Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1171079

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 # 3882
Name: Samuel Gary Jr. & Associates, Inc.
Address 1: 1515 WYNKOOP, STE 700
Address 2:
City: DENVER State: CO Zip: 80202 + ____
Contact Person: CLAYTON CAMOZZI
Phone: (303) 831-4673
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: AARON SUELTER
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 #:

8/12/2013	8/17/2013	8/18/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-051-26577-00-00
Spot Description:
NW NW SE SE Sec. 18 Twp. 12 S. R. 16 ☐ East ☑ West
1020 Feet from ☐ North / ☑ South Line of Section
1025 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Ellis
Lease Name: BRUNGARDT Well #: 1-18
Field Name:
Producing Formation: N/A
Elevation: Ground: 2049 Kelly Bushing: 2057
Total Vertical Depth: 3670 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1029 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: 61000 ppm Fluid volume: 400 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: KARLIN, GENE DBA GENE KARLIN COMPANY
Lease Name: NUSS 1 License #: 3444
Quarter SW Sec. 5 Twp. 13 S. R. 17 ☐ East ☑ West
County: ELLIS Permit #: D25588

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: 12/02/2013
☑ **Confidential Release Date:** 12/02/2015
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 12/03/2013

1171079

Operator Name: Samuel Gary Jr. & Associates, Inc. Lease Name: BRUNGARDT Well #: 1-18

Sec. 18 Twp. 12 S. R. 16 ☐ East ☑ West County: Ellis

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
TOPEKA	2989	-928
HEEBNER	3237	-1180
DOUGLAS	3271	-1214
LANSING	3282	-1225
ARBUCKLE	3570	-1513

CASING RECORD ☑ New ☐ 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
SURFACE	12.25	8.625	23	1029	COMMON CLASS A	450	2% GEL, 3% CC

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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 *(Amount and Kind of Material Used)*	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: ☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)* _____

PRODUCTION INTERVAL:

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	BRUNGARDT 1-18
Doc ID	1171079

All Electric Logs Run

INDUCTION
MICRO
POR
SONIC
SPECTRAL

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

Kansas
Corporation Commission

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

December 02, 2013

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

Re: ACO1
API 15-051-26577-00-00
BRUNGARDT 1-18
SE/4 Sec.18-12S-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

Date: 8/13/2013
Invoice # 7445

P.O.#:

Due Date: 9/12/2013
Division: *Russell*

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

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	8200.138
Well/Prospect	
Deck	
AFE	
Approval	
Description	

Reference:
BRUNGARDT 1-18

Description of Work:
LONG SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable
Labor		$ 991.39	No
Common-Class A	450	$ 7,328.57	Yes
8 5/8" Basket	3	$ 1,029.26	Yes
Bulk Truck Matl-Material Service Charge	475	$ 1,031.43	No
Calcium Chloride	16	$ 827.92	Yes
Pump Truck Mileage-Job to Nearest Camp	25	$ 270.89	No
8 5/8" Centralizer	3	$ 208.46	Yes
Premium Gel (Bentonite)	9	$ 159.08	Yes
Bulk Truck Mileage-Job to Nearest Bulk Plant	25	$ 158.51	No
8 5/8" Top Rubber Plug	1	$ 115.09	Yes
Baffle Plate Aluminum, 8 5/8"	1	$ 97.71	Yes

Item	Quantity	Price	Taxable

Invoice Terms:
Net 30

SubTotal:	$	*12,218.30*
Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice:	$	(1,832.75)
SubTotal for Taxable Items:	$	8,301.17
SubTotal for Non-Taxable Items:	$	2,084.38
Total:	$	10,385.55
6.15% Ellis County Sales Tax Tax:	$	510.52
Amount Due:	**$**	**10,896.07**
Applied Payments:		
Balance Due:	**$**	**10,896.07**

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.

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. 7445

Date	Sec.	Twp.	Range	County	State	On Location	Finish
8-13-13	18	12	16	Ellis	KS		4:30 pm

Location Blue hill school house 1½ w

Lease Brungardt Well No. 1-18

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

Hole Size 12¼ T.D. 1029

Charge To Sam Gary Jr.

Csg. 8⅝ Depth 1029

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. 42.14 Shoe Joint 42.14

Cement Amount Ordered 450 com 3% cc 2% gel

Meas Line Displace 62 3/4 bbl

EQUIPMENT

Pumptrk 17 No. Cementer / Helper Cody

Bulktrk 19 No. Driver / Driver David

Bulktrk P4 No. Driver / Driver Travis

JOB SERVICES & REMARKS

Remarks: cement did circulate

Rat Hole

Mouse Hole

Centralizers 1, 13, 22

Baskets 2, 12, 23

D/V or Port Collar

Common	450
Poz. Mix	
Gel.	9
Calcium	16
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	475
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	3
Baskets	3
AFU Inserts	
Float Shoe	
Latch Down	
	1 baffle Plate
	Rubber Plug
Pumptrk Charge	Long Surface
Mileage	25
Tax	
Discount	
Total Charge	

X Signature

Date: 8/18/2013
Invoice # 7292

P.O.#:

Due Date: 9/17/2013
Division: *Russell*

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

Invoice

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

RECEIVED
AUG 28 2013
SAMUEL GARY JR. & ASSOCIATES, INC.

Reference:
BRUNGARDT 1-18

Description of Work:
~~CIRCULATE CEMENT~~
Plug Job

☐ DRLG ☐ COMP ☐ W/O ☐ LOE ☐ GG

Account	6200.105
Well/Prospect	
Deck	
AFE	
Approval	
Description	

Services / Items Included:

	Quantity	Price	Taxable
Labor		$ 1,020.55	Yes
Common-Class A	162	$ 2,715.88	Yes
POZ Mix-Standard	108	$ 760.45	Yes
Bulk Truck Matl-Material Service Charge	280	$ 625.88	Yes
Pump Truck Mileage-Job to Nearest Camp	28	$ 312.32	Yes
Bulk Truck Mileage-Job to Nearest Bulk Plant	28	$ 182.76	Yes
Premium Gel (Bentonite)	10	$ 181.95	Yes
Flo Seal	67	$ 149.76	Yes
Dry Hole Plug	1	$ 62.59	Yes

Item	Quantity	Price	Taxable

Invoice Terms:
Net 30

SubTotal:	$	*6,012.14*
Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice:	$	(901.82)
SubTotal for Taxable Items:	$	5,110.32
SubTotal for Non-Taxable Items:	$	-
Total:	$	5,110.32
6.15% Ellis County Sales Tax Tax:	$	314.28
Amount Due:	**$**	**5,424.60**
Applied Payments:		
Balance Due:	**$**	**5,424.60**

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.

