



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1104081
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: _____



1104081

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	GLASSMAN 3-16
Doc ID	1104081

All Electric Logs Run

DIL
MICRO
POR
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

December 07, 2012

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

Re: ACO1
API 15-051-26356-00-00
GLASSMAN 3-16
SW/4 Sec.16-12S-16W
Ellis 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: 8/22/2012
 Invoice # 725

P.O.#:
 Due Date: 9/21/2012
 Division: Russell

Invoice

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

Reference:
 GLASSMAN 3-16

Description of Work:
 LONG SURFACE JOB

RECEIVED

SEP 05 2012

**SAMUEL GARY JR.
 & ASSOCIATES, INC.**

<input checked="" type="checkbox"/> DRLG <input type="checkbox"/> COMP <input type="checkbox"/> W/O <input type="checkbox"/> LOE <input type="checkbox"/> GG	
Account	8200.138
Well/Prospect	
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

Services / Items Included:

	Quantity	Price	Taxable
Labor		\$ 991.39	No
Common-Class A	350	\$ 4,636.00	Yes
8 5/8" Basket	3	\$ 1,029.26	Yes
Bulk Truck Matl-Material Service Charge	370	\$ 803.43	No
Calcium Chloride	13	\$ 672.69	Yes
8 5/8" Centralizer	3	\$ 208.46	Yes
Pump Truck Mileage-Job to Nearest Camp	18	\$ 195.04	No
Premium Gel (Bentonite)	7	\$ 123.73	Yes
8 5/8" Top Rubber Plug	1	\$ 115.09	Yes
Bulk Truck Mileage-Job to Nearest Bulk Plant	18	\$ 114.13	No
Baffle Plate Aluminum, 8 5/8"	1	\$ 97.71	Yes

Item Quantity Price Taxable

Invoice Terms:

Net 30

SubTotal: \$ 8,986.91
 Discount Available ONLY if Invoice is Paid & Received
 within listed terms of invoice: \$ (1,348.04)

SubTotal for Taxable Items:	\$ 5,850.49
SubTotal for Non-Taxable Items:	\$ 1,788.39
Total:	\$ 7,638.88
Tax:	\$ 368.58
Amount Due:	\$ 8,007.46
Applied Payments:	
Balance Due:	\$ 8,007.46

6.30% Ellis 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.
 ©2008-2013 Straker Investments, LLC. All rights reserved.

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. 725

Date	8-18-12	Sec.	16	Twp.	12	Range	16	County	Ellis	State	KS	On Location		Finish	09:30 AM
Lease	Glassman	Well No.	3-16		Location Blue Hill School 3/4 L S 1110										
Contractor	Discovery Rig 2							Owner							
Type Job	Seal Job							To Quality Oilwell Cementing, Inc.							
Hole Size	12 1/4							You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Csg.	8 5/8							Charge To							
Tbg. Size								Street							
Tool								City							
Cement Left in Csg.	41.56							The above was done to satisfaction and supervision of owner agent or contractor.							
Meas Line								Cement Amount Ordered							

EQUIPMENT

Pumptrk #9	No.	Cementer	Watt	Common	350
Bulktrk 13	No.	Driver	Rick	Poz. Mix	
Bulktrk	No.	Driver	Duog	Gel.	7

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers #1 #8 #17	Kol-Seal
Baskets #2 #9 #18	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
Cement did crackle	Handling 370
	Mileage

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	3 8 5/8
Baskets	3 8 5/8
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Long Surface
Mileage	18

X Signature *James [Signature]*

Tax
Discount
Total Charge

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. 792

Date: 8-24-12	Sec. 16	Twp. 12	Range 16	County Ellis	State KS	On Location	Finish 1:30 AM
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Lease Glassman	Well No. 3-16	Location Blue Hill School 3/4 W Sinto
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Contractor Discovery #2	Owner
Type Job Rotary Plug	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.
Hole Size 7 7/8	T.D. 3590
Csg.	Depth
Tbg. Size	Depth
Tool	Depth
Cement Left in Csg.	Shoe Joint
Meas Line	Displace
	Charge To Sam Leary Jr & Assoc.
	Street
	City State
	The above was done to satisfaction and supervision of owner agent or contractor.
	Cement Amount Ordered 245 60# 40# 1/4# F10

EQUIPMENT

Pumptrk 15	No. Cementer	147
	Helper	
Bulktrk	No. Driver	98
	Driver	
Bulktrk 10	No. Driver	9
	Driver	

JOB SERVICES & REMARKS

Remarks:	Calcium
Rat Hole 30 SK	Hulls
Mouse Hole 15 SK	Salt
Centralizers	Flowseal 60#
Baskets	Kol-Seal
D/V or Port Collar	Mud CLR 48
1st 3450 25SK	CFL-117 or CD110 CAF 38
2nd 1130 25SK	Sand
3rd 950 40SK	Handling 254
4th 1050 100SK	Mileage
5th 40 10SK	

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer
	Baskets 8 5/8 wooden Plug
	AFU Inserts
	Float Shoe
	Latch Down

	Pumptrk Charge Plug
	Mileage 18

X Signature <i>Paul Wick</i>	Tax
	Discount
	Total Charge



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

16/12S/16W-Ellis

1515 Wynkoop Ste. #700
Denver, CO 80202

Glassman #3-16

Job Ticket: 49484

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.08.21 @ 12:20:30

GENERAL INFORMATION:

Formation: **Toronto- LKC A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:04:40

Time Test Ended: 19:01:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 3140.00 ft (KB) To 3203.00 ft (KB) (TVD)

Reference Elevations: 1974.00 ft (KB)

Total Depth: 3203.00 ft (KB) (TVD)

1966.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press @ Run Depth: 46.86 psig @ 3144.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.21

End Date: 2012.08.21

Last Calib.: 2012.08.21

Start Time: 12:30:30

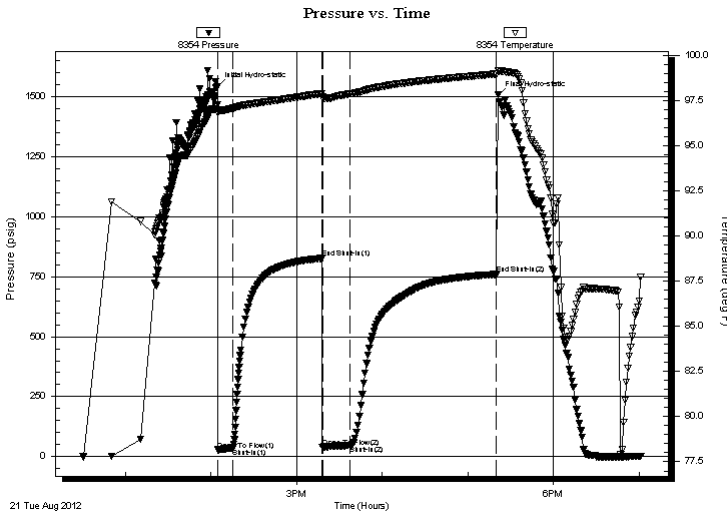
End Time: 19:01:00

Time On Btm: 2012.08.21 @ 14:04:30

Time Off Btm: 2012.08.21 @ 17:21:00

TEST COMMENT: IF-Weak surface blow . Built to 1/2 inch.
 IS- No Return.
 FF-Weak surface blow @ 6 minuts.
 FS- No Return. Flow Times- 10-60-20-100

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1541.15	97.27	Initial Hydro-static
1	27.95	96.80	Open To Flow (1)
11	36.69	97.08	Shut-In(1)
73	826.41	97.89	End Shut-In(1)
74	40.52	97.69	Open To Flow (2)
93	46.86	97.87	Shut-In(2)
196	759.73	98.98	End Shut-In(2)
197	1506.21	99.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	100%Mud	0.22

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates, Inc.

