



Confidentiality Requested:

Yes No

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: _____

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: Yes No

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

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> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Gage 1
Doc ID	1209198

All Electric Logs Run

Compensated Density Neutron Log
Micro Resistivity Log
Dual Induction Log
Cement Bond Log

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Gage 1
Doc ID	1209198

Tops

Name	Top	Datum
Anhydrite	853'	(+1017)
Topeka	2750'	(-880)
Heebner	2980'	(-1110)
Toronto	2996'	(-1126)
Lansing	3044'	(-1174)
Base/KC	3296'	(-1426)
Arbuckle	3326'	(-1456)
L.T.D.	3400'	(-1530)

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Gage 1
Doc ID	1209198

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3332-42' (Arbuckle)	350 gals. 15% NE acid	(Non-productive) squeezed w/50 sks.
4	3349-53', 3332-40' (Arbuckle)	None - completed natural	(Non-productive) set BP @ 3346'
4	3234-43' (L/KC J zone)	1000 gals. 15% NE acid	
4	3215-20' (L/KC I zone)	1000 gals. 15% NE acid (I & J)	1500 gals. 28% acid (I & J)
4	3113-32' (L/KC E-F zone)	1000 gals. 15% NE acid (E & F)	
4	3074-81' (L/KC C zone)	750 gals. 15% NE acid	
4	3000-03' (Toronto)	500 gals. 15% NE acid	(Non-productive)

Marge Schulte

From: Marge Schulte
Sent: Thursday, June 05, 2014 1:49 PM
To: 'Rick Hestermann'
Subject: RE: Gage #1

Thank you for the response Rick. I will file a KOLAR correction on the ACO-1, and I realized I had mentioned the incorrect zone that is non-productive – it is the Toronto instead of the Lansing.

Marge

From: Rick Hestermann [<mailto:r.hestermann@kcc.ks.gov>]
Sent: Thursday, June 05, 2014 1:25 PM
To: Marge Schulte
Subject: Gage #1

Marge,

If the Lansing perms are not productive, then I would file a correction on the ACO-1 removing it as a productive interval. This would preclude the necessity of filing an ACO-4 for commingling.

Rick

Rick Hestermann, Production Dept.
Conservation Division
Kansas Corporation Commission
130 S. Market St | Wichita, KS | 67202-3802
Phone (316) 337-6200 | Fax (316) 337-6211

Marge Schulte

From: Marge Schulte
Sent: Thursday, June 05, 2014 10:59 AM
To: 'r.hestermann@kcc.ks.gov.'
Subject: 15-167-23930-00-00

Good morning Rick,

I had originally filed the ACO-I for our new Gage #1 well as Commingled production (Toronto & Lansing). Only 3' of the ~~Lansing~~ ^{Toronto} was perforated, and John III has informed me that the acid job was so "tight" on completion "that the zone could not produce much of anything" – probably just a trace. In this case – I assume the ACO-4 would not be necessary or should I make any kind of corrective adjustment to the ACO-I through KOLAR?

Marge Schulte
John O. Farmer, Inc.
P.O. Box 352
Russell, KS 67665
(785) 483-3145, Ext. 214
FAX: (785) 483-6020
marge.schulte@johnofarmer.com

Summary of Changes

Lease Name and Number: Gage 1

API/Permit #: 15-167-23930-00-00

Doc ID: 1209198

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Approved Date	04/14/2014	06/06/2014
Method Of Completion - Commingled	Yes	No
Producing Formation	Toronto & Lansing/KC	Lansing/KC
Production Interval #1	3000-3243' OA	3074-3243' OA
Save Link	../..kcc/detail/operatorEditDetail.cfm?docID=1198439	../..kcc/detail/operatorEditDetail.cfm?docID=1209198

Summary of Attachments

Lease Name and Number: Gage 1

API: 15-167-23930-00-00

Doc ID: 1209198

Correction Number: 1

Attachment Name

Gage #1 E-mails



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1198439
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

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

CONFIDENTIAL 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: _____

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 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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Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Gage 1
Doc ID	1198439

All Electric Logs Run

Compensated Density Neutron Log
Micro Resistivity Log
Dual Induction Log
Cement Bond Log

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Gage 1
Doc ID	1198439

Tops

Name	Top	Datum
Anhydrite	853'	(+1017)
Topeka	2750'	(-880)
Heebner	2980'	(-1110)
Toronto	2996'	(-1126)
Lansing	3044'	(-1174)
Base/KC	3296'	(-1426)
Arbuckle	3326'	(-1456)
L.T.D.	3400'	(-1530)

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Gage 1
Doc ID	1198439

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3332-42' (Arbuckle)	350 gals. 15% NE acid	(Non-productive) squeezed w/50 sks.
4	3349-53', 3332-40' (Arbuckle)	None - completed natural	(Non-productive) set BP @ 3346'
4	3234-43' (L/KC J zone)	1000 gals. 15% NE acid	
4	3215-20' (L/KC I zone)	1000 gals. 15% NE acid (I & J)	1500 gals. 28% acid (I & J)
4	3113-32' (L/KC E-F zone)	1000 gals. 15% NE acid (E & F)	
4	3074-81' (L/KC C zone)	750 gals. 15% NE acid	
4	3000-03' (Toronto)	500 gals. 15% NE acid	



Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: Discovery Drilling Co., Inc. LIC#31548
370 West Wichita Avenue-P.O. Box 352 PO Box 763
Russell, KS 67665 Hays, KS 67601

Lease: Gage # 1 Location: 695 FSL - 690 FEL
SE/NW/SE/SE
Section 1/ 15S/ 14W
Russell County, KS

Loggers Total Depth: 3400' API#15- 167-23,930-00-00
Rotary Total Depth: 3400' Elevation: 1862 GL - 1870 KB
Commenced: 12/18/2013 Completed: 1/10/2014
Casing: 8 5/8" @ 468'W/200sks Status: Oilwell
5 1/2" @ 3397'W/130sks

DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>888'</u>
Dakota Sand	<u>301'</u>	Shale & Lime	<u>1554'</u>
Shale	<u>342'</u>	Shale	<u>1915'</u>
Cedar Hill Sand	<u>616'</u>	Shale & Lime	<u>2237'</u>
Red Bed Shale	<u>748'</u>	Lime & Shale	<u>3016'</u>
Anhydrite	<u>856'</u>	RTD	<u>3400'</u>
Base Anhydrite	<u>888'</u>		

STATE OF KANSAS)
) ss
COUNTY OF ELLIS)

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

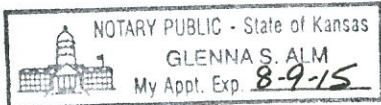
Thomas H. Alm

Subscribed and sworn to before me on 1-14-14

My Commission expires: 8-9-15

(Place stamp or seal below)

Notary Public



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 7627

Date	12-19-13	Sec.	1	Twp.	15	Range	14	County	Russell	State	KS	On Location	2:00 AM	Finish	4:15 AM
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Location Russell S to Walters RD

Lease ~~Quinn~~ Sage Well No. 1 Owner IE S I E IN

Contractor Discovey 2
To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
Type Job Surface cementer and helper to assist owner or contractor to do work as listed.

Hole Size 12 1/4 T.D. 468 Chai To JOHN O Farmer Inc

Csg. 4 5/8 Depth 468 Str _____

Tbg. Size _____ Depth _____ City _____ State _____

Tool _____ Depth _____ The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 20 ft Shoe Joint 20 ft Cement Amount Ordered 200 Com

Meas Line 23# Displace 28.5 BBL 3% CC 2% Gel

EQUIPMENT Common 200

Pumptrk 15 No. Cementer with Poz. Mix _____
Helper _____

Bulktrk 14 No. Driver hick Gel. 4
Driver _____

Bulktrk pu No. Driver Jason May Calcium 7
Driver _____

JOB SERVICES & REMARKS Hulls _____

Remarks: Salt _____

Rat Hole Flowseal _____

Mouse Hole Kol-Seal _____

Centralizers Mud CLR 48 _____

Baskets CFL-117 or CD110 CAF 38 _____

D/V or Port Collar Sand _____

lease ~~to~~ Sage Handling 211

Mileage 8 5/8 **FLOAT EQUIPMENT**

Cement did Guide Shoe _____
Circulate Centralizer _____

Baskets _____

AFU Inserts _____

Float Shoe _____

Latch Down _____

Head of man _____

Wood Plug _____

Pumptrk Charge Surface

Mileage 14

X Signature <u>[Signature]</u>	Tax
	Discount
	Total Charge

ALLIED OIL & GAS SERVICES, LLC 061095

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

COPY

SERVICE POINT: Crest Bend

DATE <u>1-15-14</u>	SEC. <u>1</u>	TWP. <u>15</u>	RANGE <u>14</u>	CALLED OUT	ON LOCATION	JOB START <u>7:30 AM</u>	JOB FINISH <u>5:30 PM</u>
LEASE <u>Cagle</u>	WELL # <u>1</u>	LOCATION <u>Spussel to water rd</u>			COUNTY <u>Tarrant</u>	STATE <u>TX</u>	
OLD OR NEW (Circle one) <u>NEW</u>		E to corner Spussel to water rd E. W. W. W. W. W.					

CONTRACTOR <u>Discosony Drilling #2</u>	OWNER
TYPE OF JOB <u>Production</u>	
HOLE SIZE _____ T.D. _____	CEMENT
CASING SIZE <u>5 1/2</u> DEPTH <u>3397</u>	AMOUNT ORDERED <u>175 skt ASC 2% gel</u>
TUBING SIZE _____ DEPTH _____	<u>6" 94 10% Salt 5# per skt joint seal</u>
DRILL PIPE _____ DEPTH _____	
TOOL _____ DEPTH _____	
PRES. MAX <u>1800 psi</u> MINIMUM _____	COMMON _____ @ _____
MEAS. LINE _____ SHOE JOINT _____	POZMIX _____ @ _____
CEMENT LEFT IN CSG. <u>17 Ft</u>	GEL _____ @ _____
PERFS. _____	CHLORIDE _____ @ _____
DISPLACEMENT <u>82.56 bbl freshwater</u>	ASC <u>175 skt</u> @ <u>20.90</u> <u>3,657.50</u>

EQUIPMENT

PUMP TRUCK # <u>597</u>	CEMENTER <u>Josh Isaac</u>
BULK TRUCK # <u>599</u>	HELPER <u>Charles Keegan</u>
BULK TRUCK # _____	DRIVER <u>WJ Guest</u>
BULK TRUCK # _____	DRIVER <u>Trammy Tijerina</u>

GILSONITE <u>875</u>	@ <u>.98</u>	<u>857.50</u>
2 gall KCL	@ <u>34.40</u>	<u>68.80</u>
Du 1100 500	@ <u>1.27</u>	<u>635.00</u>
HANDLING <u>223.46</u>	@ <u>2.48</u>	<u>554.18</u>
MILEAGE <u>9.75 x 14 x</u>	@ <u>2.60</u>	<u>355.19</u>
		TOTAL <u>6,128.17</u>

REMARKS:
 Break circulation w/ Pigment Circulate 30 mins
 Pump 1000 Du 1100 - 1000 KCL
 Plug 2H - 30 SKS - M H - 15 SKS
 Mix 130 SKS ASC 2% gel 6" 94 w/ salt
 Drop plug
 Displace 82.56 bbl freshwater w/ KCL
 Land plug 1800 psi
 Rig down

SERVICE

DEPTH OF JOB <u>3401</u>	
PUMP TRUCK CHARGE	<u>2558.25</u>
EXTRA FOOTAGE	@ _____
MILEAGE <u>Hum 14</u>	@ <u>7.70</u> <u>107.80</u>
MANIFOLD <u>Hum 14</u>	@ <u>275.00</u> <u>275.00</u>
	@ <u>4.40</u> <u>61.60</u>
TOTAL <u>3,003.15</u>	

CHARGE TO: John Payne

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

6 centalizers	@ <u>57.33</u>	<u>343.98</u>
ASV Guide shoe	@ <u>408.33</u>	<u>408.33</u>
100ft Scratchers 20	@ <u>65.00</u>	<u>1300.00</u>
Witch down plug	@ <u>398.75</u>	<u>398.75</u>
		TOTAL <u>2,451.06</u>

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

SALES TAX (If Any) _____ 38

TOTAL CHARGES 11,582.38

DISCOUNT 1,826.36 IF PAID IN 30 DAYS

9,756.02

PRINTED NAME X

SIGNATURE X Chris Weirich

Thank you!!