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. 7292

Date	Sec.	Twp.	Range	County	State	On Location	Finish
8-18-13	18	12	16	Ellis	KS		9:15 PM

Location Blue Hill School House 2W

Lease Brungardt Well No. 1-18

Contractor Discovery #2

Type Job Plug

Hole Size 7 7/8 T.D. 3550'

Csg. Drill Pipe Depth

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint

Meas Line Displace

EQUIPMENT

Pumptrk 15 No. Cementer Helper Nick

Bulktrk 14 No. Driver Driver Lonnie M

Bulktrk PU No. Driver Driver Brett

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 sk

Mouse Hole 15 sk

Centralizers

Baskets

D/V or Port Collar

1st Plug @ 3550 w/ 50 sk
2nd Plug @ 1250 w/ 25 sk
3rd Plug @ 1075 w/ 40 sk
4th Plug @ 650 w/ 100 sk
5th Plug @ 40 w/ 10 sk

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.

Charge To Sam Gary Jr & Assc

Street

City State

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

Cement Amount Ordered 270 60/40 4% Gel 1/4# Flo

Common	162
Poz. Mix	108
Gel.	10
Calcium	
Hulls	
Salt	
Flowseal	67#
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	280
Mileage	

8 5/8 FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
	Wood Plug - 1
Pumptrk Charge	Plug
Mileage	28
Tax	
Discount	
Total Charge	

X Signature

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

1515 Wynkoop, Ste 700
Denver, CO 80202

ATTN: Chris Mitchell

18-12-16

Brungardt 1-18

Job Ticket: 54426 **DST#: 1**

Test Start: 2013.08.16 @ 21:00:00

GENERAL INFORMATION:

Formation: **Lansing A-E**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:32:30
Time Test Ended: 02:53:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Brannan L
Unit No: 59

Interval: 3266.00 ft (KB) To 3343.00 ft (KB) (TVD)
Total Depth: 3343.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

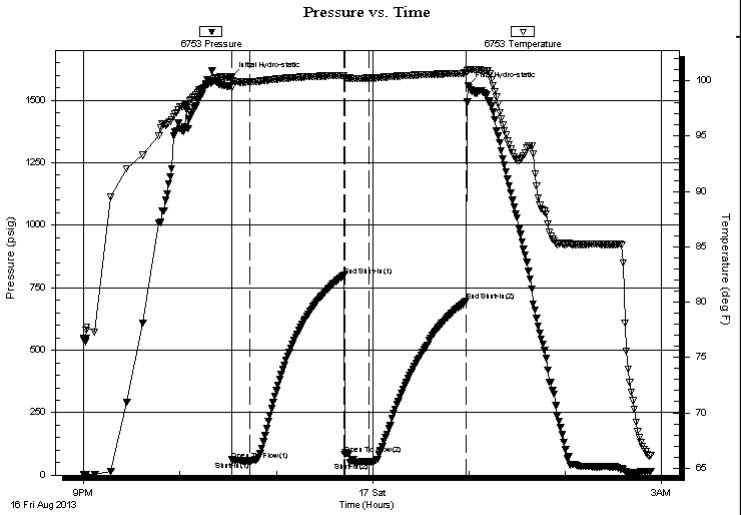
Reference Elevations: 2061.00 ft (KB)
2053.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Inside**

Press@RunDepth: 50.63 psig @ 3275.00 ft (KB)
Start Date: 2013.08.16 End Date: 2013.08.17
Start Time: 21:00:05 End Time: 02:52:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.17
Time On Btm: 2013.08.16 @ 22:32:00
Time Off Btm: 2013.08.17 @ 00:59:30

TEST COMMENT: 10- IF- Surface blow
60- ISI- No blow
15- FF- No blow
60- FSI- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1595.29	100.33	Initial Hydro-static
1	60.81	99.43	Open To Flow (1)
12	56.90	99.92	Shut-In(1)
70	798.55	100.49	End Shut-In(1)
71	83.21	100.26	Open To Flow (2)
86	50.63	100.23	Shut-In(2)
146	696.55	100.69	End Shut-In(2)
148	1556.41	100.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mw / show of O, 100%M	0.05

Gas Rates

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

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

1515 Wynkoop, Ste 700
Denver, CO 80202

ATTN: Chris Mitchell

18-12-16

Brungardt 1-18

Job Ticket: 54426 **DST#: 1**

Test Start: 2013.08.16 @ 21:00:00

GENERAL INFORMATION:

Formation: **Lansing A-E**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:32:30
Time Test Ended: 02:53:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Brannan L
Unit No: 59

Interval: 3266.00 ft (KB) To 3343.00 ft (KB) (TVD)
Total Depth: 3343.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

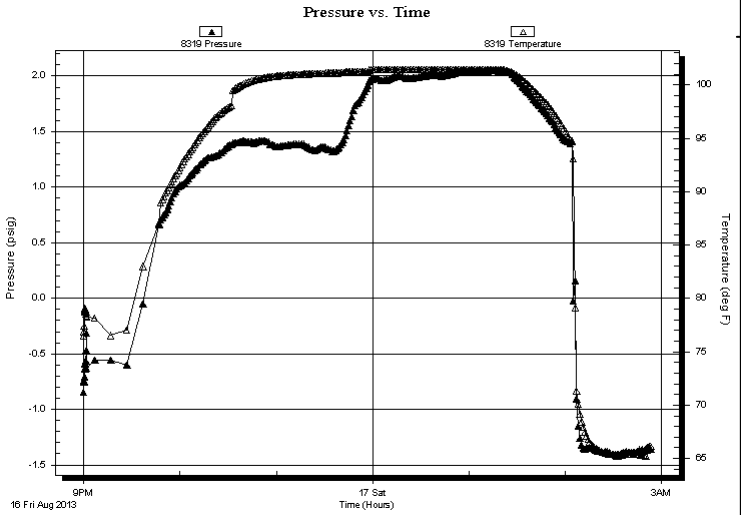
Reference Elevations: 2061.00 ft (KB)
2053.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8319

