Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1155184

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 # 5003
Name: McCoy Petroleum Corporation
Address 1: 8080 E CENTRAL STE 300
Address 2:
City: WICHITA State: KS Zip: 67206 + 2366
Contact Person: Scott Hampel
Phone: (316) 636-2737
CONTRACTOR: License # 5142
Name: Sterling Drilling Company
Wellsite Geologist: David Williams
Purchaser: MVPurchasing

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 #:

6/16/2013	6/25/2013	7/18/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-097-21761-00-00
Spot Description: C NW SW
_ - _ - NW - SW Sec. 23 Twp. 30 S. R. 19 ☐ East ☑ West
1980 Feet from ☐ North / ☑ South Line of Section
660 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: Kiowa
Lease Name: HILL 'A' Well #: #4-23
Field Name: Alford
Producing Formation: Mississippian
Elevation: Ground: 2228 Kelly Bushing: 2239
Total Vertical Depth: 5200 Plug Back Total Depth: 5150
Amount of Surface Pipe Set and Cemented at: 610 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: 15400 ppm Fluid volume: 1000 bbls
Dewatering method used: Evaporated

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: 08/15/2013
☑ **Confidential Release Date:** 08/15/2015
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 08/16/2013

1155184

Operator Name: McCoy Petroleum Corporation Lease Name: HILL 'A' Well #: #4-23

Sec. 23 Twp. 30 S. R. 19 ☐ East ☑ West County: Kiowa

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:

Weatherford: Array Induction, Dual Compensated Density, Microresistivity, Caliper

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

Name	Top	Datum
See 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	610	60/40 Pozmix / Class A	290	3%Gel, 2%CC, 1/4#/sx Flocele,
Production	7.875	4.5	10.5	5199	ASC MPC Blend	225	4%Gel, 5#/sx Kolscal

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	Spergen B: 5058-5074, 5078-5090	AC: 1000gals 15%MCA. REAC: 3000gals 20%SGA, 120 Ball Sealers	5090

TUBING RECORD: Size: 2.375 Set At: 5127 Packer At: Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 7/18/2013

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	46	39	17		

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: Miss: 5058-5090

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

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/

August 14, 2013

Scott Hampel
McCoy Petroleum Corporation
8080 E CENTRAL STE 300
WICHITA, KS 67206-2366

Re: ACO1
API 15-097-21761-00-00
HILL 'A' #4-23
SW/4 Sec.23-30S-19W
Kiowa 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,
Scott Hampel

DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corp**

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

Hill A #4-23

23-30s-19w Kiowa,KS

Start Date: 2013.06.23 @ 00:57:44
End Date: 2013.06.23 @ 11:21:29
Job Ticket #: 50988 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.06.26 @ 09:16:36

DRILL STEM TEST REPORT

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50988 **DST#: 1**

Test Start: 2013.06.23 @ 00:57:44

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:35:59
Time Test Ended: 11:21:29

Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 45

Interval: 5064.00 ft (KB) To 5105.00 ft (KB) (TVD)
Total Depth: 5105.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

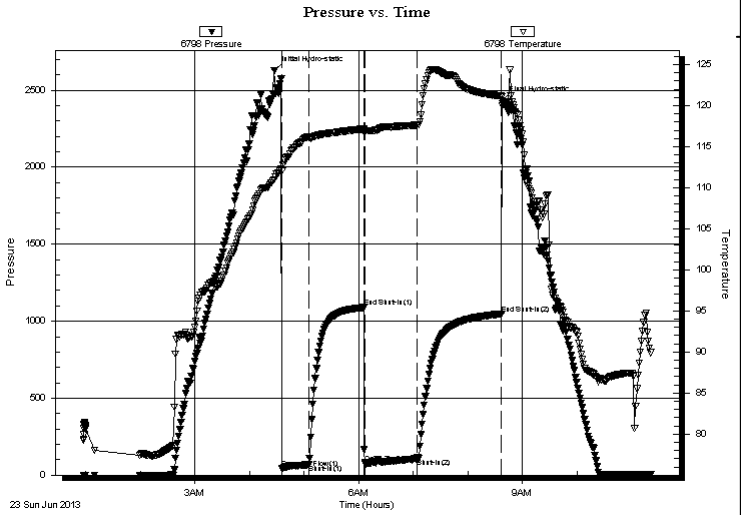
Reference Elevations: 2242.00 ft (KB)
2231.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6798 **Inside**

Press@RunDepth: 109.13 psig @ 5065.00 ft (KB)
Start Date: 2013.06.23 End Date: 2013.06.23
Start Time: 00:57:45 End Time: 11:21:29

Capacity: 8000.00 psig
Last Calib.: 2013.06.23
Time On Btm: 2013.06.23 @ 04:27:14
Time Off Btm: 2013.06.23 @ 08:37:59

TEST COMMENT: IF: Strong Blow , BOB in 30 seconds
ISI: GTS While Bleeding Off , No Blow Back
FF: Strong Blow , BOB & GTS Immediate, Caught Sample & Gauged With Merla
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2629.09	110.99	Initial Hydro-static
9	44.58	112.08	Open To Flow (1)
39	67.64	116.15	Shut-In(1)
99	1088.55	117.15	End Shut-In(1)
100	74.72	116.80	Open To Flow (2)
157	109.13	117.63	Shut-In(2)
250	1047.23	121.13	End Shut-In(2)
251	2434.53	120.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4791 GIP	0.00
120.00	GSY SOWCM 35%G 2%O 15%W 48%M	0.59
150.00	GCM 5%G 95%M	1.24

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50988 **DST#: 1**

Test Start: 2013.06.23 @ 00:57:44

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:35:59
Time Test Ended: 11:21:29

Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 45

Interval: 5064.00 ft (KB) To 5105.00 ft (KB) (TVD)
Total Depth: 5105.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

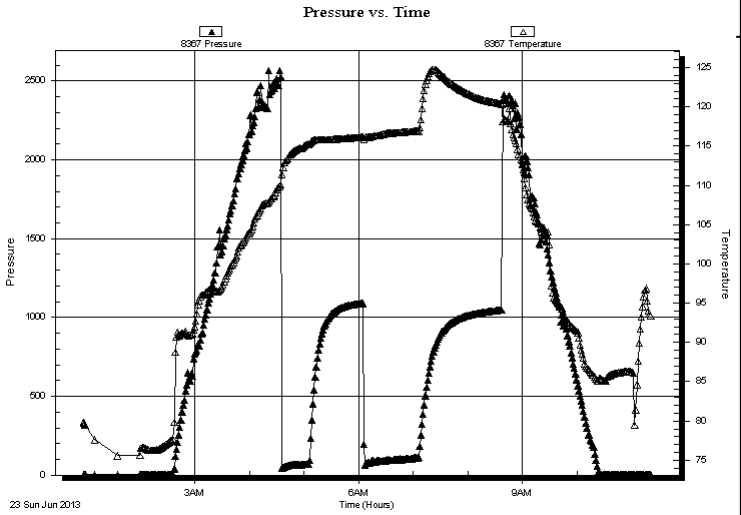
Reference Elevations: 2242.00 ft (KB)
2231.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8367 **Outside**

Press@RunDepth: psig @ 5065.00 ft (KB)
Start Date: 2013.06.23 End Date: 2013.06.23
Start Time: 00:57:49 End Time: 11:21:29

Capacity: 8000.00 psig
Last Calib.: 2013.06.23
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 30 seconds
ISI: GTS While Bleeding Off, No Blow Back
FF: Strong Blow , BOB & GTS Immediate, Caught Sample & Gauged With Merla
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4791 GIP	0.00
120.00	GSY SOWCM 35%G 2%O 15%W 48%M	0.59
150.00	GCM 5%G 95%M	1.24

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50988 **DST#: 1**

Test Start: 2013.06.23 @ 00:57:44

Tool Information

Drill Pipe:	Length:	4846.00 ft	Diameter:	3.80 inches	Volume:	67.98 bbl	Tool Weight:		2100.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	215.00 ft	Diameter:	2.25 inches	Volume:	1.06 bbl	Weight to Pull Loose:		98000.00 lb
					Total Volume:	69.04 bbl	Tool Chased		ft
Drill Pipe Above KB:		24.00 ft					String Weight:	Initial	84000.00 lb
Depth to Top Packer:		5064.00 ft						Final	86000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		41.00 ft							
Tool Length:		68.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			5042.00		
Hydraulic tool	5.00			5047.00		
Jars	5.00			5052.00		
Safety Joint	2.00			5054.00		
Packer	5.00			5059.00	27.00	Bottom Of Top Packer
Packer	5.00			5064.00		
Stubb	1.00			5065.00		
Recorder	0.00	6798	Inside	5065.00		
Recorder	0.00	8367	Outside	5065.00		
Perforations	3.00			5068.00		
Change Over Sub	1.00			5069.00		
Drill Pipe	32.00			5101.00		
Change Over Sub	1.00			5102.00		
Bullnose	3.00			5105.00	41.00	Bottom Packers & Anchor
Total Tool Length:	**68.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50988 **DST#: 1**

Test Start: 2013.06.23 @ 00:57:44

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:	125000 ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	14.37 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	10500.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4791 GIP	0.000
120.00	GSY SOWCM 35%G 2%O 15%W 48%M	0.590
150.00	GCM 5%G 95%M	1.239

Total Length: 270.00 ft Total Volume: 1.829 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW was .055 @ 85 degrees

DRILL STEM TEST REPORT

GAS RATES

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50988 **DST#: 1**

Test Start: 2013.06.23 @ 00:57:44

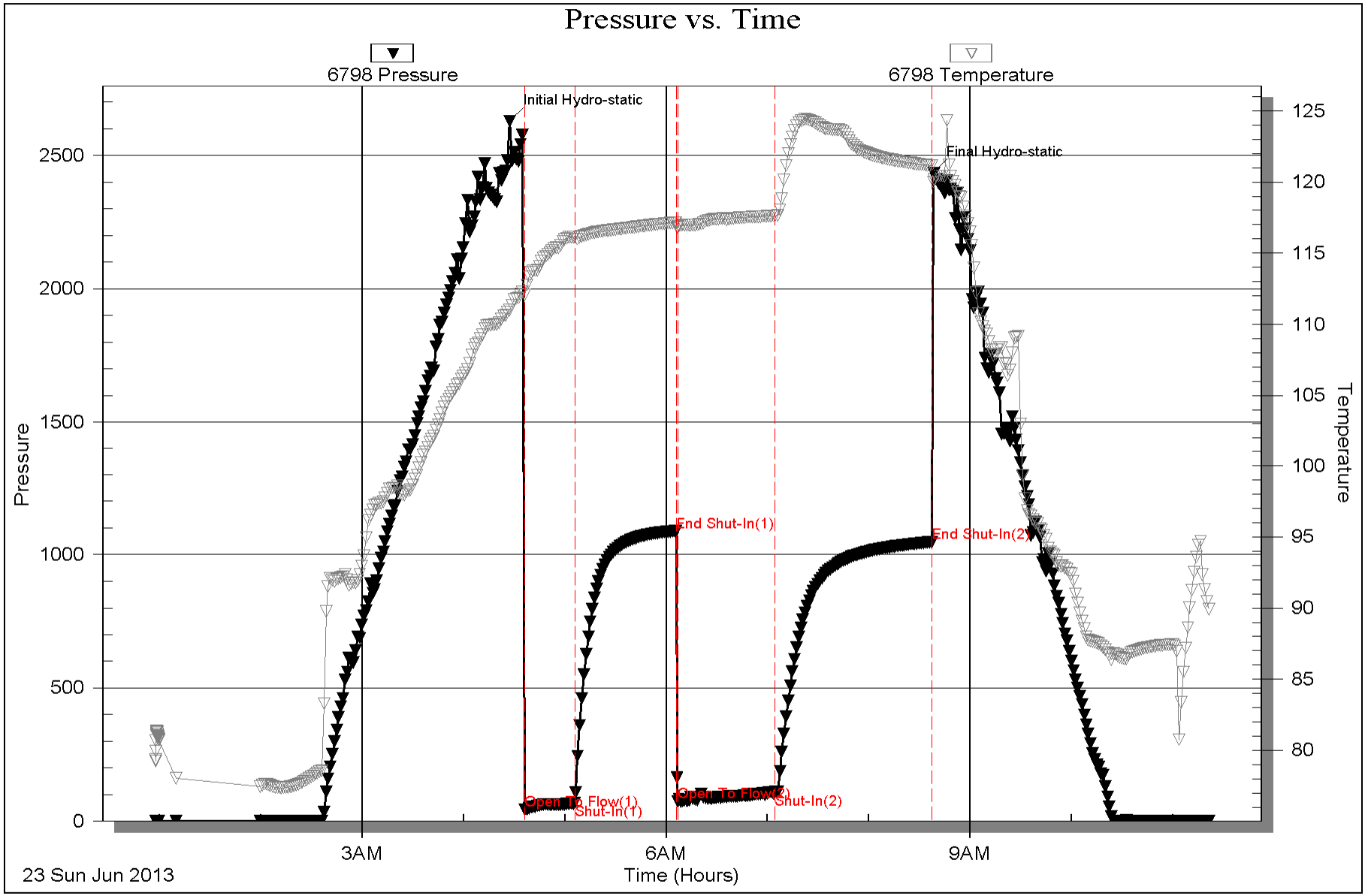
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