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 7691

Date	Sec.	Twp.	Range	County	State	On Location	Finish
1-22-14				Russell	KS		11:15 AM

Location Russells to Walters Rd IE IS IE IN

Lease <u>Gage #1</u>	Well No.	Owner
Contractor <u>L&M</u>		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Type Job <u>Squeeze</u>		
Hole Size	T.D.	Charge To <u>John O. Farmer</u>
Csg.	Depth	Street
Tbg. Size	Depth	City State
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered <u>100 COM</u>

Meas Line Displace Used 50

EQUIPMENT		
Pumptrk 5	No.	Cementer Helper <u>Lonnie W</u>
Bulktrk 3	No.	Driver <u>Claton</u>
Bulktrk <u>P4</u>	No.	Driver <u>Travis</u>

JOB SERVICES & REMARKS	
Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand

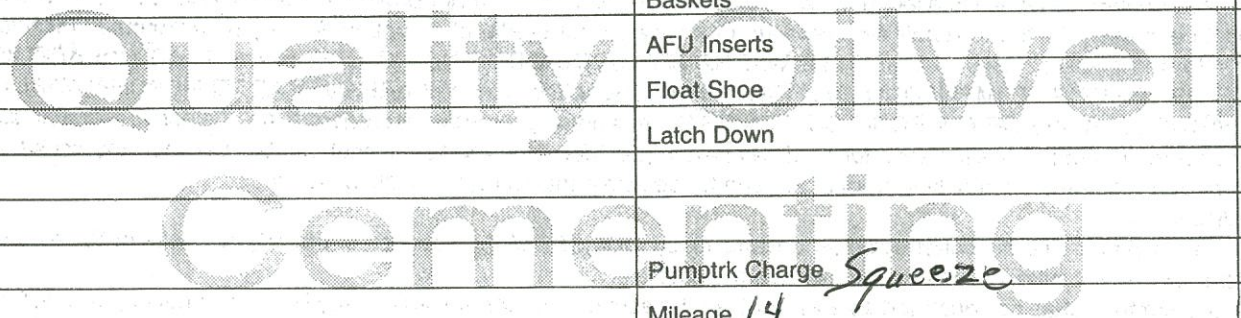
loaded back side and pressured up to 500psi. Hooked to tubing loaded and took rate. Mixed 50sx and displaced squeezed to 2000psi. washed clean pulled 5 Joints and shut in with 500psi

Handling	<u>100</u>
Mileage	

FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge	<u>Squeeze</u>
Mileage	<u>14</u>

<input checked="" type="checkbox"/> Signature <u>Uel Ohu</u>	Tax
	Discount
	Total Charge





DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Gage #1

1-15s-14w Russell,KS

Start Date: 2014.01.07 @ 08:41:23

End Date: 2014.01.07 @ 15:26:43

Job Ticket #: 56033 DST #: 1

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

Printed: 2014.01.10 @ 14:07:17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56033

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.01.07 @ 08:41:23

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:01:03

Time Test Ended: 15:26:43

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 49

Interval: 3067.00 ft (KB) To 3096.00 ft (KB) (TVD)

Reference Elevations: 1870.00 ft (KB)

Total Depth: 3096.00 ft (KB) (TVD)

1862.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898 Outside

Press@RunDepth: 28.24 psig @ 3068.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.07 End Date: 2014.01.07

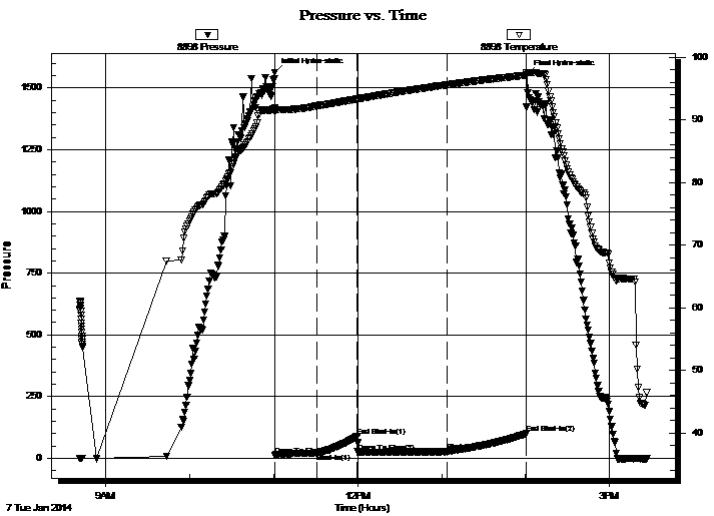
Last Calib.: 2014.01.07

Start Time: 08:41:24 End Time: 15:26:43

Time On Btm: 2014.01.07 @ 11:00:53

Time Off Btm: 2014.01.07 @ 14:00:53

TEST COMMENT: Weak surface blow built to 1 1/2"
Dead no blow back
Weak surface blow built to 3/4"
Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1563.47	91.91	Initial Hydro-static
1	13.38	91.30	Open To Flow (1)
30	21.76	92.22	Shut-In(1)
59	89.50	93.34	End Shut-In(1)
60	25.70	93.33	Open To Flow (2)
124	28.24	95.62	Shut-In(2)
180	99.42	97.13	End Shut-In(2)
180	1553.90	97.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% W/ Oil Spots	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56033

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.01.07 @ 08:41:23

Tool Information

Drill Pipe:	Length: 3035.00 ft	Diameter: 3.80 inches	Volume: 42.57 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 42.72 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3067.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	29.00 ft				
Tool Length:	49.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3052.00	
Hydraulic tool	5.00			3057.00	
Packer	5.00			3062.00	20.00 Bottom Of Top Packer
Packer	5.00			3067.00	
Stubb	1.00			3068.00	
Recorder	0.00	8897	Inside	3068.00	
Recorder	0.00	8898	Outside	3068.00	
Perforations	25.00			3093.00	
Bullnose	3.00			3096.00	29.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56033

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.01.07 @ 08:41:23

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	100% W/ Oil Spots	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

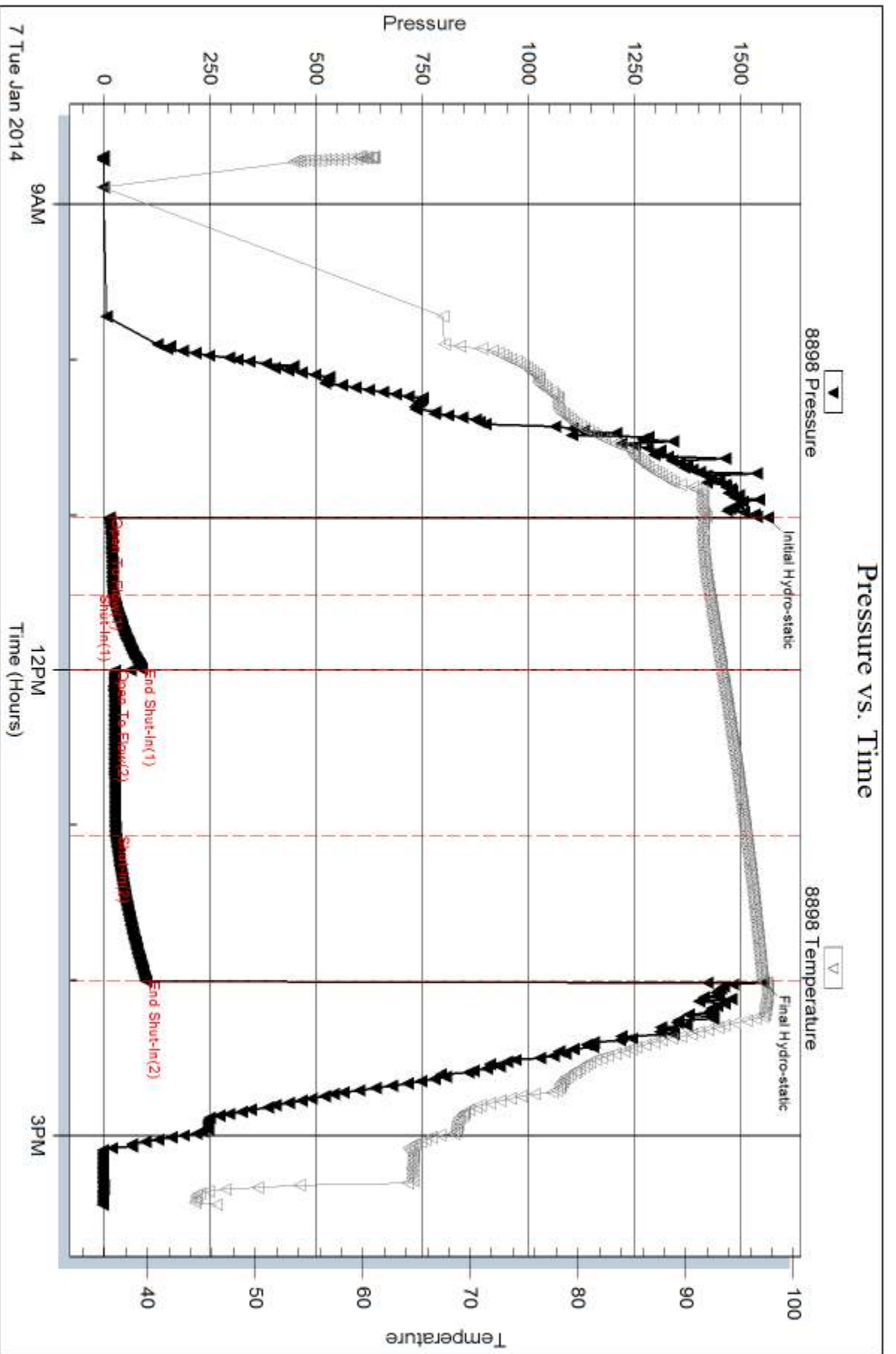
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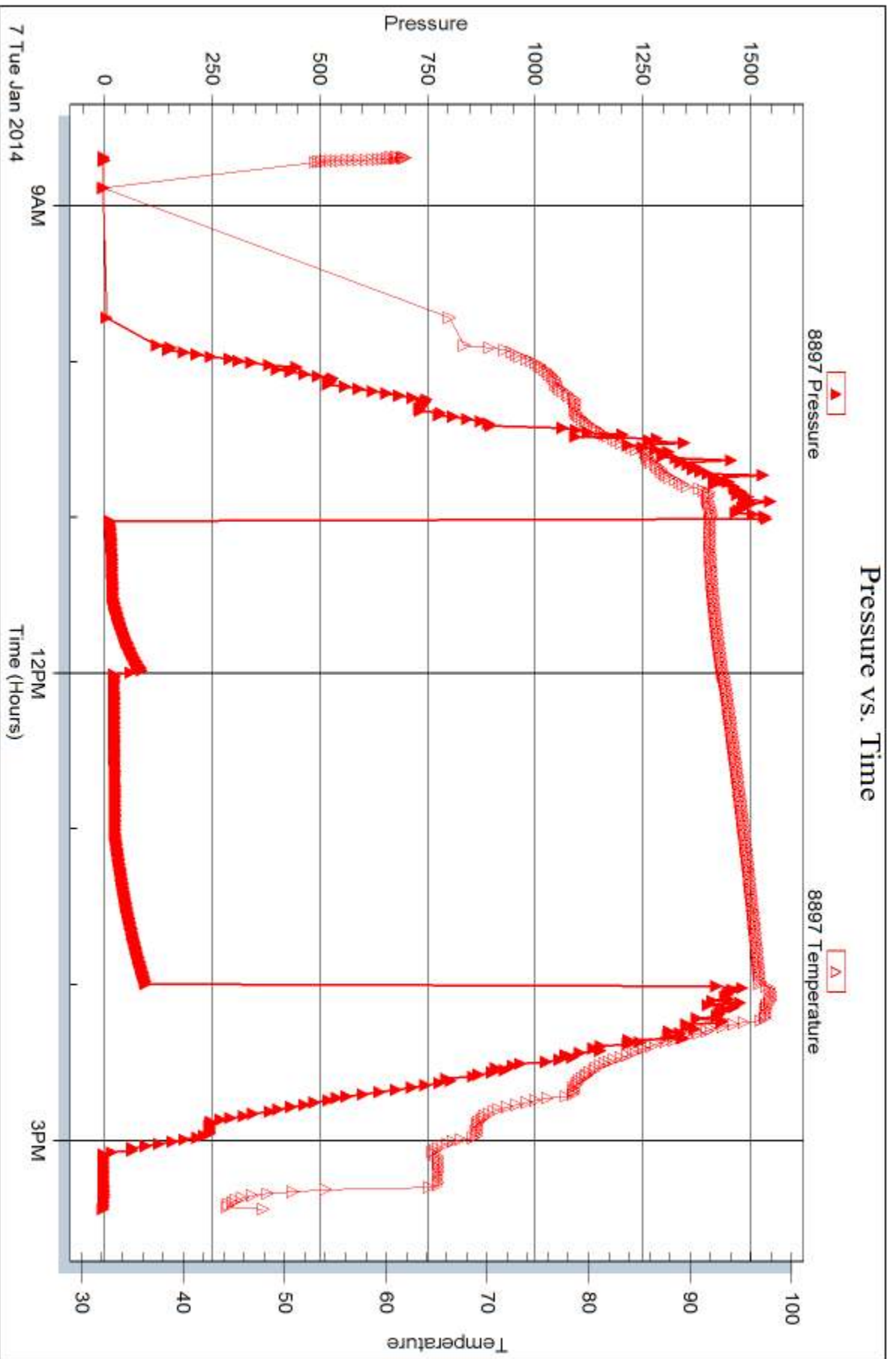
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Gage #1

