Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1086377

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 # 5316
Name: Falcon Exploration, Inc.
Address 1: 125 N MARKET STE 1252
Address 2:
City: WICHITA State: KS Zip: 67202 + 1719
Contact Person: CYNDE WOLF
Phone: (316) 262-1378
CONTRACTOR: License # 5142
Name: Sterling Drilling Company
Wellsite Geologist: DAVE WILLIAMS
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 #:

03/09/2012	03/23/2012	04/13/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-069-20367-00-00
Spot Description:
NE - SW - NE - NW Sec. 12 Twp. 28 S. R. 30 ☐ East ☑ West
880 Feet from ☑ North / ☐ South Line of Section
1720 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: Gray
Lease Name: HAROLD SMITH Well #: 1-12(NW)
Field Name: RENEGADE SE
Producing Formation: NA
Elevation: Ground: 2795 Kelly Bushing: 2808
Total Vertical Depth: 5285 Plug Back Total Depth: 4623
Amount of Surface Pipe Set and Cemented at: 1874 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: 5900 ppm Fluid volume: 125 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:
Operator Name: SHAWN HAYDEN
Lease Name: LIZ SMITH License #: 33562
Quarter NE Sec. 26 Twp. 30 S. R. 34 ☐ East ☑ West
County: HASKELL Permit #: D26802

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: 07/03/2012
☑ **Confidential Release Date:** 07/03/2014
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 07/03/2012

[redacted] 1086377

Operator Name: Falcon Exploration, Inc. Lease Name: HAROLD SMITH Well #: 1-12(NW)

Sec. 12 Twp. 28 S. R. 30 ☐ East ☑ West County: Gray

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
Attached	Attached	Attached

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	24	1874	65:35;CLASS A	825	2% GEL, 3% CC
PRODUCTION	7.875	5.5	14.5	4644	AA-2	165	

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
4	4546-4550		
	4530' SET BRIDGE PLUG		
4	4212-4214	1000 GAL 15% MCA	4212-4231
4	4224-4231		

TUBING RECORD: Size: 2.375 Set At: 4228 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:
4212-4231

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

Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	HAROLD SMITH 1-12(NW)
Doc ID	1086377

All Electric Logs Run

DIL
MEL
BHCS
CNL/CDL

Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	HAROLD SMITH 1-12(NW)
Doc ID	1086377

Tops

Name	Top	Datum
TARKIO	3542	-734
HEEBNER	4106	-1298
LANSING	4204	-1396
STARK	4540	-1732
MARMATON	4700	-1892
PAWNEE	4784	-1976
MORROW SH	5010	-2202
MISS	5052	-2244
ST LOUIS	5102	-2294

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/

July 03, 2012

CYNDE WOLF
Falcon Exploration, Inc.
125 N MARKET STE 1252
WICHITA, KS 67202-1719

Re: ACO1
API 15-069-20367-00-00
HAROLD SMITH 1-12(NW)
NW/4 Sec.12-28S-30W
Gray 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,
CYNDE WOLF

DIAMOND TESTING

General Information Report

General Information

Company Name	FALCON EXPLORATION, INC.	**Representative**	TIM VENTERS
Contact	MIKE MITCHELL	**Well Operator**	FALCON EXPLORATION, INC
Well Name	HAROLD SMITH #1-12 (NW)	**Report Date**	2012/03/14
Unique Well ID	DST #1, STOTLER, 3456-3520	**Prepared By**	TIM VENTERS
Surface Location	SEC 12-28S-30W, GRAY CO. KS.		
Field	RENEGADE SE	**Qualified By**	DAVE WILLIAMS
Well Type	Vertical		
Test Type	CONVENTIONAL		
Formation	DST #1, STOTLER, 3456-3520		
Well Fluid Type	02 Gas		
Start Test Date	2012/03/14	**Start Test Time**	10:25:00
Final Test Date	2012/03/14	**Final Test Time**	22:13:00

Test Recovery:

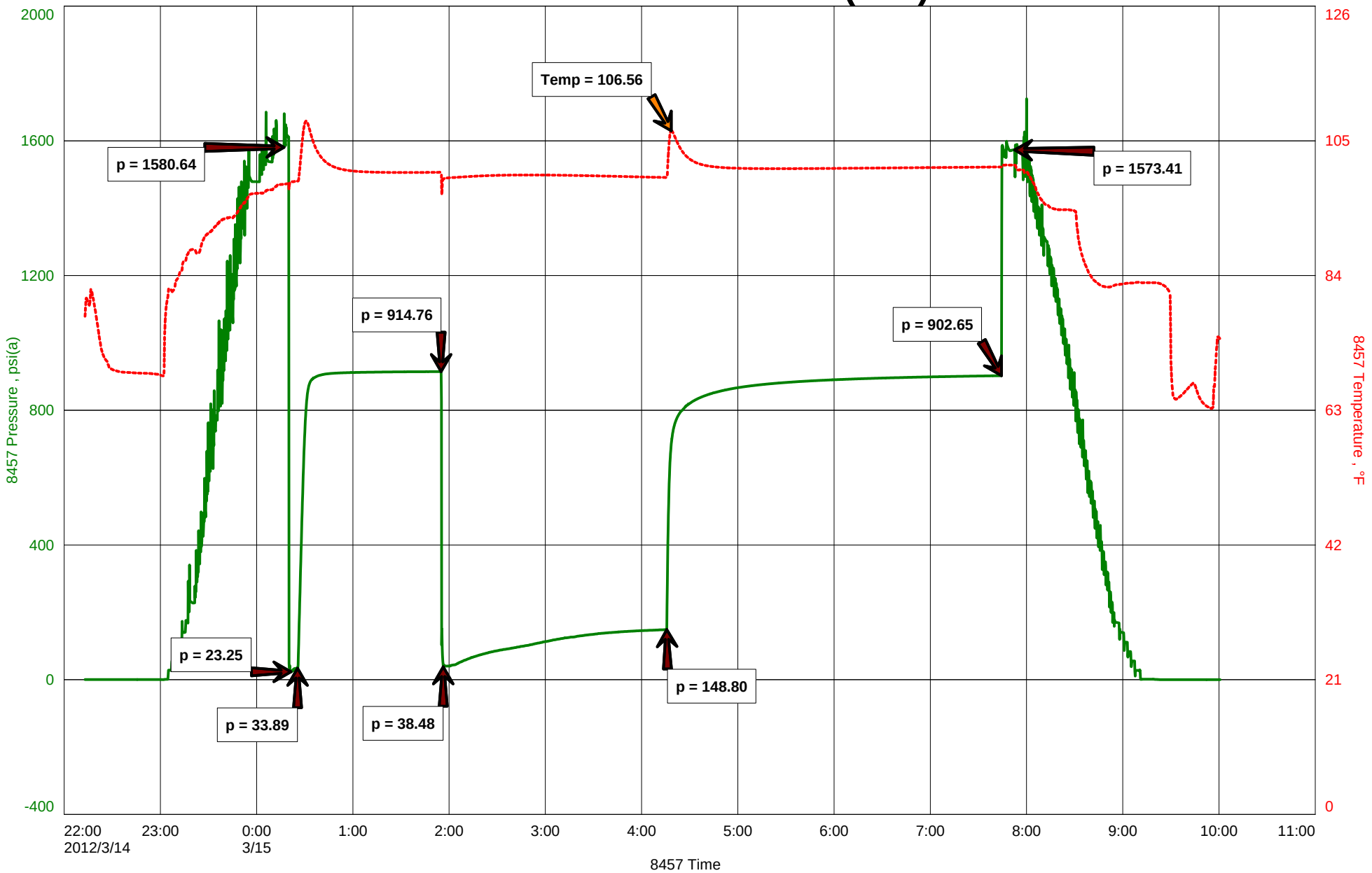
RECOVERED: 3325' GAS IN PIPE
100' MUD

TOOL SAMPLE: 3% GAS, 6% OIL, 91% MUD

FALCON EXPLORATION, INC.
DST #1, STOTLER, 3456-3520
Start Test Date: 2012/03/14
Final Test Date: 2012/03/14

HAROLD SMITH #1-12 (NW)
Formation: DST #1, STOTLER, 3456-3520
Pool: RENEGADE SE
Job Number: T029

HAROLD SMITH #1-12 (NW)



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET

FILE: HAROLDSMITH112NWDST1

TIME ON: 10:25

TIME OFF: 22:13

Company FALCON EXPLORATION, INC. Lease & Well No. HAROLD SMITH #1-12 (NW)

Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.

Elevation 2808 KB Formation STOTLER Effective Pay ____ Ft. Ticket No. TO29

Date 3-14-12 Sec. 12 Twp. 28 S Range 30 W County GRAY State KANSAS

Test Approved By DAVE WILLIAMS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 1 Interval Tested from 3456 ft. to 3520 ft. Total Depth 3520 ft.

Packer Depth 3451 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Packer Depth 3456 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 3437 ft. Recorder Number 8457 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 3517 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth ____ ft. Recorder Number ____ Cap. ____ P.S.I.

Mud Type CHEMICAL Viscosity 56 Drill Collar Length 334 ft. I.D. 2 1/4 in.

Weight 9.0 Water Loss 7.6 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in

Chlorides 2,500 P.P.M. Drill Pipe Length 3089 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 32 ft. Size 4 1/2-FH in

32' DP IN ANCHOR

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: GOOD 2 INCH BLOW, BUILDING, REACHING BOB 1 MIN. (NOBB)

2nd Open: VERY GOOD BLOW HITTING BOB INSANTANEOUSLY. (NOBB)

Recovered 3325 ft. of GAS IN PIPE

Recovered 100 ft. of MUD

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Remarks:

TOOL SAMPLE: 3% GAS, 6% OIL, 91% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 12:32 PM A.M. P.M. Time Started Off Bottom 7:57 PM A.M. P.M. Maximum Temperature 107 deg.

Initial Hydrostatic Pressure ..... (A) 1581 P.S.I.

Initial Flow Period ..... Minutes 5 (B) 23 P.S.I. to (C) 34 P.S.I.

Initial Closed In Period ..... Minutes 90 (D) 915 P.S.I.

Final Flow Period ..... Minutes 140 (E) 38 P.S.I. to (F) 149 P.S.I.

Final Closed In Period ..... Minutes 210 (G) 903 P.S.I.

Final Hydrostatic Pressure ..... (H) 1523 P.S.I.

DIAMOND TESTING

General Information Report

General Information

Company Name	FALCON EXPLORATION, INC.	**Representative**	TIM VENTERS
Contact	MIKE MITCHELL	**Well Operator**	FALCON EXPLORATION, INC.
Well Name	HAROLD SMITH #1-12 (NW)	**Report Date**	2012/03/17
Unique Well ID	DST #2, LANSING "A", 4180-4240	**Prepared By**	TIM VENTERS
Surface Location	SEC12-28S-30W, GRAY CO. KS.		
Field	RENEGADE SE	**Qualified By**	DAVE WILLIAMS
Well Type	Vertical		
Test Type	CONVENTIONAL		
Formation	DST #2, LANSING "A", 4180-4240		
Well Fluid Type	02 Gas		
Start Test Date	2012/03/16	**Start Test Time**	14:24:00
Final Test Date	2012/03/17	**Final Test Time**	00:54:00

Test Recovery:

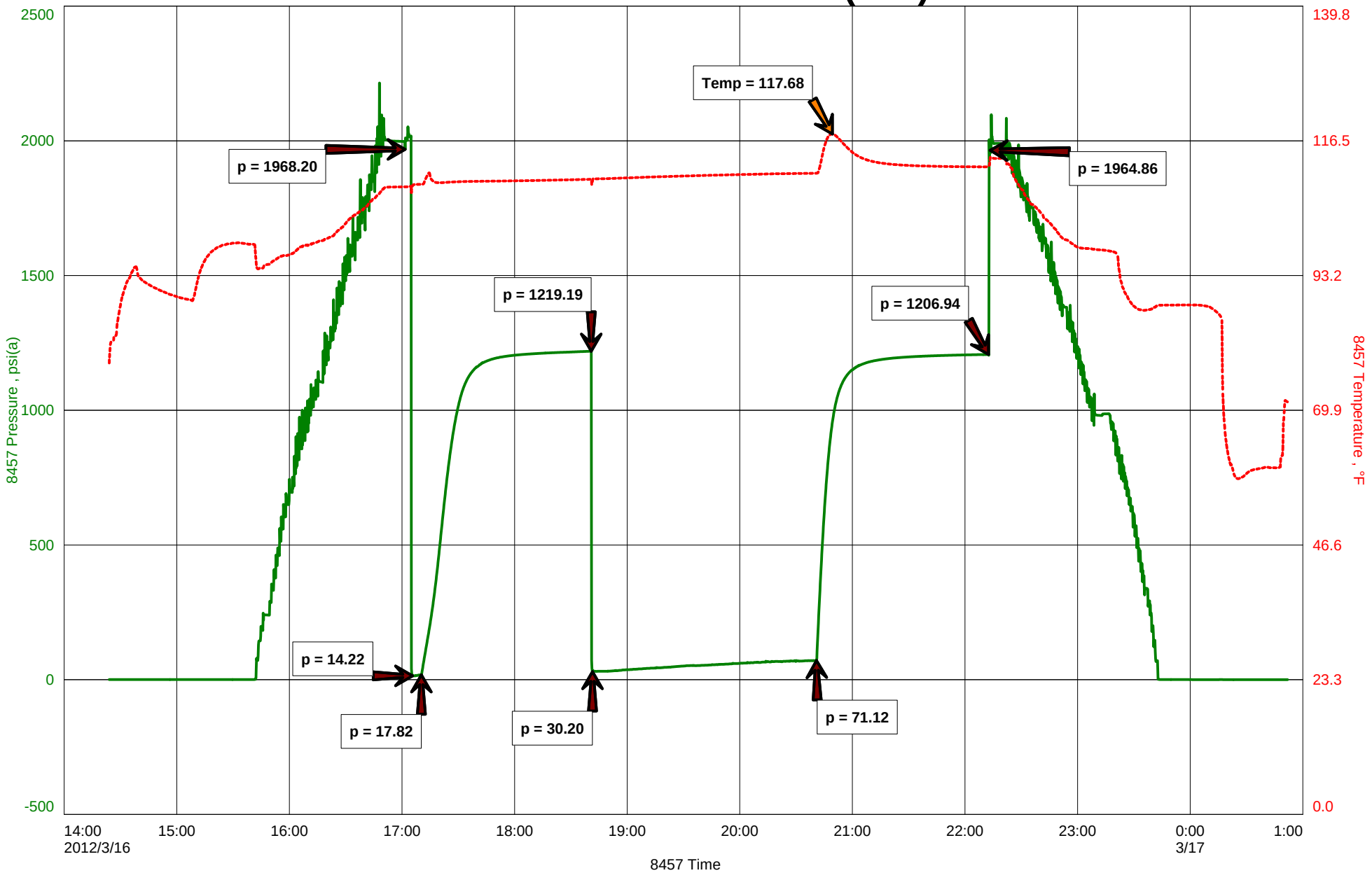
RECOVERED: 3985' GAS IN PIPE
130' MUD

TOOL SAMPLE: 1% OIL, 99% MUD

FALCON EXPLORATION, INC.
DST #2, LANSING "A", 4180-4240
Start Test Date: 2012/03/16
Final Test Date: 2012/03/17

HAROLD SMITH #1-12 (NW)
Formation: DST #2, LANSING "A", 4180-4240
Pool: RENEGADE SE
Job Number: T030

HAROLD SMITH #1-12 (NW)



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET

FILE: HAROLDSMITH112NWDST2

TIME ON: 14:24 3-16-12

TIME OFF: 00:54 3-17-12

Company FALCON EXPLORATION, INC. Lease & Well No. HAROLD SMITH #1-12 (NW)

Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.

Elevation 2808 KB Formation LANSING "A" Effective Pay ____ Ft. Ticket No. TO30

Date 3-16-12 Sec. 12 Twp. 28 S Range 30 W County GRAY State KANSAS

Test Approved By DAVE WILLIAMS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 2 Interval Tested from 4180 ft. to 4240 ft. Total Depth 4240 ft.

Packer Depth 4175 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Packer Depth 4180 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 4161 ft. Recorder Number 8457 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 4237 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth ____ ft. Recorder Number ____ Cap. ____ P.S.I.

Mud Type CHEMICAL Viscosity 49 Drill Collar Length 334 ft. I.D. 2 1/4 in.

Weight 9.15 Water Loss 8.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in

Chlorides 2,100 P.P.M. Drill Pipe Length 3813 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 28 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 32' DP IN ANCHOR Surface Choke Size 1 in. Bottom Choke Size 5/8 in

---

Blow: 1st Open: WEAK 1 INCH BLOW, BUILDING, REACHING BOB 3 1/2 MIN. (NOBB)

2nd Open: VERY GOOD BLOW HITTING BOB INSANTANEOUSLY. (NOBB)

Recovered 3985 ft. of GAS IN PIPE

Recovered 130 ft. of MUD

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Remarks: ____

TOOL SAMPLE: 1% OIL, 99% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 5:05 PM A.M. P.M. Time Started Off Bottom 10:10 PM A.M. P.M. Maximum Temperature 118 deg.

Initial Hydrostatic Pressure ..... (A) 1968 P.S.I.

Initial Flow Period ..... Minutes 5 (B) 14 P.S.I. to (C) 18 P.S.I.

Initial Closed In Period ..... Minutes 90 (D) 1219 P.S.I.

Final Flow Period ..... Minutes 120 (E) 30 P.S.I. to (F) 71 P.S.I.

Final Closed In Period ..... Minutes 90 (G) 1207 P.S.I.

Final Hydrostatic Pressure ..... (H) 1965 P.S.I.

