



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1145499
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
-----------------------------------	-----------------	---

API No. 15 - _____

Spot Description: _____

_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-
Sec. _____ Twp. _____ S. R. _____ East West

_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-
Feet from North / South Line of Section

_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-_____-
Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



1145499

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

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

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

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

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

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

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

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
--	---	---

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



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

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

August 05, 2013

David Withrow
Edison Operating Company LLC
8100 E. 22ND ST. N., BLDG 1900
WICHITA, KS 67226

Re: ACO1
API 15-175-22202-00-00
Charles 1-25
NW/4 Sec.25-33S-31W
Seward 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,
David Withrow

Cement Report

Customer	Edison Operating		Lease No.	Date 5/18/13	
Lease	Charles		Well #	1-25	Service Receipt
Casing	5 1/2	Depth	5913'	County	Seward
Job Type	L.S.	Formation		State	KS
				Legal Description	25-33-31

Pipe Data		Perforating Data		Cement Data
Casing size	5 1/2	Tubing Size		Lead 300 SK AA-2
Depth	5494'	Depth	From 2900'	To @14.8#
Volume	139	Volume	From	To 1.51 6.64
Max Press	2500	Max Press	From	To Tail in 300 SK AA-2
Well Connection	P.C.	Annulus Vol.	From	To @11.4#
Plug Depth		Packer Depth	From	To 2.95 18.10

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
13:30					on loc, spot + RC, surface mfg
14:48	3000				TEST LINES
14:50	360		10	5.5	Pump SuperPlugs
14:54	350		5	5.5	H2O
15:58	350		0	5.5	start mixing
19:18	0		51	0	shut down, Drop Plug, washup
19:23	150		0	6	start DISP
19:34	250		70	6	on mod
19:48	1560				Plug Down, Drop Bolts
20:10	730		15	4	open D.U.
23:30					Plug RTM
23:46	200		0	6	start mixing
0:13	0		131	0	Fin Mix, Drop Plug, washup
0:23	240		0	6	start Disp
0:36	600		59	3	slow Rate
0:38	1610		67		Plug Down, Close tool
	0				Release Psi
					Job Complete

Service Units	74939	37223	37920	38117	19883	33021	14284
Driver Names	C. Linz	J. Clavez		Gregorio			

Bob Casper
Customer Representative

Jerry Bennett
Station Manager

Chad Hise
Cementer



Cement Report

Customer Edison Operating	Lease No.	Date 5/8/13
Lease Charles	Well # 1-25	Service Receipt
Casing 4 5/8	Depth 1598'	County Meade
Job Type Surface	Formation	State KS
		Legal Description 25-33-31

Pipe Data		Perforating Data		Cement Data
Casing size 4 5/8	Tubing Size	Shots/Ft		Lead 385 sk
Depth 1597	Depth	From	To	A. Con @ 11.4#
Volume 98.8	Volume	From	To	2.95 18.10
Max Press 1500	Max Press	From	To	Tail in 150 sk P.P.
Well Connection P.C.	Annulus Vol.	From	To	@ 14.8#
Plug Depth	Packer Depth	From	To	1.34 6.33

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
18:00					on loc, spot + R. U, safety, mday
21:15	2000				Test Lines
21:56	150		0	5	start mixing @ 11.4#
22:02	140		202	5	on tail @ 14.8#
22:10	0		4	0	Shutdown, Clear tub
22:36	140		4	5	Resume mixing
23:03	0		36	0	Finished mixing, Drop Plug
23:06	0		0	5	start Disp, Wash UP
23:33	500		48	2.5	slow Rate
23:36	1060		96.5	0	Plug down
23:38	0				Release Psi float hold
					Job Complete

Service Units	748939	3722337772	19462719566	4135537725
Driver Names	C. Hinz	R. Olex	J. Lopez	J. Grijalva

Bob Casper Jerry Bennett Chuck Hinz
 Customer Representative Station Manager Cementor



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Edison Operating Company
 9427 E Cross Creek
 Wichita, KS 67206
 ATTN: Paul Gerlach

25-33-31 Seward ks
Charles 1-25
 Job Ticket: 51369 **DST#: 1**
 Test Start: 2013.05.12 @ 00:30:13

GENERAL INFORMATION:

Formation: **Toronto**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:36:43
 Time Test Ended: 07:22:43
 Interval: **4250.00 ft (KB) To 4326.00 ft (KB) (TVD)**
 Total Depth: 4326.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brandon Turley
 Unit No: 60
 Reference Elevations: 2737.00 ft (KB)
 2727.00 ft (CF)
 KB to GR/CF: 10.00 ft