Press@RunDepth: psig @ ft (KB)
Start Date: 2013.08.16 End Date: 2013.08.17
Start Time: 21:00:05 End Time: 02:52:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.17
Time On Btm:
Time Off Btm:

TEST COMMENT: 10- IF- Surface blow
60- ISI- No blow
15- FF- No blow
60- FSI- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mw / show of O, 100%M	0.05

Gas Rates

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

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

1515 Wynkoop, Ste 700
Denver, CO 80202

ATTN: Chris Mitchell

18-12-16

Brungardt 1-18

Job Ticket: 54426 **DST#: 1**

Test Start: 2013.08.16 @ 21:00:00

GENERAL INFORMATION:

Formation: **Lansing A-E**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:32:30
Time Test Ended: 02:53:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Brannan L
Unit No: 59

Interval: 3266.00 ft (KB) To 3343.00 ft (KB) (TVD)
Total Depth: 3343.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

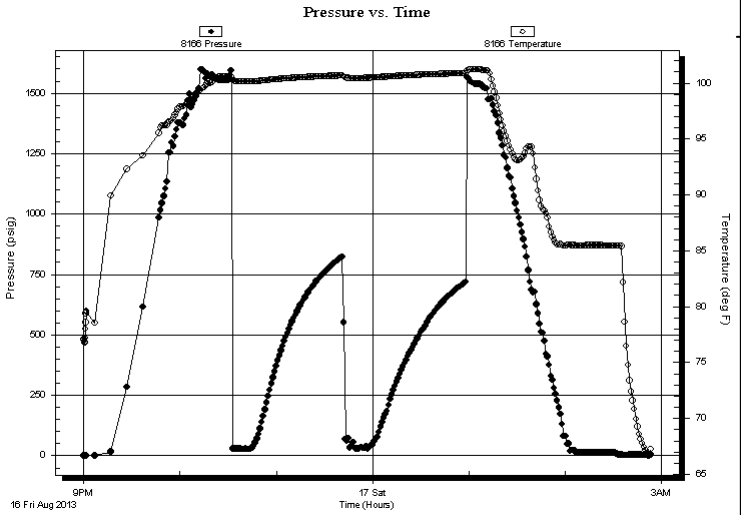
Reference Elevations: 2061.00 ft (KB)
2053.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8166 **Outside**

Press@RunDepth: psig @ 3275.00 ft (KB)
Start Date: 2013.08.16 End Date: 2013.08.17
Start Time: 21:00:05 End Time: 02:52:59

Capacity: 8000.00 psig
Last Calib.: 2013.08.17
Time On Btm:
Time Off Btm:

TEST COMMENT: 10- IF- Surface blow
60- ISI- No blow
15- FF- No blow
60- FSI- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mw/ show of O, 100%M	0.05

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates, Inc.

1515 Wynkoop, Ste 700
Denver, CO 80202

ATTN: Chris Mitchell

18-12-16

Brungardt 1-18

Job Ticket: 54426 **DST#: 1**

Test Start: 2013.08.16 @ 21:00:00

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:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	inches				