DIAMOND TESTING

General Information Report

General Information

Company Name	FALCON EXPLORATION, INC.	**Representative**	TIM VENTERS
Contact	MIKE MITCHELL	**Well Operator**	FALCON EXPLORATION, INC.
Well Name	HAROLD SMITH #1-12 (NW)	**Report Date**	2012/03/18
Unique Well ID	DST #3, KANSAS CITY "H", 4380-4409	**Prepared By**	TIM VENTERS
Surface Location	SEC 12-28S-30W, GRAY CO. KS.		
Field	RENEGADE SE	**Qualified By**	DAVE WILLIAMS
Well Type	Vertical		
Test Type	CONVENTIONAL		
Formation	DST #3, KC "H", 4380-4409		
Well Fluid Type	02 Gas		
Start Test Date	2012/03/17	**Start Test Time**	20:20:00
Final Test Date	2012/03/18	**Final Test Time**	05:51:00

Test Recovery:

RECOVERED: 35' WCM, 23% WATER, 77% MUD
65' MCW, 69% WATER, 31% MUD
690' SMCW, 93% WATER, 7% MUD
60' HMCW, 55% WATER, 45% MUD
850' TOTAL FLUID

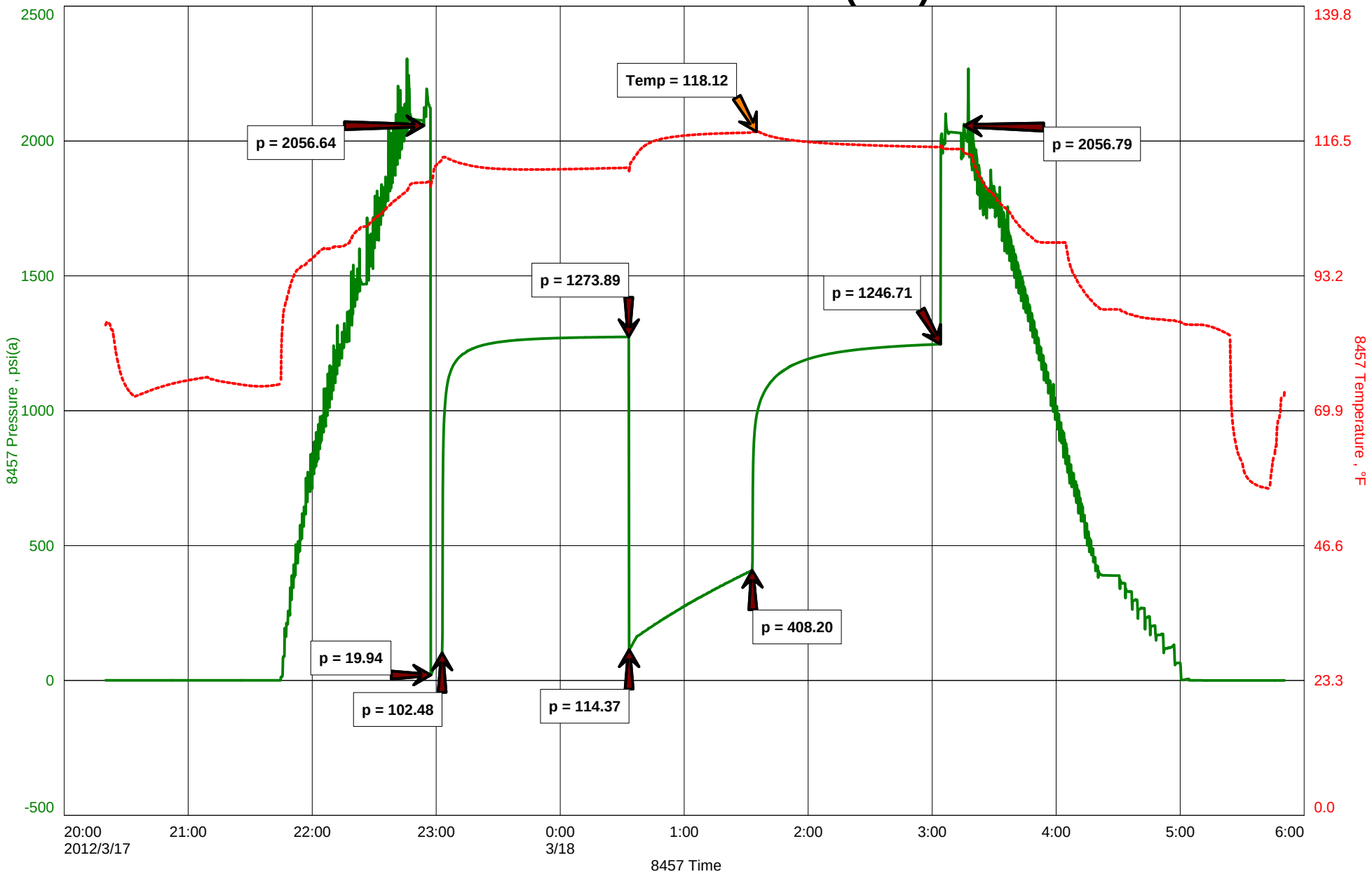
TOOL SAMPLE: TRACE OIL, 71% WATER, 29% MUD

CHLORIDES: 87,000 ppm
PH: 7.0
RW: .08 @ 75 deg.

FALCON EXPLORATION, INC.
DST #3, KANSAS CITY "H", 4380-4409
Start Test Date: 2012/03/17
Final Test Date: 2012/03/18

HAROLD SMITH #1-12 (NW)
Formation: DST #3, KC "H", 4380-4409
Job Number: T031

HAROLD SMITH #1-12 (NW)



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET

FILE: HAROLDSMITH112NWDST3

TIME ON: 20:20 3-17-12

TIME OFF: 05:51 3-18-12

Company FALCON EXPLORATION, INC. Lease & Well No. HAROLD SMITH #1-12 (NW)

Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.

Elevation 2808 KB Formation KANSAS CITY "H" Effective Pay ____ Ft. Ticket No. TO31

Date 3-17-12 Sec. 12 Twp. 28 S Range 30 W County GRAY State KANSAS

Test Approved By DAVE WILLIAMS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 3 Interval Tested from 4380 ft. to 4409 ft. Total Depth 4409 ft.

Packer Depth 4375 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Packer Depth 4380 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 4361 ft. Recorder Number 8457 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 4377 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth ____ ft. Recorder Number ____ Cap. ____ P.S.I.

Mud Type CHEMICAL Viscosity 49 Drill Collar Length 334 ft. I.D. 2 1/4 in.

Weight 9.1 Water Loss 8.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in

Chlorides 3,600 P.P.M. Drill Pipe Length 4013 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 29 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK 1 INCH BLOW, BUILDING TO 6 1/2 INCHES. (NOBB)

2nd Open: WEAK SURFACE BLOW, BUILDING, REACHING BOB 13 MIN. (VWSBLASTING 20-25 MIN.)

Recovered 35 ft. of WCM, 23% WATER, 77% MUD

Recovered 65 ft. of MCW, 69% WATER, 31% MUD

Recovered 690 ft. of SMCW, 93% WATER, 7% MUD

Recovered 60 ft. of HMCW, 55% WATER, 45% MUD

Recovered ____ ft. of CHLORIDES: 87,000 ppm

Recovered ____ ft. of PH: 7.0

Remarks: RW: .08 @ 75 deg.

TOOL SAMPLE: TRACE OIL, 71% WATER, 29% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 10:57 PM A.M. P.M. Time Started Off Bottom 3:02 AM A.M. P.M. Maximum Temperature 118 deg.

Initial Hydrostatic Pressure ..... (A) 2057 P.S.I.

Initial Flow Period ..... Minutes 5 (B) 20 P.S.I. to (C) 102 P.S.I.

Initial Closed In Period ..... Minutes 90 (D) 1274 P.S.I.

Final Flow Period ..... Minutes 60 (E) 114 P.S.I. to (F) 408 P.S.I.

Final Closed In Period ..... Minutes 90 (G) 1247 P.S.I.

Final Hydrostatic Pressure ..... (H) 2057 P.S.I.

DIAMOND TESTING

General Information Report

General Information

Company Name	FALCON EXPLORATION, INC.	**Representative**	TIM VENTERS
Contact	MIKE MITCHELL	**Well Operator**	FALCON EXPLORATION, INC.
Well Name	HAROLD SMITH #1-12 (NW)	**Report Date**	2012/03/19
Unique Well ID	DST #4, PAWNEE, 4780-4810	**Prepared By**	TIM VENTERS
Surface Location	SEC 12-28S-30W, GRAY CO. KS.		
Field	RENEGADE SE	**Qualified By**	DAVE WILLIAMS
Well Type	Vertical		
Test Type	CONVENTIONAL		
Formation	DST #4, PAWNEE, 4780-4810		
Well Fluid Type	01 Oil		
Start Test Date	2012/03/19	**Start Test Time**	14:14:00
Final Test Date	2012/03/19	**Final Test Time**	23:06:00

Test Recovery:

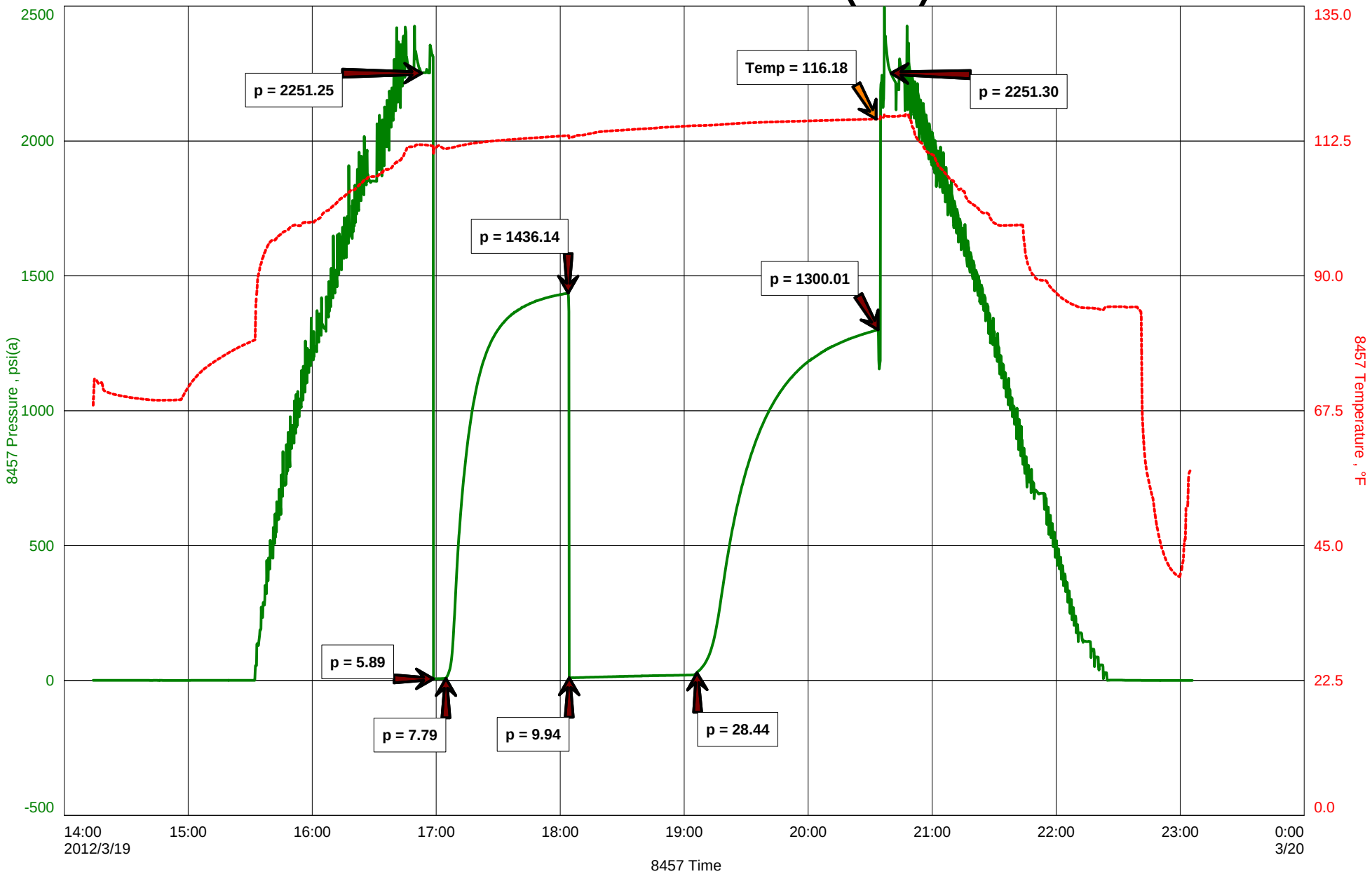
RECOVERED: 10' MUD

TOOL SAMPLE: TRACE OIL, 100% MUD

FALCON EXPLORATION, INC.
DST #4, PAWNEE, 4780-4810
Start Test Date: 2012/03/19
Final Test Date: 2012/03/19

HAROLD SMITH #1-12 (NW)
Formation: DST #4, PAWNEE, 4780-4810
Pool: RENEGADE SE
Job Number: T032

HAROLD SMITH #1-12 (NW)



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET

FILE: HAROLDSMITH112NWDST4

TIME ON: 14:14

TIME OFF: 23:06

Company FALCON EXPLORATION, INC. Lease & Well No. HAROLD SMITH #1-12 (NW)

Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.

Elevation 2808 KB Formation PAWNEE Effective Pay ____ Ft. Ticket No. TO32

Date 3-19-12 Sec. 12 Twp. 28 S Range 30 W County GRAY State KANSAS

Test Approved By DAVE WILLIAMS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 4 Interval Tested from 4780 ft. to 4810 ft. Total Depth 4810 ft.

Packer Depth 4775 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Packer Depth 4780 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 4761 ft. Recorder Number 8457 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 4807 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth ____ ft. Recorder Number ____ Cap. ____ P.S.I.

Mud Type CHEMICAL Viscosity 50 Drill Collar Length 334 ft. I.D. 2 1/4 in.

Weight 9.2 Water Loss 7.6 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in

Chlorides 2,200 P.P.M. Drill Pipe Length 4413 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 30 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK SURFACE BLOW, BUILDING TO 1/4 INCH (NOBB)

2nd Open: VERY WEAK SURFACE BLOW. (NOBB)

Recovered 10 ft. of MUD

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Remarks: ____

TOOL SAMPLE: TRACE OIL, 100% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 4:58 PM A.M. P.M. Time Started Off Bottom 8:33 PM A.M. P.M. Maximum Temperature 116 deg.

Initial Hydrostatic Pressure ..... (A) 2251 P.S.I.

Initial Flow Period ..... Minutes 5 (B) 6 P.S.I. to (C) 8 P.S.I.

Initial Closed In Period ..... Minutes 60 (D) 1436 P.S.I.

Final Flow Period ..... Minutes 60 (E) 10 P.S.I. to (F) 28 P.S.I.

Final Closed In Period ..... Minutes 90 (G) 1300 P.S.I.

Final Hydrostatic Pressure ..... (H) 2251 P.S.I.

DIAMOND TESTING

General Information Report

General Information

Company Name	FALCON EXPLORATION, INC.	**Representative**	TIM VENTERS
Contact	MIKE MITCHELL	**Well Operator**	FALCON EXPLORATION, INC.
Well Name	HAROLD SMITH #1-12 (NW)	**Report Date**	2012/03/22
Unique Well ID	DST #5, ST. LOUIS UPPER "B", 5124-5166	**Prepared By**	TIM VENTERS
Surface Location	SEC 12-28S-30W, GRAY CO. KS.		
Field	RENEGADE SE	**Qualified By**	DAVE WILLIAMS
Well Type	Vertical		
Test Type	CONVENTIONAL		
Formation	DST #5, ST. LOUIS UPPER "B", 5124-5166		
Well Fluid Type	01 Oil		
Start Test Date	2012/03/21	**Start Test Time**	13:29:00
Final Test Date	2012/03/22	**Final Test Time**	01:35:00

Test Recovery:

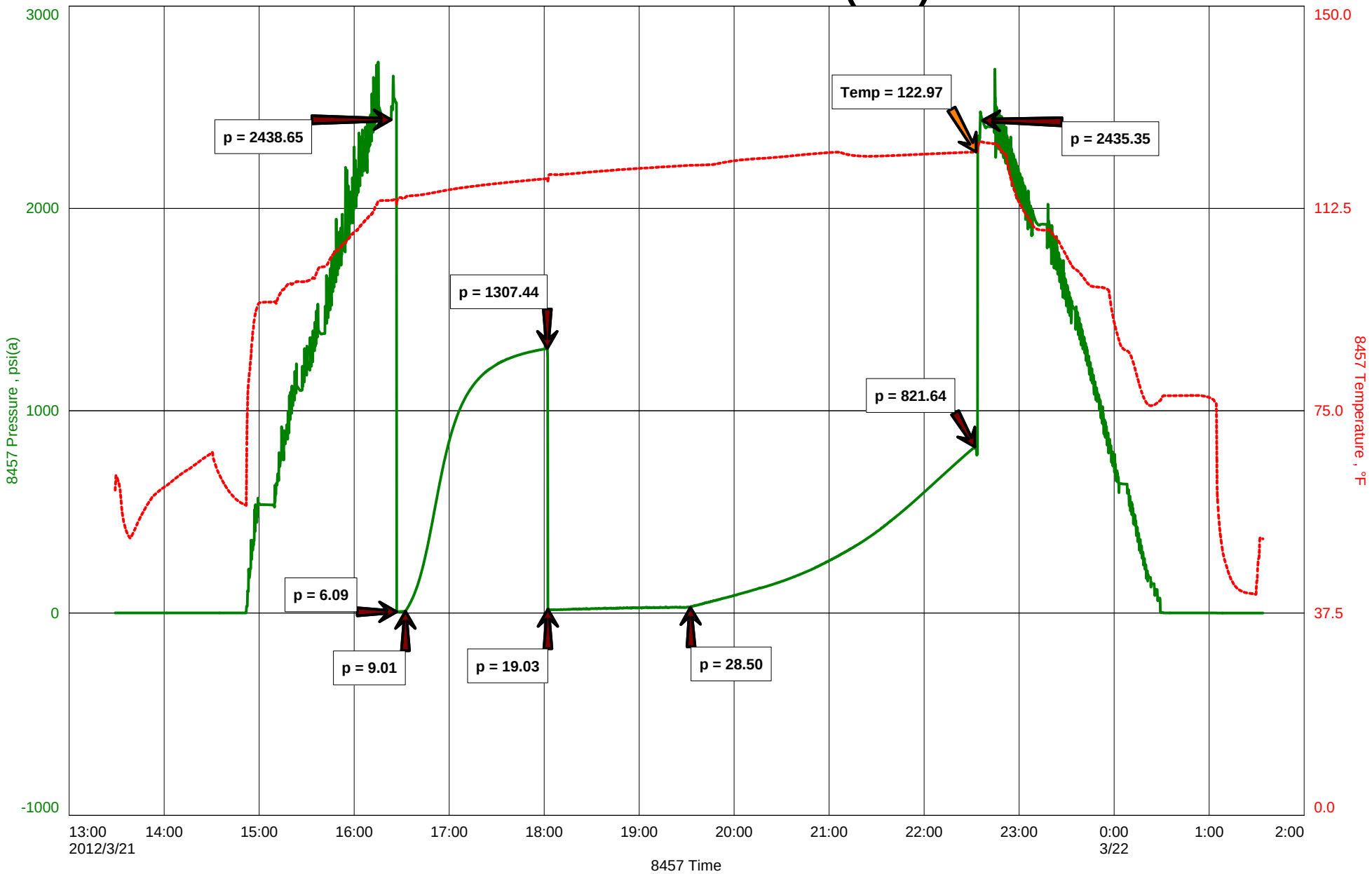
RECOVERED: 285' GAS IN PIPE
20' VSOCM, 4% OIL, 96% MUD

TOOL SAMPLE: 14% GAS, 17% OIL, 69% MUD

FALCON EXPLORATION, INC.
DST #5, ST. LOUIS UPPER "B", 5124-5166
Start Test Date: 2012/03/21
Final Test Date: 2012/03/22

HAROLD SMITH #1-12 (NW)
Formation: DST #5, ST. LOUIS UPPER "B", 5124-5166
Pool: RENEGADE SE
Job Number: T033

HAROLD SMITH #1-12 (NW)



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET

FILE: HAROLDSMITH112NWDST5

TIME ON: 13:29 3-21-12

TIME OFF: 01:35 3-22-12

Company FALCON EXPLORATION, INC. Lease & Well No. HAROLD SMITH #1-12 (NW)

Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.

Elevation 2808 KB Formation ST. LOUIS UPPER "B" Effective Pay _____ Ft. Ticket No. TO33

Date 3-21-12 Sec. 12 Twp. 28 S Range 30 W County GRAY State KANSAS

Test Approved By DAVE WILLIAMS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 5 Interval Tested from 5124 ft. to 5166 ft. Total Depth 5166 ft.

Packer Depth 5119 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Packer Depth 5124 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 5105 ft. Recorder Number 8457 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 5121 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type CHEMICAL Viscosity 61 Drill Collar Length 334 ft. I.D. 2 1/4 in.

Weight 9.2 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in

Chlorides 1,700 P.P.M. Drill Pipe Length 4757 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 42 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK SURFACE BLOW. (NOBB)

2nd Open: VERY WEAK SURFACE BLOW, BUILDING TO 7 INCHES. (NOBB)

Recovered 285 ft. of GAS IN PIPE

Recovered 20 ft. of VSOCM, 4% OIL, 96% MUD

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Remarks: _____

TOOL SAMPLE: 14% GAS, 17% OIL, 69% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 4:26 P.M. A.M. Time Started Off Bottom 10:31 P.M. A.M. Maximum Temperature 123 deg.

Initial Hydrostatic Pressure ..... (A) 2439 P.S.I.

Initial Flow Period ..... Minutes 5 (B) 6 P.S.I. to (C) 9 P.S.I.

Initial Closed In Period ..... Minutes 90 (D) 1307 P.S.I.

Final Flow Period ..... Minutes 90 (E) 19 P.S.I. to (F) 29 P.S.I.

Final Closed In Period ..... Minutes 180 (G) 822 P.S.I.

Final Hydrostatic Pressure ..... (H) 2435 P.S.I.