16/12S/16W-Ellis

1515 Wynkoop Ste. #700
Denver, CO 80202

Glassman #3-16

Job Ticket: 49484

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.08.21 @ 12:20:30

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: 63.00 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: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	100%Mud	0.218

Total Length: 35.00 ft Total Volume: 0.218 bbl

Num Fluid Samples: 0

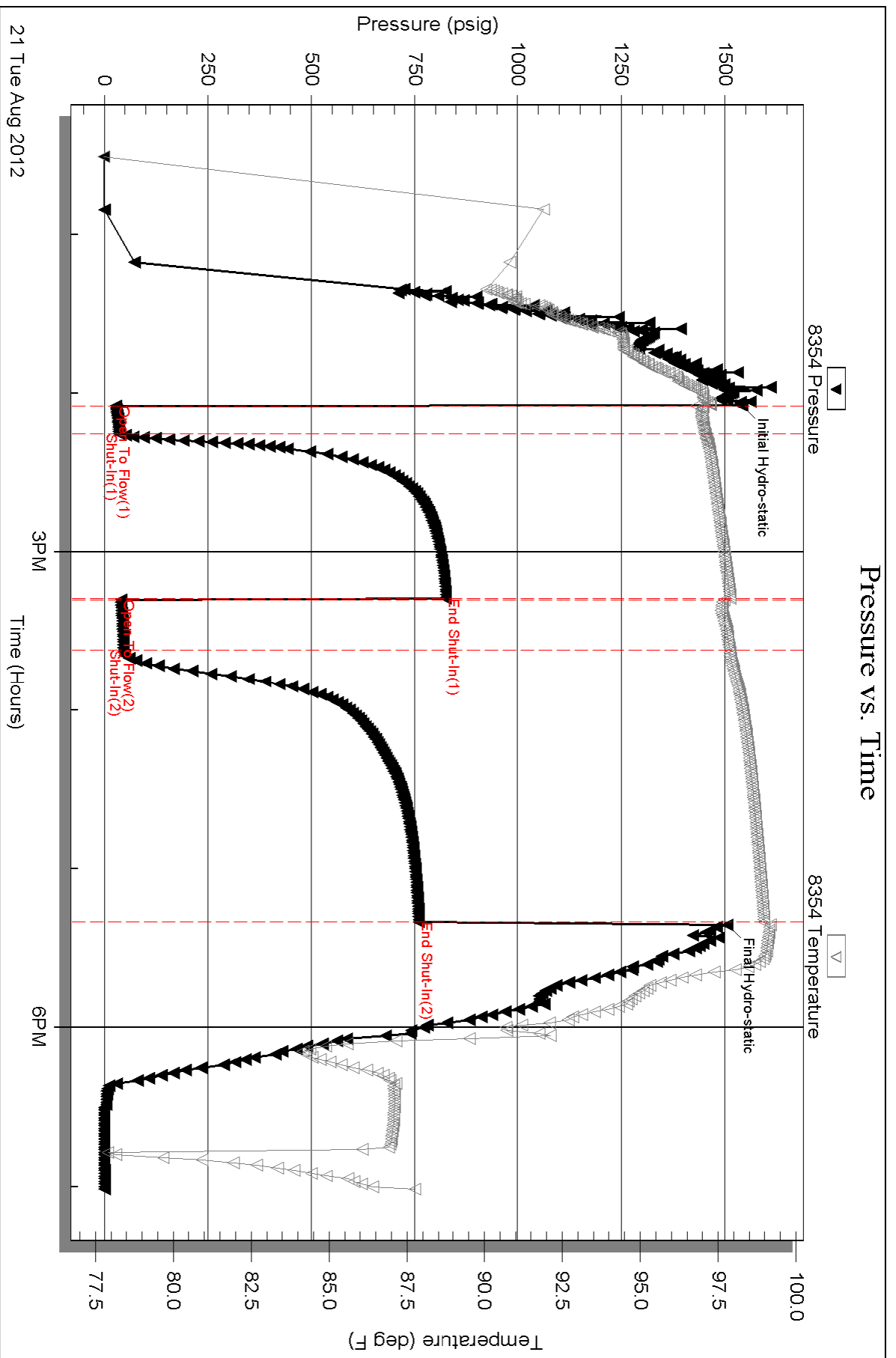
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler- 2000 ML 100%Mud
Pressure- 150#



