



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1190680
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: _____

1190680

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	WALZ FAMILY TRUST ET AL 1-12
Doc ID	1190680

All Electric Logs Run

INDUCTION
MICRO
POROSITY
SONIC
SPECTRAL



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 11/4/2013
 Invoice # 7469

P.O.#:

Due Date: 12/4/2013

Division: Russell

Invoice

Contact:
 Samuel Gary Jr & Associates Inc
Address/Job Location:
 Samuel Gary Jr & Associates Inc
 1815 11th Street
 Great Bend, KS 67530

RECEIVED
 NOV 18 2013
 SAMUEL GARY JR.
 & ASSOCIATES, INC.

DRLG COMP W/O LOE GG

Account	8200.138
Material	
Deck	
AFE	
Approval	
Description	

Reference:
 WALZ FAMILY TRUST ET AL 1-12

Description of Work:
 SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable
Labor		\$ 991.39	No
Common-Class A	225	\$ 3,664.29	Yes
Bulk Truck Matl-Material Service Charge	237	\$ 514.63	No
Calcium Chloride	8	\$ 413.96	Yes
Pump Truck Mileage-Job to Nearest Camp	36	\$ 390.08	No
8 5/8" Basket	1	\$ 343.09	Yes
Bulk Truck Mileage-Job to Nearest Bulk Plant	36	\$ 228.26	No
8 5/8" Centralizer	2	\$ 138.97	Yes
8 5/8" Top Rubber Plug	1	\$ 115.09	Yes
Baffle Plate Aluminum, 8 5/8"	1	\$ 97.71	Yes
Premium Gel (Bentonite)	4	\$ 70.70	Yes

Item	Quantity	Price	Taxable
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Invoice Terms:

Net 30

SubTotal: \$ 6,968.16
 Discount Available ONLY if Invoice is Paid & Received
 within listed terms of invoice: \$ (1,045.22)

SubTotal for Taxable Items:	\$ 4,117.23
SubTotal for Non-Taxable Items:	\$ 1,805.70
Total:	\$ 5,922.94
Tax:	\$ 314.97

7.65% Trego County Sales Tax

Thank You For Your Business!

Amount Due: \$ 6,237.91
Applied Payments:
Balance Due: \$ 6,237.91

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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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. 7469

Date <u>11-4-13</u>	Sec. <u>12</u>	Twp. <u>11</u>	Range <u>22</u>	County <u>Osage</u>	State <u>KS</u>	On Location	Finish <u>12:15 AM</u>
Lease <u>WGLZ Family Trust</u> <u>BTHL</u>				Location <u>Ogallah DR 2E 1N 1W Ninto</u>		Well No. <u>1-12</u>	
Contractor <u>Discovery #4</u>				Owner <u>To Quality Oilwell Cementing, Inc.</u> 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>Surface</u>				Charge To <u>Sam Coody Jr & Associates</u>			
Hole Size <u>12 1/4</u>		T.D. <u>476</u>		Street			
Csg. <u>8 5/8</u>		Depth <u>475</u>		City			
Tbg. Size		Depth		State			
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg. <u>42.25</u>		Shoe Joint <u>42.25</u>		Cement Amount Ordered <u>225 com 3/CC 2/GE</u>			
Meas Line		Displace <u>27 1/2 BBL</u>		Common <u>225</u>			
EQUIPMENT				Poz. Mix			
Pumptrk <u>15</u>	No.	Cement Helper <u>Greg</u>		Gel. <u>64</u>			
Bulktrk	No.	Driver <u>Nick</u>		Calcium <u>B</u>			
Bulktrk <u>19</u>	No.	Driver <u>Lonnie</u>		Hulls			
JOB SERVICES & REMARKS				Salt			
Remarks:				Flowseal			
Rat Hole				Kol-Seal			
Mouse Hole				Mud CLR 48			
Centralizers				CFL-117 or CD110 CAF 38			
Baskets				Sand			
D/V or Port Collar				Handling <u>237</u>			
<u>8 5/8 on bottom. Est. Circulation.</u>				Mileage			
<u>Mix 225 SEC + Displace Plug</u>				FLOAT EQUIPMENT			
<u>Cement Circulation</u>				Guide Shoe <u>8 5/8</u>			
<u>Plug located @ 700#</u>				Centralizer <u>2</u>			
				Baskets <u>1</u>			
				AFU inserts <u>Rubber Plug</u>			
				Float Shoe <u>Raffle Plate</u>			
				Latch Down			
				Pumptrk Charge <u>Surface</u>			
				Mileage <u>36</u>			
Signature <u>James P. [Signature]</u> X Signature				Tax			
				Discount			
				Total Charge			



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 11/12/2013
 Invoice # 7237

P.O.#:

Due Date: 12/12/2013

Division: Russell

Invoice

Contact:

Samuel Gary Jr & Associates Inc

Address/Job Location:

Samuel Gary Jr & Associates Inc
 1815 11th Street
 Great Bend, KS 67530

RECEIVED

NOV 18 2013

SAMUEL GARY JR.
 & ASSOCIATES, INC.

Reference:

WALZ FAMILY TRUST ET AL 1-12

Description of Work:

PROD LONG STRING

DRLG COMP W/O LOE GG

Account	8300.238
Well/Prospect	
Deck	
AFE	
Approval	
Description	

Services / Items Included:

Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor	\$ 1,257.19	No	Pump Truck Mileage-Job to Nearest Camp	36	\$384.58	No
Common-Class A	\$ 3,612.68	Yes	Auto Fill Float Shoe, 5 1/2"	1	\$327.55	Yes
Cement Port Collar, 5 1/2"	\$ 2,676.06	Yes	Salt (Fine)	19	\$283.92	Yes
Gilsonite	\$ 1,697.15	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$239.77	Yes
5 1/2" Basket	\$ 1,472.90	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	36	\$225.05	No
CFL 117	\$ 1,160.51	Yes	Flo Seal	56	\$119.89	Yes
5 1/2" Turbolizer	\$ 558.76	Yes	KCL	2	\$63.93	Yes
Bulk Truck Mat-Material Service Charge	\$ 543.77	No				
CD-110	\$ 500.96	Yes				
Mud Clear	\$ 396.06	Yes				
Defoamer A or CAF-38	\$ 374.65	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 15,895.37
 Discount Available ONLY if Invoice is Paid & Received
 within listed terms of invoice: \$ (2,384.31)

SubTotal for Taxable Items:	\$ 11,462.06
SubTotal for Non-Taxable Items:	\$ 2,049.00
Total:	\$ 13,511.06
Tax:	\$ 876.85

7.65% Trego County Sales Tax

Thank You For Your Business!

Amount Due: \$ 14,387.91
Applied Payments:
Balance Due: \$ 14,387.91

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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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. 7237

Date <u>11-12-13</u>	Sec. <u>12</u>	Twp. <u>11</u>	Range <u>22</u>	County <u>Trego</u>	State <u>KS</u>	On Location	Finish <u>19:30</u>
				Location <u>Ogallah N to D Rd, 2 E, 1 N, 1 W, N n 2</u>			

Lease <u>Waltz Family Trust ETAL</u>	Well No. <u>1-12</u>	Owner
Contractor <u>Discovery #4</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>long string</u>		
Hole Size <u>7 7/8</u>	T.D. <u>3921</u>	Charge To <u>Sam Gary Jr & Assoc</u>
Csg. <u>5 1/2 15.5 #</u>	Depth <u>3916.17</u>	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 <u>43.43</u>	Cement Amount Ordered <u>225sx Q pro-c 10% salt</u>
Meas Line	Displace <u>92.17661</u>	<u>5% gilsonite 1/4 # Flow 20 bbl KCL 25 CAF 38</u>

EQUIPMENT

Pumptrk No.	Cementer Helper <u>Cody</u>	Poz Mix <u>CD-110 117</u>
Bulktrk No.	Driver <u>Clayton</u>	Gal. <u>KCL 2 gal</u>
Bulktrk <u>Pu</u> No.	Driver <u>Travis</u>	Calcium

JOB SERVICES & REMARKS

Remarks:	Hulls <u>KCL 2 gal</u>
Rat Hole <u>30 sx</u>	Salt <u>19</u>
Mouse Hole <u>15 sx</u>	Flowseal <u>56 #</u>
Centralizers <u>1,3,5,7,9,11,13,15,57</u>	Kol-Seal <u>1057 #</u>
Baskets <u>4,10,16,56</u>	Mud CLR 48 <u>500 gal</u>
Port Collar <u>Top of #56 at 1598</u>	<u>CFL-117 or CD110 CAF 38 50 #</u>
<u>Pipe on bottom broke circulation. Pumped 500 gal Mud CLR 48 with 10 bbl fw behind it. Plugged Rat hole with 30sx and Mouse hole with 15 sx.</u>	Sand <u>176 #</u>
<u>Hooked to 5 1/2 Mixed 180sx shut down washed pump and lines. Released plug and displaced with 20 bbl KCL and 72.17 bbl fw plug landed and held.</u>	Handling <u>254</u>
<u>Lift pressure <u>900 psi</u></u>	Mileage

FLOAT EQUIPMENT

<u>Plug landed at <u>1500 psi</u></u>	Guide Shoe
	Centralizer <u>9 turbos</u>
	Baskets <u>4 wetherford</u>
	AFU Inserts
	Float Shoe <u>1</u>
	Latch Down <u>1</u>

	<u>1 port collar</u>
	Pumptrk Charge <u>prod long string</u>
	Mileage <u>36</u>

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



QUALITY OILWELL CEMENTING, INC.

PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 11/15/2013
 Invoice # 7011

P.O.#:

Due Date: 12/15/2013

Division: Russell

Invoice

Contact:

Samuel Gary Jr & Associates Inc
Address/Job Location:
 Samuel Gary Jr & Associates Inc
 1815 11th Street
 Great Bend, KS 67530

Reference:

WALZ FAMILY TRUST 1-12

Description of Work:

PORT COLLAR JOB

RECEIVED

NOV 25 2013

SAMUEL GARY JR.
 & ASSOCIATES, INC.

<input type="checkbox"/> DRLG	<input type="checkbox"/> COMP	<input type="checkbox"/> W/O	<input type="checkbox"/> LOE	<input type="checkbox"/> GG
Account	8300-217			
Well/Prospect				
Deck				
AFE				
Approval	<i>[Signature]</i>			
Description				

Services / Items Included:

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 991.39	No				
mon, MetsoBeads, Plater, Gel, FloSeal, Calcium)	195	\$ 4,047.98	Yes				
Bulk Truck Matl-Material Service Charge	300	\$ 651.43	No				
Pump Truck Mileage-Job to Nearest Camp	36	\$ 390.08	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	36	\$ 228.26	No				
Flo Seal	75	\$ 162.86	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 6,471.99
 Discount Available ONLY if Invoice is Paid & Received
 within listed terms of invoice: \$ (970.80)

SubTotal for Taxable Items:	\$ 3,579.21
SubTotal for Non-Taxable Items:	\$ 1,921.98
Total:	\$ 5,501.19
Tax:	\$ 273.81

7.65% Trego County Sales Tax

Thank You For Your Business!