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

Well Name:	HAROLD SMITH #1-12 (NW)		
Location:	NE-SW-NE-NW OF SEC. 12 - 28 S. - 30 W.		
License Number:	API #15-069-20367-00-00	Region:	GRAY CO., KANSAS
Spud Date:	03/09/12	Drilling Completed:	3/23/12
Surface Coordinates:	880' FNL & 1720' FWL		
Bottom Hole Coordinates:			
Ground Elevation (ft):	2795'	K.B. Elevation (ft):	2808'
Logged Interval (ft):	BASE SURFTo:E(5285'	Total Depth (ft):	5285'
Formation:	MISSISSIPPIAN "ST. LOUIS".		
Type of Drilling Fluid:	CHEMICAL MUD		

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

OPERATOR

Company: FALCON EXPLORATION, INC.
Address: 125 NORTH MARKET, STE. # 1251
WICHITA, KANSAS 67202

GEOLOGIST

Name: DAVID P. WILLIAMS
Company: DW ENERGY, LLC
Address: 312 NORTH BROADVIEW STREET
WICHITA, KANSAS 67208

Casing & Deviation Surveys

Spud at 7:15 pm on 03/09/12. Drilled 12-1/4" to 1871'. Ran 47 joints of new 24#, 8-5/8" casing. Tallied 1846'. Set at 1866' KB . Welded straps on GS & bottom 3 joints, then tack welded all collars. Float insert in 1st collar. Centralizers (3) 1-3-41. Baskets (3) 1-40-42. Cemented with 675 sks 65/35 Poz; 6% Gel; 3% CC, 1/4# FS.; Tailed wiith 150 sks Class A; 2% Ge; 3% CC. Cement did circulate to pit. Plug down at 1:30 pm on 03/11/12. Allied Cementing ticket #27169. □□□□□□□□Deviation Survey's Taken: @ 1871'= 1 1/4 degrees; @ 3520' = 3/4 degree; @ 4240'= 1 degree; @ 4409'= 3/4 degree; @ 4810'= 1 degree; @ 5166' = 1 degree; @ 5285' = 3/4 degree.□□□□

DSTs

DST # 1 3456' - 3520'. Times: 5"- 90"- 140"-210"; Blow: IF: Strong BOB/ 1". FF: Strong w/ GTS in 2 1/2 Min./TSTM. (See Gauge Report Below). Recovery: 3328' GIP; 100' DM.
Pressures: IH= 1581#; FH= 1573#; IF= 23-34#; FF= 38-149#; ISIP= 915#; FSIP= 903#; Temp= 107 degrees F.

DST # 1 Gas Flow:; FF GTS On Open TSTM; @ 10" = 32.4 Mcf; @ 20" = 56.3 Mcf; @ 30" = 78.6 Mcf; @ 40" = 89.7 Mcf; @ 50" = 99.5 Mcf; @ 60" = 112 Mcf; @ 70" = 124.5 Mcf; @ 80" = 131.4 Mcf; @ 90" = 141.2 Mcf; @ 100"= 146.7 Mcf; @ 110"= 150.9 Mcf; @ 120"= 155.1 Mcf; @ 130"= 156.5 Mcf; @ 140"= 157.9 Mcf.

DST # 2- 4180' - 4240'. Times: 5"- 90"- 120"-90"; Blow: IF: Strong BOB/ 3.5". FF: Strong w/ GTS Instant/TSTM. (See Gauge Report Below). Recovery: 3985' GIP ; 130' DM. Tool Spl:(1% O; 99% M.). Pressures: IH= 1968#; FH= 1965#; IF= 14-18#; FF= 30-71#; ISIP= 1219#; FSIP= 1207#; Temp = 118 degrees F.

DST # 2 Gas Flow:; FF GTS On Open TSTM; @ 40"= 7.32 Mcf; @ 50"=12.2 Mcf; @ 60"=20.9 Mcf; @ 70"=21.9 Mcf; @ 80"= 23.6 Mcf; @ 90"=24.5 Mcf; @ 100"=26.4 Mcf; @ 110"=27.3 Mcf;
@ 120" = 28.0 Mcf.

DST # 3 4380' - 4409'. Times: 5"- 90"- 60"-90"; Blow: IF: Weak/1" Inc to 6.5"". FF: Weak Building to Strong B.O.B./13.5". Recovery: 850' Total Fluid: 35' WCM; 65' MCW; 690' SMCW; 60' HMCW. Tool Spl:(Tr. O; 71% Wtr; 29% M.). Chl = 87000 Ppm; Rw=.08 @ 75 degree. F. Prssures: IH= 2057#; FH= 2057#; IF= 20 - 102#; FF= 114 - 408#; ISIP= 1274#; FSIP= 1247#; Temp = 118 degrees F.

DST # 4 4780' - 4821'. Times: 5"- 60"- 60"- 90"; Blow: IF: Weak Surface Blow. FF: Weak Surface Blow. Recovery: 10' M. Tool Spl. Tr Oil; 100% Mud. Pressures: IH= 2251#; FH= 2251#; IF= 6-8#; FF=10-28#; ISIP=1436#; FSIP=1300#; Temp= 118 degrees F.

DST # 5 5124'-5166'. Times: 5"- 90"- 90"- 180"; Blow: IF: Weak Surface Blow. FF: Weak Surface Blow Slowly Building From 2" to 7". Recovery: 285' GIP; 20' VSOCM (4% O; 96% M). . Tool Spl. 14% G; 17% O & 69% M. Pressures: IH= 2439#; FH= 2435#; IF= 6-9#; FF= 19-29#; ISIP= 1307#; FSIP= 822#; Temp= 123 Degrees F.

DST # 6 5164'-5235'. Times: 5"- 90"- 60"- 90"; Blow: IF: Weak Surface Blow= 3/4". FF: Weak Surface Blow Slowly Building to 1.5". Recovery: 70' HWCM w/Tr Oil: (46'% Wtr; 54% M). . Tool Spl.: Tr Oil; 49% Wtr; 51% M. Chl.= 29000; Ph= 6; RW= .18 @ 79 degrees F. Pressures: IH= 2459#; FH= 2458#; IF= 8-17#; FF= 21-56#; ISIP= 1422#; FSIP= 1358# Temp= 119 Degrees F.

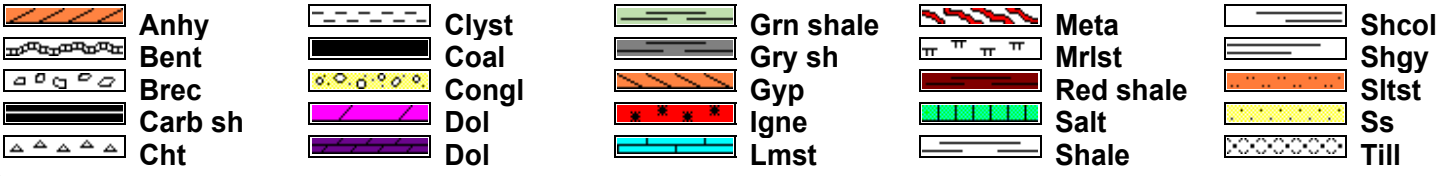
Comments

After review of all of the pertinent geological and structural data, drill test test recoveries and reservoir pressures including the electric logs analyses, it was recommended by all parties to run production casing and to attempt to complete this well as a commercial producer.

Respectfully submitted,

David P. Williams, P. G.

ROCK TYPES



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

FOSSIL
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Fuss
- Gastro
- Oomold
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

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

TEXTURE
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

SORTING
- Well
- Moderate
- Poor

ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

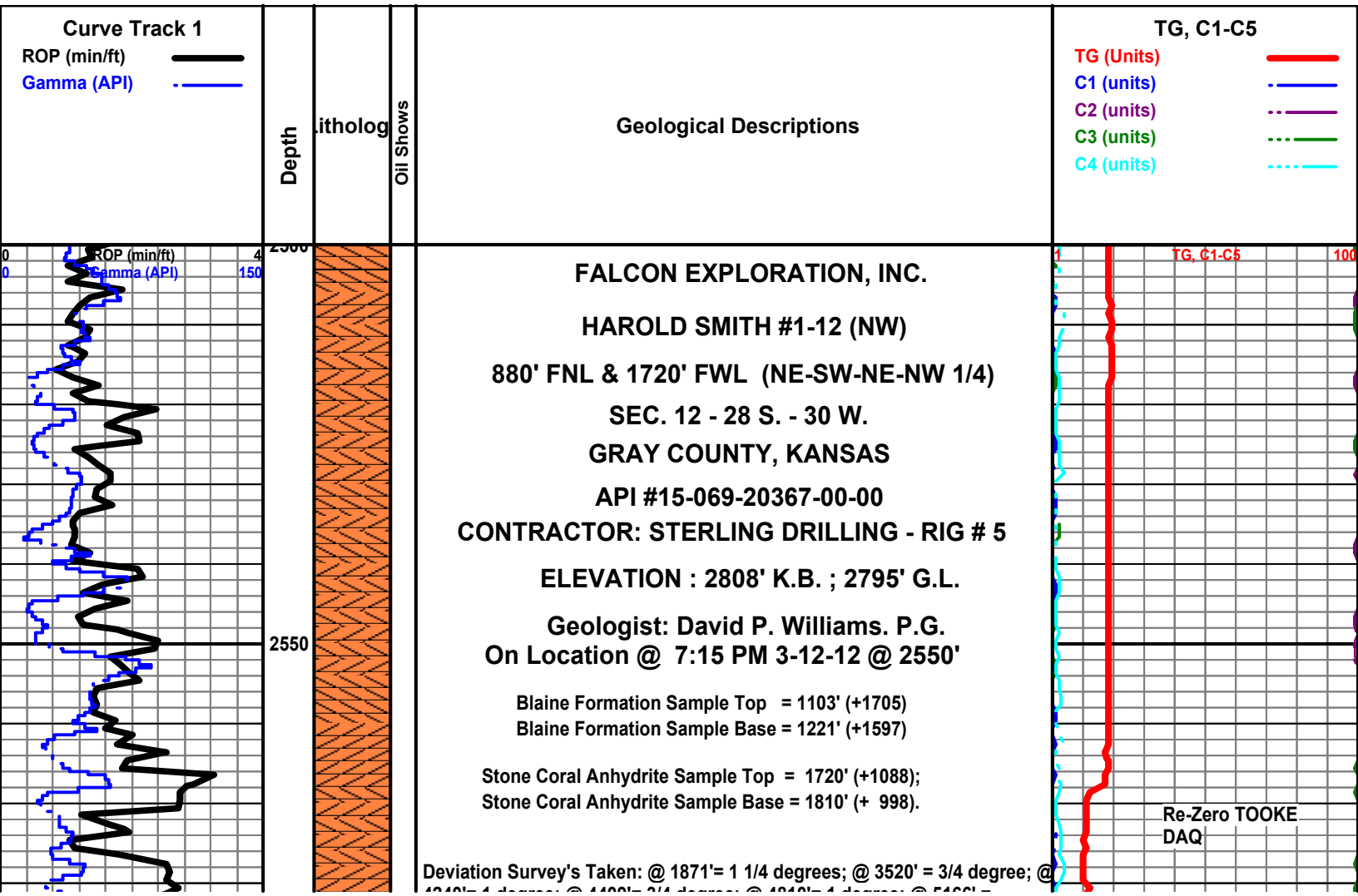
OIL SHOW
- Even

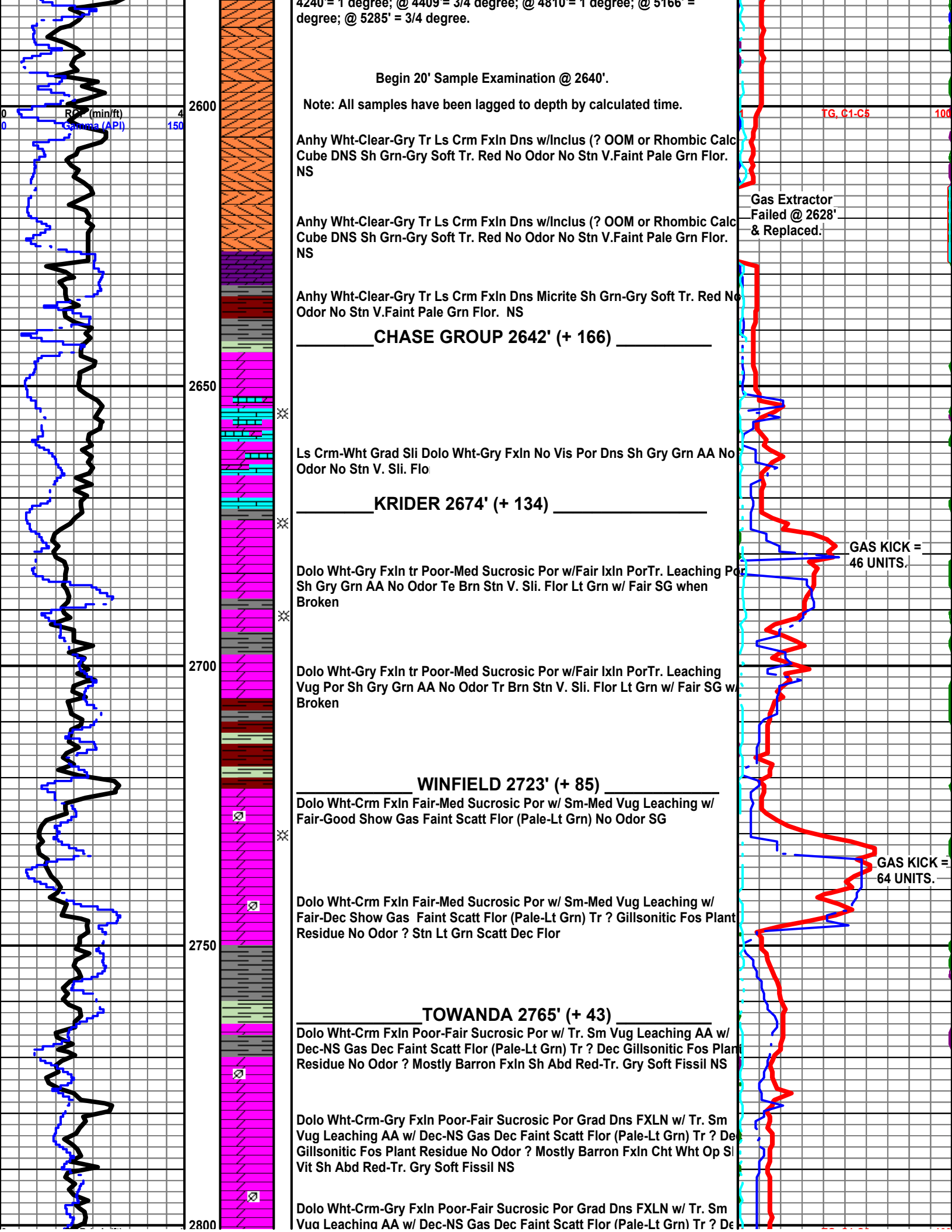
- Gas show
- Spotted
- Ques
- Dead

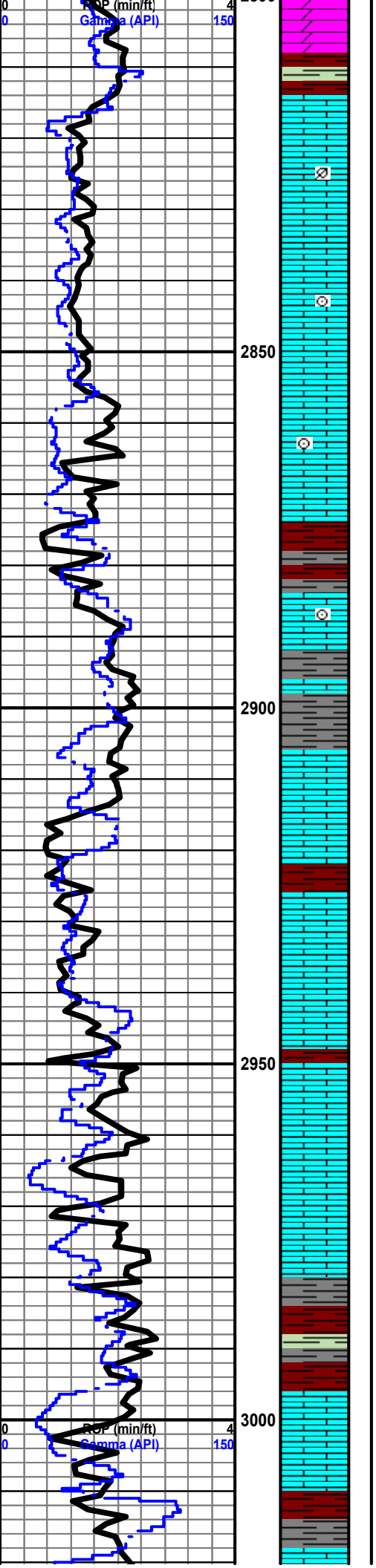
INTERVAL
- Core
- Dst_alt

- Dst

EVENT
- Rft
- Sidewall




4240' = 1 degree; @ 4409' = 3/4 degree; @ 4810' = 1 degree; @ 5166' = degree; @ 5285' = 3/4 degree.
Begin 20' Sample Examination @ 2640'.
Note: All samples have been lagged to depth by calculated time.
ROP (min/ft)
Gamma (API)
TG, C1-C5
2600
2650
2700
2750
2800
Anhy Wht-Clear-Gry Tr Ls Crm Fxln Dns w/Inclus (? OOM or Rhombic Calc Cube DNS Sh Grn-Gry Soft Tr. Red No Odor No Stn V.Faint Pale Grn Flor. NS
Gas Extractor Failed @ 2628' & Replaced.
Anhy Wht-Clear-Gry Tr Ls Crm Fxln Dns w/Inclus (? OOM or Rhombic Calc Cube DNS Sh Grn-Gry Soft Tr. Red No Odor No Stn V.Faint Pale Grn Flor. NS
Anhy Wht-Clear-Gry Tr Ls Crm Fxln Dns Micrite Sh Grn-Gry Soft Tr. Red No Odor No Stn V.Faint Pale Grn Flor. NS
CHASE GROUP 2642' (+ 166)
Ls Crm-Wht Grad Sli Dolo Wht-Gry Fxln No Vis Por Dns Sh Gry Grn AA No Odor No Stn V. Sli. Flo
KRIDER 2674' (+ 134)
GAS KICK = 46 UNITS.
Dolo Wht-Gry Fxln tr Poor-Med Sucrosic Por w/Fair Ixln PorTr. Leaching Por Sh Gry Grn AA No Odor Te Brn Stn V. Sli. Flor Lt Grn w/ Fair SG when Broken
Dolo Wht-Gry Fxln tr Poor-Med Sucrosic Por w/Fair Ixln PorTr. Leaching Vug Por Sh Gry Grn AA No Odor Tr Brn Stn V. Sli. Flor Lt Grn w/ Fair SG w Broken
WINFIELD 2723' (+ 85)
Dolo Wht-Crm Fxln Fair-Med Sucrosic Por w/ Sm-Med Vug Leaching w/ Fair-Good Show Gas Faint Scatt Flor (Pale-Lt Grn) No Odor SG
GAS KICK = 64 UNITS.
Dolo Wht-Crm Fxln Fair-Med Sucrosic Por w/ Sm-Med Vug Leaching w/ Fair-Dec Show Gas Faint Scatt Flor (Pale-Lt Grn) Tr ? Gillsonitic Fos Plant Residue No Odor ? Stn Lt Grn Scatt Dec Flor
TOWANDA 2765' (+ 43)
Dolo Wht-Crm Fxln Poor-Fair Sucrosic Por w/ Tr. Sm Vug Leaching AA w/ Dec-NS Gas Dec Faint Scatt Flor (Pale-Lt Grn) Tr ? Dec Gillsonitic Fos Plant Residue No Odor ? Mostly Barron Fxln Sh Abd Red-Tr. Gry Soft Fissil NS
Dolo Wht-Crm-Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN w/ Tr. Sm Vug Leaching AA w/ Dec-NS Gas Dec Faint Scatt Flor (Pale-Lt Grn) Tr ? De Gillsonitic Fos Plant Residue No Odor ? Mostly Barron Fxln Cht Wht Op Sl Vit Sh Abd Red-Tr. Gry Soft Fissil NS
Dolo Wht-Crm-Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN w/ Tr. Sm Vug Leaching AA w/ Dec-NS Gas Dec Faint Scatt Flor (Pale-Lt Grn) Tr ? De



