



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1102598
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: _____



1102598

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: Yes 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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	COPPER-DIETZ ET AL 1-30
Doc ID	1102598

All Electric Logs Run

DEN-NEUT
INDUCTION
MICRO
SONIC
SPECTRAL GR

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

November 27, 2012

CHRISTOPHER MITCHELL
Samuel Gary Jr. & Associates, Inc.
1515 WYNKOOP, STE 700
DENVER, CO 80202

Re: ACO1
API 15-051-26359-00-00
COPPER-DIETZ ET AL 1-30
SE/4 Sec.30-14S-17W
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,
CHRISTOPHER MITCHELL



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: 8/8/2012
 Invoice # 821

P.O.#:
 Due Date: 9/7/2012
 Division: Russell

Invoice

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

RECEIVED

AUG 13 2012

SAMUEL GARY JR.
& ASSOCIATES, INC.

Reference:
 COPPER-DIER ET AL 1-30

Description of Work:
 LONG SURFACE JOB

<input checked="" type="checkbox"/> ERIG <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	
Description	

Services / Items Included:

	Quantity	Price	Taxable	Item
Labor		\$ 991.39	No	
Common-Class A	425	\$ 5,629.43	Yes	
8 5/8" Basket	3	\$ 1,029.26	Yes	
Bulk Truck Mat-Material Service Charge	438	\$ 951.09	No	
Calcium Chloride	15	\$ 776.18	Yes	
8 5/8" Centralizer	3	\$ 208.46	Yes	
Premium Gel (Bentonite)	8	\$ 141.40	Yes	
8 5/8" Top Rubber Plug	1	\$ 115.09	Yes	
Baffle Plate Aluminum, 8 5/8"	1	\$ 97.71	Yes	
Pump Truck Mileage-Job to Nearest Camp	8	\$ 86.68	No	
Bulk Truck Mileage-Job to Nearest Bulk Plant	8	\$ 50.72	No	

SubTotal: \$ 10,077.40

Net 30

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,511.61)

SubTotal for Taxable Items: \$ 6,797.89

SubTotal for Non-Taxable Items: \$ 1,767.90

Total: \$ 8,565.79

Tax: \$ 428.27

6.30% Ellis County Sales Tax

Amount Due: \$ 8,994.06

Applied Payments:

Balance Due: \$ 8,994.06

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. 821

Date	8-5-12	Sec.	30	Twp.	14	Range	17	County	ELLIS	State	KANSAS	On Location		Finish	11:45 AM
Lease	COOPER RETAIL			Well No.	# 1-30			Location	MUNTOR 1 S - 1 E - N. INTO						
Contractor	VAL ENERGY # 10							Owner	SAM GARY JR. & ASSOC.						
Type Job	L SURFACE							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	12 1/4"			T.D.	951'			Charge To	SAM GARY JR. & ASSOC.						
Csg.	8 5/8"			Depth	951'.59			Street	1515 WYNKOOD STE 800						
Tbg. Size				Depth				City	DENVER			State	CO. 80202		
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.				Shoe Joint	42.78			Cement Amount Ordered	425 ccm 3cc - 2 GEL						
Meas Line				Displace	58 BLS										

EQUIPMENT

Pumptrk # 15	No.	Cementer Helper	NEEK	Common	425
Bulktrk # 4	No.	Driver	LONNIE	Poz. Mix	
Bulktrk # 7U	No.	Driver	CASLO	Gel.	8

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
CEMENT DID CIRCULATE!	Handling 438
	Mileage

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer 2 - 8 5/8"
	Baskets 2 - 8 5/8"
	AFU Inserts
	Float Shoe
	Latch Down
	Pumptrk Charge Long Surface
	Mileage 8

THANK YOU!

X Signature *[Handwritten 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: 8/18/2012
 Invoice # 779

P.O.#:
 Due Date: 9/17/2012
 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:
 COOPER-DIETZ ET AL 1-30

Description of Work:
 PLUG JOB

RECEIVED

SEP 07 2012

SAMUEL GARY JR.
 & ASSOCIATES, INC.

DRLG COMP W/O LOE GG

Account	6200.145
Well/Prospect	
Deck	
AFE	
Approval	LB
Description	

Services / Items Included:

	Quantity	Price	Taxable
Labor		\$ 1,005.76	Yes
Common-Class A	123	\$ 1,652.83	Yes
Bulk Truck Matl-Material Service Charge	212	\$ 467.01	Yes
POZ Mix-Standard	82	\$ 415.47	Yes
Premium Gel (Bentonite)	7	\$ 125.52	Yes
Flo Seal	50	\$ 110.14	Yes
Pump Truck Mileage-Job to Nearest Camp	8	\$ 87.94	Yes
Dry Hole Plug	1	\$ 61.68	Yes
Bulk Truck Mileage-Job to Nearest Bulk Plant	8	\$ 51.46	Yes

Item Quantity Price Taxable

Invoice Terms:

Net 30

SubTotal: \$ 3,977.82
 Discount Available ONLY if Invoice is Paid & Received
 within listed terms of invoice: \$ (596.67)

SubTotal for Taxable Items: \$ 3,381.15
 SubTotal for Non-Taxable Items: \$ -

6.30% Ellis County Sales Tax

Total: \$ 3,381.15
 Tax: \$ 213.01

Thank You For Your Business!

Amount Due: \$ 3,594.16
Applied Payments:
Balance Due: \$ 3,594.16

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. 779

Date: 8-12-12	Sec. 30	Twp. 14	Range 17	County Ellis	State KS	On Location	Finish 8:00 PM
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Lease Cooper DIETZ Well No. ETAL-1-30 Location Munger 1S 1/2E Ninto

Contractor Val #16 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. 3640 Charge To Sam Loy Jr + Assoc

Csg. Depth Street

Tbg. Size Depth City State

Tool Depth City State

Cement Left in Csg. Shoe Joint The above was done to satisfaction and supervision of owner agent or contractor.

Meas Line Displace Cement Amount Ordered 205 60/40 40/60 1/4 #10

EQUIPMENT

Pumptrk 5	No. Cementer	Helper	Common 123
Bulktrk	No. Driver	Driver	Poz. Mix 82
Bulktrk 14	No. Driver	Driver	Gel. 7

JOB SERVICES & REMARKS

Remarks:	Calcium
Rat Hole 30	Hulls
Mouse Hole 15	Salt
Centralizers	Flowseal 50#
Baskets	Kol-Seal
D/V or Port Collar	Mud CLR 48
1st 3523 255K	CFL-117 or CD110 CAF 38
2nd 1135 255K	Sand
3rd 600 1005K	Handling 112
4th 40 105K	Mileage

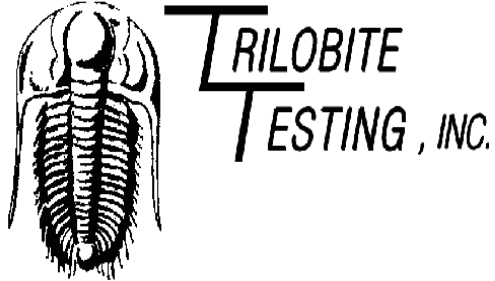
FLOAT EQUIPMENT

Guide Shoe
Centralizer 8 7/8 wooden Plug
Baskets
AFU Inserts
Float Shoe
Latch Down

Pumptrk Charge plug
Mileage 8

Tax
Discount
Total Charge

X Signature Randy D Monte



DRILL STEM TEST REPORT

Prepared For: **Samuel Gary, Jr & Associates**

1515 Wynkoop St Suite 700 Dever CO 80202

ATTN: Chris Mitchell

30-14s-17w Ellis,KS

Copper-Dietz et al #1-30

Start Date: 2012.08.09 @ 15:19:58

End Date: 2012.08.10 @ 00:40:28

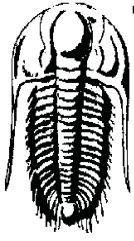
Job Ticket #: 49347 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.15 @ 09:47:03



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49347 **DST#: 1**
Test Start: 2012.08.09 @ 15:19:58

GENERAL INFORMATION:

Formation: **LKC-A-D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:20:28
Time Test Ended: 00:40:28
Interval: **3213.00 ft (KB) To 3281.00 ft (KB) (TVD)**
Total Depth: 3281.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Jeff Brown
Unit No: 44
Reference Elevations: 1940.00 ft (KB)
1930.00 ft (CF)
KB to GR/CF: 10.00 ft

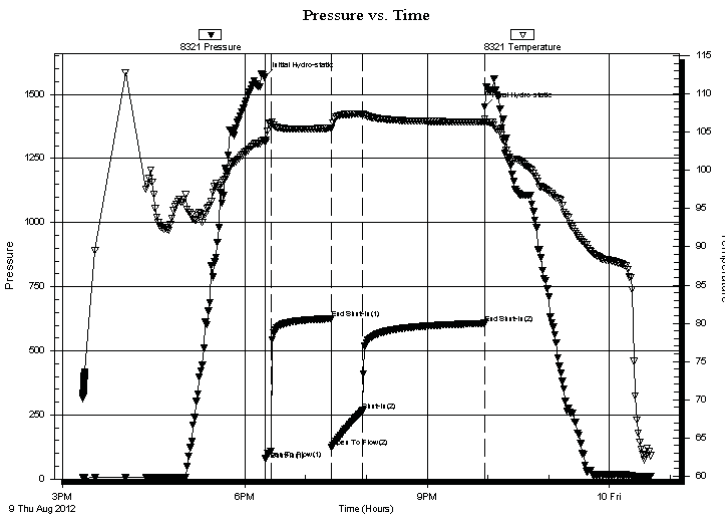
Serial #: 8321

Inside

Press@RunDepth: 267.08 psig @ 3249.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.09 End Date: 2012.08.10 Last Calib.: 2012.08.10
Start Time: 15:19:59 End Time: 00:40:28 Time On Btm: 2012.08.09 @ 18:19:58
Time Off Btm: 2012.08.09 @ 21:56:58

TEST COMMENT: IFP-Strong blow BOB in 4 min
ISI-Dead no blow back
FFP-Strong blow BOB in 4 1/2 min
FSI-Dead no blow back

PRESSURE SUMMARY



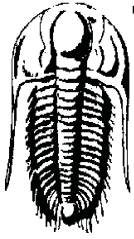
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1568.93	104.00	Initial Hydro-static
1	79.18	103.70	Open To Flow (1)
6	108.72	106.14	Shut-In(1)
65	625.07	105.54	End Shut-In(1)
66	122.92	105.40	Open To Flow (2)
97	267.08	107.37	Shut-In(2)
217	607.44	106.35	End Shut-In(2)
217	1452.88	106.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
434.00	MW 10%M 90%W	6.09
41.00	WM 45%W55%M	0.58

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49347 **DST#: 1**
Test Start: 2012.08.09 @ 15:19:58

Tool Information

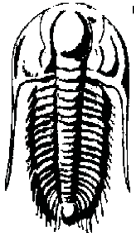
Drill Pipe:	Length: 3221.00 ft	Diameter: 3.80 inches	Volume: 45.18 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 45.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	42.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3213.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	102.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Recorder	0.00	8679	Fluid	3179.00	
Stubb	5.00			3184.00	
Shut In Tool	5.00			3189.00	
Sampler	2.00			3191.00	
Hydraulic tool	5.00			3196.00	
Jars	5.00			3201.00	
Safety Joint	3.00			3204.00	
Packer	4.00			3208.00	34.00 Bottom Of Top Packer
Packer	5.00			3213.00	
Stubb	1.00			3214.00	
Perforations	2.00			3216.00	
Change Over Sub	1.00			3217.00	
Drill Pipe	31.00			3248.00	
Change Over Sub	1.00			3249.00	
Recorder	0.00	8321	Inside	3249.00	
Recorder	0.00	8737	Outside	3249.00	
Perforations	29.00			3278.00	
Bullnose	3.00			3281.00	68.00 Bottom Packers & Anchor