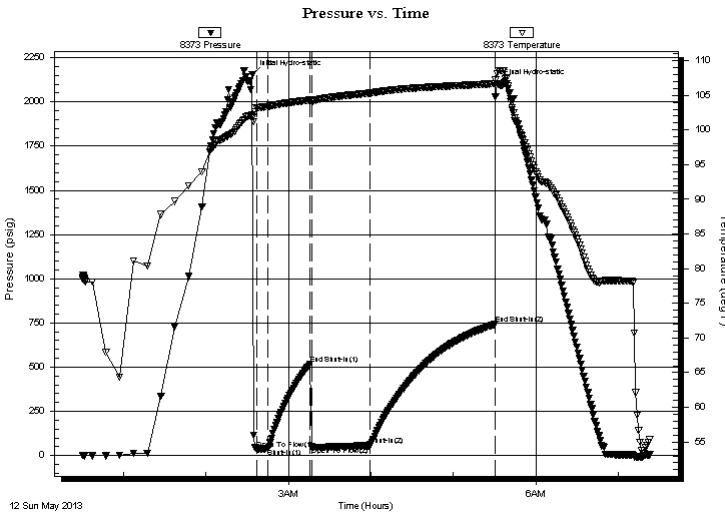
Serial #: 8373

Inside

Press @ Run Depth: 56.38 psig @ 4251.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.05.12 End Date: 2013.05.12 Last Calib.: 2013.05.12
 Start Time: 00:30:18 End Time: 07:22:42 Time On Btm: 2013.05.12 @ 02:33:43
 Time Off Btm: 2013.05.12 @ 05:31:43

TEST COMMENT: IF: BOB in 1 min.
 IS: No return.
 FF: BOB when opened the tool.
 FS: Surface blow built to 1.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2154.91	102.15	Initial Hydro-static
3	34.62	103.14	Open To Flow (1)
12	39.82	103.38	Shut-In(1)
42	516.31	104.31	End Shut-In(1)
43	49.86	104.08	Open To Flow (2)
86	56.38	105.30	Shut-In(2)
177	742.13	106.67	End Shut-In(2)
178	2103.20	108.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
93.00	mud 100% m	1.30
0.00	1271 GIP (Weak)	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51369

DST#: 1

ATTN: Paul Gerlach

Test Start: 2013.05.12 @ 00:30:13

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 15.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
93.00	mud 100%m	1.305
0.00	1271 GIP (Weak)	0.000

