



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1153093
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
-----------------------------------	-----------------	---

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: _____



1153093

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
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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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	GARRETT RANCH ET AL 1-16
Doc ID	1153093

All Electric Logs Run

DEN-NEUT
INDUCTION
MICRO
SONIC
SPECTRAL

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

July 26, 2013

CLAYTON CAMOZZI
Samuel Gary Jr. & Associates, Inc.
1515 WYNKOOP, STE 700
DENVER, CO 80202

Re: ACO1
API 15-195-22859-00-00
GARRETT RANCH ET AL 1-16
NW/4 Sec.16-12S-22W
Trego County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
CLAYTON CAMOZZI



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: 4/9/2012
 Invoice # 6684

P.O.#:
 Due Date: 5/9/2012
 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

APR 12 2013

SAMUEL GARY JR.
& ASSOCIATES, INC.

<input type="checkbox"/> DRLG	<input checked="" type="checkbox"/> COMP	<input type="checkbox"/> W/O	<input type="checkbox"/> LOE
Account	8300.238		
Well/Prospect			
Deck			
APP	[Signature]		
Approval			
Description			

Reference:
 GARRETT RANCH ET AL 1-16

Description of Work:
 SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 991.39	No				
Common-Class A	190	\$ 2,586.82	Yes				
Bulk Truck Matl-Material Service Charge	200	\$ 434.29	No				
Calcium Chloride	7	\$ 362.22	Yes				
Pump Truck Mileage-Job to Nearest Camp	31	\$ 335.90	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	31	\$ 196.56	No				
Premium Gel (Bentonite)	3	\$ 53.03	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 4,960.19
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (744.03)

SubTotal for Taxable Items:	\$ 2,551.76
SubTotal for Non-Taxable Items:	\$ 1,664.41
Total:	\$ 4,216.16
Tax:	\$ 173.52

6.80% Trego County Sales Tax

Thank You For Your Business!

Amount Due: \$ 4,389.68
Applied Payments:
Balance Due: \$ 4,389.68

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. 6684

Date	4.5-13	Sec.	16	Twp.	12	Range	22	County	Trego	State	KS	On Location		Finish	10:20 p.m.
Lease								Location				Garrett Ranch ETAL			
Well No.								1-16				Owner			
Contractor								Discovery # 2				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								Surface				Charge To			
Hole Size								12 1/4				T.D.			
Csg.								8 5/8				Depth			
Tbg. Size												Depth			
Tool												City			
Cement Left in Csg.								20'				Shoe Joint			
Meas Line								Displace				20 BCL			
EQUIPMENT															
Pumptrk								9				No. Cementer			
Bulktrk												No. Helper			
Bulktrk								12				No. Driver			
												No. Driver			
												No. Driver			
JOB SERVICES & REMARKS															
Remarks:								Garrett Ranch ETAL 1-16				Common			
Rat Hole												Poz. Mix			
Mouse Hole												Gel.			
Centralizers												Calcium			
Baskets												Hulls			
D/V or Port Collar												Salt			
8 5/8 on bottom. Est. Circulation												Flowseal			
Mix 19052 + Displace.												Kol-Seal			
Cement (Circulated)												Mud CLR 48			
												CFL-117 or CD110 CAF 38			
												Sand			
												Handling			
												Mileage			
FLOAT EQUIPMENT															
												Guide Shoe			
												Centralizer			
												Baskets			
												AFU Inserts			
												Float Shoe			
												Latch Down			
												Pumptrk Charge			
												Mileage			
												Tax			
												Discount			
												Total Charge			
Signature								<i>[Signature]</i>							



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: 4/15/2013
 Invoice # 6759
 P.O.#:
 Due Date: 5/15/2013
 Division: Russell

Invoice

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

DRLG COMP W/O LOE GG

Account	8200.145
Well/Prospect	
Deck	
AFE	<i>[Signature]</i>
Approval	
Description	

Reference:
 GARRETT RANCH ET AL 1-16

Description of Work:
 PLUG JOB

RECEIVED
APR 19 2013
SAMUEL GARY JR. & ASSOCIATES, INC.

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 991.39	Yes				
Common-Class A	162	\$ 2,205.61	Yes				
Bulk Truck Matl-Material Service Charge	280	\$ 608.00	Yes				
POZ Mix-Standard	108	\$ 539.38	Yes				
Pump Truck Mileage-Job to Nearest Camp	31	\$ 335.90	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	31	\$ 196.56	Yes				
Premium Gel (Bentonite)	10	\$ 176.75	Yes				
Flo Seal	67	\$ 145.49	Yes				
Dry Hole Plug	1	\$ 60.80	Yes				

Invoice Terms:

Net 30

SubTotal:	\$	5,259.87
Discount Available <u>ONLY</u> if Invoice is Paid & Received within listed terms of invoice:	\$	(788.98)
<hr/>		
SubTotal for Taxable Items:	\$	4,470.89
SubTotal for Non-Taxable Items:	\$	-
<hr/>		
Total:	\$	4,470.89
Tax:	\$	304.02
<hr/>		
Amount Due:	\$	4,774.91
Applied Payments:		
Balance Due:	\$	4,774.91

6.80% Trego County Sales Tax

Thank You For Your Business!

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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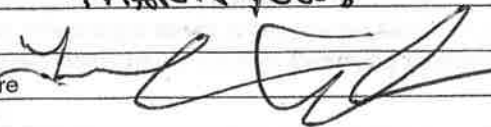
QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 6759