Amount Due: \$ 5,775.00
Applied Payments:
Balance Due: \$ 5,775.00

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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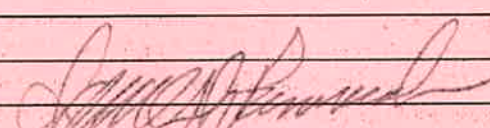
QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 7011

Date	Sec.	Twsp.	Range	County	State	On Location	Finish
11-15-13				Trego	KS		12:30 PM
Lease				Well No.	Owner		
Contractor				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				Charge To			
Hole Size				Street			
Csg.				City			
Tbg. Size				State			
Tool				The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg.				Cement Amount Ordered			
Meas Line				Displace			
EQUIPMENT				Common			
Pumptrk	No.	Cementer		Poz. Mix			
		Helper		Gel.			
Bulktrk	No.	Driver		Calcium			
		Driver		Hulls			
Bulktrk	No.	Driver		Salt			
		Driver		Flowseal			
JOB SERVICES & REMARKS				Kol-Seal			
Remarks:				Mud CLR 48			
Rat Hole				CFL-117 or CD110 CAF 38			
Mouse Hole				Sand			
Centralizers				Handling			
Baskets				Mileage			
D/V or Port Collar				FLOAT EQUIPMENT			
Tested PC to 100' bbl				Guide Shoe			
Opened PC 195				Centralizer			
Mixed 185 x QMDC				Baskets			
Displaced 7" bbl				AFU Inserts			
Ran 5' 30"				Float Shoe			
Washed down well 20 bbl H ₂ O				Latch Down			
Washed track clean				Pumptrk Charge			
Cement did circulate				Mileage			
KCC Marvin Miller				Tax			
				Discount			
				Total Charge			
				<input checked="" type="checkbox"/> Signature			



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr&AssociatesInc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz FamilyTrust1-12

Job Ticket: 54368 **DST#: 1**

Test Start: 2013.11.08 @ 23:26:03

GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:14:43

Time Test Ended: 08:09:13

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 70

Interval: 3458.00 ft (KB) To 3506.00 ft (KB) (TVD)

Reference Elevations: 2169.00 ft (KB)

Total Depth: 3506.00 ft (KB) (TVD)

2161.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369 Inside

Press @RunDepth: 213.49 psig @ 3469.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.08

End Date: 2013.11.09

Last Calib.: 2013.11.09

Start Time: 23:26:03

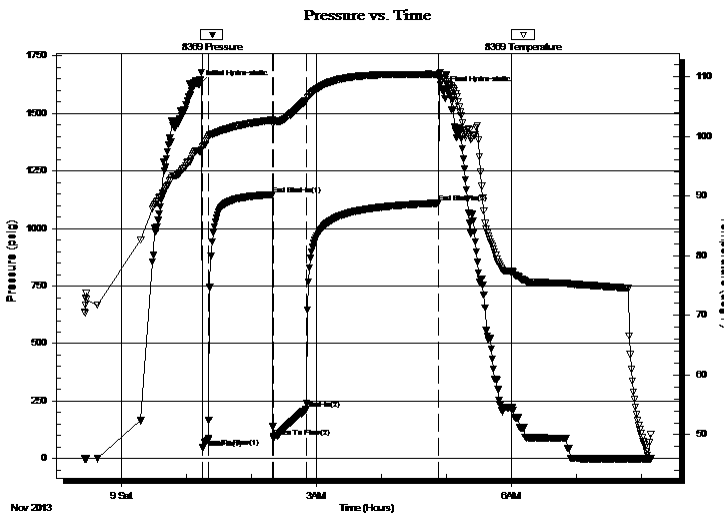
End Time: 08:09:13

Time On Btm: 2013.11.09 @ 01:11:58

Time Off Btm: 2013.11.09 @ 04:57:42

TEST COMMENT: 5-IFP-strg bl in 2min
60-ISIP-no bl
30-FFP-strg bl in 2min
120-FSIP-surface bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1624.60	97.51	Initial Hydro-static
3	49.52	98.18	Open To Flow (1)
9	86.31	99.86	Shut-In(1)
68	1147.70	102.72	End Shut-In(1)
69	95.17	102.45	Open To Flow (2)
99	213.49	106.00	Shut-In(2)
222	1110.91	110.39	End Shut-In(2)
226	1597.09	109.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	810'GIP	0.00
365.00	CO	5.12
95.00	MGO 20%G30%M50%O	1.33
35.00	O&GCMW 5%G5%M10%O70%W	0.49

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr & Associates Inc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz Family Trust 1-12

Job Ticket: 54368 **DST#: 1**

Test Start: 2013.11.08 @ 23:26:03

GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:14:43

Time Test Ended: 08:09:13

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 70

Interval: **3458.00 ft (KB) To 3506.00 ft (KB) (TVD)**

Reference Elevations: 2169.00 ft (KB)

Total Depth: 3506.00 ft (KB) (TVD)

2161.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8700 Outside

Press @ Run Depth: psig @ 3469.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.08

End Date:

2013.11.09

Last Calib.:

2013.11.09

Start Time: 23:25:45

End Time:

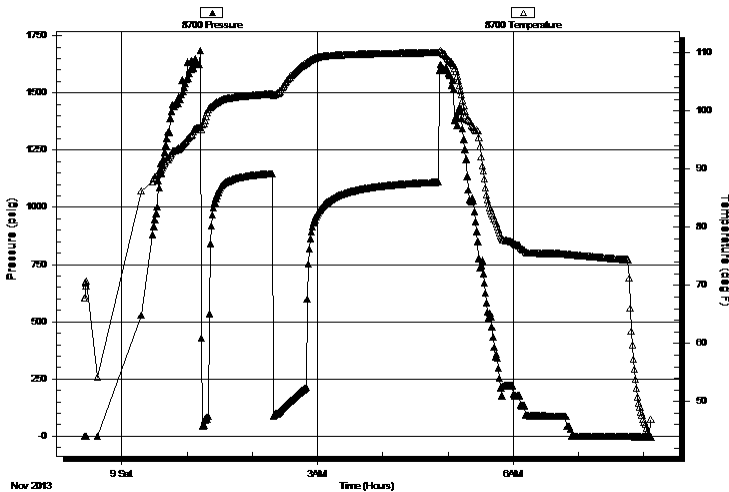
08:07:10

Time On Btm:

Time Off Btm:

TEST COMMENT: 5-IFP-strg bl in 2min
60-ISIP-no bl
30-FFP-strg bl in 2min
120-FSIP-surface bl bk

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	810'GIP	0.00
365.00	CO	5.12
95.00	MGO 20%G30%M50%O	1.33
35.00	O&GCMW 5%G5%M10%O70%W	0.49

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr & Associates Inc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz Family Trust 1-12

Job Ticket: 54368 **DST#: 1**
Test Start: 2013.11.08 @ 23:26:03

GENERAL INFORMATION:

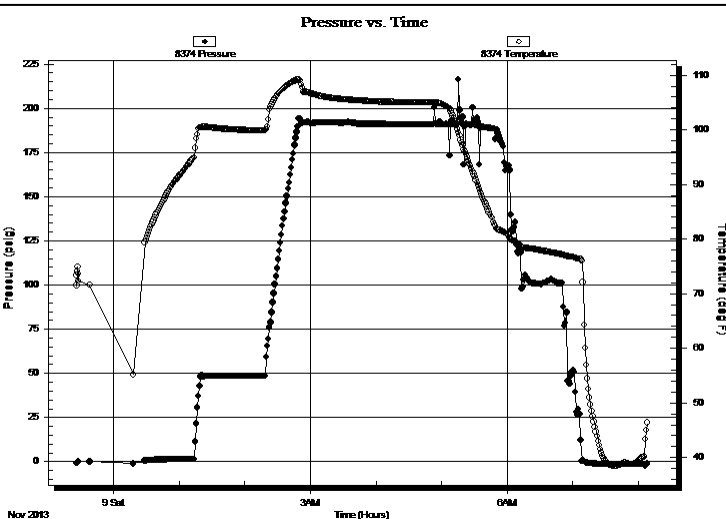
Formation: **LKC C-D**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:14:43 Tester: Ray Schwager
 Time Test Ended: 08:09:13 Unit No: 70
 Interval: **3458.00 ft (KB) To 3506.00 ft (KB) (TVD)** Reference Elevations: 2169.00 ft (KB)
 Total Depth: 3506.00 ft (KB) (TVD) 2161.00 ft (CF)
 Hole Diameter: 7.85 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8374

Fluid

Press @ Run Depth: psig @ 3424.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.11.08 End Date: 2013.11.09 Last Calib.: 2013.11.09
 Start Time: 23:25:55 End Time: 08:08:35 Time On Btm:
 Time Off Btm:

TEST COMMENT: 5-IFP-strg bl in 2min
 60-ISIP-no bl
 30-FFP-strg bl in 2min
 120-FSIP-surface bl bk



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	810'GIP	0.00
365.00	CO	5.12
95.00	MGO 20%G30%M50%O	1.33
35.00	O&GCMW 5%G5%M10%O70%W	0.49

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr&AssociatesInc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz FamilyTrust1-12

Job Ticket: 54368 **DST#: 1**

Test Start: 2013.11.08 @ 23:26:03

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 50.00 sec/qt
Water Loss: 7.60 in³
Resistivity: ohm.m
Salinity: 2000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 38 deg API
Water Salinity: 82000 ppm

Recovery Information

Recovery Table

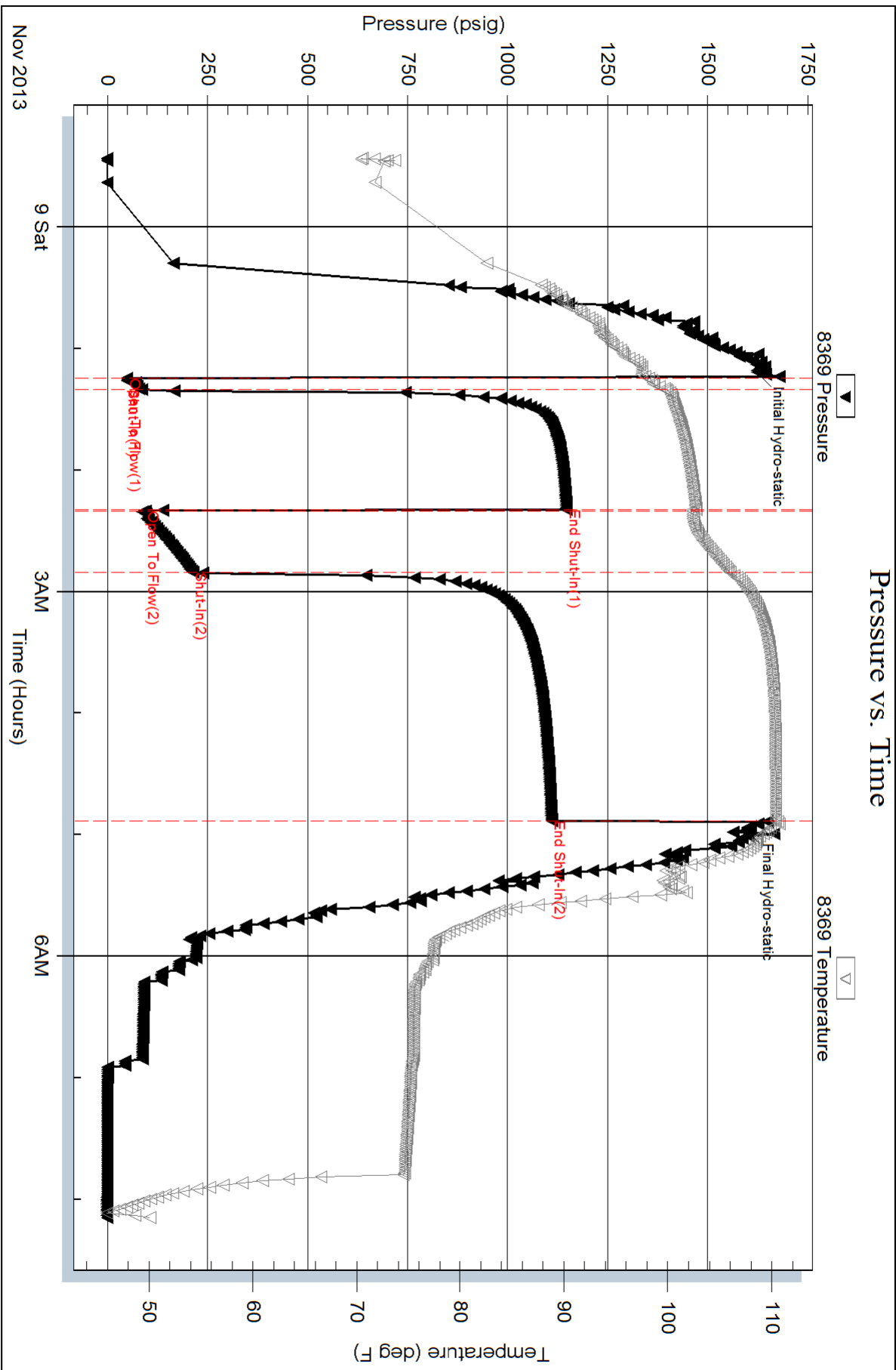
Length ft	Description	Volume bbl
0.00	810'GIP	0.000
365.00	CO	5.120
95.00	MGO 20%G30%M50%O	1.333
35.00	O&GCMW 5%G5%M10%O70%W	0.491

Total Length: 495.00 ft Total Volume: 6.944 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Sampler DATA:300MLgas 1400ML Oil 200ML Water 100ML Mud
PSI: 1000#
RW .1 @ 65F