Total Tool Length: 102.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49347 **DST#: 1**
Test Start: 2012.08.09 @ 15:19:58

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
434.00	MW 10%M 90%W	6.088
41.00	WM 45%W55%M	0.575

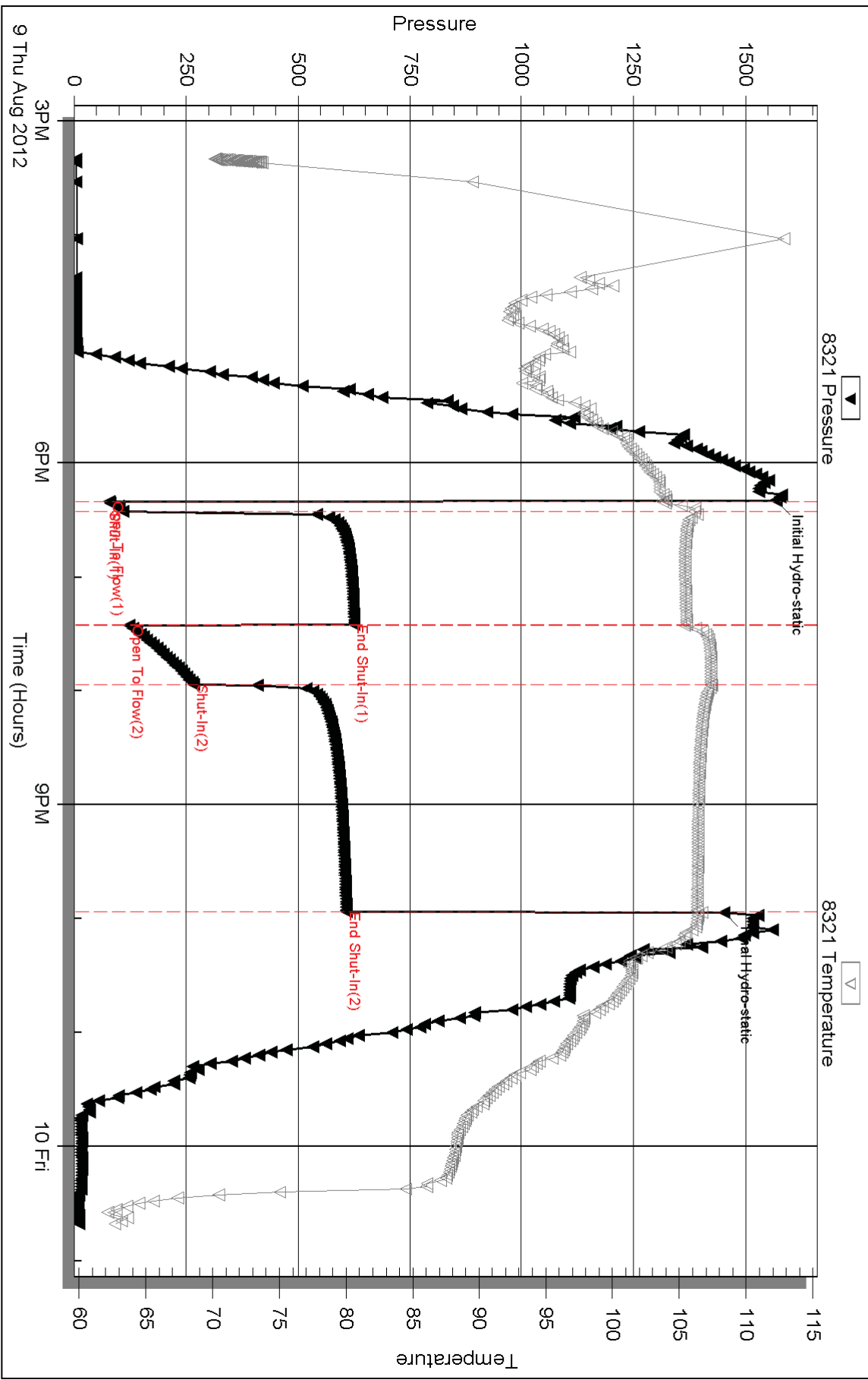
Total Length: 475.00 ft Total Volume: 6.663 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 2000 NI of fluid 500 PSI
200 NI of Mud 1800ML of Water

Pressure vs. Time

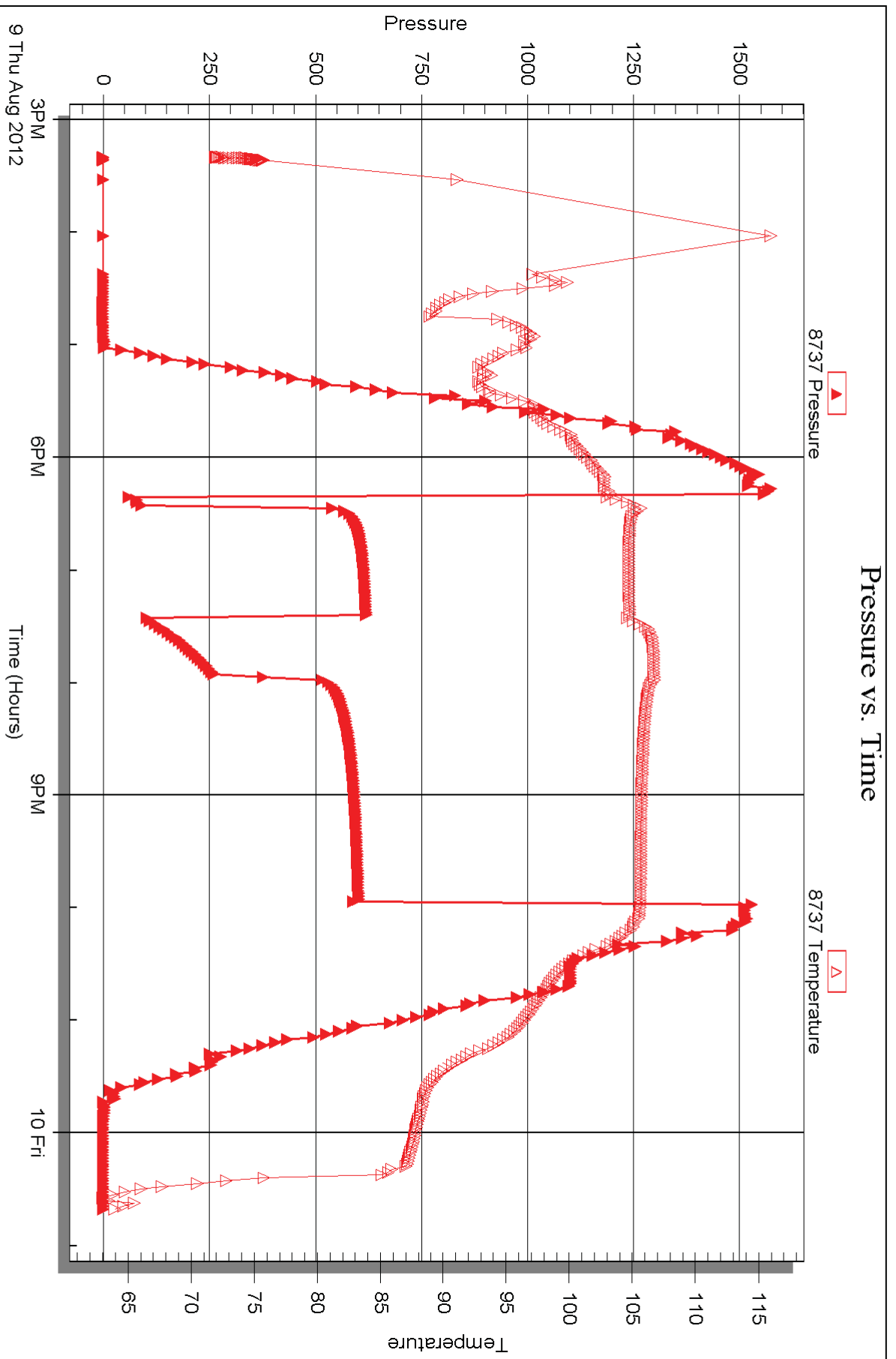


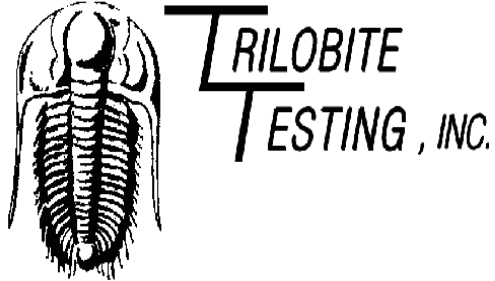
Serial #: 8737

Outside Samuel Gary, Jr & Associates

30-14s-17w Ellis, KS

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Samuel Gary, Jr & Associates**

1515 Wynkoop St Suite 700 Dever CO 80202

ATTN: Chris Mitchell

30-14s-17w Ellis,KS

Copper-Dietz et al #1-30

Start Date: 2012.08.10 @ 08:22:09

End Date: 2012.08.10 @ 16:57:09

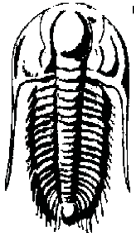
Job Ticket #: 49348 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.15 @ 09:46:11



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49348 **DST#: 2**
Test Start: 2012.08.10 @ 08:22:09

GENERAL INFORMATION:

Formation: **LKC-F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:10:09
Time Test Ended: 16:57:09
Interval: **3286.00 ft (KB) To 3311.00 ft (KB) (TVD)**
Total Depth: 3286.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Jeff Brown
Unit No: 44
Reference Elevations: 1940.00 ft (KB)
1930.00 ft (CF)
KB to GR/CF: 10.00 ft

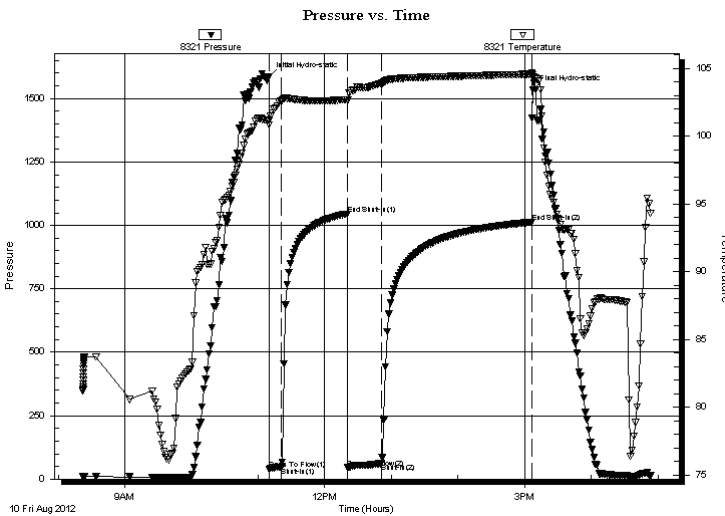
Serial #: 8321

Inside

Press@RunDepth: 63.43 psig @ 3289.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.10 End Date: 2012.08.10 Last Calib.: 2012.08.10
Start Time: 08:22:10 End Time: 16:54:09 Time On Btm: 2012.08.10 @ 11:09:39
Time Off Btm: 2012.08.10 @ 15:07:09