Recovery Information

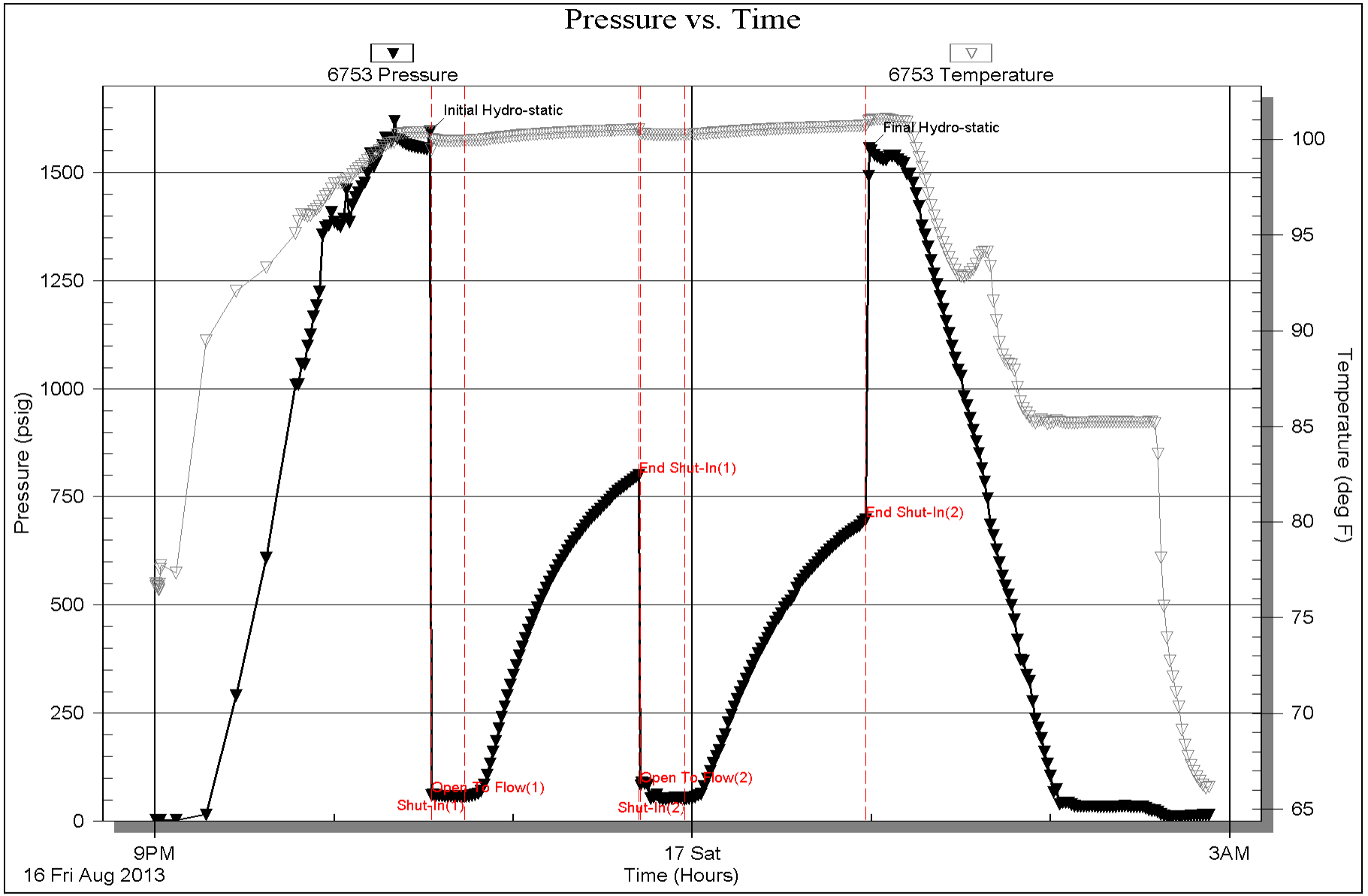
Recovery Table

Length ft	Description	Volume bbl
10.00	Mw / show of O, 100%M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

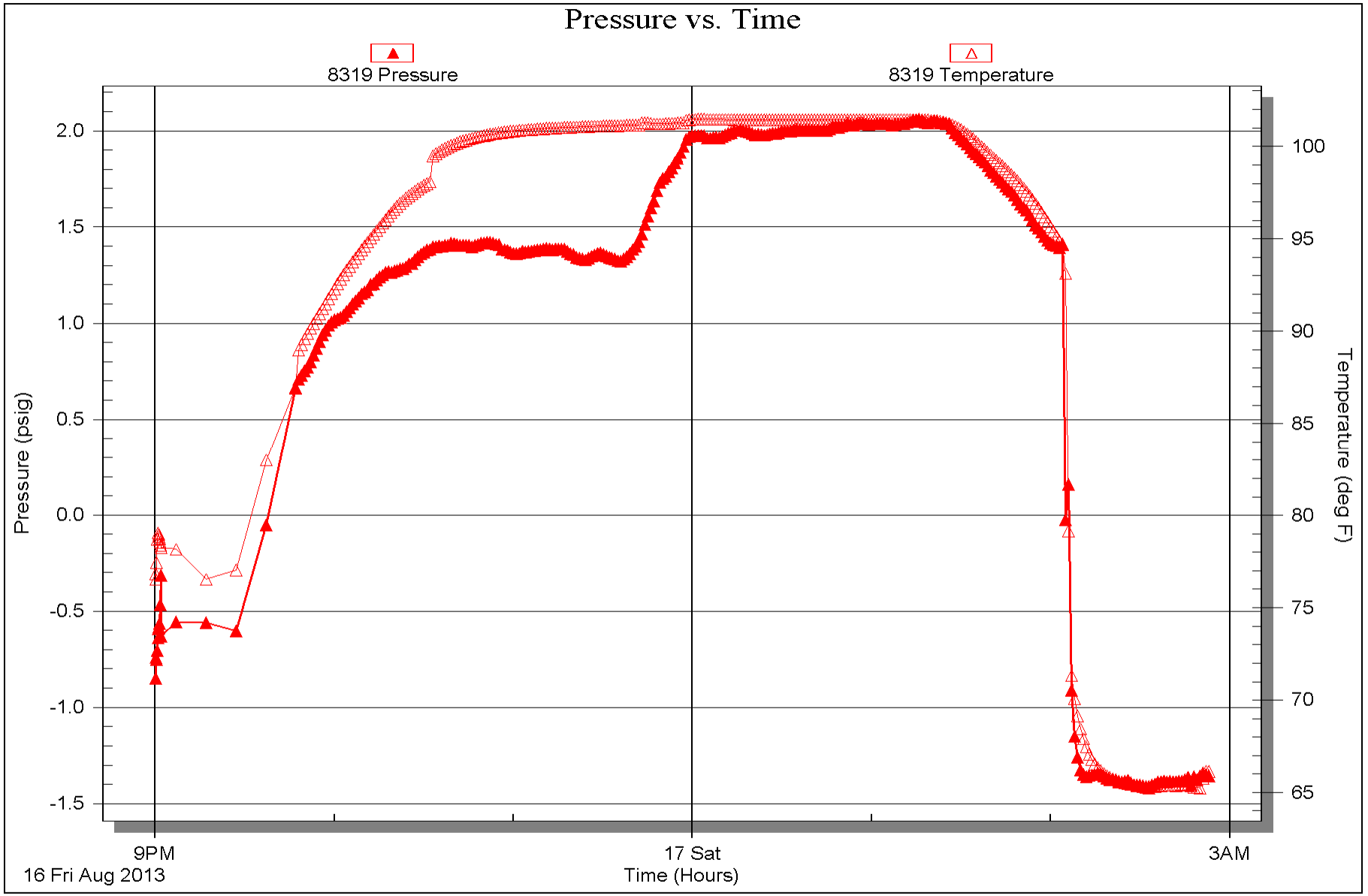
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6753 **Inside** Samuel Gary Jr. & Associates, Inc. Brungardt 1-18 DST Test Number: 1