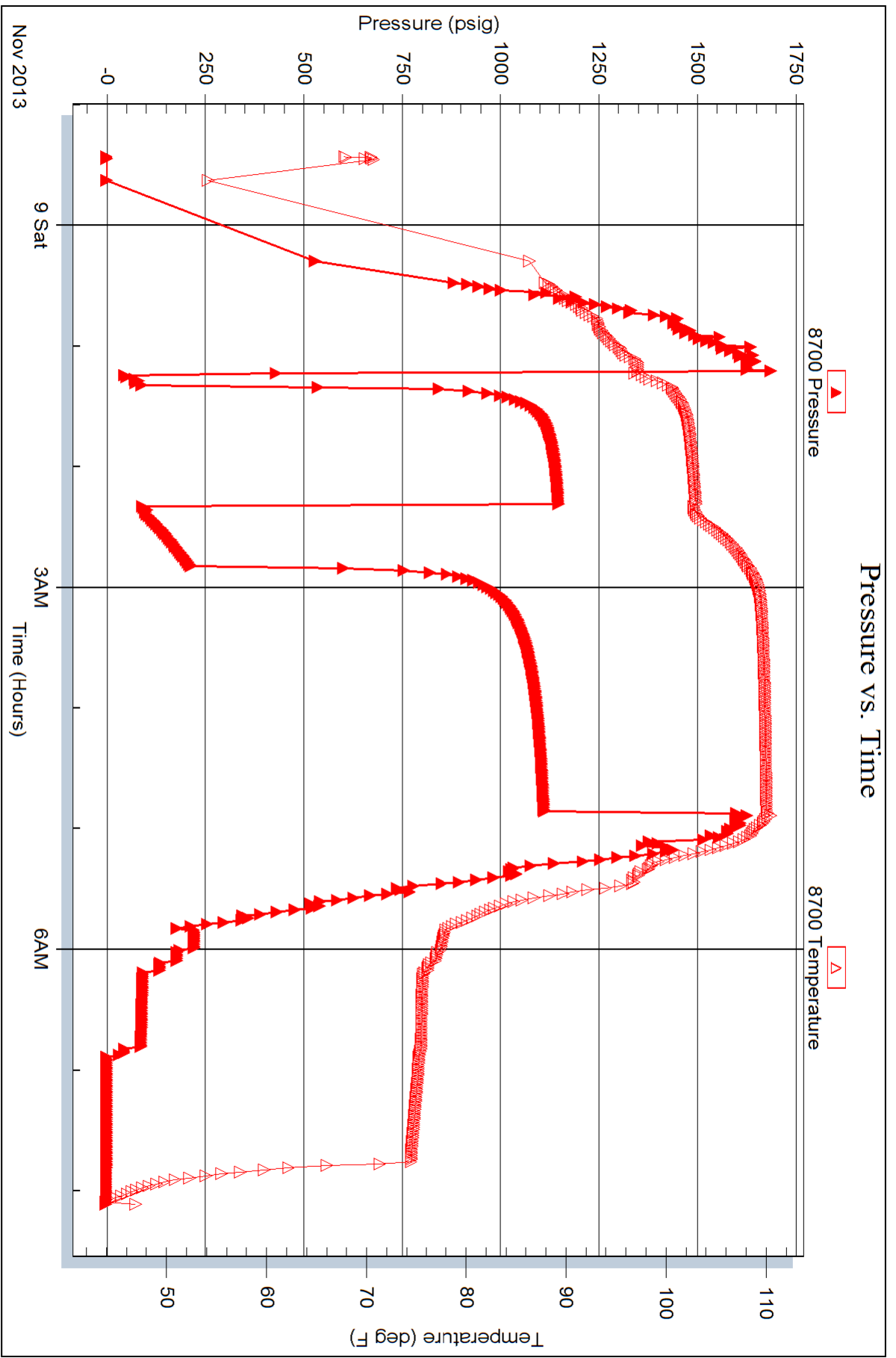
Serial #: 8700

Outside

Samuel Gary Jr & Associates Inc

Walz Family Trust 1 - 12

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54368

Printed: 2013.11.09 @ 09:22:05

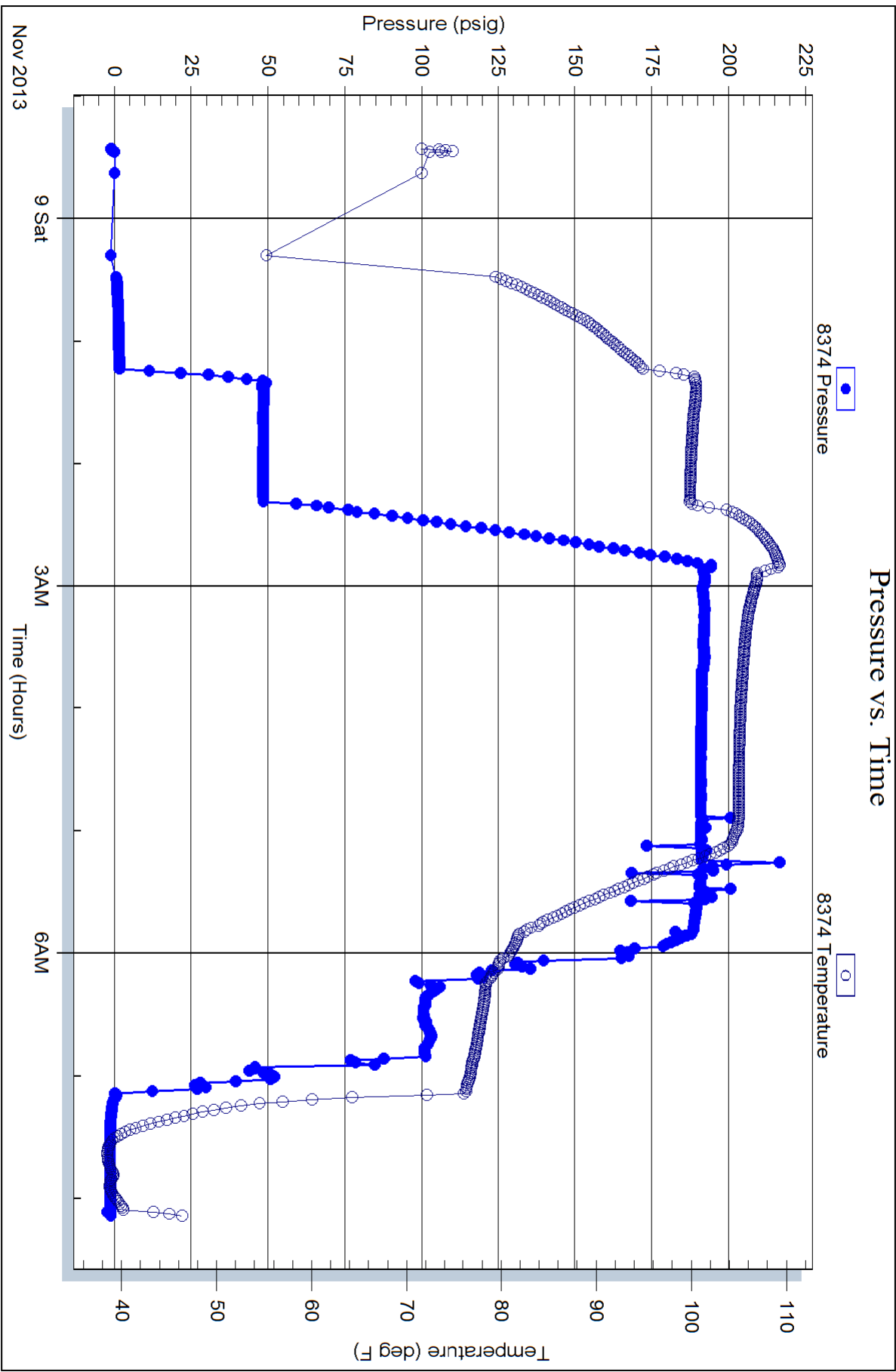
Serial #: 8374

Fluid

Samuel Gary Jr & Associates Inc

Walz Family Trust 1 - 12

DST Test Number: 1





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr&AssociatesInc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz FamilyTrust1-12

Job Ticket: 54369 **DST#: 2**

Test Start: 2013.11.09 @ 19:40:08

GENERAL INFORMATION:

Formation: **LKC F-G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:17:03
 Time Test Ended: 03:12:02
 Interval: **3522.00 ft (KB) To 3566.00 ft (KB) (TVD)**
 Total Depth: 3566.00 ft (KB) (TVD)
 Hole Diameter: 7.85 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 70
 Reference Elevations: 2169.00 ft (KB)
 2161.00 ft (CF)
 KB to GR/CF: 8.00 ft

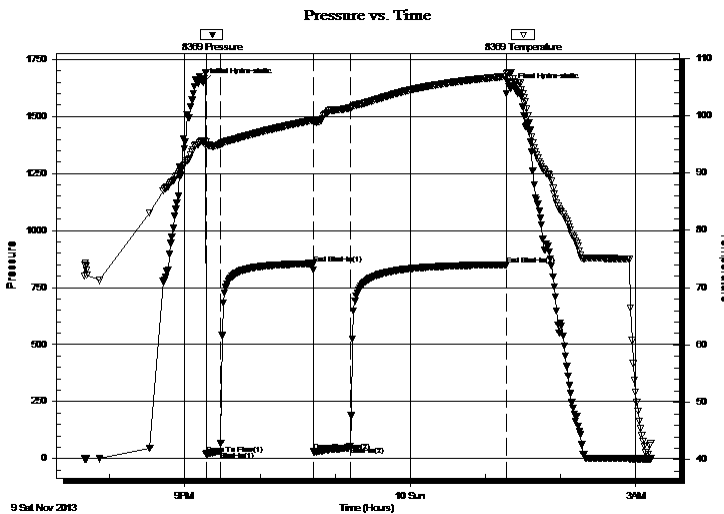
Serial #: 8369

Inside

Press @ Run Depth: 54.76 psig @ 3530.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.11.09 End Date: 2013.11.10 Last Calib.: 2013.11.10
 Start Time: 19:40:08 End Time: 03:12:02 Time On Btm: 2013.11.09 @ 21:14:48
 Time Off Btm: 2013.11.10 @ 01:20:17

TEST COMMENT: 10-IFP-w k bl 1/2"bl
 75-ISIP-no bl
 30-FFP-w k bl surface to 1/4"bl
 120-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1650.07	95.54	Initial Hydro-static
3	19.05	94.54	Open To Flow (1)
14	32.26	94.96	Shut-In(1)
88	855.27	99.21	End Shut-In(1)
89	30.99	98.95	Open To Flow (2)
117	54.76	101.31	Shut-In(2)
242	850.83	106.82	End Shut-In(2)
246	1626.93	107.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
55.00	MW 40%M60%W w /show of oil	0.77

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr & Associates Inc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz Family Trust 1-12

Job Ticket: 54369 **DST#: 2**

Test Start: 2013.11.09 @ 19:40:08

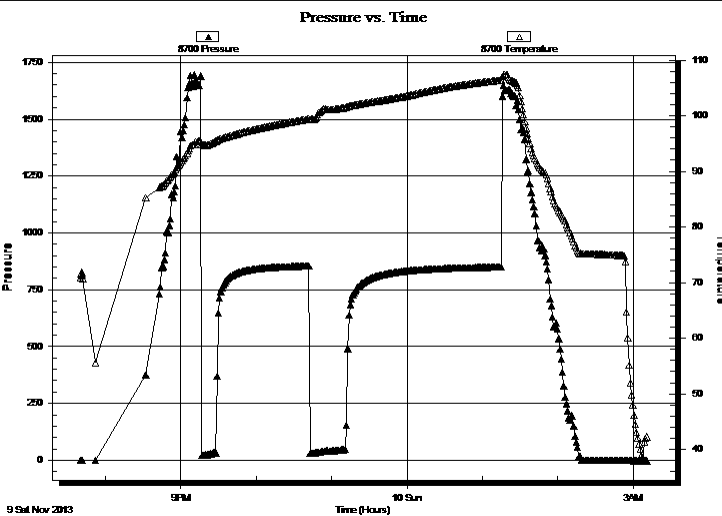
GENERAL INFORMATION:

Formation: **LKC F-G**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 21:17:03 Tester: Ray Schwager
 Time Test Ended: 03:12:02 Unit No: 70
Interval: 3522.00 ft (KB) To 3566.00 ft (KB) (TVD)
 Reference Elevations: 2169.00 ft (KB)
 Total Depth: 3566.00 ft (KB) (TVD) 2161.00 ft (CF)
 Hole Diameter: 7.85 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8700 Outside
 Press @ Run Depth: psig @ 3530.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.11.09 End Date: 2013.11.10 Last Calib.: 2013.11.10
 Start Time: 19:40:06 End Time: 03:10:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: 10-IFP-w k bl 1/2"bl
 75-ISIP-no bl
 30-FFP-w k bl surface to 1/4"bl
 120-FSIP-no bl

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
55.00	MW 40%M60%W w/show of oil	0.77

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr&AssociatesInc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz FamilyTrust1-12

Job Ticket: 54369 **DST#: 2**
Test Start: 2013.11.09 @ 19:40:08

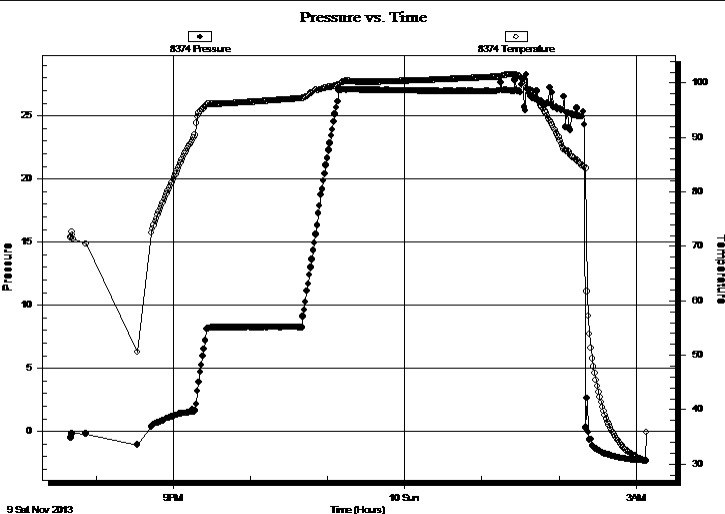
GENERAL INFORMATION:

Formation: **LKC F-G**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 21:17:03 Tester: Ray Schwager
 Time Test Ended: 03:12:02 Unit No: 70
Interval: 3522.00 ft (KB) To 3566.00 ft (KB) (TVD) Reference Elevations: 2169.00 ft (KB)
 Total Depth: 3566.00 ft (KB) (TVD) 2161.00 ft (CF)
 Hole Diameter: 7.85 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8374 Fluid

Press @ Run Depth: psig @ 3488.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.11.09 End Date: 2013.11.10 Last Calib.: 2013.11.10
 Start Time: 19:40:16 End Time: 03:08:25 Time On Btm:
 Time Off Btm:

TEST COMMENT: 10-IFP-w k bl 1/2"bl
 75-ISIP-no bl
 30-FFP-w k bl surface to 1/4"bl
 120-FSIP-no bl



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
55.00	MW 40%M60%W w /show of oil	0.77

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr&AssociatesInc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz FamilyTrust1-12

Job Ticket: 54369 **DST#: 2**
Test Start: 2013.11.09 @ 19:40:08

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:	50000 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.74 in ³	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
55.00	MW 40%M60%W w/show of oil	0.772

Total Length: 55.00 ft Total Volume: 0.772 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Sampler Data: 800ML mud 1200ML water trace of oil

PSI: 280#
RW .17 @ 60F

Serial #: 8369

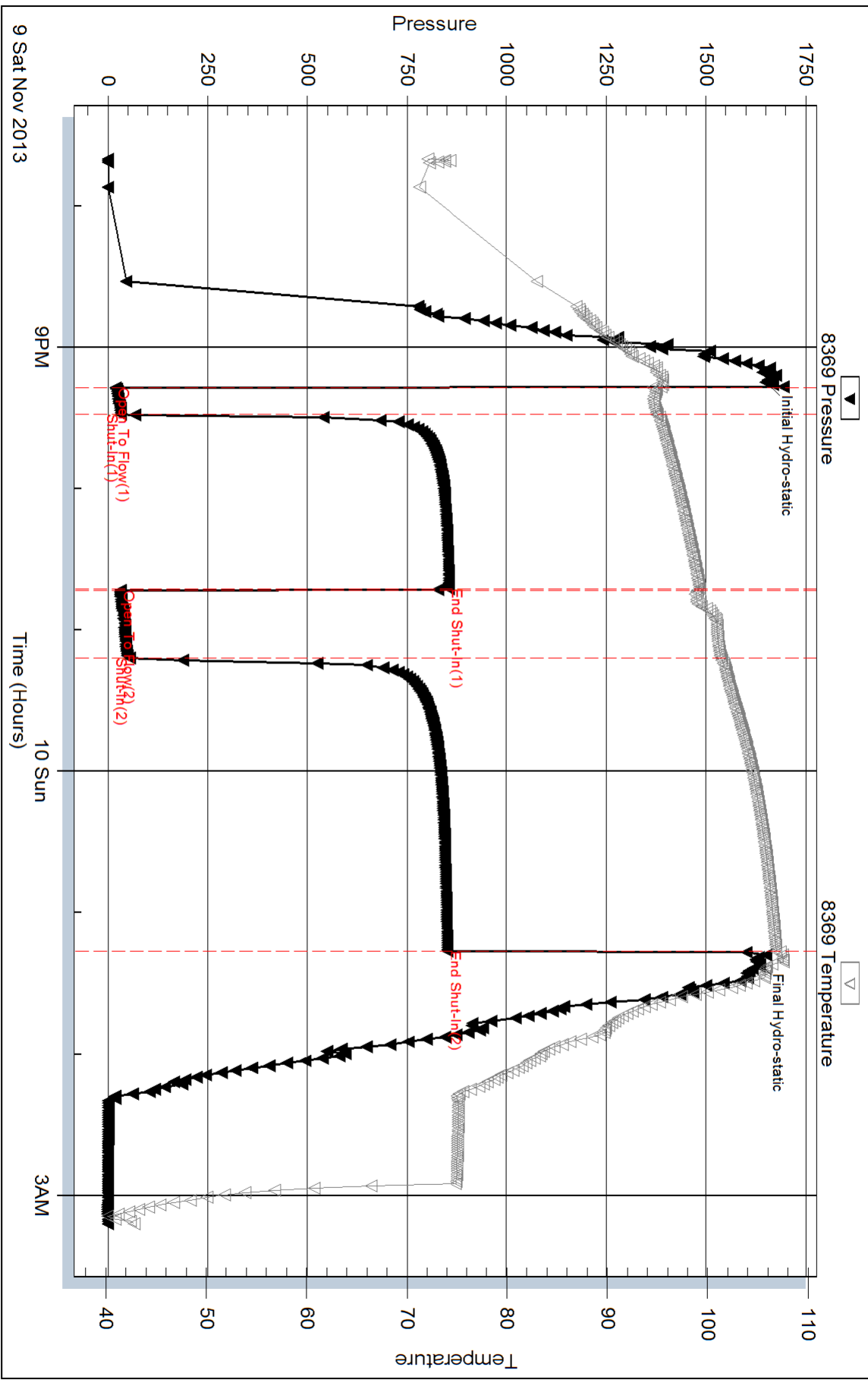
Inside

Samuel Gary Jr & Associates Inc

Walz Family Trust1 - 12

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 54369

Printed: 2013.11.10 @ 23:13:09

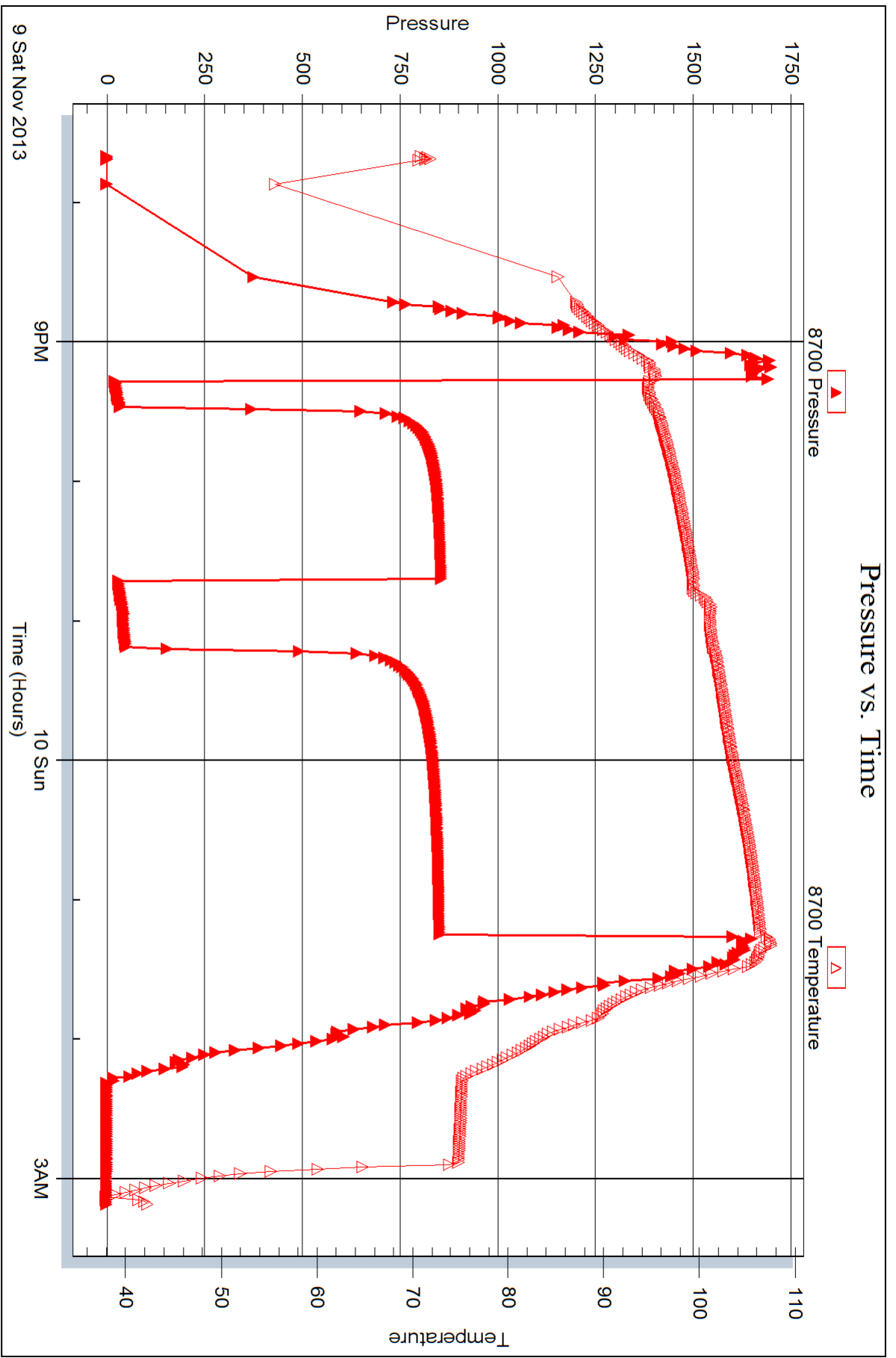
Serial #: 8700

Outside

Samuel Gary Jr & Associates Inc

Walz Family Trust1 - 12

DST Test Number: 2



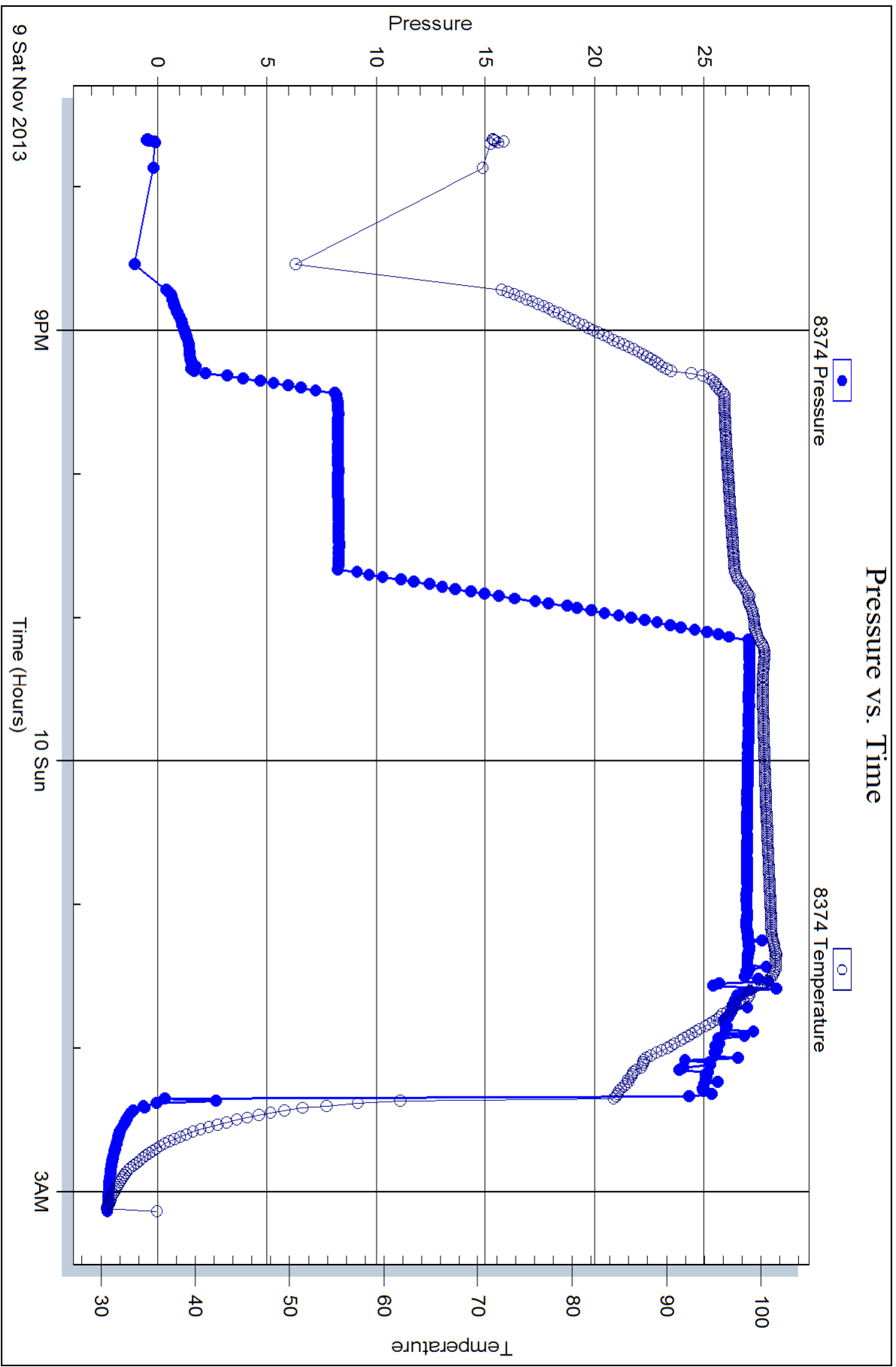
Serial #: 8374

Fluid

Samuel Gary Jr & Associates Inc

Walz Family Trust1 - 12

DST Test Number: 2





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr&AssociatesInc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz FamilyTrust1-12