Date	4-11-13	Sec.	16	Twp.	12	Range	22	County	TREGO	State	KANSAS	On Location		Finish	1100 Am	
Lease								Location		OGALAH - 3W - 1/2 N - E / INTO						
GARRETT RANCH ETAL								Well No. #1-16		Owner SAM GARY						
Contractor DISCOVERY #2								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 P.T.A								Charge To SAM GARY								
Hole Size 7 7/8"				T.D. 4200'				Street 1515 WYNWOOD - STE 700								
Csg. 4 1/2"				Depth				City DENVER				State CO, 80202				
Tbg. Size				Depth				The above was done to satisfaction and supervision of owner agent or contractor.								
Tool				Depth				Cement Amount Ordered				270 60% 40 POZ - 4 7/8 GEL - 4 LB SEAL				
Cement Left in Csg.				Shoe Joint												
Meas Line								Displace								
EQUIPMENT																
Pumptrk #16		No.		Cementer Helper TRAVIS H.				Common 162								
Bulktrk #4		No.		Driver LONNIE M.				Poz. Mix 108								
Bulktrk #14		No.		Driver CISCIO A.				Gel. 10								
JOB SERVICES & REMARKS								Hulls								
Remarks:								Salt								
Rat Hole 30 SKS								Flowseal 67#								
Mouse Hole 15 SKS								Kol-Seal								
Centralizers								Mud CLR 48								
Baskets								CFL-117 or CD110 CAF 38								
D/V or Port Collar								Sand								
1st @ 4081'				50 SKS				Handling 280								
2nd @ 1,820'				25 SKS				Mileage								
3rd @ 915'				100 SKS				FLOAT EQUIPMENT								
4th @ 390'				40 SKS				Guide Shoe								
5th @ 40'				10 SKS				Centralizer								
RAT HOLE				30 SKS				Baskets								
MOUSE HOLE				15 SKS				AFU Inserts								
TOTAL 270 SKS								Float Shoe								
								Latch Down				1- 8 7/8 WOODEN PLUG				
								Pumptrk Charge				plug				
								Mileage				31				
THANK YOU!												Tax				
												Discount				
												Total Charge				

X Signature



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates Inc.

16-12-22 Trego, Ks

1515 Wynkoop, STE 700
Denver, Co

Gerrett Ranch 1-16

ATTN: Clayton Camozzi

Job Ticket: 50277

DST#: 1

Test Start: 2013.04.10 @ 11:10:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:12:00

Time Test Ended: 19:12:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 4008.00 ft (KB) To 4036.00 ft (KB) (TVD)

Reference Elevations: 2374.00 ft (KB)

Total Depth: 4036.00 ft (KB) (TVD)

2366.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8319 Outside

Press @ Run Depth: 24.89 psig @ 4009.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.10

End Date:

2013.04.10

Last Calib.: 2013.04.10

Start Time: 11:10:05

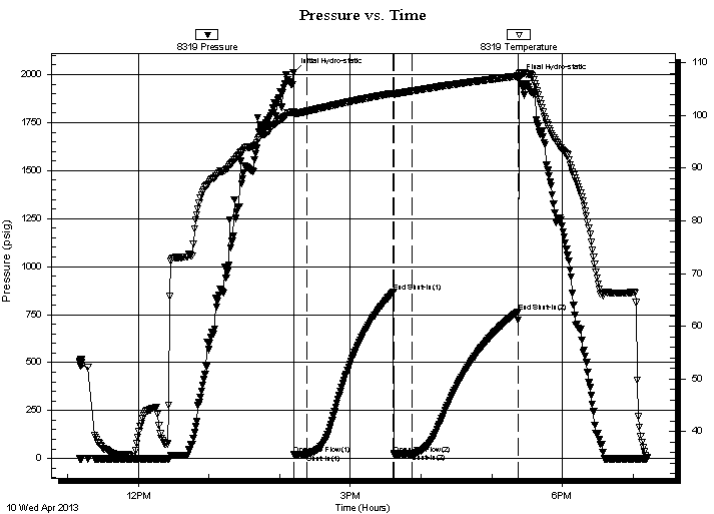
End Time:

19:11:59

Time On Btm: 2013.04.10 @ 14:11:30

Time Off Btm: 2013.04.10 @ 17:23:30

TEST COMMENT: 10min IF-1/2" blow
75min ISI-No blow
15min FF-No blow
90min FSI-No blow



PRESSURE SUMMARY

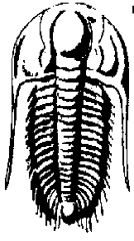
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2011.63	100.70	Initial Hydro-static
1	21.25	100.30	Open To Flow (1)
12	23.18	100.77	Shut-In(1)
85	868.13	104.18	End Shut-In(1)
86	23.30	103.96	Open To Flow (2)
101	24.89	104.60	Shut-In(2)
191	763.88	107.44	End Shut-In(2)
192	1978.20	107.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates Inc.

16-12-22 Trego, Ks

1515 Wynkoop, STE 700
Denver, Co

Gerrett Ranch 1-16

ATTN: Clayton Camozzi

Job Ticket: 50277

DST#: 1

Test Start: 2013.04.10 @ 11:10:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)

Time Tool Opened: 14:12:00 Tester: Brett Dickinson

Time Test Ended: 19:12:00 Unit No: 59

Interval: 4008.00 ft (KB) To 4036.00 ft (KB) (TVD) Reference Elevations: 2374.00 ft (KB)

Total Depth: 4036.00 ft (KB) (TVD) 2366.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6753 Fluid

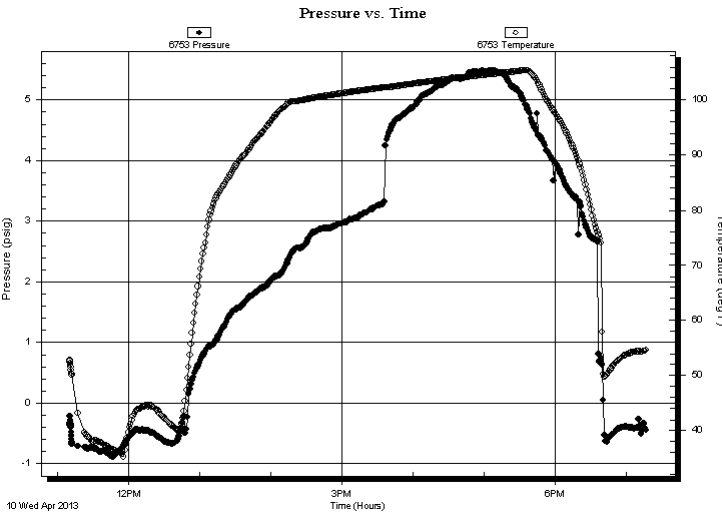
Press @ Run Depth: psig @ 3978.00 ft (KB) Capacity: 8000.00 psig

Start Date: 2013.04.10 End Date: 2013.04.10 Last Calib.: 2013.04.10

Start Time: 11:10:05 End Time: 19:16:29 Time On Btm:

Time Off Btm:

TEST COMMENT: 10min IF-1/2" blow
75min ISI-No blow
15min FF-No blow
90min FSI-No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates Inc.