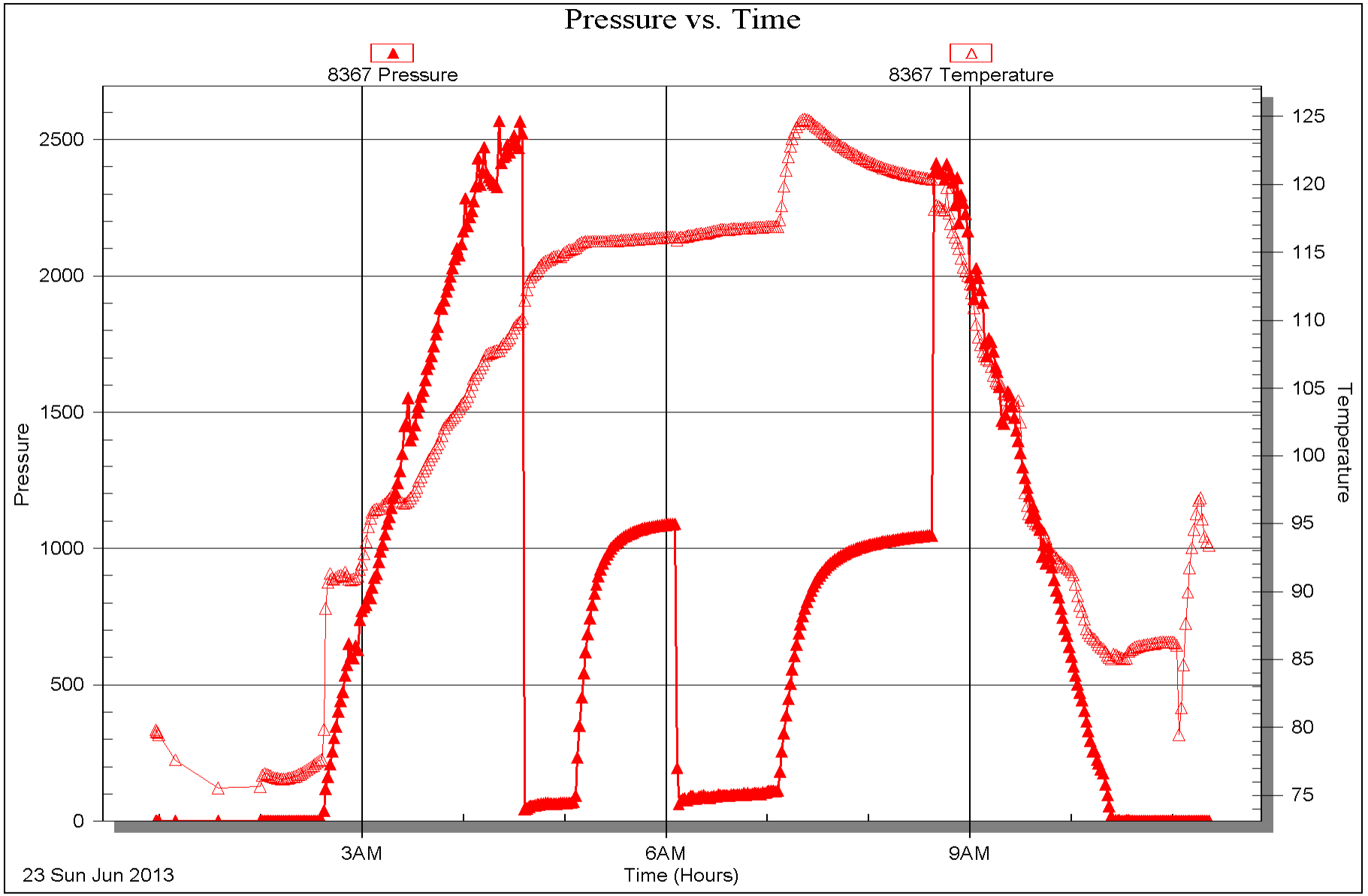
Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
		0.00	0.00	0.00

Serial #: 6798 **Inside** McCoy Petroleum Corp Hill A #4-23 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 50988 Printed: 2013.06.26 @ 09:16:40

Serial #: 8367 **Outside** McCoy Petroleum Corp Hill A #4-23 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 50988 Printed: 2013.06.26 @ 09:16:40

DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corp**

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

Hill A #4-23

23-30s-19w Kiowa,KS

Start Date: 2013.06.23 @ 23:33:50
End Date: 2013.06.24 @ 08:53:35
Job Ticket #: 50989 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.06.26 @ 09:15:37

DRILL STEM TEST REPORT

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50989 **DST#: 2**

Test Start: 2013.06.23 @ 23:33:50

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:07:05
Time Test Ended: 08:53:35

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 45

Interval: 5105.00 ft (KB) To 5125.00 ft (KB) (TVD)
Total Depth: 5125.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

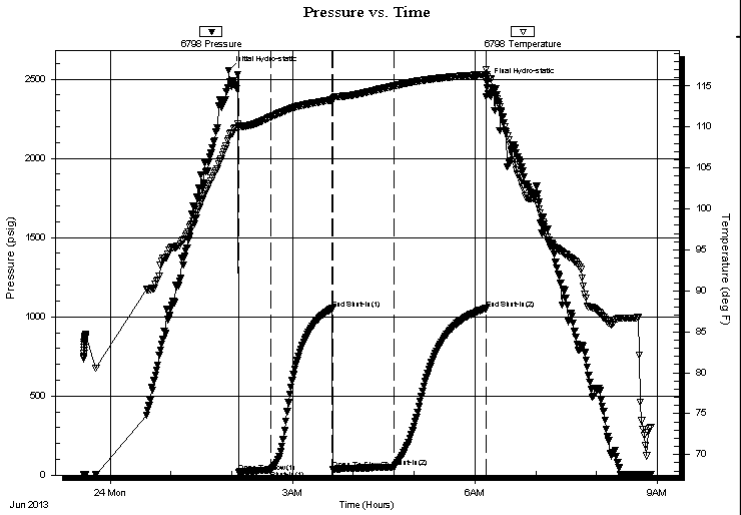
Reference Elevations: 2242.00 ft (KB)
2231.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6798 **Inside**

Press@RunDepth: 52.11 psig @ 5106.00 ft (KB)
Start Date: 2013.06.23 End Date: 2013.06.24
Start Time: 23:33:51 End Time: 08:53:35

Capacity: 8000.00 psig
Last Calib.: 2013.06.24
Time On Btm: 2013.06.24 @ 01:57:05
Time Off Btm: 2013.06.24 @ 06:11:35

TEST COMMENT: IF: Weal 1/4 inch Blow
ISI: No Blow Back
FF: Weak Blow , Built to 1 1/2 inches
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2556.14	108.55	Initial Hydro-static
10	19.37	110.12	Open To Flow (1)
41	33.25	111.19	Shut-In(1)
102	1052.38	113.32	End Shut-In(1)
103	34.80	113.43	Open To Flow (2)
163	52.11	114.99	Shut-In(2)
254	1051.50	116.44	End Shut-In(2)
255	2481.14	116.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	630 GIP	0.00
65.00	VSOCWM 1%O 40%W 59%M	0.32

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50989 **DST#: 2**

Test Start: 2013.06.23 @ 23:33:50

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:07:05
Time Test Ended: 08:53:35

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 45

Interval: 5105.00 ft (KB) To 5125.00 ft (KB) (TVD)
Total Depth: 5125.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

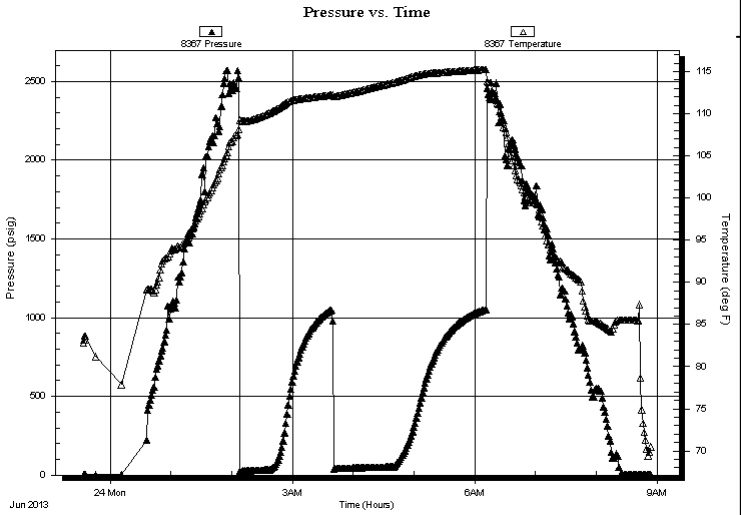
Reference Elevations: 2242.00 ft (KB)
2231.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8367 **Outside**

Press@RunDepth: psig @ 5106.00 ft (KB)
Start Date: 2013.06.23 End Date: 2013.06.24
Start Time: 23:33:55 End Time: 08:54:05

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weal 1/4 inch Blow
ISI: No Blow Back
FF: Weak Blow , Built to 1 1/2 inches
FSI: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	630 GIP	0.00
65.00	VSOCWM 1%O 40%W 59%M	0.32

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50989 **DST#: 2**

Test Start: 2013.06.23 @ 23:33:50

Tool Information

Drill Pipe:	Length:	4878.00 ft	Diameter:	3.80 inches	Volume:	68.43 bbl	Tool Weight:		2100.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	215.00 ft	Diameter:	2.25 inches	Volume:	1.06 bbl	Weight to Pull Loose:		95000.00 lb
					Total Volume:	69.49 bbl	Tool Chased		ft
Drill Pipe Above KB:		15.00 ft					String Weight:	Initial	85000.00 lb
Depth to Top Packer:		5105.00 ft						Final	85000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		20.00 ft							
Tool Length:		47.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			5083.00		
Hydraulic tool	5.00			5088.00		
Jars	5.00			5093.00		
Safety Joint	2.00			5095.00		
Packer	5.00			5100.00	27.00	Bottom Of Top Packer
Packer	5.00			5105.00		
Stubb	1.00			5106.00		
Recorder	0.00	6798	Inside	5106.00		
Recorder	0.00	8367	Outside	5106.00		
Perforations	16.00			5122.00		
Bullnose	3.00			5125.00	20.00	Bottom Packers & Anchor
Total Tool Length:	**47.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50989 **DST#: 2**

