



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1165479
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: _____



1165479

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

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

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

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
----------------	-------	---------	------------	---

Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

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> _____	PRODUCTION INTERVAL: _____ _____
--	--	---

Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	FABRIZIUS ET AL 1-34
Doc ID	1165479

All Electric Logs Run

INDUCTION
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

October 28, 2013

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

Re: ACO1
API 15-195-22873-00-00
FABRIZIUS ET AL 1-34
NE/4 Sec.34-12S-23W
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: 7/9/2013
 Invoice # 7258

P.O.#:
 Due Date: 8/8/2013
 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

JUL 18 2013

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

DRLG COMP W/O LOE GG

Account	825.138
Well/Prospect	
APP	
Approval	HB
Description	

Reference:
 FABRIZIUS ET AL 1-34

Description of Work:
 LONG SURFACE JOB

Services / Items Included:

Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor	\$ 991.39	No	Baffle Plate Aluminum, 8 5/8"	1	\$97.71	Yes
Common-Class A	\$ 5,445.94	Yes				
8 5/8" Basket	\$ 1,029.26	Yes				
Bulk Truck Matl-Material Service Charge	\$ 916.34	No				
Calcium Chloride	\$ 724.43	Yes				
Pump Truck Mileage-Job to Nearest Camp	\$ 433.42	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	\$ 253.62	No				
Flo Seal	\$ 217.14	Yes				
8 5/8" Centralizer	\$ 208.46	Yes				
Premium Gel (Bentonite)	\$ 141.40	Yes				
8 5/8" Top Rubber Plug	\$ 115.09	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 10,574.21
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,586.13)

SubTotal for Taxable Items: \$ 6,782.52
 SubTotal for Non-Taxable Items: \$ 2,205.55

Total: \$ 8,988.08
 Tax: \$ 518.86

7.65% Trego County Sales Tax

Thank You For Your Business!

Amount Due: \$ 9,506.94
Applied Payments:
Balance Due: \$ 9,506.94

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. 7258

Date	7-9-13	Sec.	34	Twp.	12	Range	23 23	County	Trego	State	KS	On Location		Finish	12:45 PM
Location Wakeeney - 1st exit 3 S 1/2 E Sinto															

Lease	Fabrizius ETAL	Well No.	- 34	Owner	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.
Contractor	Discovery #4				
Type Job	Surface				
Hole Size	12 1/4	T.D.	947.83	Charge To	Sam Gary Jr & Associates
Csg.	8 5/8	Depth		Street	
Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	42.55 ft	Shoe Joint	4255 ft	Cement Amount Ordered	400 com 3+2 1/4 flow
Meas Line	23	Displace	57 1/2 bbl		

EQUIPMENT

Pumptrk	17	No.	Cementer Helper	Matt	Common	400
Bulktrk	19	No.	Driver	Heath	Poz. Mix	
Bulktrk	PU	No.	Driver	Brett	Gel.	8
			Driver		Calcium	14

JOB SERVICES & REMARKS

Remarks:	Fabrizius 1-34	Hulls	
Rat Hole		Salt	
Mouse Hole		Flowseal	100 ft
Centralizers	1, 18 + 21	Kol-Seal	
Baskets	2, 18 + 22	Mud CLR 48	
D/V or Port Collar		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	422
		Mileage	

FLOAT EQUIPMENT

Cement		Guide Shoe	
		Centralizer	3
		Baskets	3
Circulated!!		AFU Inserts	1 Rubber plug
		Float Shoe	
		Latch Down	
		Baffle Plate	
		Pumptrk Charge	Long Surface
		Mileage	Long 40

X Signature Mike Smith

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: 7/17/2013
 Invoice # 7420

P.O.#:
 Due Date: 8/16/2013
 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
 JUL 24 2013
 SAMUEL GARY JR.
 & ASSOCIATES, INC.

Reference:
 FABRIZIUS ET AL 1-34

Description of Work:
 PROD LONG STRING

DRLG COMP W/O LOE GG

Account	8300.238
Well/Prospect	
Deck	
AFE	
Approval	hr
Description	

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 963.85	No	Defoamer A or CAF-38	50	\$369.44	Yes
Common-Class A	225	\$ 2,978.25	Yes	Auto Fill Float Shoe, 5 1/2"	1	\$323.00	Yes
Cement Port Collar, 5 1/2"	1	\$ 2,638.89	Yes	Salt (Fine)	19	\$279.98	Yes
5 1/2" Basket	5	\$ 1,815.56	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$236.44	Yes
Gilsonite	1057	\$ 1,673.58	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	40	\$246.58	No
CFL 117	176	\$ 1,144.39	Yes	Flo Seal	56	\$118.22	Yes
Bulk Truck Matl-Material Service Charge	254	\$ 536.22	No	KCL	2	\$63.04	Yes
CD-110	117	\$ 494.00	Yes	Rotating Head (4 1/2", 5 1/2", or 2 7/8")	1	\$38.00	No
5 1/2" Turbolizer	7	\$ 428.56	Yes				
Pump Truck Mileage-Job to Nearest Camp	40	\$ 421.38	No				
Mud Clear	500	\$ 390.56	Yes				

Invoice Terms:

Net 30	SubTotal:	\$ 15,159.93
	Discount Available <u>ONLY</u> if Invoice is Paid & Received within listed terms of invoice:	\$ (2,273.99)
	SubTotal for Taxable Items:	\$ 11,010.82
	SubTotal for Non-Taxable Items:	\$ 1,875.12
	Total:	\$ 12,885.94
	Tax:	\$ 842.33
	Amount Due:	\$ 13,728.27
	Applied Payments:	
	Balance Due:	\$ 13,728.27

7.65% 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. 7420

Date	7-17-13	Sec.	34	Twp.	12	Range	23	County	Trego	State	KS	On Location		Finish	11:30 AM
								Location							
								Wakeeney 1st Exit 3S, 1/2 E, S n 2							

Lease	Fabrizius ETAL	Well No.	1-34	Owner	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.										
Contractor	Discovery			Charge To	Sam Gary JR. & Associates										
Type Job	long string	T.D.	4210	Street											
Hole Size	7 7/8	Depth	4051.16	City	State										
Csg.	5 1/2 15#	Depth		The above was done to satisfaction and supervision of owner agent or contractor.											
Tbg. Size		Depth		Cement Amount Ordered 225 Q pro-C 10% salt											
Tool		Depth		5% gilconite 1/4 Flow, 20 bbl KCL - 8 1/2 CFL-117											
Cement Left in Csg.	42.40	Shoe Joint	42.40	225 CAF-38											
Meas Line		Displace	95.40	2 3/8 CD-110											

EQUIPMENT

Pumptrk	16	No.	Cementer		Poz. Mix	225									
			Helper	Lonnie W.		8 1/2 CFL-117									
Bulktrk	14	No.	Driver		Get.	KCL 2 gal									
			Driver	Lonnie M.		CD-110 117#									
Bulktrk	PU	No.	Driver		Calcium										
			Driver	Travis											

JOB SERVICES & REMARKS

Remarks:	Pipe on bottom broke circulation. Pumped 500gal Mud CLR 48 with 10 bbl fw behind it.														
Rat Hole	plug Rat hole with 30sx and Mouse hole with 15sx. Hooked to 5 1/2 mixed 180 sx														
Mouse Hole	shut down washed pump and lines Released plug and displaced with 20 bbl KCL and 75 1/2 bbl fw plug landed and held.														
Centralizers	1, 5, 7, 11, 13, 55, 71														
Baskets	3, 9, 15, 54, 70														
D/V or Port Collar	Top of 54														
	lift pressure 700# psi														
	Plug landed at 1300# psi														

FLOAT EQUIPMENT

Guide Shoe															
Centralizer	7														
Baskets	5														
AFU Inserts	1 port collar														
Float Shoe	1 with Ball														
Latch Down	1 with plug														

Pumptrk Charge	Prod Long String														
Mileage	40														

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: 7/22/2013
 Invoice # 6711

P.O.#:
 Due Date: 8/21/2013
 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

JUL 31 2013

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

Reference:
 FABRAIZIUS ET AL 1-34

Description of Work:
 PORT COLLAR JOB

DRLG COMP W/O LOE GG

Account	8300.317
Well/Prospect	
Deck	
APE	
Approval	AS
Description	

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 1,020.55	No				
mon, MetsoBeads, Plater, Gel, FloSeal, Calcium)	175	\$ 3,739.65	Yes				
Bulk Truck Matl-Material Service Charge	300	\$ 670.59	No				
Pump Truck Mileage-Job to Nearest Camp	40	\$ 446.16	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	40	\$ 261.08	No				
Flo Seal	75	\$ 167.65	Yes				
Premium Gel (Bentonite)	4	\$ 72.78	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 6,378.46
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (956.77)

SubTotal for Taxable Items:	\$ 3,383.06
SubTotal for Non-Taxable Items:	\$ 2,038.62
Total:	\$ 5,421.69
Tax:	\$ 258.80

7.65% Trego County Sales Tax

Thank You For Your Business!

Amount Due: \$ 5,680.49
Applied Payments:
Balance Due: \$ 5,680.49

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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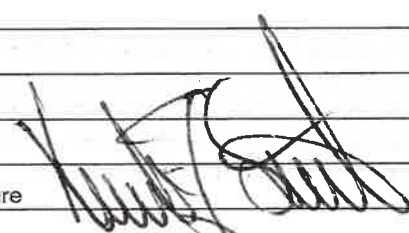
QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 6711

Date	7-22-13	Sec.	34	Twp.	12	Range	23	County	Hrego	State	KS	On Location	10.00 AM	Finish	11.30 AM	
Lease	Fabrizius ETAL			Well No.	1-34			Owner	Sinto							
Contractor	DSW			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	port collar			Charge To <u>Sam Gary Jr & Associates</u>												
Hole Size	2 1/2			T.D.	Street <u>W. Main St</u>											
Csg.	5 1/2			Depth	City <u>Wray</u> State <u>KS</u>											
Tbg. Size				Depth	The above was done to satisfaction and supervision of owner agent or contractor.											
Tool				Depth	Cement Amount Ordered <u>300 @ mdc</u>											
Cement Left in Csg.				Shoe Joint	Meas Line Displace <u>10.45</u> <u>14 ft on used 175</u>											
EQUIPMENT												Common				
Pumptrk	17	No.	Cementer	Matt												
			Helper													
Bulktrk	12	No.	Driver	Cody												
			Driver													
Bulktrk	pu	No.	Driver	Doug												
			Driver													
JOB SERVICES & REMARKS												Hulls				
Remarks:	Fabrizius ETAL 1-34												Salt			
Rat Hole													Flowseal <u>75#</u>			
Mouse Hole													Kol-Seal			
Centralizers													Mud CLR 48			
Baskets													CFL-117 or CD110 CAF 38			
Port Collar	<u>1806</u>												Sand			
mix 4 gal then												Handling <u>300</u>				
mix 175 SKS displaced												Mileage				
09 BBL of water												FLOAT EQUIPMENT				
30 BBL of water												Guide Shoe				
to wash clean												Centralizer				
												Baskets				
												AFU Inserts				
												Float Shoe				
												Latch Down				
												Pumptrk Charge <u>port collar</u>				
												Mileage <u>40</u>				
X Signature 												Tax				
												Discount				
												Total Charge				



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

34-12S-23W Trego, KS

Fabrizius Et Al 1-34

Job Ticket: 53926

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2013.07.13 @ 13:42:00

GENERAL INFORMATION:

Formation: **Lansing C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:48:00