Gillsonitic Fos Plant Residue No Odor ? Mostly Barron Fxln Cht Wht Op Sl Vit Sh Abd Red-Tr. Gry Soft Fissil NS

FORT RILEY 2814' (- 6)

Ls Wht- Crm- Gry Dec Fxln Poor-Fair Sucrosic Por Grad Dns FXLN AA w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) No Odor Barron Fxln Sh Abd Red-Tr. Gry Soft Fissil No Odor No Stn No Flor NS

Ls Wht- Crm- Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN Micrite AA Fos Crin w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) Few Pcs No Odor Barron Fxln Sh Abd Red-Tr. Gry Soft Fissil No Odor No Stn No Flor NS

Ls Wht- Crm- Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN Micrite AA Fos Crin w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) Few Pcs No Odor Barron Fxln Sh Abd Red-Tr. Gry Soft Fissil No Odor No Stn No Flor NS

Ls Wht- Crm- Gry Fxln Poor-Fair Sucrosic Por Grad Dns FXLN Micrite AA w/ Pyr Inclus Fos Crin w/ Dec-NS Gas Dec Faint Flor (Pale-Lt Grn) Few Pcs No Odor Barron Fxln Sh Abd Red-Tr/Gry Soft Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Grad Abd Gry Fxln Micrite to Poor Sucriosic Por AA Sh Abd Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Ls Crm- Abd Gry Fxln Micrite to Poor Sucriosic Por AA Sh Abd Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Ls Abd Gry Fxln V Poor Sucriosic Por Grad Crm Fxln Micrite Sh V Abd Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

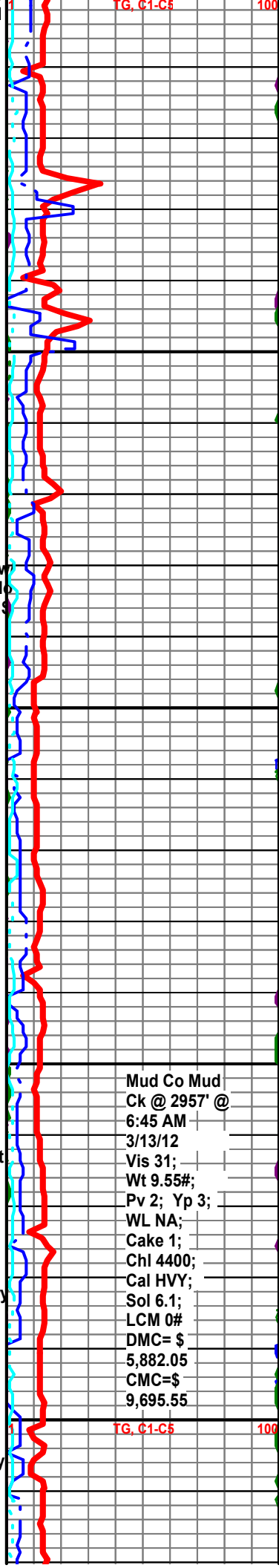
Ls Gry Fxln V Poor Sucriosic Por Grad Fxln Micrite Sh V Abd Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

Ls Gry Fxln V Poor Sucriosic Por Grad Crm Fxln Micrite Sh V Abd Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

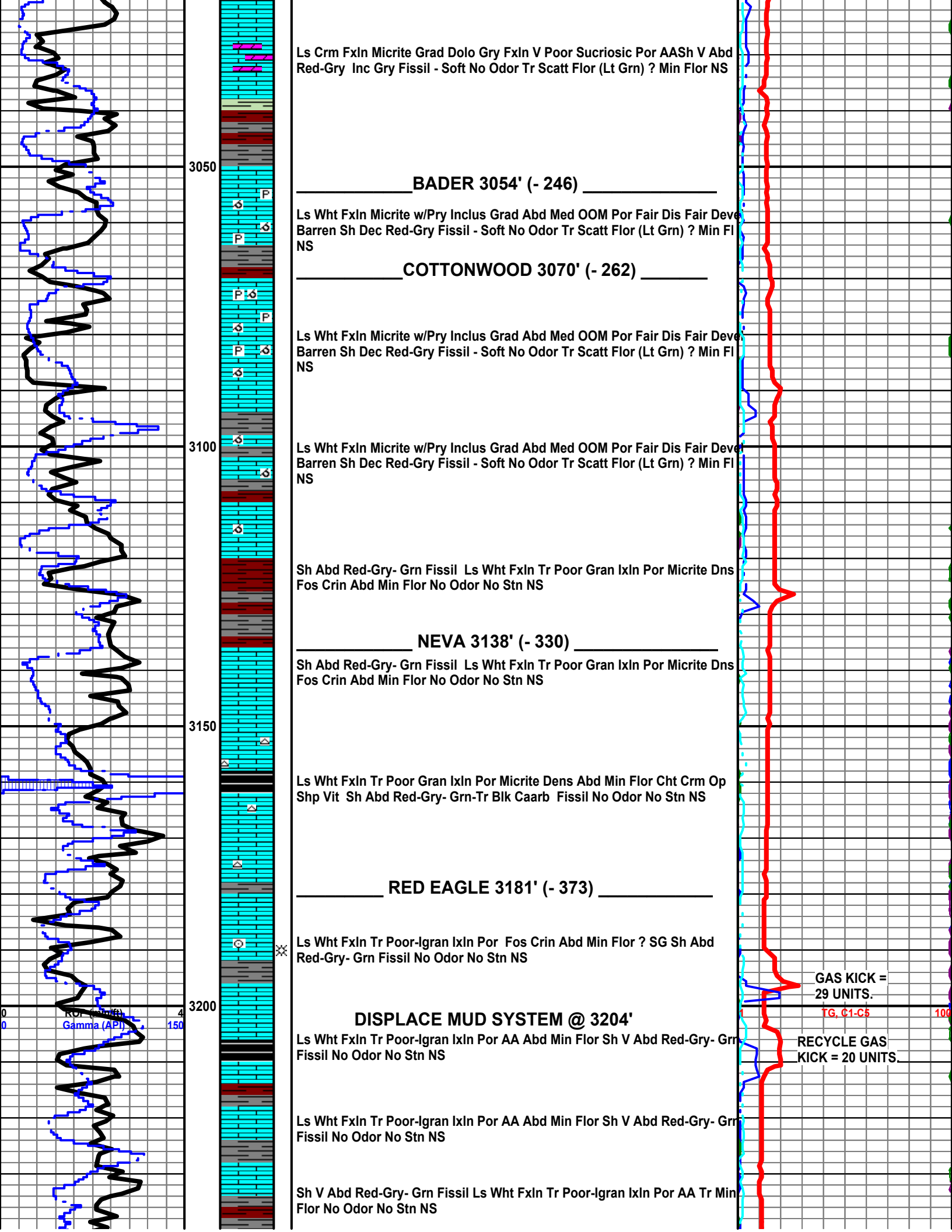
WREFORD 2996' (- 188)

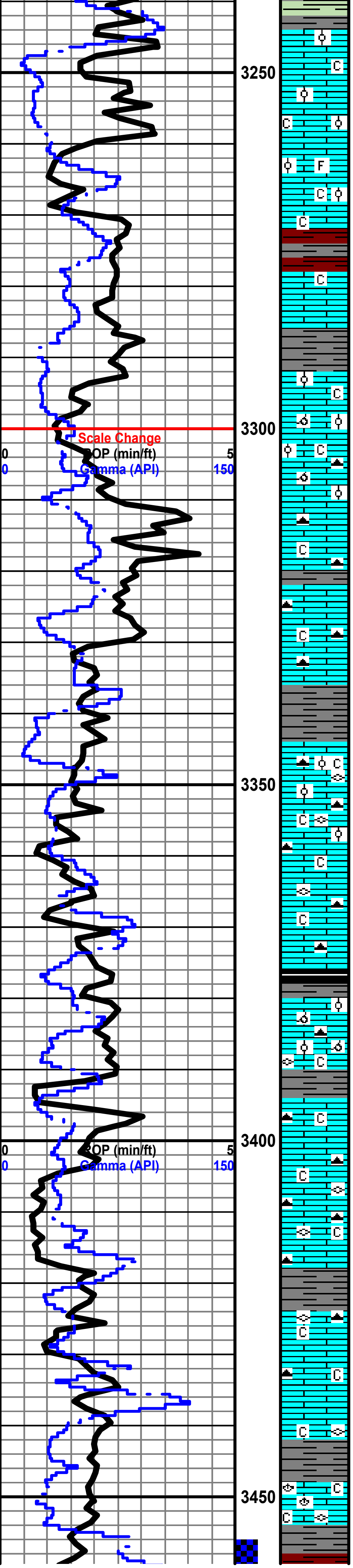
Ls Gry Fxln V Poor Sucriosic Por Grad Crm Fxln Micrite Sh V Abd Red-Gry Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS

BASE CHASE GROUP 3020' (- 212)



Mud Co Mud Ck @ 2957' @ 6:45 AM
3/13/12
Vis 31;
Wt 9.55#;
Pv 2; Yp 3;
WL NA;
Cake 1;
Chl 4400;
Cal HVY;
Sol 6.1;
LCM 0#
DMC= $ 5,882.05
CMC=$ 9,695.55


3050
3100
3150
3200
Ls Crm Fxln Micrite Grad Dolo Gry Fxln V Poor Sucriosic Por AASh V Abd Red-Gry Inc Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Flor NS
BADER 3054' (- 246)
Ls Wht Fxln Micrite w/Pry Inclus Grad Abd Med OOM Por Fair Dis Fair Deve Barren Sh Dec Red-Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Fl NS
COTTONWOOD 3070' (- 262)
Ls Wht Fxln Micrite w/Pry Inclus Grad Abd Med OOM Por Fair Dis Fair Deve Barren Sh Dec Red-Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Fl NS
Ls Wht Fxln Micrite w/Pry Inclus Grad Abd Med OOM Por Fair Dis Fair Deve Barren Sh Dec Red-Gry Fissil - Soft No Odor Tr Scatt Flor (Lt Grn) ? Min Fl NS
Sh Abd Red-Gry- Grn Fissil Ls Wht Fxln Tr Poor Gran Ixln Por Micrite Dns Fos Crin Abd Min Flor No Odor No Stn NS
NEVA 3138' (- 330)
Sh Abd Red-Gry- Grn Fissil Ls Wht Fxln Tr Poor Gran Ixln Por Micrite Dns Fos Crin Abd Min Flor No Odor No Stn NS
Ls Wht Fxln Tr Poor Gran Ixln Por Micrite Dens Abd Min Flor Cht Crm Op Shp Vit Sh Abd Red-Gry- Grn-Tr Blk Caarb Fissil No Odor No Stn NS
RED EAGLE 3181' (- 373)
Ls Wht Fxln Tr Poor-lgran Ixln Por Fos Crin Abd Min Flor ? SG Sh Abd Red-Gry- Grn Fissil No Odor No Stn NS
GAS KICK = 29 UNITS.
TG, C1-C5
100
DISPLACE MUD SYSTEM @ 3204'
Ls Wht Fxln Tr Poor-lgran Ixln Por AA Abd Min Flor Sh V Abd Red-Gry- Grn Fissil No Odor No Stn NS
RECYCLE GAS KICK = 20 UNITS.
Ls Wht Fxln Tr Poor-lgran Ixln Por AA Abd Min Flor Sh V Abd Red-Gry- Grn Fissil No Odor No Stn NS
Sh V Abd Red-Gry- Grn Fissil Ls Wht Fxln Tr Poor-lgran Ixln Por AA Tr Min Flor No Odor No Stn NS
0
Gamma (API)
150



FORAKER 3246' (- 438)

Ls Crm Fxln Poor-Fair Ixln Grad OOL Poor InterOOL Por Fos Spic Tr Igran Poor Por Chalky Wht No Flor No Odor No Stn Sh Red-Brn Dec NS

Ls Crm Fxln Poor-Fair Ixln Grad OOL Poor InterOOL Por Fos Spic Tr Igran Poor Por Chalky Wht No Flor No Odor No Stn Sh Red-Brn Dec NS

Sh V Abd Red-Gry- Grn Fissil Ls Wht Fxln Tr Poor-Igran Ixln Por AA Chalky Wht Tr Min Flor No Odor No Stn NS

@ 3300' Samples Start 10' Interval Wet & Dry

Ls Wht Fxln Tr Poor-Igran Ixln Por AA Tr Min Flor Sh V Abd Red-Gry- Grn Fissil No Odor No Stn NS

Ls Crm-Gry-Wht Fxln Poor-Fair Ixln Por Tr OOL Por w/OOL in pl Poor Poor Dis Poor Devel Por Tr Inc Chalk No Flor No Odor No Stn Sh Dec Red-Brn Dec NS

LS Crm-Gry Fxln Ixln Por Grad Micritic Sh Char-Grn Soft Fissil (Tr Only) Cl Gry Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor NS

LS Char-Gry-Crm Fxln Ixln Por Grad Micritic Sh Char-Grn Soft Fissil (Tr Only) Cht Drk Gry-Char Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor NS

LS Char-Gry-Crm Fxln Ixln Por Grad Micritic Sh Char-Grn Soft Fissil (Tr Only) Cht Drk Gry-Char Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor NS

LS Char-Gry-Crm Fxln Ixln Por Grad Micritic Sh Char-Grn Soft Fissil (Tr Only) Cht Drk Gry-Char Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor NS

LS Char-Gry-Crm Fxln Ixln Por Grad Micritic Grad Poor Develop OOM Por w/ OOL in pl No Dissolu No Vis Por Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Char-Gry-Crm Fxln Ixln Por Grad Micritic Grad Poor Develop OOM Por w/ OOL in pl No Dissolu No Vis Por Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Crm-Gry Fxln Ixln Por Grad Micritic Sh Char-Grn Soft Fissil Cht Drk-Gry Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor NS

FALL CITY 3381' (- 573)

LS Char-Gry-Crm Fxln Ixln Por Grad Micritic Grad Poor Develop OOM Por w/ OOL in pl No Dissolu No Vis Por Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Crm-Gry Fxln Ixln Por Grad Micritic Sh Char-Grn Soft Fissil Cht Drk-Gry Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor N

LS Gry-Crm Fxln Ixln Por Grad Micritic Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Gry-Crm Fxln Ixln Por Grad Micritic Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Gry-Crm Fxln Ixln Por Grad Micritic Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

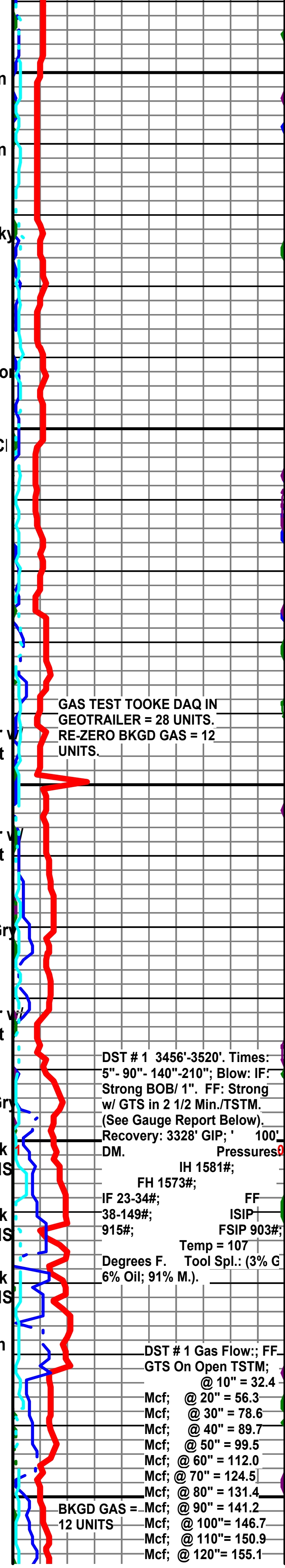
LS Crm Fxln Ixln Micritic Cht Drk-Gry Op Shp Vit Fos (Fuss) Chalk Wht Sh Char-Grn Soft Fissil No Odor Sli ? Min Flor No Stn No Flor N

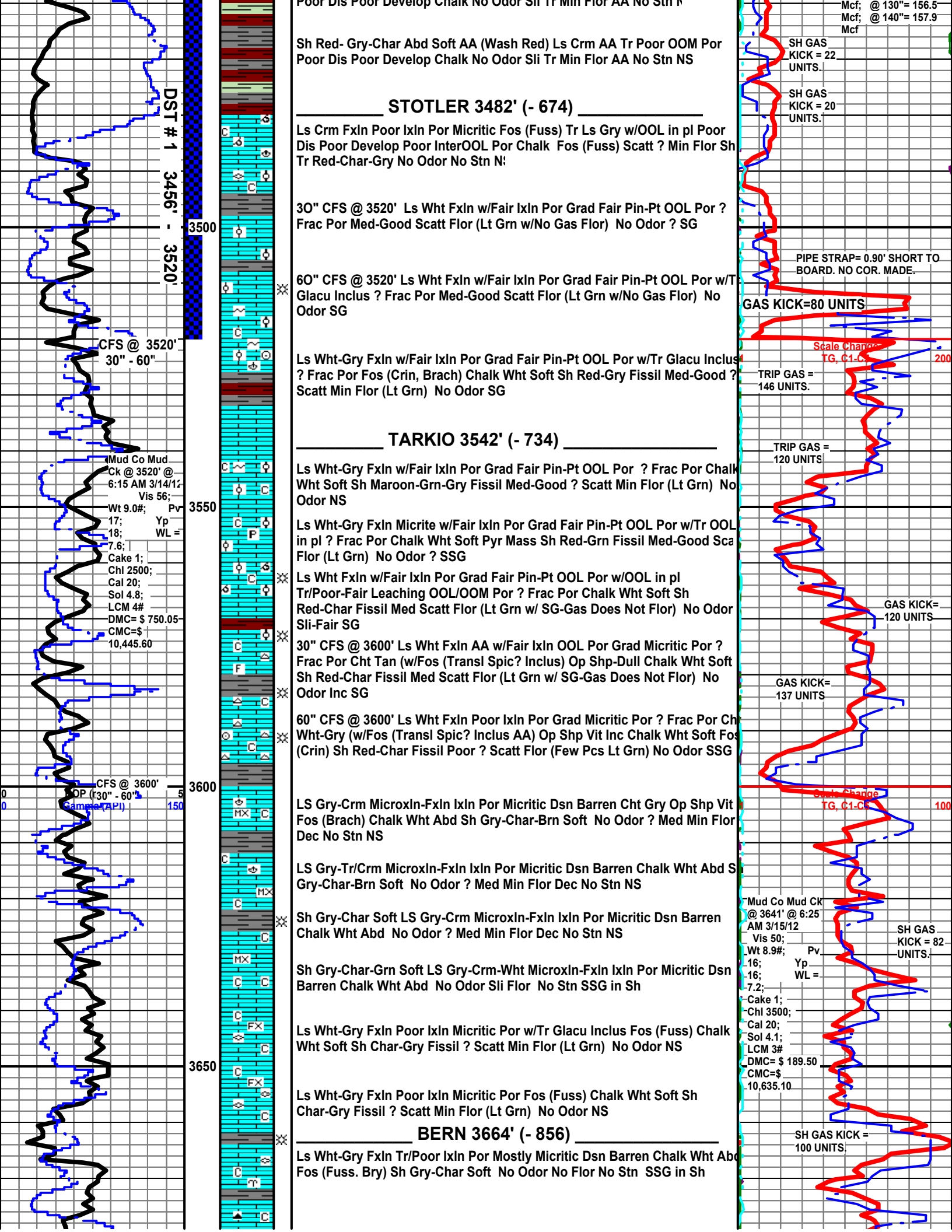
LS Crm-Gry Fxln Ixln Por Micritic Dsn No Vis Por Barren Sh Grn-Red Soft Fissil Dec Fos (Brach, Fuss) Chalk Wht Abd No Odor No Flor No Stn Fair ? Min Flor (Lt Grn) NS