TEST COMMENT: IFP-Weak blow built to 3"
ISI-Dead no blow back
FFP-Fair blow built to 4 1/4"
FSI-Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1585.48	101.14	Initial Hydro-static
1	37.29	100.84	Open To Flow (1)
12	45.72	102.60	Shut-In(1)
71	1043.54	102.70	End Shut-In(1)
71	44.05	102.65	Open To Flow (2)
102	63.43	103.89	Shut-In(2)
237	1012.90	104.58	End Shut-In(2)
238	1534.65	104.53	Final Hydro-static

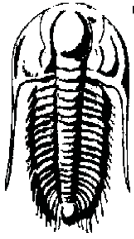
Recovery

Length (ft)	Description	Volume (bbl)
62.00	Mw 25%M 75%W	0.87
10.00	MW with oil spots	0.14

* 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 St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49348 **DST#: 2**
Test Start: 2012.08.10 @ 08:22:09

GENERAL INFORMATION:

Formation: **LKC-F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:10:09
Time Test Ended: 16:57:09
Interval: **3286.00 ft (KB) To 3311.00 ft (KB) (TVD)**
Total Depth: 3286.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Jeff Brown
Unit No: 44
Reference Elevations: 1940.00 ft (KB)
1930.00 ft (CF)
KB to GR/CF: 10.00 ft

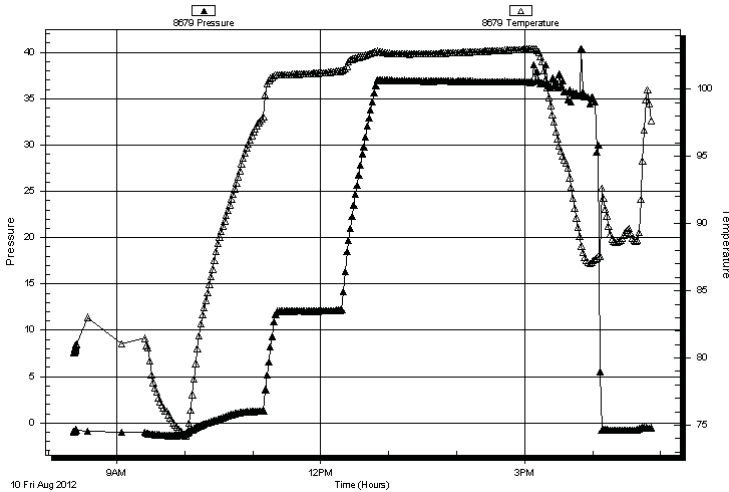
Serial #: 8679

Fluid

Press@RunDepth: psig @ 3252.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.10 End Date: 2012.08.10 Last Calib.: 2012.08.10
Start Time: 08:22:05 End Time: 16:52:34 Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak blow built to 3"
ISI-Dead no blow back
FFP-Fair blow built to 4 1/4"
FSI-Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

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

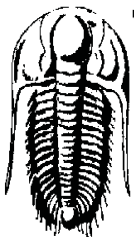
Recovery

Length (ft)	Description	Volume (bbl)
62.00	Mw 25%M 75%W	0.87
10.00	MW with oil spots	0.14

* 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 St Suite 700 Dever CO 80202
 ATTN: Chris Mitchell

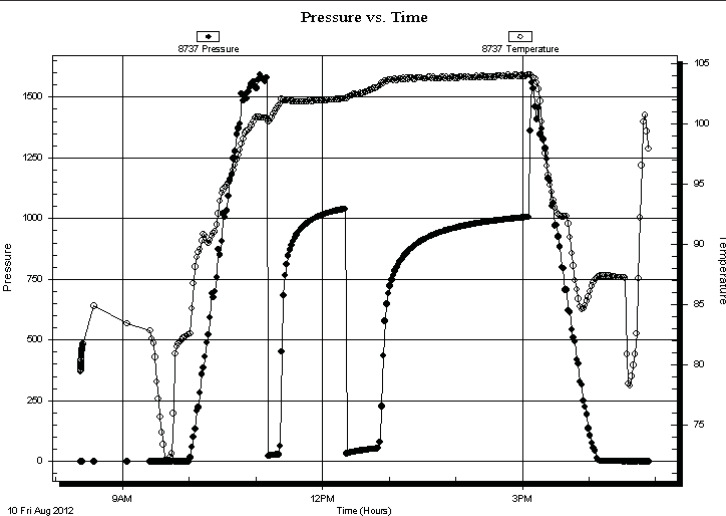
Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
 Job Ticket: 49348 **DST#: 2**
 Test Start: 2012.08.10 @ 08:22:09

GENERAL INFORMATION:

Formation: **LKC-F**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 11:10:09 Tester: Jeff Brown
 Time Test Ended: 16:57:09 Unit No: 44
Interval: 3286.00 ft (KB) To 3311.00 ft (KB) (TVD) Reference Elevations: 1940.00 ft (KB)
 Total Depth: 3286.00 ft (KB) (TVD) 1930.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8737 Outside
 Press@RunDepth: psig @ 3289.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.08.10 End Date: 2012.08.10 Last Calib.: 2012.08.10
 Start Time: 08:22:26 End Time: 16:54:25 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP-Weak blow built to 3"
 ISI-Dead no blow back
 FFP-Fair blow built to 4 1/4"
 FSI-Dead no blow back



PRESSURE SUMMARY

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

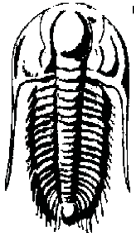
Recovery

Length (ft)	Description	Volume (bbl)
62.00	Mw 25%M 75%W	0.87
10.00	MW with oil spots	0.14

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49348 **DST#: 2**
Test Start: 2012.08.10 @ 08:22:09

Tool Information

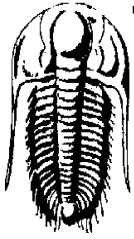
Drill Pipe:	Length: 3284.00 ft	Diameter: 3.80 inches	Volume: 46.07 bbl	Tool Weight:	2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	54000.00 lb
			<u>Total Volume: 46.07 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3286.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	25.00 ft				
Tool Length:	59.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Recorder	0.00	8679	Fluid	3252.00	
Stubb	5.00			3257.00	
Shut In Tool	5.00			3262.00	
Sampler	2.00			3264.00	
Hydraulic tool	5.00			3269.00	
Jars	5.00			3274.00	
Safety Joint	3.00			3277.00	
Packer	4.00			3281.00	34.00 Bottom Of Top Packer
Packer	5.00			3286.00	
Stubb	1.00			3287.00	
Perforations	2.00			3289.00	
Recorder	0.00	8321	Inside	3289.00	
Recorder	0.00	8737	Outside	3289.00	
Perforations	19.00			3308.00	
Bullnose	3.00			3311.00	25.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49348 **DST#: 2**
Test Start: 2012.08.10 @ 08:22:09

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	Mw 25%M 75%W	0.870
10.00	MW w ith oil spots	0.140

Total Length: 72.00 ft Total Volume: 1.010 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

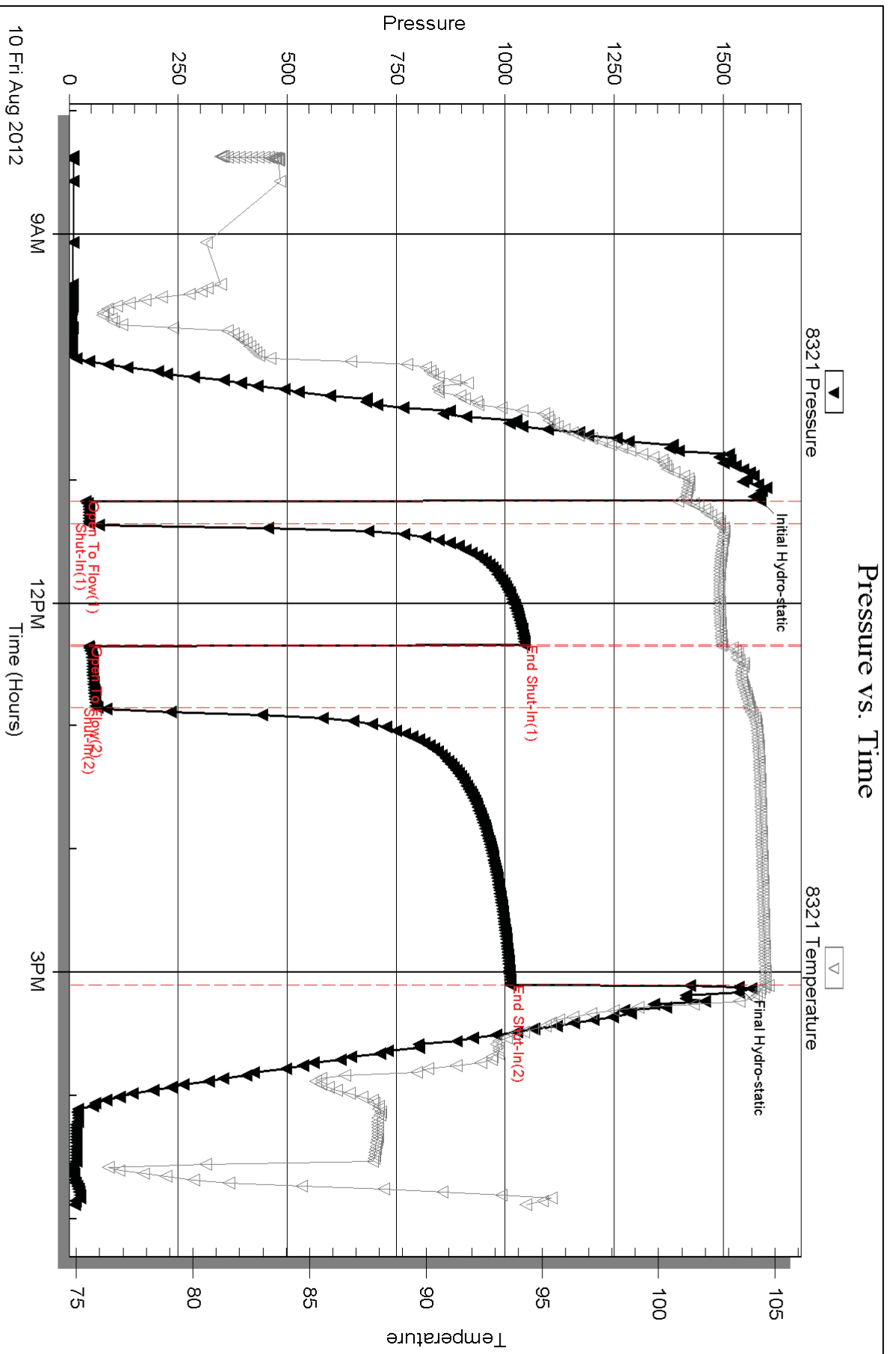
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Inside