1-15s-14w Russell,KS

Start Date: 2014.01.07 @ 22:19:05

End Date: 2014.01.08 @ 04:31:44

Job Ticket #: 56034 DST #: 2

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

Printed: 2014.01.10 @ 14:06:49



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56034

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.01.07 @ 22:19:05

GENERAL INFORMATION:

Formation: **LKC E,F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:01:55

Time Test Ended: 04:31:44

Test Type: Conventional Bottom Hole (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3106.00 ft (KB) To 3136.00 ft (KB) (TVD)

Reference Elevations: 1870.00 ft (KB)

Total Depth: 3136.00 ft (KB) (TVD)

1862.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898 Outside

Press@RunDepth: 22.82 psig @ 3107.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.07 End Date: 2014.01.08

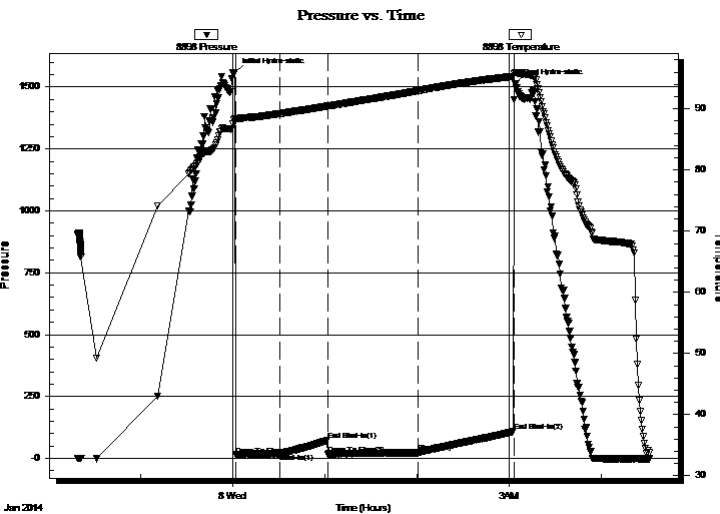
Last Calib.: 2014.01.08

Start Time: 22:19:06 End Time: 04:31:45

Time On Btm: 2014.01.08 @ 00:01:35

Time Off Btm: 2014.01.08 @ 03:04:05

TEST COMMENT: Fair surface blow built to 5"
Dead no blow back
Fair surface blow built to 6 1/2"
Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1559.35	88.39	Initial Hydro-static
1	14.45	88.02	Open To Flow (1)
29	19.83	89.21	Shut-In(1)
61	71.69	90.44	End Shut-In(1)
61	15.75	90.44	Open To Flow (2)
120	22.82	92.96	Shut-In(2)
182	108.33	95.33	End Shut-In(2)
183	1513.09	95.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	8%O 92%M	0.15
0.00	30' Weak GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56034

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.01.07 @ 22:19:05

Tool Information

Drill Pipe:	Length: 3067.00 ft	Diameter: 3.80 inches	Volume: 43.02 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 43.17 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	47000.00 lb
Depth to Top Packer:	3106.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 ft				
Tool Length:	50.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3091.00	
Hydraulic tool	5.00			3096.00	
Packer	5.00			3101.00	20.00 Bottom Of Top Packer
Packer	5.00			3106.00	
Stubb	1.00			3107.00	
Recorder	0.00	8897	Inside	3107.00	
Recorder	0.00	8898	Outside	3107.00	
Perforations	26.00			3133.00	
Bullnose	3.00			3136.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56034

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.01.07 @ 22:19:05

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	8%O 92%M	0.148
0.00	30' Weak GIP	0.000

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

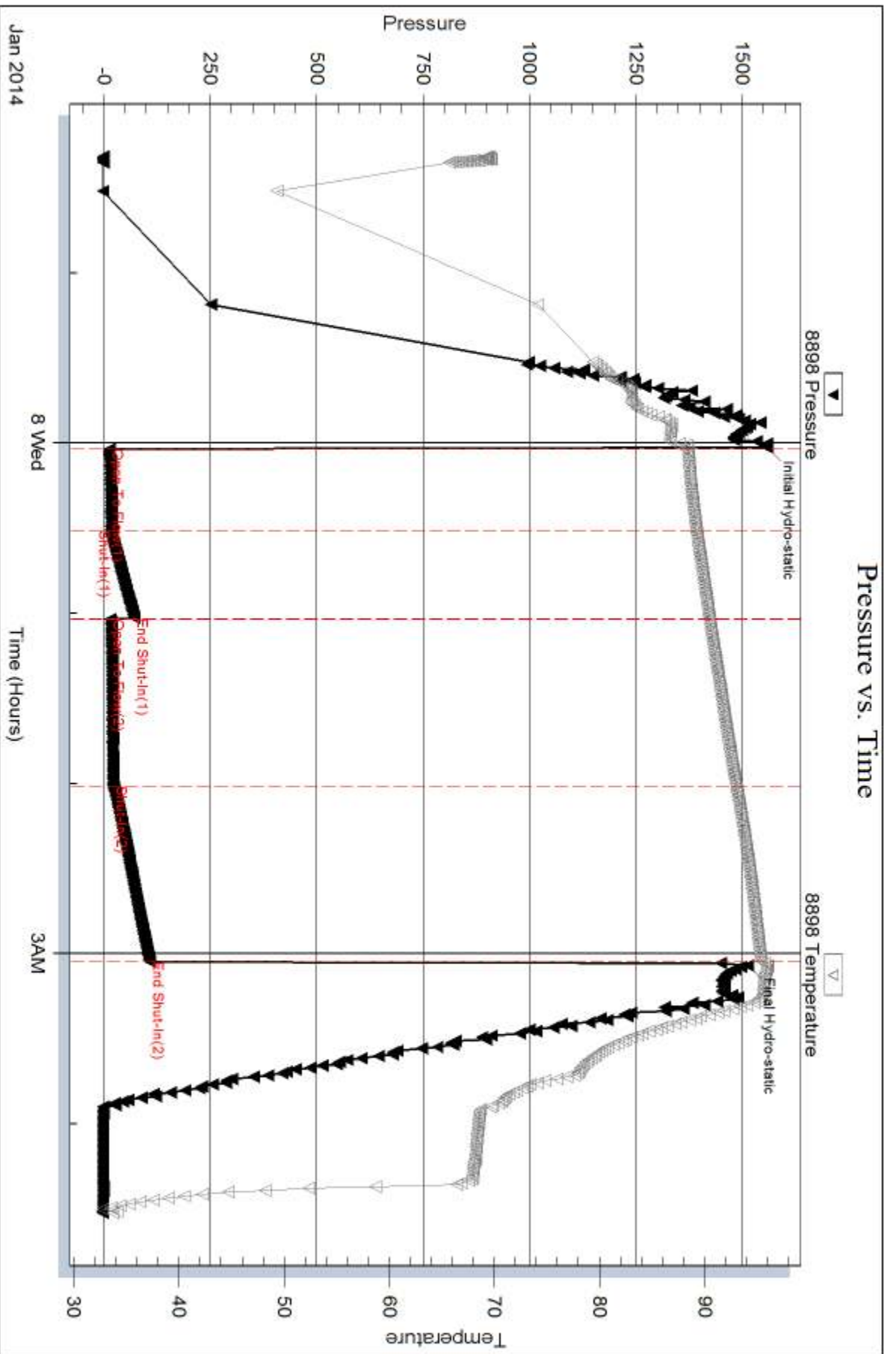
Num Gas Bombs: 0

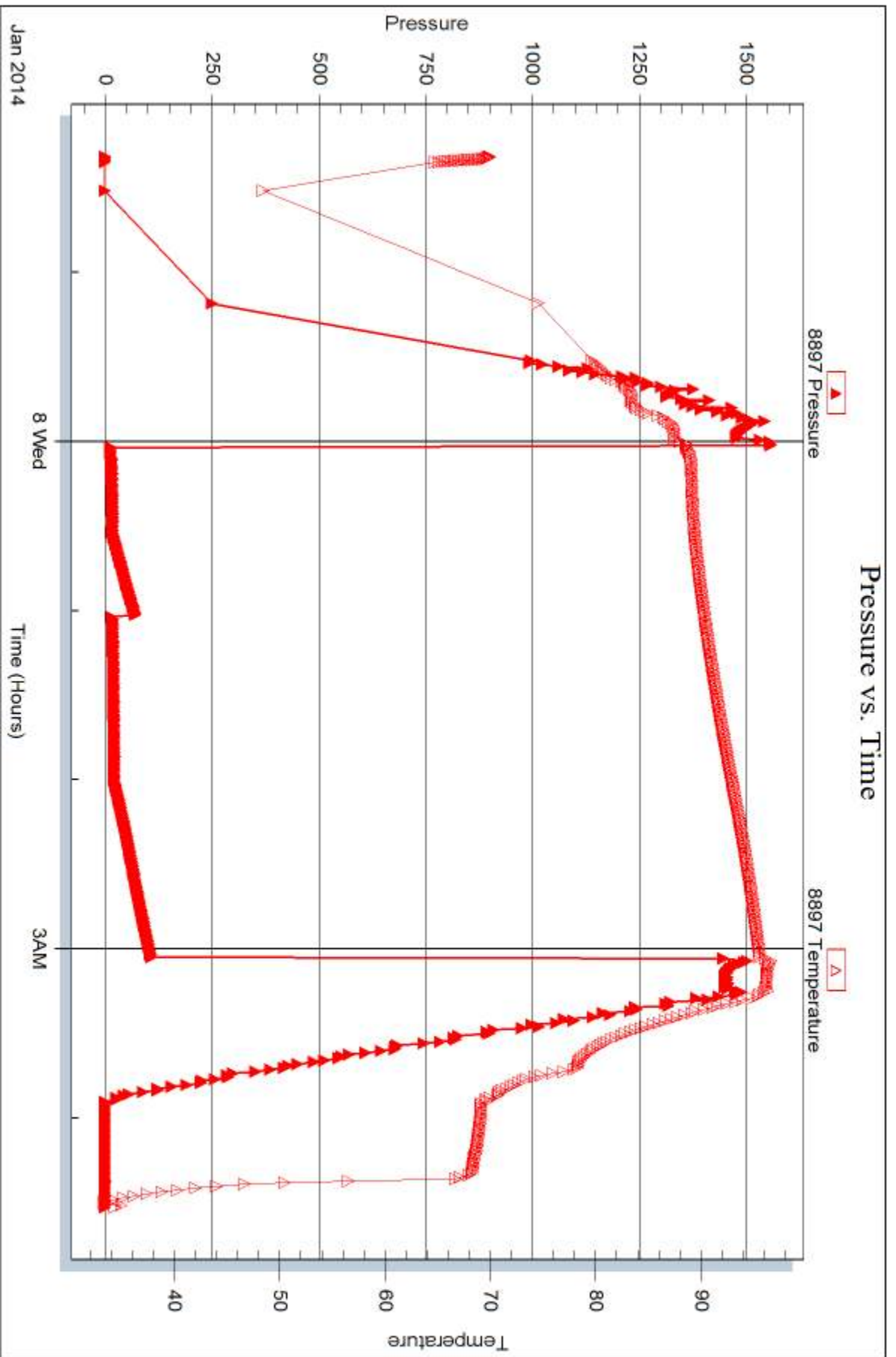
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Gage #1