16-12-22 Trego, Ks

1515 Wynkoop, STE 700
Denver, Co

Gerrett Ranch 1-16

Job Ticket: 50277

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2013.04.10 @ 11:10:00

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: 64.00 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: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

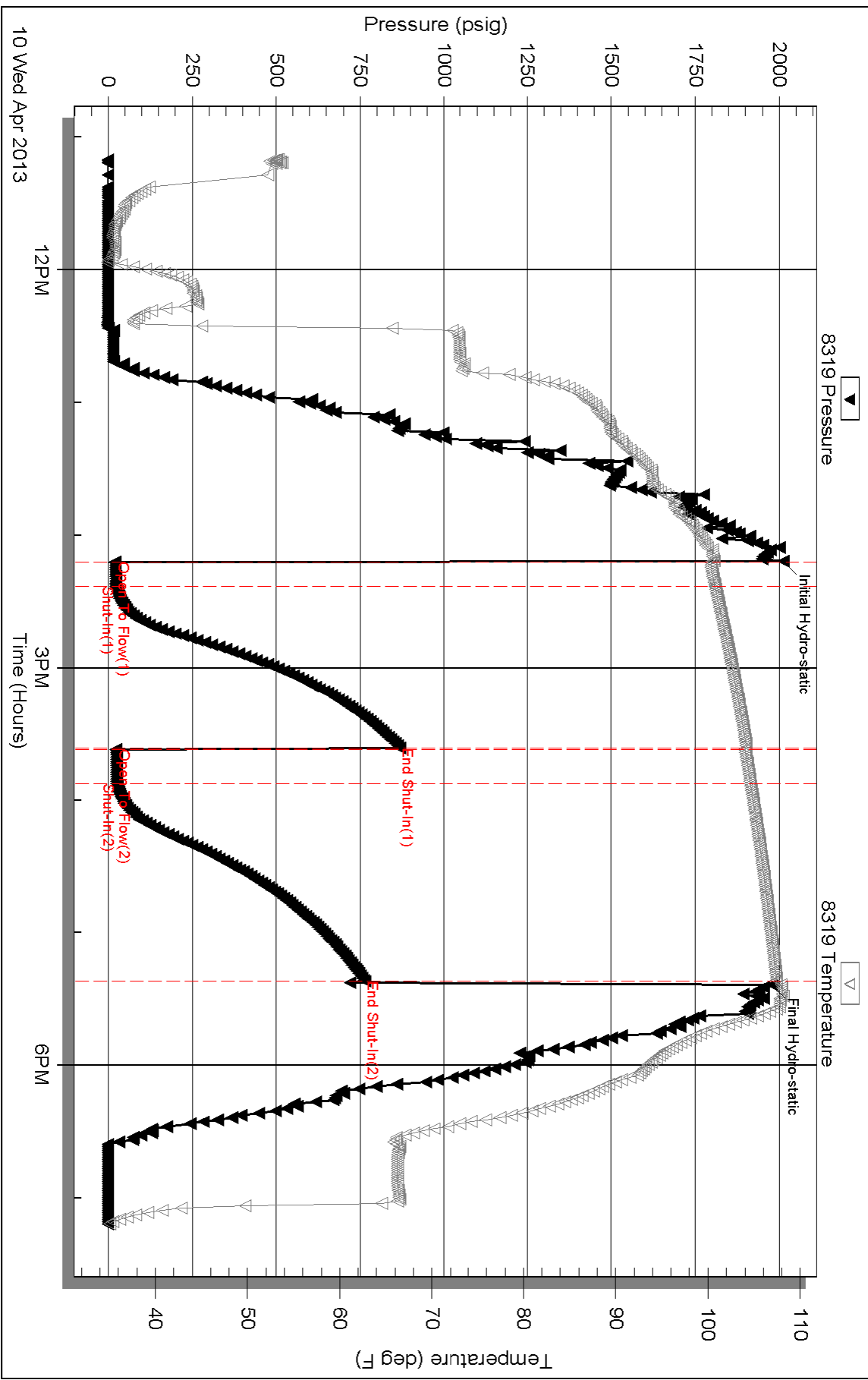
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler Data 2000ml Mud 140psi