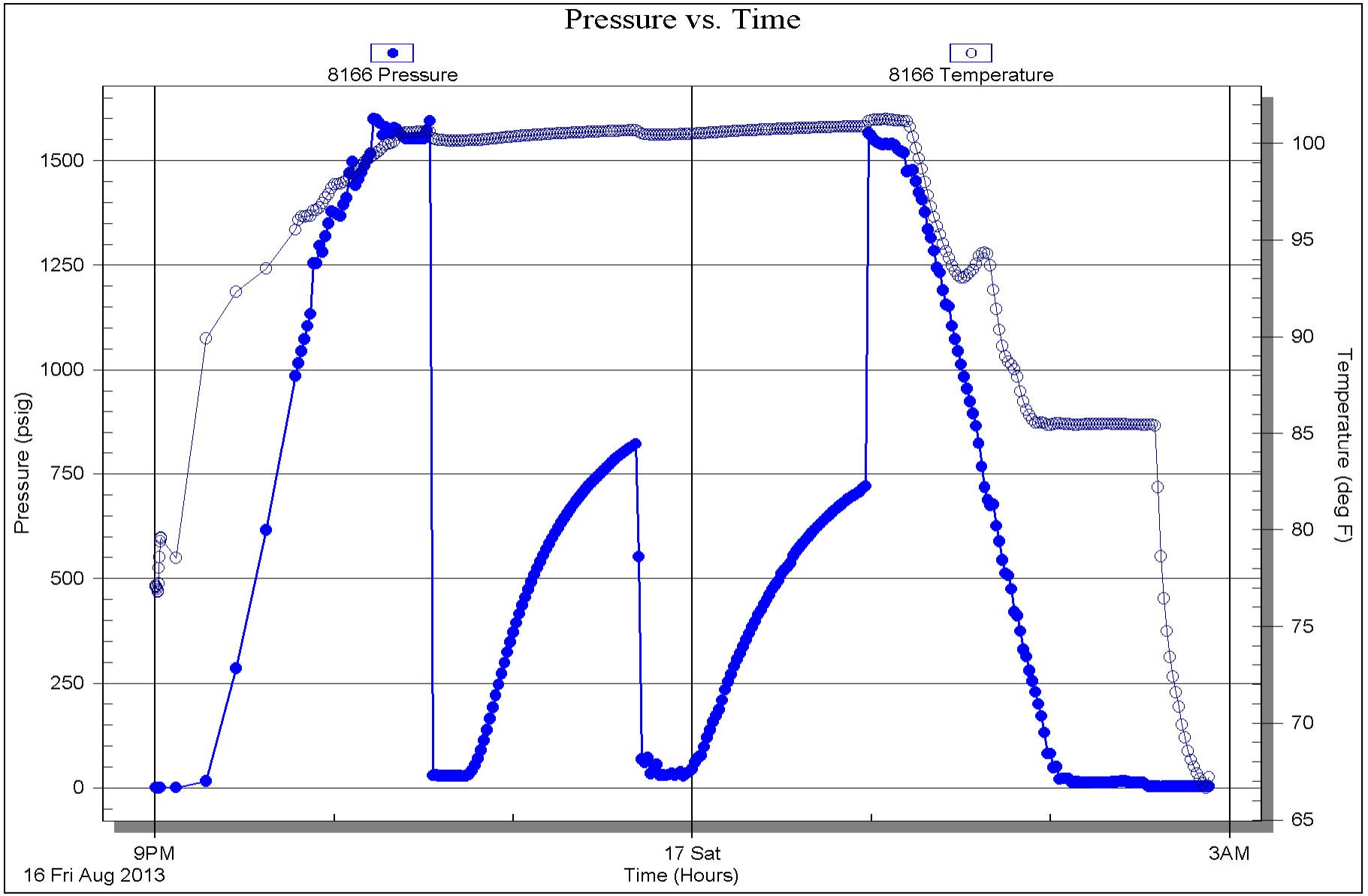
Trilobite Testing, Inc Ref. No: 54426 Printed: 2013.08.17 @ 03:50:05

Serial #: 8319 | Samuel Gary Jr. & Associates, Inc. | Brungardt 1-18 | DST Test Number: 1



Trilobite Testing, Inc | Ref. No: 54426 | Printed: 2013.08.17 @ 03:50:06

Serial #: 8166 **Outside** Samuel Gary Jr. & Associates, Inc. Brungardt 1-18 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 54426 Printed: 2013.08.17 @ 03:50:06

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

Well Name:	Brungardt 1-18		
Location:	Sec. 18-12S-16W Ellis County, Kansas		
License Number:	15-051-26577-0000	Region:	WILDCAT
Spud Date:	Aug 13, 2013	Drilling Completed:	Aug 18, 2013
Surface Coordinates:	1020 FSL/ 1025 FEL		
Bottom Hole Coordinates:			
Ground Elevation (ft):	2051'	K.B. Elevation (ft):	2061'
Logged Interval (ft):	2950' To: 3670'	Total Depth (ft):	3670'
Formation:			
Type of Drilling Fluid:			

OPERATOR

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

GEOLOGIST

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DST's Report

DST#1 3266'-3343' 10 60 15 60
IF- SURFACE BLOW/ ISI- NO BLOW/ FF- NO BLOW/ FSI- NO BLOW
IH- 1595, FH- 1556/ IF- 61 TO 83/ FF- 57 TO 51/ ISI- 799, FSI- 697
RECOVERY- 10' MUD W/ SHOW OF OIL

ROCK TYPES

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

ACCESSORIES

MINERAL

Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
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