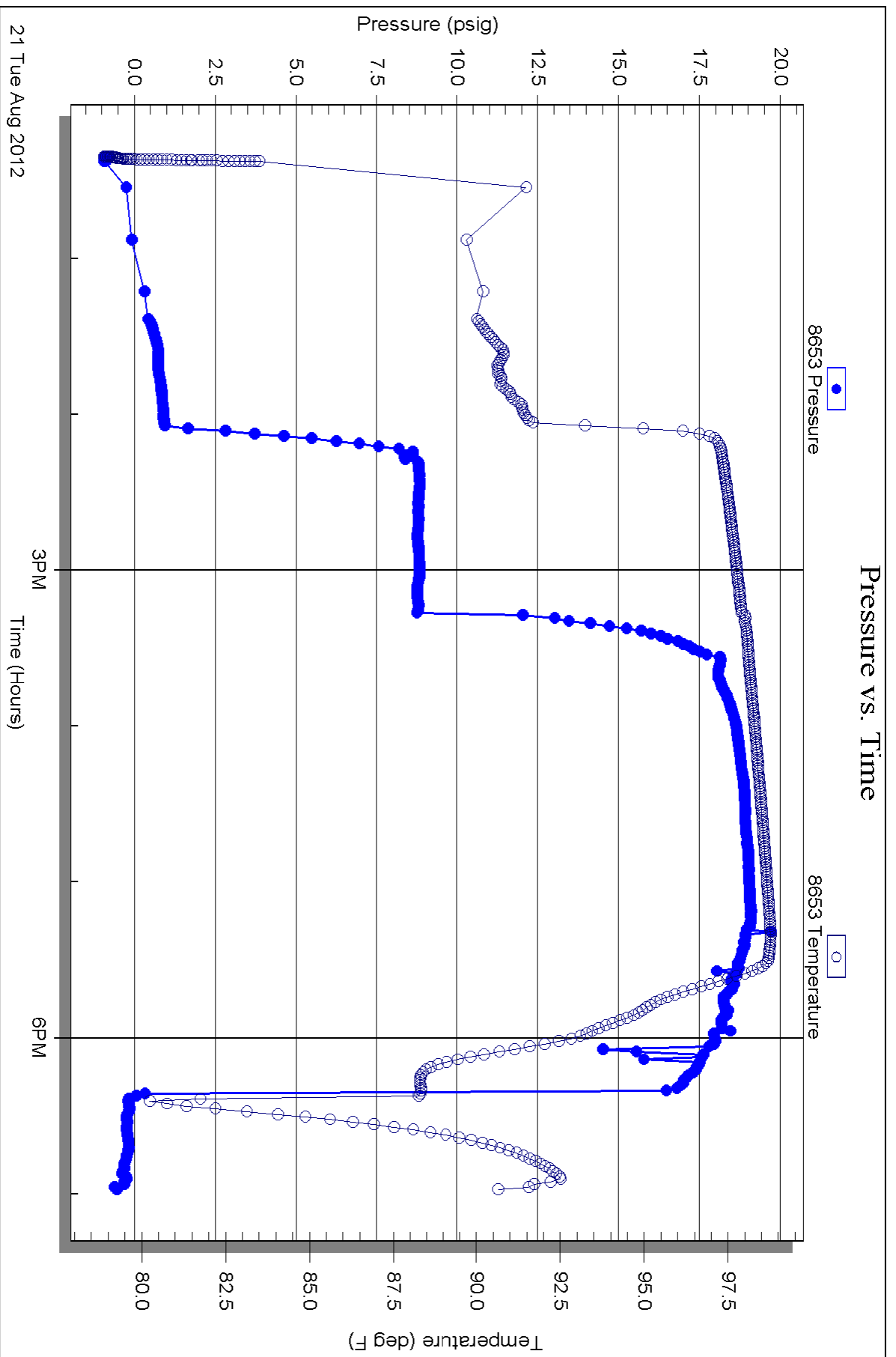
Serial #: 8653

Fluid

Samuel Gary Jr. & Associates, Inc.

Glassman #3-16

DST Test Number: 1





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

16/12S/16W-Ellis

1515 Wynkoop Ste. #700
Denver, CO 80202

Glassman #3-16

Job Ticket: 49485

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.08.22 @ 03:14:15

GENERAL INFORMATION:

Formation: **LKC "C-D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:53:35
 Time Test Ended: 10:59:45
 Interval: **3216.00 ft (KB) To 3245.00 ft (KB) (TVD)**
 Total Depth: 3245.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Rash
 Unit No: 38
 Reference Elevations: 1974.00 ft (KB)
 1966.00 ft (CF)
 KB to GR/CF: 8.00 ft

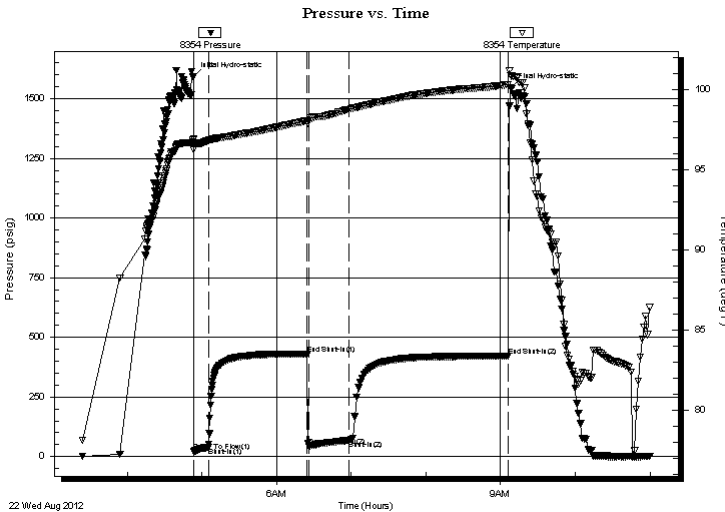
Serial #: 8354

Inside

Press @ Run Depth: 68.97 psig @ 3220.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.08.22 End Date: 2012.08.22 Last Calib.: 2012.08.22
 Start Time: 03:24:15 End Time: 10:59:45 Time On Btm: 2012.08.22 @ 04:53:25
 Time Off Btm: 2012.08.22 @ 09:08:15

TEST COMMENT: IF-Weak building blow . Built to 3 inches.
 ISI-No Return.
 FF-Weak building blow . Built to 5&1/2 inches.
 FSI-No Return. Flow Times- 10-75-30-120

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1593.10	96.90	Initial Hydro-static
1	20.71	96.26	Open To Flow (1)
12	39.29	96.82	Shut-In(1)
92	430.54	98.07	End Shut-In(1)
93	44.25	98.06	Open To Flow (2)
125	68.97	98.76	Shut-In(2)
253	422.66	100.32	End Shut-In(2)
255	1545.14	100.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	85%Water/15%Mud	1.27
2.00	100%Oil	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates, Inc.

16/12S/16W-Ellis

1515 Wynkoop Ste. #700
Denver, CO 80202

Glassman #3-16

Job Ticket: 49485

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.08.22 @ 03:14:15

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:

16000 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: 0.33 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
110.00	85%Water/15%Mud	1.270
2.00	100%Oil	0.028

Total Length: 112.00 ft Total Volume: 1.298 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler-2000ML Total. 1800ML-Water, 150ML-Mud, 50ML-Oil
Resistivity- .336=15,500 chlorides. Pressure=175#