Pressure vs. Time



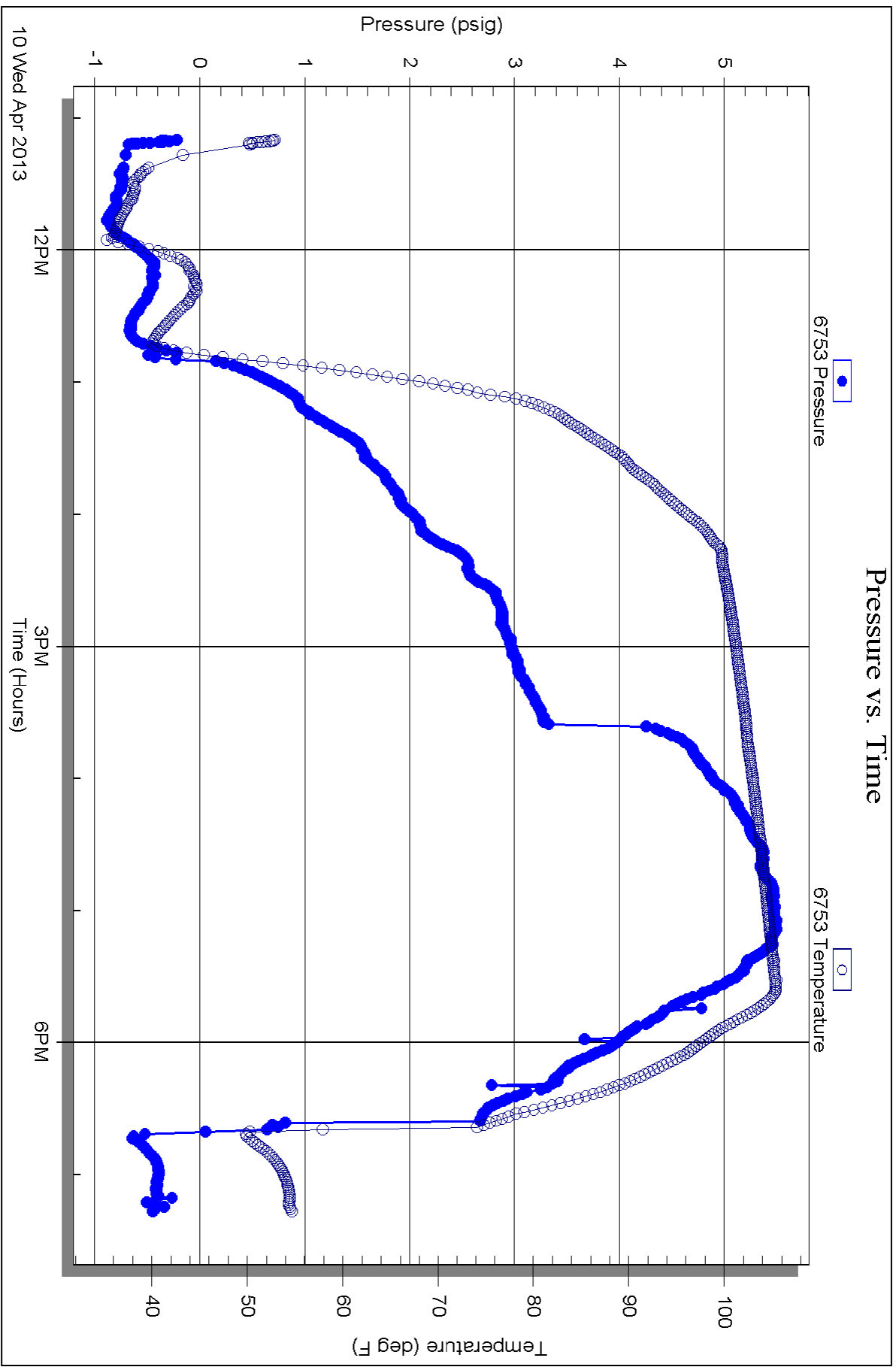
Serial #: 6753

Fluid

Samuel Gary Jr. & Associates Inc.

Gerritt Ranch 1-16

DST Test Number: 1





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

Well Name: Garrett Ranch et al 1-16
 Location: Sec. 16-12S-22W Trego County, Kansas
 License Number: 15-195-22859-0000
 Spud Date: Apr. 6, 2013
 Surface Coordinates: 2050 FNL/ 100 FWL
 Region: WILDCAT
 Drilling Completed: Apr. 11, 2013

Bottom Hole Coordinates:
 Ground Elevation (ft): 2366' K.B. Elevation (ft): 2374'
 Logged Interval (ft): 3350' To: 4200' Total Depth (ft): 4200'
 Formation:
 Type of Drilling Fluid:

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

OPERATOR

Company: Samuel Gary Jr. & Assoc.
 Address: 1515 Wynkoop, Ste. # 700
 Denver, Colo. 80202
 Geo: Clayton Camozzi

GEOLOGIST

Name: Aaron Suelter
 Company: Earth Tech OGL, Inc.
 Address: PO Box 683
 Hooker, Okla . 73945
 Off. 888-543-8378 Cell: 620-600-0777

DST's Report

DST#1 4008'-4036' 10 75 15 90
 IF- 1/2" BLOW/ ISI- NO BLOW/ FF- NO BLOW/ FSI- NO BLOW
 IH-2012, FH- 1978/ IF- 21 TO 23/ FF- 23 TO 25/ ISI- 868, FSI- 764
 RECOVERY 10' MUD
 SAMPLER 2000 ML MUD/ 2000 ML TOTAL

ROCK TYPES

Anhy	Gyp	Shgy	Sandylms
Bent	Igne	Sltst	Shale
Brec	Lmst	Ss	Sltstn
Cht	Meta	Till	Shlysits
Clyst	Mrlst	Carb sh	Sitysh
Coal	Salt	Dol	Lms
Congl	Shale	Dtd	
Dol	Shcol	Gry sh	

ACCESSORIES

MINERAL	Salt	Fossil	Clystn
Anhy	Sandy	Gastro	Dol
Arggrn	Silt	Oolite	Grysh
Arg	Sil	Ostra	Gryslt
Bent	Sulphur	Pelec	Lms
Bit	Tuff	Pellet	Sandylms
Brecfrag	Chlorite	Pisolite	Sh
Calc	Dol	Plant	Sltstn
Carb	Sand	Strom	
Chtdk	Sity	Fuss	
Chtlt		Oomold	
Dol	FOSSIL	STRINGER	TEXTURE
Feldspar	Algae	Anhy	Boundst
Ferrpel	Amph	Arg	Chalky
Ferr	Belm	Bent	Cryxln
Glau	Bioclst	Coal	Earthy
Gyp	Brach	Dol	Finexln
Hvymin	Bryozoa	Gyp	Grainst
Kaol	Cephal	Ls	Lithogr
Marl	Coral	Mrst	Microxln
Minxl	Crin	Sltstrg	Mudst
Nodule	Echin	Ssstrg	Packst
Phos	Fish	Carbsh	Wackest
Pyr	Foram		

OTHER SYMBOLS

POROSITY TYPE

- E Earthy
- B Fenest
- F Fracture
- X Inter
- A Moldic
- O Organic
- P Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- S Subrnd
- a Subang