Test Start: 2013.06.23 @ 23:33:50

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:	110000 ppm
Viscosity:	68.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	15.58 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	12400.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	630 GIP	0.000
65.00	VSOCWM 1%O 40%W 59%M	0.320

Total Length: 65.00 ft Total Volume: 0.320 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW was .06 @ 86 degrees

DRILL STEM TEST REPORT

GAS RATES

McCoy Petroleum Corp

8080 E Central Ste 300
Wichita, KS 67206

ATTN: Dave Williams

23-30s-19w Kiowa,KS

Hill A #4-23

Job Ticket: 50989 **DST#: 2**

Test Start: 2013.06.23 @ 23:33:50

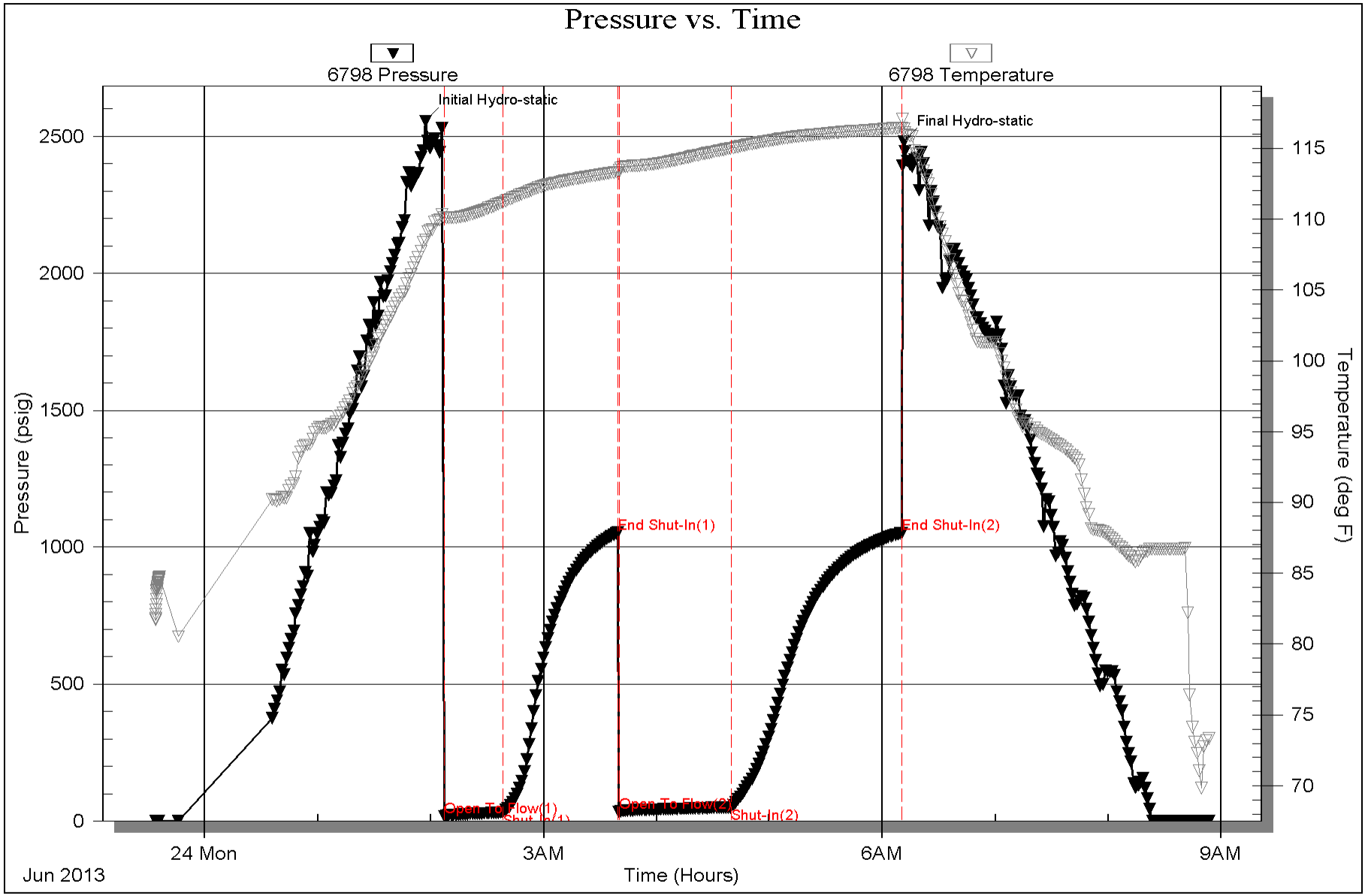
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

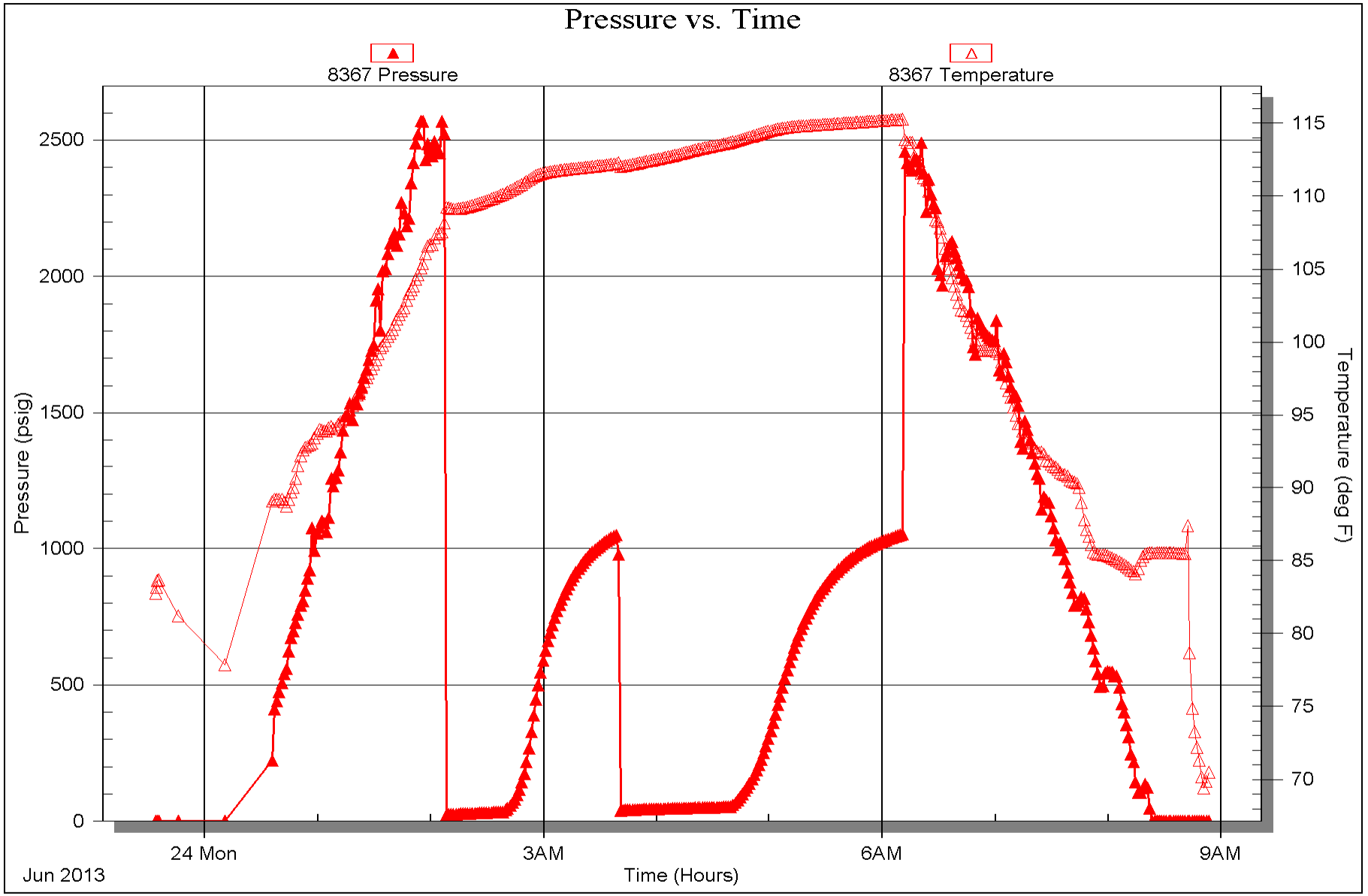
Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
		0.00	0.00	0.00

Serial #: 6798 **Inside** McCoy Petroleum Corp Hill A #4-23 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50989 Printed: 2013.06.26 @ 09:15:41

Serial #: 8367 **Outside** McCoy Petroleum Corp Hill A #4-23 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50989 Printed: 2013.06.26 @ 09:15:41

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50988

Well Name & No. Hill A 4-23 Test No. 1 Date 06/22/13

Company McCoy Petroleum Corp Elevation 2242 KB 2231 GL

Address 8080 E central Ste 300 Wichita, KS 67206

Co. Rep / Geo. Dave Williams Rig Sterling 2

Location: Sec. 23 Twp. 30S Rge. 19W Co. Kiowa State KS

Interval Tested 5064 - 5105 Zone Tested Mississippi

Anchor Length 41 Drill Pipe Run 4846 Mud Wt. 9.2

Top Packer Depth 5059 Drill Collars Run 215 Vis 53

Bottom Packer Depth 5064 Wt. Pipe Run 0 WL 14.4

Total Depth 5105 Chlorides 19,500 ppm System LCM 2

Blow Description IF: Strong Blow, BOB in 30 seconds

ISI: GTS while Bleeding off, No BlowBack

FF: Strong Blow, BOB & GTS Immediate, caught Sample + Gauged with Merla

FSI: No Blow Back

Rec 4791	Feet of GIP	%gas	%oil	%water	%mud
Rec 150	Feet of GCM	5 %gas	%oil	%water	95 %mud
Rec 120	Feet of GSY SOWCM	35 %gas	2 %oil	15 %water	48 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 270 BHT 121 Gravity N/C API RW .055 @ 85 °F Chlorides 125,000 ppm

(A) Initial Hydrostatic	2629	☑ Test 1350	T-On Location 23:45
(B) First Initial Flow	45	☑ Jars 250	T-Started 00:57
(C) First Final Flow	68	☑ Safety Joint 75	T-Open 04:35
(D) Initial Shut-In	1089	☐ Circ Sub	T-Pulled 08:37
(E) Second Initial Flow	75	☑ Hourly Standby 1 .5h 50	T-Out 11:21
(F) Second Final Flow	109	☑ Mileage (110) 170.50	Comments
(G) Final Shut-In	1047	☐ Sampler	
(H) Final Hydrostatic	2435	☐ Straddle	☐ Ruined Shale Packer
		☐ Shale Packer	☐ Ruined Packer
Initial Open	30	☐ Extra Packer	☐ Extra Copies
Initial Shut-In	60	☐ Extra Recorder	Sub Total 0
Final Flow	60	☐ Day Standby	Total 1895.50
Final Shut-In	90	☐ Accessibility	MP/DST Disc't
		Sub Total 1895.50	

Approved By Dave R Williams Our Representative

12/08

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Gas Volume Report

McCoy Petroleum
Operator

Hill A 4-23
Well Name and No.