Time Test Ended: 21:37:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody/Brannan

Unit No: 53

Interval: 3742.00 ft (KB) To 3771.00 ft (KB) (TVD)

Reference Elevations: 2339.00 ft (KB)

Total Depth: 3771.00 ft (KB) (TVD)

2331.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8648 Outside

Press @ Run Depth: 121.94 psig @ 3743.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.13

End Date:

2013.07.13

Last Calib.:

2013.07.13

Start Time: 13:42:05

End Time:

21:37:14

Time On Btm:

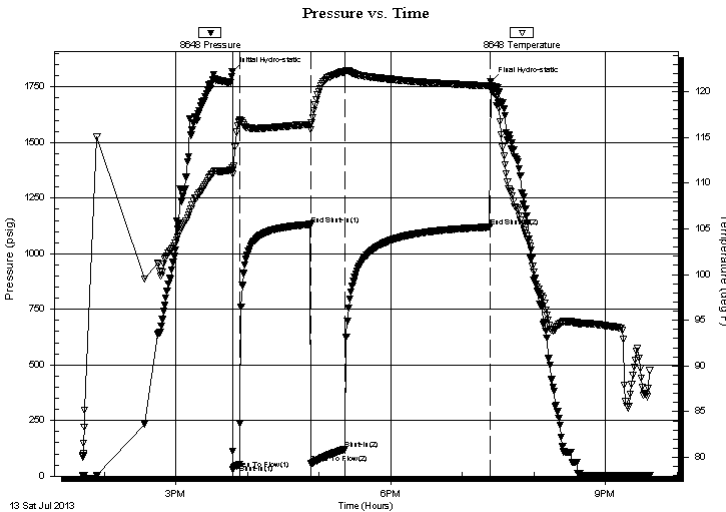
2013.07.13 @ 15:47:30

Time Off Btm:

2013.07.13 @ 19:23:45

TEST COMMENT: 005 - IF-4" blow
060 - IS- No return
030 - FF- B.O.B. in 18 minutes
120 - FS- No return

PRESSURE SUMMARY



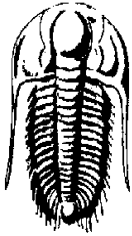
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1820.31	111.61	Initial Hydro-static
1	29.27	111.40	Open To Flow (1)
6	52.01	116.73	Shut-In(1)
66	1131.67	116.42	End Shut-In(1)
66	57.60	115.87	Open To Flow (2)
95	121.94	122.17	Shut-In(2)
216	1120.08	120.64	End Shut-In(2)
217	1774.06	120.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	MW, 30% m, 70% W - show of oil	2.34
20.00	Free oil, 100% O	0.28

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

34-12S-23W Trego, KS

Fabrizius Et Al 1-34

Job Ticket: 53926

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2013.07.13 @ 13:42:00

GENERAL INFORMATION:

Formation: **Lansing C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:48:00

Time Test Ended: 21:37:15

Interval: 3742.00 ft (KB) To 3771.00 ft (KB) (TVD)

Total Depth: 3771.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody/Brannan

Unit No: 53

Reference Elevations: 2339.00 ft (KB)

2331.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8655 Fluid

Press @ Run Depth: psig @ 3705.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.13

End Date: 2013.07.13

Last Calib.: 2013.07.13

Start Time: 13:42:05

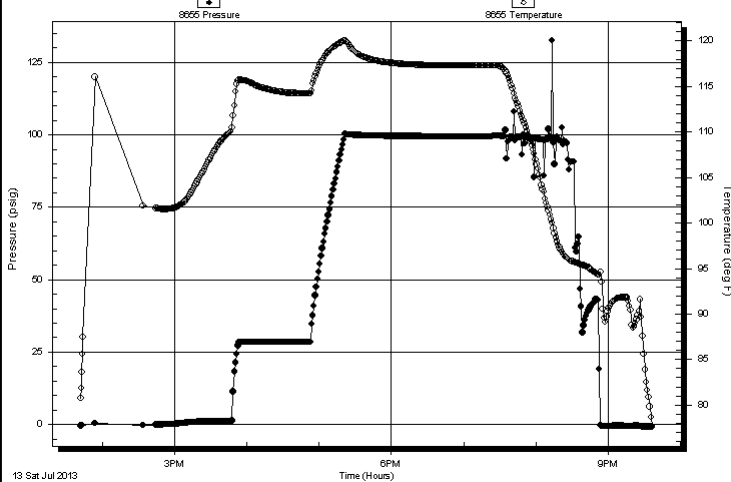
End Time: 21:37:14

Time On Btm:

Time Off Btm:

TEST COMMENT: 005 - IF-4" blow
060 - IS- No return
030 - FF- B.O.B. in 18 minutes
120 - FS- No return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
186.00	MW, 30% m, 70% W - show of oil	2.34
20.00	Free oil, 100% O	0.28

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

34-12S-23W Trego, KS

Fabrizius Et Al 1-34

Job Ticket: 53926

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2013.07.13 @ 13:42:00

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:

38000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	MW, 30% _m , 70% _W - show of oil	2.336
20.00	Free oil, 100% _O	0.281

Total Length: 206.00 ft Total Volume: 2.617 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

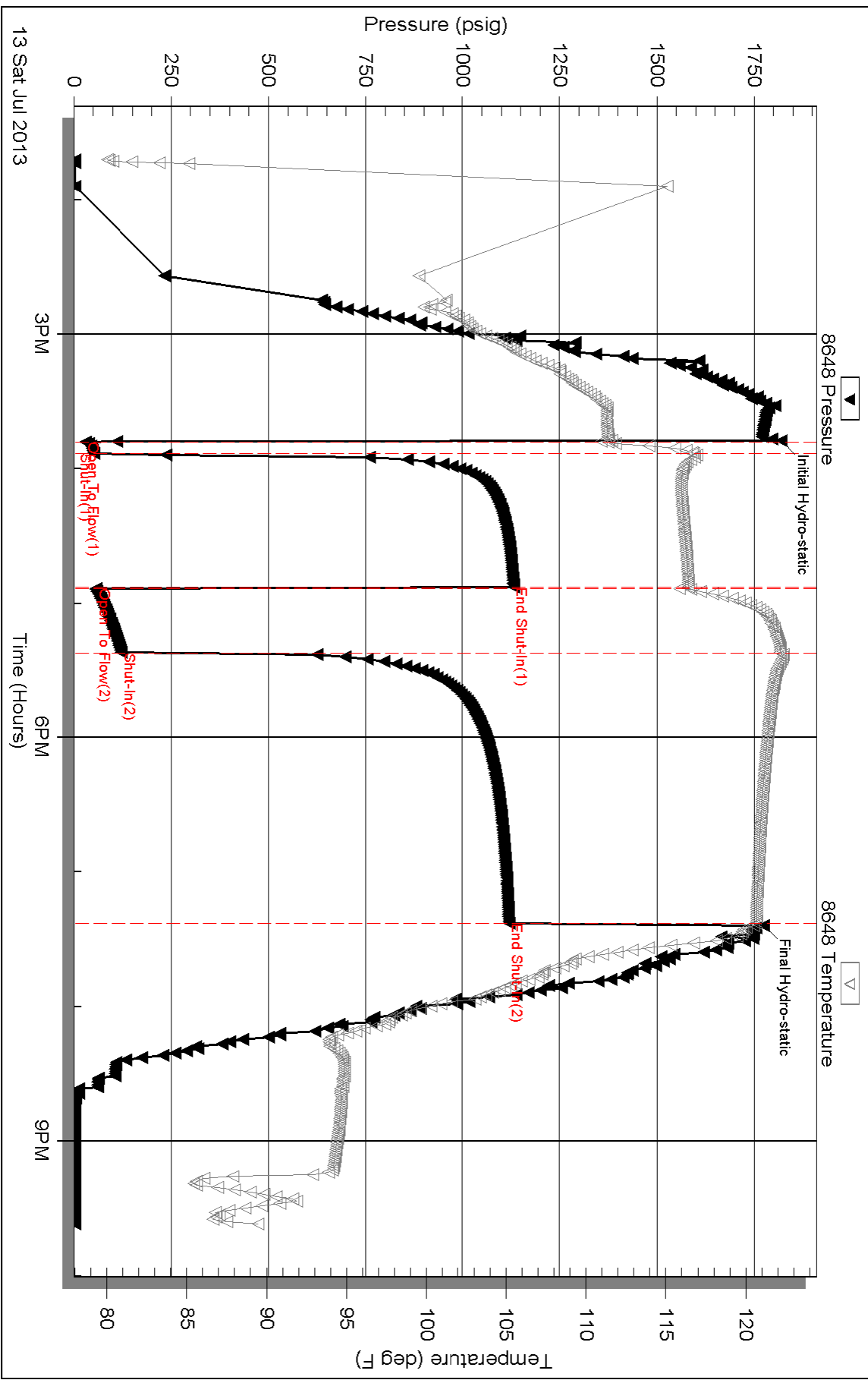
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .2 @65 DEGREES = 38000

Pressure vs. Time



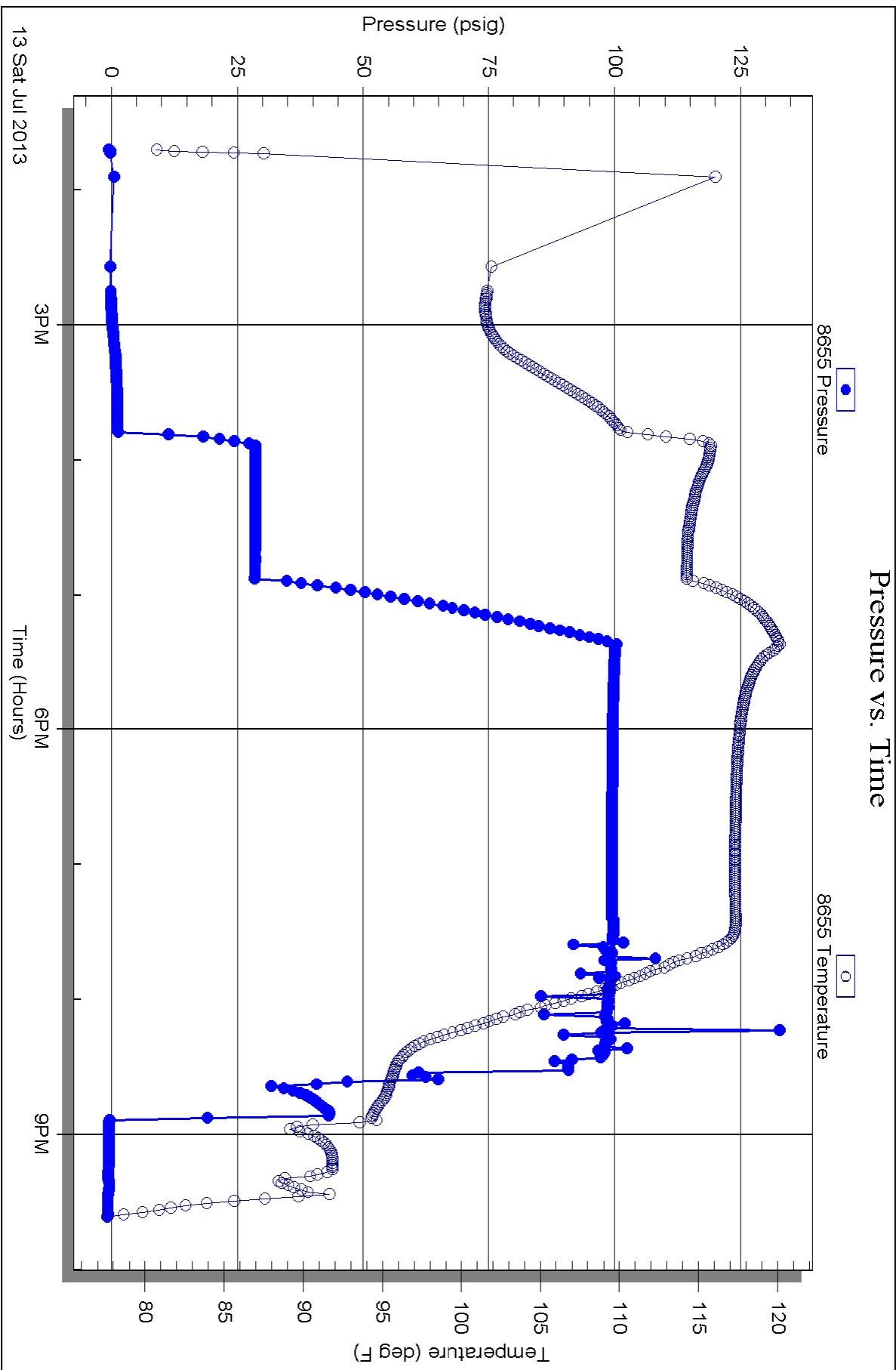
Serial #: 8655

Fluid

Samuel Gary Jr. & Associates

Fabrizius B AI 1-34

DST Test Number: 1





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates
1515 Wynkoop
ATTN: Clayton Camozzi