Job Ticket: 54370 **DST#: 3**

Test Start: 2013.11.11 @ 03:20:51

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:29:46

Time Test Ended: 11:48:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Interval: 3749.00 ft (KB) To 3768.00 ft (KB) (TVD)

Reference Elevations: 2169.00 ft (KB)

Total Depth: 3768.00 ft (KB) (TVD)

2161.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369 Inside

Press @ Run Depth: 20.01 psig @ 3750.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.11 End Date: 2013.11.11

Last Calib.: 2013.11.11

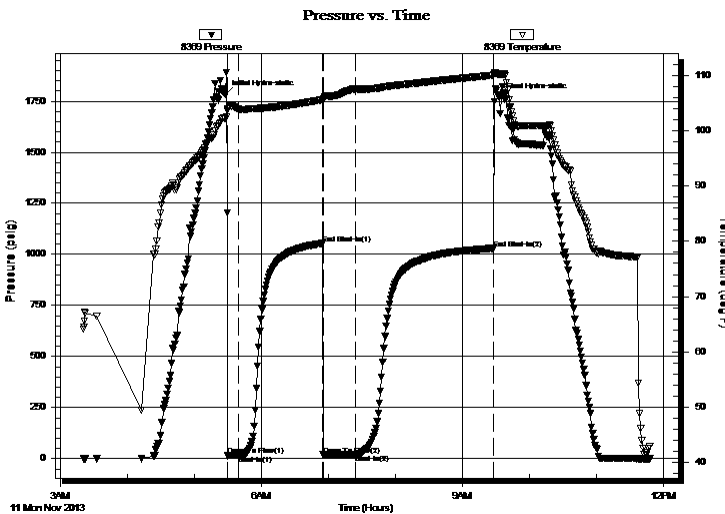
Start Time: 03:20:51 End Time: 11:48:15

Time On Btm: 2013.11.11 @ 05:27:31

Time Off Btm: 2013.11.11 @ 09:33:00

TEST COMMENT: 10-IFP-w k bl , 1/4"bl
75-ISIP-no bl
30-FFP-no bl
120-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1783.36	102.22	Initial Hydro-static
3	14.59	103.61	Open To Flow (1)
12	18.51	103.91	Shut-In(1)
88	1053.77	105.58	End Shut-In(1)
88	19.30	105.42	Open To Flow (2)
117	20.01	107.45	Shut-In(2)
241	1027.62	110.02	End Shut-In(2)
246	1765.99	110.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	CO	0.01
5.00	OCM 10%oil90%M	0.07

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr&AssociatesInc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz FamilyTrust1-12

Job Ticket: 54370

DST#: 3

Test Start: 2013.11.11 @ 03:20:51

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:29:46

Time Test Ended: 11:48:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Interval: 3749.00 ft (KB) To 3768.00 ft (KB) (TVD)

Reference Elevations: 2169.00 ft (KB)

Total Depth: 3768.00 ft (KB) (TVD)

2161.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8374

Fluid

Press @RunDepth: psig @ 3715.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.11

End Date: 2013.11.11

Last Calib.: 2013.11.11

Start Time: 03:20:19

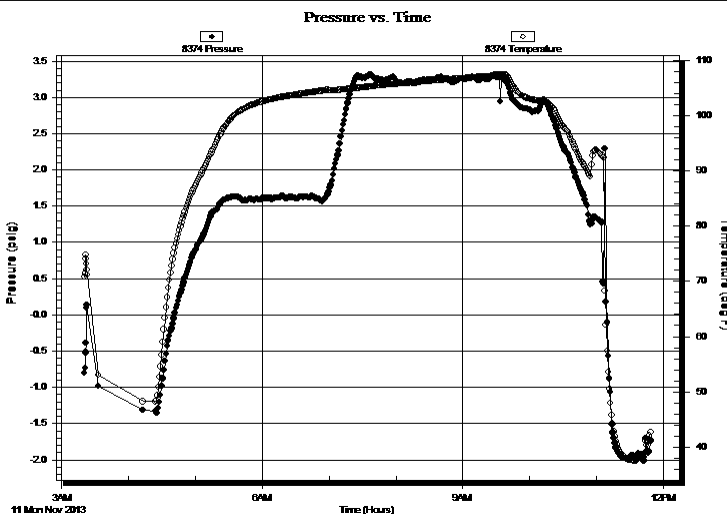
End Time: 11:49:06

Time On Btm:

Time Off Btm:

TEST COMMENT: 10-IFP-w k bl , 1/4"bl
75-ISIP-no bl
30-FFP-no bl
120-FSIP-no bl

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	CO	0.01
5.00	OCM 10%oil90%M	0.07

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr&AssociatesInc

12-11s-22w Trego

1515 Wynkoop
Ste 700
Denver Co 80202
ATTN: Dan Pritchard

Walz FamilyTrust1-12

Job Ticket: 54370 **DST#: 3**

Test Start: 2013.11.11 @ 03:20:51

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: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.73 in ³	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
1.00	CO	0.014
5.00	OCM 10%oil90%M	0.070

Total Length: 6.00 ft Total Volume: 0.084 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Sampler Data: 200MLOIL 1800MLMud
PSI: 130#

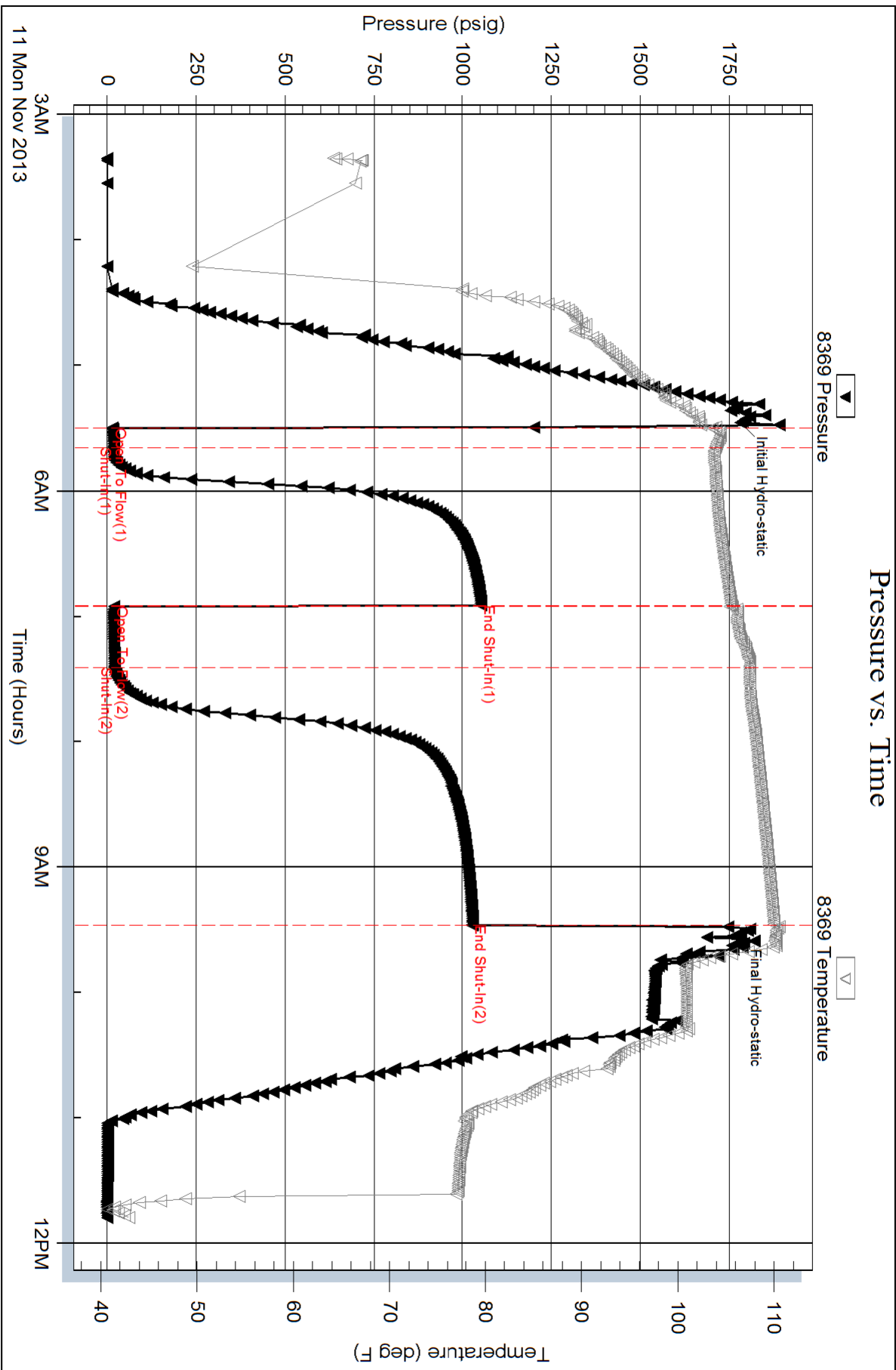
Serial #: 8369

Inside

Samuel Gary Jr & Associates Inc

Walz Family Trust1 - 12

DST Test Number: 3



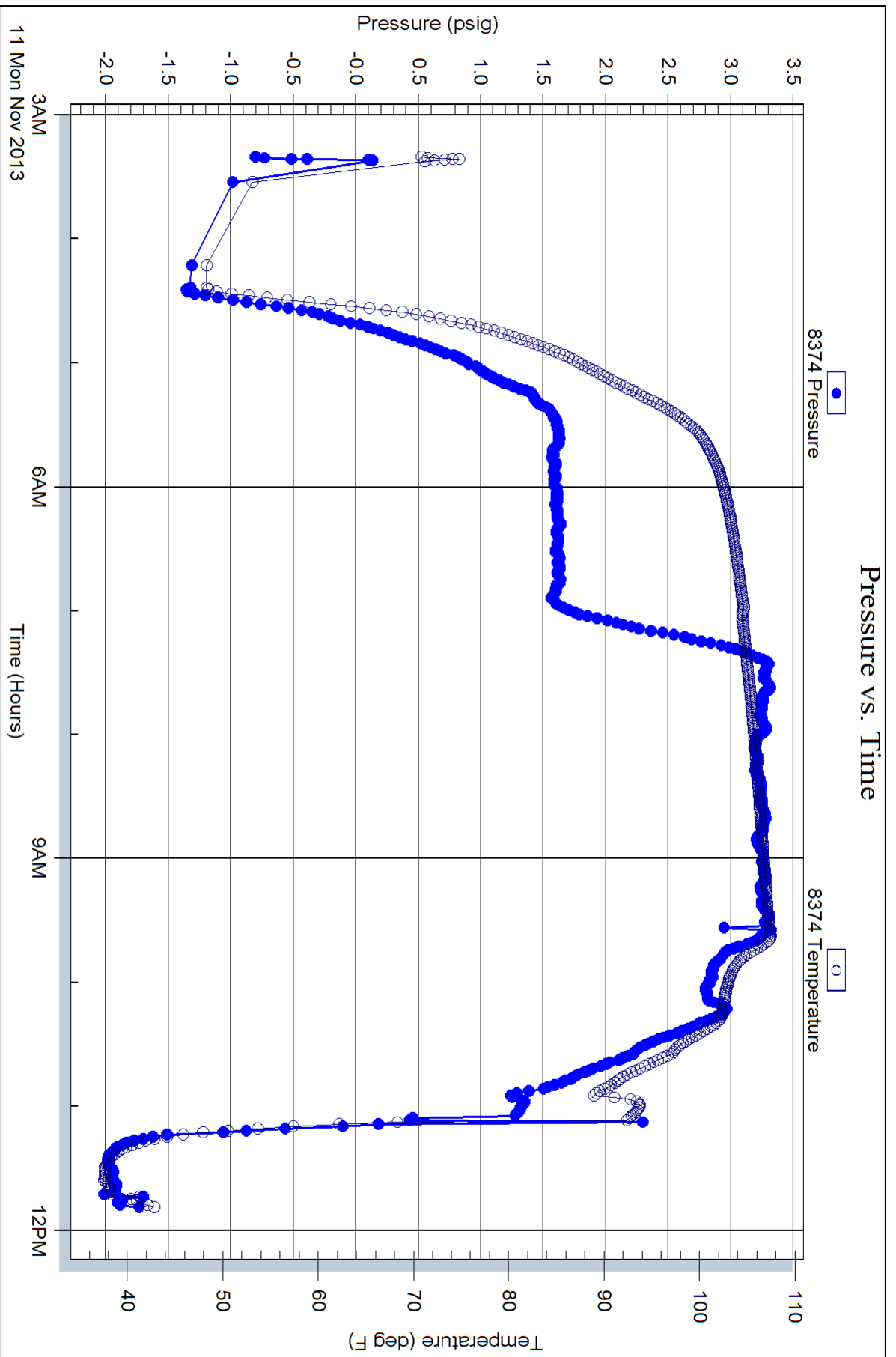
Serial #: 8374

Fluid

Samuel Gary Jr & Associates Inc

Walz Family Trust 11-12

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 54370

Printed: 2013.11.11 @ 12:00:15



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

Well Name: Walz Family Trust et al 1-12
 Location: SEC. 12-11S-22W Trego Co., KS
 License Number: 15-195-22894-0000
 Spud Date: 11/4/2013 Region: Wildcat
 Surface Coordinates: 950 FSL/ 150 FWL Drilling Completed: 11/12/2013