1
DST No.

Min.	Ins. of Water PSIG	Orifice Size	CF/D	Min.	~~Ins. of Water~~ PSIG	Orifice Size	M CF/D
				10	7	1/8	7.5
				20	9	1/8	8.2
				30	10	1/8	8.6
				40	13	1/8	9.6
				50	14	1/8	9.9
				60	15	1/8	10.3

Remarks:

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50989

Well Name & No. Hill A 4-23 Test No. 2 Date 06/23/13

Company McCoy Petroleum corp Elevation 2242 KB 2231 GL

Address 8080 E Central Ste 300 wichita, KS 67206

Co. Rep / Geo. Dave Williams Rig Sterling 2

Location: Sec. 23 Twp. 30S Rge. 19 W Co. Kiowa State KS

Interval Tested 5105 - 5125 Zone Tested Mississippi

Anchor Length 20 Drill Pipe Run 4878 Mud Wt. 9.3

Top Packer Depth 5100 Drill Collars Run 215 Vis 68

Bottom Packer Depth 5105 Wt. Pipe Run 0 WL 15.6

Total Depth 5125 Chlorides 12,400 ppm System LCM 2

Blow Description IF: Weak 1/4 inch Blow

ISI: NO Blow Back

FF: Weak Blow, Built to 1 1/2 inches

FSI: NO Blow Back

Rec 630	Feet of GIP	%gas	%oil	%water	%mud
Rec 65	Feet of VSOCWM	%gas 1	%oil 40	%water 59	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 65 BHT 116 Gravity N/C API RW .06 @ 86 °F Chlorides 110,000 ppm

(A) Initial Hydrostatic	2556	☑ Test 1350	T-On Location 21:30
(B) First Initial Flow	19	☑ Jars 250	T-Started 22:33
(C) First Final Flow	33	☑ Safety Joint 75	T-Open 02:07
(D) Initial Shut-In	1052	☐ Circ Sub	T-Pulled 06:10
(E) Second Initial Flow	35	☐ Hourly Standby	T-Out 08:53
(F) Second Final Flow	52	☑ Mileage (110) 341	Comments
(G) Final Shut-In	1051	☐ Sampler	loaded tools 6/25 8:00
(H) Final Hydrostatic	2481	☐ Straddle	
		☐ Shale Packer	☐ Ruined Shale Packer
Initial Open	30	☐ Extra Packer	☐ Ruined Packer
Initial Shut-In	60	☐ Extra Recorder	☐ Extra Copies
Final Flow	60	☐ Day Standby	Sub Total 0
Final Shut-In	90	☐ Accessibility	Total 2016
		Sub Total 2016	MP/DST Disc't

Approved By Dave R Williams Our Representative

ACO-1 Supplemental

SAMPLE TOPS
McCoy Petroleum
Hill 'A' #4-23
C NW SW
1980'FSL & 660'FWL
Sec 23-30s-19w
KB: 2239′

	Depth	Datum
LeCompton B	4014	-1775
Queen Hill	4045	-1806
Heebner	4226	-1987
Brown Lime	4415	-2176
Lansing	4438	-2199
Lansing B	4455	-2216
Lansing F	4548	-2309
Lansing H	4606	-2367
Lansing J	4722	-2483
Stark	4762	-2523
Hushpuckney	4810	-2571
Pawnee	4938	-2699
Cherokee	4986	-2747
Mississippian	5054	-2815
Spergen	5090	-2851
Warsaw	5116	-2876
RTD	5200	-2961

LOG TOPS Structure
McCoy Petroleum
Hill 'A' #4-23
C NW SW
Sec 23-30s-19w
KB: 2239′

	Depth	Datum
LeCompton B	4008	-1769
Queen Hill	4045	-1806
Heebner	4226	-1987
Brown Lime	4416	-2177
Lansing	4438	-2199
Lansing B	4456	-2217
Lansing F	4553	-2314
Lansing H	4607	-2368
Lansing J	4720	-2481
Stark	4760	-2521
Hushpuckney	4808	-2569
Pawnee	4944	-2705
Cherokee	4986	-2747
Mississippian	5052	-2813
Spergen	5091	-2852
Warsaw	5114	-2875
LTD	5199	-2960

ALLIED OIL & GAS SERVICES, LLC 059509

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Medicine Lodge

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
6-16-13	23	30S	19W				5:00

LEASE	WELL #	LOCATION	COUNTY	STATE
Hill	A-4-23	54 & 183 S To rd T, W to 21st, 2 1/2 S, Elinto	Kiowa	KS

OLD OR NEW (Circle one): NEW (circled)

CONTRACTOR Sterling #2
OWNER McCoy Petroleum
TYPE OF JOB Surface
HOLE SIZE 12 1/4 T.D. 619'
CASING SIZE 8 5/8 DEPTH 611.92'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT 38.73
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT 36 1/2 Bbls

EQUIPMENT

PUMP TRUCK # 471-265 CEMENTER Ron Gilley, HELPER Jake Hurd
BULK TRUCK # 421-250 DRIVER James Bowmen
BULK TRUCK # DRIVER

CEMENT

AMOUNT ORDERED 190sx 60:40:8% gel + 2% CC + 1/4# flo seal
100sx Class "A" + 3% CC

Item	Qty	@	Amount
COMMON Class A	100sx	17.90	1790.00
POZMIX			
GEL			
CHLORIDE	9sx	64.00	576.00
ASC			
Light weight	190sx	15.95	3030.50
Floseal	48#	2.97	142.56
HANDLING	327.01 cuft.	2.48	810.98
MILEAGE	13.85 ton · 35 · 2.60		1260.51

TOTAL 7610.55

REMARKS:

See Cement Log
Cement Did Circulate

SERVICE

Item	Qty	@	Amount
DEPTH OF JOB 619'			
PUMP TRUCK CHARGE			2058.50
EXTRA FOOTAGE			
MILEAGE	35	7.70	269.50
MANIFOLD head rental		275.00	N/C
Light Veh.	35	4.40	154.

TOTAL 2482.00

CHARGE TO: McCoy Petroleum
STREET
CITY STATE ZIP

8 5/8 PLUG & FLOAT EQUIPMENT

Item	@	Amount
1-Baffle plate		59.40
1-Rubber plug		67.10
1-Basket		226.50

TOTAL 353.00

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) 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 and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME X [signature] Martinez

SIGNATURE X [signature]

SALES TAX (If Any)
TOTAL CHARGES 10445.55
DISCOUNT 35 IF PAID IN 30 DAYS
Net 6913.16

ALLIED OIL & GAS SERVICES, LLC 059513

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Medicine Lodge

DATE 6-25-13	SEC. 23	TWP. 30S	RANGE 19W	CALLED OUT	ON LOCATION	JOB START	JOB FINISH 2:15
LEASE Hill	WELL # A-4-23		LOCATION Coldwater N to Rd 1, W to 2nd, 2½ S, E into			COUNTY Kiowa	STATE KS.
OLD OR (NEW) (Circle one)							

CONTRACTOR Sterling #2
TYPE OF JOB Production
HOLE SIZE 7 7/8 T.D. 5200'
CASING SIZE 4½ DEPTH 5202.85
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT 39.40
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT 82 3/4

OWNER McCoy Pet.

CEMENT

AMOUNT ORDERED 50sk 60:40:4 Total / 225 sk Class A" ASC + 5# Kolseal + 1/2% FL-160

COMMON	A 30 sx	@ 17.90	537.00
POZMIX	20 sx	@ 9.35	187.00
GEL	2	@ 23.40	46.80
CHLORIDE		@	
ASC	225 sx	@ 20.99	4702.50
Kolseal	1125 #	@ .98	1102.50
FL-160	105.75	@ 18.90	1998.67
Clapro	8.5 Gals	@ 34.40	292.40
ASF	750 Gals	@ 1.39	1042.50
		@	
		@	
		@	
		@	
HANDLING	348.86	@ 2.48	865.17
MILEAGE	16-86/35/2-60		1535.12
		TOTAL	12,309.66

EQUIPMENT

PUMP TRUCK CEMENTER Ron Caffey
#471-265 HELPER Jake Hurde
BULK TRUCK
#381-252 DRIVER James Bowen
BULK TRUCK
DRIVER

REMARKS:

See Cement Log

SERVICE

DEPTH OF JOB 5200'
PUMP TRUCK CHARGE 3099 ES

EXTRA FOOTAGE		@	
MILEAGE	35	@ 7.70	269.50
MANIFOLD		@	275.00
Light Veh.	35	@ 4.40	154.00
		@	
		TOTAL	3797.75

CHARGE TO: McCoy Pet.
STREET
CITY STATE ZIP

4½ PLUG & FLOAT EQUIPMENT

1-AFU Float Shoe		@	264.20
1-Latch Down plug Assy		@	400.00
6-Centralizers		@ 28.10	168.60
1-Basket		@	127.90
		@	
		TOTAL	960.70

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) 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 and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any)
TOTAL CHARGES 17,068.11
DISCOUNT IF PAID IN 30 DAYS
(Net) 12,235.88

PRINTED NAME x Dave Oller
SIGNATURE Dave Oller

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

Well Name:	**HILL "A" #4-23**
Location:	**NW - SW of Sec. 23 - T. 30 S. - R. 19 W.**
License Number:	**A.P.I. #15-097-21,761-00-00**
Region:	**KIOWA CO., KS.**
Spud Date:	**06/16/2013**
Drilling Completed:	**06/25/2013**
Surface Coordinates:	**1980' FSL & 660' FWL**
Bottom Hole Coordinates:	
Ground Elevation (ft):	**2228'**
K.B. Elevation (ft):	**2239'**
Logged Interval (ft):	**608' To: 5186'**
Total Depth (ft):	**5200' RTD**
Formation:	**MISSISSIPPIAN "WARSAW."**
Type of Drilling Fluid:	**CHEMICAL/POLYMER/GEL**

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: McCOY PETROLEUM CORPORATION KCC LIC. NO. # 5003
Address: 8080 E. CENTRAL, STE. 300
WICHITA, KANSAS 67206-2366

GEOLOGIST

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

Cores

Surface Casing Data: Spud at 4:15 am on 06/16/13. Drilled 12-1/4" hole to 616'. Ran 15 joints of new 24# 8-5/8" surface casing, Tallied 597.92', set at 610' KB. Welded straps on bottom 3 and top 2 joints. Tacked collars on remainder. Cemented with 190 sks60/40 POZ; 3% Gel; 2% CC; 1/4# FS, tailed with 100 sks Class A; 3% CC. Plug down at 5:00 pm 06/16/13. Allied Cementing ticket #59509. Basket at 120'. Cement did circulate.

Production Casing: Ran 123 joints new 10.5 #, 4-1/2" casing. Tallied 5202', set at 5199 'RTD. Cemented with 225 sks ASC "McCoy Blend" with 750 gal mud flush. Centralizers (5) 1,3,5,7,10. Baskets (2) 12 & 14. Plug down at 2:15 am on 06/26/13. Allied Cementing ticket #50513. Plugged Rathole with 30 sks and mousehole with 20 sks, using 60/40 Poz. SDC reported to KCC on 06/26/13 to (Michelle Pennington).

Deviation Survey's Taken: @ 618' = 3/4 degree; @ 4945' = 3/4 degree; @ 5105' = 1 1/2 degrees; @ 5200' = 3/4 degree.

DSTs

~~ DST # 1 ~~ 5064'-5105'. Times: 30"- 60"- 60"- 90"; Blow: IF=Strong/ BOB/30 Sec. & GTS @ 30" (See Gauge Report). No Blow Back During ISIP. FF= Strong Blow BOB/ Instant. No Blow Back During FSIP.

Recovery: 4791' GIP: 270' TF:150' GCM (5% G; 95% M); 120 SOWCM (35% G; 2% O; 15% Wtr; 48% M).