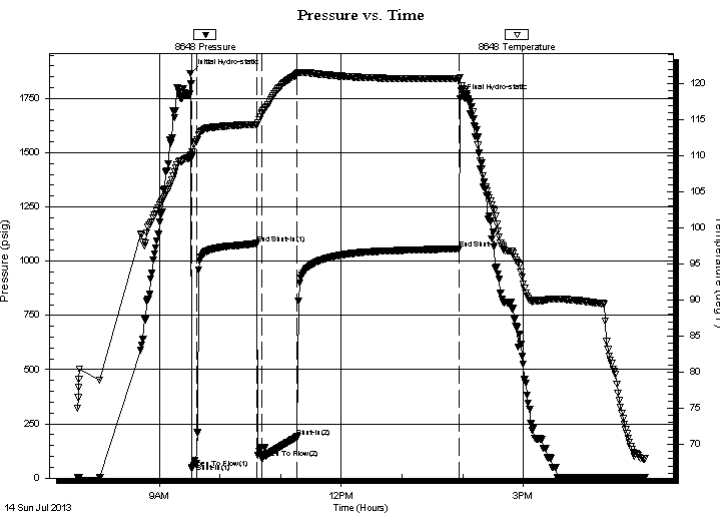
34-12S-23W Trego, KS
Fabrizius Et Al 1-34
Job Ticket: 53927 **DST#: 2**
Test Start: 2013.07.14 @ 07:39:00

GENERAL INFORMATION:

Formation: **Lansing F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:32:00
Time Test Ended: 17:00:30
Interval: **3770.00 ft (KB) To 3800.00 ft (KB) (TVD)**
Total Depth: 3800.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Cody/Brannan
Unit No: 53
Reference Elevations: 2339.00 ft (KB)
2331.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8648 Outside
Press @ Run Depth: 190.23 psig @ 3771.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.07.14 End Date: 2013.07.14 Last Calib.: 2013.07.14
Start Time: 07:39:05 End Time: 17:00:30 Time On Btm: 2013.07.14 @ 09:30:30
Time Off Btm: 2013.07.14 @ 13:57:30

TEST COMMENT: 005- IF- B.O.B 5mins
060- IS- No return
040- FF- B.O.B. 3mins
160- FS- 1" return throughout



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1866.32	109.76	Initial Hydro-static
2	45.72	109.78	Open To Flow (1)
7	66.82	111.98	Shut-In(1)
66	1080.67	114.34	End Shut-In(1)
71	89.97	115.96	Open To Flow (2)
106	190.23	121.29	Shut-In(2)
266	1057.18	120.71	End Shut-In(2)
267	1749.82	120.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	MW, 40%M 60%W	0.60
248.00	GMCWO, 10%G 10%W 80%O	3.48
102.00	GMO, 5%G 10%M 85%O	1.43

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates
 1515 Wynkoop
 ATTN: Clayton Camozzi

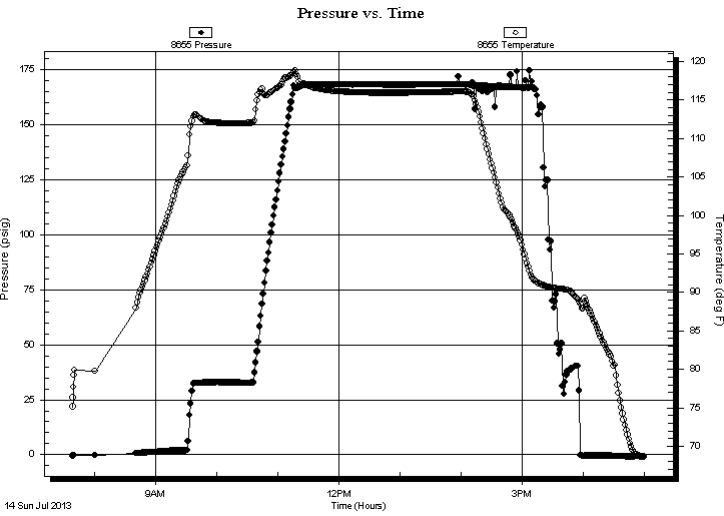
34-12S-23W Trego, KS
Fabrizius Et Al 1-34
 Job Ticket: 53927 **DST#: 2**
 Test Start: 2013.07.14 @ 07:39:00

GENERAL INFORMATION:

Formation: **Lansing F**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 09:32:00 Tester: Cody/Brannan
 Time Test Ended: 17:00:30 Unit No: 53
 Interval: **3770.00 ft (KB) To 3800.00 ft (KB) (TVD)** Reference Elevations: 2339.00 ft (KB)
 Total Depth: 3800.00 ft (KB) (TVD) 2331.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8655 Fluid
 Press @ Run Depth: psig @ 3733.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.14 End Date: 2013.07.14 Last Calib.: 2013.07.14
 Start Time: 07:39:05 End Time: 17:00:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: 005- IF- B.O.B 5mins
 060- IS- No return
 040- FF- B.O.B. 3mins
 160- FS- 1" return throughout



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	MW, 40%M 60%W	0.60
248.00	GMCWO, 10%G 10%W 80%O	3.48
102.00	GMO, 5%G 10%M 85%O	1.43

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates
1515 Wynkoop
ATTN: Clayton Camozzi

34-12S-23W Trego, KS
Fabrizius Et Al 1-34
Job Ticket: 53927 **DST#: 2**
Test Start: 2013.07.14 @ 07:39:00

Mud and Cushion Information

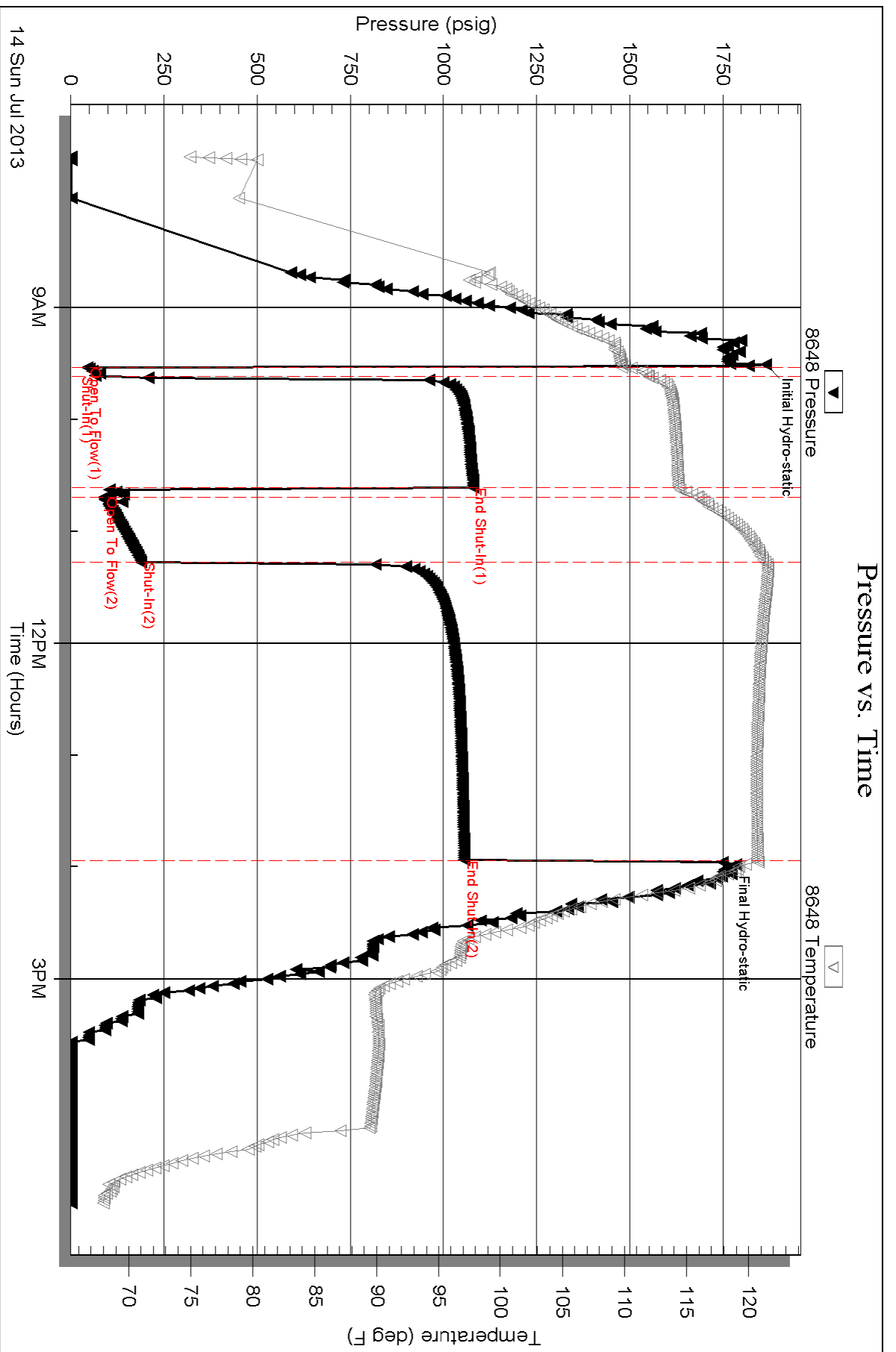
Mud Type: Gel Chem	Cushion Type:	Oil API: 24 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 72.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.59 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1500.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	MW, 40%M 60%W	0.596
248.00	GMCWO, 10%G 10%W 80%O	3.479
102.00	GMO, 5%G 10%M 85%O	1.431

Total Length: 412.00 ft Total Volume: 5.506 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: Sampler: 2000ML Oil, PSI 750
Gravity 26 @ 80degrees = 24