Total Length: 93.00 ft Total Volume: 1.305 bbl

Num Fluid Samples: 0

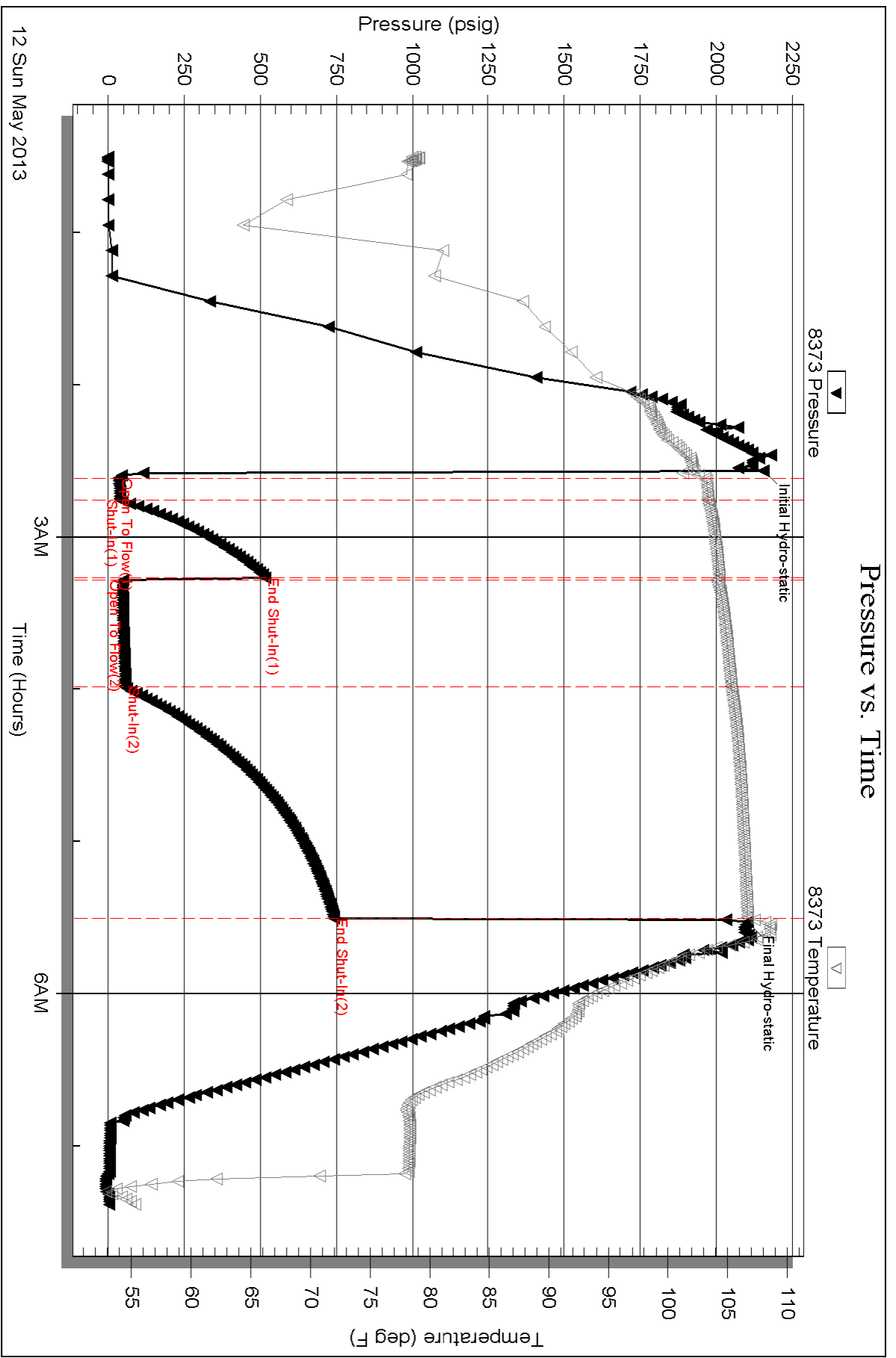
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51370

DST#: 2

ATTN: Paul Gerlach

Test Start: 2013.05.12 @ 17:36:29

GENERAL INFORMATION:

Formation: **Goe didnt give info**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:44:29

Time Test Ended: 02:05:29

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 60

Interval: 4460.00 ft (KB) To 4485.00 ft (KB) (TVD)

Total Depth: 4485.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2737.00 ft (KB)

2727.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press @ Run Depth: 1030.79 psig @ 4461.00 ft (KB)

Start Date: 2013.05.12

End Date: 2013.05.13

Start Time: 17:36:34

End Time: 02:05:28

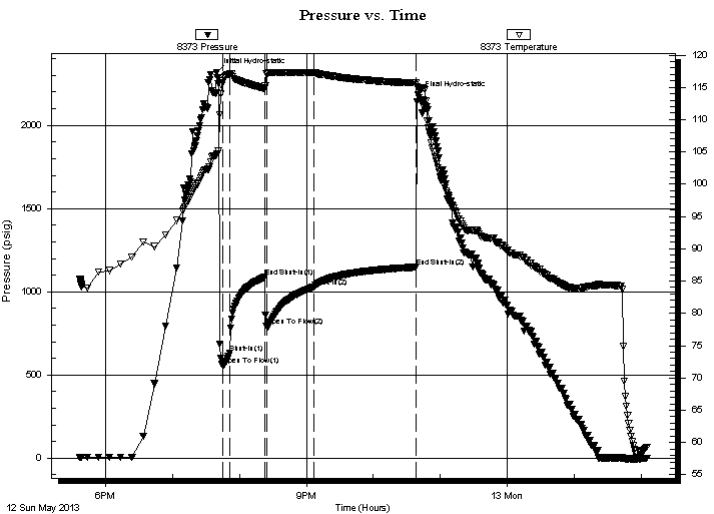
Capacity: 8000.00 psig

Last Calib.: 2013.05.13

Time On Btm: 2013.05.12 @ 19:39:29

Time Off Btm: 2013.05.12 @ 22:39:59

TEST COMMENT: IF: BOB in 30 sec.
IS: BOB in 26 min.
FF: BOB in 30 sec.
FS: BOB in 10 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2318.44	104.60	Initial Hydro-static
5	559.94	115.72	Open To Flow (1)
12	633.06	117.06	Shut-In(1)
43	1087.25	114.85	End Shut-In(1)
45	791.50	117.13	Open To Flow (2)
88	1030.79	117.28	Shut-In(2)
179	1148.07	115.68	End Shut-In(2)
181	2181.68	114.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1550.00	water 100%w	21.74
248.00	ocmw 10%o 70%w 20%m	3.48
341.00	gocw m 10%g 10%o 40%w 40%m	4.78

