator <b>Habit Petroleum, LLC.</b>	Contractor <b>Shields Drilling Company, Inc.</b>	Rig No. <b>1</b>
Address <b>Rig</b>	Address <b>Rig</b>	Spud Date <b>05/05/16</b>
Report for Mr. <b>Irvin E. Haselhorst/Duane Stecklein</b>	Report for Mr. <b>George Begler</b>	Section <b>23</b>
Well Name & No. <b>K. Leiker #2 EI: 1960 GL est.</b>	County <b>Ellis</b>	State <b>Kansas</b>
		wp <b>15S</b>
		Range <b>17W</b>

Operation	Casing	Mud Volume (BBL)	Liner Size	Stroke	Opposite Drill Pipe	Pump Pressure
Present Activity <b>WOC</b>	<b>8 5/8</b> in. at <b>1089</b>	Hole <b>91</b> Pits <b>400</b>	<b>6</b>	<b>14</b>	<b>195</b>	<b>500</b>
Bit Size (in.) <b>7 7/8</b>	No <b>1</b>	Intermediate in. at	Est. Hole/DS capacities <b>1.1463</b>	Opposite Drill Collars <b>356</b>	Pump Make <b>Bethlehem</b>	
Drill pipe sz <b>4 1/2</b>	Type <b>XH</b>	Production / Liner in. at	Volume in Storage <b>Volume</b>	BBL/ Strk <b>0.139</b>	Strk / Min. <b>57</b>	Bottoms Up (Min.) <b>12</b>
Drill Collar size <b>6 1/4</b>	233	Drilling mud type <b>Native/Premix</b>	BBL /Min. <b>7.9</b>	GAL/Min. <b>333</b>	System Total (Min.) <b>62</b>	Critical GPM DC/DP <b>#DIV/0!</b>

Sample from Flowline ___ or Pit ___	Daily Mud Cost <b>166.90</b>	Cumulative Mud Cost <b>541.64</b>
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MUD PROPERTIES SPECIFICATIONS		LCM
Mud Wt. (lbs/gal.) <b>9.0-9.5</b>	Viscosity <b>As needed</b>	LCM <b>As Needed</b>
	Filtrate <b>Filtrate</b>	

Time Sample Taken	7:35 AM
Depth (Ft.)	1,099
Weight (lb/gal.)	
Mud Gradient (psi/ft.)	0.000
Funnel Viscosity (Sec/qt. API)	
Plastic Viscosity cp	
Yield Point (lb/100 sq.ft.)	
Gel Strength 10 sec/10 min.	
pH	
Filtrate API (ml/30 min.)	
Cake Thickness 32nd	
Alkalinity, Mud (Pm)	
Alkalinity, Filtrate (Pf/Mf)	
Chloride Content, ppm	
Calcium, ppm	
Sand Content (% by Vol)	
Solids Content (% by Vol.)	
Oil Content (% by Vol.)	
Water Content (% by Vol.)	100.0
LCM, lbs/bbl.	
Reynold's #DP	#DIV/0!
Reynold's # DC	#DIV/0!
ECD lb/gal	#DIV/0!

**Suggest for mud up:**

- Run plenty of fresh water and jet as needed.
- Flush hole as needed with the following:  
40 bbls. Fresh water  
10-15 sx. Gel  
1/2 sx. Lime (Add just before adding to system)
- If hole pulls tight, add 2-3 gallons of Poly Plus down the pipe on connections.
- If loss circulation does occur, mix and add the following:  
80 bbls. Fresh water  
20 sx. Gel  
18 sx. c/s hulls  
1/2 sx. Lime (Add just before adding to system)
- Displace @ 2800' (or per Geo's orders)
- Fill frac tank with the following:  
80 bbls. Fresh water  
23 sx. Gel  
3 sx. Soda ash  
1 sx. Caustic soda  
1 sx. Lignite  
1/3 sx. Pac  
3 sx. c/s hulls

# 7. Always Keep Hole Full!  
# 8. Always Circulate Hole Clean Before Trips.  
# 9. Always Keep Mud Skids Covered.

Thank You

DRILLING MUD INVENTORY					
Products:	Prior Day	Delivery	On Hand	Used	Cost
Premium Gel	262		262		
Lime	6		6		
Soda Ash	28		28		
Caustic Soda	19		19		
Lignite	15		15		
C/S Hulls	146		136	10	166.90
Drill Pak	6		6		
Desco	2		2		
Poly Plus	2		2		
Florigel					
Xcide					
Sapp					
Barite					
Multi Seal					

Mud-Co / Service Mud Representative  
**Gary Schmidtberger**

Home Address  
**Hays, Ks**

Telephone Number  
**785-625-4931**

Cell: **785-259-2757**

Warehouse Location  
**Hays, Ks**

Telephone Number  
**785-621-4232**

# Mud-Co / Service Mud, Inc.

100 S. Main St., Suite #310, Wichita, Ks. 67202

Report: **5**

## Daily Drilling Mud Report

Date: **05/08/16** Depth: **1943**

Operator <b>Habit Petroleum, LLC.</b>		Contractor <b>Shields Drilling Company, Inc.</b>		Rig No. <b>1</b>
Address <b>Rig</b>		Address <b>Rig</b>		Spud Date <b>05/05/16</b>
Report for Mr. <b>Irvin E. Haselhorst/Duane Stecklein</b>		Report for Mr. <b>George Begler</b>		Section <b>23</b>
Well Name & No. <b>K. Leiker #2 EI: 1960 GL est.</b>		County <b>Ellis</b>	State <b>Kansas</b>	
		Twp <b>15S</b>	Range <b>17W</b>	

Operation <b>Drilling</b>		Casing <b>8 5/8 in. at 1089</b>		Mud Volume (BBL) Hole <b>161</b> Pits <b>400</b>		Circulation Data Liner Size <b>6</b> Stroke <b>14</b>		Opposite Drill Pipe <b>195</b>	Pump Pressure <b>500</b>
Bit Size (in.) <b>7 7/8</b>	No <b>1</b>	Intermediate in. at		Total Circulating Vol. <b>561</b>		Est. Hole/DS capacities <b>1.1463</b>		Opposite Drill Collars <b>356</b>	Pump Make <b>Bethlehem</b>
Drill pipe sz <b>4 1/2</b>	Type <b>XH</b>	Production / Liner in. at		Volume in Storage <b>2 premix in frac</b>		BBV/ Strk <b>0.139</b>	Strk / Min. <b>57</b>	Bottoms Up (Min.) <b>20</b>	Pump Model <b>225</b>
Drill Collar size <b>6 1/4</b>	Drilling mud type <b>233</b>	<b>Native/Premix</b>		BBL/Min. <b>7.9</b>		GAL/Min. <b>333</b>		System Total (Min) <b>71</b>	Critical GPM DC/DP #DIV/0! #DIV/0!