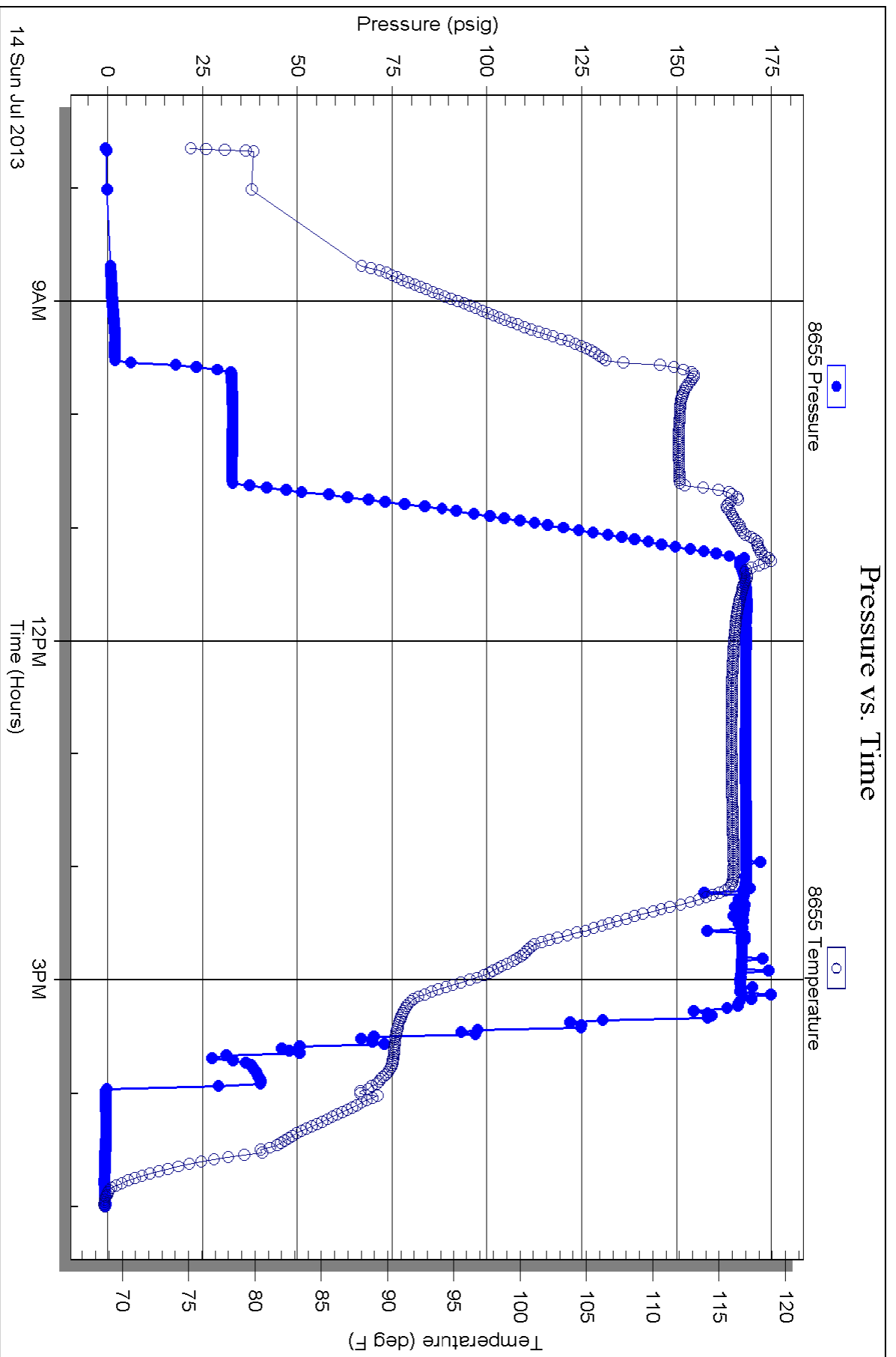
Serial #: 8655

Fluid

Samuel Gary Jr. & Associates

Fabrizius B AI 1-34

DST Test Number: 2





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates
1515 Wynkoop
ATTN: Clayton Camozzi

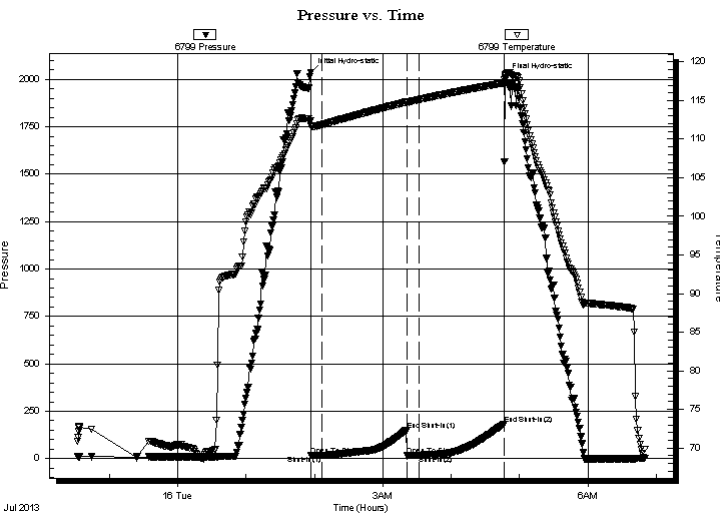
34-12S-23W Trego, KS
Fabrizius Et Al 1-34
Job Ticket: 53928 **DST#: 3**
Test Start: 2013.07.15 @ 22:32:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:57:00
Time Test Ended: 06:50:30
Interval: **4070.00 ft (KB) To 4110.00 ft (KB) (TVD)**
Total Depth: 4110.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Cody/Brannan
Unit No: 53
Reference Elevations: 2339.00 ft (KB)
2331.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6799 Inside
Press @ Run Depth: 17.44 psig @ 4071.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.07.15 End Date: 2013.07.16 Last Calib.: 2013.07.16
Start Time: 22:32:05 End Time: 06:50:29 Time On Btm: 2013.07.16 @ 01:56:45
Time Off Btm: 2013.07.16 @ 04:47:15

TEST COMMENT: 10- IF- 1/4" blow
75- IS- No blow
10- FF- No blow
75- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2036.90	112.38	Initial Hydro-static
1	17.79	111.77	Open To Flow (1)
10	17.18	111.88	Shut-In(1)
85	150.92	114.83	End Shut-In(1)
85	15.39	114.80	Open To Flow (2)
95	17.44	115.10	Shut-In(2)
170	182.83	117.29	End Shut-In(2)
171	2007.70	118.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud with show of oil	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates
1515 Wynkoop
ATTN: Clayton Camozzi

34-12S-23W Trego, KS
Fabrizius Et Al 1-34
Job Ticket: 53928 **DST#: 3**
Test Start: 2013.07.15 @ 22:32:00

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: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud with show of oil	0.005

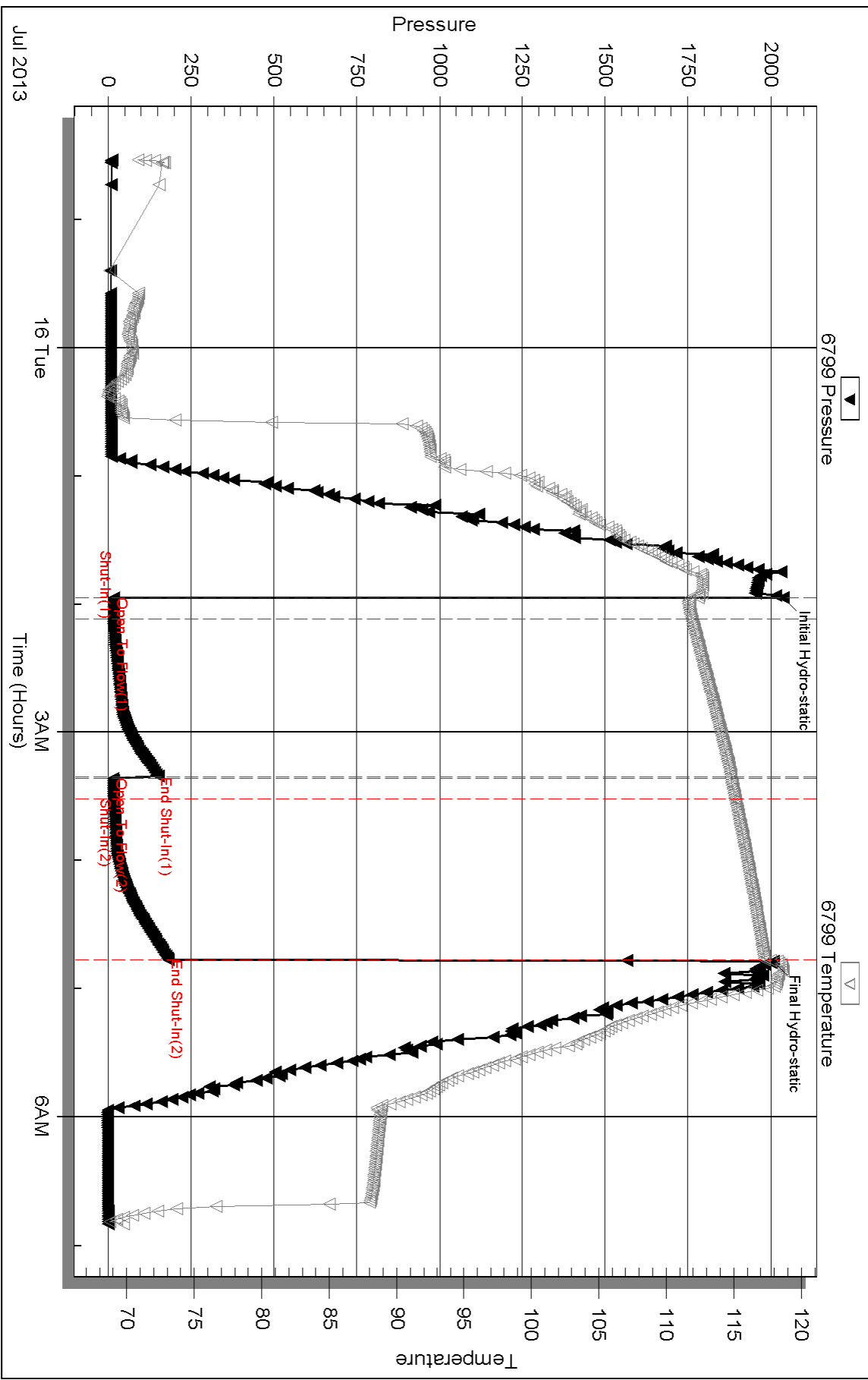
Total Length: 1.00 ft Total Volume: 0.005 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Sampler- Full of mud with no pressure