Serial #: 8354

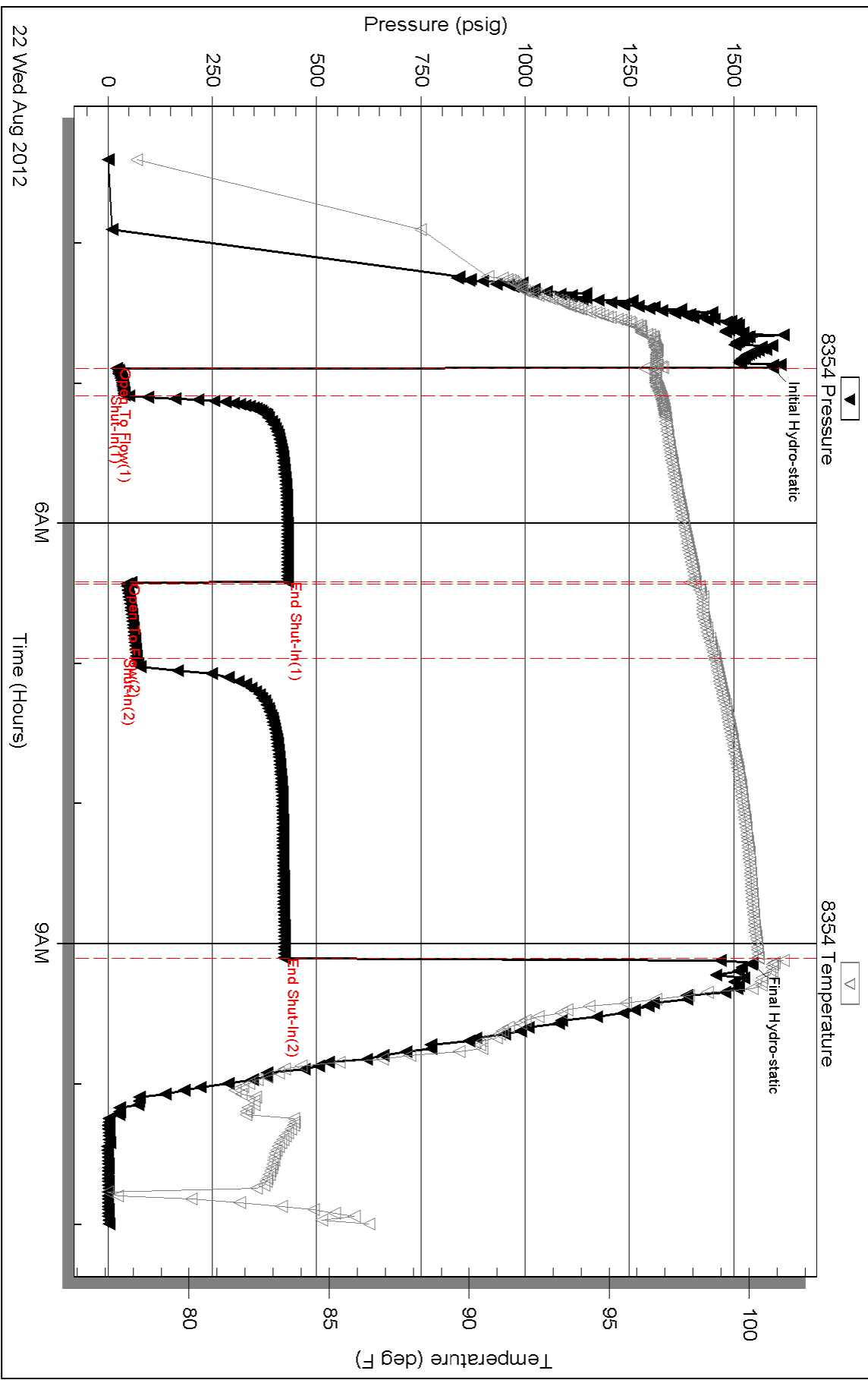
Inside

Samuel Gary Jr. & Associates, Inc.

Glassman #3-16

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 49485

Printed: 2012.08.22 @ 12:01:37

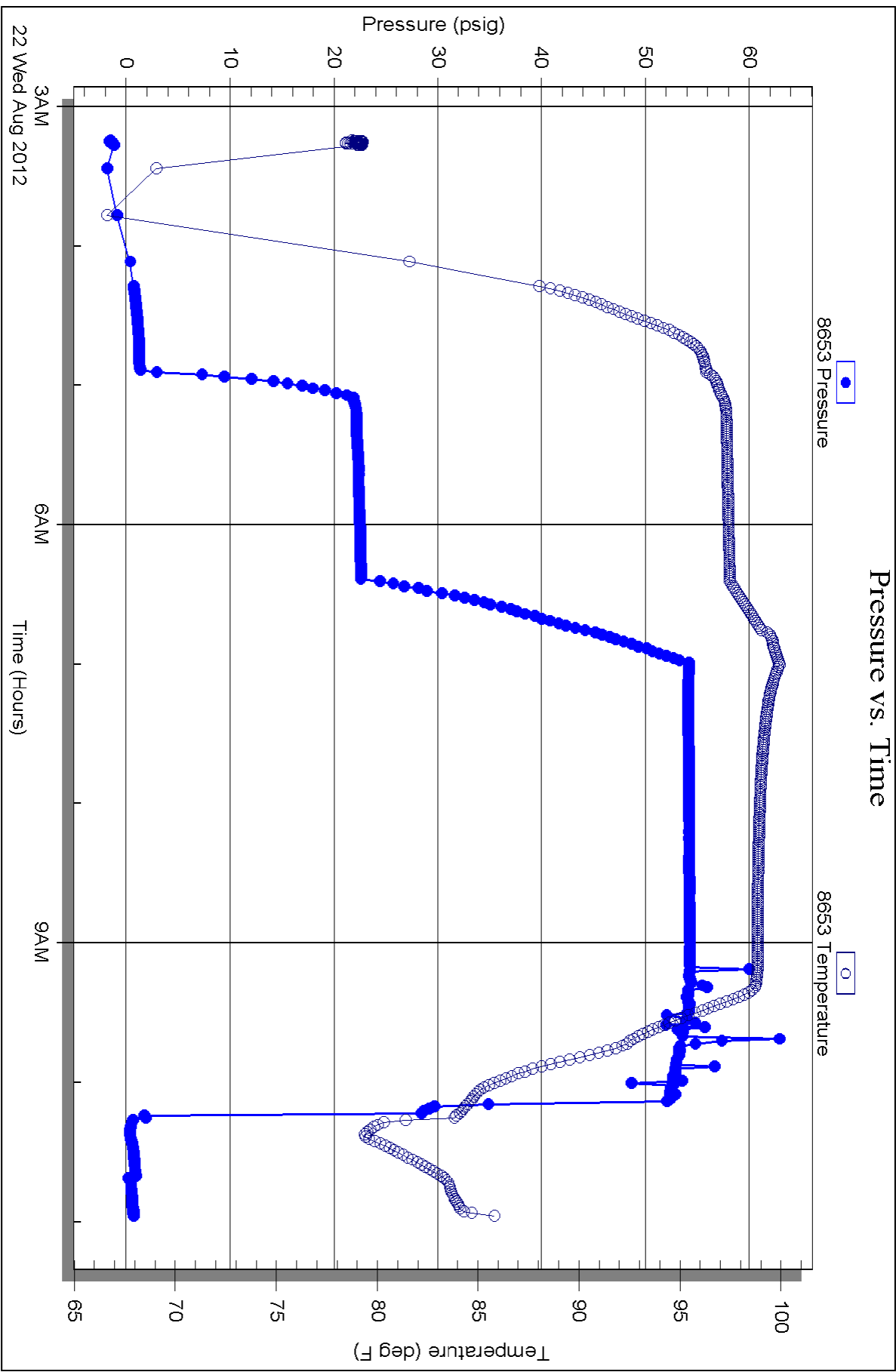
Serial #: 8653

Fluid

Samuel Gary Jr. & Associates, Inc.

Glassman #3-16

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 49485

Printed: 2012.08.22 @ 12:01:38



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

Well Name: Glassman 3-16
 Location: Sec. 16 - 12S - 16W Ellis County, Kansas
 License Number: 15-051-26356-0000
 Spud Date: Aug 18, 2012
 Surface Coordinates: 330 FSL / 330 FWL
 Region: WILDCAT
 Drilling Completed: Aug 23, 2012

Bottom Hole Coordinates:
 Ground Elevation (ft): 1971' K.B. Elevation (ft): 1979'
 Logged Interval (ft): 2800' To: 3590' Total Depth (ft): 3590'
 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 3140'-3203' 10 60 20 100
 IF- WK SURFACE BLOW, BUILT TO 1/2 INCH/ ISI- NO RETURN/ FF- WK SURFACE BLOW @ 6 MINUTES/ FSI- NO RETURN
 IH- 1541, FH-1506/ IF- 30 TO 41/ FF- 37 TO 47/ ISI- 826, FSI 760
 RECOVERY- 35' MUD, BHT 99, CHLORIDES 3000
 SAMPLE- 2000 ML MUD

DST's Report

DST#2 3216'-3245' 10 75 30 120
 IF- WK BUILDING BLOW, BUILT TO 3 INCHS/ ISI- NO RETURN/ FF WEAK BUILDING BLOW , BUILT TO 5 1/2 INCHS/ FSI- NO RETURN
 IH- 1593, FH- 1545/ IF- 21 TO 44/ FF- 39 TO 69/ ISI- 431, FSI 423
 RECOVERY- 2' OIL/ 110' MUDDY WATER, 85% WATER, 15% MUD
 SAMPLE- 50 ML OIL, 150 ML MUD, 1800 ML WATER/ PSI