1-15s-14w Russell,KS

Start Date: 2014.01.08 @ 18:10:46

End Date: 2014.01.08 @ 23:39:36

Job Ticket #: 56035 DST #: 3

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

Printed: 2014.01.10 @ 14:05:00



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56035

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.01.08 @ 18:10:46

GENERAL INFORMATION:

Formation: **Lower LKC**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:07:06

Time Test Ended: 23:39:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3200.00 ft (KB) To 3300.00 ft (KB) (TVD)

Reference Elevations: 1870.00 ft (KB)

Total Depth: 3300.00 ft (KB) (TVD)

1862.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898 Outside

Press@RunDepth: 21.68 psig @ 3203.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.08 End Date: 2014.01.08

Last Calib.: 2014.01.08

Start Time: 18:10:47 End Time: 23:39:36

Time On Btm: 2014.01.08 @ 20:06:56

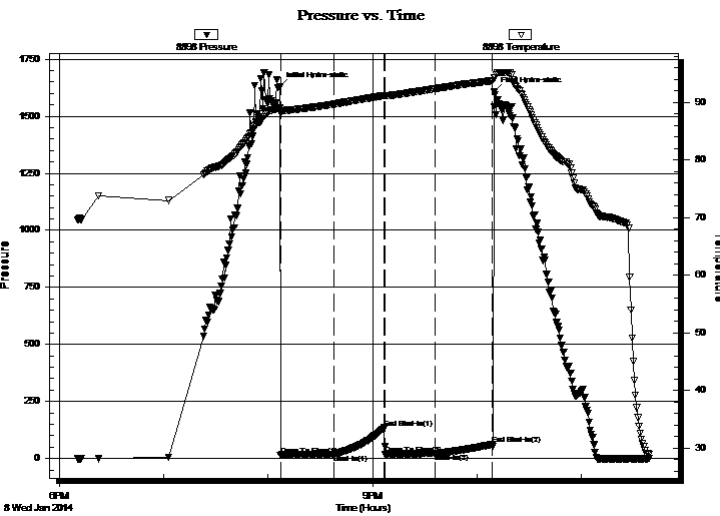
Time Off Btm: 2014.01.08 @ 22:09:56

TEST COMMENT: Weak surface blow built to 1"

Dead no blow back

Weak surface blow

Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1630.73	88.97	Initial Hydro-static
1	15.15	88.12	Open To Flow (1)
31	19.49	89.66	Shut-In(1)
60	134.05	91.16	End Shut-In(1)
61	19.92	91.14	Open To Flow (2)
89	21.68	92.37	Shut-In(2)
122	60.67	93.74	End Shut-In(2)
123	1605.95	94.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100%M W/ Oil Spots	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56035

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.01.08 @ 18:10:46

Tool Information

Drill Pipe:	Length: 3160.00 ft	Diameter: 3.80 inches	Volume: 44.33 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 44.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3200.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	100.00 ft			
Tool Length:	120.00 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			3185.00	
Hydraulic tool	5.00			3190.00	
Packer	5.00			3195.00	20.00 Bottom Of Top Packer
Packer	5.00			3200.00	
Stubb	1.00			3201.00	
Perforations	2.00			3203.00	
Recorder	0.00	8897	Inside	3203.00	
Recorder	0.00	8898	Outside	3203.00	
Perforations	29.00			3232.00	
Change Over Sub	1.00			3233.00	
Drill Pipe	63.00			3296.00	
Change Over Sub	1.00			3297.00	
Bullnose	3.00			3300.00	100.00 Bottom Packers & Anchor

Total Tool Length: 120.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56035

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.01.08 @ 18:10:46

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: 65.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	100%M W/ Oil Spots	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

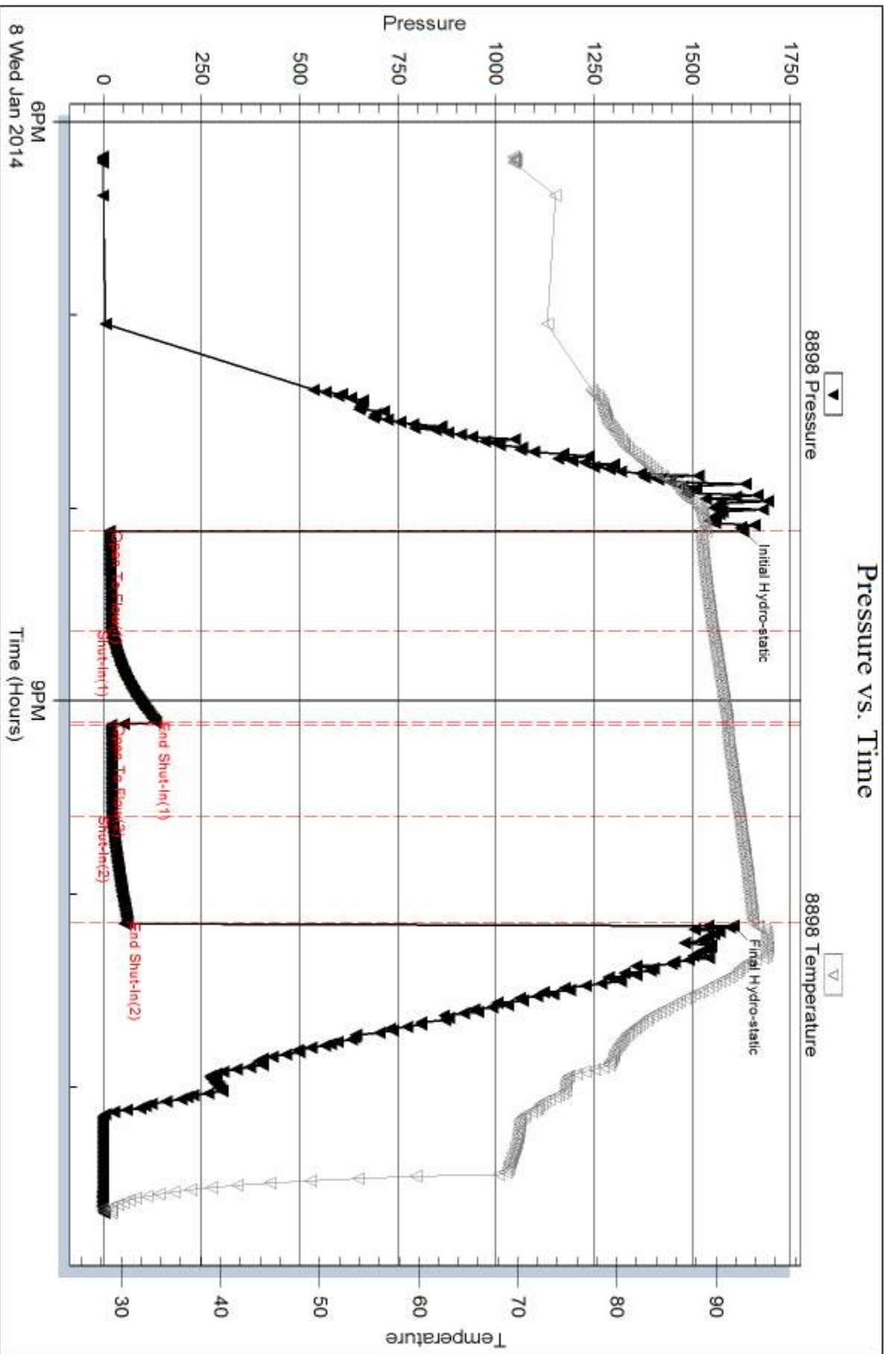
Num Gas Bombs: 0

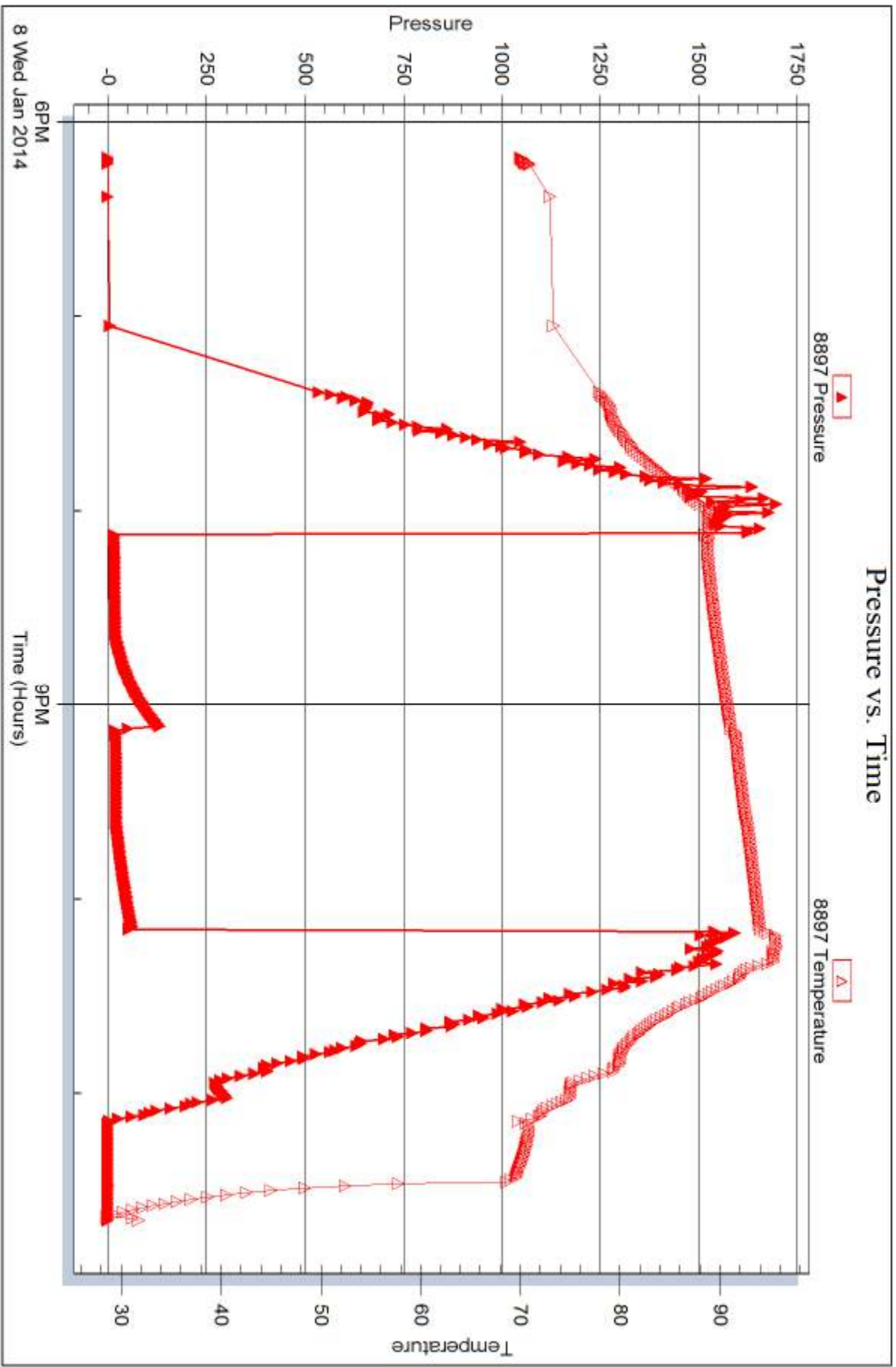
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