Sample from Flowline ___ or Pit ___	Daily Mud Cost <b>1,516.58</b>	Cumulative Mud Cost <b>2,058.22</b>
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Flowline Temperature _____		Mud Properties		MUD PROPERTIES SPECIFICATIONS		LCM	
Time Sample Taken <b>7:20 AM</b>	Depth (Ft.) <b>1,943</b>	Mud Wt. (lbs/gal.) <b>9.0-9.5</b>	Viscosity <b>As needed</b>	Filtrate <b>Filtrate</b>	<b>As Needed</b>		

Weight (lb/gal.)	<b>10.1</b>
Mud Gradient (psi/ft.)	<b>0.525</b>
Funnel Viscosity (Sec/qt. API)	<b>29</b>
Plastic Viscosity cp	
Yield Point (lb/100 sq.ft.)	
Gel Strength 10 sec/10 min.	
pH	<b>7.0</b>
Filtrate API (ml/30 min.)	<b>NC</b>
Cake Thickness 32nd	
Alkalinity, Mud (Pm)	
Alkalinity, Filtrate (Pf/Mf)	
Chloride Content, ppm	<b>37,000</b>
Calcium, ppm	<b>Hvy</b>
Sand Content (% by Vol)	<b>Tr</b>
Solids Content (% by Vol.)	<b>10.5</b>
Oil Content (% by Vol.)	<b>0.0</b>
Water Content (% by Vol.)	<b>89.5</b>
LCM, lbs/bbl.	<b>Nil</b>
Reynold's #DP	<b>#DIV/0!</b>
Reynold's # DC	<b>#DIV/0!</b>
ECD lb/gal	<b>#DIV/0!</b>

**Suggest for mud up:**

- Run plenty of fresh water and jet as needed.
- Flush hole as needed with the following:  
40 bbls. Fresh water  
10-15 sx. Gel  
1/2 sx. Lime (Add just before adding to system)
- If hole pulls tight, add 2-3 gallons of Poly Plus down the pipe on connections.
- If loss circulation does occur, mix and add the following:  
80 bbls. Fresh water  
20 sx. Gel  
18 sx. c/s hulls  
1/2 sx. Lime (Add just before adding to system)
- Displace @ 2800' (or per Geo's orders)
- Fill frac tank with the following:  
80 bbls. Fresh water  
23 sx. Gel  
3 sx. Soda ash  
1 sx. Caustic soda  
1 sx. Lignite  
1/3 sx. Pac  
3 sx. c/s hulls
- Always Keep Hole Full!
- Always Circulate Hole Clean Before Trips.
- Always Keep Mud Skids Covered.

Thank You

DRILLING MUD INVENTORY					
Products:	Prior Day	Delivery	On Hand	Used	Cost
Premium Gel	262		216	46	787.06
Lime	6		6		
Soda Ash	28		22	6	144.24
Caustic Soda	19		17	2	125.04
Lignite	15		13	2	53.20
C/S Hulls	136		130	6	100.14
Drill Pak	6		5	1	306.90
Desco	2		2		
Poly Plus	2		2		
Florigel					
Xcide					
Sapp					
Barite					
Multi Seal					

Mud-Co / Service Mud Representative <b>Gary Schmidtberger</b>	Home Address <b>Hays, Ks</b>	Telephone Number <b>785-625-4931</b>
Cell: <b>785-259-2757</b>	Warehouse Location <b>Hays, Ks</b>	Telephone Number <b>785-621-4232</b>



# Mud-Co / Service Mud, Inc.

100 S. Main St., Suite #310, Wichita, Ks. 67202

Report: **6**

## Daily Drilling Mud Report

Date: **05/09/16** Depth: **2700**

Operator <b>Habit Petroleum, LLC.</b>	Contractor <b>Shields Drilling Company, Inc.</b>	Rig No. <b>1</b>
Address <b>Rig</b>	Address <b>Rig</b>	Spud Date <b>05/05/16</b>
Report for Mr. <b>Irvin E. Haselhorst/Duane Stecklein</b>	Report for Mr. <b>George Begler</b>	Section <b>23</b> Twp <b>15S</b> Range <b>17W</b>
Well Name & No. <b>K. Leiker #2 El: 1960 GL est.</b>	County <b>Ellis</b>	State <b>Kansas</b>

Operation <b>Drilling</b>	Casing <b>8 5/8 in. at 1089</b>	Mud Volume (BBL) Hole <b>224</b> Pits <b>300</b>	Liner Size <b>6</b> Stroke <b>14</b>	Opposite Drill Pipe <b>195</b>	Pump Pressure <b>700</b>
Bit Size (in.) <b>7 7/8</b>	No <b>1</b>	Total Circulating Vol. <b>524</b>	Est. Hole/DS capacities <b>1.1463</b>	Opposite Drill Collars <b>356</b>	Pump Make <b>Bethlehem</b>
Drill pipe sz <b>4 1/2</b>	Type <b>XH</b>	Volume in Storage <b>Frac is Full</b>	BBV/ Strk <b>0.139</b>	Strk / Min. <b>57</b>	Bottoms Up (Min.) <b>29</b>
Drill Collar size <b>6 1/4</b>	233	Drilling mud type <b>Chemical</b>	BBL/Min. <b>7.9</b>	GAL/Min. <b>333</b>	System Total (Min) <b>66</b>
Sample from Flowline ___ or Pit ___			Daily Mud Cost <b>2,507.63</b>	Cumulative Mud Cost <b>4,565.85</b>	