Bottom Hole
 Coordinates:
 Ground Elevation (ft): 2161' K.B. Elevation (ft): 2169'
 Logged Interval (ft): 3130' To: 3920' Total Depth (ft): 3920'
 Formation: Lansing/ Arbuckle
 Type of Drilling Fluid: Natural Chemical

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Sam Gar Jr. & Associates
 Address: 1515 Wynkoop, Ste. # 700
 Denver, Co. 80202
 Co. Geo: Dan Pritchard

GEOLOGIST

Name: Tom Flowers/ Schuyler Hedrick
 Company: Earth Tech OGL, Inc.
 Address: PO Box 683
 Hooker, Okla. 73945
 1-(888)- 543-8378 Work Cell-(580)-754-0990

DST's Report

DST #1 3458'-3506' 5-60-30-120
 IF-STRONG BLOW IN 2 MIN, ISI- NO BLOW, FF- STRONG BLOW IN 2 MIN, FSI- SURFACE BLOW BACK
 IH- 1624, FH- 1597/ IF- 49 TO 95, FF-86 TO 213/ ISI- 1147, FSI- 1111
 REC. 495' TF/ 810' GIP/ 365' CO/ 95' MGO 20% GAS, 50% OIL, 30% MUD/ 35' O&GCMW 5% GAS, 10% OIL, 70%
 WATER, 5% MUD/ BHT- 110, GRAVITY- 38, API RW- .1 @ 65 DEG., CHLOR- 82,000 PPM- 2,000 PPM SYSTEM

DST's Report

DST #2 3522'-3566' 10-75-30-120
 IF- WEAK BLOW, 1/2" BLOW, ISI- NO BLOW, FF- WEAK BLOW, SURFACE TO 1/4" BLOW, FSI- NO BLOW
 IH- 1650, FH-1626/ IF-19 TO 30, FF- 32 TO 54/ ISI- 855, FSI- 850
 REC. 55' TF/ 55' MW, 60% WATER, 40% MUD/ BHT- 106, API RW-.17 @ 60 DEG., CHLOR- 50,000 PPM- 3,000
 PPM SYSTEM

DST's Report

DST #3 3749'-3768' 10-75-30-120
 IF- WEAK BLOW, 1/4" BLOW, ISI- NO BLOW, FF- NO BLOW, FSI- NO BLOW/ IH-1783, FH 1765/ IF- 14 TO 19, FF-
 18 TO 20/ ISI- 1053, FSI- 1027
 REC. 6' TF/ 1' CO, 5' OCM, 10% OIL, 90% MUD/ BHT-110/ CHLOR- 5,000 PPM SYSTEM

ROCK TYPES

Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal
 Congl
 Dol

Gyp
 Igne
 Lmst
 Meta
 Mrlst
 Salt
 Shale
 Shcol

Shgy
 Sltst
 Ss
 Till
 Carb sh
 Dol
 Dtd
 Gry sh

Sandylms
 Shale
 Sltstn
 Shlyslts
 Sitysh
 Lms

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brefracg
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr

- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Slty

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram

- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh

- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandyms
- Sh
- Sltstn

TEXTURE

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

OTHER SYMBOLS

POROSITY TYPE

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

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang

Angular

OIL SHOWS

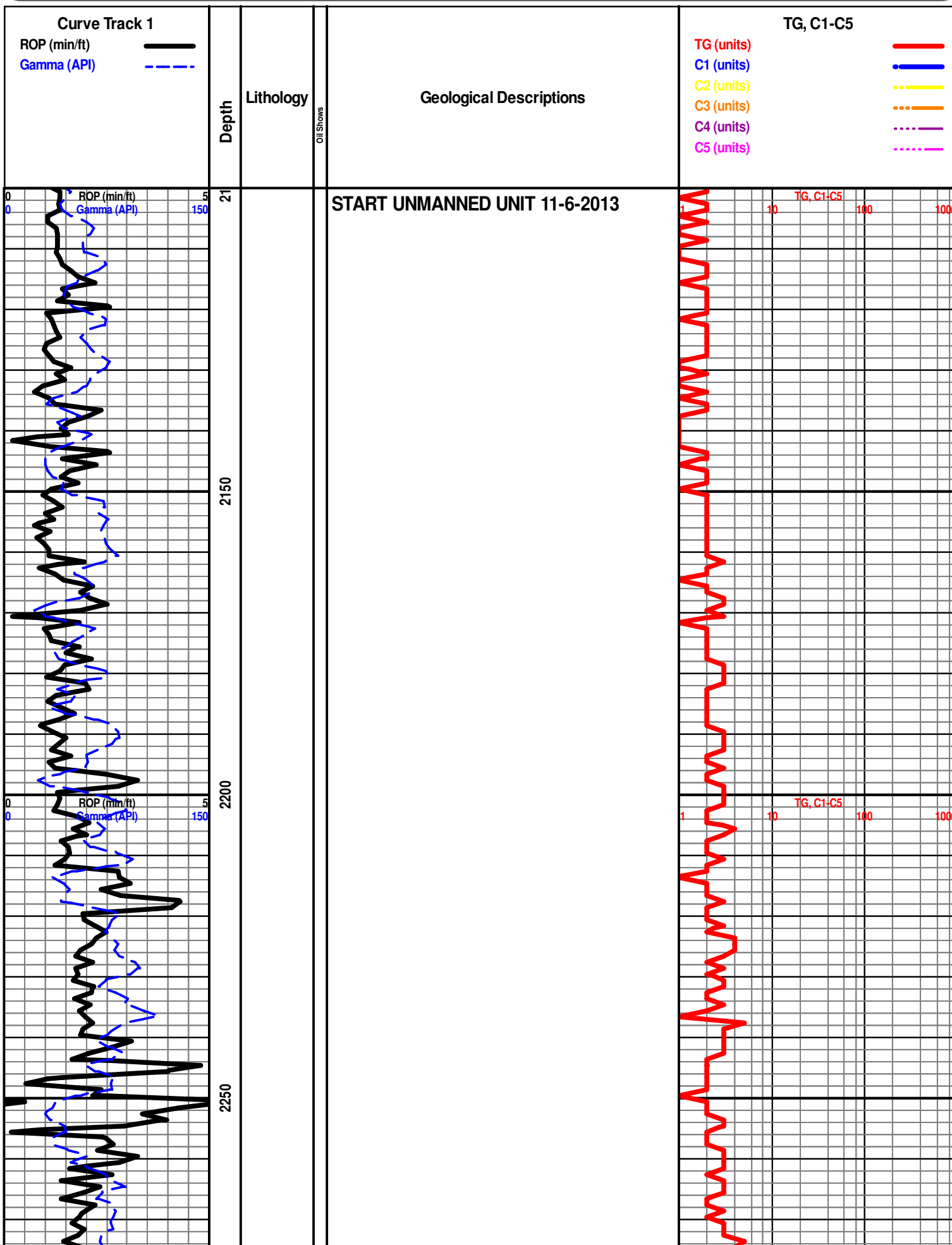
- Even
- Spotted
- Ques
- Dead
- Gas show

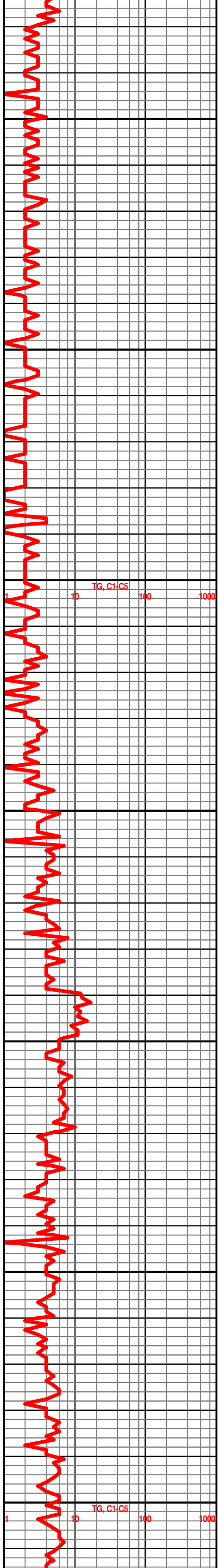
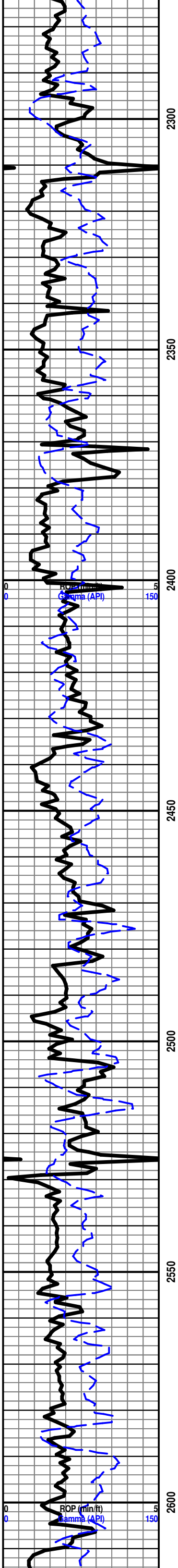
INTERVALS

- Core
- Dst
- Dst

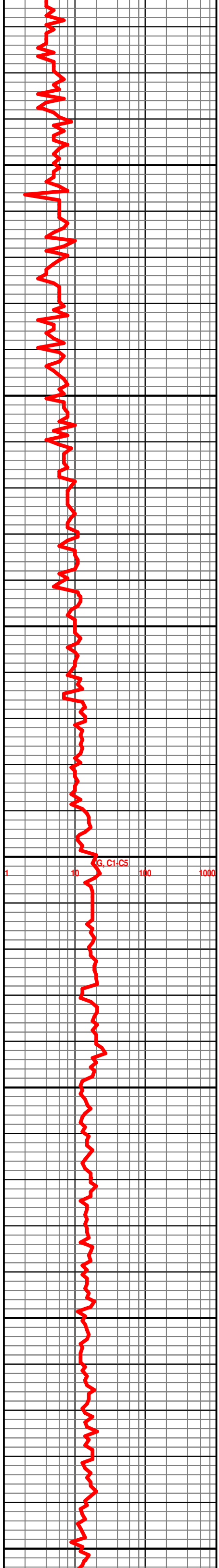
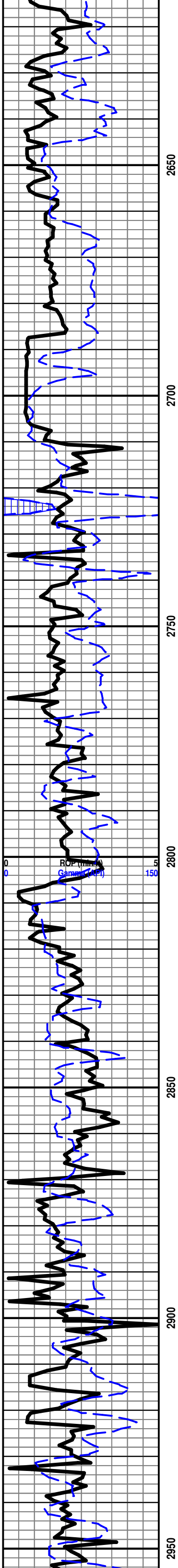
EVENTS