ROCK TYPES

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

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

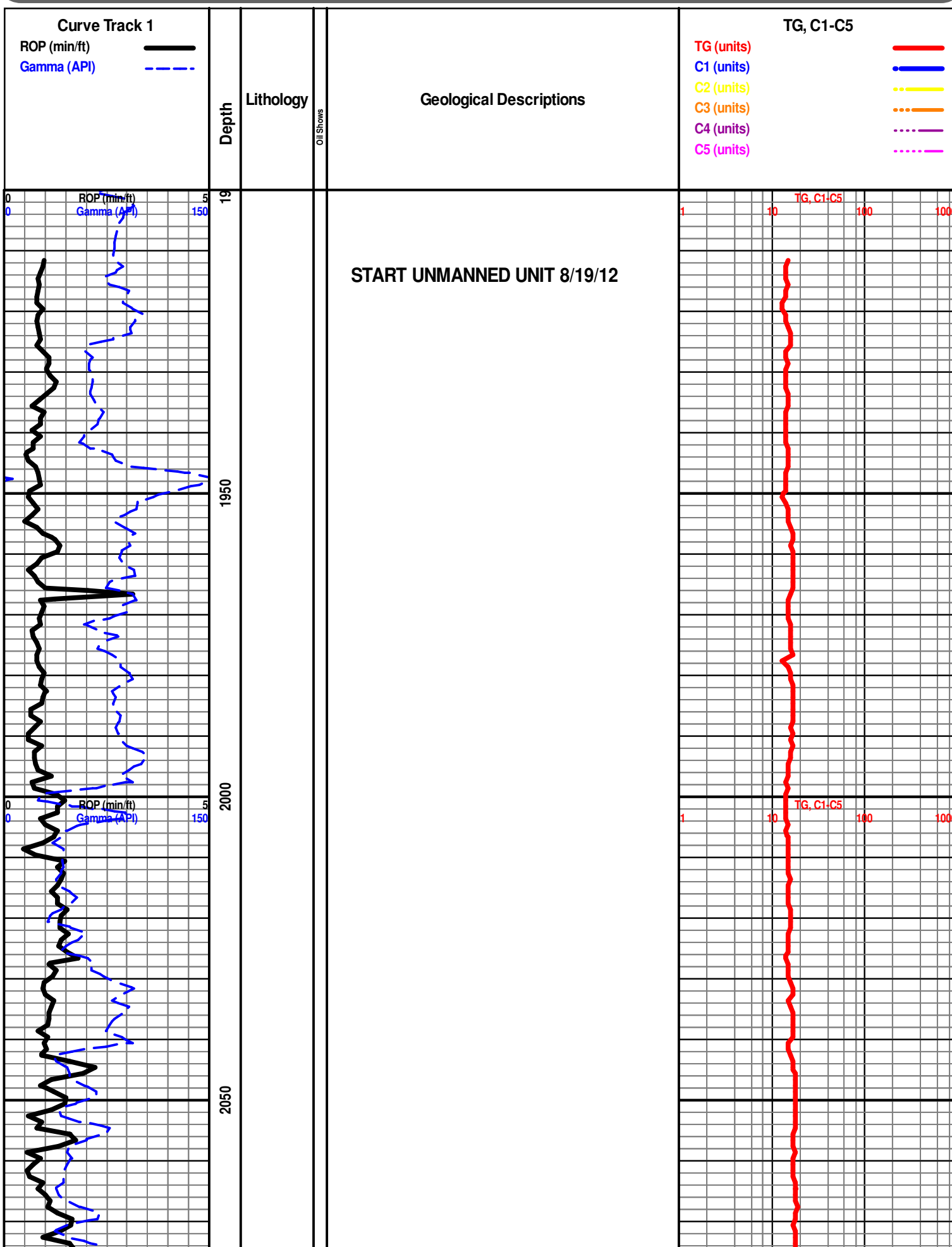
- Even
- Spotted
- Ques
- Dead
- Gas show

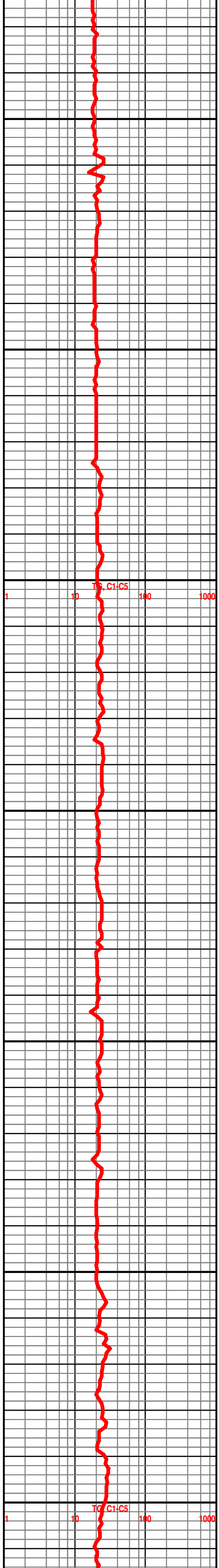
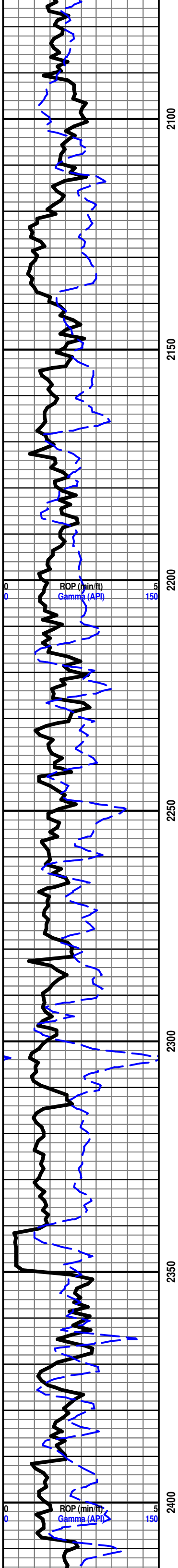
INTERVALS