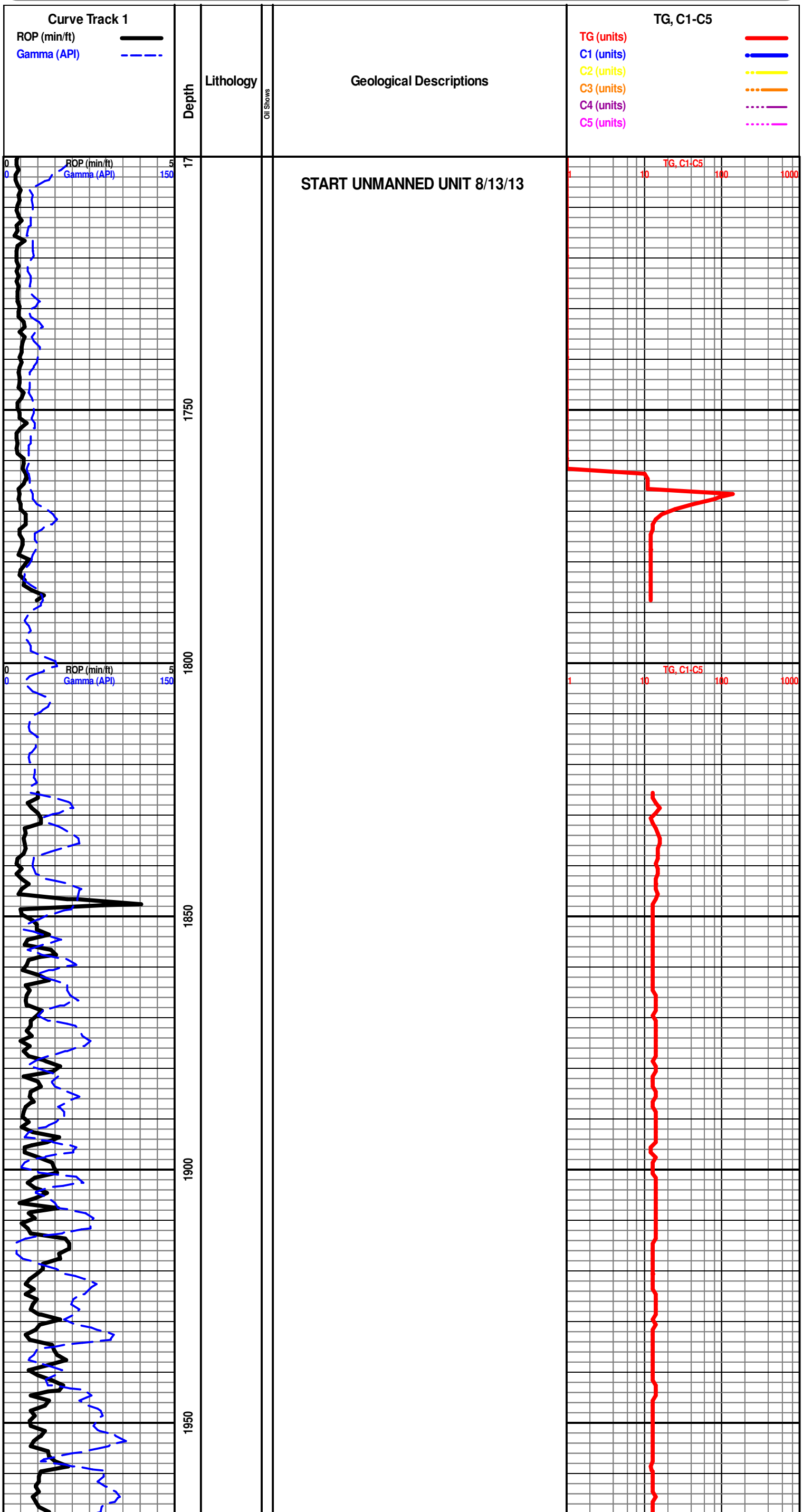
SORTING
- Well
- Moderate
- Poor

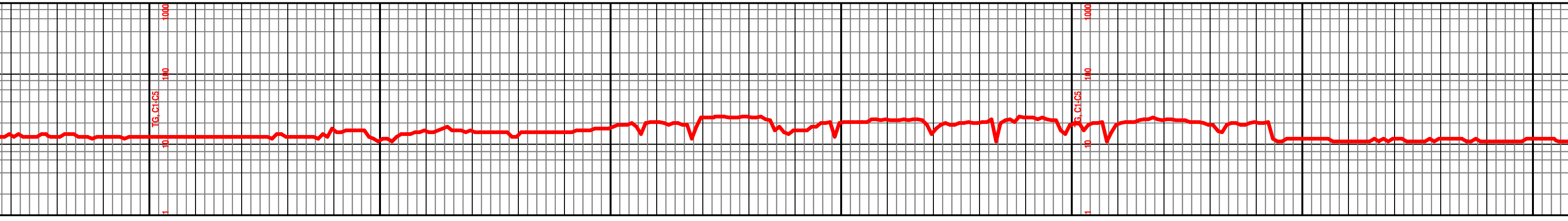
ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

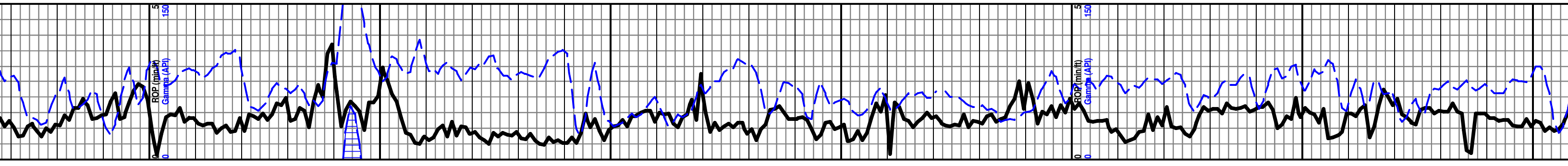
OIL SHOWS
- Even
- Spotted
- Ques
- Dead
- Gas show