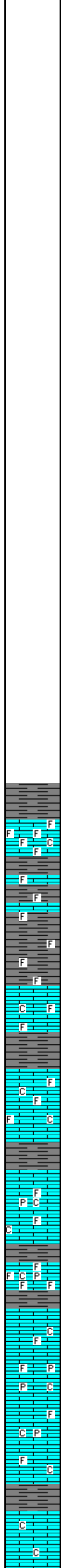
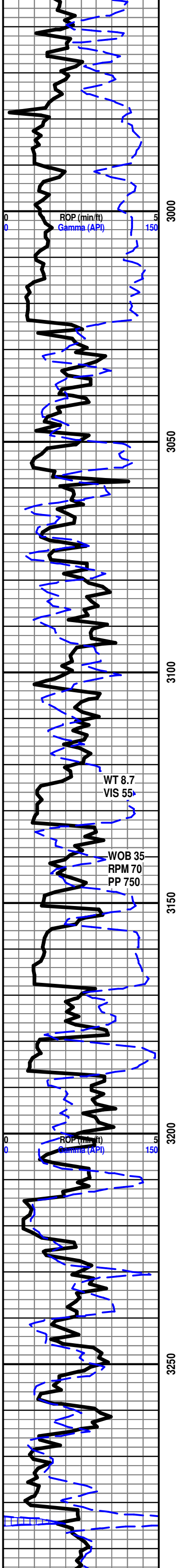
- Rft
- Sidewall





ESKRIDGE 2656' -487





ELMONT 3023' -854'

START 24 HR. MANNED UNIT 11-7-2013

LS- OFF WHT TO CRM BFF, HD DNS TO BRIT, RE-XLN IP, MD IMBD CALC-XLS, SLI TRS S-CHLKY, HVY TRS IMBD FOSS FRGS, SLT TRS GLAUC, TRS IMBD SH, DUL YEL MIN FLO IN 20%, SPTTED BRT YEL MIN FLO IN 30%, NO VIS POR, NO VIS CUT OR SHOW

SH- LT GRY TO GRY GRN, SFT TO FRM, BLKY SILTY TO GUMMY, TRS IMBD FOSS FRGS, TRS IMBD LMS

LS- WHT TO OFF WHT CRM, HD DNS TO BRIT, RE-XLN IP, MD/F IMBD CALC-XLS, SLI TRS SFT WHT CHLK THRU TRAY, SLI TRS FREE FOSS IN TRAY, DUL YEL MIN FLO IN 50%, BRT YEL MIN FLO IN 40%, NO VIS POR, NO VIS CUT OR SHOW

TOPEKA 3187' -1018'

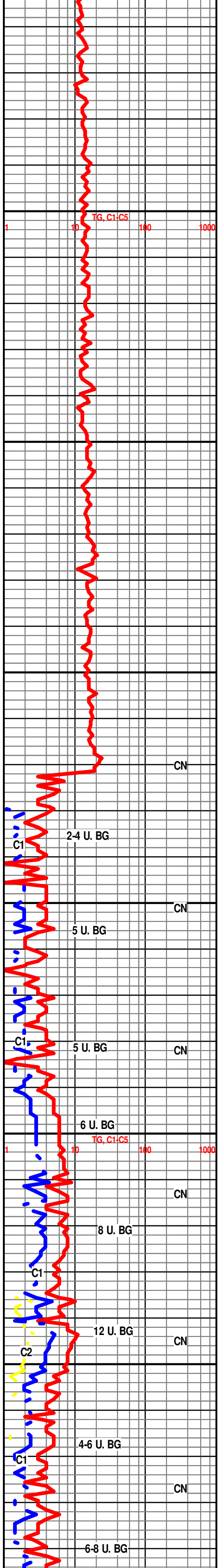
LS- CRM TO OFF WHT BFF, HD DNS TO BRIT, RE-XLN, MD/F IMBD CALC-XLS IP, SLI TRS SFT WHT CHLK IN TRAY, SLI TRS IMBD FOSS FRGS, TRS IMBD SH, DUL YEL MIN FLO IN 40%, BRT YEL MIN FLO SCATT IN 30%, SLI TRS INTER-XLN POR IN 1%, NO VIS CUT OR SHOW

LS- CRM BFF TO LT TN, HD DNS TO BRIT, MD/F-XLN RE-XLN MTRX, S-CHLKY IP, LT TRS SFT WHT CHLK IN TRAY, TRS DISS PYR, SLI TRS IMBD FOSS FRGS, TRS FREE FOSS THRU TRAY, DUL YEL MIN FLO IN 40%, NO VIS POR, NO VIS CUT OR SHOW

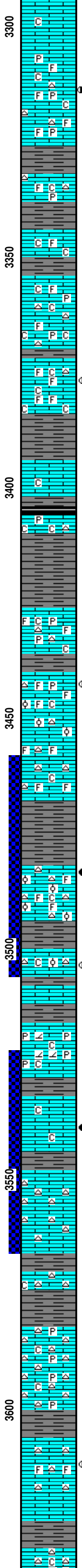
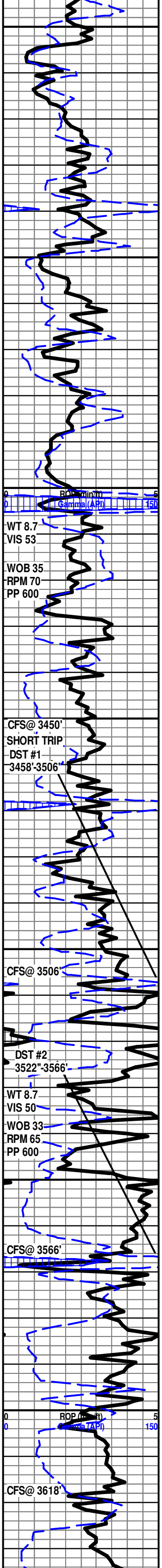
3228'-3234' LS-CRM TO LT TN TO TN (DUE TO LIVE OIL STN IN 60%) F/VF-XLN, SUCRO, SLI TRS SFT WHT CHLK IN TRAY, TRS FREE FOSS IN TRAY, SLI TRS DISS PYR, DUL YEL GLD FLO IN 70%, BRT YEL GLD IN 10%, PR TO FR MICRO PP POR 2%, V PR TO PR VUG/ MICRO VUG POR IP 1%, EXCL FLSH CUT, EXCL SLW STRM IN 40-50%, DRK TN LCH ON DISH, GD TO EXCL OIL ODOR

LS- OFF WHT TO WHT CRM TO LT TN, F/VF-XLN, S-SUCRO, SCATT SFT WHT CHLK IN TRAY, TRS DISS PYR & PYR IN TRAY, SLI TRS IMBD FOSS FRGS, SLI TRS IMBD SH, DUL YEL MIN FLO IN IN 50%, SCATT BRT YEL MIN FLO IN 10%, NO VIS POR, NO VIS CUT OR SHOW

LS-CRM BFF LT TN, HD DNS TO TRS BRIT, MD-XLN RE-XLN IP, TRS IMBD CALC-XLS ON ONE FACES OF ROCK, TRS SFT WHT CHLK IN THRU, S-CHLKY, DUL YEL MIN FLO IN 60%, NO VIS POR, NO VIS CUT OR SHOW



2-4 U. BG
C1
5 U. BG
CN
5 U. BG
CN
6 U. BG
8 U. BG
CN
12 U. BG
CN
4-6 U. BG
CN
6-8 U. BG



3310'-3316' LS- WHT TO OFF WHT TN TO DRK TN (DUE TO LIVE OIL STN IN 40%) MD/F-XLN RE-XLN IP, SUCRO, IMBD CALC-XLS, TRS BFF LT TN CHRT IN TRAY, TRS IMBD FOSS FRGS, SCATT FREE FOSS THRU, TRS PYR, DUL YEL GLD FLO IN 70%, PR TO TRS FR VUG POR IN 2%, PR INTER-XLN POR 1%, EXCL FLSH CUT, EXCEL SLW STRM IN 60%, DRK TN LCH ON DISH, GD OIL ODOR

LS-OFF WHT TO CRM BFF, HD DNS TO TRS BRIT, MD/F-XLN, TRS OFF WHT CRM LT TN CHRT THRU, SCATT TRS IMBD CALC-XLS, HVY TRS SFT WHT CHLK THRU TRAY, TRS DISS PYR, SLI TRS IMBD FOSS FRGS, DUL YEL MIN FLO IN 40%, NO VIS POR, NO VIS CUT OR SHOW

LS- WHT TO OFF WHT CRM BFF, HD DNS TO TRS BRIT, F/VF-XLN, RE-XLN IP, S-ANG TO S-RND FRSTLY CLR QRTZ GRNS, ABDT TRS SFT WHT CHLK THRU, SLI TRS PYR, SLI TRS CRM TO LT TN CHRT IN TRAY, DUL YEL MIN FLO IN 30%, BRT YEL MIN FLO IN 30%, NO VIS POR, NO VIS CUT OR SHOW

3374'-3379' LS- OFF WHT TO CRM TN TO DRK TN (DUE TO OIL STN IN 40%), HD DNS TO BRIT, F/VF-XLN RE-XLN MTRX, S- SUCRO, HVY TRS SFT WHT CHLK THRU, TRS S-ANG ANG TO S-RND WHT FRSTY CLR QRTZ GRNS, TRS SCATT IMBD FOSS FRGS, DUL YEL GLD FLO IN 40%, PR TO FR MICRO PP POR IN 2-3%, SLI TRS PR MICRO VUG POR, GD TO EXCL FLSH CUT, FR TO GD TO TRS EXCL SLW STM IN 40-50%, LT TN TO TN LCH ON DISH, PR TO FR OIL ODOR

HEEBNER 3402' -1233'

LS- WHT TO OFF WHT CRM, HD DNS TO BRIT, F/VF-XLN, S-SUCRO, ABDT SFT WHT CHLK THRU, SLI TRS CRM TO LT TN CHRT, SLI TRS DISS PYR, DUL YEL MIN FLO IN 30%, NO VIS POR, NO VIS CUT OR SHOW

LS- OFF WHT TO WHT CRM BFF, HD DNS TO BRIT, F/VF-XLN, S-SUCRO, TRS SFT WHT CHLK THRU, TRS WHT CRM ORNG CHRT, TRS FREE FOSS FRGS THRU TRAY, TRS DISS PYR, DUL YEL MIN FLO IN 30%, BRT YEL MIN FLO IN 20%, NO VIS POR, NO VIS CUT OR SHOW

LANSING 3442' -1273'

3441'-3444' LS-WHT TO OFF WHT CRM TO LT TN, (DUE TO OIL STN IN 30-40%) MD TO F/VF-XLN, RE-XLN IP, IMBD CALC-XLS ON ONE FACES OF ROCK, SCATT IMBD OOL THRU, TRS WHT CRM TO CLR CHRT THRU, TRS FOSS FRGS THRU, SLI TRS CHLK, DUL YEL GLD FLO IN 20%, BRT YEL GLD FLO IN 30%, PR TO FR INTER-XLN POR IN 2%, PR TO FR VUG POR IN 2%, GD FLSH CUT, GD SLW STM IN 40%, LT TN LCH ON DISH, PR TO FR OIL ODOR

LS- WHT TO OFF WHT CRM, HD DNS TO BRIT, F/VF-XLN, RE-XLN MTRX, S-CHLKY IP, TRS PYR/ DISS PYR, SLI TRS FREE FOSS FRGS IN TRAY, TRS WHT FRSTY ORNG CRM CHRT THRU, DUL YEL MIN FLO 30%, NO VIS POR, NO VIS CUT OR SHOW

LANSING "C" 3482' -1313

3481'-3485' LS- OFF WHT TO WHT TN TO DRK TN (DUE TO LIVE OIL STN IN 40%) FREE FLOATING OIL IN TRAY, F/VF-XLN, S-SUCRO, IMBD CALC-XLS IP, IMBD OOL THRU, TRS IMBD FOSS FRGS THRU, TRS WHT FRSTY ORNG CRM CHRT THRU, SLI TRS S-CHLKY, SLI TRS PYR, YEL GLD FLO IN 30%, SCATT BRT YEL GLD FLO IN 30%, PR TO FR TO GD INTER OOL POR IN 3-4%, PR TO FR TO GD VUG POR IN 4%, GD TO EXCL FLSH CUT, GD SLW STRM IN 40%, LT TN TO TN LCH ON DISH, EXCL OIL ODOR

3502'-3505' LS- OFF WHT TO WHT CRM (W/ DRK TN OIL STN IN 30%) HD DNS TO BRIT IP, F/MD-XLN, S-CHLKY IP, IMBD WHT CHRT, SLI TRS IMBD OOL, BRT YEL GLD FLO IN 30%, YEL GLD FLO IN 20%, V PR TO PR VUG POR IN 1%, GD FLSH CUT, GD SLW STRM IN 40%, TN LCH ON DISH, EXCEL OIL ODOR

LANSING "F" 3516' -1347'