- A Angular

OIL SHOWS

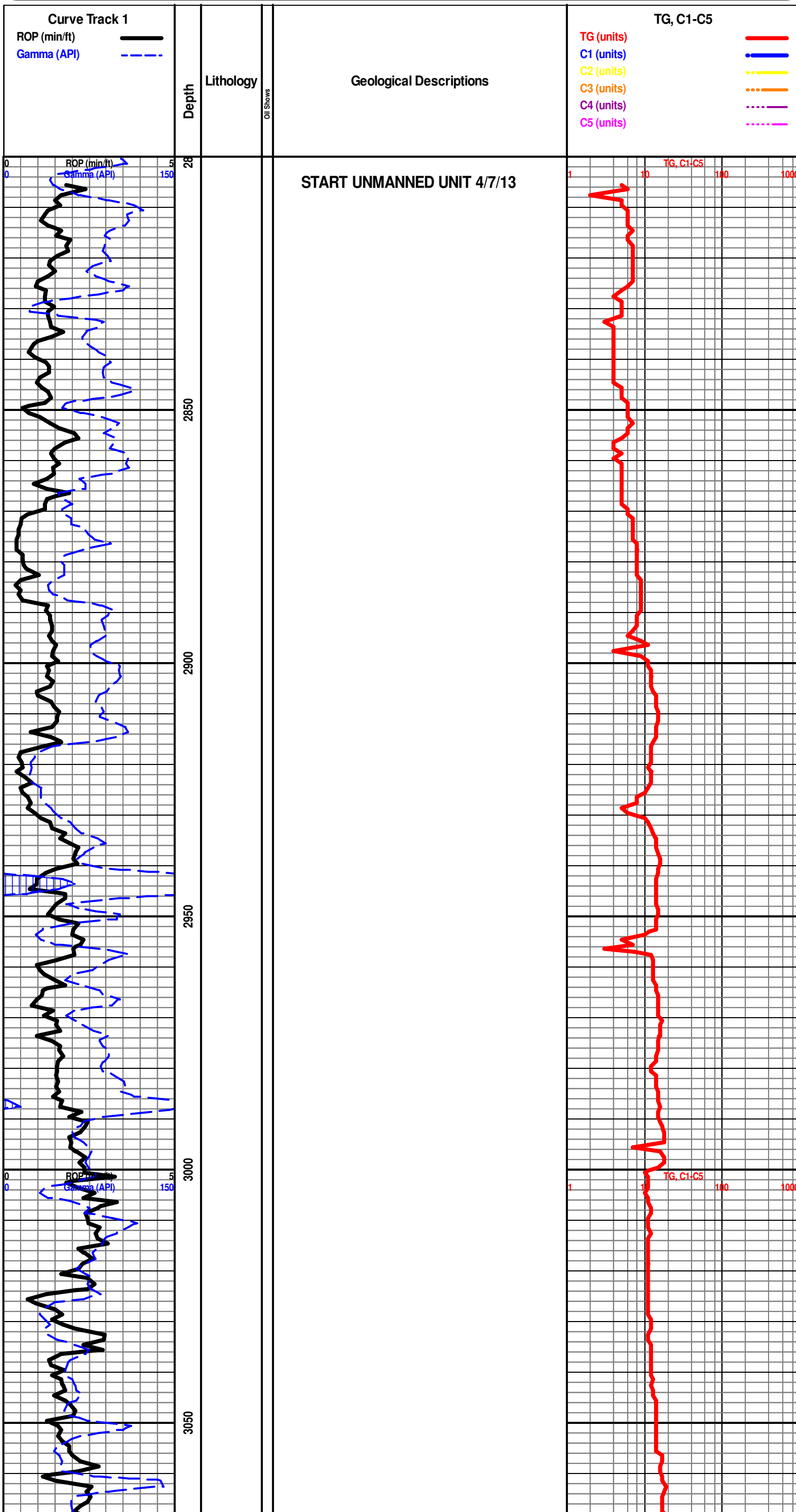
- E Even
- S Spotted
- Q Ques
- D Dead
- G Gas show

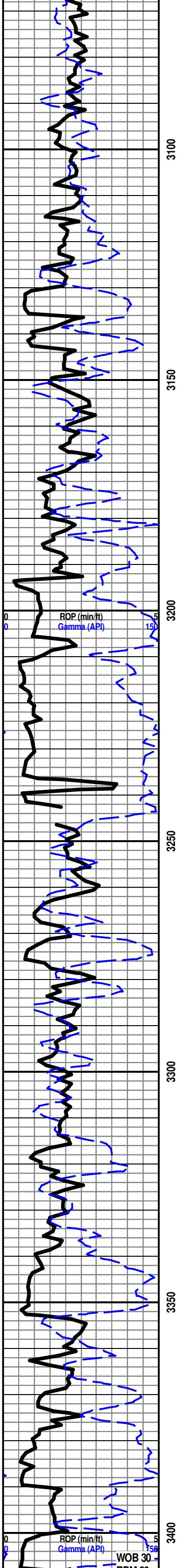
INTERVALS

- Core
- Dst
- Dst

EVENTS

- Rft
- Sidewall





3100

3150

3200

3250

3300

3350

3400

START 24 HOUR MANNED UNIT 4/8/12

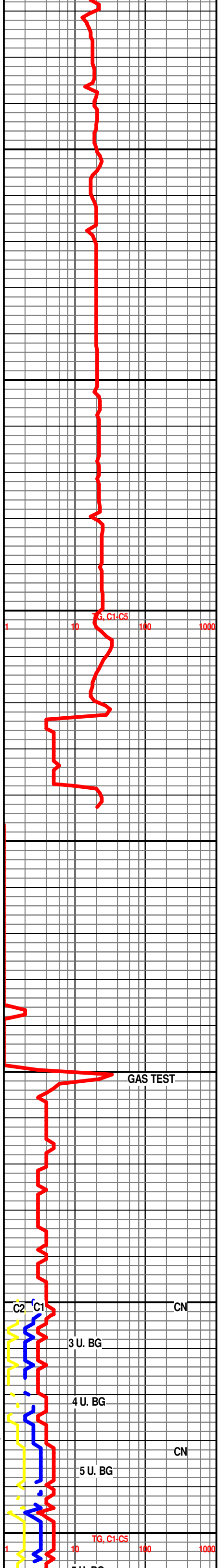
HOWARD 3353' -979'