Samuel Gary, Jr & Associates

30-14s-17w Ellis, KS

DST Test Number: 2



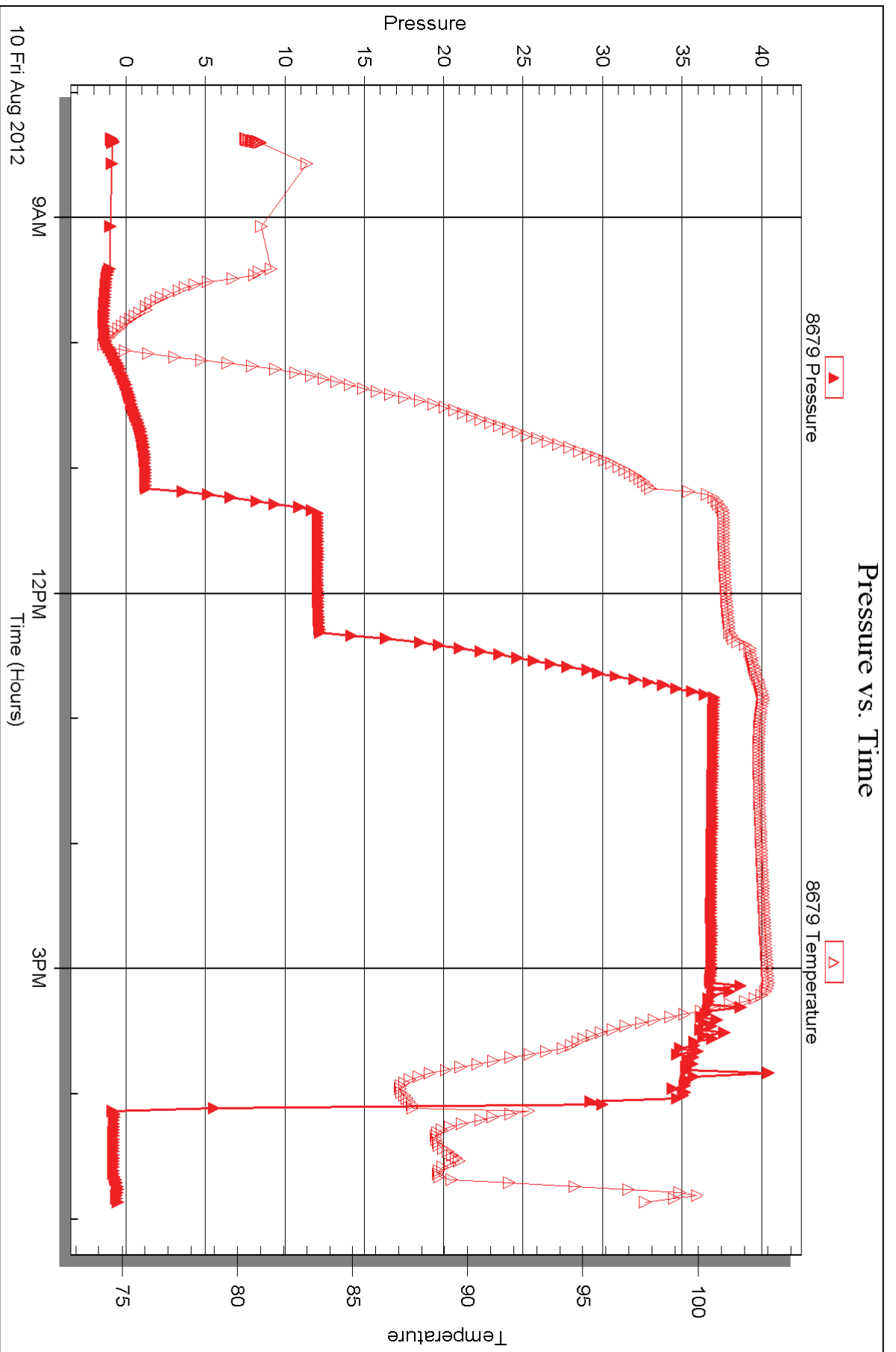
Serial #: 8679

Fluid

Samuel Gary, Jr & Associates

30-14s-17w Ellis, KS

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 49348

Printed: 2012.08.15 @ 09:46:16

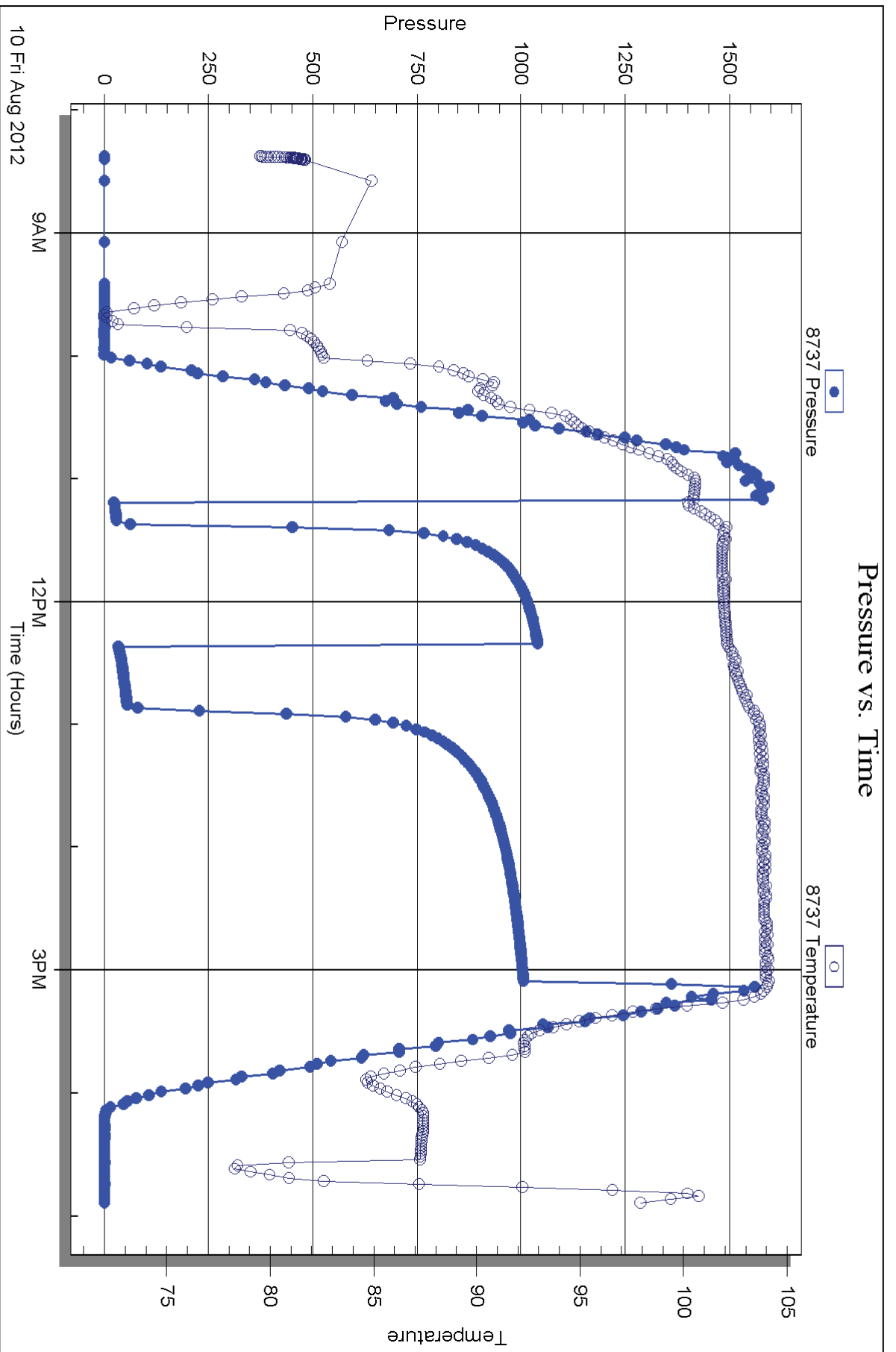
Serial #: 8737

Outside

Samuel Gary, Jr & Associates

30-14s-17w Ellis, KS

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Samuel Gary, Jr & Associates**

1515 Wynkoop St Suite 700 Dever CO 80202

ATTN: Chris Mitchell

30-14s-17w Ellis,KS

Copper-Dietz et al #1-30

Start Date: 2012.08.11 @ 06:56:40

End Date: 2012.08.11 @ 13:24:40

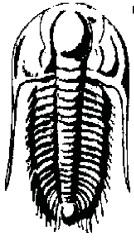
Job Ticket #: 49349 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.15 @ 09:45:16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49349 **DST#: 3**
Test Start: 2012.08.11 @ 06:56:40

GENERAL INFORMATION:

Formation: **LKC-J-K**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 09:05:10 Tester: Jeff Brown
Time Test Ended: 13:24:40 Unit No: 44
Interval: 3400.00 ft (KB) To 3440.00 ft (KB) (TVD) Reference Elevations: 1940.00 ft (KB)
Total Depth: 3440.00 ft (KB) (TVD) 1930.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

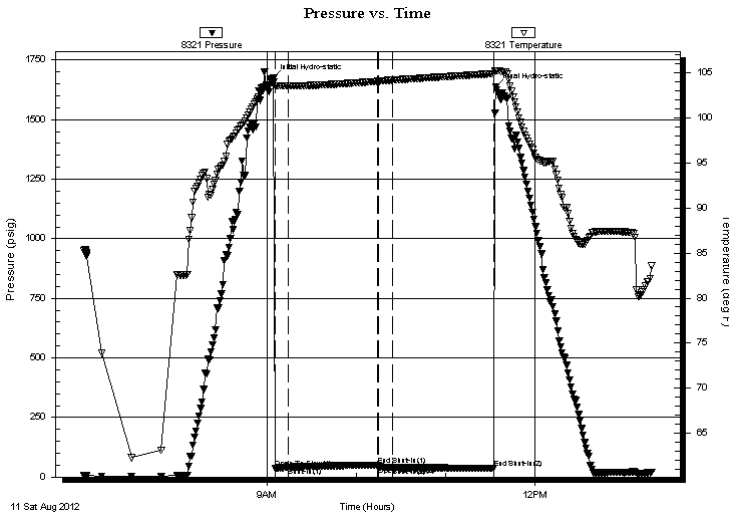
Serial #: 8321

Inside

Press@RunDepth: 40.84 psig @ 3404.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.11 End Date: 2012.08.11 Last Calib.: 2012.08.11
Start Time: 06:56:41 End Time: 13:18:40 Time On Btm: 2012.08.11 @ 09:04:10
Time Off Btm: 2012.08.11 @ 11:33:40

TEST COMMENT: IFP=Weak blow built to 1/4"
ISI=Dead no blow back
FFP=Dead no blow
FSI=Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1673.69	103.95	Initial Hydro-static
1	36.26	103.59	Open To Flow (1)
10	40.31	103.56	Shut-In(1)
70	50.66	104.05	End Shut-In(1)
71	43.44	104.06	Open To Flow (2)
80	40.84	104.19	Shut-In(2)
148	38.36	104.91	End Shut-In(2)
150	1635.99	105.25	Final Hydro-static

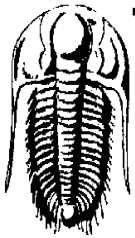
Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
1.00	MUD w ith oil spots	0.01

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates

Copper-Dietz et al #1-30

1515 Wynkoop St Suite 700 Dever CO 80202

30-14s-17w Ellis,KS

ATTN: Chris Mitchell

Job Ticket: 49349

DST#: 3

Test Start: 2012.08.11 @ 06:56:40

GENERAL INFORMATION:

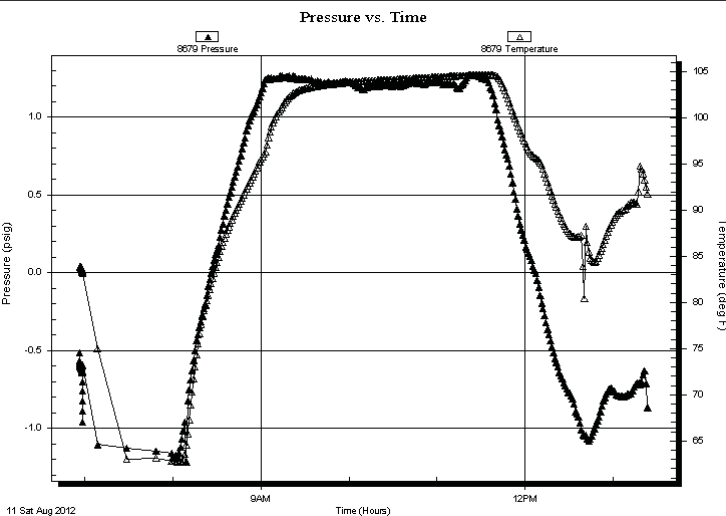
Formation: **LKC-J-K**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 09:05:10
 Tester: Jeff Brown
 Time Test Ended: 13:24:40
 Unit No: 44
 Interval: **3400.00 ft (KB) To 3440.00 ft (KB) (TVD)**
 Reference Elevations: 1940.00 ft (KB)
 Total Depth: 3440.00 ft (KB) (TVD)
 1930.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 10.00 ft

Serial #: 8679

Fluid

Press@RunDepth: psig @ 3366.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2012.08.11	End Date: 2012.08.11
Start Time: 06:56:46	End Time: 13:23:45
	Last Calib.: 2012.08.11
	Time On Btm:
	Time Off Btm:

TEST COMMENT: IFP=Weak blow built to 1/4"
 ISI=Dead no blow back
 FFP=Dead no blow
 FSI=Dead no blow back



PRESSURE SUMMARY

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

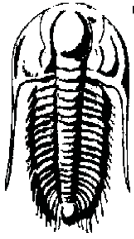
Recovery

Length (ft)	Description	Volume (bbl)
1.00	MUD w ith oil spots	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49349 **DST#: 3**
Test Start: 2012.08.11 @ 06:56:40

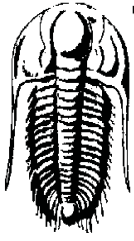
Tool Information

Drill Pipe:	Length: 3378.00 ft	Diameter: 3.80 inches	Volume: 47.38 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			Total Volume: 47.38 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3400.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	74.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Recorder	0.00	8679	Fluid	3366.00	
Stubb	5.00			3371.00	
Shut In Tool	5.00			3376.00	
Sampler	2.00			3378.00	
Hydraulic tool	5.00			3383.00	
Jars	5.00			3388.00	
Safety Joint	3.00			3391.00	
Packer	4.00			3395.00	34.00 Bottom Of Top Packer
Packer	5.00			3400.00	
Stubb	1.00			3401.00	
Perforations	3.00			3404.00	
Recorder	0.00	8321	Inside	3404.00	
Recorder	0.00	8737	Outside	3404.00	
Perforations	33.00			3437.00	
Bullnose	3.00			3440.00	40.00 Bottom Packers & Anchor

Total Tool Length: 74.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary, Jr & Associates
1515 Wynkoop St Suite 700 Dever CO 80202
ATTN: Chris Mitchell

Copper-Dietz et al #1-30
30-14s-17w Ellis,KS
Job Ticket: 49349 **DST#: 3**
Test Start: 2012.08.11 @ 06:56:40

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	7.98 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6500.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	MUD with oil spots	0.014

Total Length: 1.00 ft Total Volume: 0.014 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 2000 MI of MUD 50 PSI