Pressure vs. Time



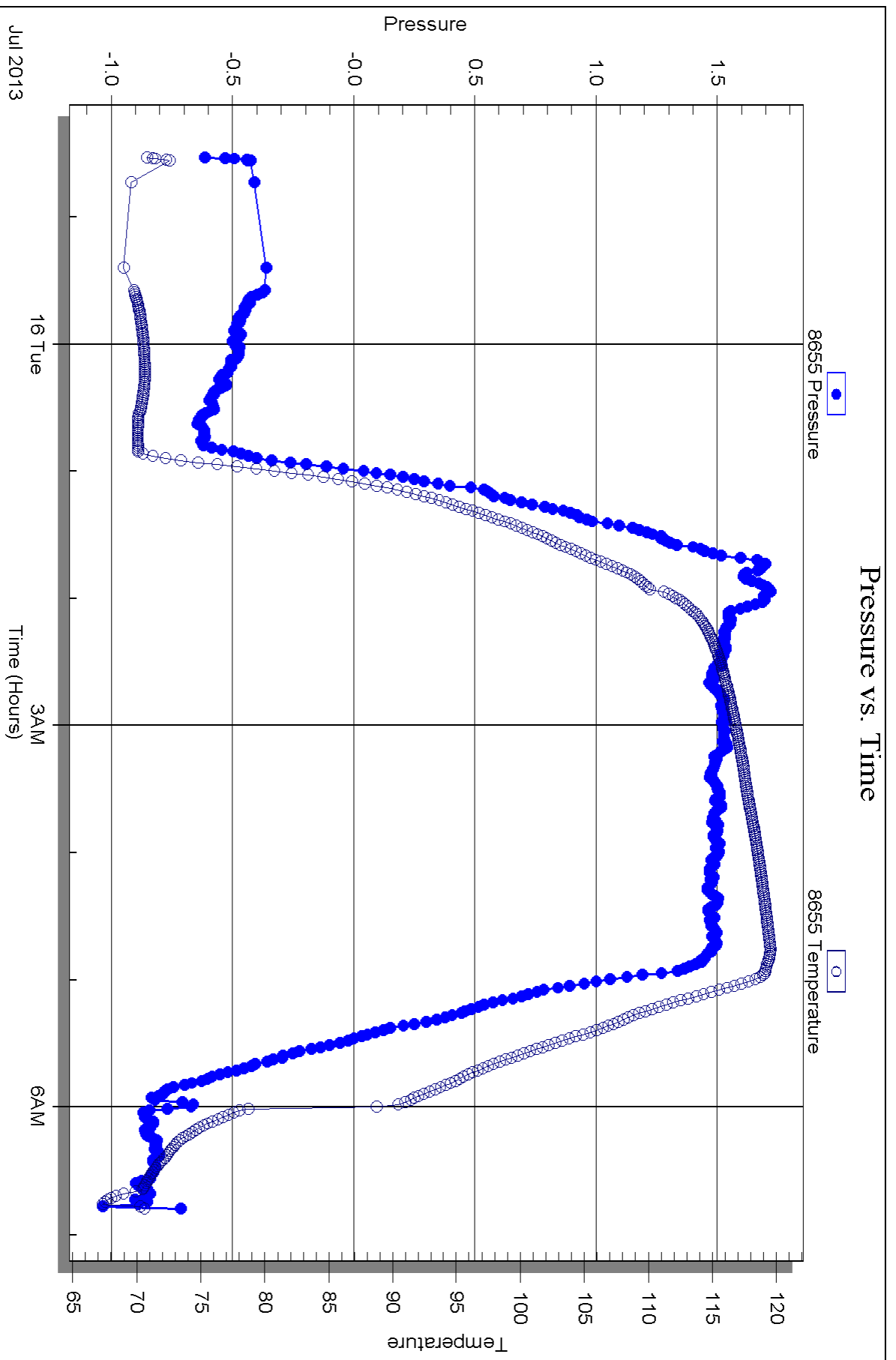
Serial #: 8655

Fluid

Samuel Gary Jr. & Associates

Fabrizius B AI 1-34

DST Test Number: 3





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

Well Name: FABRIZIUS ET AL 1-34
 Location: Sec.34 -T12s -R23w TREGO COUNTY, Kansas
 License Number: 15-195-22873-0000
 Spud Date: July 08, 2013
 Surface Coordinates: 135' FNL & 1580' FEL
 Region: WILDCAT
 Drilling Completed: July 16,2013

Bottom Hole Coordinates:
 Ground Elevation (ft): 2331' K.B. Elevation (ft): 2339'
 Logged Interval (ft): 3400' To: 4210' Total Depth (ft): 4210'
 Formation: Lansing, Kansas City
 Type of Drilling Fluid: Natural Chemical

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

OPERATOR

Company: Sam Gary Jr. & Associates
 Address: 1515 Wynkoop, Ste. # 700
 Denver, Co. 80202
 Co. Geo: Clayton Camozzi

GEOLOGIST

Name: Tim Hedrick / Ian Bosmeijer
 Company: Earth Tech OGL, Inc.
 Address: PO Box 683
 Hooker, Okla. 73945
 1-(888)- 543-8378 Cell-(580)-754-0062

DST's Report

DST #1 3742'-3771' 5 60 30 120
 IF - 4" BLO/ ISI NB / FF BOB 18MIN / FSI - NB
 IH -1820, FH - 1774 / IF 29-52, FF 57-121 / ISI-1131, FSI 1120
 RECOVERED - 206' TF / 20' FREE OIL , 100% O. / 186' MW WITH SHO OF O., 70% WATER 30% MUD, CHL - 38,000PPM
 RW = .2 @65DEG./ BHT 120DEG. SAMPLER 100ML OIL, 1900ML WATER, 600PSI, TOTAL 2000ML. PIT CHL 2000PPM

DST's Report

DST #2 3770'-3800' 5 60 40 160
 IF - BOB/ ISI NB / FF BOB 3MIN/ FIS-1" THRU
 IH-1866, FH-1749 / IF 45-66, FF 66-190 /ISI-1080, FSI 1057
 RECOVERED- 412' TF / 102' GMO, 85% O. 5%GAS 10% MUD/ 248' GMCWO, 80%O., 10%GAS, 10%WATER/ 62' MW, 60%WATER, 40% MUD, GRAVITY 24/ BHT 120 DEG.
 SAMPLER 2000 ML OIL, 750 PSI, TOTAL 2000ML. PIT CHL 1500PPM.

DST's Report

DST #3 4070'-4110' 10 75 10 75
 IF - 1/4" BLO/ ISI NB/ FF - NO BLO / FSI - NO BLO
 IH - 2036, FH 2007 / IF 17-15, FF 17-17 / ISI-150, FSI 182
 RECOVERED - 1' TF/ 1' MUD W/ SHOW OF OIL BHT 117 DEG
 SAMPLER FULL OF MUD, NO PRESSURE, PIT CHL 2000 PPM, 62 VIS, 9.2 WT, 8.0 FILTRATE

ROCK TYPES

Anhy	Gyp	Shgy	Sandyms
Bent	Igne	Sltst	Shale
Brec	Lmst	Ss	Sltstn
Cht	Meta	Till	Shlyslts
Clyst	Mrlst	Carb sh	Sltyslts
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
- Sandylms
- 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

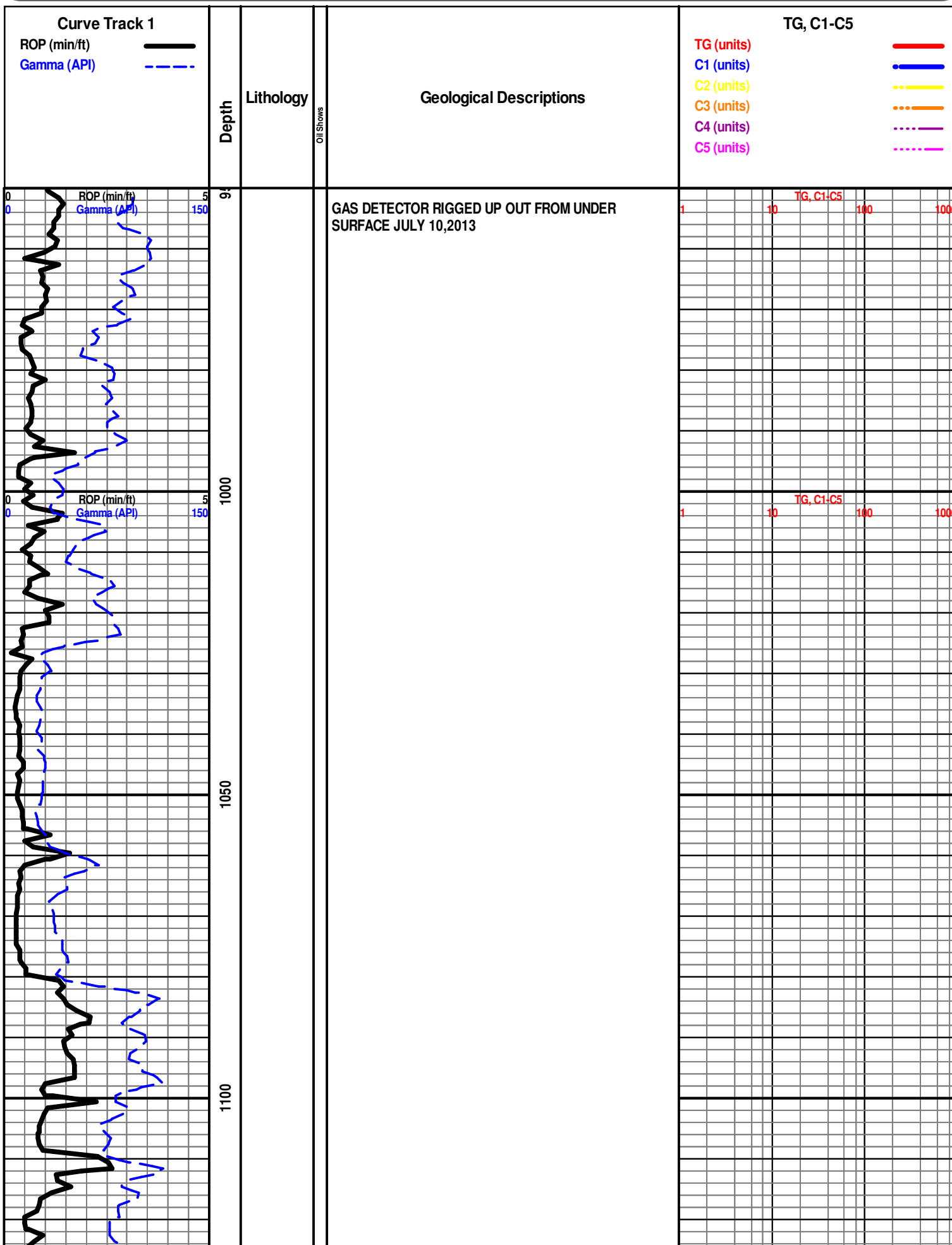
- Even
- Spotted
- Ques
- Dead
- Gas show