Flowline Temperature _____	Mud Properties	<b>2,507.63</b>	<b>4,565.85</b>
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Time Sample Taken 7:45 AM	Depth (Ft.) 2700	Mud Wt. (lbs/gal.) 9.0-9.4	Viscosity 50-55	Filtrate 8-10cc	LCM 1-2 ppb.
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Weight (lb/gal.)	9.8
Mud Gradient (psi/ft.)	0.510
Funnel Viscosity (Sec/qt. API)	30
Plastic Viscosity cp	
Yield Point (lb/100 sq.ft.)	
Gel Strength 10 sec/10 min.	
pH	7.0
Filtrate API (ml/30 min.)	NC
Cake Thickness 32nd	
Alkalinity, Mud (Pm)	
Alkalinity, Filtrate (Pf/Mf)	
Chloride Content, ppm	62,000
Calcium, ppm	Hvy
Sand Content (% by Vol)	Tr
Solids Content (% by Vol.)	7.0
Oil Content (% by Vol.)	0.0
Water Content (% by Vol.)	93.0
LCM, lbs/bbl.	Nil
Reynold's #DP	#DIV/0!
Reynold's # DC	#DIV/0!
ECD lb/gal	#DIV/0!

### Suggest :

1. Run stream of water @ flowline slowly to control wt. & vis.
2. If more vis is required, mix gel in pit mud. No Chemicals!
3. If hole pulls tight, add Poly Plus down the pipe on connection.
4. For volume & or when mud wt. climbs above 9.4, mix this:  
**80 bbls. Fresh water**  
**23 sx. Gel**  
**3 sx. Soda ash**  
**1 sx. Caustic Soda**  
**1 sx. Lignite**  
**1/2 sx. Pac**  
**3 sx. c/s hulls**
5. Always Keep Hole Full!
6. Always Circulate Hole Clean Before Trips.
7. Always Keep Mud Skids Covered.
8. Prior to trips, circulate hole until sample box is clean!

**Jet & gun a pit before adding to system.**  
**Add over 1 1/2 hour period.**

**THANK YOU**

DRILLING MUD INVENTORY					
Products:	Prior Day	Delivery	On Hand	Used	Cost
Premium Gel	216		138	78	1,334.58
Lime	6		6		
Soda Ash	22		10	12	288.48
Caustic Soda	17		13	4	250.08
Lignite	13		9	4	106.40
C/S Hulls	130		127	3	50.07
Drill Pak	5		4	1	306.90
Desco	2		2		
Poly Plus	2		1	1	171.12
Florigel					
Xcide					
Sapp					
Barite					
Multi Seal					

Mud-Co / Service Mud Representative <b>Gary Schmidtberger</b>	Home Address <b>Hays, Ks</b>	Telephone Number <b>785-625-4931</b>
<b>Cell: 785-259-2757</b>	Warehouse Location <b>Hays, Ks</b>	Telephone Number <b>785-621-4232</b>

# Mud-Co / Service Mud. Inc.

100 S. Main St., Suite #310, Wichita, Ks. 67202

Report: **7**

## Daily Drilling Mud Report

Date: **05/10/16** Depth: **3328**

Operator <b>Habit Petroleum, LLC.</b>	Contractor <b>Shields Drilling Company, Inc.</b>	Rig No. <b>1</b>
Address <b>Rig</b>	Address <b>Rig</b>	Spud Date <b>05/05/16</b>
Report for Mr. <b>Irvin E. Haselhorst/Duane Stecklein</b>	Report for Mr. <b>George Begler</b>	Section <b>23</b> Twp <b>15S</b> Range <b>17W</b>
Well Name & No. <b>K. Leiker #2 EI: 1960 GL est.</b>	County <b>Ellis</b>	State <b>Kansas</b>

Operation <b>Drilling</b>	Casing <b>8 5/8 in. at 1089</b>	Mud Volume (BBL) Hole <b>276</b> Pits <b>300</b>	Liner Size <b>6</b> Stroke <b>14</b>	Circulation Data Opposite Drill Pipe <b>195</b>	Pump Pressure <b>700</b>
Bit Size (in.) <b>7 7/8</b> No <b>1</b>	Intermediate in. at	Total Circulating Vol. <b>576</b>	Est. Hole/DS capacities <b>1.1463</b>	Opposite Drill Collars <b>356</b>	Pump Make <b>Bethlehem</b>
Drill pipe sz <b>4 1/2</b> Type <b>XH</b>	Production / Liner in. at	Volume in Storage <b>Volume</b>	BB/ Strk <b>0.139</b> Strk / Min. <b>57</b>	Bottoms Up (Min.) <b>35</b>	Pump Model <b>225</b>
Drill Collar size <b>6 1/4</b> <b>233</b>	Drilling mud type <b>Chemical</b>	BBL/Min. <b>7.9</b> GAL/Min. <b>333</b>	System Total (Min) <b>73</b>	Critical GPM DC/DP <b>324</b> <b>474</b>	

Sample from Flowline ___ or Pit ___	Daily Mud Cost <b>513.30</b>	Cumulative Mud Cost <b>5,079.15</b>
Flowline Temperature _____	Mud Properties	

Time Sample Taken	7:40 AM
Depth (Ft.)	3,328
Weight (lb/gal.)	9.2
Mud Gradient (psi/ft.)	0.478
Funnel Viscosity (Sec/qt. API)	55
Plastic Viscosity cp	15
Yield Point (lb/100 sq.ft.)	25
Gel Strength 10 sec/10 min.	8/14
pH	11.0
Filtrate API (ml/30 min.)	7.2
Cake Thickness 32nd	1
Alkalinity, Mud (Pm)	0.0
Alkalinity, Filtrate (Pf/Mf)	1.1/1.3
Chloride Content, ppm	7,400
Calcium, ppm	Tr
Sand Content (% by Vol)	Tr
Solids Content (% by Vol.)	6.0
Oil Content (% by Vol.)	0.0
Water Content (% by Vol.)	94.0
LCM, lbs/bbl.	2
Reynold's #DP	1,161
Reynold's # DC	2,086
ECD lb/gal	9.78

MUD PROPERTIES SPECIFICATIONS			
Mud Wt. (lbs/gal.)	Viscosity	Filtrate	LCM
9.0-9.4	50-55	8-10cc	1-2 ppb.