6PM
8 Wed Jan 2014

9PM
Time (Hours)



DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67665

ATTN: Austin Klaus

Gage #1

1-15s-14w Russell,KS

Start Date: 2014.01.09 @ 12:54:07

End Date: 2014.01.09 @ 18:51:46

Job Ticket #: 56036 DST #: 4

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

Printed: 2014.01.10 @ 14:04:19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56036

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.01.09 @ 12:54:07

GENERAL INFORMATION:

Formation: **Arblucke**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:23:37

Time Test Ended: 18:51:46

Test Type: Conventional Straddle (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3330.00 ft (KB) To 3340.00 ft (KB) (TVD)

Reference Elevations: 1870.00 ft (KB)

Total Depth: 3400.00 ft (KB) (TVD)

1862.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898 Outside

Press@RunDepth: 94.90 psig @ 3331.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.09 End Date: 2014.01.09

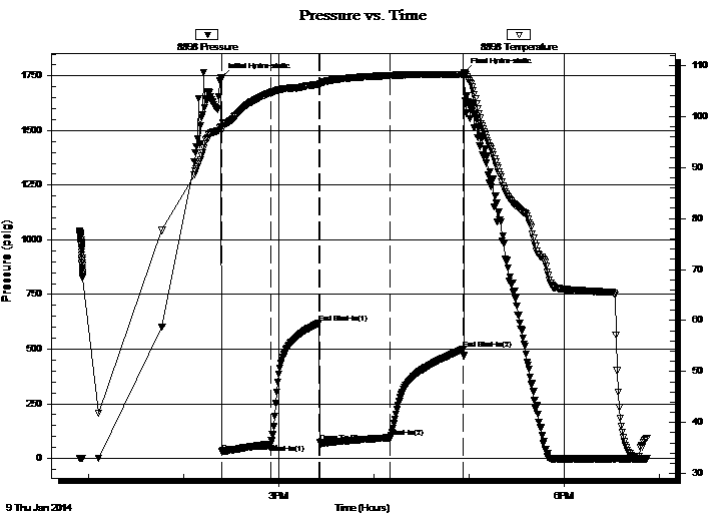
Last Calib.: 2014.01.09

Start Time: 12:54:08 End Time: 18:51:47

Time On Btm: 2014.01.09 @ 14:23:27

Time Off Btm: 2014.01.09 @ 16:56:57

TEST COMMENT: B.O.B. In 11 mins
Weak surface blow back built to 1/2 in
B.O.B. In 30 mins
Weak surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1742.01	98.02	Initial Hydro-static
1	29.33	97.33	Open To Flow (1)
32	64.75	104.63	Shut-In(1)
62	619.82	106.27	End Shut-In(1)
63	74.85	106.21	Open To Flow (2)
107	94.90	108.02	Shut-In(2)
153	498.21	108.21	End Shut-In(2)
154	1764.91	108.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	5%G 5%O 30%W 60%M	0.57
150.00	20%G 80%O	2.10
0.00	270 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56036

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.01.09 @ 12:54:07

Tool Information

Drill Pipe:	Length: 3279.00 ft	Diameter: 3.80 inches	Volume: 46.00 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 46.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3330.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	3340.00 ft			
Interval between Packers:	10.00 ft			
Tool Length:	100.00 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			3308.00	
Hydraulic tool	5.00			3313.00	
Jars	5.00			3318.00	
Safety Joint	2.00			3320.00	
Packer	5.00			3325.00	27.00 Bottom Of Top Packer
Packer	5.00			3330.00	
Stubb	1.00			3331.00	
Recorder	0.00	8897	Inside	3331.00	
Recorder	0.00	8898	Outside	3331.00	
Perforations	5.00			3336.00	
Blank Off Sub	1.00			3337.00	
Blank Spacing	3.00			3340.00	10.00 Tool Interval
Packer	5.00			3345.00	
Stubb	1.00			3346.00	
Perforations	23.00			3369.00	
Recorder	0.00	8354	Below	3369.00	
Change Over Sub	1.00			3370.00	
Blank Spacing	31.00			3401.00	
Change Over Sub	1.00			3402.00	
Bullnose	1.00			3403.00	63.00 Bottom Packers & Anchor

Total Tool Length: 100.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

1-15s-14w Russell,KS

PO Box 352
Russell KS 67665

Gage #1

Job Ticket: 56036

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.01.09 @ 12:54:07

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	5%G 5%O 30%W 60%M	0.568
150.00	20%G 80%O	2.104
0.00	270 GIP	0.000