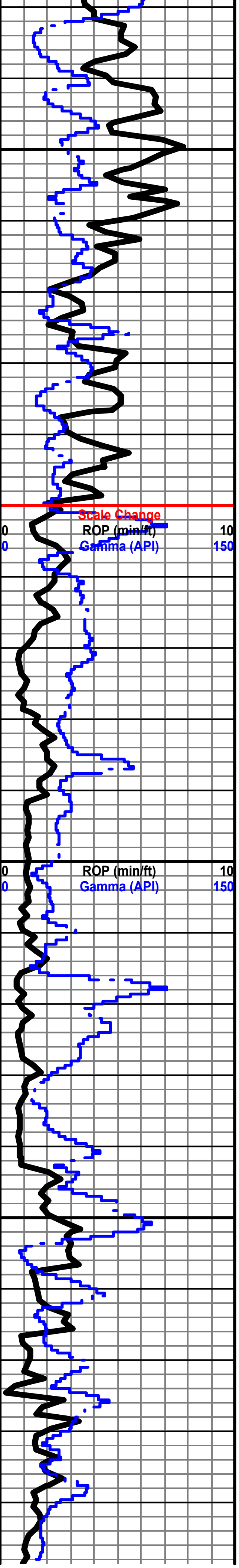
LS Crm-Gry Fxln Ixln Por Micritic Dsn No Vis Por Barren Sh Grn-Red Soft Fissil Dec Fos (Brach, Fuss) Chalk Wht Abd No Odor No Flor No Stn Fair ? Min Flor (Lt Grn) NS

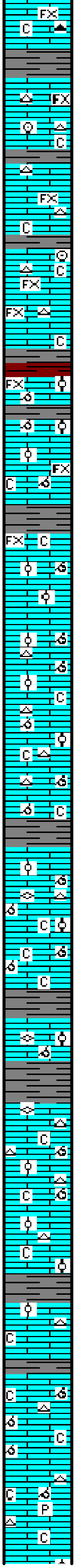
ROOT SHALE 3455' (- 647)

Sh Red- Gry-Char Abd Soft AA (Wash Red) Ls Crm AA Tr Poor OOM Por




DST # 1 3456' - 3520'
CFS @ 3520' 30" - 60"
Mud Co Mud Ck @ 3520' @ 6:15 AM 3/14/12 Vis 56; Wt 9.0#; Pv 17; Yp 18; WL = 7.6; Cake 1; Chl 2500; Cal 20; Sol 4.8; LCM 4# DMC= $ 750.05 CMC=$ 10,445.60
CFS @ 3600' 30" - 60"
TOP (in)
Gamma (API)
0
150
5
3500
3550
3600
3650
Poor Dis Poor Develop Chalk No Odor Sli Tr Min Flor AA No Stn NS
Sh Red- Gry-Char Abd Soft AA (Wash Red) Ls Crm AA Tr Poor OOM Por Poor Dis Poor Develop Chalk No Odor Sli Tr Min Flor AA No Stn NS
STOTLER 3482' (- 674)
Ls Crm Fxln Poor Ixln Por Micritic Fos (Fuss) Tr Ls Gry w/OOL in pl Poor Dis Poor Develop Poor InterOOL Por Chalk Fos (Fuss) Scatt ? Min Flor Sh Tr Red-Char-Gry No Odor No Stn NS
3O" CFS @ 3520' Ls Wht Fxln w/Fair Ixln Por Grad Fair Pin-Pt OOL Por ? Frac Por Med-Good Scatt Flor (Lt Grn w/No Gas Flor) No Odor ? SG
6O" CFS @ 3520' Ls Wht Fxln w/Fair Ixln Por Grad Fair Pin-Pt OOL Por w/Tr Glacu Inclus ? Frac Por Med-Good Scatt Flor (Lt Grn w/No Gas Flor) No Odor SG
Ls Wht-Gry Fxln w/Fair Ixln Por Grad Fair Pin-Pt OOL Por w/Tr Glacu Inclus ? Frac Por Fos (Crin, Brach) Chalk Wht Soft Sh Red-Gry Fissil Med-Good ? Scatt Min Flor (Lt Grn) No Odor SG
TARKIO 3542' (- 734)
Ls Wht-Gry Fxln w/Fair Ixln Por Grad Fair Pin-Pt OOL Por ? Frac Por Chalk Wht Soft Sh Maroon-Grn-Gry Fissil Med-Good ? Scatt Min Flor (Lt Grn) No Odor NS
Ls Wht-Gry Fxln Micrite w/Fair Ixln Por Grad Fair Pin-Pt OOL Por w/Tr OOL in pl ? Frac Por Chalk Wht Soft Pyr Mass Sh Red-Grn Fissil Med-Good Sca Flor (Lt Grn) No Odor ? SSG
Ls Wht Fxln w/Fair Ixln Por Grad Fair Pin-Pt OOL Por w/OOL in pl Tr/Poor-Fair Leaching OOL/OOM Por ? Frac Por Chalk Wht Soft Sh Red-Char Fissil Med Scatt Flor (Lt Grn w/ SG-Gas Does Not Flor) No Odor Sli-Fair SG
30" CFS @ 3600' Ls Wht Fxln AA w/Fair Ixln OOL Por Grad Micritic Por ? Frac Por Cht Tan (w/Fos (Transl Spic? Inclus) Op Shp-Dull Chalk Wht Soft Sh Red-Char Fissil Med Scatt Flor (Lt Grn w/ SG-Gas Does Not Flor) No Odor Inc SG
60" CFS @ 3600' Ls Wht Fxln Poor Ixln Por Grad Micritic Por ? Frac Por Cht Wht-Gry (w/Fos (Transl Spic? Inclus AA) Op Shp Vit Inc Chalk Wht Soft Fos (Crin) Sh Red-Char Fissil Poor ? Scatt Flor (Few Pcs Lt Grn) No Odor SSG
LS Gry-Crm Microxln-Fxln Ixln Por Micritic Dsn Barren Cht Gry Op Shp Vit Fos (Brach) Chalk Wht Abd Sh Gry-Char-Brn Soft No Odor ? Med Min Flor Dec No Stn NS
LS Gry-Tr/Crm Microxln-Fxln Ixln Por Micritic Dsn Barren Chalk Wht Abd Sh Gry-Char-Brn Soft No Odor ? Med Min Flor Dec No Stn NS
Sh Gry-Char Soft LS Gry-Crm Microxln-Fxln Ixln Por Micritic Dsn Barren Chalk Wht Abd No Odor ? Med Min Flor Dec No Stn NS
Sh Gry-Char-Grn Soft LS Gry-Crm-Wht Microxln-Fxln Ixln Por Micritic Dsn Barren Chalk Wht Abd No Odor Sli Flor No Stn SSG in Sh
Ls Wht-Gry Fxln Poor Ixln Micritic Por w/Tr Glacu Inclus Fos (Fuss) Chalk Wht Soft Sh Char-Gry Fissil ? Scatt Min Flor (Lt Grn) No Odor NS
Ls Wht-Gry Fxln Poor Ixln Micritic Por Fos (Fuss) Chalk Wht Soft Sh Char-Gry Fissil ? Scatt Min Flor (Lt Grn) No Odor NS
BERN 3664' (- 856)
Ls Wht-Gry Fxln Tr/Poor Ixln Por Mostly Micritic Dsn Barren Chalk Wht Abd Fos (Fuss. Bry) Sh Gry-Char Soft No Odor No Flor No Stn SSG in Sh
Mcf; @ 130"= 156.5 Mcf; @ 140"= 157.9 Mcf
SH GAS KICK = 22 UNITS.
SH GAS KICK = 20 UNITS.
PIPE STRAP= 0.90' SHORT TO BOARD. NO COR. MADE.
GAS KICK=80 UNITS
Scale Change TG, C1-C5
200
TRIP GAS = 146 UNITS.
TRIP GAS = 120 UNITS
GAS KICK= 120 UNITS
GAS KICK= 137 UNITS
Scale Change TG, C1-C5
100
Mud Co Mud CK @ 3641' @ 6:25 AM 3/15/12 Vis 50; Wt 8.9#; Pv 16; Yp 16; WL = 7.2; Cake 1; Chl 3500; Cal 20; Sol 4.1; LCM 3# DMC= $ 189.50 CMC=$ 10,635.10
SH GAS KICK = 82 UNITS.
SH GAS KICK = 100 UNITS.





Ls Wht-Crm-Gry Fxln Tr/Poor Ixln Por Mostly Micritic Dsn Barren Cht Dı Gry Banded Wht Transl-Op Shp Vit Chalk Wht Abd Sh Gry-Char Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Tr/Poor Ixln Por Mostly Micritic Dsn Barren Cht Wht (w/Fos Crin Inclus) Op Shp Vit Chalk Wht Dec Sh Gry-Char Soft No Odor No Flor No Stn NS

3700

Ls Wht-Crm Fxln Tr/Poor Ixln Por Mostly Micritic AA Dsn Barren w/Tr Cht Wht Op Shp Vit Inclus Chalk Wht Sh Char-Gry Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Tr/Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor Pin-Pt Ixln Por Chalk Wht Cht Wht-Tan Transl-Op Shp Vit Sh Tr/Char-Red Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Tr/Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor Pin-Pt Ixln Por Chalk Wht Cht Wht-Tan Transl-Op Shp Vit Sh Tr/Char-Red Soft No Odor No Flor No Stn N!

Ls Wht-Crm Fxln Tr/Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM/Pelletal Por Tr Poor Dissolu Chalk Wht Sh Char-Red Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Tr/Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM/Pelletal Por Tr Poor Dissolu Chalk Wht Sh Char-Red Soft No Odor No Flor No Stn NS

3750

TOPEKA 3756' (- 948)

Ls Wht-Crm Fxln Tr/Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM/Pelletal Por Tr Poor Dissolu Chalk Wht Sh Char-Red Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM Por Poor Dissolu Chalk Wht Soft Cht Wht Op Shp Vit (Tr Only) S Gry-Grn Fissil Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM Por Poor Dissolu Chalk Wht Soft V Abd Cht Wht Op Shp Vit (Tr Only) Sh Gry-Grn Fissil Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM Por Poor Dissolu Chalk Wht V Abd Soft Cht Wht Op Shp Vit (Tr Only) Sh Gry-Grn Fissil Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM Por Poor Dissolu Fos (Fuss in Cht/LS AA) Chalk Wht V Abd Soft Cht Wht Op Shp Vit (Tr Only) Sh Gry-Grn Fissil Soft No Odor No Flor No S NS

3800

Ls Wht-Crm Fxln Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM Por Poor Dissolu Fos (Fuss in Cht/LS AA) Chalk Wht V Abd Soft Cht Wht Op Shp Vit (Tr Only) Sh Gry-Grn Fissil Soft No Odor No Flor No S NS

Ls Wht-Crm Fxln Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM Por Poor Dissolu Fos (Fuss in Cht/LS AA) Chalk Wht V Abd Soft Cht Wht Op Shp Vit (Tr Only) Sh Gry-Grn Fissil Soft No Odor No Flor No S NS

Ls Wht-Crm Fxln Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM Por Poor Dissolu Fos (Fuss in Cht/LS AA) Chalk Wht V Abd Soft Cht Wht Op Shp Vit (Tr Only) Sh Gry-Grn Fissil Soft No Odor No Flor No S NS

Ls Wht-Crm Fxln Poor Ixln Por Mostly Micritic Dsn Barren Grad Poor OOL/OOM Por Poor Dissolu Fos (Fuss in Cht/LS AA) Chalk Wht V Abd Soft Cht Wht Op Shp Vit (Tr Only) Sh Gry-Grn Fissil Soft No Odor No Flor No S NS

3850

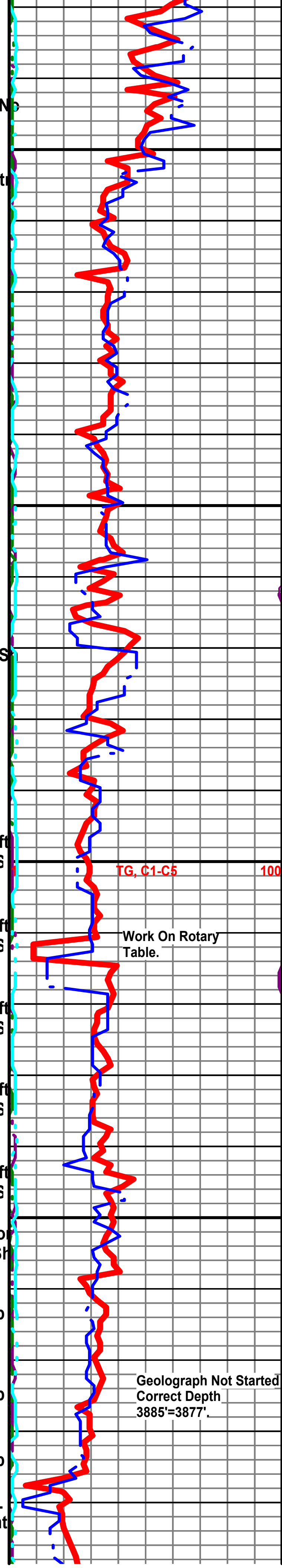
Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Grad Tr/OOL Por w/ OOL in pl Poor Develop Poor Dissolu Poor Leaciing Chalk Wht Abd Cht Wht Op Shp Vit Sh Char-Red Fissil No Odor No Flor No Stn NS

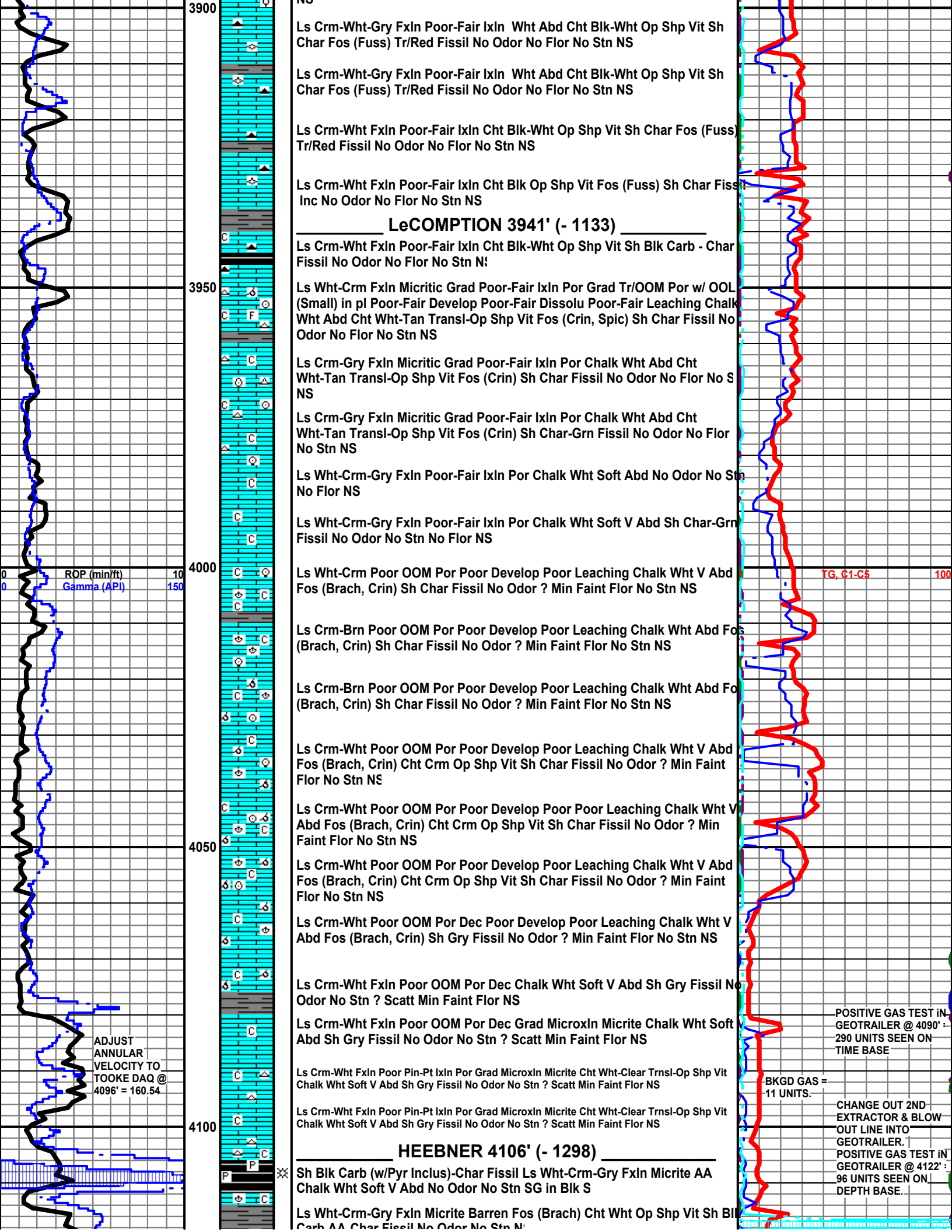
Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Grad Tr/OOM Por Poor InterOOM Por Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Wht Op Shp Vit Sh Char-Red Fissil No Odor No Flor No Stn NS

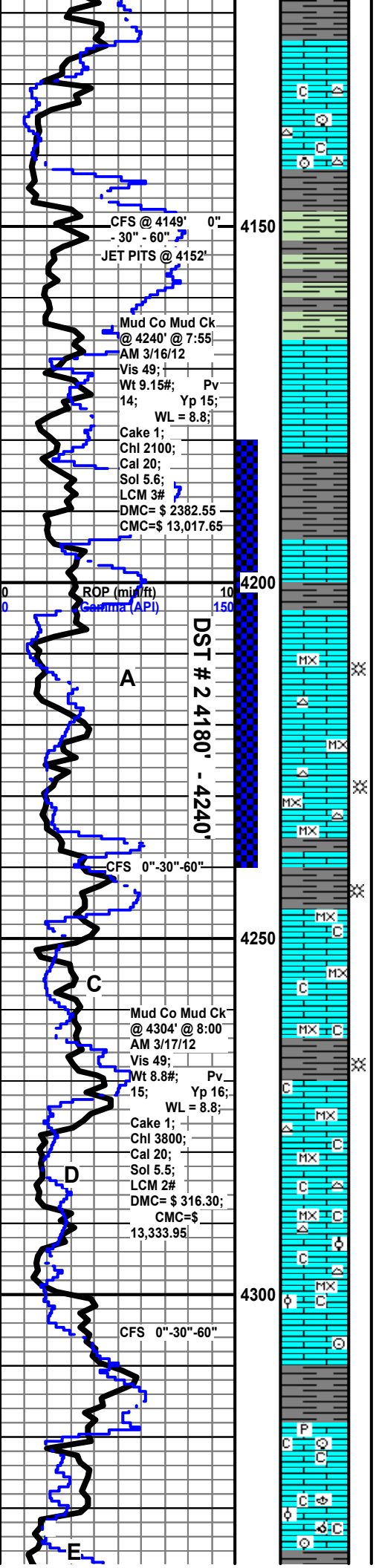
Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Grad Tr/OOM Por Poor InterOOM Por Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Wht Op Shp Vit Sh Char Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Grad Tr/OOM Por Poor InterOOM Por Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Wht Op Shp Vit Sh Char Fissil No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Poor-Fair Ixln w/ Pyr Inclus Por Grad Tr/OOL Por w/ OOL (Small) in pl Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Wht-Tan Transl-Op Shp Vit Sh Char Tr/Red Fissil No Odor No Flor No Stn NS