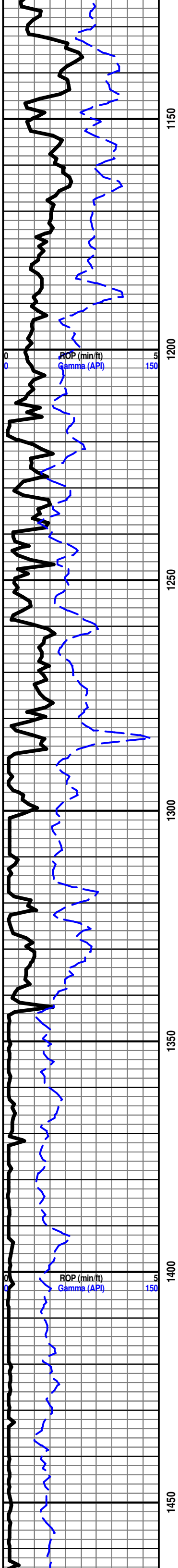
INTERVALS

- Core
- Dst
- Dst

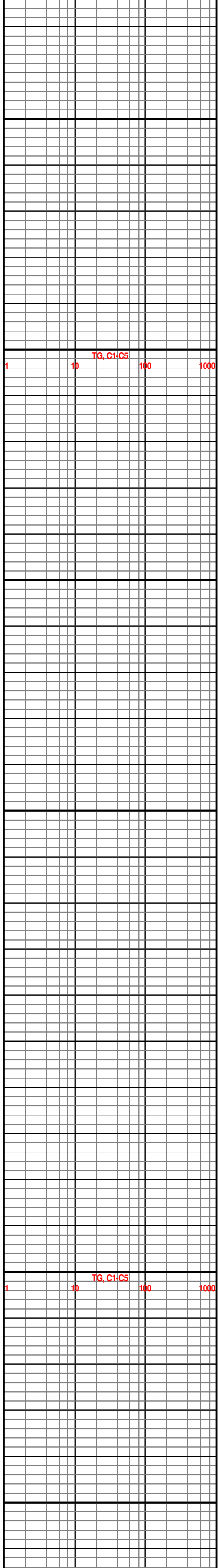
EVENTS

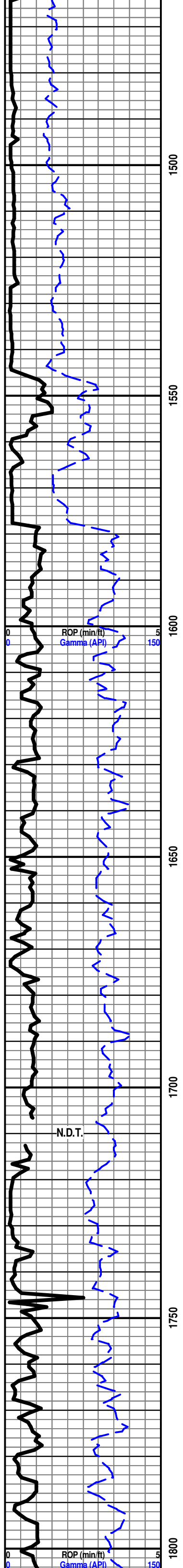
- Rft
- Sidewall



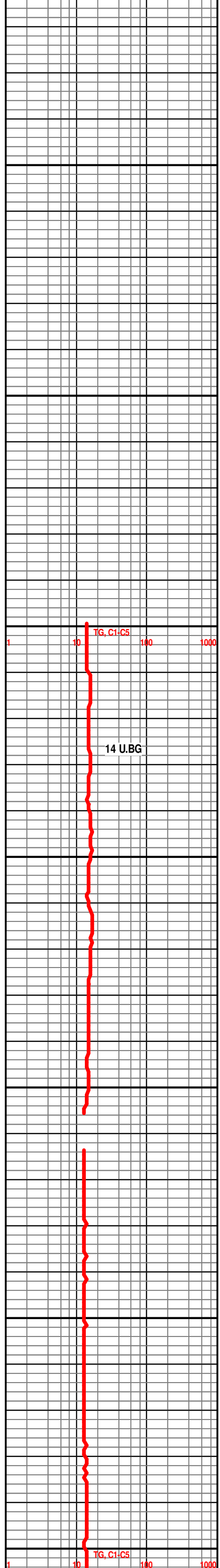


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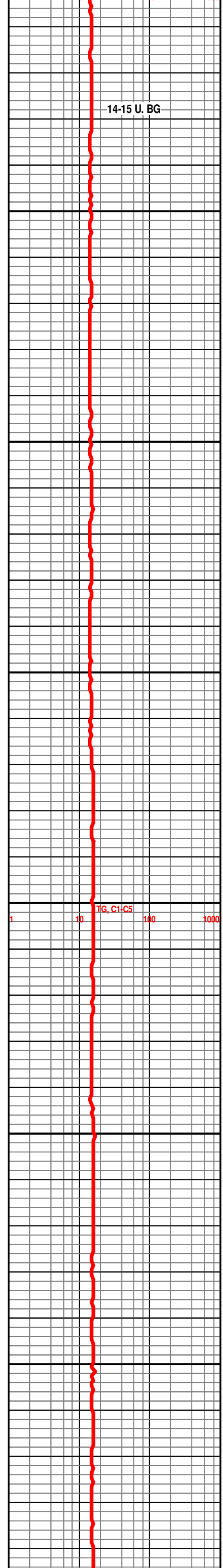
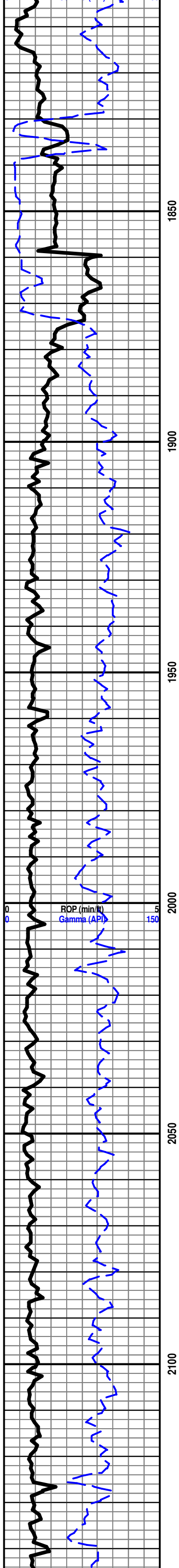




TRAP BOX SET 1600' JULY, 11, 2013

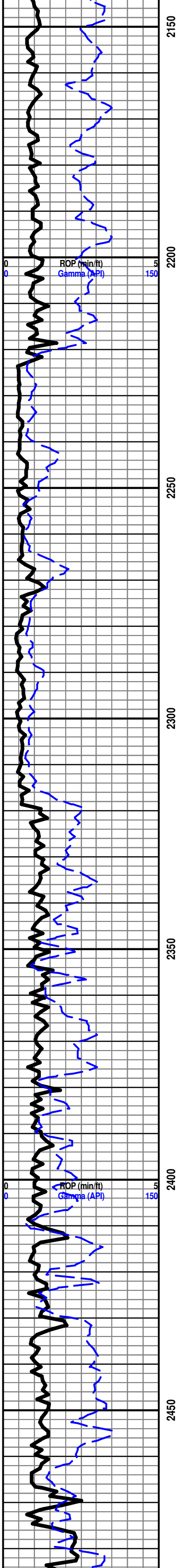


STONE CORRAL 1829' + 502'

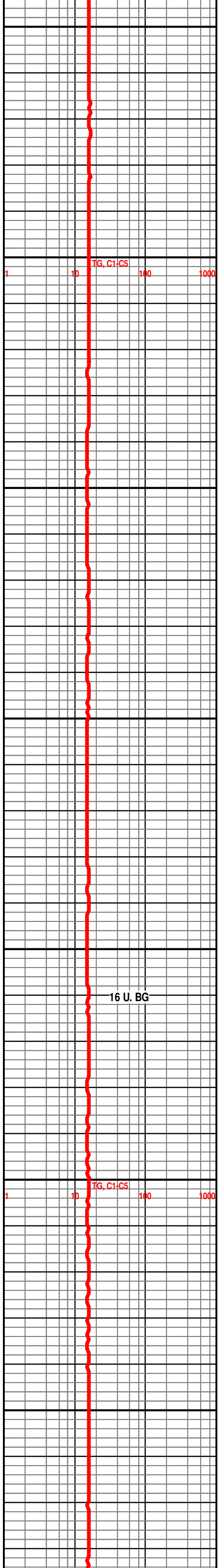


14-15 U. BG

TG, C1-C5



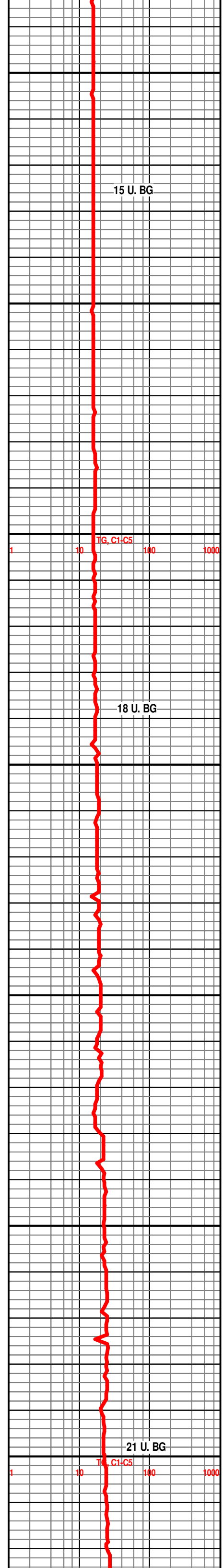
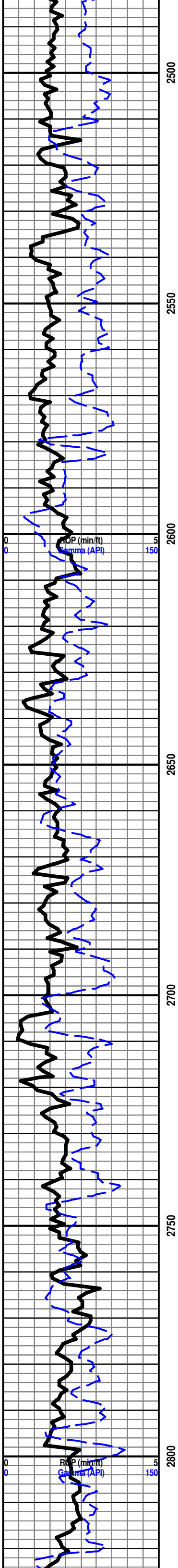
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2250
2300
2350
2400
2450

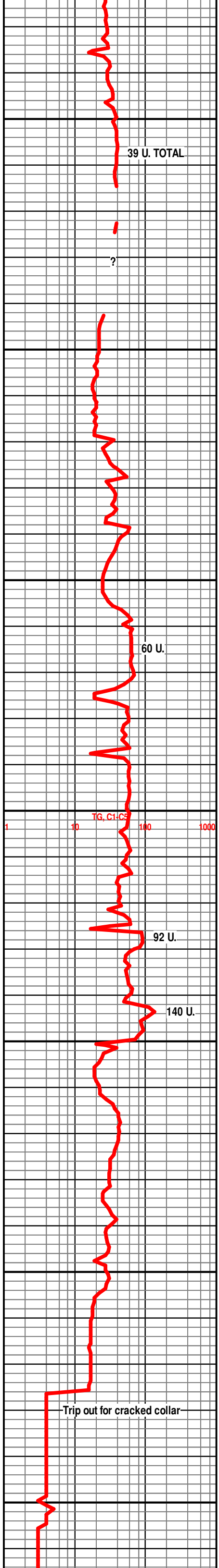
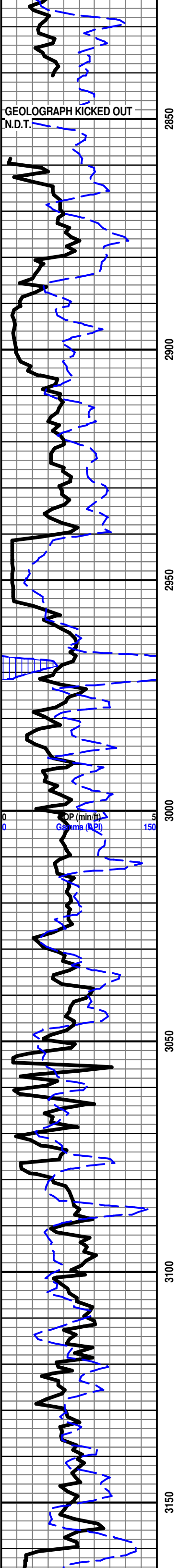