Total Length: 210.00 ft Total Volume: 2.672 bbl

Num Fluid Samples: 0

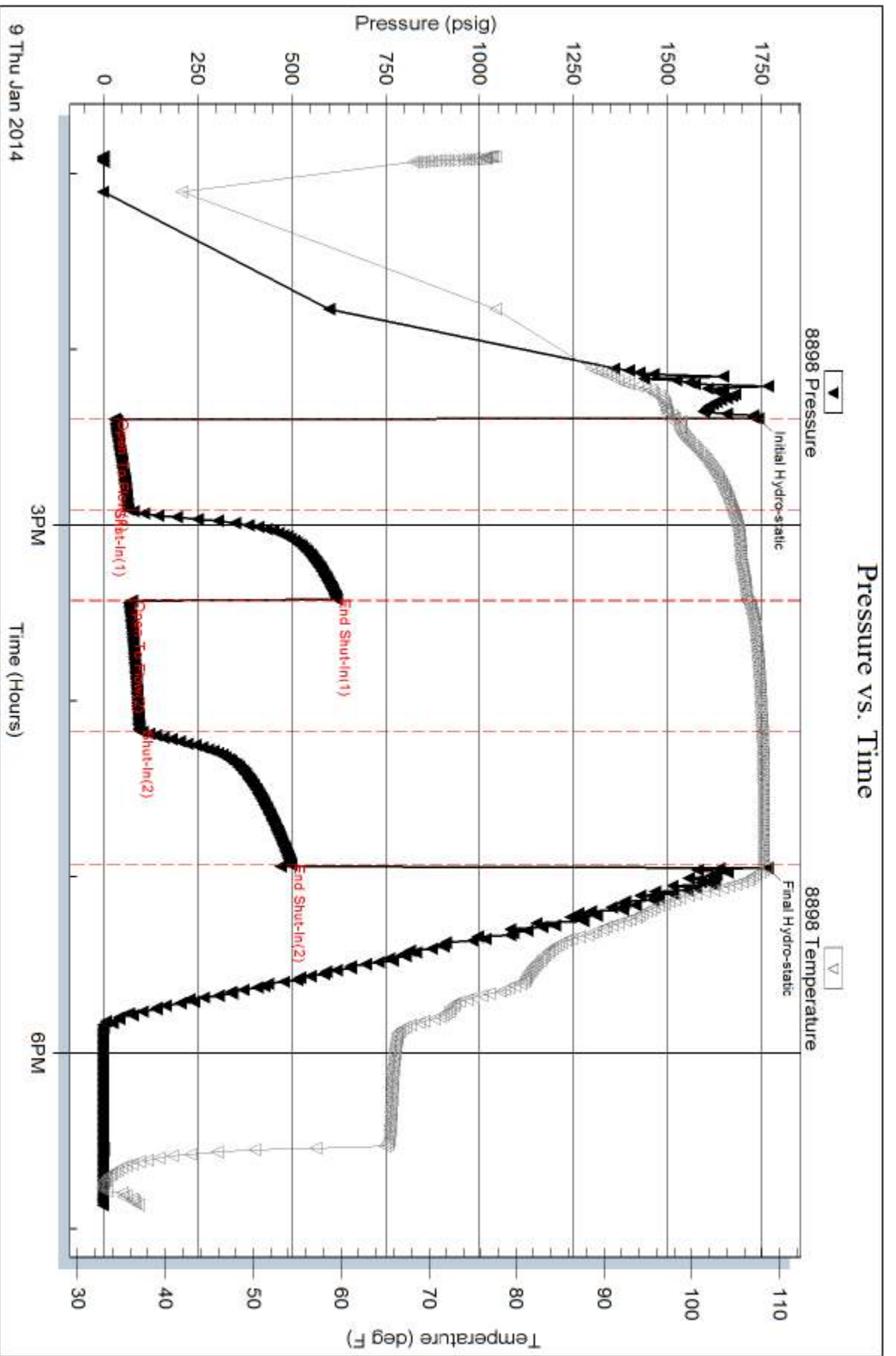
Num Gas Bombs: 0

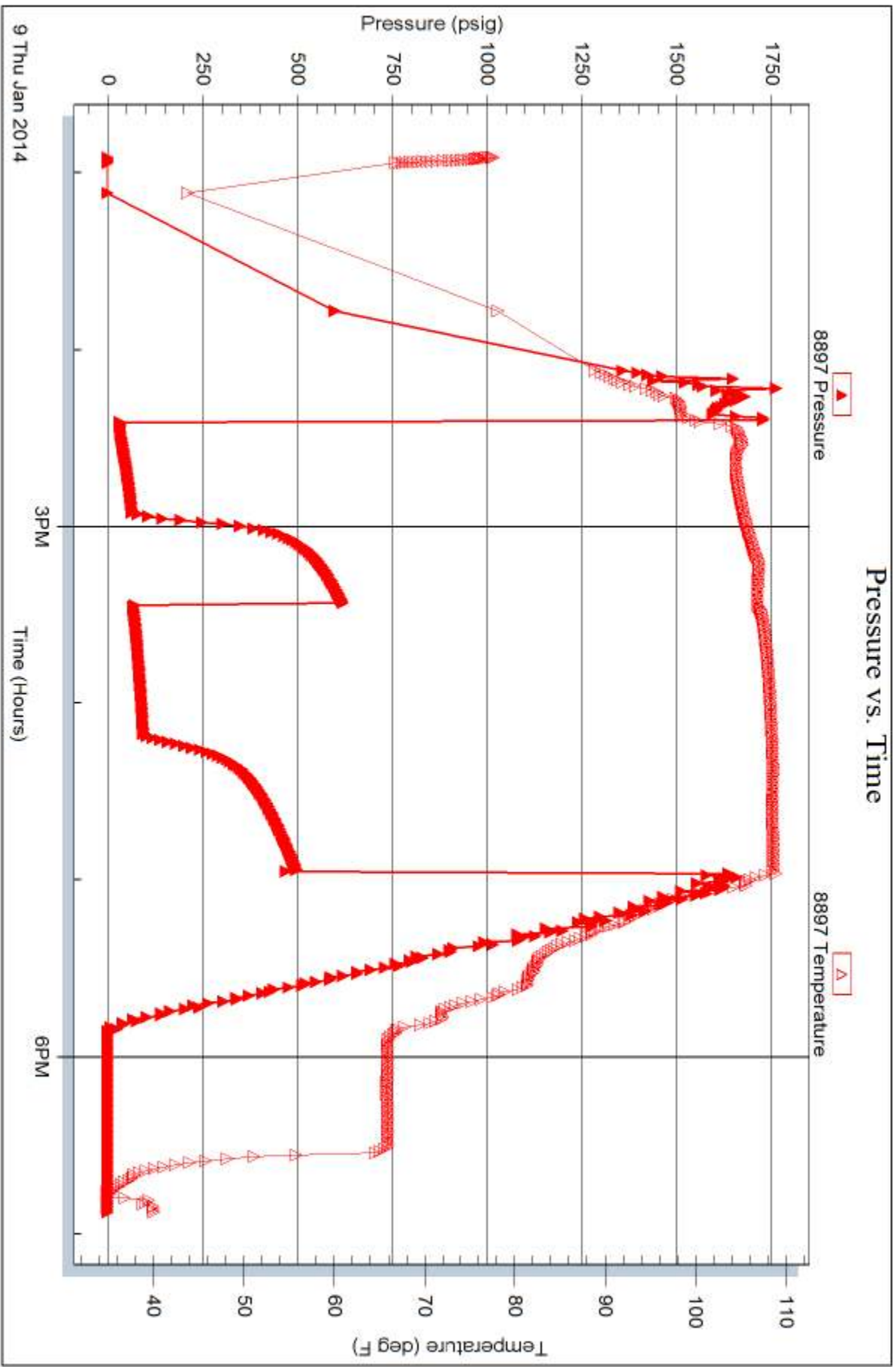
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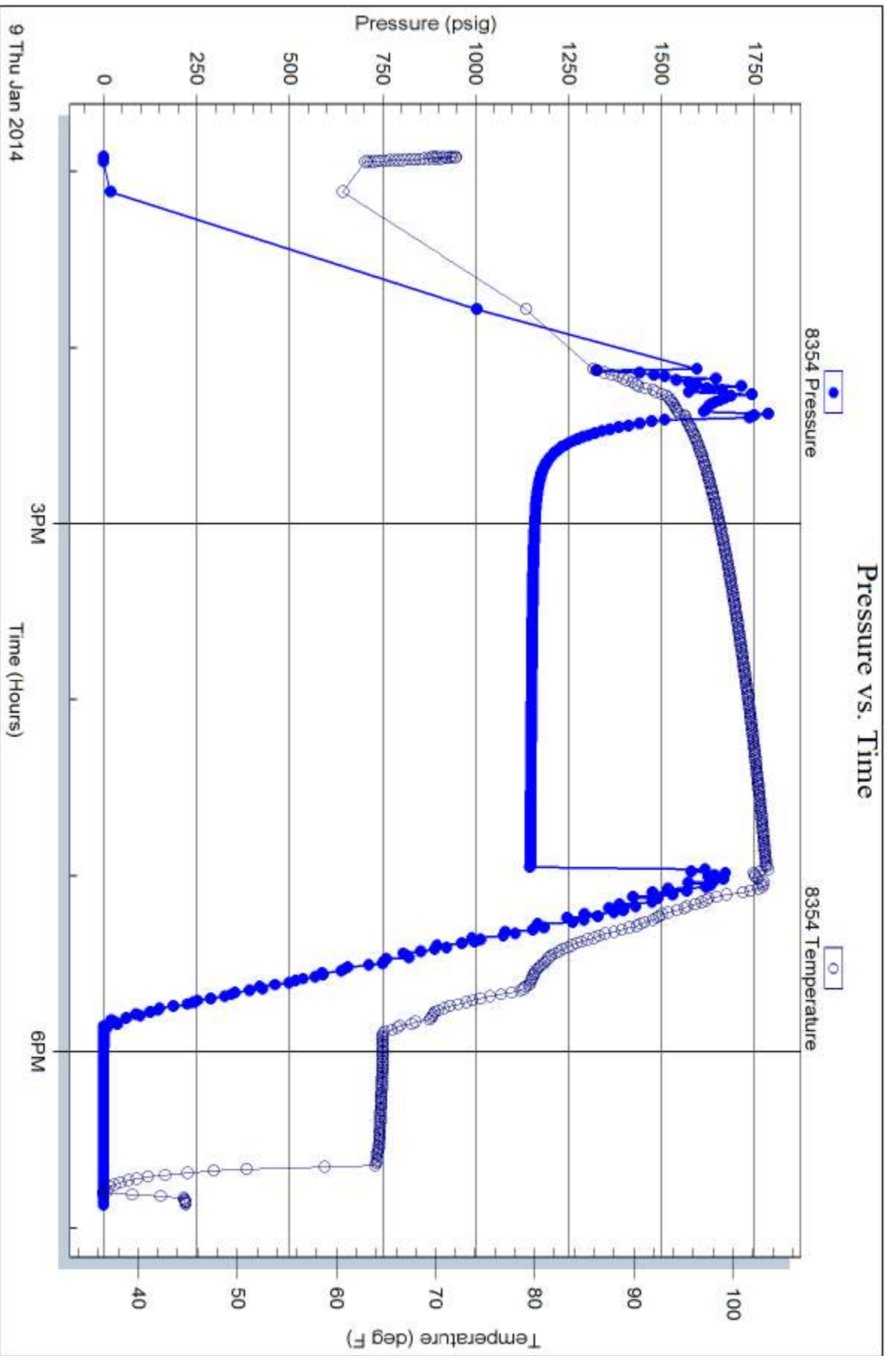
Laboratory Name:

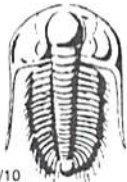
Laboratory Location:

Recovery Comments:









TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56033**

4/10

Well Name & No. Gage #1 Test No. 1 Date 1-7-14
 Company John O Farmer Inc Elevation 1870 KB 1862 GL
 Address PO Box 372 Russell KS 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #2
 Location: Sec. 1 Twp. 15S Rge. 14W Co. Russell State KS

Interval Tested 3067 3096 Zone Tested lens, C
 Anchor Length 29 Drill Pipe Run 3035 Mud Wt. 8.7
 Top Packer Depth 3063 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 3067 Wt. Pipe Run 0 WL 8.0
 Total Depth 3096 Chlorides 3000 ppm System LCM
 Blow Description Weak surface blow built to 1/2 in
Dead no slow back
Weak surface blow built to 3/4 in
Dead no slow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>10</u>	Feet of <u>mud w/oil spots</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

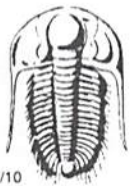
Rec Total 10 BHT 97 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1563 Test 1150 T-On Location 06:50
 (B) First Initial Flow 13 Jars — T-Started 08:41
 (C) First Final Flow 22 Safety Joint — T-Open 11:00
 (D) Initial Shut-In 90 Circ Sub — T-Pulled 14:00
 (E) Second Initial Flow 26 Hourly Standby — T-Out 15:26
 (F) Second Final Flow 28 Mileage 72 R/T 111.60 Comments —
 (G) Final Shut-In 99 Sampler —
 (H) Final Hydrostatic 1554 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 30 Extra Recorder — Sub Total 0
 Initial Shut-In 30 Day Standby — Total 1261.60
 Final Flow 60 Accessibility — MP/DST Disc't —
 Final Shut-In 60 Sub Total 1261.60

Approved By _____

Our Representative [Signature] 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56034

4/10

Well Name & No. Gage #1 Test No. 2 Date 7-14/1-8-14
 Company John O Farmer Inc Elevation 1870 KB 1822 GL
 Address PO Box 352 Russell KS 67665
 Co. Rep / Geo. Austin Klals Rig Discovery #2
 Location: Sec. 1 Twp. 15S Rge. 14W Co. Russell State KS

Interval Tested 3106 3136 Zone Tested LHC E/F
 Anchor Length 30' Drill Pipe Run _____ Mud Wt. 9.4
 Top Packer Depth 3102 Drill Collars Run 30 Vis 50
 Bottom Packer Depth 3106 Wt. Pipe Run 0 WL 9.0
 Total Depth 3136 Chlorides 5000 ppm System LCM 1

Blow Description Fair surface slow built to 5in
Dead w/o blow back
Fair surface low built to 6 1/2 in
Dead w/o blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>0</u>	Feet of <u>30 weak GIP</u>	<u>100</u>			
Rec <u>30</u>	Feet of <u>50CM</u>		<u>8</u>		<u>92</u>
Rec _____	Feet of <u>Skim of free oil on top</u>				
Rec _____	Feet of _____				

Rec Total 30 BHT 96 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1559</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>22:05</u>
(B) First Initial Flow <u>14</u>	<input type="checkbox"/> Jars _____	T-Started <u>22:19</u>
(C) First Final Flow <u>20</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>00:02 (1-8-14)</u>
(D) Initial Shut-In <u>72</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>03:02</u>
(E) Second Initial Flow <u>16</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>04:32</u>
(F) Second Final Flow <u>23</u>	<input checked="" type="checkbox"/> Mileage <u>72 R/T</u> <u>111.60</u>	Comments _____
(G) Final Shut-In <u>108</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1513</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

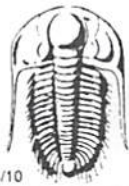
Initial Open 30
 Initial Shut-In 30
 Final Flow 60
 Final Shut-In 60

Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Sub Total 1261.60

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56035**

4/10

Well Name & No. <u>Gage #1</u>	Test No. <u>3</u>	Date <u>1-8-14</u>
Company <u>John & Farmer Inc</u>	Elevation <u>1870</u>	KB <u>1862</u> GL
Address <u>PO Box 352 Russell MS 67665</u>		
Co. Rep / Geo. <u>Astin Klaus</u>	Rig <u>Discovery #2</u>	
Location: Sec. <u>1</u>	Twp. <u>15S</u>	Rge. <u>14W</u> Co. <u>Russell</u> State <u>MS</u>

Interval Tested <u>3200</u> <u>3300</u>	Zone Tested <u>Lower LLC</u>	
Anchor Length <u>100</u>	Drill Pipe Run <u>3160</u>	Mud Wt. <u>9.1</u>
Top Packer Depth <u>3096</u>	Drill Collars Run <u>30</u>	Vis <u>65</u>
Bottom Packer Depth <u>3200</u>	Wt. Pipe Run <u>0</u>	WL <u>2.0</u>
Total Depth <u>3300</u>	Chlorides <u>5000</u> ppm System	LCM <u>1#</u>

Blow Description Weak surface blow built to 1in
Dead no blow back
Weak surface blow
Dead no blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>10</u>	Feet of <u>Mud w/oil spots</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

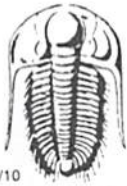
Rec Total <u>10</u>	BHT <u>94</u>	Gravity _____	API RW _____	@ _____	° F Chlorides _____	ppm
(A) Initial Hydrostatic <u>1631</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>17:45</u>				
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars _____	T-Started <u>18:10</u>				
(C) First Final Flow <u>19</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>20:06</u>				
(D) Initial Shut-In <u>134</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>22:06</u>				
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>23:38</u>				
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>22RH</u> <u>111.60</u>	Comments _____				
(G) Final Shut-In <u>61</u>	<input type="checkbox"/> Sampler _____	_____				
(H) Final Hydrostatic <u>1606</u>	<input 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 <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1261.60</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1261.60</u>	

Approved By _____

Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56036

4/10

Well Name & No. Gage #1 Test No. 4 Date 1-9-14
 Company John O Farmer Inc Elevation 3170 KB 3162 GL
 Address PO Box 352 Russell MS 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #2
 Location: Sec. 1 Twp. 15S Rge. 14W Co. Russell State KS