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51370

DST#: 2

ATTN: Paul Gerlach

Test Start: 2013.05.12 @ 17:36:29

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

165000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1550.00	water 100%w	21.742
248.00	ocmw 10%o 70%w 20%m	3.479
341.00	gocw m 10%g 10%o 40%w 40%m	4.783

Total Length: 2139.00 ft Total Volume: 30.004 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

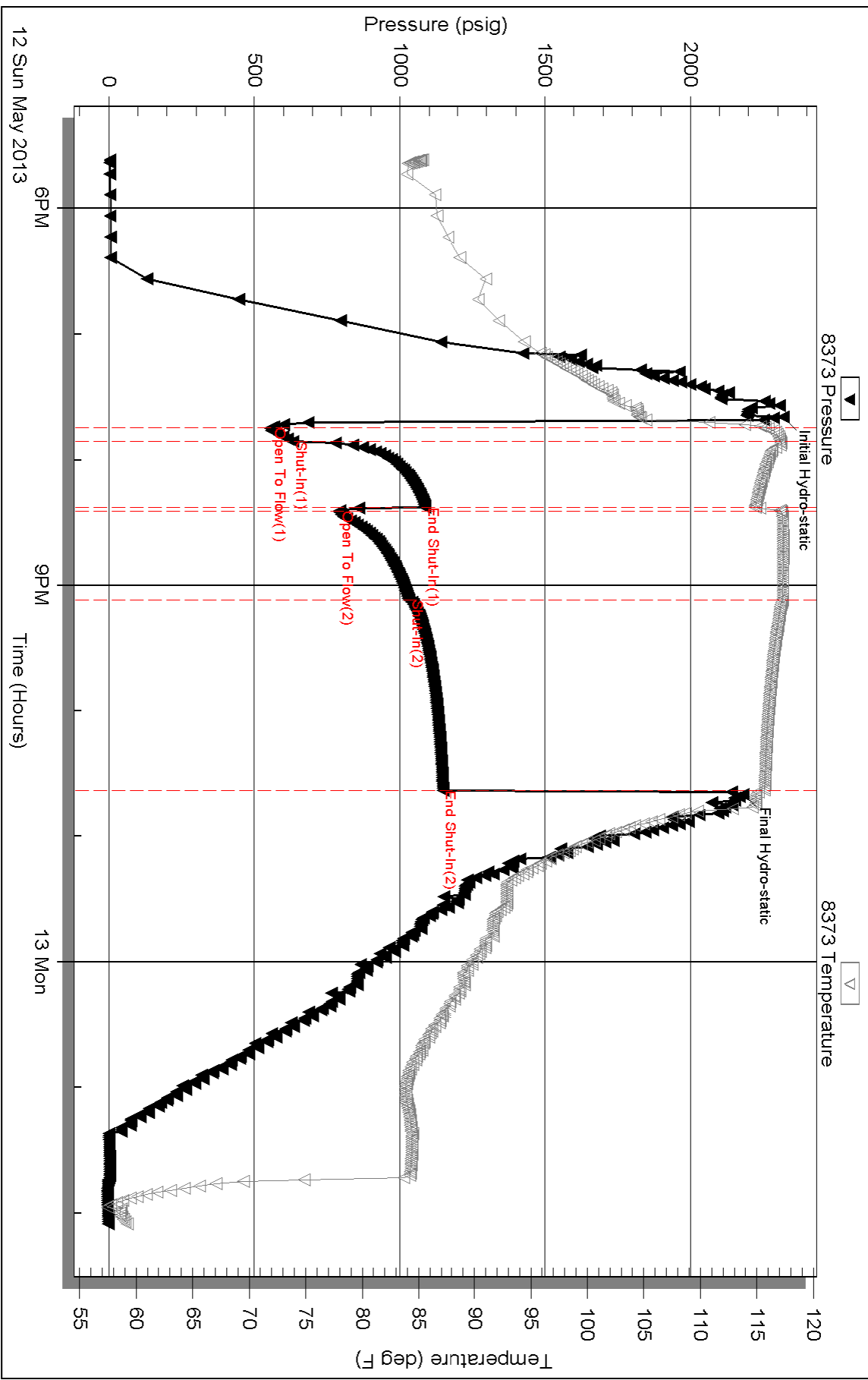
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .08@50=165000