### Suggest :

1. Run stream of water @ flowline slowly to control wt. & vis.
  2. If more vis is required, mix gel in pit mud. No Chemicals!
  3. If hole pulls tight, add Poly Plus down the pipe on connection.
  4. For volume & or when mud wt. climbs above 9.4, mix this:  
 80 bbls. Fresh water  
 23 sx. Gel  
 3 sx. Soda ash  
 1 sx. Caustic Soda  
 1 sx. Lignite  
 1/2 sx. Pac  
 3 sx. c/s hulls
- Jet & gun a pit before adding to system.  
Add over 1 1/2 hour period.

### 5. Always Keep Hole Full!

# 6. Always Circulate Hole Clean Before Trips.

# 7. Always Keep Mud Skids Covered.

# 8. Prior to trips, circulate hole until sample box is clean!

### THANK YOU

# Displaced @ 2841-2858  
 # Reserve pit chlorides: 77000 ppm.  
 # Reserve pit volume est: 700 bbls.

DRILLING MUD INVENTORY					
Products:	Prior Day	Delivery	On Hand	Used	Cost
Premium Gel	138		108	30	513.30
Lime	6		6		
Soda Ash	10		10		
Caustic Soda	13		13		
Lignite	9		9		
C/S Hulls	127		127		
Drill Pak	4		4		
Desco	2		2		
Poly Plus	1		1		
Florigel					
Xcide					
Sapp					
Barite					
Multi Seal					

Mud-Co / Service Mud Representative <b>Gary Schmidtberger</b>	Home Address <b>Hays, Ks</b>	Telephone Number <b>785-625-4931</b>
Cell: <b>785-259-2757</b>	Warehouse Location <b>Hays, Ks</b>	Telephone Number <b>785-621-4232</b>

# Mud-Co / Service Mud. Inc.

100 S. Main St., Suite #310, Wichita, Ks. 67202

Report: **8**

## Daily Drilling Mud Report

Date: **05/11/16** Depth: **3573**

Operator <b>Habit Petroleum, LLC.</b>	Contractor <b>Shields Drilling Company, Inc.</b>	Rig No. <b>1</b>
Address <b>Rig</b>	Address <b>Rig</b>	Spud Date <b>05/05/16</b>
Report for Mr. <b>Irvin E. Haselhorst/Duane Stecklein</b>	Report for Mr. <b>George Begler</b>	Section <b>23</b> Twp <b>15S</b> Range <b>17W</b>
Well Name & No. <b>K. Leiker #2 El: 1960 GL est.</b>	County <b>Ellis</b>	State <b>Kansas</b>

Operation <b>TIH/w/DST #1</b>	Casing <b>8 5/8 in. at 1089</b>	Mud Volume (BBL) Hole <b>297</b> Pits <b>300</b>	Liner Size <b>6</b> Stroke <b>14</b>	Opposite Drill Pipe <b>195</b>	Pump Pressure <b>700</b>
Bit Size (in.) <b>7 7/8</b>	No <b>1</b>	Total Circulating Vol. <b>597</b>	Est. Hole/DS capacities <b>1.1463</b>	Opposite Drill Collars <b>356</b>	Pump Make <b>Bethlehem</b>
Drill pipe sz <b>4 1/2</b>	Type <b>XH</b>	Volume in Storage <b>Volume</b>	BBL/ Strk <b>0.139</b>	Strk / Min. <b>57</b>	Bottoms Up (Min.) <b>38</b>
Drill Collar size <b>6 1/4</b>	Drilling mud type <b>Chemical</b>	BBL/Min. <b>7.9</b>	GAL/Min. <b>333</b>	System Total (Min) <b>75</b>	Critical GPM DC/DP <b>325 463</b>

Sample from Flowline ___ or Pit ___	Daily Mud Cost <b>-34.22</b>	Cumulative Mud Cost <b>5,044.93</b>
-------------------------------------	---------------------------------	--

Mud Properties	
Time Sample Taken	7:45 AM
Depth (Ft.)	3,573 RTD
Weight (lb/gal.)	9.4
Mud Gradient (psi/ft.)	0.489
Funnel Viscosity (Sec/qt. API)	53
Plastic Viscosity cp	17
Yield Point (lb/100 sq.ft.)	24
Gel Strength 10 sec/10 min.	14/19
pH	10.5
Filtrate API (ml/30 min.)	7.6
Cake Thickness 32nd	1
Alkalinity, Mud (Pm)	0.0
Alkalinity, Filtrate (Pf/Mf)	1.1/1.3
Chloride Content, ppm	7,900
Calcium, ppm	Tr
Sand Content (% by Vol)	Tr
Solids Content (% by Vol.)	7.4
Oil Content (% by Vol.)	0.0
Water Content (% by Vol.)	92.6
LCM, lbs/bbl.	2
Reynold's #DP	1,220
Reynold's # DC	2,077
ECD lb/gal	9.96

MUD PROPERTIES SPECIFICATIONS			
Mud Wt. (lbs/gal.)	Viscosity	Filtrate	LCM
9.0-9.4	50-55	8-10cc	1-2 ppb.

**Suggest :**

1. Run stream of water @ flowline slowly to control wt. & vis.
2. If more vis is required, mix gel in pit mud. **No Chemicals!**
3. If hole pulls tight, add Poly Plus down the pipe on connection.
4. For volume & or when mud wt. climbs above 9.4, mix this:  
**80 bbls. Fresh water**  
**23 sx. Gel**  
**3 sx. Soda ash**  
**1 sx. Caustic Soda**  
**1 sx. Lignite**  
**1/2 sx. Pac**  
**3 sx. c/s hulls**

**Jet & gun a pit before adding to system.**  
**Add over 1 1/2 hour period.**

5. Always Keep Hole Full!
6. Always Circulate Hole Clean Before Trips.
7. Always Keep Mud Skids Covered.
8. Prior to trips, circulate hole until sample box is clean!