Pressures: IH= 2629#; FH= 2434#; IF = 45-68#; FF = 75-109#;
ISIP = 1089#; FSIP = 1047#; T.= 121 degrees. F.; WTR= 125,000 Ppm Chl.; RW= .055 @ 85 degrees F.

Gas Gauge FF= @ 10"= 7.5 Mcf; @ 20"= 8.2 Mcf; @ 30"= 8.6 Mcf; @ 40"= 9.6 Mcf; @ 50"= 9.9 Mcf; @ 60"=10.3 Mcf.

~~ DST # 2 ~~ 5105'-5125'. Times: 30"- 60"- 60"- 90"; Blow: IF=Weak Build/1/4". No Blow Back During ISIP. FF= Weak Build// 1 1/2". No Blow Back During FSIP.

Recovery: 630' GIP: 65' VSOCMW (1% O; 40% W & 59% M).

Pressures: IH= 2556#; FH= 2481#; IF= 19-33#; FF= 35-52#; ISIP= 1052#; FSIP= 1052#; T.= 116 degrees. F.; WTR= 110,000 Ppm Chl.; RW= .06 @ 86 degrees F..

Comments

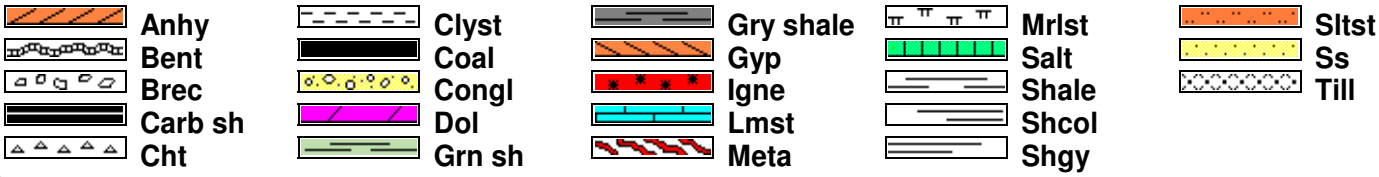
After review of all geologic samples as examined, combined with the fluid and pressures results from all drill stem tests taken and analysis from the electric logs run, it was determined by all parties that production casing be run in order to further evaluate this well.

It should be noted that the electric logs depths appear to be approximately 14' shallow to the geological sample tops, the drillers pipe strap and the actual production casing tally as set, Therefore, it is my opinhion that the electric log tops should be corrected to adjuct for this discripancy,.

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
- Oolite
- Oomold
- 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

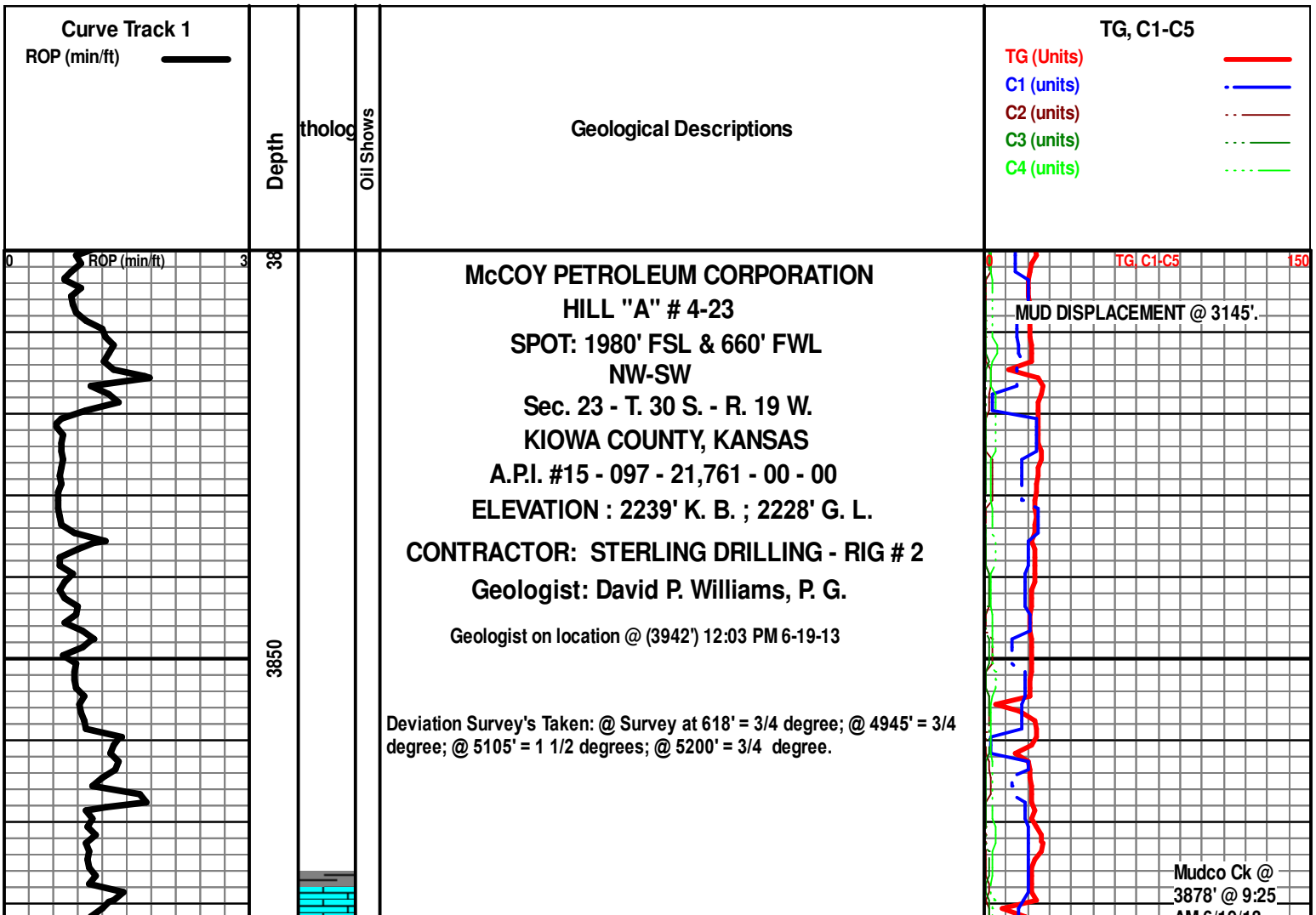
ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