LS- CRM TO TN, HD DNS TO V/BRIT, F XLN CHLKY MTRX,
S-SUCRO IP, IMBD FOSS FRG THU, NO VIS FLO, NO VIS
POR, NO VIS SHOW

SH- LT GY TO DK GY, FRM BLKY TO SFT GMMY, SLTY TXT

LS- LT TN TO TN, HD DNS TO BRIT, F XLN SUCRO MTRX,
S-CHLKY, SCAT IMBD FOSS FRG IP, NO VIS FLO, NO VIS
POR, NO VIS SHOW

TOPEKA 3408' -1034'



TG, C1-C5

GAS TEST

C2 C1 CN

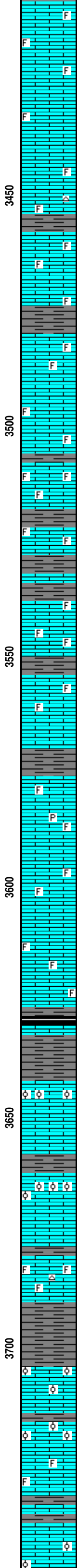
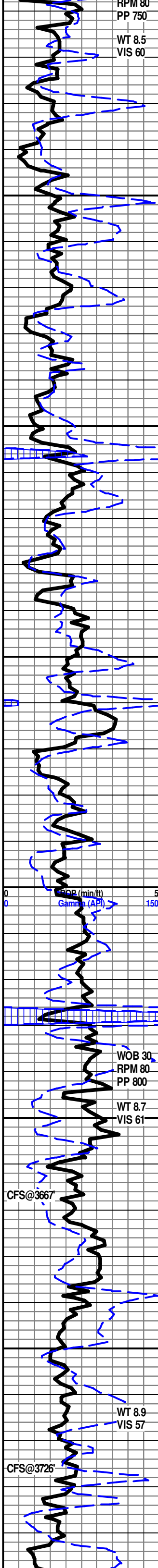
3 U. BG

4 U. BG

5 U. BG CN

TG, C1-C5

WOB 30



LS- LT TN TO TN, HD DNS TO BRIT, F XLN CHLKY MTRX, S-SUCRO, ABDT IMBD FOSS FRG THRU, NO VIS FLO, PR INTR XLN POR IN 2%, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT, F XLN CHLKY MTRX, S-SUCRO, SCAT IMBD FOSS FRG THRU, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO TN, HD DNS TO BRIT IP, F TO MD XLN CHLKY MTRX, RE-XLN IP, SCAT IMBD FOSS FRG IP, TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR

LS- LT TN TO TN, HD DNS TO BRIT, F XLN CHLKY MTRX, S-SUCRO IP, SCAT IMBD FOSS FRG IP, SLI TR TN CHRT IN TRAY, SLI TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GY TO DK GY, FRM BLKY, SLTY TXT

LS- LT TN TO TN, HD DNS TO BRIT IP, F TO MD XLN RE-XLN MTRX, S-CHLKY IP, SCAT IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN GY TO DK GY, FRM BLKY, SLTY TXT

LS- OFF WHT TO LT TN, HD DNS TO V/BRIT, F XLN CHLKY MTRX, RE-XLN IP, SLI TR IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO LT TN, HD DNS TO V/BRIT, F XLN CHLKY MTRX, RE-XLN IP, SLI TR IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT IP, F TO MD XLN RE-XLN MTRX, IMBD FOSS FRG THRU, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT IP, F TO MD XLN RE-XLN MTRX, S-CHLKY IP, S-SUCRO IP, SCAT IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN BRWN GY TO DK GY, FRM BLKY, SLTY TXT

LS- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO MD XLN RE-XLN MTRX, S-CHLKY IP, IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TO TN DK TN, HD DNS, V/F TO CRYPTO XLN RE-XLN MTRX, TR S-CHLKY IP, SLI TR IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN GY TO DK GY, FRM BLKY, SMTH TO SLTY TXT

LS- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY, IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, SLI TR PYR IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO TN, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY, IMBD FOSS FRG THRU, TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY IP, IMBD FOSS FRG IP, TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

HEEBNER 3626' -1252'
SH- BLCK, SFT, CARB

SH- GRN BRWN GY TO DK GY, FRM BLKY TO SFT GMMY, SLTY TXT

3644'-3646' LS- CRM TO LT TN W/ TN TO DK TN OIL STN IN 35%, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY IP, SCAT IMBD OOL THRU, SLI TR IMBD CALC XLS ON ONE FACES, BRT YEL GLD FLO IN 35%, FR TO GD VUG POR IN 4%, POSS FRCT POR, FR FLSH CUT IN 35%, FR TO GD SLW STRM IN 35%, TN LCH ON DISH, FLTING OIL ODOR

LANSING 3661' -1287'
3663'-3664' LS- OFF WHT TO LT TN W/ LT TN TO TN OIL STN IN 50%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, ABDT IMBD OOL THRU, BRT YEL GLD FLO IN 50%, FR TO GD INTR OOL POR IN 4%, FR TO GD VUG POR IN 4%, FR FLSH CUT IN 50%, FR TO GD SLW STRM IN 50%, TN LCH ON DISH, SULFUR ODOR

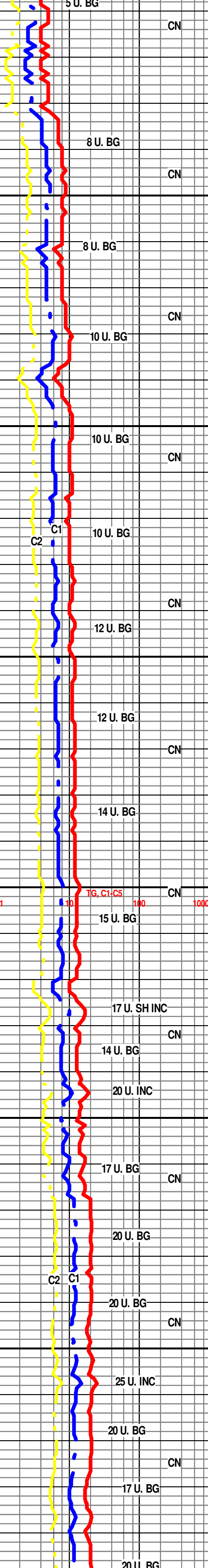
LS- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, RE-XLN IP, IMBD FOSS FRG IP, OFF WHT TO LT TN CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