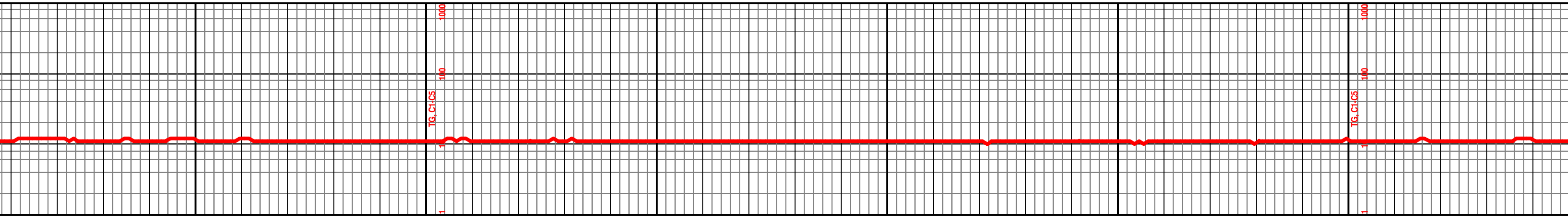
INTERVALS
- Core
- Dst
- Dst

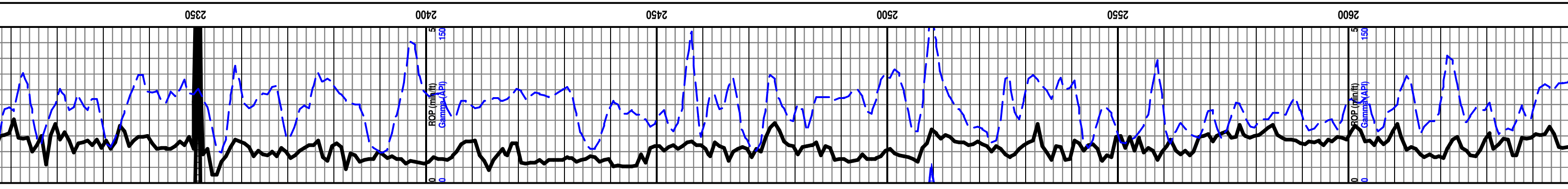
EVENTS
- Rft
- Sidewall




TG, C1-C5
1000
100
10
1


2000
2050
2100
2150
2200
2250
2300
ROP (min/ft)
Gamma (API)
5
150
0


TG, C1-C5
1000
100
1
TG, C1-C5
1000
100
1


2350
2400
2450
2500
2550
2600
ROP (mm/ft)
Gamma (API)
5
150
0
0
ROP (mm/ft)
Gamma (API)
5
150
0
0

2650
2700
2750
2800
2850
2900
2950

0 ROP (min/ft) 5
0 Gamma (API) 150

1 TG, C1-C5 1000
1 10 100

F
F
F

START 24 HOUR MANNED UNIT 8/15/13

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

HOWARD 2968' -907'

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

C1

5 U. BG

CN

0 ROP (min/ft) 5
0 Gamma (API) 150

WOB 30
RPM 80
PP 800

WT 8.8
VIS 52

DST#1
3266'-3343'

WOB 30
RPM 80
PP 800

WT 9.1
VIS 50

CFS@3290'

3000
3050
3100
3150
3200
3250
3300

TG, C1-C5
1 10 100 1000

CN

4 U. BG

C1

C2

C3

C5

7 U. BG

8 U. BG

13 U. BG

16 U. SHOW

TOPEKA 2989' -928'

LS- LT TN TO TN, HD DNS TO V/ BRIT IP, F XLN SUCRO MTRD, RE-XLN IP, SCAT IMBD FOSS FRG THRU, SLI TR IMBD CALC XLS IP, SLI TR PYR IN TRAY, NO VSI FLO, NO VIS POR, NO VIS SHOW

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

SGA TOPEKA 3018' -957'

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

SH- BRWN TO GY, FRM BLKY, SMTH TXT

LS- LT TN TO DK TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, RE-XLN, SCAT IMBD FOSS FRG THRU, 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-SUCRO IP, SLI TR SCAT IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

3077'-3079' LS- LT TN TO TN W/ TN OIL STN IN 20%, HD DNS TO BRIT IP, F XLN RE-XLN MTRX, S-SUCRO IP, ABDT IMBD FOSS FRG IP, DUL YEL FLO IN 10%, PR INTR FOSS POR IN 2%, NO FLSH CUT, WK SLW STRM IN 20%, NO LCH ON DISH

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

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

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

LE COMPTON 3125' -1064'

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

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

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

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

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

SH- LT GY TO GY, FRM BLKY, SMTH TXT

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

LS- OFF WHT TO CRM, HD DNS TO BRIT, F XLN CHLKY MTRX, S-SUCRO IP, ABDT IMBD FOSS FRG THRU, NO VIS FLO, PR INTR FOSS POR IN 3%, NO VIS SHOW

HEEBNER 3237' 1176'

SH- BLCK, SFT, CARB

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

3265'-3267' LS- OFF WHT TO CRM W/ TN OIL STN IN 40%, HD DNS TO V/BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY, TR SFT WHT CHLK IN TRAY, BRT YEL GLD FLO IN 40%, PR INT XLN POR IN 3%, WK FLSH CUT IN 40%, WK SLW STRM IN 40%, NO LCH ON DISH

DOUGLAS 3271' -1210'

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

LANSING 3282' -1221'

3286'-3288' LS- CRM TO LT TN W/ TN OIL STN IN 70%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, SCAT IMBD FOSS FRG IP, DUL YEL GLD FLO IN 70%, PR INTR XLN POR IN 3%, FR VUG POR IN 1%, PR FLSH CUT IN 70%, PR TO FR SLW STRM IN 70%, LT TN LCH ON DISH

SH- BRWN LT GY TO GY, FRM BLKY, SMTH TO SLTY TXT

LANSING "C" 3309' -1248'

3311'-3314' LS- CRM TO LT TN W/ TN OIL STN IN 75%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, SLI TR IMBD PYR IP, DUL YEL GLD FLO IN 80%, PR TO FR INTR OOL POR IN 2% PR TO FR INTR XLN POR IN 3%, FR VUG POR IN 2%, FR FLSH CUT IN 80%, FR TO GD SLW STRM IN 80%, LT TN LCH ON DISH, WK OIL ODOR

3320'-3322' LS- CRM TO LT TN W/ LT TN TO TN OIL STN IN 40%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, SLI TR

WT 8.9
VIS 46

CFS@3343'

WOB 30
RPM 80
PP 800

WT 8.9
VIS 62

CFS@3388'

0 ROP (min/ft) 5
0 Gamma (API) 150

WT 9.1
VIS 55

CFS@3448'

WOB 30
RPM 80
PP 800

WT 9.1
VIS 56

CFS@3498'

WT 9.0
VIS 65

CFS@3553'

CFS@3584'

3350
3400
3450
3500
3550
3600
3650

OOLMLD IP, DUL YEL GLD FLO IN 40%, PR INTR OOL POR IN 2%, PR TO FR OOLMLD POR IN 2%, FR FLSH CUT IN 30%, PR TO FR SLW STRM IN 40%, NO LCH ON DISH

LS- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO TMRX, SCAT IMBD OOL THRU, SLI TR IMBD CALC XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LANSING "F" 3354' -1293'

LS- OFF WHT TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, SCAT IMBD CALC XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

3369'-3372' LS- CRM TO TN W/ TN OIL STN IN 25%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, ABDT SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 40%, PR TO FR INTR OOL POR IN 3%, FR SLW FLSH CUT IN 40%, FR TO GD SLW STRM IN 40%, NO LCH ON DISH