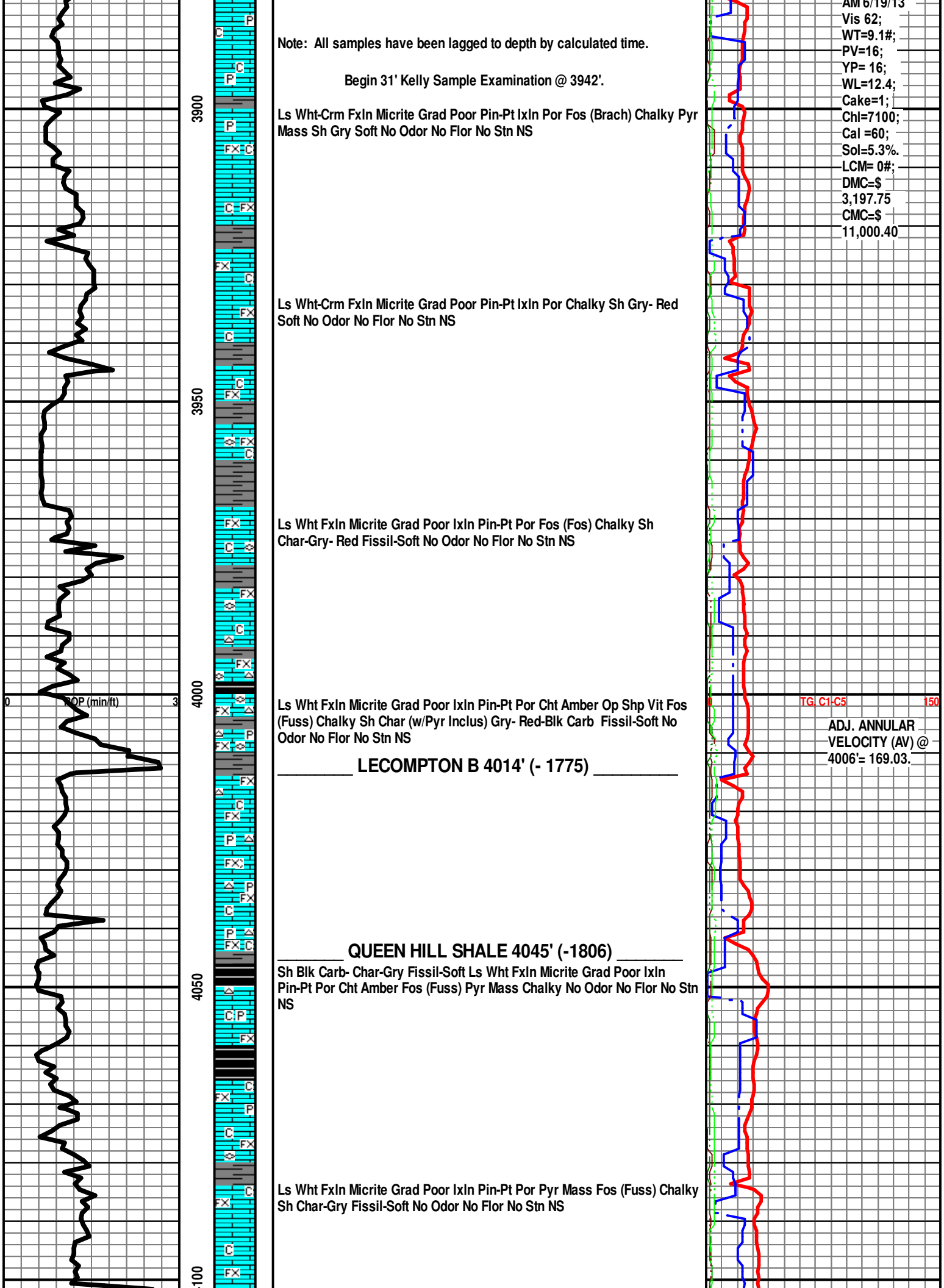
OIL SHOW
- Gas show

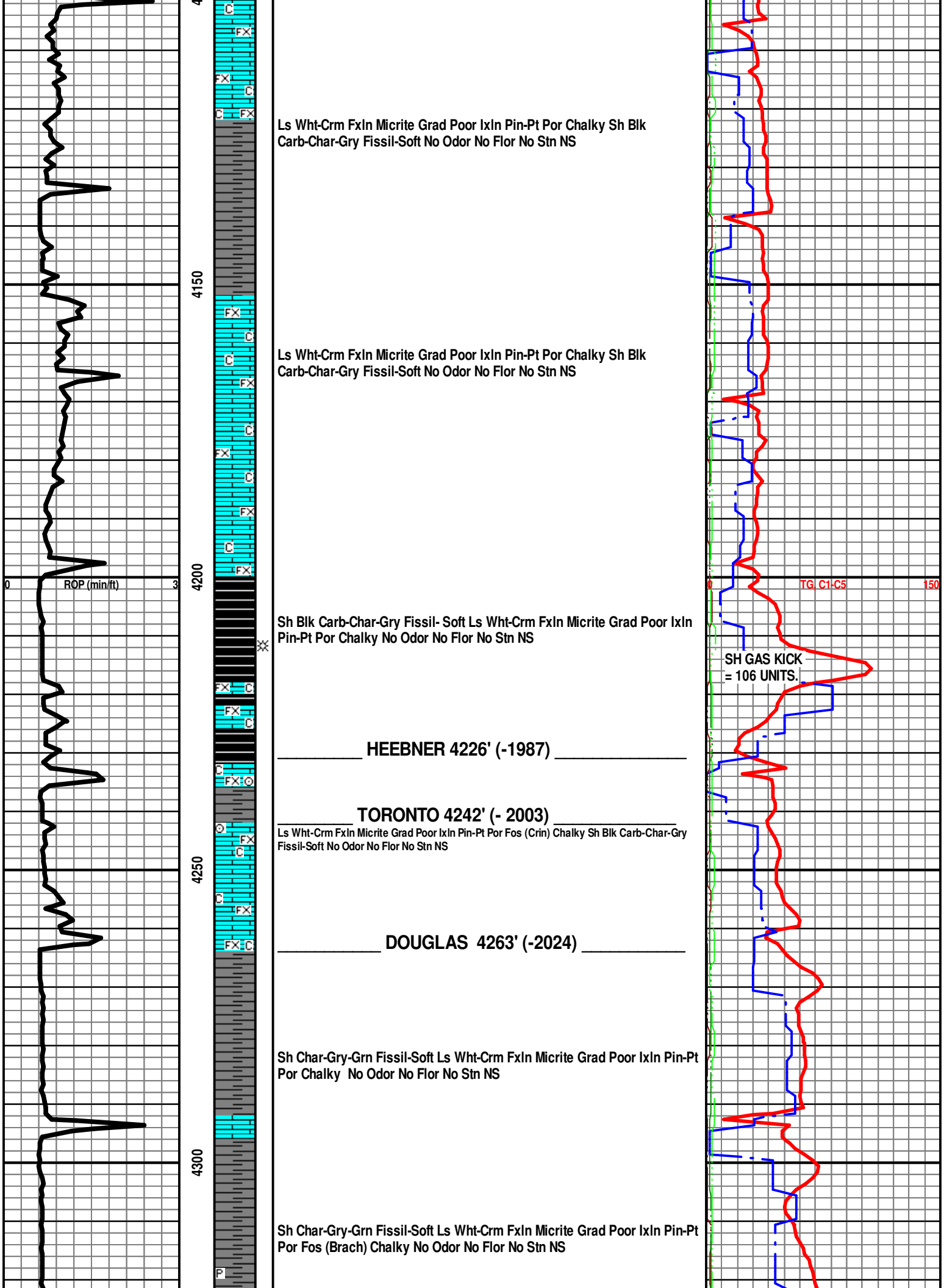
- Even
- Spotted
- Ques
- Dead

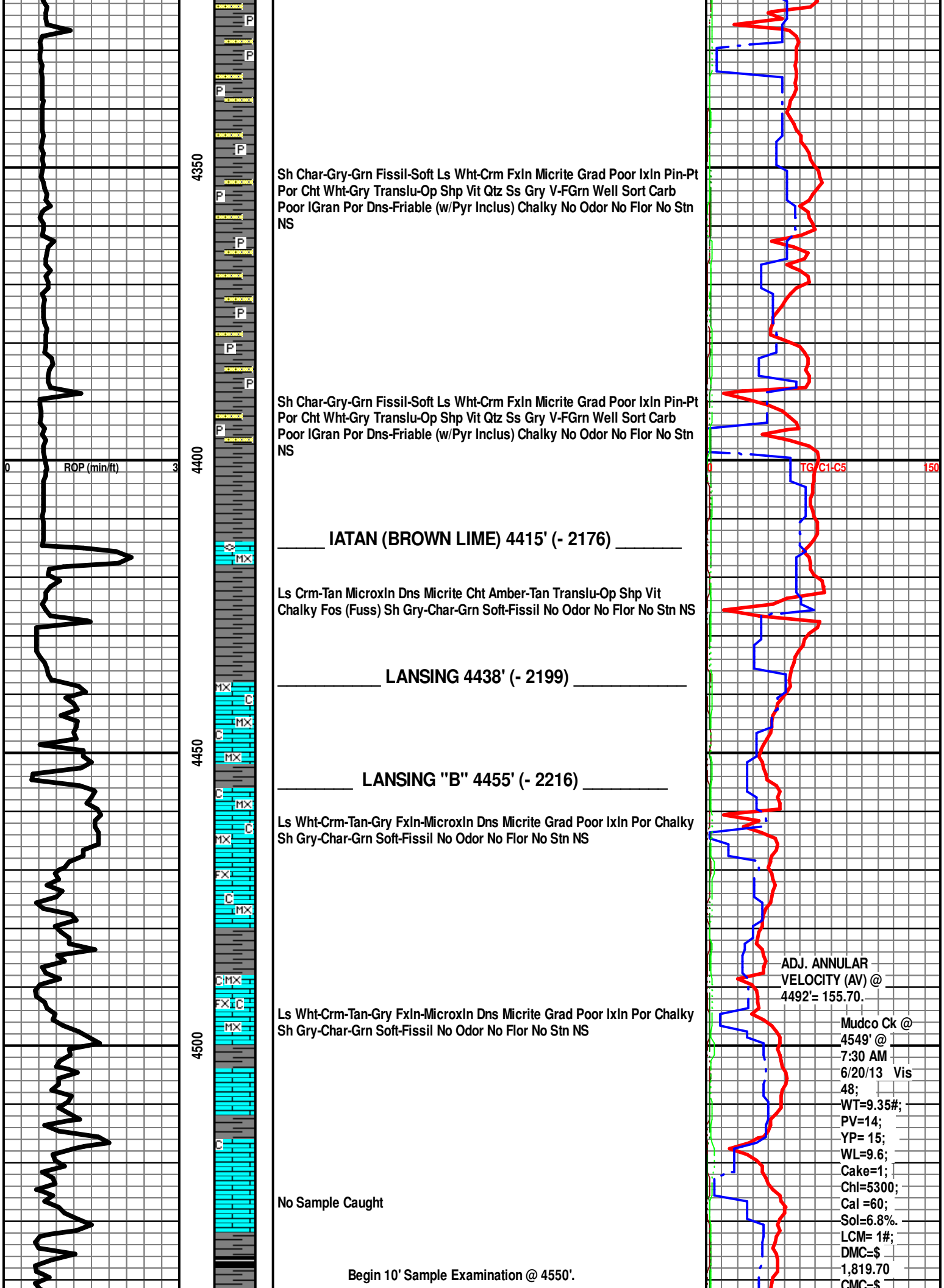
INTERVAL
- Core
- Dst
- Dst_alt

EVENT
- Rft
- Sidewall




0
ROP (min/ft)
3
3900
3950
4000
4050
4100
Note: All samples have been lagged to depth by calculated time.
Begin 31' Kelly Sample Examination @ 3942'.
Ls Wht-Crm Fxln Micrite Grad Poor Pin-Pt Ixln Por Fos (Brach) Chalky Pyr Mass Sh Gry Soft No Odor No Flor No Stn NS
Ls Wht-Crm Fxln Micrite Grad Poor Pin-Pt Ixln Por Chalky Sh Gry- Red Soft No Odor No Flor No Stn NS
Ls Wht Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Fos) Chalky Sh Char-Gry- Red Fissil-Soft No Odor No Flor No Stn NS
Ls Wht Fxln Micrite Grad Poor Ixln Pin-Pt Por Cht Amber Op Shp Vit Fos (Fuss) Chalky Sh Char (w/Pyr Inclus) Gry- Red-Blk Carb Fissil-Soft No Odor No Flor No Stn NS
LECOMPTON B 4014' (- 1775)
QUEEN HILL SHALE 4045' (-1806)
Sh Blk Carb- Char-Gry Fissil-Soft Ls Wht Fxln Micrite Grad Poor Ixln Pin-Pt Por Cht Amber Fos (Fuss) Pyr Mass Chalky No Odor No Flor No Stn NS
Ls Wht Fxln Micrite Grad Poor Ixln Pin-Pt Por Pyr Mass Fos (Fuss) Chalky Sh Char-Gry Fissil-Soft No Odor No Flor No Stn NS
AM 6/19/13
Vis 62;
WT=9.1#;
PV=16;
YP= 16;
WL=12.4;
Cake=1;
Chl=7100;
Cal =60;
Sol=5.3%.
LCM= 0#;
DMC=$ 3,197.75
CMC=$ 11,000.40
TG C1-C5
150
ADJ. ANNULAR VELOCITY (AV) @ 4006'= 169.03.


0
ROP (min/ft)
3
4150
4200
4250
4300
0
TG, C1-C5
150
Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Chalky Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS
Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Chalky Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS
Sh Blk Carb-Char-Gry Fissil- Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Chalky No Odor No Flor No Stn NS
SH GAS KICK
= 106 UNITS.
HEEBNER 4226' (-1987)
TORONTO 4242' (- 2003)
Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Crin) Chalky Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Flor No Stn NS
DOUGLAS 4263' (-2024)
Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Chalky No Odor No Flor No Stn NS
Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Fos (Brach) Chalky No Odor No Flor No Stn NS



Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Cht Wht-Gry Translu-Op Shp Vit Qtz Ss Gry V-FGrn Well Sort Carb Poor IGran Por Dns-Friable (w/Pyr Inclus) Chalky No Odor No Flor No Stn NS

Sh Char-Gry-Grn Fissil-Soft Ls Wht-Crm Fxln Micrite Grad Poor Ixln Pin-Pt Por Cht Wht-Gry Translu-Op Shp Vit Qtz Ss Gry V-FGrn Well Sort Carb Poor IGran Por Dns-Friable (w/Pyr Inclus) Chalky No Odor No Flor No Stn NS

_____ IATAN (BROWN LIME) 4415' (- 2176) _____

Ls Crm-Tan Microxln Dns Micrite Cht Amber-Tan Translu-Op Shp Vit Chalky Fos (Fuss) Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

_____ LANSING 4438' (- 2199) _____

_____ LANSING "B" 4455' (- 2216) _____

Ls Wht-Crm-Tan-Gry Fxln-Microxln Dns Micrite Grad Poor Ixln Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

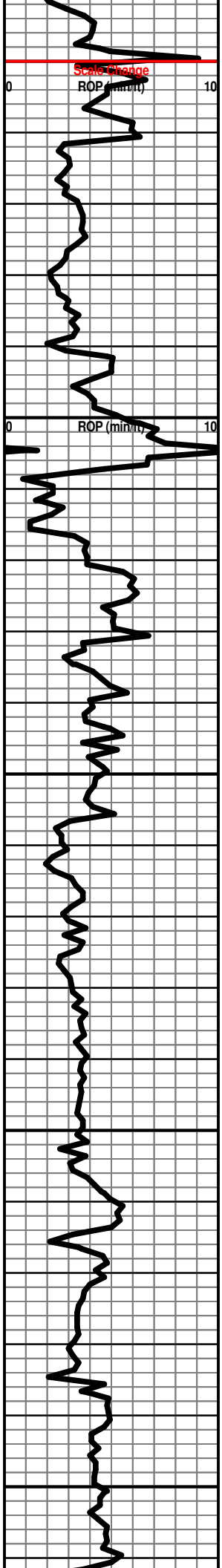
ADJ. ANNULAR VELOCITY (AV) @ 4492'= 155.70.

Ls Wht-Crm-Tan-Gry Fxln-Microxln Dns Micrite Grad Poor Ixln Por Chalky Sh Gry-Char-Grn Soft-Fissil No Odor No Flor No Stn NS

Mudco Ck @ 4549' @ 7:30 AM 6/20/13 Vis 48; WT=9.35#; PV=14; YP= 15; WL=9.6; Cake=1; Chl=5300; Cal =60; Sol=6.8%. LCM= 1#; DMC=$ 1,819.70 CMC=$

No Sample Caught

Begin 10' Sample Examination @ 4550'.