LS- OFF WHT TO CRM BFF LT TN IP, HD DNS TO TRS BRIT, F/VF-XLN, S-CHLKY, HVY TRS PYR IN TRAY, LT TRS DISS PYR, IMBD SFT WHT CHLK IP, INTERBED DOLO THRU TRAY, DUL YEL MIN FLO IN 30%, NO VIS POR, NO VIS CUT OR SHOW

3537'-3540' LS- OFF WHT TO LT TN, (W/ BLK LIVE OIL STN SCATT IN 40-50%) HD DNS TO SLI TRS BRIT IP, F-XLN, TT SUCRO MTRX, ABDT IMBD SML TO MD CALC-XLS, LT TRS IMBD SFT WHT CHLK, YEL GLD FLO IN 30%, FR INTER-XLN POR IN 3%, V PR VUG POR IP, EXCL FLSH CUT, EXCL SLW STRM IN 70%, DRK TN LCH ON DISH, EXCL OIL ODOR

LS- WHT TO OFF WHT CRM IP, HD DNS, F/VF-XLN, S-SUCRO, SCATT IMBD CALC-XLS IP, HVY TRS CLR TO WHT CHRT IN TRAY, DUL YEL MIN FLO IN 70%, NO VIS FLO IN 30%, NO VIS POR, NO VIS CUT OR SHOW

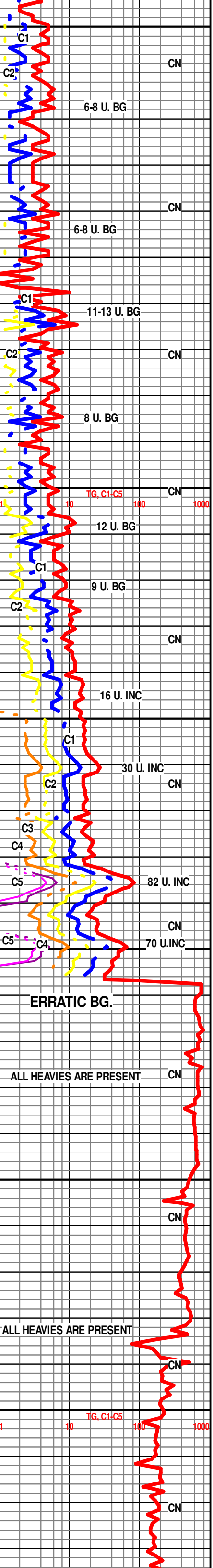
LANSING "H" 3570' -1401

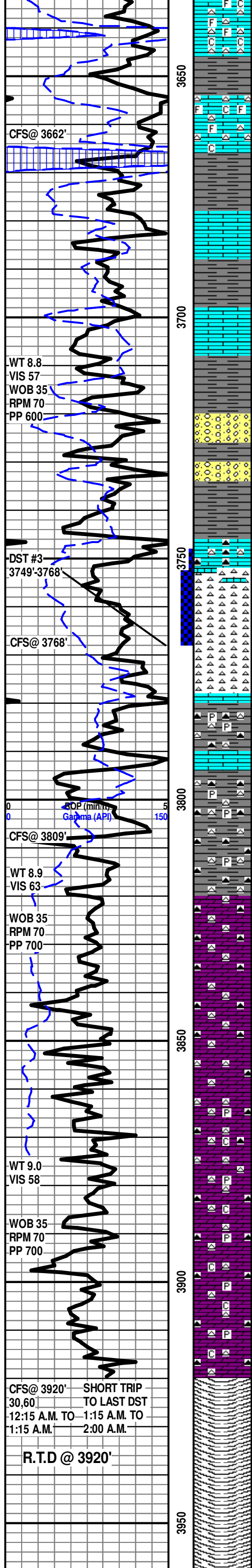
LS- OFF WHT TO CRM BFF TO LT GRY IP, HD DNS TO TRS BRIT, VF-XLN, S-CHLKY, HVY TRS ORNG CLR TO WHT CHRT THRU TRAY, SLI TRS IMBD CALC-XLS IP, DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS CUT OR SHOW

LS- OFF WHT CRM TO LT GRY, HD DNS, F/VF-XLN, CRYPTO-XLN IP, LT TRS S-CHLKY, TRS PYR & DISS PYR IN TRAY, HVY TRS WHT TO TN CHRT, LT TRS SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS CUT OR SHOW

3608'-3614' LS- LT TN TO TN OFF WHT IP (DUE TO OIL STN IN 70-80%) HD DNS TO BRIT, MD/F-XLN, V TT SUCRO MTRX, LT TRS IMBD WHT CHRT, IMBD FOSS FRGS IP, DUL YEL GLD FLO IN 60%, YEL TO BRT YEL GLD FLO IN 5%, V PR TO PR MICRO VUG POR IN 1%, FR TO GD FLSH CUT, GD TO EXCL SLW STRM IN 60% LT TN TO TN LCH ON DISH, FR OIL ODOR

LS- WHT TO OFF WHT CRM, HD DNS TO SLI TRS BRIT, F/VF-XLN, S-SUCRO, HVY TRS SFT WHT CHLK IN TRAY,





3656'-3662' LS- OFF WHT LT GRY TO TN TO DRK TN (DUE TO OIL STN IN 50%) HD DNS TO TRS BRIT, F/VF-XLN, RE-XLN IP, S-CHLKY, TRS IMBD CALC-XLS, IMBD FOSS FRGS IP, ABDT TRS ORNG WHT CLR CHRT THRU, TRS SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 20%, SCATT BRT YEL TO YEL GLD FLO IN 20%, V PR TO PR VUG TO MICRO VUG POR IN 1%, PR INTER-XLN POR IN 2%, GD TO EXCL FL SH CUT, GD TO EXCL SLW STRM 50-60%, LT TN TO TN LCH ON DISH, GD OIL ODOR

X- SHALE 3672 -1503

LS- WHT TO OFF WHT TRS LT GRY, HD DNS TO BRIT, F-XLN, S-SUCRO, S-CHLKY, TRS SFT WHT CHLK THRU, HVY TRS CLR ORNG CHRT, DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS CUT OR SHOW

LS- OFF WTH LT GRY TO GRY, HD DNS TO TRS BRIT, F/VF-XLN, S-SUCRO, TRS MD/F S-RND TO RND CLR TO FRSTY QRTZ GRNS, TRS IMBD SH, NO VIS FLO, NO VIS POR, NO VIS CUT OR SHOW

CONG- LS OFF WHT TO WHT LT GRY, HD DNS TO TRS BRIT, MD/F-XLN, RE-XLN, SUCRO, IMBD FOSS FRGS, IMBD MD/F S-ANG TO RND CLR TO FRSTY QRTZ GRNS, TRS FRSTY CLR ORNG CHRT THRU, IMBD SH BRN GRY GRN YEL, FRM SFT TO GUMMY, BLKY TO SLTY, DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS CUT OR SHOW

MARMATON 3745' -1577'

3754'-3759' CHRT- BRN TO TRS WHT IP (DUE TO OIL STN IN 80-90%), HD DNS, V TT SUCRO MTRX, F-XLN IP, WTHRD, CALC IP, HVY TRS WHT ORNG CHRT, LT TRS IMBD WHT CHRT, YEL GLD FLO IN 80%, BRT YEL GLD FLO IN 20%, V PR TO PR MICRO VUG POR IN 2%, V PR VUG POR IN 1%, EXCL FL SH CUT, EXCL SLW STRM IN 60-70%, LT TN TO TN LCH ON DISH, GD TO EXCL OIL ODOR

SH- RD BRN TO LT GRY TO GRY, SFT FRM TO TRS GUMMY, BLKY TO SLTY, SLI TRS PYR, TRS IMBD CLR FRSTY CHRT

SH- RD TO BRN, SFT TO FRM, BLKY TO SLTY TRS GUMMY, TRS DISS PYR, TRS IMBD LMS, TRS IMBD CHRT, HVY TRS CLR FRSTY ORNG CHRT THRU TRAY,

ARBUCKLE 3820' -1651

3822'-3826' DOLO- OFF WHT TO CRM LT GRY LT TN TO TN (DUE TO OIL STN IN 40%) HD DNS TO TRS BRIT, MD/F-XLN, V TT SUCRO MTRX, ABDT IMBD RND TO S-RND DOLO GRNS, HVY TRS CLR FRSTY ORNG CHRT THRU TRAY, DUL YEL GLD FLO IN 30%, BRT YEL GLD IN 10%, INTER-DOLO POR IP, FR TO GD FL SH CUT, FR TO GD SLW STRM IN 40%, LT TN LCH ON DISH, PR TO FR OIL ODOR

3831'-3836' DOLO- TN TO DRK TN (DUE TO LIVE OIL STN IN 80%) HD DNS TO BRIT, MD/F/VF-XLN, V TT SUCRO MTRX ABDT IMBD RND TO S-RND DOLO GRNS, TRS FRSTY CLR ORNG IN TRAY, DUL YEL GLD FLO IN 30%, PR VUG POR IN 1%, INTER-DOLO POR IP, EXCL FL SH CUT, EXCL SLW STRM 80-90%, TN TO DRK TN LCH ON DISH, EXCL OIL ODOR

3841'-3846' DOLO- WHT TO OFF WHT CRM TN TO DRK TN (DUE TO LIVE OIL STN IN 50%) HD DNS TO BRIT MD/F/VF-XLN, TT SUCRO MTRX, HVY TRS IMBD S-ANG TO RND DOLO GRNS, TRS PNK CLR FRSTY ORNG CHRT THRU TRAY, DUL YEL GLD FLO IN 10%, SCATT BRT YEL GLD IN 30%, PR INTER-DOLO POR 2%, GD TO EXCL FL SH CUT, GD SLW STRM IN 50%, LT TN TO TN LCH ON DISH, GD OIL ODOR

3851'-3856' DOLO- OFF WHT TO WHT LT TN TO TN (DUE TO OIL STN IN 20-30%) HD DNS TO BRIT IP, MD/F-XLN, TT SUCRO MTRX, ABDT IMBD S-ANG TO RND DOLO GRNS, HVY TRS PNK CLR FRSTY CRM CHRT IN TRAY, SLI TRS SFT WHT CHLK IN TRAY, SLI TRS DISS PYR IP, DUL YEL GLD FLO IN 60%, V PR TO PR INTER-DOLO POR IN 1%, V PR TO PR VUG POR IN 1%, GD TO EXCL FL SH CUT, GD SLW STRM IN 40-50%, LT TN LCH ON DISH, GD OIL ODOR

DOLO- OFF WHT TO CRM LT GRY, HD DNS TO BRIT, MD/F-XLN, TT SUCRO MTRX, HVY TRS IMBD CLR TO FRSTY S-RND QRTZ GRNS, HVY TRS CRM TN CLR FRSTY CHRT THRU TRAY, TRS SFT WHT CHLK IN TRAY, SLI TRS DISS PYR, DUL YEL MIN FLO IN 50%, NO VIS POR, NO VIS CUT OR SHOW

DOLO- WHT TO OFF WHT CRM LT GRY, HD DNS TO BRIT, MD/F-XLN, V TT SUCRO MTRX, ABDT IMBD MD S-RND TO RND QRTZ GRNS, TRS TN CRM CLR FRSTY CHRT THRU, TRS SFT WHT CHLK IN TRAY, SLI TRS DISS PYR IP, YEL MIN FLO IN 70%, NO VIS POR, NO VIS CUT OR SHOW

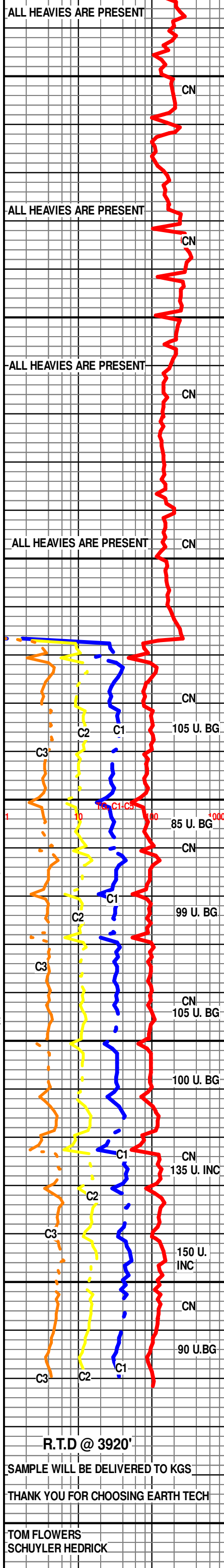
R.T.D. @ 12:15 A.M 11/12/2013

DROP SURVEY

CTCH @ 2:00 A.M. TO 3:00 A.M.

TOFL @ 3:00 A.M.

WEATHERFORD/ LIBERAL, KANSAS



R.T.D @ 3920'

SAMPLE WILL BE DELIVERED TO KGS

THANK YOU FOR CHOOSING EARTH TECH

TOM FLOWERS
SCHUYLER HEDRICK