3379'-3382' LS- LT TN TO TN W/ TN OIL STN IN 30%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 30%, PR TO FR INTR OOLPOR IN 3%, WK FLSH CUT IN 30%, PR TO FR SLW STRM IN 30%, NO LCH ON DISH

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

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

LANSING "H" 3420' -1359'

LS- GY TO LT TN, HD DNS, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, SLI TR IMBD CALC XLS IP, TN TO DK GY CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

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

3442'-3443' LS- LT TN TO TN W/ TN OIL STN IN 60%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, IMBD OOL IP, DUL YEL GLD FLO IN 60%, PR INTR OOL POR IN 2%, PR INTR XLN POR IN 2%, WK FLSH CUT IN 60%, PR SLW STRM IN 60%, NO LCH ON DISH

3466'-3467' LS- OFF WHT TO CRM W/ TN OIL STN IN 40%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, SCAT IMBD OOL IP, DUL YEL GLD FLO IN 40%, PR INTR XLN POR IN 2%, NO FLSH CUT, PR SLW STRM IN 30%, NO LCH ON DISH

SH- BRWN GY TO DK GY, FRM BLKY TO SFT GMMY IP, SLI TR IMBD CALC XLS IP, SMTH TXT

3486'-3490' LS0 OFF WHT TO CRM W/ TN OIL STN IN 70%, HD DNS TO V/BRIT IP, V/F TO MD XLN SUCRO MTRX, RE-XLN IP, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 40%, BRT YEL GLD FLO IN 30%, FR TO GD INTR OOL POR IN 3%, FR INTR XLN POR IN 2%, V/GD INTR OOL POR IN 2%, FR FLSH CUT IN 70%, FR TO GD SLW STRM IN 70%, TN LCH ON DISH

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

BKC 3520' -1459'

3526'-3528' SS- CRM TO LT TN W/ TN OIL STN IN 55%, LOS IN 2% LIME GRN, TT TO FRI, F TO MD GRN S-ANG TO S-RND, WLL SRT, SIL CMNT, DUL YEL GLD FLO IN 85%, TT TO FR INTR GRN POR IN 15%, FR FLSH CUT IN 70%, PR SLW STRM IN 70%, NO LCH ON DISH

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

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

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

ARBUCKLE 3570' -1509'

DOLO- LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD F TO SM S-RND TO RND DOLO GRNS THRU, ABDT SFT WHT CHLK IN TRAY, NO VIS FLO, TT TO PR INTR GRN POR IN 5%, NO VIS SHOW

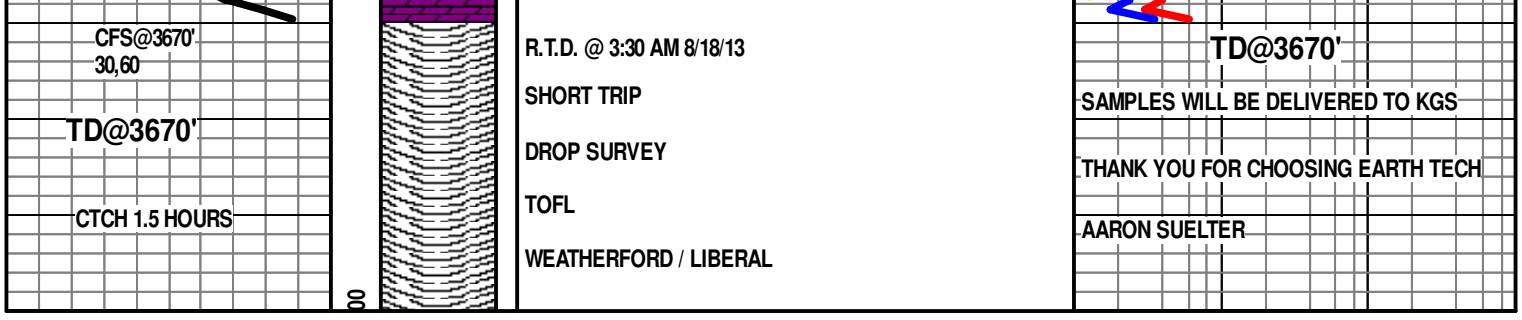
DOLO- LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD F TO MD S-RND TO S-ANG DOLO GRNS THRU, ABDT SFT WHT CHLK IN TRAY NO VIS FLO, TR TO PR INTR GRN POR IN 10%, NO VIS SHOW

DOLO- LT TN TO DK TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD SM TO MD S-ANG TO S- RND DOLO GRNS THRU, ABDT SFT WHT CHLK IN TRAY, NO VIS FLO, PR TO FR INTR GRN POR IN 10%, NO VIS SHOW

DOLO- LT TN TO DK TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD SM TO MD S-ANG TO S- RND DOLO GRNS THRU, ABDT SFT WHT CHLK IN TRAY, NO VIS FLO, PR TO 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 MD S-ANG TO S-RND DOLO GRNS THRU, SFT WHT CHLK IN TRAY, NO VIS FLO, PR TO FR INTR GRN POR IN 10%, NO VIS SHOW

14 U. BG
CN
13 U. BG
14 U. BG
CN
11 U. BG
TG, C1-C5
1 10 100 1000
CN
14 U. BG
C2 C1
7 U. BG
10 U. BG
CN
C3
16 U. INC
10 U. BG
10 U. BG
15 U. BG
CN
10 U. BG
14 U. INC
10 U. BG
CN
11 U. BG
C2 C1
C3
22 U. INC
12 U. BG
CN
16 U INC.
10 U. BG
14 U. INC
CN
14 U. INC
CN
10 U. BG
8 U. BG
CN
TG, C1-C5
1 10 100 1000
3 U. BG
CN
C2 C1
9 U. BG
8 U. BG
CN


CFS@3670'
30,60
TD@3670'
CTCH 1.5 HOURS
R.T.D. @ 3:30 AM 8/18/13
SHORT TRIP
DROP SURVEY
TOFL
WEATHERFORD / LIBERAL
TD@3670'
SAMPLES WILL BE DELIVERED TO KGS
THANK YOU FOR CHOOSING EARTH TECH
AARON SUELTER