3900
3950
4000
4050
4100
0
ROP (min/ft)
10
0
Gamma (API)
150
TG, C1-C5
100
ADJUST ANNULAR VELOCITY TO TOOKE DAQ @ 4096' = 160.54
Ls Crm-Wht-Gry Fxln Poor-Fair Ixln Wht Abd Cht Blk-Wht Op Shp Vit Sh Char Fos (Fuss) Tr/Red Fissil No Odor No Flor No Stn NS
Ls Crm-Wht-Gry Fxln Poor-Fair Ixln Wht Abd Cht Blk-Wht Op Shp Vit Sh Char Fos (Fuss) Tr/Red Fissil No Odor No Flor No Stn NS
Ls Crm-Wht Fxln Poor-Fair Ixln Cht Blk-Wht Op Shp Vit Sh Char Fos (Fuss) Tr/Red Fissil No Odor No Flor No Stn NS
Ls Crm-Wht Fxln Poor-Fair Ixln Cht Blk Op Shp Vit Fos (Fuss) Sh Char Fissil Inc No Odor No Flor No Stn NS
LeCOMPTION 3941' (- 1133)
Ls Crm-Wht Fxln Poor-Fair Ixln Cht Blk-Wht Op Shp Vit Sh Blk Carb - Char Fissil No Odor No Flor No Stn NS
Ls Wht-Crm Fxln Micritic Grad Poor-Fair Ixln Por Grad Tr/OOM Por w/ OOL (Small) in pl Poor-Fair Develop Poor-Fair Dissolu Poor-Fair Leaching Chalk Wht Abd Cht Wht-Tan Transl-Op Shp Vit Fos (Crin, Spic) Sh Char Fissil No Odor No Flor No Stn NS
Ls Crm-Gry Fxln Micritic Grad Poor-Fair Ixln Por Chalk Wht Abd Cht Wht-Tan Transl-Op Shp Vit Fos (Crin) Sh Char Fissil No Odor No Flor No Stn NS
Ls Crm-Gry Fxln Micritic Grad Poor-Fair Ixln Por Chalk Wht Abd Cht Wht-Tan Transl-Op Shp Vit Fos (Crin) Sh Char-Grn Fissil No Odor No Flor No Stn NS
Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Chalk Wht Soft Abd No Odor No Stn No Flor NS
Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Chalk Wht Soft V Abd Sh Char-Grn Fissil No Odor No Stn No Flor NS
Ls Wht-Crm Poor OOM Por Poor Develop Poor Leaching Chalk Wht V Abd Fos (Brach, Crin) Sh Char Fissil No Odor ? Min Faint Flor No Stn NS
Ls Crm-Brn Poor OOM Por Poor Develop Poor Leaching Chalk Wht Abd Fos (Brach, Crin) Sh Char Fissil No Odor ? Min Faint Flor No Stn NS
Ls Crm-Brn Poor OOM Por Poor Develop Poor Leaching Chalk Wht Abd Fos (Brach, Crin) Sh Char Fissil No Odor ? Min Faint Flor No Stn NS
Ls Crm-Wht Poor OOM Por Poor Develop Poor Leaching Chalk Wht V Abd Fos (Brach, Crin) Cht Crm Op Shp Vit Sh Char Fissil No Odor ? Min Faint Flor No Stn NS
Ls Crm-Wht Poor OOM Por Poor Develop Poor Poor Leaching Chalk Wht V Abd Fos (Brach, Crin) Cht Crm Op Shp Vit Sh Char Fissil No Odor ? Min Faint Flor No Stn NS
Ls Crm-Wht Poor OOM Por Poor Develop Poor Leaching Chalk Wht V Abd Fos (Brach, Crin) Cht Crm Op Shp Vit Sh Char Fissil No Odor ? Min Faint Flor No Stn NS
Ls Crm-Wht Poor OOM Por Dec Poor Develop Poor Leaching Chalk Wht V Abd Fos (Brach, Crin) Sh Gry Fissil No Odor ? Min Faint Flor No Stn NS
Ls Crm-Wht Fxln Poor OOM Por Dec Chalk Wht Soft V Abd Sh Gry Fissil No Odor No Stn ? Scatt Min Faint Flor NS
Ls Crm-Wht Fxln Poor OOM Por Dec Grad Microxln Micrite Chalk Wht Soft V Abd Sh Gry Fissil No Odor No Stn ? Scatt Min Faint Flor NS
Ls Crm-Wht Fxln Poor Pin-Pt Ixln Por Grad Microxln Micrite Cht Wht-Clear Trnsl-Op Shp Vit Chalk Wht Soft V Abd Sh Gry Fissil No Odor No Stn ? Scatt Min Faint Flor NS
Ls Crm-Wht Fxln Poor Pin-Pt Ixln Por Grad Microxln Micrite Cht Wht-Clear Trnsl-Op Shp Vit Chalk Wht Soft V Abd Sh Gry Fissil No Odor No Stn ? Scatt Min Faint Flor NS
HEEBNER 4106' (- 1298)
Sh Blk Carb (w/Pyr Inclus)-Char Fissil Ls Wht-Crm-Gry Fxln Micrite AA Chalk Wht Soft V Abd No Odor No Stn SG in Blk S
Ls Wht-Crm-Gry Fxln Micrite Barren Fos (Brach) Cht Wht Op Shp Vit Sh Blk Carb AA Char Fissil No Odor No Stn N
POSITIVE GAS TEST IN GEOTRAILER @ 4090' = 290 UNITS SEEN ON TIME BASE
BKGD GAS = 11 UNITS.
CHANGE OUT 2ND EXTRACTOR & BLOW OUT LINE INTO GEOTRAILER.
POSITIVE GAS TEST IN GEOTRAILER @ 4122' = 96 UNITS SEEN ON DEPTH BASE.



TORONTO 4124' (- 1316)

O" CFS @ 4149' Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Por Fos (Crin) Cht Wht Op Shp Vit Sh Blk Carb AA-Char Fissil No Odor No Stn NS

3O" CFS @ 4149' Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Po Fos (Crin) Cht Wht Op Shp Vit Sh Blk Carb AA-Char Fissil No Odor No Stn NS

6O" CFS @ 4149' Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Po Fos (Crin) Cht Wht Op Shp Vit Sh Blk Carb AA-Char Fissil No Odor No Stn NS

Sh Char-Gry-Grn Soft-Fissli w/ \Fos (Fuss) Ls Crm-Wht-Gry Fxln Dns Micrite Poor Ixln Por Chalk Wht Soft Abd No Odor No Stn Few Pcs Sli ? Mi Flor AA Grad No Flor NS

Sh Char-Gry-Grn Soft-Fissli w/ \Fos (Fuss) Ls Crm-Wht-Gry Fxln Dns Micrite Poor Ixln Por Chalk Wht Soft Abd No Odor No Stn Few Pcs Sli ? Mi Flor AA Grad No Flor NS

Sh Char-Gry-Grn Soft-Fissli Ls Crm-Wht-Gry Fxln Dns Micrite Poor Ixln Por Chalk Wht Soft Abd No Odor No Stn Few Pcs Sli ? Min Flor AA Grad No Flo NS

Ls Wht-Crm Microxln-Fxln Poor-Fair Ixln Por Cht Wht-Tan Op Shp Vit Chalk Wht Soft Abd Sh Char-Gry-Grn Tr/Blk Carb Fissil No Odor No Stn Dec Sli ? Min Flor NS

IATAN 4194' (- 1386)

Ls Wht-Crm Microxln-Fxln Poor-Fair Ixln Por Cht Wht-Tan Op Shp Vit Chalk Wht Soft Abd Sh Char-Gry-Grn Tr/Blk Carb Fissil No Odor No Stn Dec Sli ? Min Flor NS

LANSING 4204' (- 1396)

0" CFS @ 4240' Ls Wht-Crm-Gry Microxln w/ Pin-Pt Ixln Por w/ Poor-Fair S (Under Heat) ? Frac Por Even Sat Stn Flor (Lt Grn-Wht) Throught Tray Cht Wht-Tan Op Shp Vit Chalk Wht Soft Sh Char-Gry Fissil No Odor SG

30" CFS @ 4240' Ls Wht-Crm-Gry Microxln-Fxln w/ Poor Pin-Pt Ixln Por w/ Poor-Fair SG (Under Heat) ? Frac Por Even Sat Stn Flor (Lt Grn-Wht) Throughout Tray Cht Wht-Tan Op Shp Vit Chalk Wht Soft Sh Char-Gry-Tr Blk Carb Fissil Faint Odor SG

60" CFS @ 4240' Ls Wht-Crm-Gry Microxln-Fxln w/ Poor Pin-Pt Ixln Por w/ Poor SG (Under Heat) ? Frac Por Even Sat Stn Flor (Lt Grn-Wht) Throughou Tray Cht Wht-Tan Op Shp Vit Chalk Wht Soft Sh Char-Gry-Tr Blk Carb Fiss Faint Odor SG

Ls Crm-Gry Microxln-Fxln Poor Ixln Por Grad Micritic Chalk Wht Soft Cht Wht Op Shp Vit (Tr Only) Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor Dec AA NS

Sh Char-Gry Fissil Ls Crm-Gry Microxln-Fxln Poor Ixln Por Grad Micritic Chalk Wht Soft Dec No Odor No Stn ? Sli Min Flor Dec N

Ls Crm-Gry Microxln-Fxln Poor Ixln Por Grad Micritic Chalk Wht Soft Cht Wht Op Shp Vit (Tr Only) Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor Dec AA NS

Chalk Wht Soft V Abd (60% of Spl) Ls Crm-Tan Microxln-Fxln Poor Ixln Por Grad Micritic Cht Wht Op Shp Vit Sh Char-Gry-Grn Fissil No Odor No Stn ? V Sli Min Flor NS

30" CFS @ 4304' Chalk Wht Soft V Abd (50% of Spl) Ls Crm-Tan Microxln-Fxln Poor Ixln Por Grad Tr Poor OOL (Small Ooids) Por Cht Wht (w/OOL Inclus)-Tan Op Shp Vit Sh Char-Gry-Grn Fissil No Odor No Stn ? V Sli Min Flor (30% of Spl. (50% Lt Wht & 50% Lt Grn)) ? SG (No Gas Shown In Wet Spl).

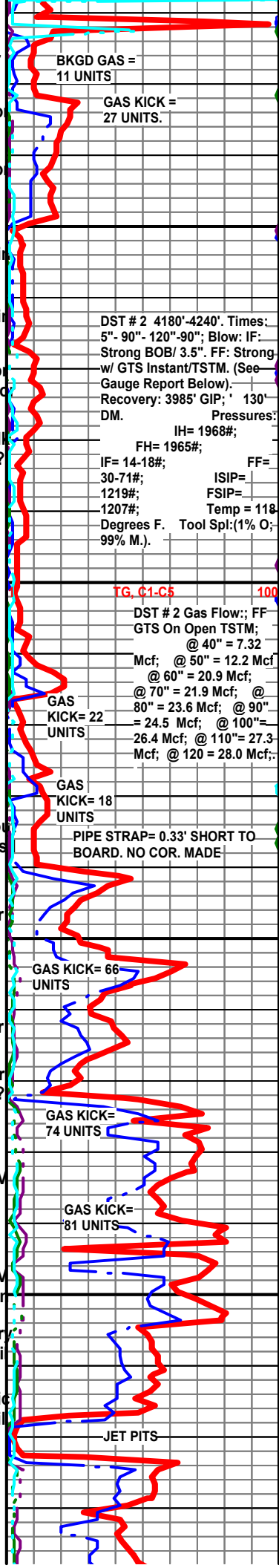
60" CFS @ 4304' Chalk Wht Soft V Abd (50% of Spl) Ls Crm-Tan Microxln-Fxln Poor Ixln Por Grad Tr Poor OOL (Small Ooids) Cht Wht (w/OOL Inclus)-Tan Op Shp Vit Sh Char-Gry-Grn Fissil No Odor No Stn ? V Sli Min Flor (40% of Spl. (50% Lt Wht & 50% Lt Grn) ? SG (No Gas Shown In Wet Spl).

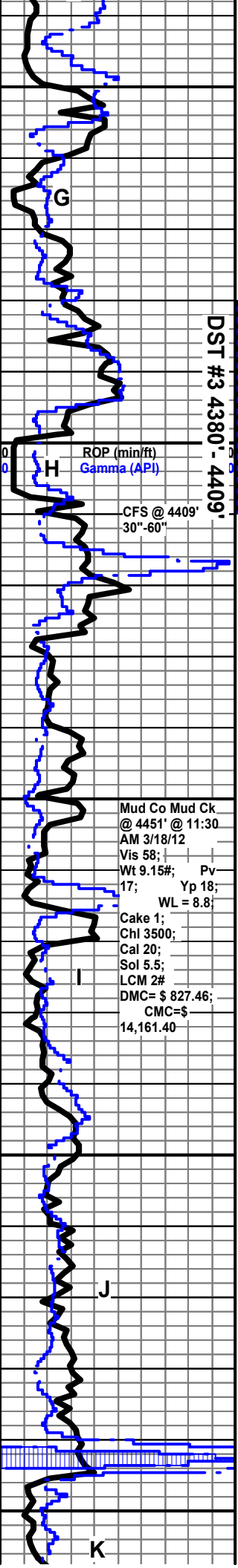
Ls Gry-Crm-Wht Microxln-Fxln Poor Ixln Por Grad Micritic Cht Drk Char-Gry Transl-Op Shp Vit Fos (Crin) Chalk Wht Soft Dec Sh Char-Tr/Blk Carb Fissil ? Faint Odor No Stn No Flor NS

Ls Gry-Crm-Wht Microxln-Fxln (w/Tr Pyr Inclus) Poor Ixln Por Grad Micritic Cht Drk Char-Gry Transl-Op Shp Vit Chalk Wht Soft Dec Sh Char-Gry Fissil ? Faint Odor No Stn No Flor NS

Ls Wht-Crm-Gry Microxln-Fxln Poor Ixln Por Micritic Chalk Wht Soft Dec Fos (Brach) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Fxln Poor OOL Por (w/Small OOL in pl) Grad Poor OOM Por Poor Dissolu Poor Develop Grad Microxln Micrite Cht Gry Transl-Op Shp Vit Fos (Crin) Chalk Wht Soft Sh Gry Fissil No Odor No Stn No Flor NS





4350

4400

4450

4500

4550

Ls Wht-Crm-Gry Microxln-Fxln Poor Ixln Poor OOL Por (w/Small OOL in pl) Grad Poor OOM Por Poor Dissolu Poor Develop Grad Por Micritic Chalk Wht Soft Dec Fos (Brach) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Wht Med-Good OOM Por w/OOL in pl Good Develop Good Leachin Barren Poor InterOOM Por Chalk Wht Abd Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Med-Good OOM Por w/OOL in pl Good Develop Good Leachin Barren Poor InterOOM Por Pyr Mass Chalk Wht Abd Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Med-Good OOM Por w/OOL in pl Good Develop Good Leachin Barren Poor InterOOM Por Pyr Mass Chalk Wht Abd Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Med-Good OOM Por w/OOL in pl Good Develop Good Leachin Barren Poor InterOOM Por Pyr Mass Chalk Wht Abd Sh Char-Gry Fissil No Odor No Flor No Stn NS

KANSAS CITY "DRUM (H)" 4388' (- 1580)

30" CFS @ 4409' Ls Wht-Crm Good OOM Por (w/Large OOM Vug Por w/tr OOL in pl) Med-Goo Dissolu Fair-Med Leaching Por Good Odor (w/SG Under Heat in Wtr) Sli Scat Flor (Lt Grn-Gas Does Not Flor) ? InterOOM/OOL Connectivity) SSG

60" CFS @ 4409' Ls Wht-Crm Good OOM Por (w/Large OOM Vug Por w/tr OOL in pl) Med-Good Dissolu Fair-Med Leaching Por Good-Inc Odor (w/SG Under Heat in Wtr) Sli Scat Flor (Lt Grn-Gas Does Not Flor) SG

Ls Crm-Wht-Gry Microxln-Fxln Poor Ixln Por w/ Pyr Inclus Grad Micritic Ch Wht-Gry w/OOL in Pl Op Shp Vit Chalk Wht Soft Sh Char-Gry Tr Blk Carb Fissil Sli Tr ? Odor No Stn No Flor NS

Ls Crm-Gry Microxln-Fxln Poor Ixln Por Grad Micritic w/Rhom Calcite Xls Inclus (lt Brn-Transl w/Lt Grn Flor) Chalk Wht V Abd Soft Fos (Crin) Sh Char-Gry Fissil Faint Odor No Stn ? Sli Min (Calcite) Flor Sh Char-Gry Tr Bl Carb Fissil NS

Ls Crm-Wht-Gry Microxln-Fxln Grad Tr/Poor OOM Por Med Dissolu Med Develop Poor Ixln Por Grad Micritic Cht Wht Op Shp Vit Chalk Wht V Abd Soft Sh Char-Gry-Blk Carb AA Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Microxln-Fxln Grad Tr/Poor OOM Por Med Dissolu Med Develop Poor Ixln Por Grad Micritic Cht Wht Op Shp Vit Chalk Wht V Abd Soft Sh Char-Gry Fissil No Odor No Stn No Flor N

Ls Crm Microxln-Fxln Poor Ixln Por Grad Micritic Cht Tan Op Shp Vit Chalk Wht Soft Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor Sh Char-Gry Tr Blk Carb Fissil NS

Ls Crm-Wht-Gry OOM Por Poor Develop Poor Dissolu Microxln - Fxln Poor Ixln Micritic Cht Wht-Gry Op Shp Vit (Tr Only) Chalk Wht Soft V Abd Sh Char-Gry Tr Blk Carb Fissil No Odor No Stn No Flor NS

Ls Crm-Gry OOM Por Poor Develop Poor Dissolu Microxln - Fxln Poor Ixln Micritic Cht Gry Op Shp Vit Chalk Wht Soft V Abd Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Gry Microxln - Fxln Poor Ixln Micritic Cht Gry Op Shp Vit Fos (Brach) Chalk Wht Soft V Abd Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Wht-Gry Microxln - Fxln Poor Ixln Micritic w/Pyr Inclus Grad Fxln Poor Pin-Pt Por Cht Gry Op Shp Vit Chalk Wht Soft V Abd Sh Char-Gry Fissil Faint Odor No Stn No Flor NS

Ls Crm-Wht-Gry Microxln - Fxln Poor Ixln Micritic w/Pyr Inclus Grad Fxln Poor Pin-Pt Por Cht Gry Op Shp Vit Chalk Wht Soft V Abd Sh Char-Gry Fissil Faint Odor No Stn No Flor NS

Ls Crm-Wht-Gry Microxln - Fxln Poor Ixln Micritic Cht Gry Op Shp Vit Chalk Wht Soft V Abd S Char-Gry Fissil Faint Odor No Stn No Flor NS

Ls Crm-Wht-Gry Microxln - Fxln Poor Ixln Micritic Cht Drk-Gry Lt-Gry-Wht Op Shp Vit Fos (Brach) Chalk Wht Soft V Abd Sh Char-Gry Fissil Faint Odo No Stn No Flor NS

STARK 4540' (- 1732)

KANSAS CITY "SWOPE (K)" 4546' (- 1738)

Sh Blk Carb w/Good SG Fissil Ls Wht Fxln Micritic Grad Tr OOL/OOM Poor InterOOL/OOM Po Cht-Gry Banded Op Shp Vit Chalk Wht Soft V Abd No Stn No Flor Faint Odor SG No Stn No Fl Faint Odor SG in Blk Sh

30" CFS @ 4562' Sh Blk Carb w/Good SG Fissil Ls Wht Fxln Micritic Grad Tr OOM Poor InterOOM Por No Stn No Flor Faint Odor SG