LANSING "F" 4548' (- 2309)

Ls Wht-Crm-Tan Fxln-Microxln Dns Micrite Grad Poor Ixln Pin-Pt Por Cht Amber-Gry Translu Shp Vit Chalky Sh Blk Carb-Gry-Char - Grn Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Micritic Grad Poor-Fair OOM Por Poor InterOOM Por (Small OOids in pl) V Poor Leaching Poor Develop Cht Gry Op Shp Vit Chalky Sh Char- Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Micritic Grad Poor-Fair OOM Por Poor InterOOM Por (Small OOids in pl) V Poor Leaching Poor Develop Cht Wht-Gry Op Shp Vit Pyr Mass Chalky Sh Char- Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Micritic Grad Tr Poor OOM Por AA Cht Lt Tan Op Shp Vit Pyr Mass Chalky Sh Char- Gry- Grn- Blk Carb- Aqua Fissil No Odor No Stn No Flor NS

No Sample Caught.

KANSAS CITY "H" DRUM 4606' (-2367)

Ls Wht-Crm-Lt Tan Microxln-Fxln Micritic No Vis Por Cht Lt Tan Op Shp Vit Pyr Mass Chalky Sh Char- Gry- Grn- Blk Carb- Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Micritic (w/Pry Inclus) Grad Fair-Med OOM Por Poor- Fair InterOOM Por (Tr/OOL (Small OOids in pl) V Poor-Fair Leaching (Tr Fair Vug) Poor Develop Cht Wht Op Shp Vit Chalky Sh Char- Gry (w/Pyr Inclus)- Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Micritic (w/Pry Inclus) Grad Fair-Med OOM Por Poor- Fair InterOOM Por (Tr/OOL (Small OOids in pl) V Poor-Fair Leaching (Tr Fair Vug) Poor Develop Pyr Mass Chalky Sh Blk Carb-Char- Gry- Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Micritic Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Dec Chalky Sh Char- Gry- Grn- Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Mostly Micrite Tr Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Dec AA Chalky Sh Char -Gry Grn-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Mostly Micrite Tr Poor OOM Por AA Cht Wht-Amber Op Shp Vit Chalky Fos (Crin) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb Fissil Ls Wht-Crm-Lt Tan Microxln-Fxln Mostly Micrite Grad Fair OOM Por Poor- Fair InterOOM Por Poor-Fair Leaching Poor Develop Cht Wht Op Shp Vit Chalky Pyr Mass No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Mostly Micrite Cht Wht- Amber- Gry Op Shp Vit Chalky Fos (Gastro (Turritella)) Pyr Mass Abd Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Mostly Micrite Cht Wht Op Shp Vit Chalky Fos (Crin) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Sh Char-Gry (w/Pyr Inclus)-Blk Carb Fissil Ls Wht-Crm-Lt Tan Microxln-Fxln Mostly Micrite Grad Tr Fair OOM Por Poor InterOOM Por Poor Leaching Poor Develop Dec Cht Wht Op Shp Vit Chalky No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Tan Microxln-Fxln Mostly Micrite Grad Tr Fair OOM Por Poor InterOOM Por Poor Leaching Poor Develop Dec Cht Wht Op Shp Vit Chalky Sh Char-Gry (w/Pyr Inclus)-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Crm-Lt Tan-Wht Microxln-Fxln Mostly Micrite Poor OOM Por AA (Tr Only) Cht- Wht Op Shp Vit Chalky Sh Blk Carb (w/Pyr Inclus) Char-Gry (w/Pyr Inclus) Fissil No Odor No Stn No Flor NS

KANSAS CITY "J" DENNIS 4722' (- 2483)

Ls Lt Tan-Wht VFxln Mostly Micrite Poor OOM Por Grad Poor OOM Por Poor InterOOM Por Poor Leaching Poor Develop Chalky Sh Blk Carb (w/Pyr Inclus) Char-Gry (w/Pyr Inclus) Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht Fxln Mostly Micrite Grad Por Pin-Pt Ixln Por Cht Wht -Lt Tan Translu-Op Shp Vit Chalky Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht Fxln Mostly Micrite Grad Por Pin-Pt Ixln Por Cht Wht -Lt Tan Translu-Op Shp Vit Chalky Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Lt Tan-Wht Fxln Mostly Micrite Grad Por Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalky Sh Blk Carb-Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

STARK SHALE 4762' (- 2523)

12,819.70

BIT TRIP @ 4549'. Fish For Parts of Bit.

@ 4566' GAS TEST EXTRACTOR. 112 UNITS OBSERVED.

TG, C1-C5

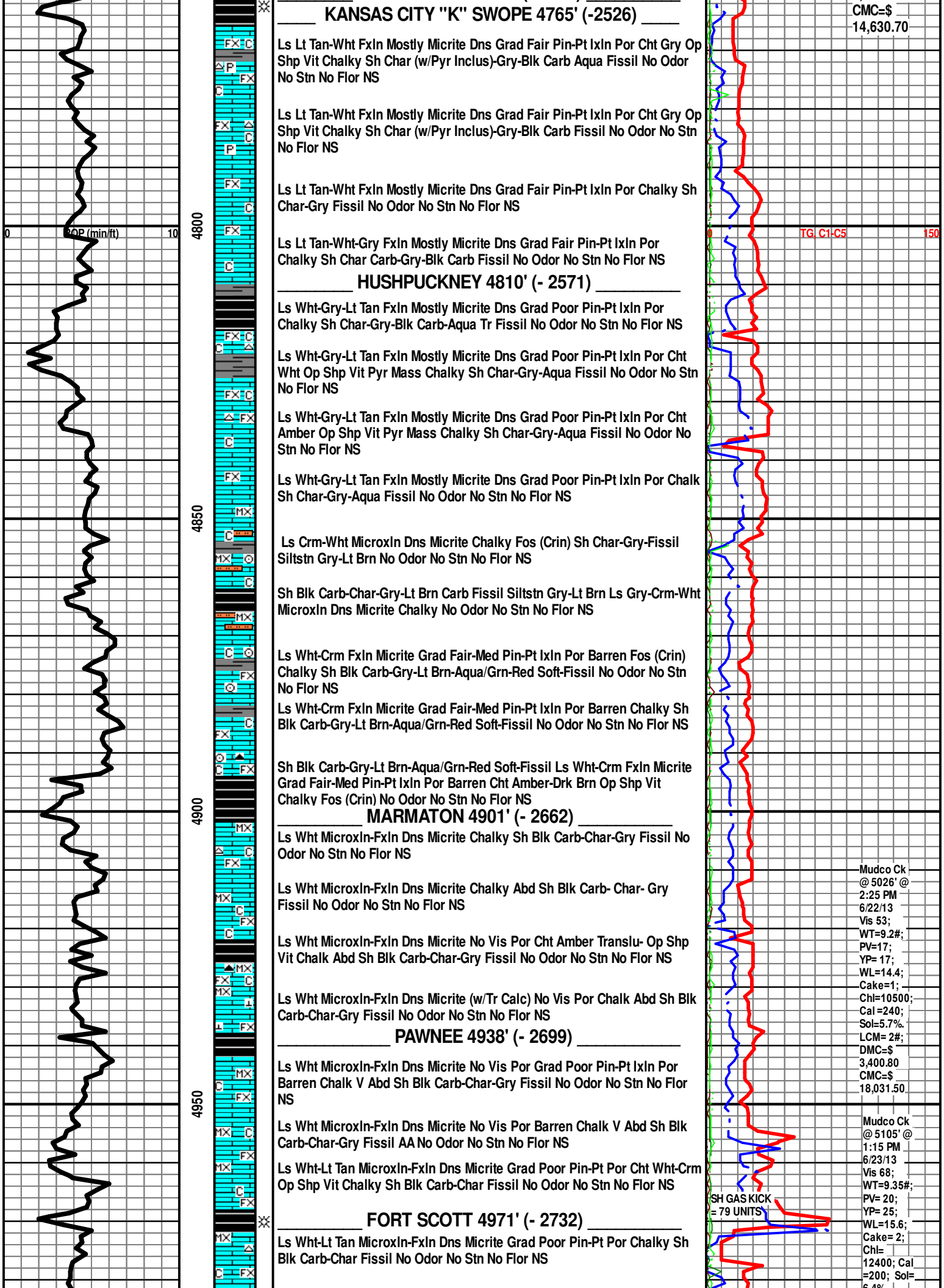
0

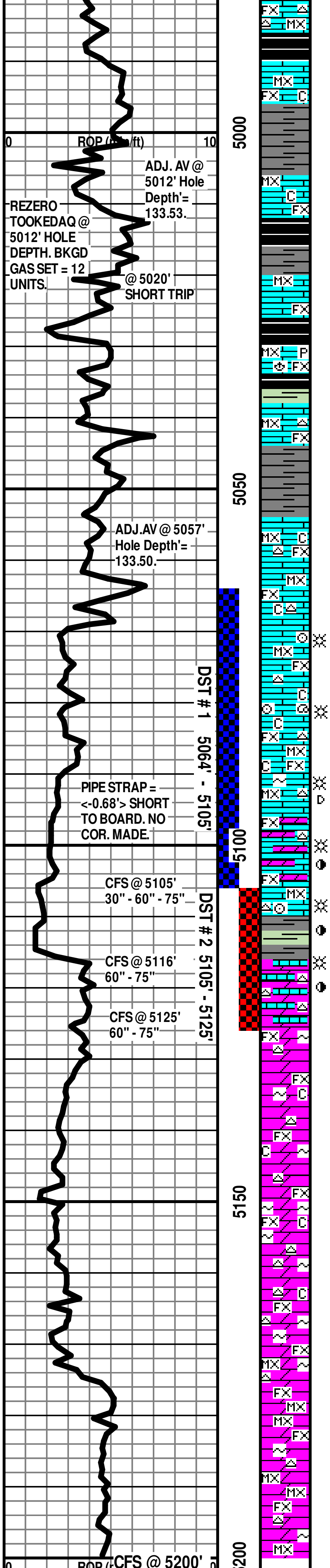
150

@ 4681' GAS TEST EXTRACTOR. 102 UNITS OBSERVED.

SH GAS KICK = 53 UNITS.

Mudco Ck @ 4718' @ 9:55 AM 6/21/13
Vis 62;
WT=9.45#;
PV=17;
YP= 21;
WL=12.8;
Cake=1;
Chl=9400;
Cal =160;
Sol=7.3%.
LCM= 1#;
DMC=$ 1,811.00