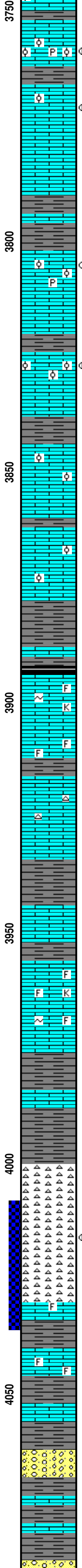
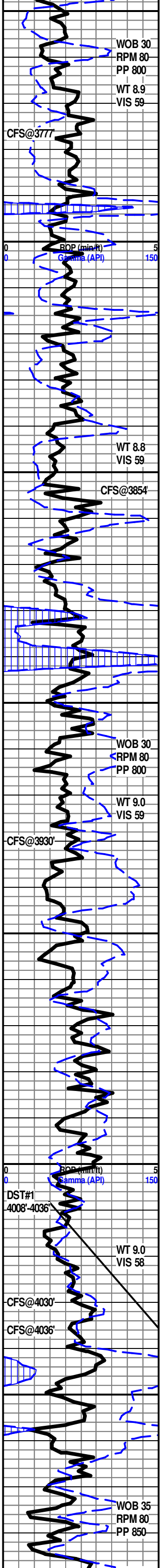
SH- GRN BRWN GY TO DK GY, FRM BLKY, SLTY TXT

LANSING "C" 3703' -1329'
3706'-3708' LS- OFF WHT TO LT TN W/ TN OIL STN IN 15%, HD DNS TO V/BRIT IP, V/F TO F XLN CHLKY MTRX, S-SUCRO, IMBD OOL IP, ABDT SFT WHT CHLK IN TRAY, TR PYR IN TRAY, DUL YEL GLD FLO IN 15%, FR TO GD INTR OOL POR IN 3%, FR VUG POR IN 2%, FR FLSH CUT IN 15%, FR TO GD SLW STRM IN 15%, NO LCH ON DISH, SULFUR ODOR

3717'-3718' LS- LT TN TO TN W/ LT TN TO TN OIL STN IN 25%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY, ABDT IMBD OOL THRU, SFT WHT CHLK IN TRAY, BRT YEL GLD FLO IN 10%, DUL YEL GLD FLO IN 15%, FR INTR OOL POR IN 4%, PR TO F VUG POR IN 2%, FR FLSH CUT IN 25%, FR TO GD SLW STRM IN 25%, LT TN LCH ON DISH, SULFUR ODOR

LANSING "F" 3737' -1363'
LS- CRM TO LT TN, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY, SCAT IMBD OOL IP, TR IMBD DISS PYR IP, TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO





3757'-3761' LS- CRM TO LT TN W/ TN OIL STN IN 70%, HD DNS TO BRIT IP, F TO MD XLN SUCRO MTRX, S-CHLKY, IMBD OOL THRU, ABDT SFT WHT CHLK IN TRAY, TR PYR IN TRAY, DUL YEL GLD FLO IN 70%, PR TO FR INTR OOL POR IN 3%, FR TO GD VUG POR IN 3%, WK FLSH CUT IN 70%, FR TO GD SLW STRM IN 70%, TN LCH ON DISH

3770'-3773' LS- CRM TO TN W/ LT TN TO TN OIL STN IN 40%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, TR IMBD OOL IP, TR SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 40%, FR TO GD VUG POR IN 4%, WK FLSH CUT IN 40%, PR TO FR SLW STRM IN 40%, NO LCH ON DISH

SH- BRWN GY TO DK GY, FMR BLKY, SLTY TXT

LANSING "H" 3802' -1428'

3804'-3805' LS- WHT TO OFF WHT W/ TN OIL STN IN 20%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S-CHLKY, IMBD OOL IP, PYR IN TRAY, DUL YEL GLD FLO IN 15%, PR TO FR VUG POR IN 3%, W/WK FLSH CUT IN 15%, PR SLW STRM IN 15%, NO LCH ON DISH

SH- LT GY TO DK GY, FRM BLKY, SLTY TXT

3826'-3828' LS- OFF WHT TO LT TN W/ TN OIL STN IN 40%, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY IP, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 20%, BRT YEL GLD FLO IN 20%, PR TO FR INTR OOL POR IN 3%, PR TO FR VUG POR IN 2%, WK FLSH CUT IN 40%, FR SLW STRM IN 40%, NO LCH ON DISH

3851'-3853' LS- WHT TO LT TN W/ DK TN OIL STN IN 15%, DOS IN 5%, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY, SCAT IMBD OOL IP, OOLMLD IP, SFT WHT CHLK IN TRAY, BRT YEL GLD FLO IN 15%, PR VUG POR IN 2%, FR OOLMLD POR IN 1%, WK FLSH CUG IN 15%, PR SLW STRM IN 20%, NO LCH ON DISH

LS- OFF WHT TO TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, TR IMBD OOL IP, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN BRWN TO DK GY, FRM BLKY, SLTY TXT

X-SHALE 3890' -1516'

SH- BLCK SFT CARB

LS- OFF WHT TO CRM, HD DNS TO V/BRIT, F XLN CHLKY MTRX, S-SUCRO IP, SLI TR IMBD FOSS FRG IP, SLI TR GLAUC OR KAOL, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM, HD DNS TO BRIT IP, F XLN CHLKY MTRX, S-SUCRO IP, IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, TR OFF WHT TO ORNG CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN RED TO GY, FRM BLKY TO SFT GMMY, SMTH TXT

LS- OFF WHT TO WHT, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, RE-XLN IP, TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, RE-XLN IP, SCAT IMBD FOSS FRG IP, SLI TR IMBD GLAUC OR KAOL, SLI TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN RED BRWN TO GY, FRM BLKY TO SFT GMMY, SMTH TXT