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51371

DST#: 3

ATTN: Paul Gerlach

Test Start: 2013.05.13 @ 20:21:02

GENERAL INFORMATION:

Formation: **Swope**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:48:27

Time Test Ended: 05:16:27

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 60

Interval: 4850.00 ft (KB) To 4866.00 ft (KB) (TVD)

Reference Elevations: 2737.00 ft (KB)

Total Depth: 4866.00 ft (KB) (TVD)

2727.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press @ Run Depth: 478.95 psig @ 4851.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.05.13

End Date:

2013.05.14

Last Calib.:

2013.05.14

Start Time: 20:21:02

End Time:

05:16:27

Time On Btm:

2013.05.13 @ 22:43:57

Time Off Btm:

2013.05.14 @ 01:43:26

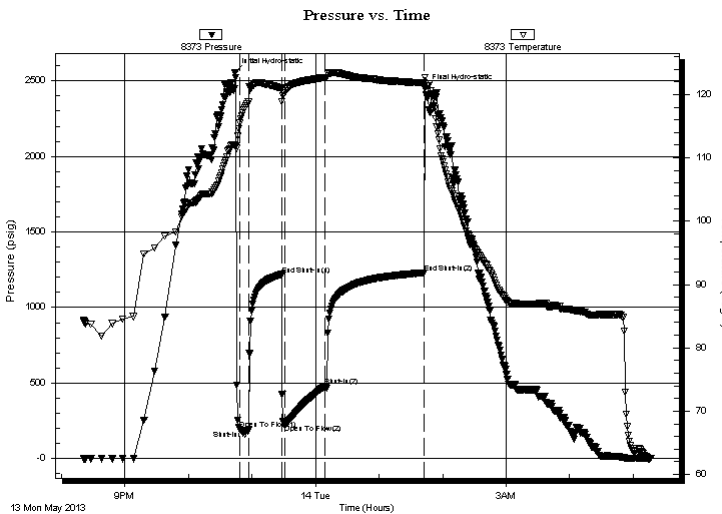
TEST COMMENT: IF: BOB Gas to surface in 5 min.

IS: BOB in 4 min.

FF: BOB

FS: BOB in 1 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2555.84	111.93	Initial Hydro-static
5	193.30	115.49	Open To Flow (1)
13	189.00	118.81	Shut-In(1)
44	1218.62	121.02	End Shut-In(1)
47	224.65	120.35	Open To Flow (2)
85	478.95	122.71	Shut-In(2)
179	1229.71	121.90	End Shut-In(2)
180	2449.66	122.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
434.00	water 100%w	6.09
124.00	mcw 90%w 10%m	1.74
248.00	mw cgo 60%g 30%o 5%w 5%m	3.48
124.00	mcgo 75%g 20%o 5%m	1.74

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	20.00	12.05
Last Gas Rate	0.13	43.00	20.18
Max. Gas Rate	0.13	43.00	20.18



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51371

DST#: 3

ATTN: Paul Gerlach

Test Start: 2013.05.13 @ 20:21:02

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

150000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.28 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
434.00	water 100%w	6.088
124.00	mcw 90%w 10%m	1.739
248.00	mw cgo 60%g 30%o 5%w 5%m	3.479
124.00	mcgo 75%g 20%o 5%m	1.739

Total Length: 930.00 ft

Total Volume: 13.045 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 37@70=36