Serial #: 8321

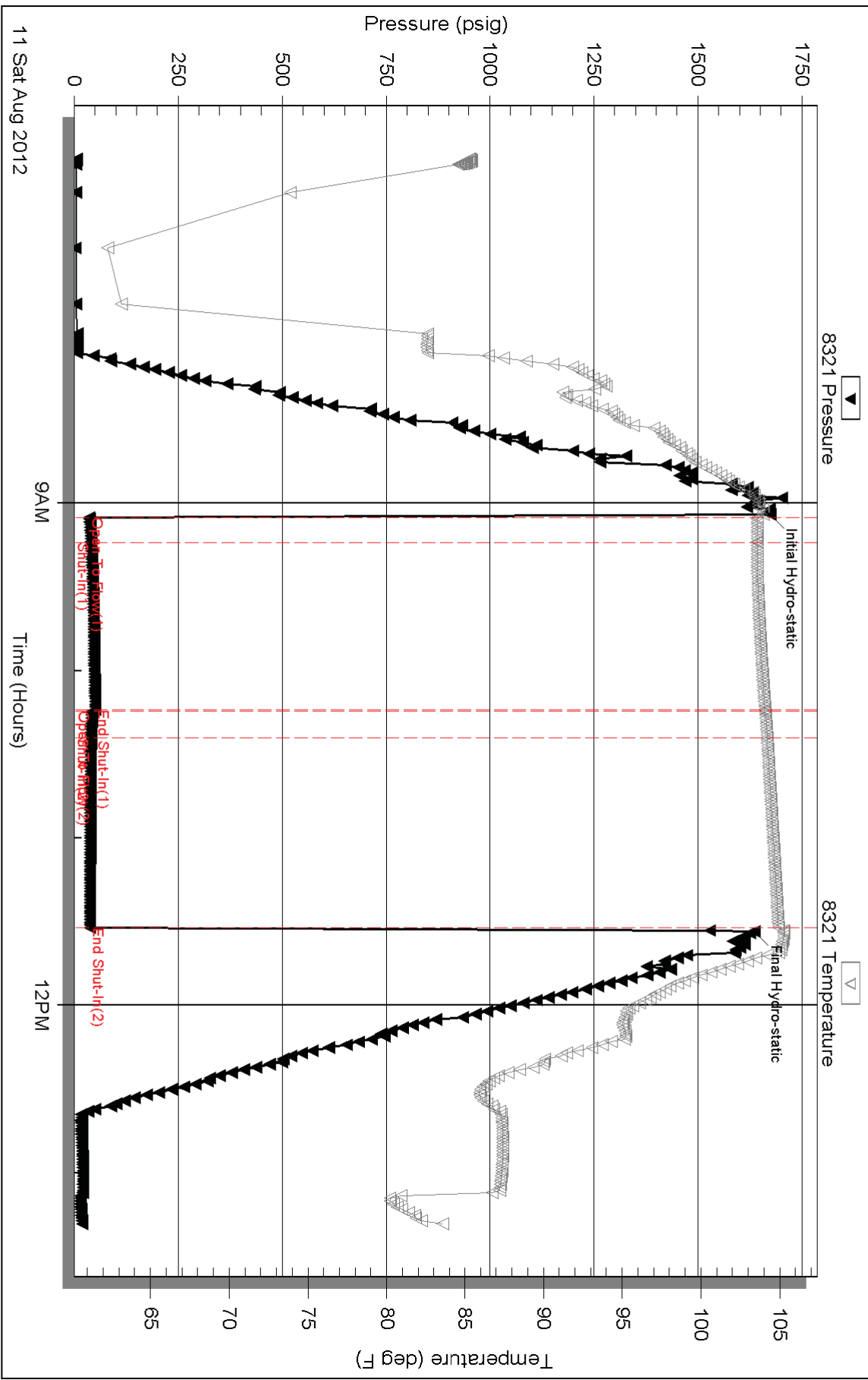
Inside

Samuel Gary, Jr & Associates

30-14s-17w Ellis, KS

DST Test Number: 3

Pressure vs. Time



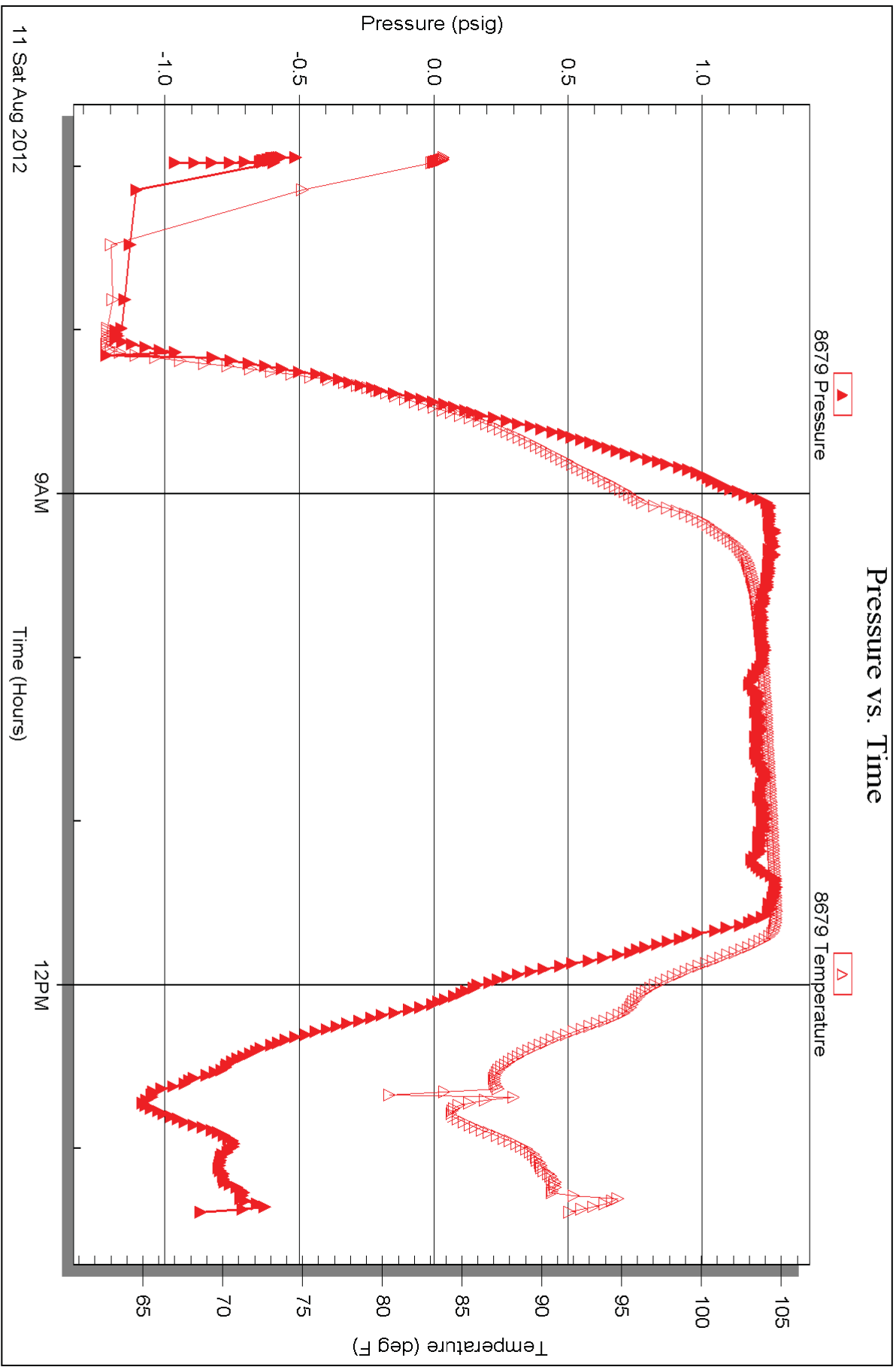
Serial #: 8679

Fluid

Samuel Gary, Jr & Associates

30-14s-17w Ellis, KS

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 49349

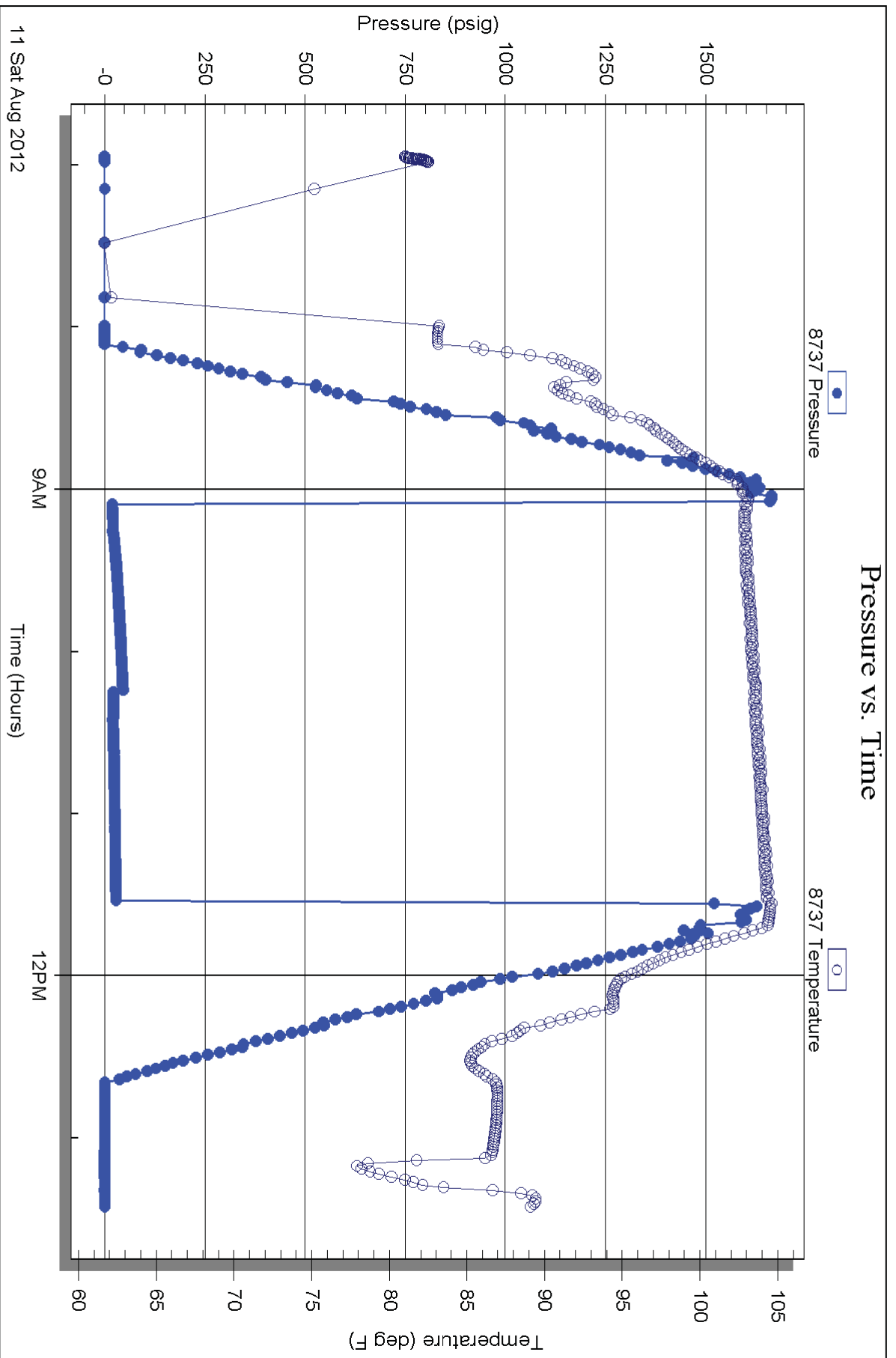
Printed: 2012.08.15 @ 09:45:20

Serial #: 8737

Outside Samuel Gary, Jr & Associates

30-14s-17w Ellis, KS

DST Test Number: 3





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

Well Name: SGA COPPER-DIETZ ET AL 1-30
 Location: SEC. 30 14S-17W ELLIS COUNTY, KANSAS
 License Number: 15-051-26359-0000 Region: WILDCAT
 Spud Date: 8/04/12 Drilling Completed: 8/12/12
 Surface Coordinates: 165' FSL/ 1905' FEL
 Bottom Hole Coordinates:
 Ground Elevation (ft): 1933' K.B. Elevation (ft): 1943'
 Logged Interval (ft): 2900' To: 3640' Total Depth (ft): 3640'
 Formation: Lansing, Arbuckle
 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: Chirs Mitchell

GEOLOGIST

Name: Schuyler Hedrick
 Company: Earth Tech OGL, Inc.
 Address: PO Box 683
 Hooker, Okla . 73945
 Off. 888-543-8378

DST's Report

DST# 1 3213'-3281' 5-60-30-120
 IF- STRNG BLW BOB IN 4 MIN, ISI- DEAD NO BLW BACK, FF- STRNG BLW BOB IN 4 1/2 MIN, FSI- DEAD NO BLW BACK
 IH- 1569, FH- 1453/ IF- 79 TO 109, FF- 123 TO 267/ ISI- 625, FSI- 607
 REC. 475' OF TF/ 434' OF MW 90% WATER, 10% MUD/ 41' OF WM 45% WATER, 55% MUD/ BHT- 106 DEG./ API RW- .137 @ 65.2 DEG./ CHLOR.- 60,000 PPM

DST's Report

DST# 2 3286'-3311' 10-60-30-120
 IF- WK BLW BUILT TO 3", ISI- DEAD NO BLW BACK, FF- FR BLW BUILT TO 4 1/4", FSI- DEAD NO BLW BACK
 IH- 1585, FH- 1535/ IF- 37 TO 46, FF- 44 TO 63/ ISI- 1044, FSI- 1013
 REC. 72' OF TF/ 62' OF MW 75% WATER, 25% MUD/ 10' OF MW W/ OIL SPOTS 60% WATER, 40% MUD/ BHT- 105 DEG./ API RW- .111 @ 1043 DEG./ CHLOR.- 46,000 PPM

DST's Report

DST# 3 3400'-3440 10-60-10-60
 IF- WK BLW BUILT TO 1/4", ISI- DEAD NO BLW BACK, FF- DEAD NO BLW, FSI- DEAD NO BLW BACK
 IH- 1674, FH-1636/ IF- 36 TO 40, FF- 43 TO 41'/ ISI- 51, FSI- 38
 REC. 1' OF TF/ 1' OF MUD W/ OIL SPOTS 100% MUD/ BHT- 105 DEG./

ROCK TYPES

Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal
 Congl
 Dol

Gyp
 Igne
 Lmst
 Meta
 Mrlst
 Salt
 Shale
 Shcol

Shgy
 Sltst
 Ss
 Till
 Carb sh
 Dol
 Dtd
 Gry sh

Sandylms
 Shale
 Sltstn
 Shlyslts
 Sitysh
 Lms

ACCESSORIES

MINERAL

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

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

FOSSIL

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

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

STRINGER

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

- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- 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

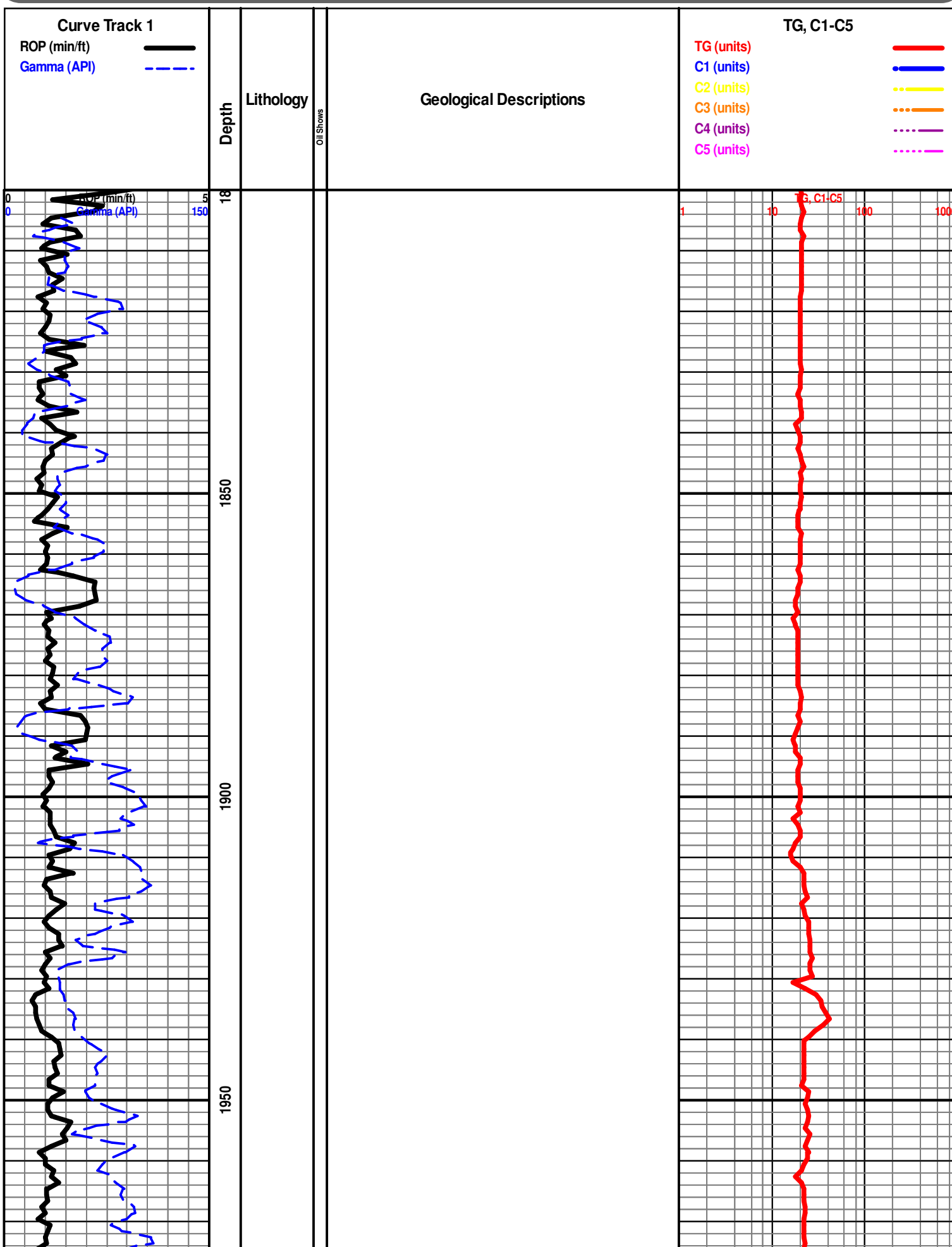
- Even
- Spotted
- Ques
- Dead
- Gas show