**THANK YOU**

Loggers TD: 3571

DRILLING MUD INVENTORY					
Products:	Prior Day	Delivery	On Hand	Used	Cost
Premium Gel	108		110	-2	-34.22
Lime	6		6		
Soda Ash	10		10		
Caustic Soda	13		13		
Lignite	9		9		
C/S Hulls	127		127		
Drill Pak	4		4		
Desco	2		2		
Poly Plus	1		1		
Florigel					
Xcide					
Sapp					
Barite					
Multi Seal					

Mud-Co / Service Mud Representative <b>Gary Schmidtberger</b>	Home Address <b>Hays, Ks</b>	Telephone Number <b>785-625-4931</b>
Cell: <b>785-259-2757</b>	Warehouse Location <b>Hays, Ks</b>	Telephone Number <b>785-621-4232</b>

2647

# GLOBAL CEMENTING, L.L.C.

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT: Russell KS

DATE <u>5-11-2014</u>	SEC. <u>23</u>	TWP. <u>15</u>	RANGE <u>17</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>8:00PM</u>
LEASE <u>K-Leiker</u>		WELL #. <u>#2</u>	LOCATION <u>VICTORIA 7 S 2W/25</u>	COUNTY <u>ELLIS</u>		STATE <u>KANSAS</u>	
OLD OR <u>(NEW)</u> (CIRCLE ONE)				<u>2E 4S</u>			

CONTRACTOR <u>Shields DRG. Rig #2</u>	OWNER
TYPE OF JOB <u>ROTARY Plug</u>	
HOLE SIZE <u>7 7/8"</u>	T.D. <u>3573'</u>
CASING SIZE <u>8 5/8 SURFACE</u>	DEPTH <u>1086'</u>
TUBING SIZE	DEPTH
DRILL PIPE <u>4 1/2 X-H</u>	DEPTH <u>3538</u>
TOOL	DEPTH
PRES. MAX	MINIMUM <input checked="" type="checkbox"/>
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS	
DISPLACEMENT	

EQUIPMENT	
PUMP TRUCK # <u>P-2</u>	CEMENTER <u>GLENN G.</u>
BULK TRUCK # <u>B-4</u>	HELPER <u>CODY H.</u>
BULK TRUCK #	DRIVER <u>JASON M.</u>
BULK TRUCK #	DRIVER

CEMENT AMOUNT ORDERED <u>255 SX 40 4% GEL</u>	
<u>1/4# F10-SEAL PER SX</u>	
COMMON _____	@ _____
POZMIX _____	@ _____
GEL _____	@ _____
CHLORIDE _____	@ _____
ASC _____	@ _____
_____	@ _____
_____	@ _____
_____	@ _____
_____	@ _____
_____	@ _____
HANDLING _____	@ _____
MILEAGE _____	@ _____
TOTAL _____	

### REMARKS:

50 SX @ 3538  
50 SX @ 1175  
100 SX @ 500  
10 SX @ 40 d WOODEN Plug  
30 SX @ RAT Hole +  
15 SX @ Mouse Hole

CHARGE TO: HABIT OIL PRODUCTION  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

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

PRINTED NAME George Begler  
 SIGNATURE George Begler

SERVICE	
DEPTH OF JOB	
PUMP TRUCK CHARGE	
EXTRA FOOTAGE	@ _____
MILEAGE	@ _____
MANIFOLD	@ _____
_____	@ _____
_____	@ _____
TOTAL _____	

PLUG & FLOAT EQUIPMENT	
<u>1- 8 5/8 WOODEN Wiper Plug</u>	@ _____
_____	@ _____
_____	@ _____
_____	@ _____
_____	@ _____
TOTAL _____	

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES \_\_\_\_\_  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

# GLOBAL CEMENTING, L.L.C.

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT: Russell

5-7-2016

DATE <u>5-6-16</u>	SEC. <u>23</u>	TWP. <u>15 S</u>	RANGE <u>17 W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>3:00 AM</u>
LEASE <u>K-Leiker</u>	WELL #. <u>2</u>	LOCATION <u>Victoria T-S. 2W</u>			COUNTY <u>Ellis</u>	STATE <u>KANSAS</u>	
OLD OR <u>NEW</u> (CIRCLE ONE)				<u>1/2 S 1/2 E</u>			

CONTRACTOR SHIELDS DALG. Rig #1

TYPE OF JOB Long SURFACE

HOLE SIZE 12 1/4 T.D. 1099

CASING SIZE 8 5/8 DEPTH 1086

TUBING SIZE 23#CSG DEPTH

DRILL PIPE DEPTH

TOOL BAFFLE Plate DEPTH 1056

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS

DISPLACEMENT 67 1/2 BBL

OWNER \_\_\_\_\_

CEMENT AMOUNT ORDERED 425 SX TOTAL

300 SX 601140

125 SX COM 2% GEL

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

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

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

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

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

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

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

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

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

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

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

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

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

TOTAL \_\_\_\_\_

EQUIPMENT

PUMP TRUCK CEMENTER Glenn G.

# P-2 HELPER Cody H.

BULK TRUCK

# B-3 DRIVER Jason M

BULK TRUCK

# DRIVER

REMARKS:

Set 8 5/8 @ 1086' 23#CSG.

Circulate 15 minutes

Cement w/ 425 SX 243cc

Release SOLID RUBBER Plug.

Displaced 68 BBL

Land Plug @ 600 #.

Cement Circulated THANKS

CHARGE TO: Habit Petroleum LLC

STREET \_\_\_\_\_

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

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

PRINTED NAME George Begler

SIGNATURE George Begler

### SERVICE

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

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

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

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

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

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

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

TOTAL \_\_\_\_\_

### PLUG & FLOAT EQUIPMENT

1- 8 5/8 Baffle Plate

1- Solid Rubber Plug

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

TOTAL \_\_\_\_\_

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

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

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






# TRILOBITE TESTING, INC.

1515 Commerce Pkwy HAYS, KANSAS 67601  
TELEPHONE: (785) 625-4778 FAX: (785) 625-5620

DATE INVOICE #  
5/26/2016 23002

Habit Petroleum LLC  
PO Box 243  
Hays, KS 67601

		PO/PAYEE #	TERMS	DUE DATE
<b>K. Leiker #2</b>		<b>23 15S 17W Ellis KS</b>	Net 30	6/25/2016
Date	Ticket #	Description		Amount
5/11/2016	64774	DST #1 3340-3400, total depth 3571 21 Miles @ \$0.75 (Round Trip) Straddle		1
<p>Thank You</p> 				