MARMATON 4001' -1627

CHRT- OFF WHT TN TO ORNG, V/HD DNS, V/TT TO CRYPTO XLN, NO VIS FLO, NO VIS POR, NO VIS SHOW

4014'-4018' CHRT- OFF WHT TN TO ORNG MOTTLD IP W/ TN OIL STN IN 60%, V/HD DNS, V/TT TO CRYPTO XLN, BRT YEL GLD FLO IN 60%, V/TT INTR XLN POR IN 6%, WK FLSH CUT IN 40%, F SLW STRM IN 40%, LT TN LCH ON DISH

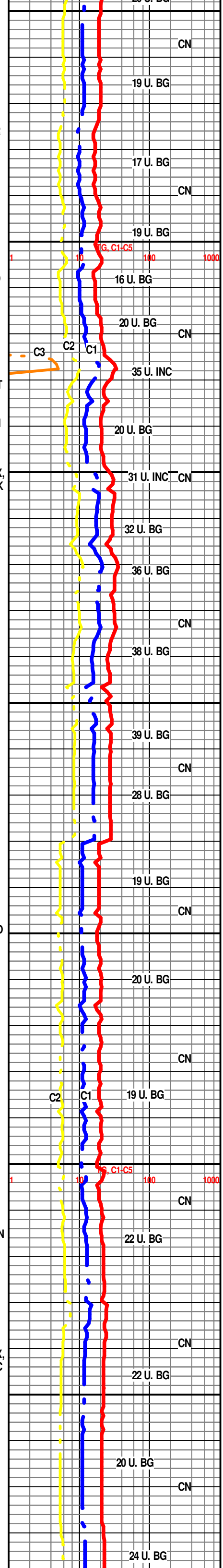
LS- OFF WHT TO CRM, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX S-CHLKY IP, TR SCAT IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

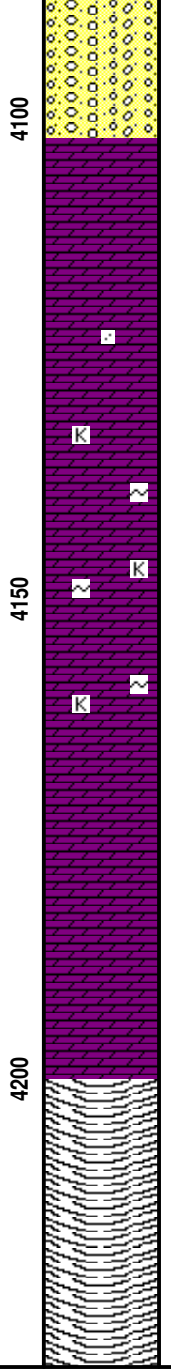
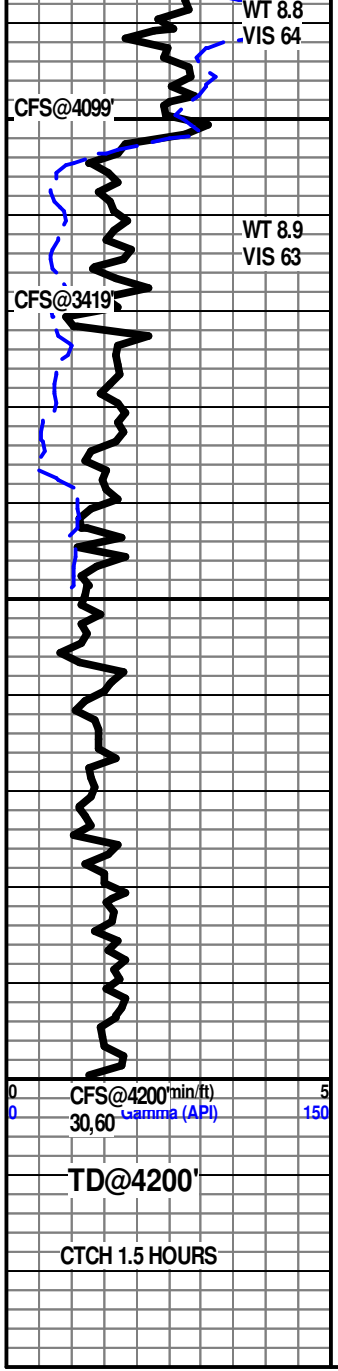
LS- CRM TO LT TN, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY IP, SCAT IMBD FOSS FRG IP, SLI TR IMBD CALC XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- RED BRWN TO GY, FRM BLKY TO SFT GMMY, SMTH TXT

CONG- LS- LT TN TO TN, HD DNS TO BRIT IP, F TO MD XLN RE-XLN MTRX, S-SUCRO IP, SCAT IMBD FOSS FRG IP, SH- GRN BRWN TO GY, FRM BLKY TO SFT GMMY, SMTH TXT, CHRT- FRSTY CRM TO TO ORNG

SH- RED BRWN, SFT GMMY





LS- LT TN, HD DNS, SCAT IMBD OOL IP, SH-RED BRW SFT GMMY, CHRT- CRM TN YEL ORNG TO RED

ARBUCKLE 4102' -1728'

DOLO- OFF WHT TO CRM, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD SM TO CRS S-RND TO ANG DOLO GRNS THRU, NO VIS FLO, FR TO GD INTR GRN POR IN 20%, NO VIS CUT OR SHOW

DOLO- OFF WHT TO CRM, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY, ABDT IMBD SM TO MD S-RND TO S-ANG DOLO GRNS THRU, NO VIS FLO, FR INTR GRN POR IN 10%, NO VIS SHOW

DOLO- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD SM TO CRS A-RND TO ANG DOLO GRNS THRU, IMBD MD RND QRTZ XLS IP, NO VIS FLO, FR TO GD INTR GRN POR IN 15%, NO VIS SHOW

DOLO- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD F TO MD S-ANG TO S-RND DOLO GRNS THRU, SLI TR IMBD KAOL OR GLAUC, NO VIS FLO, FR INTR GRN POR IN 15%, NO VIS SHOW

DOLO- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD F TO MD S-ANG TO S-RND DOLO GRNS THRU, SLI TR IMBD KAOL OR GLAUC, NO VIS FLO, FR INTR GRN POR IN 15%, NO VIS SHOW

R.T.D. @ 6:40 AM 4/11/13

DROP SURVEY

TOFL

WEATHERFORD LIBERAL