BKGD GAS= 23 UNITS

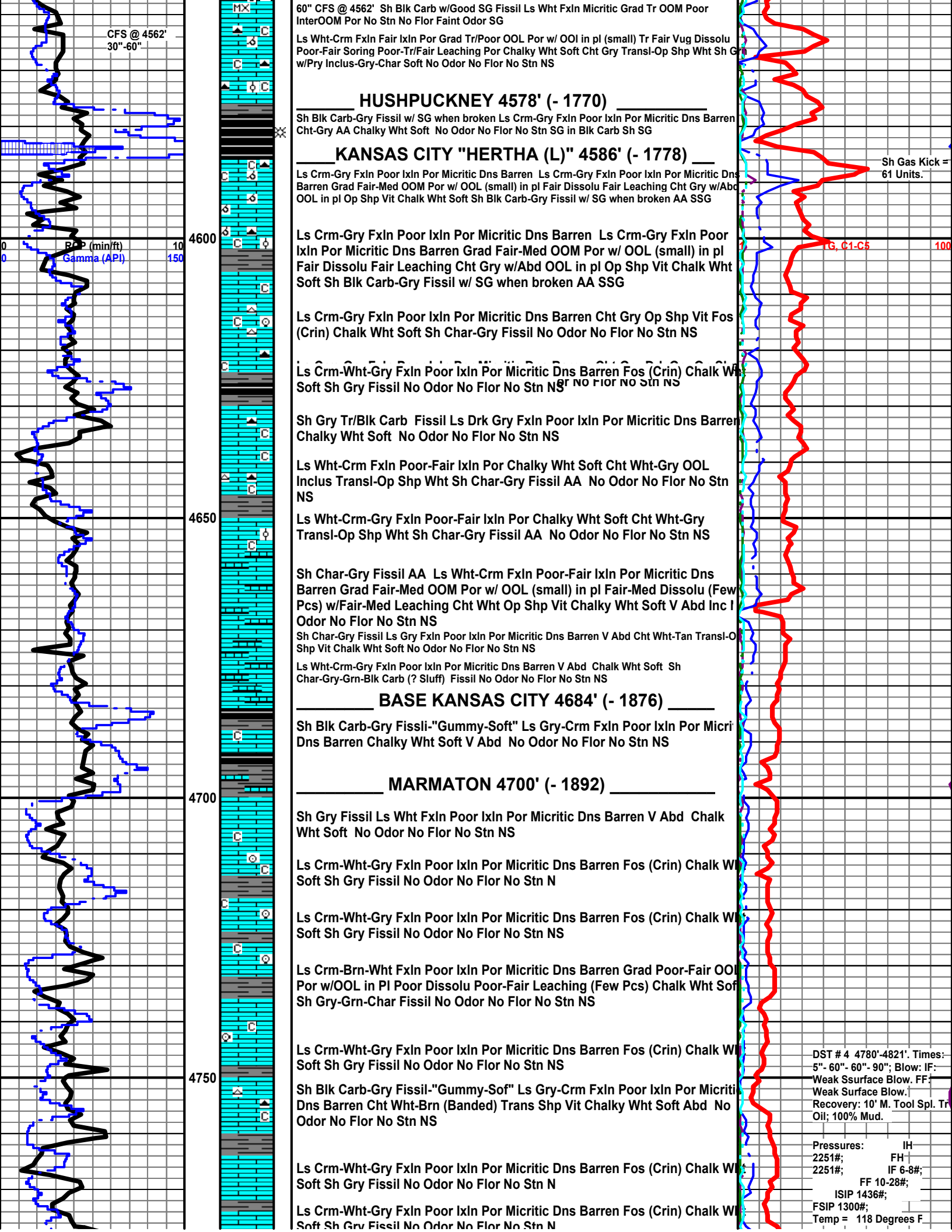
GAS KICK = 53 UNITS

TG, C1-C5 100

DST # 3 4380'-4409'. Times 5"- 90"- 60"-90"; Blow: IF: Weak/1" Inc to 6.5"". FF: Weak Building to Strong B.O.B./13.5". Recovery: 850' Total Fluid: 35' WCM; 65' MCW; 690' SMCW; 60' HMCW. Tool Spl: (Tr. O; 71% Wtr; 29% M.) Chl=8700 Ppm; Rw=.08 @ 75 degree. F.

Pressures: IH 2057#; FH = 2057#; IF = 20-102#; FF= 114-408#; ISIP= 1274#; FSIP= 1247#; Temp = 118 Degrees F. .

Sh Gas Kick = 86 Units



60" CFS @ 4562' Sh Blk Carb w/Good SG Fissil Ls Wht Fxln Micritic Grad Tr OOM Poor InterOOM Por No Stn No Flor Faint Odor SG

Ls Wht-Crm Fxln Fair Ixln Por Grad Tr/Poor OOL Por w/ OOl in pl (small) Tr Fair Vug Dissolu Poor-Fair Soring Poor-Tr/Fair Leaching Por Chalky Wht Soft Cht Gry Transl-Op Shp Wht Sh Gry w/Pry Inclus-Gry-Char Soft No Odor No Flor No Stn NS

HUSHPUCKNEY 4578' (- 1770)

Sh Blk Carb-Gry Fissil w/ SG when broken Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Cht-Gry AA Chalky Wht Soft No Odor No Flor No Stn SG in Blk Carb Sh SG

KANSAS CITY "HERTHA (L)" 4586' (- 1778)

Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Grad Fair-Med OOM Por w/ OOL (small) in pl Fair Dissolu Fair Leaching Cht Gry w/Abd OOL in pl Op Shp Vit Chalk Wht Soft Sh Blk Carb-Gry Fissil w/ SG when broken AA SSG

Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Grad Fair-Med OOM Por w/ OOL (small) in pl Fair Dissolu Fair Leaching Cht Gry w/Abd OOL in pl Op Shp Vit Chalk Wht Soft Sh Blk Carb-Gry Fissil w/ SG when broken AA SSG

Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Cht Gry Op Shp Vit Fos (Crin) Chalk Wht Soft Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Crin) Chalk Wht Soft Sh Gry Fissil No Odor No Flor No Stn NS

Sh Gry Tr/Blk Carb Fissil Ls Drk Gry Fxln Poor Ixln Por Micritic Dns Barren Chalky Wht Soft No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Poor-Fair Ixln Por Chalky Wht Soft Cht Wht-Gry OOL Inclus Transl-Op Shp Wht Sh Char-Gry Fissil AA No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Chalky Wht Soft Cht Wht-Gry Transl-Op Shp Wht Sh Char-Gry Fissil AA No Odor No Flor No Stn NS

Sh Char-Gry Fissil AA Ls Wht-Crm Fxln Poor-Fair Ixln Por Micritic Dns Barren Grad Fair-Med OOM Por w/ OOL (small) in pl Fair-Med Dissolu (Few Pcs) w/Fair-Med Leaching Cht Wht Op Shp Vit Chalky Wht Soft V Abd Inc I Odor No Flor No Stn NS

Sh Char-Gry Fissil Ls Gry Fxln Poor Ixln Por Micritic Dns Barren V Abd Cht Wht-Tan Transl-O Shp Vit Chalk Wht Soft No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren V Abd Chalk Wht Soft Sh Char-Gry-Grn-Blk Carb (? Sluff) Fissil No Odor No Flor No Stn NS

BASE KANSAS CITY 4684' (- 1876)

Sh Blk Carb-Gry Fissli-"Gummy-Soft" Ls Gry-Crm Fxln Poor Ixln Por Micri Dns Barren Chalky Wht Soft V Abd No Odor No Flor No Stn NS

MARMATON 4700' (- 1892)

Sh Gry Fissil Ls Wht Fxln Poor Ixln Por Micritic Dns Barren V Abd Chalk Wht Soft No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Crin) Chalk Wh Soft Sh Gry Fissil No Odor No Flor No Stn N

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Crin) Chalk Wh Soft Sh Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Brn-Wht Fxln Poor Ixln Por Micritic Dns Barren Grad Poor-Fair OOL Por w/OOL in Pl Poor Dissolu Poor-Fair Leaching (Few Pcs) Chalk Wht Soft Sh Gry-Grn-Char Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Crin) Chalk Wh Soft Sh Gry Fissil No Odor No Flor No Stn NS

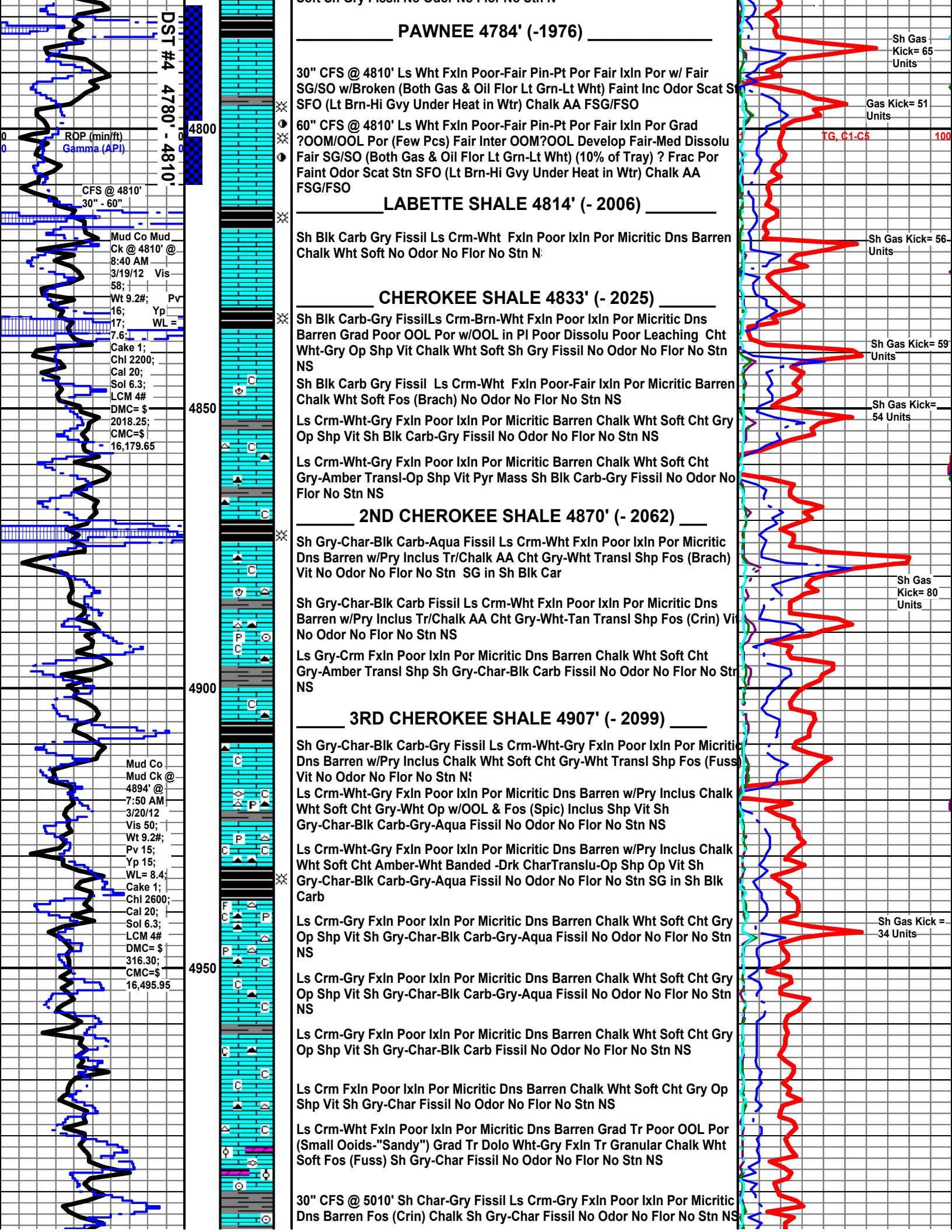
Sh Blk Carb-Gry Fissil-"Gummy-Sof" Ls Gry-Crm Fxln Poor Ixln Por Micriti Dns Barren Cht Wht-Brn (Banded) Trans Shp Vit Chalky Wht Soft Abd No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Crin) Chalk Wh Soft Sh Gry Fissil No Odor No Flor No Stn N

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Crin) Chalk Wh Soft Sh Gry Fissil No Odor No Flor No Stn N

DST # 4 4780'-4821'. Times: 5"- 60"- 60"- 90"; Blow: IF: Weak Ssurface Blow. FF: Weak Surface Blow. Recovery: 10' M. Tool Spl. Tr Oil; 100% Mud.

Pressures: IH 2251#; FH 2251#; IF 6-8#; FF 10-28#; ISIP 1436#; FSIP 1300#; Temp = 118 Degrees F



PAWNEE 4784' (-1976)

30" CFS @ 4810' Ls Wht Fxln Poor-Fair Pin-Pt Por Fair Ixln Por w/ Fair SG/SO w/Broken (Both Gas & Oil Flor Lt Grn-Lt Wht) Faint Inc Odor Scat St SFO (Lt Brn-Hi Gvy Under Heat in Wtr) Chalk AA FSG/FSO

60" CFS @ 4810' Ls Wht Fxln Poor-Fair Pin-Pt Por Fair Ixln Por Grad ?OOM/OOL Por (Few Pcs) Fair Inter OOM?OOL Develop Fair-Med Dissolu Fair SG/SO (Both Gas & Oil Flor Lt Grn-Lt Wht) (10% of Tray) ? Frac Por Faint Odor Scat Stn SFO (Lt Brn-Hi Gvy Under Heat in Wtr) Chalk AA FSG/FSO

LABETTE SHALE 4814' (- 2006)

Sh Blk Carb Gry Fissil Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft No Odor No Flor No Stn N

CHEROKEE SHALE 4833' (- 2025)

Sh Blk Carb-Gry FissilLs Crm-Brn-Wht Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOL Por w/OOL in Pl Poor Dissolu Poor Leaching Cht Wht-Gry Op Shp Vit Chalk Wht Soft Sh Gry Fissil No Odor No Flor No Stn NS

Sh Blk Carb Gry Fissil Ls Crm-Wht Fxln Poor-Fair Ixln Por Micritic Barren Chalk Wht Soft Fos (Brach) No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Cht Gry Op Shp Vit Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Cht Gry-Amber Transl-Op Shp Vit Pyr Mass Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

2ND CHEROKEE SHALE 4870' (- 2062)

Sh Gry-Char-Blk Carb-Aqua Fissil Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren w/Pry Inclus Tr/Chalk AA Cht Gry-Wht Transl Shp Fos (Brach) Vit No Odor No Flor No Stn SG in Sh Blk Car

Sh Gry-Char-Blk Carb Fissil Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren w/Pry Inclus Tr/Chalk AA Cht Gry-Wht-Tan Transl Shp Fos (Crin) Vit No Odor No Flor No Stn NS

Ls Gry-Crm Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft Cht Gry-Amber Transl Shp Sh Gry-Char-Blk Carb Fissil No Odor No Flor No Str NS

3RD CHEROKEE SHALE 4907' (- 2099)

Sh Gry-Char-Blk Carb-Gry Fissil Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren w/Pry Inclus Chalk Wht Soft Cht Gry-Wht Transl Shp Fos (Fuss) Vit No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren w/Pry Inclus Chalk Wht Soft Cht Gry-Wht Op w/OOL & Fos (Spic) Inclus Shp Vit Sh Gry-Char-Blk Carb-Gry-Aqua Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren w/Pry Inclus Chalk Wht Soft Cht Amber-Wht Banded -Drk CharTranslu-Op Shp Op Vit Sh Gry-Char-Blk Carb-Gry-Aqua Fissil No Odor No Flor No Stn SG in Sh Blk Carb

Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft Cht Gry Op Shp Vit Sh Gry-Char-Blk Carb-Gry-Aqua Fissil No Odor No Flor No Stn NS

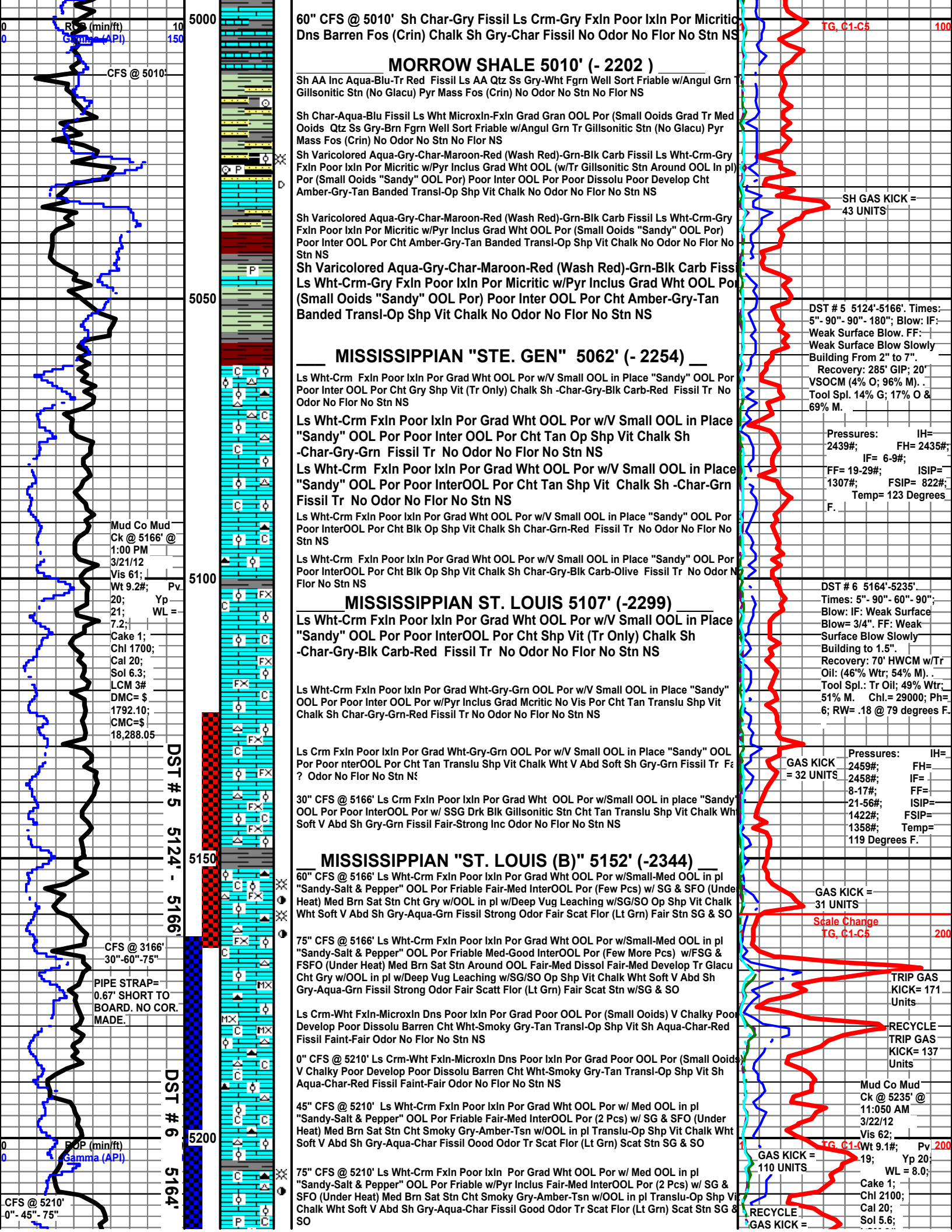
Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft Cht Gry Op Shp Vit Sh Gry-Char-Blk Carb-Gry-Aqua Fissil No Odor No Flor No Stn NS