.07@65=150000



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51371

DST#: 3

ATTN: Paul Gerlach

Test Start: 2013.05.13 @ 20:21:02

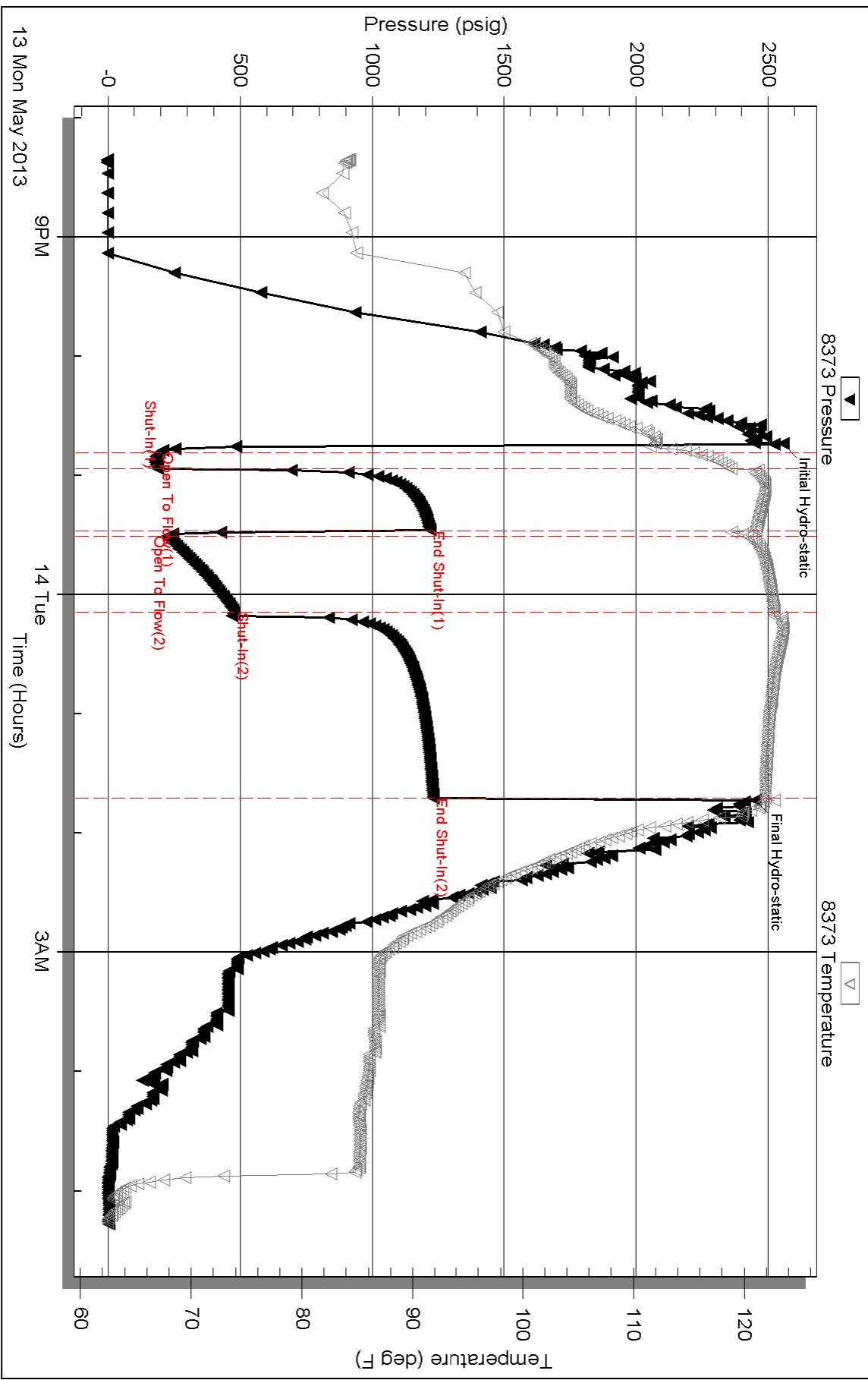
Gas Rates Information

Temperature: 122 (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)
2	10	0.13	20.00	12.05
2	10	0.13	20.00	12.05
2	20	0.13	30.00	15.59
2	30	0.13	43.00	20.18

Pressure vs. Time





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

ATTN: Paul Gerlach

Job Ticket: 51372

DST#: 4

Test Start: 2013.05.15 @ 14:08:28

GENERAL INFORMATION:

Formation: **Marrow**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:08:58

Time Test Ended: 21:09:58

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 60

Interval: 5490.00 ft (KB) To 5595.00 ft (KB) (TVD)

Reference Elevations: 2737.00 ft (KB)

Total Depth: 5595.00 ft (KB) (TVD)

2727.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press @ Run Depth: 81.32 psig @ 5491.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.05.15

End Date:

2013.05.15

Last Calib.:

2013.05.15

Start Time: 14:08:33

End Time:

21:09:57

Time On Btm:

2013.05.15 @ 16:05:28

Time Off Btm:

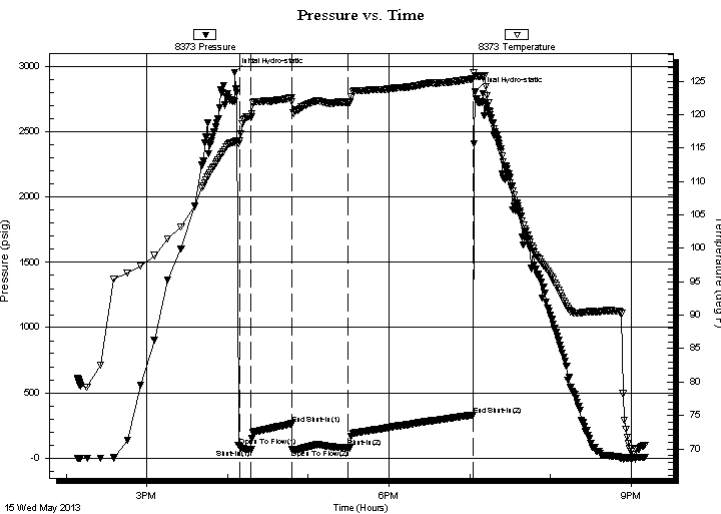
2013.05.15 @ 19:03:58

TEST COMMENT: IF: BOB in 1 min. Gas to surface in 8 min.

IS: Surface blow died in 15 min.

FF: BOB

FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2957.61	116.00	Initial Hydro-static
4	86.09	116.15	Open To Flow (1)
12	63.40	119.66	Shut-In(1)
42	261.97	122.54	End Shut-In(1)
43	67.95	121.95	Open To Flow (2)
84	81.32	121.90	Shut-In(2)
177	329.43	125.39	End Shut-In(2)
179	2807.12	125.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
77.00	gcm 10%g 90%m	1.08
0.00	GTS	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	13.00	10.14
Last Gas Rate	0.38	32.00	159.88
Max. Gas Rate	0.13	59.00	25.90



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51372

DST#: 4

ATTN: Paul Gerlach

Test Start: 2013.05.15 @ 14:08:28

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 80.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
77.00	gcm 10%g 90%m	1.080
0.00	GTS	0.000

Total Length: 77.00 ft Total Volume: 1.080 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51372