Interval Tested 3330 3340 Zone Tested Arbuckle
 Anchor Length 10' 60' Tail Drill Pipe Run _____ Mud Wt. 9.4
 Top Packer Depth _____ Drill Collars Run 30 Vis 55
 Bottom Packer Depth 3330 Wt. Pipe Run 0 WL 8.0
 Total Depth 3400 Chlorides 7000 ppm System LCM 1A

Blow Description A.D.B. In 11 mins
Weak surface blow back built to 1/2 in
B.O.B. In 30 mins
Weak surface blow

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>0</u>	Feet of <u>270 GIP</u>	<u>100</u>			
Rec <u>150</u>	Feet of <u>60</u>	<u>20</u>	<u>80</u>		
Rec <u>60</u>	Feet of <u>60 GDCWM</u>	<u>5</u>	<u>5</u>	<u>30</u>	<u>60</u>
Rec _____	Feet of _____	%gas	%oil	%water	%mud

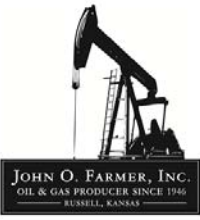
Rec Total 210 BHT 106 Gravity 36 API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 1742 Test 1150 T-On Location 11:50
 (B) First Initial Flow 29 Jars _____ T-Started 12:54
 (C) First Final Flow 65 Safety Joint _____ T-Open 14:25
 (D) Initial Shut-In 620 Circ Sub _____ T-Pulled 16:55
 (E) Second Initial Flow 75 Hourly Standby _____ T-Out _____
 (F) Second Final Flow 95 Mileage 72 R17 111.60 Comments _____
 (G) Final Shut-In 498 Sampler _____
 (H) Final Hydrostatic 1765 Straddle 600 Ruined Shale Packer _____

Initial Open 30 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 30 Extra Packer _____ Extra Copies _____
 Final Flow 45 45 Extra Recorder _____ Sub Total 0
 Final Shut-In _____ Day Standby _____ Total 1861.60
 _____ Accessibility _____ MP/DST Disc't _____
 Sub Total 1861.60

Approved By _____ Our Representative [Signature]

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AUSTIN B. KLAUS



Cell 785.650.3629
Work 785.483.3145
Ext 225

PO BOX 352
Russell, KS 67665
austin.klaus@johnofarmer.com

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

Well Name: Gage #1
Location: Russell County
License Number: API # 15-167-23,930-0000
Spud Date: 12/18/13
Surface Coordinates: Section 1 Township 15 South Range 14 West
695' FSL & 690' FEL
Bottom Hole Coordinates: Vertical well with minimal deviation, same as above
Ground Elevation (ft): 1,862' K.B. Elevation (ft): 1,870'
Logged Interval (ft): 2,300' To: RTD Total Depth (ft): 3,400'
Formation: Lansing
Type of Drilling Fluid: Chemical (Andy's)

Region: Kansas
Drilling Completed: 1/9/14

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

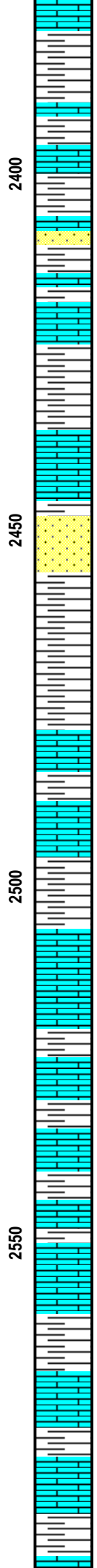
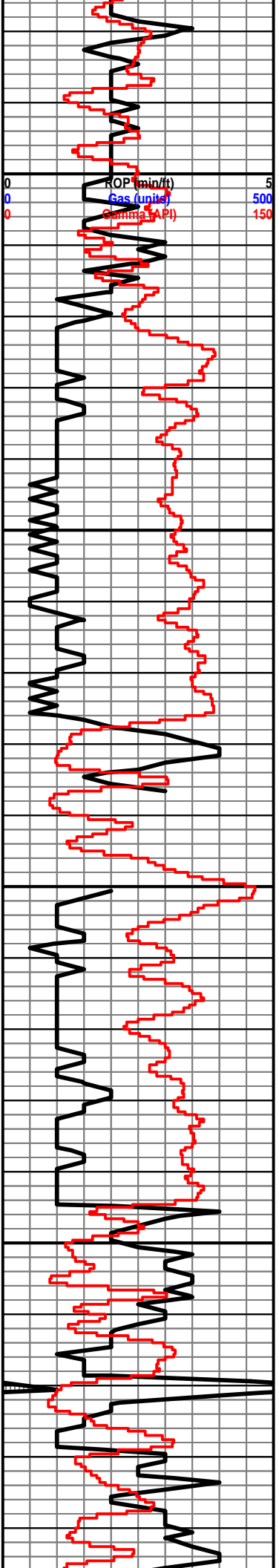
OPERATOR

Company: John O. Farmer, Inc.
Address: P.O. Box 352
Russell, KS 67665-0352

Comments

The Gage #1 well was drilled by Discovery Drilling Rig #2 (Tool Pusher: Terry Wickham).

The location for the Gage #1 well was found via 3-D seismic survey. Geologic samples were collected and evaluated from 2,350'-3,400'. Structurally, the Gage #1 ran 10' high to our correlation well at the LNSG. Three bottom-hole tests were conducted in the LNSG, all of which yielded negative results. The Arbuckle horizon was 6' high to the comparison well. Upon completion of the logging operation, a straddle tested was conducted across top 4-14' of ABCK. After all sample, log, and drill stem test data was gathered and evaluated, the decision was made to run 5 1/2" production casing on 1/10/13 to further evaluate the Arbuckle in the Gage #1 well.



Sh: lt-drk gry

Sh: ala

Grandhaven 2408' (-538)

Ls: off wh-tan, fn-sub xln, mostly DNS, scat ss

Ls: ala

Sh: lt-drk gry

Ls: off wh-tan, fn-sub xln, mostly DNS, scat ss, NSFO

Ss: tan, fn grn, well rnd, fair int grn porosity, SSFO, lt sat, fair odor, sl odor

Sh: lt-drk gry

Sh: drk gry-brn

Tarkio 2477' (-607)

Ls: off wh-tan, fn xln, scat int xln porosity, NSFO, no odor

Ls: ala

Sh: drk gry

Qtz: ss, lt gry-grn, fn grn, well rnd, poor int grn porosity, SSFO, sl odor, sl chert-off wh

Sh: drk gry-brn

Sh: ala

Sh: lt-drk gry, few pcs soft

Sh: ala

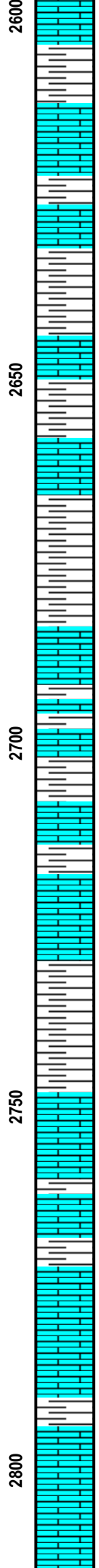
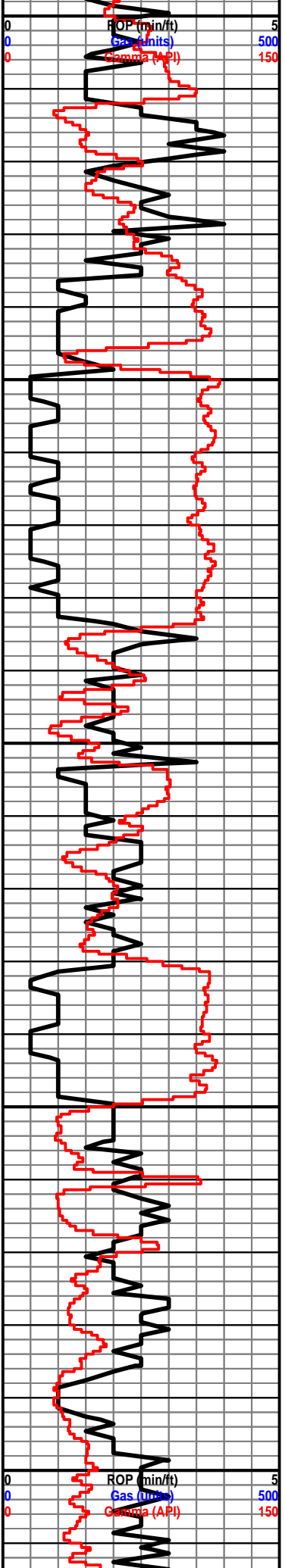
Ls: off wh-tan, fn xln, mostly DNS

Sh: lt-drk gry, scat ls

Sh: gry

Ls: off wh-tan, fn xln, mostly DNS, scat chert-off wh

Sh: lt gry



Ls: tan-gry, fn xln, mostly DNS, scat pp porosity, sl chalky

Ls: ala

Sh: lt gry, soft

Sh: ala

Sh: lt-drk gry, soft

Ls: off wh-tan, fn-sub xln, mostly DNS, sl chalky, scat pyrite

Sh: lt gry

Sh: ala

Ls: tan-gry, fn xln, scat pp porosity, NSFO, scat chert-off wh, scat pyrite, sl chalky

Sh: lt-drk gry

Sh: gry

Ls: tan-gry, fn xln, mostly DNS, sl chalky

Sh: gry

Topeka 2752' (-882)

Ls: tan-lt gry, fn xln, mostly DNS, sl chalky

Ls: ala

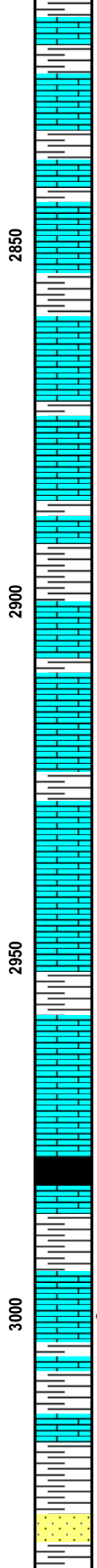
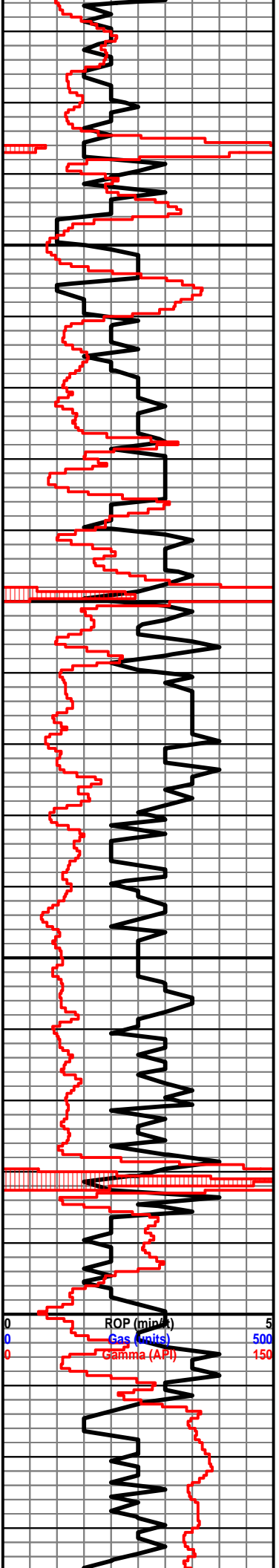
Sh: lt-drk gry

Ls: tan-lt gry, fn-md xln, scat int xln porosity, scat oil st, NSFO, sl odor, sl chalky