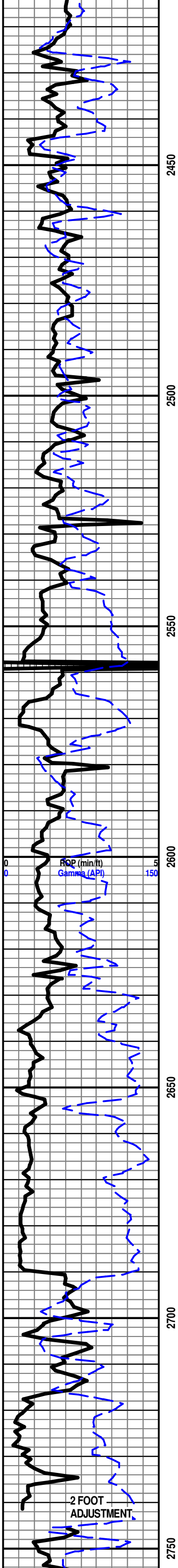
- Core
- Dst
- Dst

EVENTS

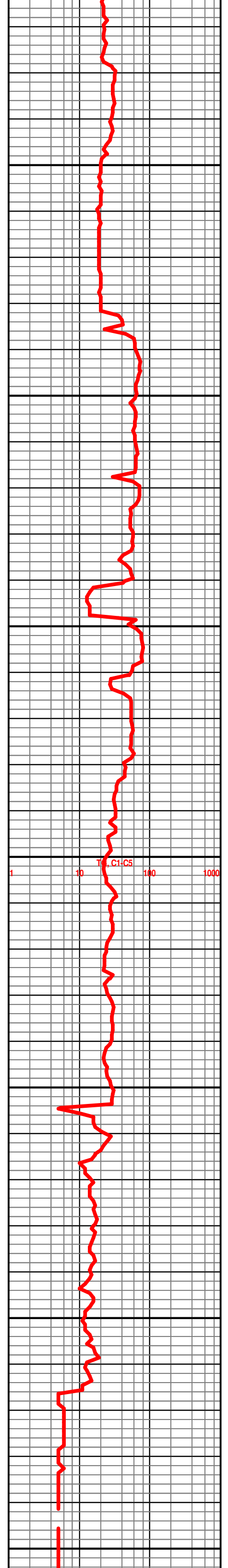
- Rft
- Sidewall

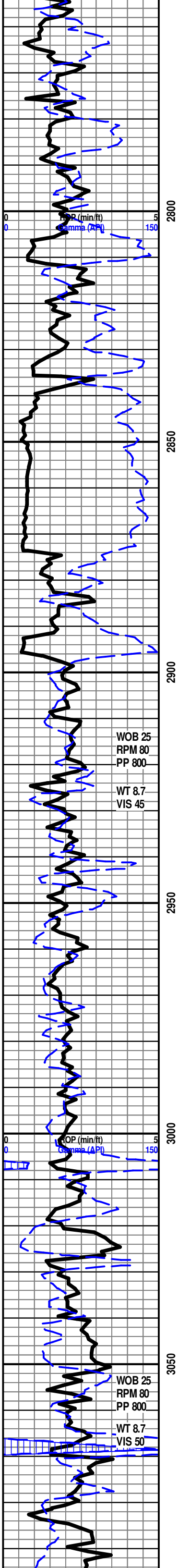






BRS 2690' -711'





START 24 HOUR MANNED UNIT 8/20/12

SH- BRWN GY TO DK GY, FRM BLKY, SMTH TXT
 LS- TN TO DK TN, HD DNS TO BRIT IP, F XLN MTRX, SLI TR IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW
 LS- LT TN TO TN, HD DNS TO BRIT IP, F XLN MTRX, S-SUCRO IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

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

HOWARD 2874' -895'

LS- TN TO GY, HD DNS TO BRIT, F XLN SUCRO MTRX, IMBD FOSS FRG IP, TR FREE CALC XLS IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

TOPEKA 2896' -917'

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

LS- TN TO DK TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SGA TOPEKA 2926' -947'

2932'-2934' LS- CRM TO LT TN W/ LT TN OIL STN IN 35%, HD DNS TO BRIT, F XLN SUCRO MTRX, SLI TR IMBD CALC XLS IP, DUL YEL GLD FLO IN 10% FR VUG POR IN 2%, V/PR MICRO VUG POR IN 5%, GD FLSH CUT IN 40%, GD SLW STRM IN 40%, TN LCH ON DISH, FR OIL ODOR

SH- GRN TO GY, SFT GMMY

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

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

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

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

LS- TN TO LT GY, HD DNS, F TO MD XLN RE-XLN MTRX, IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

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

LS- TN TO GY, HD DNS, V/F TO F XLN MTRX, IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

LE COMPTON 3029' -1050'

LS- LT TN, HD DNS TO BRIT, F TO MD XLN RE-XLN MTRX, ABDT IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

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

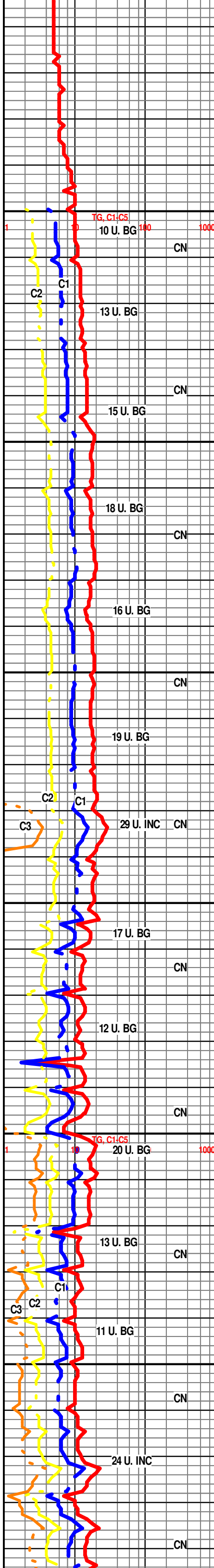
LS- CRM TO LT TN, HD DNS TO BRIT IP, F XLN RE-XLN MTRX, ABDT IMBD FOSS FRG THRU, TR IMBD PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

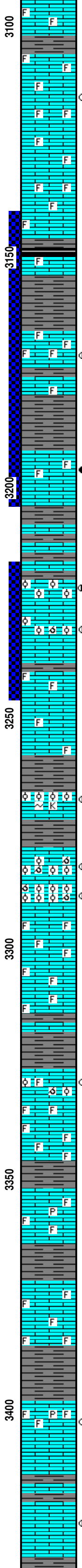
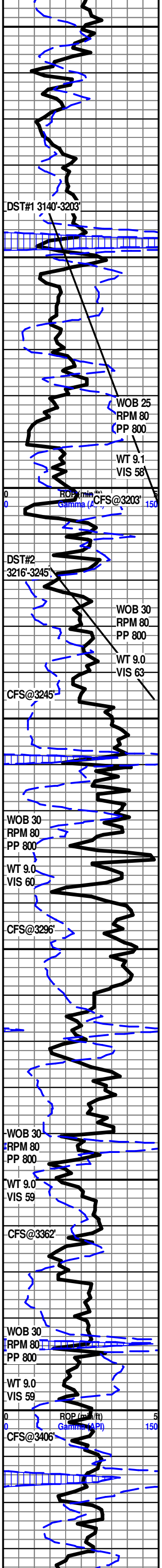
SH- BLCK, SFT, CARB

LS- LT TN, HD DNS, V/F TO F XLN MTRX, TR IMBD PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, FRM DNS TO BRIT, F XLN CHLKY MTRX, NO VIS FLO, NO VIS POR, NO VIS SHOW

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





IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- LT GY TO GY, SFT GMMY, SLTY TXT

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

3113'-3115' LS- CRM TO LT TN W/ TN OIL STN IN 10%, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY IP, IMBD FOSS FRG IP, DUL YEL GLD FLO IN 15%, PR VUG POR IN 3%, V/WK FLSH CUT IN 10%, PR TO FR SLW STRM IN 15%, NO LCH ON DISH, NO OIL ODOR

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

HEEBNER 3146' -1167'

SH- BLCK, SFT, CARB

SH- LT GY, SFT GMMY

TORONTO 3165' -1186

3170'-3171' LS- OFF WHT TO CRM W/ LT TN OIL STN IN 40%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S-CHLKY IP, IMBD FOSS FRG IP, DUL YEL GLD FLO IN 40%, BRT YEL GLD FLO IN 20%, FR TO GL VUG POR IN 5%, FR INTR FOSS POR IN 1%, WK FLSH CUT IN 60%, FR TO GD SLW STRM IN 50%, LT TN LCH ON DISH, NO OIL ODOR