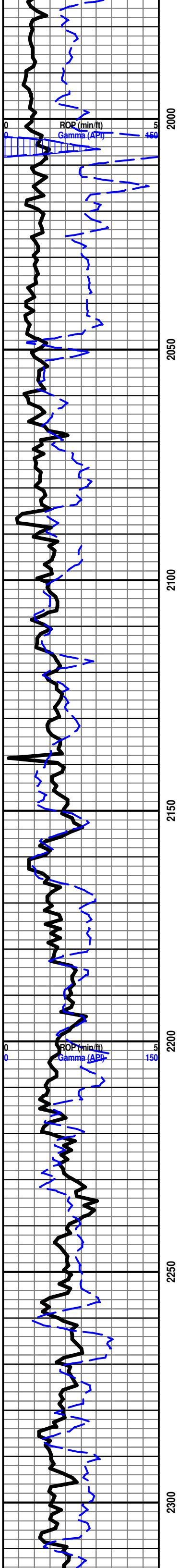
INTERVALS

- Core
- Dst
- Dst

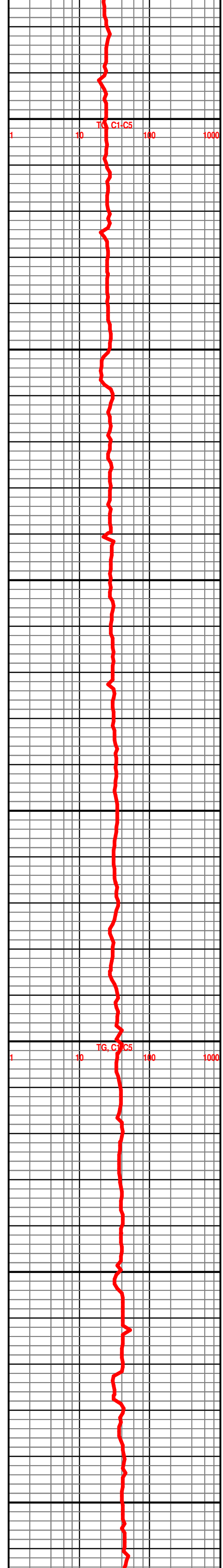
EVENTS

- Rft
- Sidewall

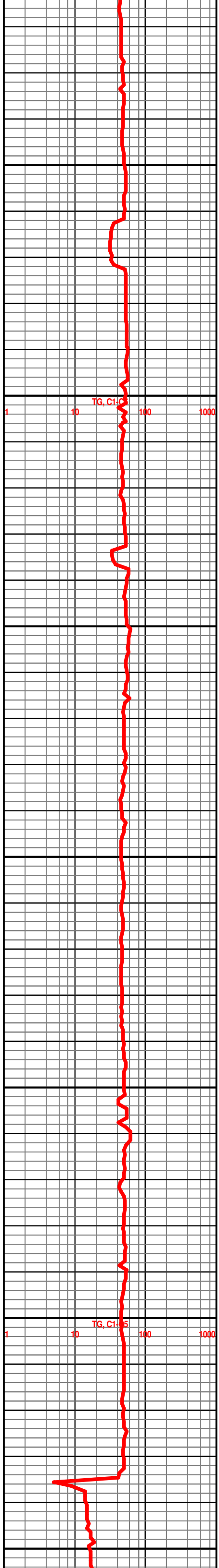
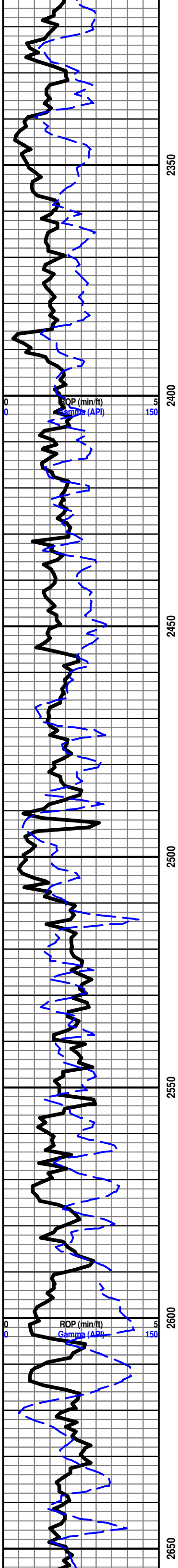


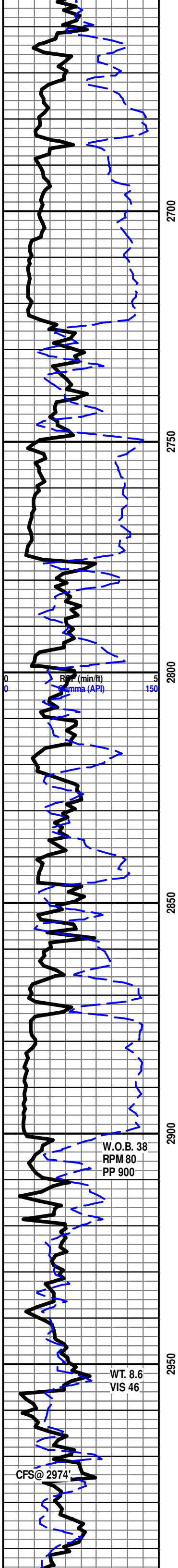


2000 2050 2100 2150 2200 2250 2300



1 10 100 1000





2700

2750

2800

2850

2900

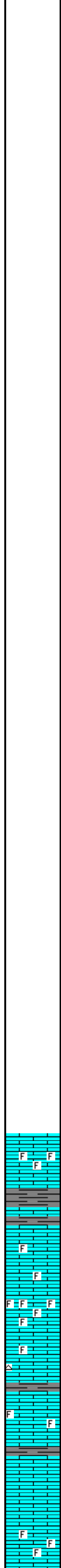
2950

RPM (min/ft)
Gamma (API)

W.O.B. 38
RPM 80
PP 900

WT. 8.6
VIS 46

CFS@ 2974'



BRS 2723'-780'

START 24 HR. MANNED UNIT 8/07/12

HOWARD 2901'-958'

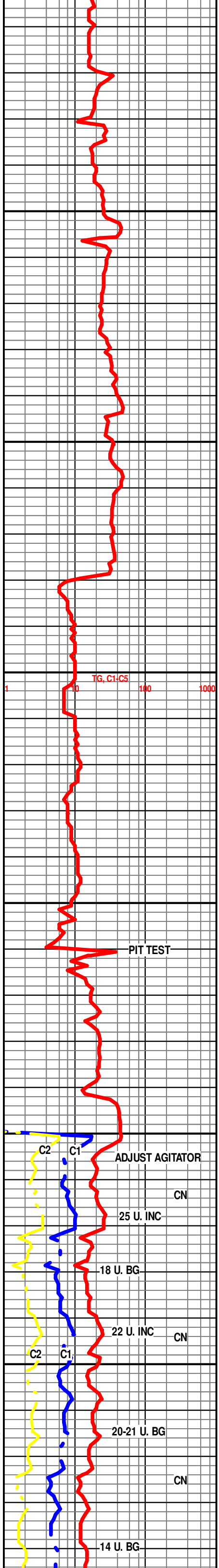
LS- CRM TO LT TN, HD DNS TO V BRIT, MD/F-XLN, S-CHLKY, SCAT IMB FOSS FRAGS, SFT WHT CHLK IP, V DUL YEL FLO IN 40%, NO VIS POR, NO VIS CUT OR SHOW

LS- OFF WHT TO CRM LT GY IP, HD DNS TO BRIT, MD-XLN, RE-XLN, S-CHLKY IP, ABDT IMB FOSS FRAGS THRU, SLI TR PYR IP, DUL YEL FLO IN 20%, NO VIS POR, NO VIS CUT OR SHOW

TOPEKA 2957'-1014'

LS- CRM BFF TO LT TN, HD DNS TO V BRIT, MD-XLN MTRX, S-CHLKY, ABDT SFT WHT CHLK THRU TRAY, SCAT IMB FOSS FRAGS IP, TR FREE FOSSIL, NO VIS FLO, V PR MICRO-VUG POR SCAT IN 3%, TR V PR VUG POR IN 2%, NO VIS CUT OR SHOW

LS- LT TN TO TN, HD DNS TO BRIT IP, F/VF-XLN MTRX, RE-XLN IP, IMB FOSS FRAGS IP, DUL YEL FLO IN 70%, NO VIS POR, NO VIS CUT OR SHOW



TG, C1-C5

PIT TEST

ADJUST AGITATOR

CN

25 U. INC

18 U. BG

22 U. INC

CN

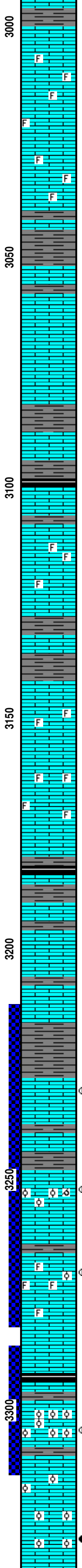
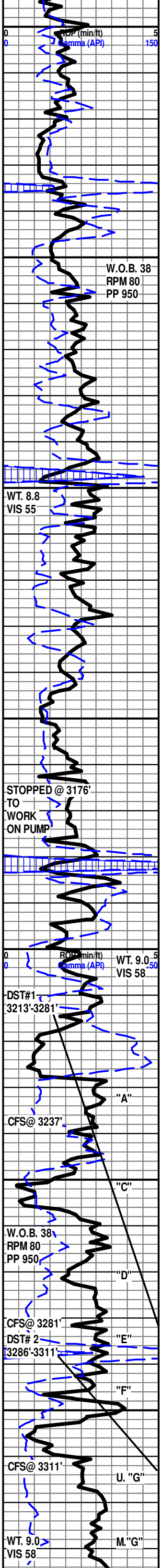
20-21 U. BG

CN

14 U. BG

C2 C1

C2 C1



LS- CRM TO LT TN, HD DNS TO BRIT IP, MD/F-XLN, RE-XLN, S-CHLKY IP, ABDT IMB FOSS FRAGS THRU, SCAT SFT WHT CHLK IP, YEL FLO IN 50%, NO VIS POR, NO VIS CUT OR SHOW

LS- OFF WHT TO CRM BFF, HD DNS TO BRIT, MD-XLN, RE-XLN, S-CHLKY, ABDT SFT WHT CHLK THRU TRAY, IMB FOSS FRAGS, DUL YEL FLO IN 30%, NO VIS POR, NO VIS CUT OR SHOW

LE COMPTON 3058'-1115'

LS- OFF WHT TO CRM, HD DNS TO BRIT IP, F/VF-XLN MTRX, SCAT SFT WHT CHLK IP, PYR IP, DUL YEL FLO IN 40%, NO VIS POR, NO VIS CUT OR SHOW

SH- LT GY TO GY, FRM TO V SFT, SPLNTY SMTH TXT

SH- BLCK SFT CARB

WT. 8.8
VIS 55

LS- CRM BFF TO LT TN, HD DNS TO BRIT IP, MD/F-XLN MTRX, RE-XLN IP, S-CHLKY IP, IMB FOSS FRAGS THRU, TR SFT WHT CHLK IN TRAY, DUL YEL FLO IN 50%, NO VIS POR, NO VIS CUT OR SHOW

SH-LT GY GREENISH IP, FRM TO V SFT, SPLNTY SLTY TXT

LS- LT TN TO TN, HD DNS TO BRIT IP, MD/F-XLN, RE-XLN, SLI TR S-CHLKY, IMB FOSS FRAGS THRU, TR PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

HEEBNER 3181'-1238'

SH- BLCK SFT CARB

LS- OFF WHT TO CRM BFF, HD DNS TO BRIT IP, MD/F-XLN MTRX, S-SUCRO IP, SCAT IMB SM CALC-XLS THRU, V DUL YEL FLO IN 20%, TR V PR MICRO VUG POR SCAT IN 2%, NO VIS CUT OR SHOW

DOUGLAS 3216'-1273'

LANSING 3229'-1286'

3229'-3232' LS- CRM TO LT TN (W/ LT TN OIL STN IN 35-40%), V HD DNS TO TR BRIT IP, F/VF-XLN MTRX, RE-XLN IP, S-SUCRO, SLI TR S-CHLKY IP, SCAT IMB SM CALC-XLS, DUL YEL GLD FLO IN 50%, BRT YEL GLD FLO IN 20%, TR PR TO FR MICRO VUG POR IN 2%, TR V PR VUG POR IP, POSS FRACT POR, FR TO TR GD FLSH CUT IN 30%, GD SLW STRM CUT IN 40%, LT TN LCH ON DSH, GD V STRNG OIL ODOR