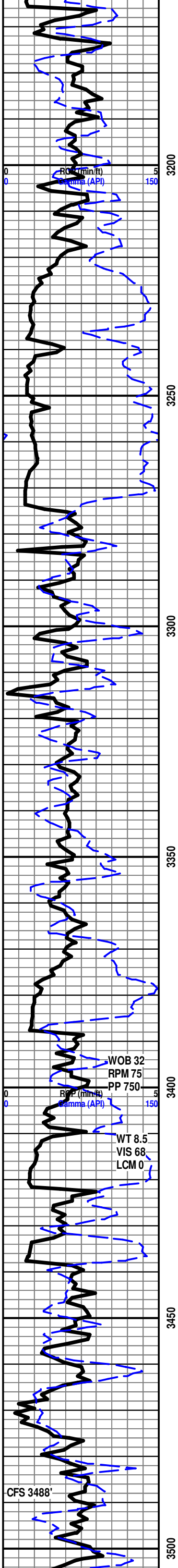
16 U. BG

1 10 100 1000

1 10 100 1000







3200
3250
3300
3350
3400
3450
3500

ELMONT 3274' - 935'

START 24 HR MANNED UNIT ON JULY 12, 2013

SH- MD TO DK GY- FRM BLKY SMTH TXT , V/ CALC IP

SH- LT TO MD GY-DK GY IP, FRM BLKY SMTH TXT TR GRNY IP, CALC IP

LS- LT TN TN- HD DNS , MD-F-XLN RE-XLN MTRX IP, SCAT IMBD FOSS FRGS IP, SCAT IMBD LT GY SH IP, LT BRIT YEL MIN FLO SCAT THRU, NO VIS POR, NO VIS CUT OR SHOW

TOPEKA 3438' - 1099'

LS- CRM BFF- HD DNS TO BRITT, V/ TT SUCRO MTRX TO MD-XLN IP, TR SFT CHLK IP, SLI TR SCAT FOSS IP, LT BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

LS-CRM BFF OFF WHT - HD V/ BRITT, MD-XLN RE-XLN MTRX, SCAT IMBD SMLL FOSS FRGS SCAT IP, HVY TR IMBD SFT WHT CHLK, TR PYR CLSTR W/ IMBD CHLK IP, DLL YEL FLO IN 10%, FR MICRO OOLMLD TO MICRO VUG POR IN 20%, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

SH- BLK SFT CARB

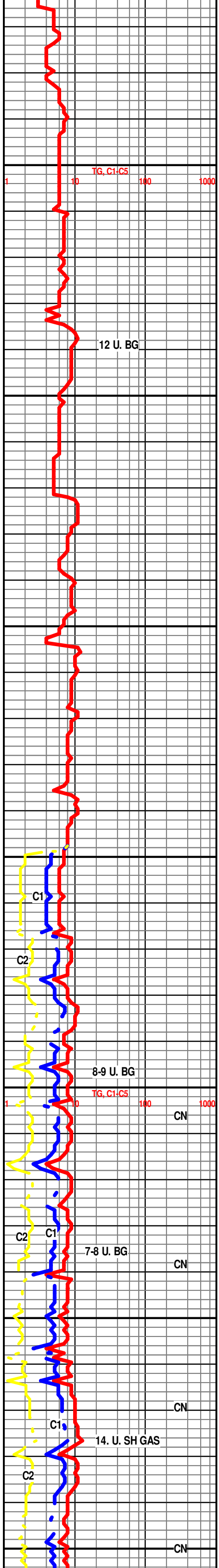
LS- TN BRN GY- HD DNS MOTT, F-V/F-XLN, RE-XLN IP, SCAT IMBD FOSS FRGS IP, ABDT DK GY TO BLK CHRT, LT YEL MIN FLO SCAT THRU, NO VIS POR, NO VIS SHOW OR CUT

LS-OFF WHT CRM - MD HD TO SFT IP, V/ SUCRO S-CHLKY

WOB 32
RPM 75
PP 750

WT 8.5
VIS 68
LCM 0

CFS 3488'



TG, C1-C5

12 U. BG

C1

C2

8-9 U. BG

TG, C1-C5

C2

C1

7-8 U. BG

C2

C1

14. U. SH GAS

C2

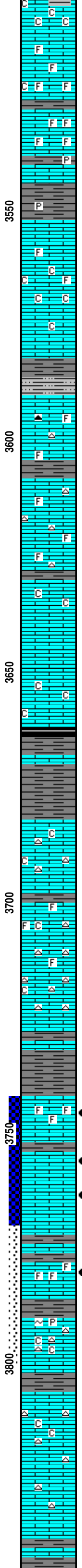
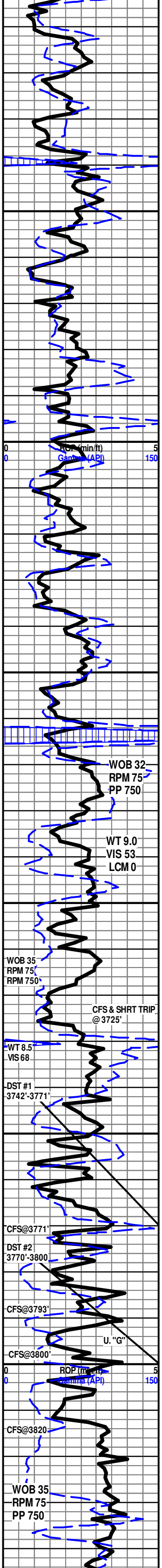
C1

CN

CN

CN

CN



IP TO V/ SFT CHLKY MTRX, TR IMBD LT GY SH IP, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM LT TN -HD TO V/ BRITT, MD-XLN, RE-XLN MTRX, ABDT IMBD FOSS FRGS SCAT THRU, SMLL IMBD CALC XLS, TR SFT WHT CHLK IP, LT BRIT YEL MIN FLO, TR V/PR INTER-XLN POR IP, NO VIS SHOW OR CUT

SH- LT TO MD GY- FRM BLKY IP TO SFT SLTY . GRNY TXT W/ DISS PYR IP

LS- OFF WHT WHT CRM- MD HD TO BRITT IP , V/ SUCRO MTRX, SUCRO S-CHLKY TO CHLKY IP, HVY TR SFT WHT CHLK IP, SCAT IMBD SMLL FOSS FRGS IP, LT YEL MIN FLO IP, TR MICRO PP POR IP, NO VIS SHOW OR CUT

SH- LT GY TO V/ LT GRN- V/ SFT SLTY TXT TO FRM IP

LS- CRM BFF- HD DNS TO BRITT IP, V/ SUCRO MTRX, TR F-XLN IP, ABDT IMBD WTHRED WHT CHRT SCAT THRU, TR FOSS FRGS IP, LT BRIT YEL MIN FLO THRU, NO VIS POR, NO VIS SHOW

LS- CRM BFF- HD DNS TR BRITT IP, F-V/F-XLN, RE-XLN IP, SUCRO S-CHLKY IP, IMBD FOSS FRGS THRU, W/ TN DK TN CHRT, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM LT TN TN - HD V/BRITT, V/ SUCRO MTRX, SLI S-CHLKY IP, ABDT IMBD SMLL CALC XLS, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

3653'-3660' LS- OFF WHT WHT- HD BRITT IP TO V/ FRM, V/ SUCRO S-CHLKY MTRX, W/ HVY TR ABDT FRM CHLK IP, ABDT IMBD SCAT SMLL CALC XLS, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

HEEBNER 3662' -1323'

SH- BLK SFT CARB

SH- DK BRN TO DK GY- FRM BLKY SMTH TXT TO SLI SLTY IP

LS- CRM BFF- HD DNS IP TO BRITT, SUCRO SLI S-CHLKY IP , TR F-XLN IP, WHT TN CHRT, LT BRIT YEL FLO IP, NO VIS POR, NO VIS SHOW

LANSING 3701' - 1362'

3701-3710' LS- OFF WHT CRM BFF- HD BRITT, V/ SUCRO MTRX TO F-XLN IP, SLI S-CHLKY IP, ABDT WHT CLR CHRT IMBD, SCAT FOSS FRGS IP, NO FLO TO SCAT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

3718-3725 LS- OFF WHT WHT CRM BFF- HD BRITT IP, V/ SUCRO MTRX, S-CHLKY IP, ABDT WHT CLR CHRT IMBD, FOSS FRGS IP, SMLL TO MD CALC XLS IMBD IP, NO FLO TO SCAT BRIT YEL MIN FLO IP, NO VIS POR TO PR VIS SCAT MICRO VUG POR IP, NO VIS SHOW OR CUT

SH- MD TO DK GY- FRM BLKY SMTH TO GRNY TXT, SLI CALC

LANSING "C" 3742' -1403'

3743-3747 LS-OFF WHT CRM TN BRN(DUE TO OIL STN SCAT THRU & V/ DK OIL, SLI TAR STN) HD V/ BRITT, MD-F-XLN RE-XLN MTRX, V/ FOSS IP, SMLL CALC XLS IMBD IP, BRIT YEL GLD SPTTD FLO SCAT THRU DLL YEL GLD FLO IP, PR TO FR INTER-FOSS POR IN 10%, PR TO TR FR MICRO VUG POR IN 2%, EXCEL FLSH CUT THRU, EXCEL SLO STRM MLKY BLU CUT THRU, FR OIL ODOR, BRN LCH ON DISH , LV OIL ON TRAY

3755-3757- LS- DK TN BRN(DUE TO OIL STN IN 100%) HD V/ BRITT, V/CRS SUCRO MTRX, ABDT SMLL ANG LM GRNS, SMLL CALC XLS AND POSS DOLO THRU, TR V/F-XLN IP, BRIT YEL GLD SPTTD FLO IN 70%, NO FLO IN 30%, PR TO FR TO GD VIS INTER-XLN POR IN 30%, EXCEL INST FLSH CUT THRU, EXCEL SLO STRM MLKY BLU CUT THRU, GD OIL ODOR, DK BRN LCH ON DISH, ABDT LV OIL IN CUP & IN TRAY

3760-3764' LS- WHT OFF WHT DK BRN(DUE TO BRN OIL STN ON ONE FACES)- HD DNS TO BRITT IP, V/ F-CRYPTO-XLN TO V/ SUCRO TXT ON ONE FACES, HVY TR IMBD ANG LS GRNS, SMLL CALC XLS IP, BRIT YEL GLD FLO SCAT THRU, V/ DLL YEL GLD FLO IP, PR VIS INTER-XLN POR IP, V/ GD FLSH CUT THRU, TO V/ GD TO EXCEL SLO STRM MLKY BLU CUT IP, DK BRN LCH ON DISH, V/ STNG OIL ODOR, LOTS OF OIL IN CUP AND SHEEN IN TRAY

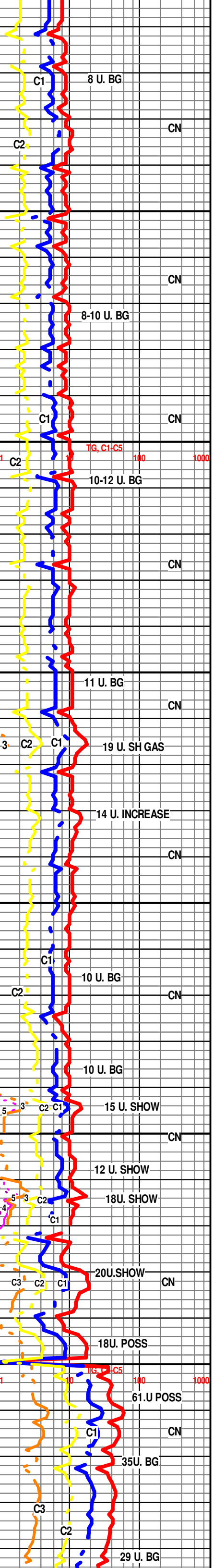
LANSING "F" 3778'- 1439'