Please note that we have moved our New address is 1515 Commerce Parkway, Hays KS 67601

For a complete price list go to <http://www.trilobitetesting.com> If you are interested in Paperless Invoices please contact us at [trilobite@eaglecom.net](mailto:trilobite@eaglecom.net)

F  
T  
E

# **GEOLOGICAL REPORT**

**Habit Petroleum, LLC  
K. Leiker #2  
660' FSL & 1585' FWL  
SEC. 23 TWP 15S RGE 17W  
Ellis County, Kansas**

**COMMENCED: 5/5/16  
COMPLETED: 5/11/16  
CONTRACTOR: Shields Drilling Co.  
SURFACE PIPE: 8 5/8" at 1089'  
PRODUCTION PIPE: None D & A**

**May 21, 2016**



## Formation Data

Elevation: (1960 K.B.) – (1955 G.L.)  
All top formations measured from 1960 K.B.

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>SEA-LEVEL DATUM</u>
Anhydrite	1083	+877
Topeka	2988	-1028
Heebner	3216	-1256
Toronto	3230	-1270
Lansing-K.C.	3260	-1300
Base-K.C.	3496	-1536
Conglomerate	3530	-1570
Arbuckle	3557	-1597
R.T.D.	3573	-1613

<u>FORMATION</u>	<u>LOG TOPS</u>	<u>SEA-LEVEL DATUM</u>
Anhydrite	1083	+877
Topeka	2984	-1024
Heebner	3213	-1253
Toronto	3231	-1271
Lansing-K.C.	3260	-1300
Base-K.C.	3496	-1536
Conglomerate	3530	-1570
Arbuckle	3558	-1598
R.T.D.	3571	-1611

All samples were examined and described by me on actual location and did not start until a depth of 2950' was reached. All zones and sample tops examined are all true and accurate according to drillers depth.

One foot drilling time was logged from a depth of 2950' to 3573', and all zones were examined by ten foot samples at a rotary depth of 2950' to 3250'. Five foot samples were examined from a rotary depth of 3255' to 3573'.

## Sample Description

Following are the pertinent geological formation and all zones of subject well K. Leiker #2

### THE FOLLOWING ZONES WERE NOTED:

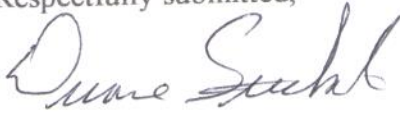
TOPEKA	2988-2996	Limestone – buff, fine crystalline, no show of oil.
	3000-3006	Limestone – cream, fine crystalline to chalky, poor inter porosity, very slight show of oil stain, no odor.
DEER CREEK	3025-3058	Limestone – cream, fine crystalline to chalky, no show of oil.
LECOMPTON	3070-3120	Limestone – same as above.
OREAD LIME	3135-3154	Limestone – cream, fine crystalline to dense lime, no inter porosity, no show of oil.
	3170-3216	Limestone – same as above, with chalk.
TORONTO	3230-3240	Limestone – buff to tan, very dense lime, no visible porosity, no show of oil.
LANSING – K.C.		
(A-Zone)	3260-3265	Limestone – white to cream, fine crystalline to chalky, poor inter porosity, no show of oil.
(C-Zone)	3288-3296	Limestone – same as above.
(D-Zone)	3306-3310	Limestone – white to cream, fine crystalline, to dense lime, no inter porosity, no show of oil.

(F-Zone)	3334-3346	Limestone – white, fine crystalline, fair inter porosity with a good show of oil stain with free oil and good odor, friable.
(G-Zone)	3360-3370	Limestone – white to cream, fine crystalline to oolitic and oolitic in part, barren, no odor.
(H-Zone)	3398-3406	Limestone – white to cream, fine crystalline to chalky in part, poorly developed, no inter porosity, no show of oil.
(I-Zone)	3422-3427	Limestone – cream to tan, very small show of oil stain to free oil in pin point, fine crystalline porosity, poor inter porosity, no odor.
(J-Zone)	3439-3444	Limestone – tan, very fine crystalline to dense lime, no inter porosity, no show of oil.
(K-Zone)	3460-3468	Limestone – same as above.
(L-Zone)	3484-3490	Limestone – cream, dense lime, no porosity, no show of oil.
ARBUCKLE	3555-3560	Dolomite – white, medium crystalline, poor inter porosity, tight, show of black residual stain, no free oil, no odor.
	3561-3573	Dolomite – white, medium crystalline, poor inter porosity, very small show of residual stain.

## Remarks and Conclusion

During the drilling of the K. Leiker #2, the subject well ran low in the Lansing K.C. and Arbuckle formations, and due to the poor drill stem test results in the Lansing K.C., operator of Habit Petroleum, LLC decided to plug and abandon well as a dry hole.

Respectfully submitted,

A handwritten signature in black ink that reads "Duane Stecklein". The signature is written in a cursive style with a large, looped initial "D".

Duane Stecklein, Geologist



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64774

Well Name & No. K. Leiker # 2 Test No. 1 Date 5-11-16  
 Company Habit Petroleum LLC Elevation 1964 KB 1959 GL  
 Address 639 280th Ave Box 243 Hays KS 67601-9530  
 Co. Rep / Geo. Duane Stecklein Rig Shields  
 Location: Sec. 23 Twp. 15<sup>s</sup> Rge. 17<sup>w</sup> Co. Ellis State KS

Interval Tested 3340 - 3400 Zone Tested LKC "F"  
 Anchor Length 60 Drill Pipe Run 2859 Mud Wt. 9.2  
 Top Packer Depth 3340 Drill Collars Run 0 Vis 55  
 Bottom Packer Depth 3400 Wt. Pipe Run 466 WL 7.2  
 Total Depth 3570 LogTD Chlorides 7400 ppm System LCM 2

Blow Description IFP - Surface Blow Building to 3 1/2 in.  
ISIP - No Blow  
FFP - Surface Blow in 3 min. Building to 1 1/2 in.  
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>MCW</u>		<u>70</u>	<u>30</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>Show of Oil in Tool</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 90 BHT 103 Gravity \_\_\_\_\_ API RW 376 @ 67 ° F Chlorides 19000 ppm