LANSING "C" 3247'-1304'

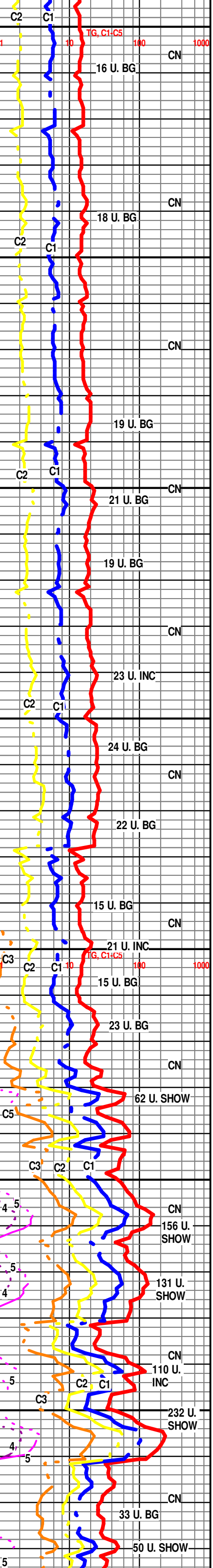
3251'-3255' LS- CRM TO LT TN (W/ LT TN TO TN OIL STN IN 25%), HD DNS TO V BRIT, MD-XLN, SUCRO THRU, TR S-CHLKY, SCAT IMB OOLITES IP, TR SCAT SFT, WHT CHLK IN TRAY, BRT YEL GLD FLO SCAT IN 20%, DUL YEL GLD FLO IN 10%, PR TO FR TO TR GD VUG POR IN 10%, SLI TR OOLMOLDIC POR IP, V PR WK FLSH CUT IN 30%, V PR TO PR SLW STRM CUT IN 30%, TR LT TN LCH ON DSH, V GD OIL ODOR

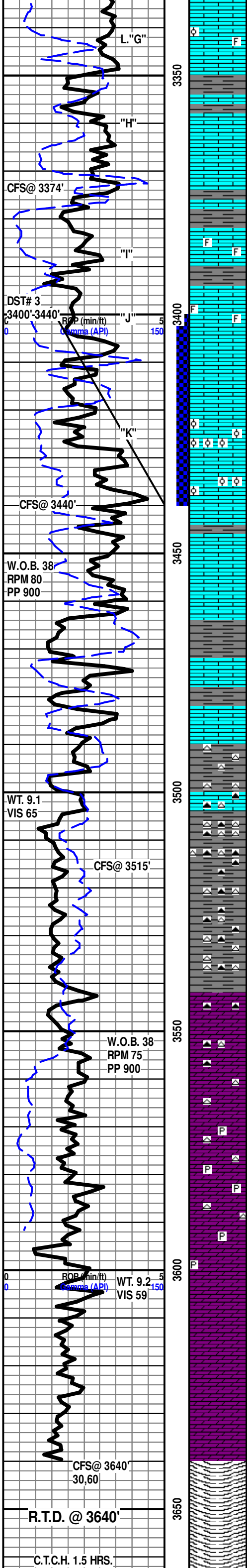
3269'-3272' LS- OFF WHT TO CRM (W/ TN OIL STN IN 20%), HD DNS TO BRIT IP, MD/F-XLN, S-CHLKY THRU, ABDT SFT WHT CHLK THRU TRAY, IMB FOSS FRAGS, TR SCAT SM OOLITES IP, DUL YEL GLD FLO IN 30%, SPTTD BRT YEL GLD FLO IN 10%, PR TO FR VUG POR IN 4%, TR INTER-FOSS POR IP, FR TO GD FLSH CUT IN 40%, GD SLW STRM CUT IN 40%, LT TN LCH ON DSH, STRNG OIL ODOR

LANSING "F" 3297'-1354'

3304'-3307' LS- OFF WHT TO CRM (W/ TN OIL STN IN 40%), HD DNS TO V-BRIT, RE-XLN MTRX, S-SUCRO THRU, S-CHLKY IP, ABDT IMB SM TO MD OOLITES THRU, SCAT LG OOLITES IP, V-OOLITIC, SCAT SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 40%, BRT YEL GLD FLO SCAT IN 15%, FR TO TR GD INTER-OOLITIC POR SCAT IN 10%, FR FLSH CUT IN 70%, FR TO GD SLW STRM CUT IN 70%, TN LCH ON DSH, GD OIL ODOR

3329'-3332' LS- CRM TO LT TN (W/ DK TN OIL STN IN 20%), V HD DNS TO TR BRIT IP, F/VF-XLN MTRX, S-SUCRO IP, IMB LG OOLITES IP, TR IMB FOSS FRAGS IP, DUL YEL GLD FLO IN 30%, NO FLO IN 70%, PR TO TR FR VUG POR IN 2%, POSS FRACT POR, GD FLSH CUT IN 80%, GD SLW STRM CUT IN 80%, DK TN LCH ON DSH, GD STRNG OIL ODOR





LANSING "H" 3358'-1415'

LS- LT TN, V HD DNS TO TR BRIT IP, F/VF-XLN MTRX, RE-XLN IP, IMB CALC-XLS IP, SLI TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM BFF TO LT TN, HD DNS TO BRIT IP, F/VF-XLN MTRX, S-CHLKY IP, SCAT IMB FOSS FRAGS IP, TR IMB SM CALC-XLS IP, DUL YEL FLO IN 15%, NO VIS POR, NO VIS CUT OR SHOW

3408-3411' LS- LT TN TO TN (W/ TN OIL STN IN 30%), HD DNS TO BRIT IP, MD-XLN, V-SUCRO, S-CHLKY, SCAT SFT WHT CHLK IP, SLI TR DISS PRY IP, DUL YEL GLD FLO IN 20%, BRT YEL GLD FLO IN 10%, FR TO TR GD MICRO-VUG POR IN 3%, PR TO FR PP POR IN 1%, V GD FLSH CUT THRU, EXCEL FLSH CUT IN 90%, TN LCH ON DSH, GD OIL ODOR

3425'-3427' LS- CRM BFF TO LT TN (W/ LIVE OIL STN SCAT IN 20%), HD DNS TO BRIT IP, MD/XLN, RE-XLN, S-SUCRO IP, SLI S-CHLKY, SCAT IMB SM TO MICRO OOLITES, V DUL YEL GLD FLO IN 30%, SLI TR YEL GLD FLO IP, PR TO FR TO TR GD MICRO-VUG POR IN 4%, TR V PR INTER-OOLITIC POR IP, FR TO GD FLSH CUT IN 50%, GD SLW STRM CUT IN 60%, TN LCH ON DSH, GD OIL ODOR

LS- CRM TO LT TN, HD DNS TO TR BRIT IP, F/VF-XLN MTRX, SCAT IMB OOLITES IP, IMB SM CALC-XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

BKC 3464'-1521'

SH- RD TO GY IP MOTT, V SFT TO GMMY THRU

LS- OFF WHT TO WHT, V HD DNS, F-XLN, RE-XLN, SCAT IMB MD RND TO S-RND CLR QRTZ GRNS THRU, SCAT SFT WHT CHLK, WHT CHRT IN TRAY, DUL YEL FLO IN 20%, NO VIS POR, NO VIS CUT OR SHOW

SH- RD TO DK RD, FRM TO V SFT GMMY, ABDT WHT, PINK, & ORANGE CHRTS THRU

SH- RD, SFT TO V GMMY THRU, ABDT MOTT CHRTS THRU

ARBUCKLE 3543'-1600'

DOLO- WHT OFF WHT, HD DNS TO TR BRIT IP, MD-XLN, RE-XLN MTRX, ABDT SM TO MD S-ANG DOLO GRNS THRU, MOTT CHRTS THRU TRAY, SCAT PYR IP, SLI TR SFT WHT CHLK IN TRAY, DUL YEL MIN FLO IN 20%, NO VIS POR, NO VIS CUT OR SHOW

DOLO- OFF WHT TO CRM, HD DNS TO BRIT IP, V RE-XLN MTRX, ABDT IMB SM TO MD S-ANG TO RND DOLO GRNS THRU, SCAT IMB LG S-ANG DOLO GRNS IP, SCAT DISS PYR IP, TR DUL YEL MIN FLO IP, TR V PR INTER-GRN POR IP, NO VIS CUT OR SHOW

DOLO- WHT TO OFF WHT, HD DNS TO BRIT IP, RE-XLN MTRX, ABDT IMB MD TO LG S-ANG DOLO GRNS THRU, SCAT DISS PYR, SLI TR WHT CHRT IP, YEL MIN FLO IN 20%, DUL YEL MIN FLO IN 10%, V PR TO PR INTER-GRN POR IN 1%, NO VIS CUT OR SHOW

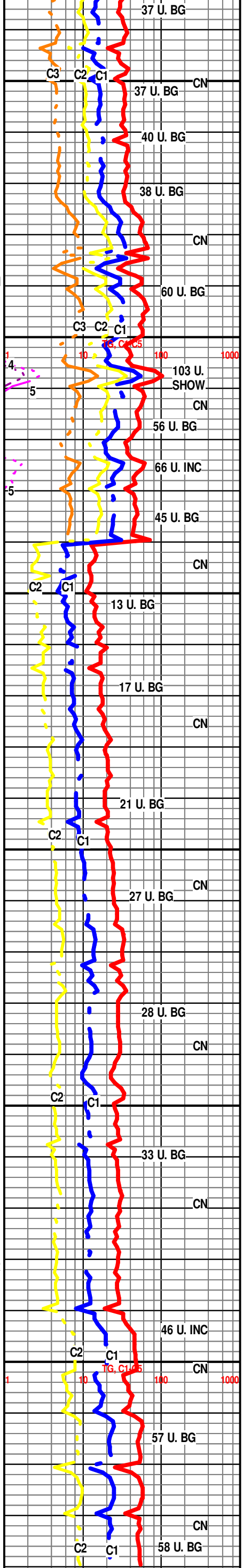
DOLO- WHT TO OFF WHT, HD DNS TO BRIT IP, MD-XLN IP, RE-XLN MTRX, ABDT IM SM TO MD S-ANG TO RND DOLO GRNS THRU, SCAT IMB SM S-RND CLR QRTZ GRNS, DUL YEL MIN FLO IN 25%, SPTTD YEL MIN FLO IP, NO VIS POR, NO VIS CUT OR SHOW

R.T.D. @ 1:00 A.M. 8/12/12

DROP SURVEY

T.O.F.L. @ 2:30 A.M.

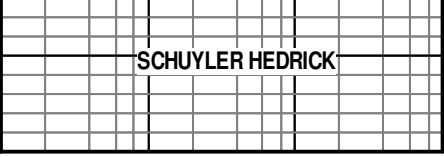
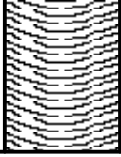
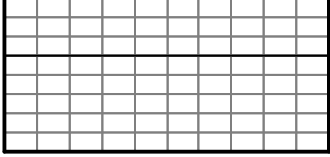
WEATHERFORD/ LIBERAL, KANSAS



R.T.D. @ 3640

SAMPLES WILL BE DELIVERED TO KGS

THANK YOU FOR CHOOSING EARTH TECH



SCHUYLER HEDRICK