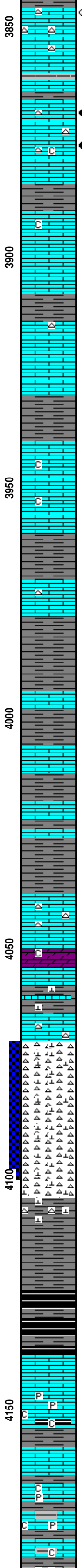
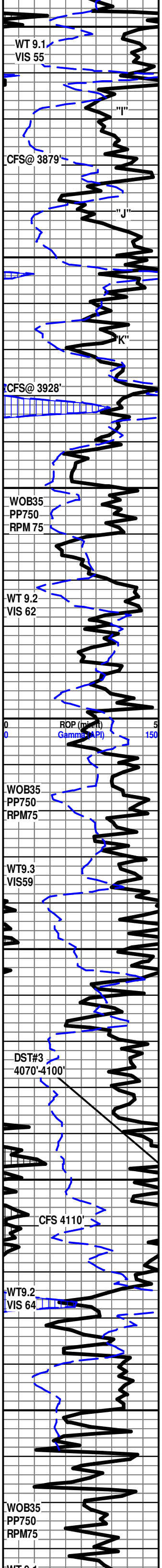
3778'-3783' LS- CRM LT TN BK BRN(DUE TO OIL STAIN SCAT THRU) HD BRITT MD - XLN, RE-XLN, V/ FOSS THRU, SCAT IMBD MD OOL IP, SMLL CALC XLS IP, BRIT YEL GLD FLO IN 80%, DLL YEL GLD IN 20%, PR TO FR TO GD VIS INTER-FOSS POR IN 20%, FR SCAT VUG POR IP, EXCEL INST FLSH CUT THRU, EXEL SLO STRM CUT THRU, GD OIL ODOR, LIVE OIL IN CUP, DK TN STN ON DISH

3791'-3798' LS- CRM BUFF, HD DNS TO BRITT IP, F-XLN TO SUCRO IP, ABDT FRM WHT CHLK IP, ABDT WHT TN CHRT IMBD, SMLL IMBED CALC XLS, TR GLAUC, TR DISS PYR IP, V/ DLL YEL FLO IP, V/PR VIS INTER-XLN POR IN 2%, NO VIS CUT OR SHOW.

LS- WHT OFF WHT - MD HD TO SFT IP, V/ CHLKY MTRX, GRDNG TO F-V/F-XLN IP, ABDT WHT TRNSLCNT CHRT IMBD, LT YEL MIN FLO THRU, NO VIS POR, NO VIS SHOW OR CUT

LANSING "H" 3845' - 1506'





3846'-3847' LS OFF WHT CRM TO DK TN (DUE TO OIL STAIN IP) HD DNS, V/ TT SUCRO TO V/F -XLN HVY TR IMBD WHT CHRT IP, TR SMLL CALC XLS ON ONE FACES, BRT YEL GLD FLO IN SCAT 50%, NO VIS POR TO POSS FRACT POR IP, GD INST FLSH CUT IN 50%, GD SLO STRM CUT IN 20%, V/ LT OIL ODOR, V/ LT STAIN ON DISH.

3866-3878- LS- TN BRN -CRM LT TN TN BRN IP (BRN DUE TO HVY DK BRN STN IP) HD DNS F-VF-XLN TO V/ TT SUCRO IP, SLI TR S-CHLKY IP, WHT TN CHRT SCAT THRU, DLL YEL FLO IN 40-50%, TR BRIT YEL GLD FLO IN 1%, NO FLO 50%, V/ PR SCAT ISOLATED MICRO VUG POR W/ DK DK BRN TO BLK TARRY OIL STN SCAT THRU, EXCEL FLSH CUT SCAT THRU, EXCEL SLO STRM CUT THRU, NO ODOR, BRN LCH ON DISH

SH- RD TO DK RD, V/ SFT GMMY TXT,

LS OFF WHT TO CRM, HD DNS IP TO MD HD, F-VF XLN TO SUCRO/ S-CHLKY IP, NO VIS POR, NO POR.

SH- GRN TO PRPL - FRM BLKY SMTH TO GRNY TXT IP.

LS - OFF WHT TO CRM, HD IP, TO BRITT, MD-F/XLN, RE-XLN IP, TR FOSS FRGS IP, HVY TR ABDT SFT WHT CHLK IP, LT TN WHT CHRT, NO FLO IP, DLL YEL FLO IP, NO VIS POR, NO VIS CUT OR SHO.

"X" SHALE 3929' - 1590'

SH - DK GRY TO RD, MOTT, FRM BLKY, SMTH TXT, HVY TR RD SFT GMMY SH IP

LS - OFF WHT TO CRM, MD -HD TO BRITT, V/ SUCRO MTRX, ABDT FRM TO SFT WHT CHLK FRM TO HD, V/ DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

SH- SFT RD TO DK RD, FRM BLKY IP, SMTH TXT TO V/ SFT SLTY TXT, SFT GMMY IP,

LS- CRM LT TO TN, HD DNS, TR BRITT, F-V/-XLN, SLI SUCRO IP, TR WHT CHRT IP, NO FLO, NO VIS POR, NO VIS SHO OR CUT.

SH - DK RD TO PRP, FRM BLKY GRNY TXT TO V/ SFT GMMY,

LS- CRM TO LT TN LT RD, HD DNS MOTT, V/ SUCRO MTRX, V/ ARG TO SHLY IP, NO VIS FLO, NO VIS POR OR SHO

SH - RD BRN GRY, FRM BLKY MOTT, SMTH TXT IP TO V/ SFT GMMY,

LS- CRM LT TO TN TN, HD DNS, TR BRITT, F-V/-XLN, SLI SUCRO IP, NO FLO, NO VIS POR, NO VIS SHO OR CUT.

SH - RD TO PRPL, FRM BLKY SMTH TXT TO GRNY IP,

LS - OFF WHT TO CRM, HD DNS, TR BRIT, F-XLN TO SUCRO IP, FOSS FRGS IP, ABDT WHT ORNG RD CHRT, SLI TR DOLO IP, DULL YEL MIN FLO IP, NO VIS POR,

DOLO- OFF WHT TO CRM, V/ TT SUCRO MTRX, RE-XLN, V/ CALC IP, TR FOSS IP, DULL YEL MIN FLO, NO VIS POR, NO VIS SHO

SH- RD PRPL GRN YEL, FRM BLKY, SMTH TXT, SLI CALC IP,

MARMATON 4064' -1725'

4064'-4068 LS WHT OFF WHT TO CRM IP, TO V/ FRM, MD-F-XLN IP, GRDNG TO MD TO SFT CHLK W/ IMBD LT TN CHRT IP, NO FLO TO TR LT YEL MIN FLO IP, NO VIS POR, NO VIS SHO

4068'-4080' CHRT OFF WHT CRM TO LT TN ORNG, MOTT, HD DNS, CRYPTO XLN TO SUCRO WTHRD MTRX, SLI CALC IP, TR MD CALC XLS, NO FLO IN 80%, BRIT YEL MIN FLO IN 20%, NO VIS CUT, NO SHO.

4080'-4105' CHRT OFF WHT TO CRM BUFF LT TN, HD DNS, V/ F-CRYPTO XLN TO V/F-SUCRO OR WTHRD MTRX, V/ CALC, V/ S-CHLKY IP, NO FLO, V/ POOR MICRO PP IP, NO VIS CUT OR SHO.

4105'-4110' SH- LT TO MD GRY, GRN IP, FRM BLKY GRNY TXT, SLI TO V/ CALC IP

SH- DK GY, HD BLKY, CALC IP

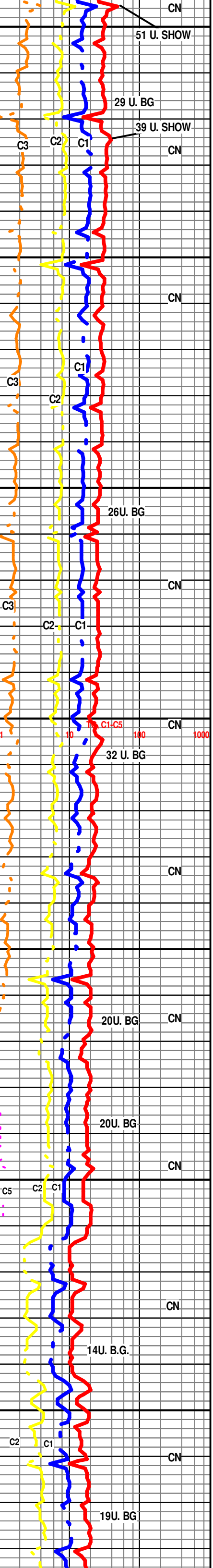
SH- BLK SFT CARB, TO DK GY FRM BLKY

LS - OFF WHT TO CRM, HD, V/ BRITT, F-XLN TO SUCRO SUB CHLKY IP, SMLL IMBD CAL XTL, TR IMBD DISS DK GY SH IP, TR DISS PYR IP, NO FLO, NO VIS POR, NO SHO

4150'-4152' LS OFF WHT TO CRM, HD IP, MD-XLN W/ IMBD ABDT SFT WHT CHLK. HVY TR IMBD BLK CARB SH. NO FLO, NO VIS POR, NO CUT

LS- CRM LT TN OFF WHT, HD DNS TO BRITT, V/ F-XLN TO MD-XLN, V/ SUB CHLK IP, HVY TR IMBD LMNTD GR SH, ABDT W/ IMBD DISS PYR, NO FLO, NO VIS POR, NO SHO

LS- CRM TN WHT TO OFF WHT, HD DNS TO BRIT IP, MD-XLN TO F-XLN GRDNG TO SUCRO TO CHLK W/



W1 9.1
VIS 64

ROP (min/ft)
Gamma (API) 150

R.T.D @ 4210'

L.T.D @ 4211'

4200



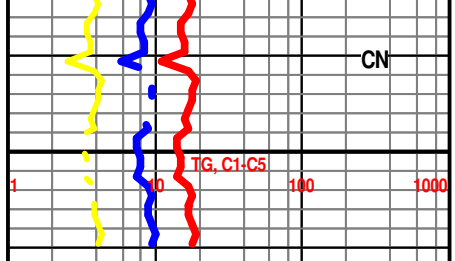
LMNTD BEDS OF RD GN YEL SH, W/ ORNG YEL BRN
CHRT, NO FLO, NO VIS POR, NO SHO

SS- FRSTY, WHT, HD TO V/ FRI, CLR TO FRSTY GRNS,
F-MD-GRNS, S-ANG TO S-RND, FR SRT, SIL CMNT, TR
SUB-CHLK IP, TR GLAUC IP, TR DISS PYR IP, NO FLO, NO
VIS POR TO SLI TR INTER-GRN POR IN 2%, NO VIS CUT,
NO SHO

R.T.D. @ 4:00PM JULY 16, 2013

CFS 1 HR. / CTCH

TOFL/ WEATHERFORD/ LIBERAL



R.T.D @ 4210'

SAMPLES WILL BE DELIVERED TO KGS

COMPLETED BY TIM HEDRICK
AND IAN BOSMEIJER