0
ROP (min/ft)
10
4800
4850
4900
4950
KANSAS CITY "K" SWOPE 4765' (-2526)
Ls Lt Tan-Wht FxIn Mostly Micrite Dns Grad Fair Pin-Pt IxIn Por Cht Gry Op Shp Vit Chalky Sh Char (w/Pyr Inclus)-Gry-Blk Carb Aqua Fissil No Odor No Stn No Flor NS
Ls Lt Tan-Wht FxIn Mostly Micrite Dns Grad Fair Pin-Pt IxIn Por Cht Gry Op Shp Vit Chalky Sh Char (w/Pyr Inclus)-Gry-Blk Carb Fissil No Odor No Stn No Flor NS
Ls Lt Tan-Wht FxIn Mostly Micrite Dns Grad Fair Pin-Pt IxIn Por Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS
Ls Lt Tan-Wht-Gry FxIn Mostly Micrite Dns Grad Fair Pin-Pt IxIn Por Chalky Sh Char Carb-Gry-Blk Carb Fissil No Odor No Stn No Flor NS
HUSHPUCKNEY 4810' (- 2571)
Ls Wht-Gry-Lt Tan FxIn Mostly Micrite Dns Grad Poor Pin-Pt IxIn Por Chalky Sh Char-Gry-Blk Carb-Aqua Tr Fissil No Odor No Stn No Flor NS
Ls Wht-Gry-Lt Tan FxIn Mostly Micrite Dns Grad Poor Pin-Pt IxIn Por Cht Wht Op Shp Vit Pyr Mass Chalky Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS
Ls Wht-Gry-Lt Tan FxIn Mostly Micrite Dns Grad Poor Pin-Pt IxIn Por Cht Amber Op Shp Vit Pyr Mass Chalky Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS
Ls Wht-Gry-Lt Tan FxIn Mostly Micrite Dns Grad Poor Pin-Pt IxIn Por Chalk Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS
Ls Crm-Wht MicroxIn Dns Micrite Chalky Fos (Crin) Sh Char-Gry-Fissil Siltstn Gry-Lt Brn No Odor No Stn No Flor NS
Sh Blk Carb-Char-Gry-Lt Brn Carb Fissil Siltstn Gry-Lt Brn Ls Gry-Crm-Wht MicroxIn Dns Micrite Chalky No Odor No Stn No Flor NS
Ls Wht-Crm FxIn Micrite Grad Fair-Med Pin-Pt IxIn Por Barren Fos (Crin) Chalky Sh Blk Carb-Gry-Lt Brn-Aqua/Grn-Red Soft-Fissil No Odor No Stn No Flor NS
Ls Wht-Crm FxIn Micrite Grad Fair-Med Pin-Pt IxIn Por Barren Chalky Sh Blk Carb-Gry-Lt Brn-Aqua/Grn-Red Soft-Fissil No Odor No Stn No Flor NS
Sh Blk Carb-Gry-Lt Brn-Aqua/Grn-Red Soft-Fissil Ls Wht-Crm FxIn Micrite Grad Fair-Med Pin-Pt IxIn Por Barren Cht Amber-Drk Brn Op Shp Vit Chalky Fos (Crin) No Odor No Stn No Flor NS
MARMATON 4901' (- 2662)
Ls Wht MicroxIn-FxIn Dns Micrite Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS
Ls Wht MicroxIn-FxIn Dns Micrite Chalky Abd Sh Blk Carb- Char- Gry Fissil No Odor No Stn No Flor NS
Ls Wht MicroxIn-FxIn Dns Micrite No Vis Por Cht Amber Translu- Op Shp Vit Chalk Abd Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS
Ls Wht MicroxIn-FxIn Dns Micrite (w/Tr Calc) No Vis Por Chalk Abd Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS
PAWNEE 4938' (- 2699)
Ls Wht MicroxIn-FxIn Dns Micrite No Vis Por Grad Poor Pin-Pt IxIn Por Barren Chalk V Abd Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS
Ls Wht MicroxIn-FxIn Dns Micrite No Vis Por Barren Chalk V Abd Sh Blk Carb-Char-Gry Fissil AA No Odor No Stn No Flor NS
Ls Wht-Lt Tan MicroxIn-FxIn Dns Micrite Grad Poor Pin-Pt Por Cht Wht-Crm Op Shp Vit Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS
FORT SCOTT 4971' (- 2732)
Ls Wht-Lt Tan MicroxIn-FxIn Dns Micrite Grad Poor Pin-Pt Por Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS
CMC=$ 14,630.70
0
TG, C1-C5
150
Mudco Ck @ 5026' @ 2:25 PM 6/22/13 Vis 53; WT=9.2#; PV=17; YP= 17; WL=14.4; Cake=1; Chl=10500; Cal =240; Sol=5.7%. LCM= 2#; DMC=$ 3,400.80 CMC=$ 18,031.50
SH GAS KICK = 79 UNITS
Mudco Ck @ 5105' @ 1:15 PM 6/23/13 Vis 68; WT=9.35#; PV= 20; YP= 25; WL=15.6; Cake= 2; Chl= 12400; Cal =200; Sol=



CHEROKEE SHALE 4986' (- 2747)

Sh Blk Carb-Char Fissil Ls Wht-Lt Tan Microxln-Fxln Dns Micrite Chalky No Odor No Stn No Flor NS

30" CFS @ 5020' Ls Wht-Lt Tan Microxln-Fxln Dns Micrite Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS

60" CFS @ 5020' Ls Wht-Lt Tan Microxln-Fxln Dns Micrite Chalky Sh Blk Carb-Char Fissil No Odor No Stn No Flor NS

Ls Wht-Lt Tan Microxln-Fxln Dns Micrite (w/Pyr Inclus) Grad Poor Ixln Pin-Pt Por Barren Sh Blk Carb-Char-Gry-Drab Grn-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Lt Tan Microxln-Fxln (w/Pyr Inclus) Dns Micrite Grad Poor Ixln Pin-Pt Por Barren Fos (Brach) Sh Char-Gry-Drab Grn-Aqua-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Lt Tan-Yell Tr Microxln-Fxln Dns Micrite Grad Poor Ixln Pin-Pt Por Barren Cht Wht-Gry Op Shp Vit Sh Blk Carb-Char-Gry-Drab Grn-Aqua (w/Pyr Inclus) Fissil No Odor No Stn No Flor NS

MISSISSIPPIAN 5054' (- 2815)

Ls Wht-Lt Tan-Yell Tr Microxln-Fxln Micritic Grad Poor-Fair Pin-Pt Ixln Por Cht Wht-Gry-Amber Translu-Op Shp Vt Pyr Mass Chalky Sh Char-Gry (w/Pyr Inclus) -Drab Grn-Aqua Fissil No Odor No Flor No Stn NS

Ls Wht-Lt Tan Microxln-Fxln Micritic Grad Poor Pin-Pt Ixln Por Cht Op Shp Vit Chalky Sh Char-Gry Fissil ? No Odor ? Sli Flor No Stn ? NS

Ls Wht-Lt Tan Microxln-Fxln Micritic Grad Poor-Fair Pin-Pt Ixln Por (w/? SG) Cht Op Shp Vit Fos (Crin) Chalky Sh Char-Gry Fissil ? V Faint Odor Sli Flor No Stn ? SG

Ls Wht-Lt Tan Microxln-Fxln Micritic Grad Poor-Fair Pin-Pt Ixln Por (w/SG & Drk Blk Gillsonitic Stn Cht Wht-Tan Translu-Op Shp Vit Fos (Crin & Gastro (Turritella)) Chalky Sh Char-Gry-Olive-Maroon Fissil Faint Odor No Flor Sli Stn ? SG

30" CFS @ 5105' Ls Wht-Lt Tan Microxln-Fxln Micritic Grad Poor-Fair Pin-Pt Ixln Por (w/SG & Drk Blk Gillsonitic Stn & Tr Glacu) Cht Wht-Tan Translu-Op Shp Vit Fos (Gastro) Chalky Sh Char-Gry-Olive-Maroon Fissil Faint Odor No Flor Sli Stn ? SG

60" CFS @ 5105' 60" CFS Ls/Dolo Wht-Lt Tan-Tan Fxln Micritic Grad Fair Pin-Pt Ixln Por (w/Tr Glacu Inclus & SSG) Cht Amber-Wht Trip (w/Tr Gillsonitic Stn Drk Blk Stn) Translu Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Fair Odor Poor-Fair Lt Grn Flor (6 Pcs) Tr Brn Stn SG & VSSO

75" CFS @ 5105' Ls/Dolo AA Cht Wht AA Pyr Mass Fair Inc Odor Sli Inc Flor (Lt Grn) SSG & ? VSSO

60" CFS @ 5116' Ls/Dolo Tan-Wht Microxln-Fxln Fair Ixln Pin-Pt Por (w/Lt Brn Stn & SG) Grad Poor Sucrosic Poor-Fair VFxln (w/SG & SSO) Cht Wht AA Fos (Crin) Odor Fair Flor (Lt Grn) SSG & VSSO

MISS. WARSAW 5116' (- 2877)

75" CFS @ 5116' Dolo/Ls Tan-Wht Microxln-Fxln Fair Ixln Pin-Pt Por Grad Poor-Fair Vug Leached Pin-Pt Por(w/Lt Brn Stn & SG) Grad Sucrosic Poor-Fair VFxln (w/SG & SSFO Under Heat in Wtr w/ Lt Grn Flor) Cht Wht AA Fos (Crin) Odor Fair Flor (Lt Grn) SG & SSO

60" CFS @ 5125' Dolo Tan-Wht Fxln Poor Pin-Pt ixln Por (w/Scatt (Lt Grn Flor & w/SG & SSO Under Heat in Wtr) Pry Mass Sh AA Faint Odor Sli Flor Sli Lt Brn Stn SSG & VSSO

75" CFS @ 5125' Dolo/Ls Tan-Wht Fxln AA Ls AA Faint Odor Sli Flor Sli Lt Brn Stn VSSO

Dolo Tan-Wht-Lt Tan Fxln Poor Pin-Pt Ixln Por (w/Glacu Inclus) Grad Dns Micritic Cht Amber-Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

Dolo Tan-Wht-Lt Tan Fxln Poor Pin-Pt Ixln Por (w/Glacu Inclus) Grad Dns Micritic Cht Amber-Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

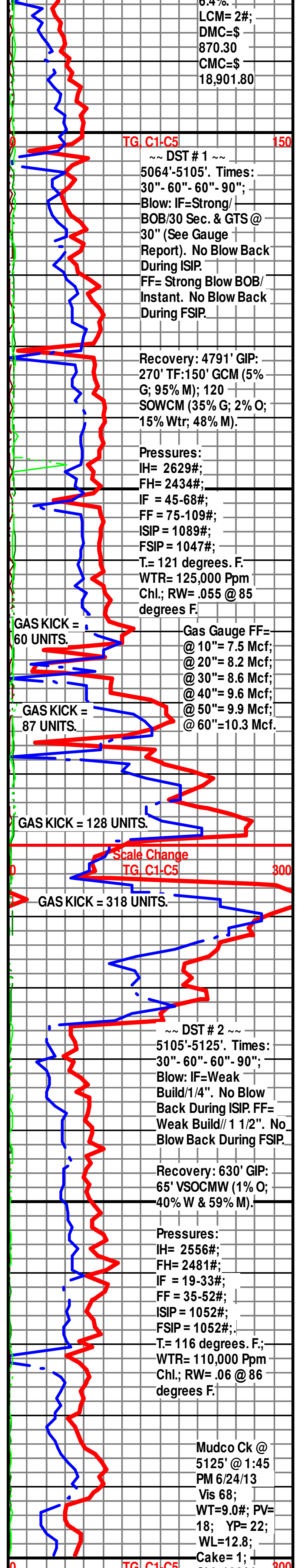
Dolo Tan-Wht-Lt Tan Fxln Poor Pin-Pt Ixln Por (w/Glacu Inclus) Grad Dns Micritic Cht Amber-Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

Dolo Tan-Wht-Lt Tan Fxln Poor Pin-Pt Ixln Por (w/Glacu Inclus) Grad Dns Micritic Cht Amber-Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

Dolo Gry Inc-Tan-Wht-Lt Tan Microxln-Fxln Poor Pin-Pt Ixln Por (w Glacu Inclus) Grad Dns Micritic Cht Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

30" CFS @ 5200' Dolo Gry Abd-Tan-Wht-Lt Tan Microxln- Fxln Poor Pin-Pt Ixln Por (w Glacu Inclus) Grad Dns Micritic Cht Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS

60" CFS @ 5200' Dolo Gry Abd-Tan-Wht-Lt Tan Microxln-Fxln Poor Pin-Pt Ixln Por (w Glacu Inclus) Grad Dns Micritic Cht Wht Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Abd No Odor NoFlor NoStn NS



30" - 60"

R.T.D. = 5200' (- 2961)

L.T.D. = 5186' (-2947)

Electric Logs Run By: Weatherford Logging: Dual Induction; Compensated Density-Neutron; & Microresisitivity Logs.

Geologist Left Location at: 9:00 AM on 06/25/2013

Chl=12800; Cal =20; Sol= 4.3%. LCM= 2#;

DMC=$ 866.80

CMC=$ 19,768.60