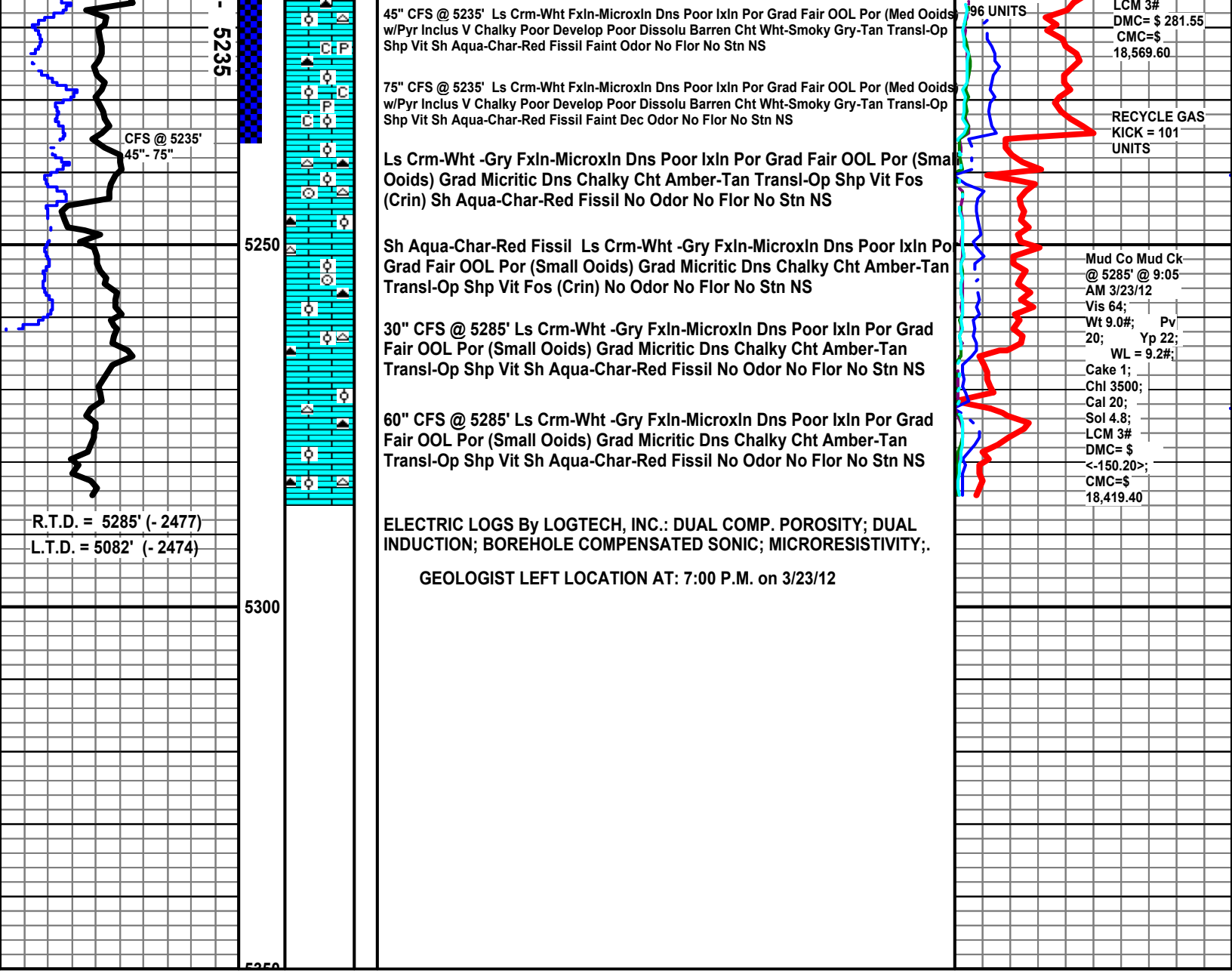
Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft Cht Gry Op Shp Vit Sh Gry-Char-Blk Carb Fissil No Odor No Flor No Stn NS

Ls Crm Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft Cht Gry Op Shp Vit Sh Gry-Char Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Grad Tr Poor OOL Por (Small Ooids-"Sandy") Grad Tr Dolo Wht-Gry Fxln Tr Granular Chalk Wht Soft Fos (Fuss) Sh Gry-Char Fissil No Odor No Flor No Stn NS

30" CFS @ 5010' Sh Char-Gry Fissil Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Crin) Chalk Sh Gry-Char Fissil No Odor No Flor No Stn NS


0
ROP (min/ft)
10
0
Gamma (API)
150
CFS @ 5010'
5000
5050
5100
5150
5200
Mud Co Mud Ck @ 5166' @ 1:00 PM 3/21/12 Vis 61; Wt 9.2#; Pv 20; Yp 21; WL = 7.2; Cake 1; Chl 1700; Cal 20; Sol 6.3; LCM 3# DMC= $ 1792.10; CMC=$ 18,288.05
DST # 5 5124' - 5166'
CFS @ 3166' 30"-60"-75"
PIPE STRAP= 0.67' SHORT TO BOARD. NO COR. MADE.
DST # 6 5164'
0
ROP (min/ft)
0
Gamma (API)
CFS @ 5210' 0"- 45"- 75"
60" CFS @ 5010' Sh Char-Gry Fissil Ls Crm-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Crin) Chalk Sh Gry-Char Fissil No Odor No Flor No Stn NS
MORROW SHALE 5010' (- 2202)
Sh AA Inc Aqua-Blu-Tr Red Fissil Ls AA Qtz Ss Gry-Wht Fgrn Well Sort Friable w/Angul Grn Tr Gillsonitic Stn (No Glacu) Pyr Mass Fos (Crin) No Odor No Stn No Flor NS
Sh Char-Aqua-Blu Fissil Ls Wht Microxln-Fxln Grad Gran OOL Por (Small Ooids Grad Tr Med Ooids Qtz Ss Gry-Brn Fgrn Well Sort Friable w/Angul Grn Tr Gillsonitic Stn (No Glacu) Pyr Mass Fos (Crin) No Odor No Stn No Flor NS
Sh Varicolored Aqua-Gry-Char-Maroon-Red (Wash Red)-Grn-Blk Carb Fissil Ls Wht-Crm-Gry Fxln Poor Ixln Por Micritic w/Pyr Inclus Grad Wht OOL (w/Tr Gillsonitic Stn Around OOL In pl) Por (Small Ooids "Sandy" OOL Por) Poor Inter OOL Por Poor Dissolu Poor Develop Cht Amber-Gry-Tan Banded Transl-Op Shp Vit Chalk No Odor No Flor No Stn NS
Sh Varicolored Aqua-Gry-Char-Maroon-Red (Wash Red)-Grn-Blk Carb Fissil Ls Wht-Crm-Gry Fxln Poor Ixln Por Micritic w/Pyr Inclus Grad Wht OOL Por (Small Ooids "Sandy" OOL Por) Poor Inter OOL Por Cht Amber-Gry-Tan Banded Transl-Op Shp Vit Chalk No Odor No Flor No Stn NS
Sh Varicolored Aqua-Gry-Char-Maroon-Red (Wash Red)-Grn-Blk Carb Fissil Ls Wht-Crm-Gry Fxln Poor Ixln Por Micritic w/Pyr Inclus Grad Wht OOL Por (Small Ooids "Sandy" OOL Por) Poor Inter OOL Por Cht Amber-Gry-Tan Banded Transl-Op Shp Vit Chalk No Odor No Flor No Stn NS
MISSISSIPPIAN "STE. GEN" 5062' (- 2254)
Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/V Small OOL in Place "Sandy" OOL Por Poor Inter OOL Por Cht Gry Shp Vit (Tr Only) Chalk Sh -Char-Gry-Blk Carb-Red Fissil Tr No Odor No Flor No Stn NS
Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/V Small OOL in Place "Sandy" OOL Por Poor Inter OOL Por Cht Tan Op Shp Vit Chalk Sh -Char-Gry-Grn Fissil Tr No Odor No Flor No Stn NS
Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/V Small OOL in Place "Sandy" OOL Por Poor InterOOL Por Cht Tan Shp Vit Chalk Sh -Char-Grn Fissil Tr No Odor No Flor No Stn NS
Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/V Small OOL in Place "Sandy" OOL Por Poor InterOOL Por Cht Blk Op Shp Vit Chalk Sh Char-Grn-Red Fissil Tr No Odor No Flor No Stn NS
Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/V Small OOL in Place "Sandy" OOL Por Poor InterOOL Por Cht Blk Op Shp Vit Chalk Sh Char-Gry-Blk Carb-Olive Fissil Tr No Odor No Flor No Stn NS
MISSISSIPPIAN ST. LOUIS 5107' (-2299)
Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/V Small OOL in Place "Sandy" OOL Por Poor InterOOL Por Cht Shp Vit (Tr Only) Chalk Sh -Char-Gry-Blk Carb-Red Fissil Tr No Odor No Flor No Stn NS
Ls Wht-Crm Fxln Poor Ixln Por Grad Wht-Gry-Grn OOL Por w/V Small OOL in Place "Sandy" OOL Por Poor Inter OOL Por w/Pyr Inclus Grad Mcritic No Vis Por Cht Tan Translu Shp Vit Chalk Sh Char-Gry-Grn-Red Fissil Tr No Odor No Flor No Stn NS
Ls Crm Fxln Poor Ixln Por Grad Wht-Gry-Grn OOL Por w/V Small OOL in Place "Sandy" OOL Por Poor nterOOL Por Cht Tan Translu Shp Vit Chalk Wht V Abd Soft Sh Gry-Grn Fissil Tr Fa ? Odor No Flor No Stn NS
30" CFS @ 5166' Ls Crm Fxln Poor Ixln Por Grad Wht OOL Por w/Small OOL in place "Sandy" OOL Por Poor InterOOL Por w/ SSG Drk Blk Gillsonitic Stn Cht Tan Translu Shp Vit Chalk Wh Soft V Abd Sh Gry-Grn Fissil Fair-Strong Inc Odor No Flor No Stn NS
MISSISSIPPIAN "ST. LOUIS (B)" 5152' (-2344)
60" CFS @ 5166' Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/Small-Med OOL in pl "Sandy-Salt & Pepper" OOL Por Friable Fair-Med InterOOL Por (Few Pcs) w/ SG & SFO (Unde Heat) Med Brn Sat Stn Cht Gry w/OOL in pl w/Deep Vug Leaching w/SG/SO Op Shp Vit Chalk Wht Soft V Abd Sh Gry-Aqua-Grn Fissil Strong Odor Fair Scat Flor (Lt Grn) Fair Stn SG & SO
75" CFS @ 5166' Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/Small-Med OOL in pl "Sandy-Salt & Pepper" OOL Por Friable Med-Good InterOOL Por (Few More Pcs) w/FSG & FSFO (Under Heat) Med Brn Sat Stn Around OOL Fair-Med Dissol Fair-Med Develop Tr Glacu Cht Gry w/OOL in pl w/Deep Vug Leaching w/SG/SO Op Shp Vit Chalk Wht Soft V Abd Sh Gry-Aqua-Grn Fissil Strong Odor Fair Scatt Flor (Lt Grn) Fair Scat Stn w/SG & SO
Ls Crm-Wht Fxln-Microxln Dns Poor Ixln Por Grad Poor OOL Por (Small Ooids) V Chalky Poor Develop Poor Dissolu Barren Cht Wht-Smoky Gry-Tan Transl-Op Shp Vit Sh Aqua-Char-Red Fissil Faint-Fair Odor No Flor No Stn NS
0" CFS @ 5210' Ls Crm-Wht Fxln-Microxln Dns Poor Ixln Por Grad Poor OOL Por (Small Ooids) V Chalky Poor Develop Poor Dissolu Barren Cht Wht-Smoky Gry-Tan Transl-Op Shp Vit Sh Aqua-Char-Red Fissil Faint-Fair Odor No Flor No Stn NS
45" CFS @ 5210' Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/ Med OOL in pl "Sandy-Salt & Pepper" OOL Por Friable Fair-Med InterOOL Por (2 Pcs) w/ SG & SFO (Under Heat) Med Brn Sat Stn Cht Smoky Gry-Amber-Tsn w/OOL in pl Translu-Op Shp Vit Chalk Wht Soft V Abd Sh Gry-Aqua-Char Fissil Oood Odor Tr Scat Flor (Lt Grn) Scat Stn SG & SO
75" CFS @ 5210' Ls Wht-Crm Fxln Poor Ixln Por Grad Wht OOL Por w/ Med OOL in pl "Sandy-Salt & Pepper" OOL Por Friable w/Pyr Inclus Fair-Med InterOOL Por (2 Pcs) w/ SG & SFO (Under Heat) Med Brn Sat Stn Cht Smoky Gry-Amber-Tsn w/OOL in pl Translu-Op Shp Vit Chalk Wht Soft V Abd Sh Gry-Aqua-Char Fissil Good Odor Tr Scat Flor (Lt Grn) Scat Stn SG & SO
1
TG, C1-C5
100
SH GAS KICK = 43 UNITS
DST # 5 5124'-5166'. Times: 5"- 90"- 90"- 180"; Blow: IF: Weak Surface Blow. FF: Weak Surface Blow Slowly Building From 2" to 7". Recovery: 285' GIP; 20' VSOCM (4% O; 96% M). . Tool Spl. 14% G; 17% O & 69% M.
Pressures: IH= 2439#; FH= 2435#; IF= 6-9#; FF= 19-29#; ISIP= 1307#; FSIP= 822#; Temp= 123 Degrees F.
DST # 6 5164'-5235'. Times: 5"- 90"- 60"- 90"; Blow: IF: Weak Surface Blow= 3/4". FF: Weak Surface Blow Slowly Building to 1.5". Recovery: 70' HWCM w/Tr Oil: (46'% Wtr; 54% M). . Tool Spl.: Tr Oil; 49% Wtr; 51% M. Chl.= 29000; Ph= 6; RW= .18 @ 79 degrees F.
GAS KICK = 32 UNITS
Pressures: IH= 2459#; FH= 2458#; IF= 8-17#; FF= 21-56#; ISIP= 1422#; FSIP= 1358#; Temp= 119 Degrees F.
GAS KICK = 31 UNITS
Scale Change
TG, C1-C5
200
TRIP GAS KICK= 171 Units
RECYCLE TRIP GAS KICK= 137 Units
Mud Co Mud Ck @ 5235' @ 11:050 AM 3/22/12 Vis 62; Wt 9.1#; Pv 19; Yp 20; WL = 8.0; Cake 1; Chl 2100; Cal 20; Sol 5.6;
1
TG, C1-C5
200
GAS KICK = 110 UNITS
RECYCLE GAS KICK =



45" CFS @ 5235' Ls Crm-Wht FxIn-MicroxIn Dns Poor IxIn Por Grad Fair OOL Por (Med Ooids) w/Pyr Inclus V Chalky Poor Develop Poor Dissolu Barren Cht Wht-Smoky Gry-Tan Transl-Op Shp Vit Sh Aqua-Char-Red Fissil Faint Odor No Flor No Stn NS

75" CFS @ 5235' Ls Crm-Wht FxIn-MicroxIn Dns Poor IxIn Por Grad Fair OOL Por (Med Ooids) w/Pyr Inclus V Chalky Poor Develop Poor Dissolu Barren Cht Wht-Smoky Gry-Tan Transl-Op Shp Vit Sh Aqua-Char-Red Fissil Faint Dec Odor No Flor No Stn NS

Ls Crm-Wht -Gry FxIn-MicroxIn Dns Poor IxIn Por Grad Fair OOL Por (Small Ooids) Grad Micritic Dns Chalky Cht Amber-Tan Transl-Op Shp Vit Fos (Crin) Sh Aqua-Char-Red Fissil No Odor No Flor No Stn NS

Sh Aqua-Char-Red Fissil Ls Crm-Wht -Gry FxIn-MicroxIn Dns Poor IxIn Po Grad Fair OOL Por (Small Ooids) Grad Micritic Dns Chalky Cht Amber-Tan Transl-Op Shp Vit Fos (Crin) No Odor No Flor No Stn NS

30" CFS @ 5285' Ls Crm-Wht -Gry FxIn-MicroxIn Dns Poor IxIn Por Grad Fair OOL Por (Small Ooids) Grad Micritic Dns Chalky Cht Amber-Tan Transl-Op Shp Vit Sh Aqua-Char-Red Fissil No Odor No Flor No Stn NS

60" CFS @ 5285' Ls Crm-Wht -Gry FxIn-MicroxIn Dns Poor IxIn Por Grad Fair OOL Por (Small Ooids) Grad Micritic Dns Chalky Cht Amber-Tan Transl-Op Shp Vit Sh Aqua-Char-Red Fissil No Odor No Flor No Stn NS

ELECTRIC LOGS By LOGTECH, INC.: DUAL COMP. POROSITY; DUAL INDUCTION; BOREHOLE COMPENSATED SONIC; MICRORESISTIVITY;.

GEOLOGIST LEFT LOCATION AT: 7:00 P.M. on 3/23/12

ALLIED CEMENTING CO., INC.

Federal Tax I.D.# 48-0727860

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

27169

SERVICE POINT: Liberal Ks

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
3-11-12	12	28S	30W			8:00	1:30 PM

LEASE	WELL #	LOCATION	COUNTY	STATE
Harold Smith	1-12	Copland N on #6 to AA ½ N E to Loc	Seward	KS

OLD OR (NEW) (Circle one)

CONTRACTOR Sterling #5
TYPE OF JOB 8⅝ Surface
HOLE SIZE 12¼ T.D. 1871'
CASING SIZE 8⅝ DEPTH 1871'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX 2000 PSI MINIMUM
MEAS. LINE SHOE JOINT 38.75'
CEMENT LEFT IN CSG. 38.75'
PERFS.
DISPLACEMENT 116.5

OWNER SAME

EQUIPMENT

PUMP TRUCK CEMENTER Ryan
456/541 HELPER Rubin Ceasar
BULK TRUCK
472/467 DRIVER Francisco
BULK TRUCK
457/251 DRIVER Rubin

REMARKS:

Thank You

Circ cmt to surface

CHARGE TO: Falcon Exp
STREET
CITY STATE ZIP

CEMENT

AMOUNT ORDERED 675 sk 65/35 6% Gel 3% CC ¼# Floseal
150 A 2% Gel 3% CC

COMMON	150 A	@ 16.25	2437.50
POZMIX		@	
GEL	3 sk	@ 21.25	63.75
CHLORIDE	27 sk CC	@ 58.20	1571.40
ASC		@	
		@	
	675 Lite	@ 15.00	10125.00
	Sugar Solid	@ 1.10	55.00
	Floseal	@	
		@	
	169 lb	@ .70	456.30
		@	
HANDLING	862	@ 2.25	1939.50
MILEAGE	5 x Mi x 111		4744.00

TOTAL 21,389.45

SERVICE

DEPTH OF JOB	1877'	1925.00
PUMP TRUCK CHARGE		
EXTRA FOOTAGE	@	
MILEAGE 100 mi	@ 7.00	700.00
MANIFOLD & Head	@ 200.00	200.00
Fuel mi 100 m	@ 4.00	400.00
	@	

TOTAL 3225.00

PLUG & FLOAT EQUIPMENT

3 Baskets	@ 478.00	1434.00
Centralizer	@ 64.00	192.00
AFU	@	
Guide Shoe	@	394.00
	@	

TOTAL 2402.00

TAX
TOTAL CHARGE 27,016.45
DISCOUNT IF PAID IN 30 DAYS

To Allied Cementing Co., Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

SIGNATURE

PRINTED NAME

BASiC energy services, L.P.

TREATMENT REPORT

Customer: Falcon		Lease No.			Date: 3-21-12	
Lease: Harold Smith		Well #: 1-12				
Field Order #: [illegible]	Station: Liberal, KS [illegible]	Casing: 5 1/2		Depth: 4645	County: [illegible]	State: KS
Type Job: [illegible] 5 1/2" Production			Formation		Legal Description: [illegible]	

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME			
Casing Size	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
Depth 4645'	Depth	From	To	Pre Pad	Max			5 Min.
Volume [illegible]	Volume	From	To	Pad	Min			10 Min.
Max Press [illegible]	Max Press	From	To	Frac	Avg			15 Min.
Well Connection [illegible]	Annulus Vol.	From	To		HHP Used			Annulus Pressure
Plug Depth [illegible]	Packer Depth	From	To	Flush	Gas Volume			Total Load

Customer Representative: Chuck	Station Manager: J. Bennett	Treater: [illegible]

Service Units	3[illegible]776	3[illegible]10	14[illegible]2	14354	14578
Driver Names	[illegible]	[illegible]		[illegible]	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
2:00					on loc. [illegible] assessment (hazards)
2:30					spot trucks - rig up
7:00					start csg + fe
10:00					csg on btm break circ
10:45	1200#		2	1	circ packer shoe to 1200# open
10:45	300		5	5	pump 5 bbl H_2O spacer
10:48	300		12	5	pump 12 bbl super flush
10:53	300		5	5	pump 5 bbl H_2O spacer
10:55	100		13	4	mix + pump [illegible] 60/40 poz
					@ 13.5 ppg - 1.45 [illegible] 7.77 gal/sk
					to plug rat + mouse holes
11:05	500		44.4	6	mix + pump 165 sk AA2 @ 15 ppg
					5% [illegible] 10% salt .6% C15 [illegible]
					defoamer 5# Gilsonite -
					1.51 [illegible], 6.6 gal/sk
11:15					wash pump + lines
11:20	175		0	6.5	drop plug disp csg
11:40	700		100	3	slow rate last 10 bbl of disp
11:45	1200		112	0	land plug float held
					job complete

1700 S. Country Estates • P.O. Box 129 • Liberal, KS 67905 • (620) 624-2277 • Fax (620) 624-2280

Taylor Printing, Inc. 620-672-3656