DOUGLAS 3180' -1201'

SH- BRWN TO LT GY, SFT GMMY

LANSING 3191' -1212'

3195'-3196' LS- OFF WHT TO CRM W/ DK TN OIL STN IN 70%, HD DNS TO BRIT, F XLN RE-XLN MTRX, S-SUCRO, SLI TR IMBD FOSS FRG IP, SLI TR IMBD CALC XLS IP, BRT YEL GLD FLO IN 40%, DUL YEL GLD FLO IN 30%, PR INTR XLN POR IN 5%, FR TO GD VUG POR IN 5%, GD FLSH CUT IN 75%, GD SLW STRM IN 65%, DK TN LCH ON DISH, FR OIL ODOR

SH- BRWN TO GY, FRM BLKY, SMTH TO SLTY TXT, CALC IP

LANSING "C" 3219' -1240'

3220'-3222' LS- OFF WHT TO CRM, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 40%, BRT YEL GLD FLO IN 5%, FR TO GD INTR OOL POR IN 7%, FR VUG POR IN 2%, WK FLSH CUT IN 40%, FR SLW STRM IN 35%, LT TN LCH ON DISH, NO OIL ODOR

3230'-3231' LS- CRM TO LT TN W/ TN OIL STN IN 30%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S-CHLKY IP, ABDT IMBD OOL, SLI TR OOLMLD IP, IMBD CALC XLS IP, DUL YEL GLD FLO IN 20%, BRT YEL GLD FLO IN 5%, PR TO FR MICRO VUG POR IN 5%, PR OOLMLD POR IN 5%, FR INTR OOL POR IN 1%, WK FLSH CUT IN 30%, FR SLW STRM IN 30%, LT TN LCH ON DISH, GD OIL ODOR

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

LANSING "F" 3265' -1286'

3266'-3268' LS- OFF WHT TO CRM W/ TN OIL STN IN 50%, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-CHLKY IP, ABDT IMBD OOL, IMBD DISS PYR IP, SLI TR IMBD KAOL OR GLAUC, SLI TR SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 40%, PR INTR OOL POR IN 5%, FR TO GD VUG POR IN 5%, FR FLSH CUT IN 40%, WK SLW STRM CUT IN 40%, LT TN LCH ON DISH, GD SLFR ODOR

3281'-3282' LS- CRM W/ LT TN OIL STN IN 20%, HD DNS TO BRIT IP, V/F TO F SUCRO MTRX, ABDT IMBD OOL THRU, ABDT OOLMLD THRU, TR IMBD CALC XLS IP, DUL YEL GLD FLO IN 30%, BRT YEL GLD FLO IN 1%, PR INTR OOL POR IN 2%, FR MICRO VUG POR IN 3%, FR OOLMLD POR IN 15%, WK FLSH CUT IN 30%, PR TO FR SLW STRM IN 15%, NO LCH ON DISH, SLFR ODOR

3286'-3288' LS- CRM TO LT TN W/ LT TN OIL STN IN 20%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, SU-CHLKY IP, ABDT IMBD OOL THRU, OOLMLD IP, DUL YEL GLD FLO IN 10%, BRT YEL GLD FLO IN 15%, FR TO GD INTR OOL POR IN 5%, F TO GD VUG POR IN 5%, FR TO GD OOLMLD POR IN 5%, WK FLSH CUT IN 10%, PR TO FR SLW STRM IN 10%, NO LCH ON DISH, SLFR ODOR

SH-BRWN TO DK GY, FRM BLKY, SMTH TXT

LANSING "H" 3326' -1347'

3328'-3329' LS- CRM TO LT TN W/ LT TN OIL STN IN 5%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S-CHLKY, IMBD OOL THRU, IMBD FOSS FRG IP, SLI TR OOLMLD, DUL YEL GLD FLO IN 5%, FR VUG POR IN 2%, PR OOLMLD POR IN 1%, NO FLSH CUT, PR SLW STRM IN 5%, NO LCH ON DISH, SLFR ODOR

LS- OFF WHT TO CRM, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S-CHLKY, IMBD FOSS FRG THRU, IMBD CALC XLS THRU, TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW, SLFR ODOR

LS- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, SCAT IMBD FOSS FRG IP, SLI TR IMBD DISS PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW, SLFR ODOR

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

LS- CRM TO LT TN, HD DNS TO BRIT IP, F XLN MTRX, S-CHLKY IP, IMBD FOSS FRG IP, NO VIS FLO, PR INTR FOSS POR IN 1%, NO VIS SHOW

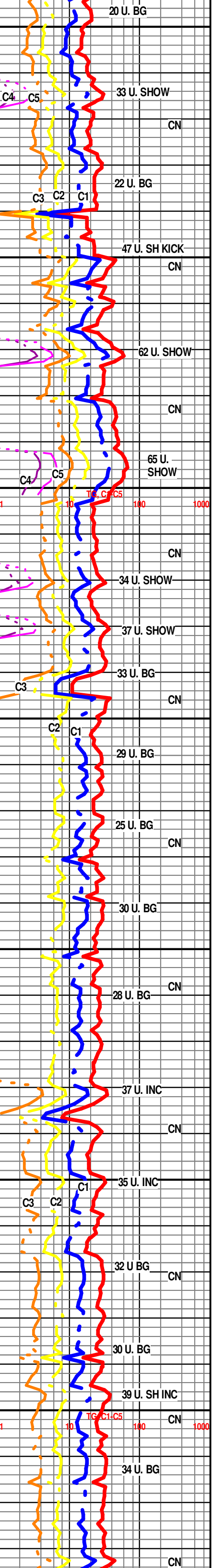
SH- GRN LT GY TO GY, FRM BLKY TO SFT GMMY