Sh: lt-drk gry

Ls: off wh-lt gry, fn-md xln, mostly DNS, scat pp porosity, chalky

Sh: arv



Sh: ala

Sh: lt-drk gry, soft

Ls: tan-lt gry, fn-sub xln, mostly DNS, no visible porosity, scat chert-off wh

Ls: ala

Ls: off wh-tan, fn-sub xln, mostly DNS, scat chert-off wh, sl fossil

Sh: lt gry-grn, soft

Ls: off wh-tan, fn xln, scat int xln porosity, scat oil st, sl odor, scat chert-off wh, chalky

Sh: lt-drk gry

Ls: tan-lt gry, fn-sub xln, mostly DNS, sl chert-off wh

Ls: ala

Sh: drk gry

Ls: lt gry, fn-md xln, scat int xln porosity, lt scat oil st, VSSFO, sl odor, chalky

Ls: tan-lt gry, fn-sub xln, mostly DNS, chalky

Sh: lt gry

Ls: tan-lt gry, fn-md xln, scat int xln porosity, scat oil st, sl odor, sl fossil, chalky

Ls: tan-lt gry, fn-md xln, vry DNS, no visible porosity, sl chalky, sl fossil

Heebner 2981' (-1111)

Sh: drk gry-blk, carb, fissile

Ls: tan-gry, fn xln, mostly DNS

Sh: gry-grn, soft

Toronto 2997'(-1127)

Ls: off wh, fn-md xln, poor int xln porosity, lt scat oil st, VSSFO, sl odor, scat chert-off wh

Sh: lt-drk gry

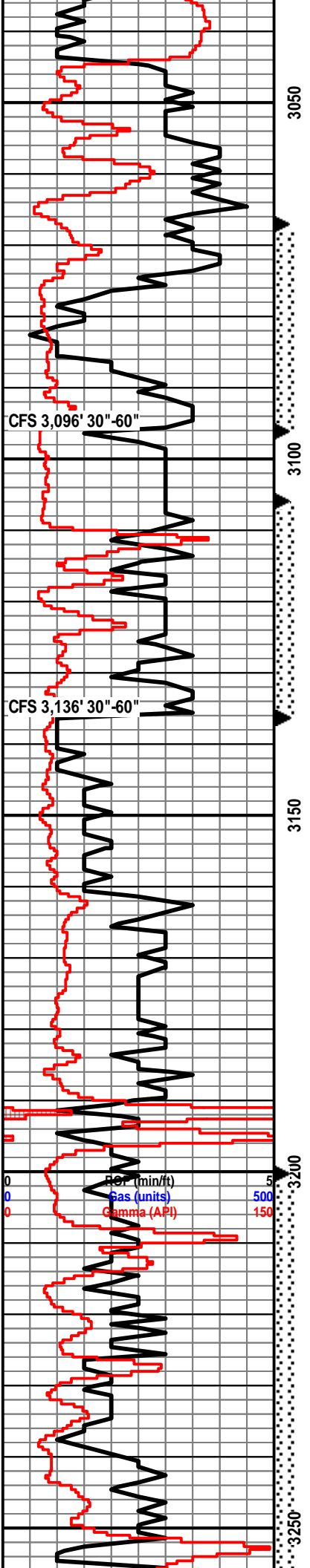
Ls: tan-lt gry, fn-sub xln, mostly DNS, fossil, scat chert-off wh

Sh: lt gry-brn-grn, vry soft

Ss: off wh, fn-md grn, poor int grn porosity, scat oil sat, VSSFO, sl-fair odor

DST #1 3,067'-3,096' LKC "C"
30"-30"-60"-60"

IF: Weak blow, built to 1.5"
FF: Weak blow, built to .75"
Rec: 10' Mud w/ oil spots



Sh: drk gry-grn, vry soft

Lansing 3048' (-1178)

Ls: off wh-tan, fn xln, scat int xln porosity, mostly barren, scat chert-off wh

Sh: drk gry

Ls: off wh-tan, fn xln, poor int xln porosity, vry lt oil st, NSFO, vry lt odor

Sh: lt gry

Ls: off wh-tan, fn xln, ool, fair oomoldic porosity, fair-good oil sat, SSFO, fair odor, sl chert-off wh

Ls: off wh, fn xln, scat int xln porosity, NSFO, no odor

Sh: drk gry

Ls: off wh-tan, fn xln, mostly DNS, chalky, sl chert-off wh

Sh: drk gry

Ls: tan-lt gry, fn-sub xln, mostly DNS,

Sh: lt-drk gry

Ls: off wh-tan, fn xln, ool, poor oom porosity, fair oil sat, VSSFO, sl odor

Ls: off wh-tan, fn xln, ool, good oom porosity, mostly barren, NSFO, chalky, sl chert-off wh

Ls: off wh-tan, fn xln, mostly DNS, sl chalky

Ls: off wh-tan-lt gry, fn xln, ool, fair oom porosity, mostly barren, NSFO, vry chalky, scat chert-off wh

Ls: tan-gry, fn-sub xln, vry DNS, hvy chert-off wh, sl chalky

Ls: ala

Sh: blk, carb, fissile

Ls: off wh-lt gry, fn xln, poor int xln porosity, scat oil st, NSFO, no odor, scat chert-off wh

Sh: lt-drk gry

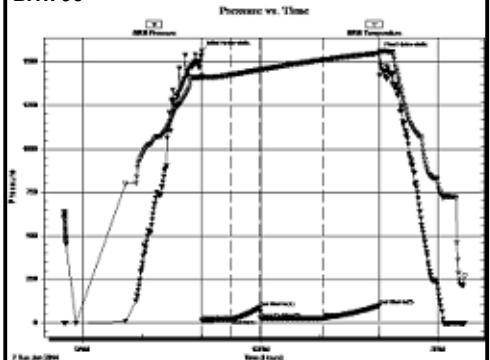
Ls: off wh-tan, fn xln, poor int xln porosity, vry lt scat oil st, NSFO, no odor, vry chalky

Sh: gry

Ls: off wh-tan, fn-md xln, poor-fair int xln porosity, sl-fair oil st, VSSFO, sl odor, sl chalky, fossil

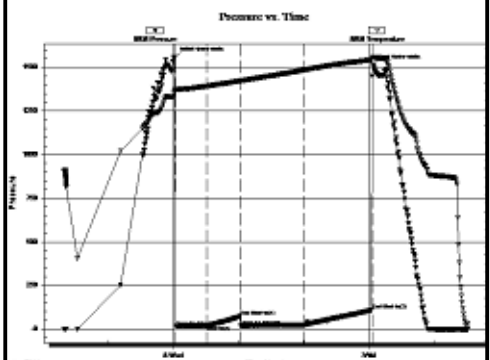
Sh: drk gry-blk

FP: 13-22, 26-28#
 SIP: 90-99#
 HP: 1,563-1,554#
 BHT: 98



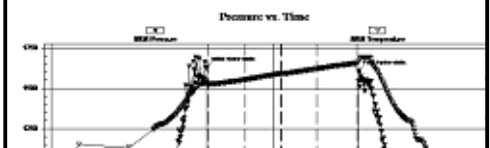
DST #2 3,106'-3,136' LKC "E & F"
 30"-30"-60"-60"

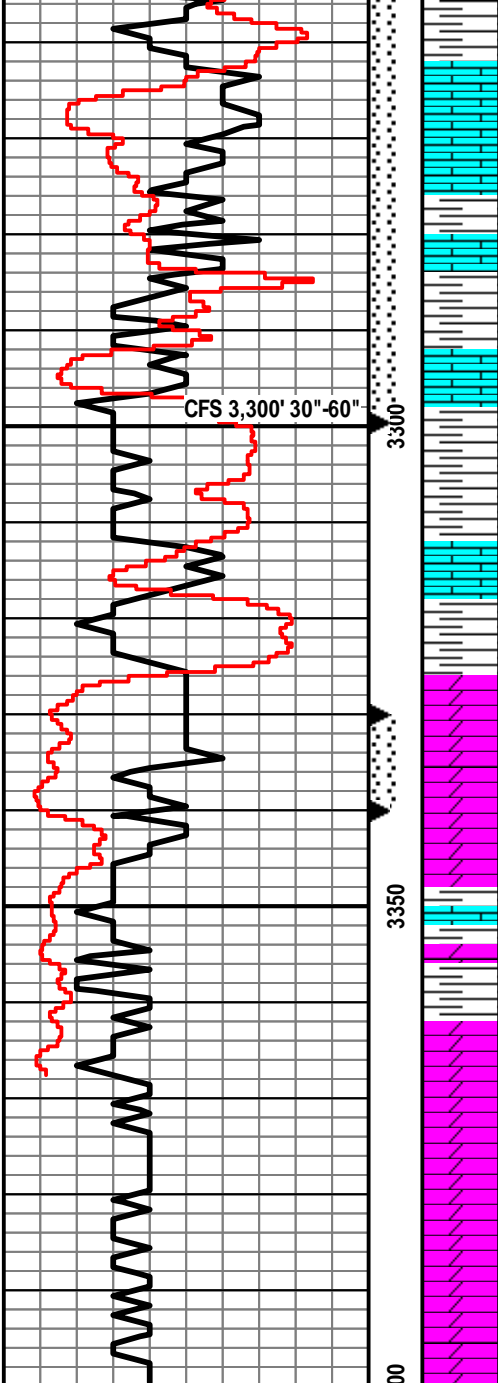
IF: Weak blow, built to 5"
 FF: Weak blow, built to 6.5"
 Rec: 30' GIP, 30' OCM (8% O, 92% M)
 FP: 14-20, 16-23#
 SIP: 72-108#
 HP: 1,559-1,513#
 BHT: 96



DST #3 3,200'-3,300' LKC "I-L"
 30"-30"-30"-30"

IF: Weak blow, built to 1"
 FF: Weak surface blow
 Rec: 10' Mud w/ oil spots
 FP: 15-19, 20-22#
 SIP: 134-61#
 HP: 1,631-1,606#
 BHT: 94





Ls: tan-lt gry, fn xln, scat int xln porosity, scat oil st, NSFO, no odor, sl chalky

Ls: ala

Sh: gry, scat blk

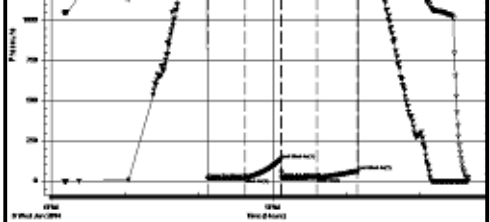
Ls: off wh-tan-gry, fn-md xln, poor int xln porosity, NSFO, no odor, sl fossil
B/KC 3298' (-1428)
 Sh: lt-drk gry-grn, soft
 Sh: lt-drk gry-brn, soft, earthy
 Sh: drk gry-brn-grn, vry soft
 Sh: ala

Arbuckle 3326' (-1456)
 Dolo: off wh, fn-md xln, fair-good int xln porosity, lt oil sat, VSSFO, sl-fair odor
 Dolo: off wh, fn-md xln, poor-fair int xln porosity, lt-fair oil sat, SSFO, good-strong odor
 Dolo: off wh, fn-md xln, poor int xln porosity, lt oil sat, VSSFO, fair-good odor
 Sh: drk gry-brn, scat ls: off wh-tan, fn-sub xln, mostly DNS
 Sh: ala

Dolo: off wh, fn-md xln, fair int xln porosity, fair oil sat, SSFO, good-strong odor

Dolo: wh, fn-md xln, fair int xln porosity, lt oil st, VSSFO, strong odor, chalky, scat sh: drk gry

Dolo: wh, md xln, fair-good int xln porosity, mostly barren, strong odor, scat chalk



DST #4 3,330-3,340' Top 4-14' Arbuckle
 30"-30"-30"-30"
 IF: BOB in 11 minutes, .5" blow back on shut in
 FF: BOB in 30 minutes, surface blow back on shut in
 Rec: 270' GIP, 150' GO (20% G, 80% O), 60' G&OCWM (5% G, 5% O, 30% W, 60% M)
 FP: 29-65, 75-95#
 SIP: 620-498#
 HP: 1,742-1,765#
 BHT: 109