(A) Initial Hydrostatic <u>1750</u>	<input checked="" type="checkbox"/> Test _____	T-On Location <u>05:47</u>
(B) First Initial Flow <u>39</u>	<input type="checkbox"/> Jars _____	T-Started <u>06:52</u>
(C) First Final Flow <u>59</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>08:52</u>
(D) Initial Shut-In <u>878</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>10:52</u>
(E) Second Initial Flow <u>62</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>12:26</u>
(F) Second Final Flow <u>78</u>	<input checked="" type="checkbox"/> Mileage <u>21 RT</u>	Comments _____
(G) Final Shut-In <u>852</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1702</u>	<input checked="" type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total _____
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total _____
	<input type="checkbox"/> Accessibility _____	MP/DST Disc _____
	Sub Total _____	

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Habit Petroleum LLC  
 639 280th Ave. Box 243  
 Hays KS 67601-9530  
 ATTN: Duane Stecklein

**23 15s 17w Ellis**  
**K Leiker 2**  
 Job Ticket: 64774      **DST#: 1**  
 Test Start: 2016.05.11 @ 06:52:00

**GENERAL INFORMATION:**

Formation: **LKC " F "**  
 Deviated: **No Whipstock**      ft (KB)  
 Time Tool Opened: 08:51:30  
 Time Test Ended: 12:26:00

Test Type: **Conventional Straddle (Initial)**  
 Tester: **Jim Svaty**  
 Unit No: **76**

Interval: **3340.00 ft (KB) To 3400.00 ft (KB) (TVD)**  
 Total Depth: **3571.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **1964.00 ft (KB)**  
**1958.00 ft (CF)**  
 KB to GR/CF: **5.00 ft**

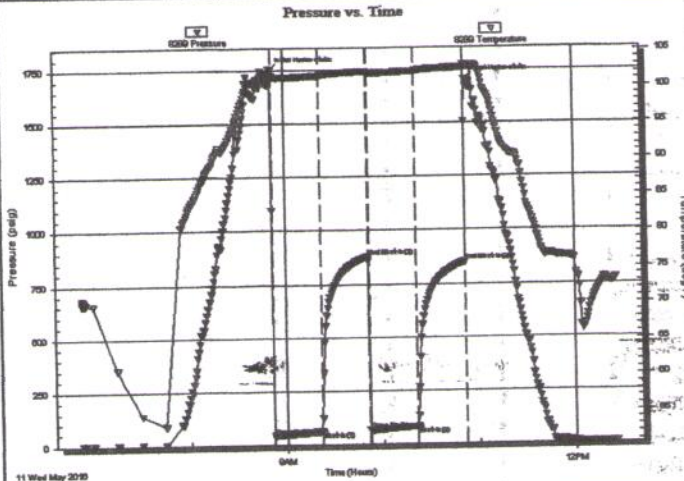
**Serial #: 8289**

**Outside**

Press@RunDepth: **78.63 psig @ 3381.00 ft (KB)**  
 Start Date: **2016.05.11**      End Date: **2016.05.11**  
 Start Time: **06:52:00**      End Time: **12:26:00**

Capacity: **8000.00 psig**  
 Last Calib.: **2016.05.11**  
 Time On Btm: **2016.05.11 @ 08:51:00**  
 Time Off Btm: **2016.05.11 @ 10:52:45**

**TEST COMMENT:** 30-IFP- Surface Blow Building to 3 1/2in.  
 30-ISF- No Blow  
 30-FFP- Surface Blow in 3min. Building to 1 1/2in.  
 30-FSIF- No Blow



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1750.68	101.87	Initial Hydro-static
1	39.97	101.35	Open To Flow (1)
31	59.66	101.52	Shut-In(1)
60	878.17	102.09	End Shut-In(1)
61	62.94	101.79	Open To Flow (2)
91	78.63	102.10	Shut-In(2)
121	852.22	102.60	End Shut-In(2)
122	1702.92	102.84	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
90.00	MCW 30% m 70% w	0.66
0.00	Show of Oil in Tool	0.00