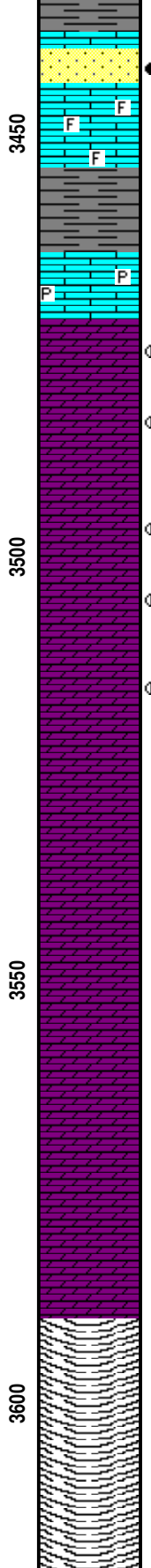
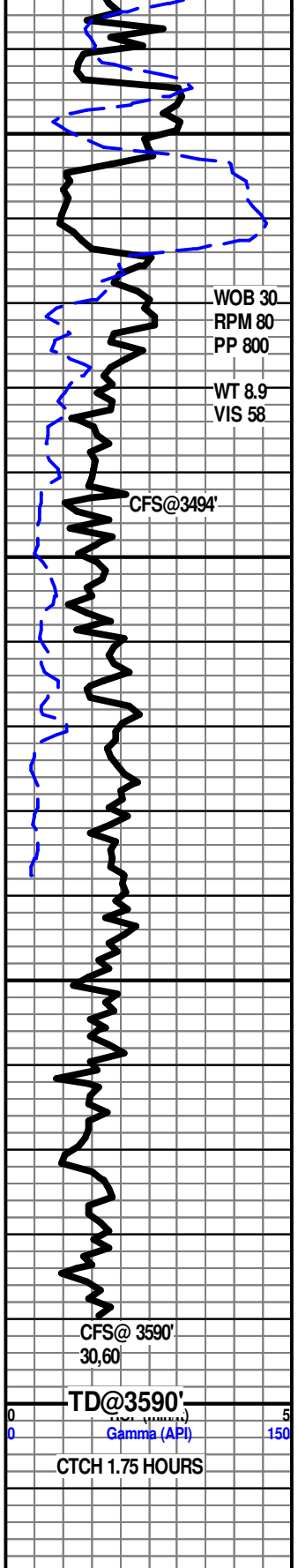
3402'-3403' LS- CRM TO LT TN W/ LT TN OIL STN IN 5%, HD DNS TO BRIT, F XLN MTRX, S-CHLKY IP, IMBD FOSS FRG IP, TR IMBD DISS PYR IP, DUL YEL GLD FLO IN 5%, PR INTR FOSS POR IN 5%, PR MICRO VUG POR IN 2%, NO FLSH CUT, WK SLW STRM IN 10%, NO LCH ON DISH, SLFR ODOR

LS- LT TN TO TN, HD DNS, V/F TO F XLN MTRX, NO VIF FLO, NO VIS POR, NO VIS SHOW

3424'-3425' LS- TN W/ LT TN OIL STN IN 10%, HD DNS TO BRIT, F XLN SUCRO MTRX, TR IMBD FOSS THRU, NO VIS FLO, PR MICRO VUG POR IN 3%, FR FLSH CUT IN 25%, FR TO GD SLW STRM IN 25%, TN LCH ON DISH

BKC 3431' -1452'





SH- BRWN TO LT GY, SFT GMMY

3440'-3444' SS- CRM W/TN OIL STN IN 75%, QRTZ GRN, HD TO V/TT, F GRN S-RND TO RND, WLL SRT, CALC CMNT, DUL YEL GLD FLO IN 35%, BRT YEL GLD FLO IN 30%, PR PP POR IN 10%, FR TO GD FLSH CUT IN 70%, GASSY SLW STRM IN 55%, DK TN LCH ON DISH

SH- BRWN TO GY, SFT GMMY, SLTY TXT

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

ARBUCKLE 3473' -1494

3473'-3475' DOLO- TN W/ TN OIL STN IN 40%, HD DNS TO BRIT IP, F SUCRO MTRX, ABDT IMBD MD TO CRS S-ANG TO ANG DOLO GRNS THRU, DUL YEL GLD FLO IN 40%, BRT YEL GLD FLO IN 5%, FR TO GD INTR GRN POR IN 15%, WK FLSH CUT IN 50%, PR TO FR SLW STRM IN 50%, LT TN LCH ON DISH

3483'-3484' DOLO- LT TN TO TN W/ TN OIL STN IN 40%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD F TO MD S-ANG TO ANG DOLO GRNS THRU, DUL YEL GLD FLO IN 30%, BRT YEL GLD FLO IN 5%, PR TO FR INTR GRN POR IN 10%, FR FLSH CUT IN 30%, FR TO GD SLW STRM IN 30%, DK TN LCH ON DISH

3496'-3498' DOLO- LT TN TO TN W/ DK TN OIL STN IN 25%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD MD TO CRS S-ANG TO ANG DOLO GRNS THRU, DUL YEL GLD FLO IN 30%, FR TO GD INTR GRN POR IN 15%, FR FLSH CUT IN 30%, FR TO GD SLW STRM IN 30%, DK TN LCH ON DISH

4505'-3506' DOLO- LT TN TO TN W/ LT TN OIL STN IN 15%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD F TO MD S-ANG TO ANG DOLO GRNS THRU, DUL YEL GLD FLO IN 10%, F TO GD INTR GRN POR IN 10%, V/WK FLSH CUT IN 5%, PR SLW STRM IN 10%, NO LCH ON DISH

3515'-3517' DOLO- LT TN TO TN W/ TN OIL STN IN 5%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD F TO MD S-ANG TO ANG DOLO GRNS THRU, DUL YEL GLD FLO IN 10%, BRT YEL GLD FLO IN 5%, FR TO GD INTR GRN POR IN 15%, WK FLSH CUT IN 20%, PR SLW STRM IN 20%

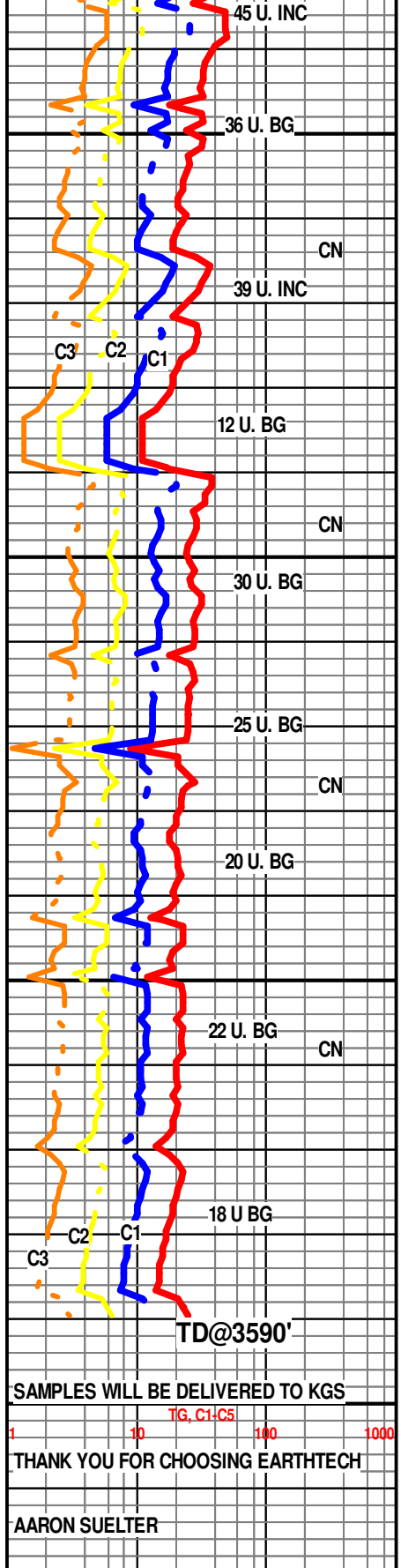
DOLO- CRM TO LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABT IMBD F TO MD S-ANG TO ANG DOLO GRNS THRU, SLI TR IMBD MD S-RND QRTZ GRN IP, NO VIS FLO, FR INTR GRN POR IN 10%, NO VIS SHOW

R.T.D. @ 10:45 AM 8/23/12

DROP SURVEY

TOFL@12:30 PM

WEATHERFORD / LIBERAL



SAMPLES WILL BE DELIVERED TO KGS

TG, C1-C3

1 10 100 1000

THANK YOU FOR CHOOSING EARTHTECH

AARON SUELTER