**Gas Rates**

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

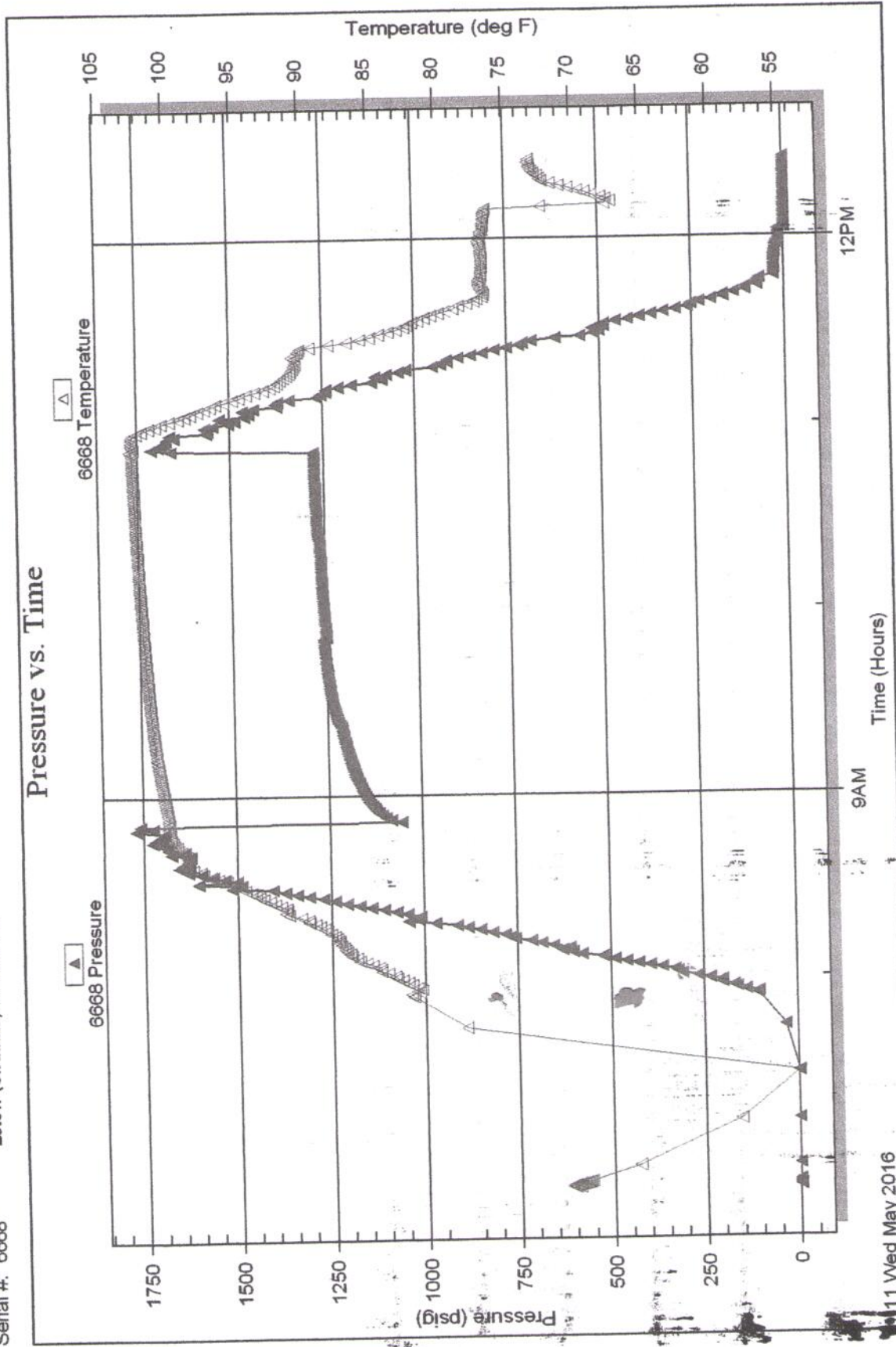
DST Test Number: 1

K Leiker 2

Below (Strat Petroleum LLC)

Serial #: 6668

### Pressure vs. Time



11 Wed May 2016

Printed: 2016.05.11 @ 12:33:57

Ref. No.: 64774

Trilobite Testing, Inc

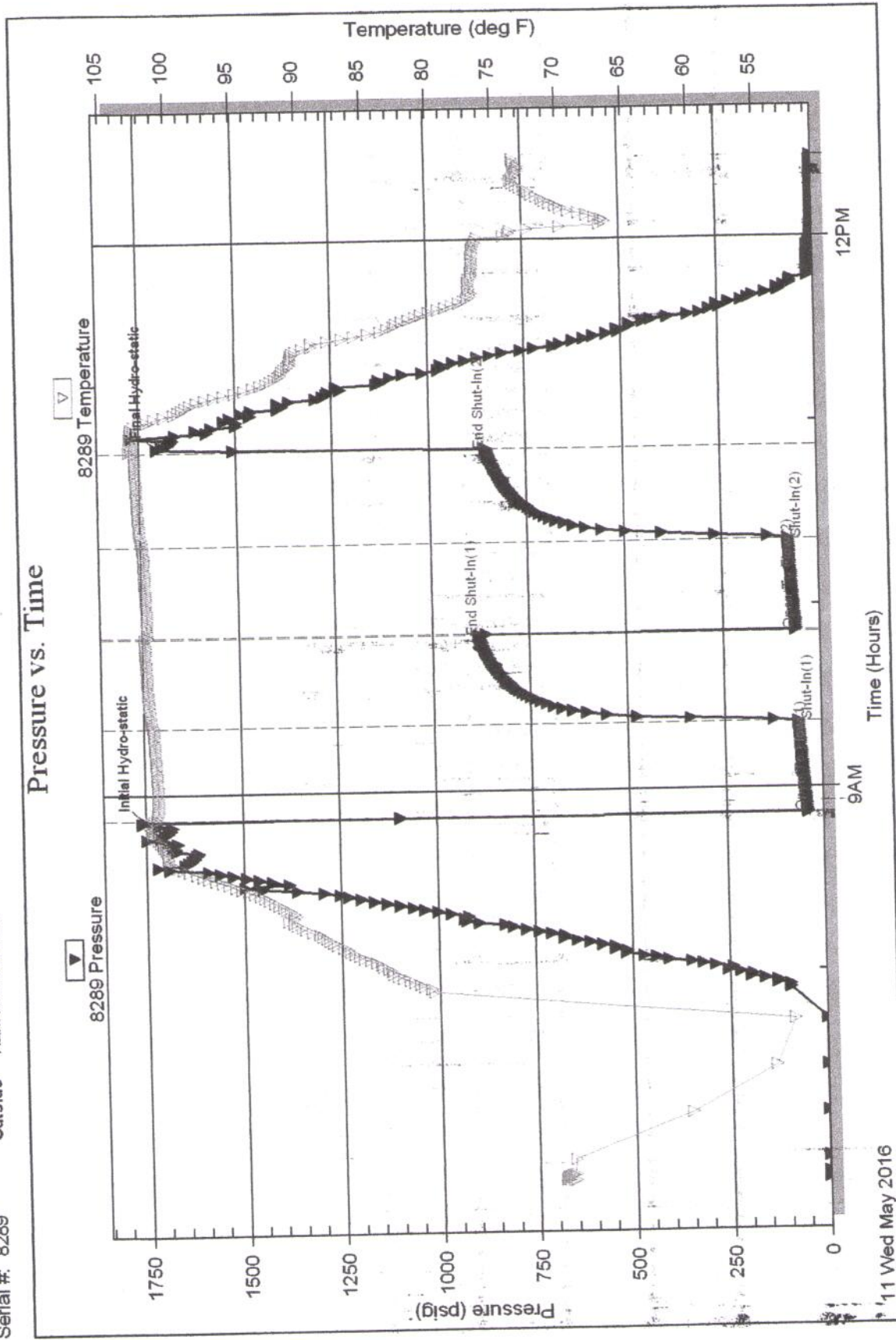
DST Test Number: 1

K Lelker 2

Outside Habit Petroleum LLC

Serial #: 8289

### Pressure vs. Time



11 Wed May 2016

Printed: 2016.05.11 @ 12:31:52

Ref. No: 64774

Trilobite Testing, Inc