DST#: 4

ATTN: Paul Gerlach

Test Start: 2013.05.15 @ 14:08:28

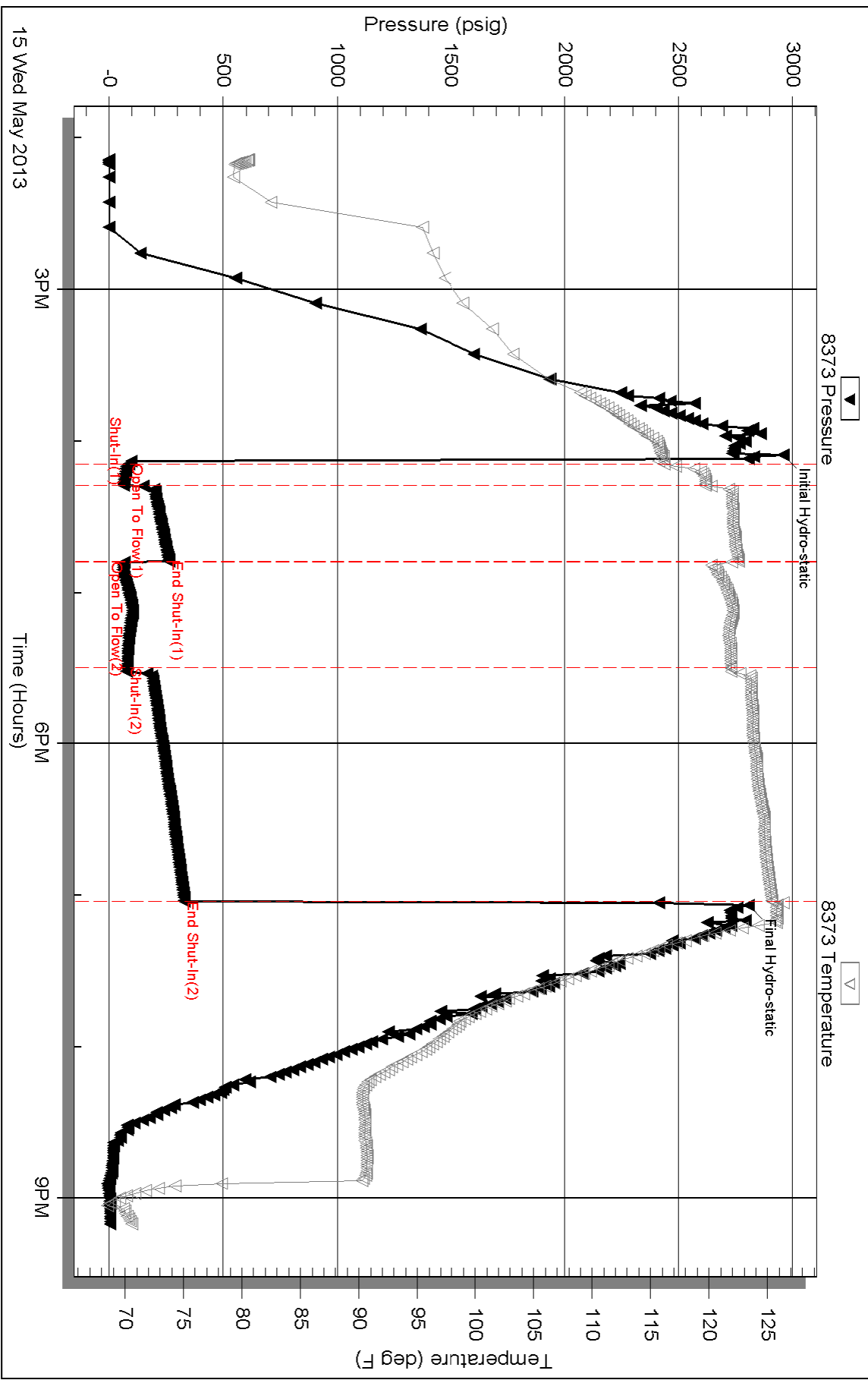
Gas Rates Information

Temperature: 119 (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)
2	5	0.13	13.00	10.14
2	5	0.13	13.00	9.60
2	5	0.13	13.00	9.60
2	10	0.13	30.00	15.63
2	20	0.13	59.00	25.90
2	30	0.38	38.00	180.68
2	40	0.38	32.00	159.88

Pressure vs. Time





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Edison Operating Company
 9427 E Cross Creek
 Wichita, KS 67206
 ATTN: Paul Gerlach

25-33-31 Seward ks
Charles 1-25
 Job Ticket: 51373 **DST#: 5**
 Test Start: 2013.05.16 @ 18:38:57

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:10:57
 Time Test Ended: 03:16:57
 Interval: **5740.00 ft (KB) To 5779.00 ft (KB) (TVD)**
 Total Depth: 5779.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brandon Turley
 Unit No: 60
 Reference Elevations: 2737.00 ft (KB)
 2727.00 ft (CF)
 KB to GR/CF: 10.00 ft

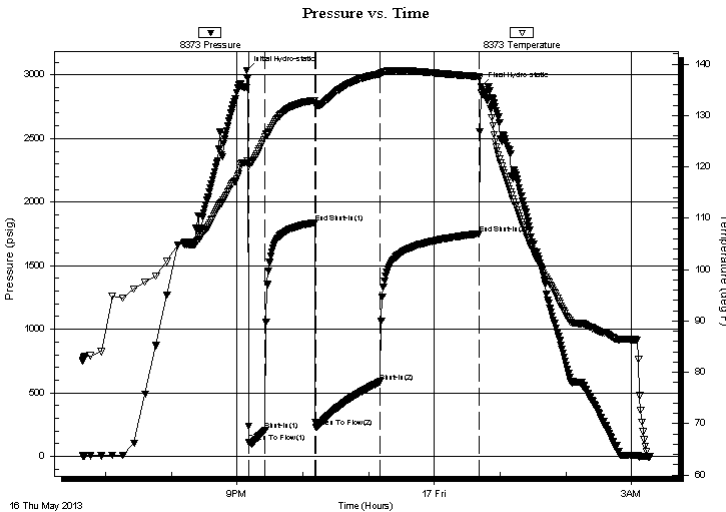
Serial #: 8373

Inside

Press @ Run Depth: 587.88 psig @ 5741.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.05.16 End Date: 2013.05.17 Last Calib.: 2013.05.17
 Start Time: 18:39:02 End Time: 03:16:57 Time On Btm: 2013.05.16 @ 21:08:57
 Time Off Btm: 2013.05.17 @ 00:42:27

TEST COMMENT: IF: BOB in 3 min.
 IS: Surface blow built to 1 in 15 min died in 20.
 FF: BOB in 7 min.
 FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3036.01	120.89	Initial Hydro-static
2	107.78	120.68	Open To Flow (1)
17	206.87	125.82	Shut-In(1)
62	1837.37	132.97	End Shut-In(1)
63	231.46	132.14	Open To Flow (2)
122	587.88	138.11	Shut-In(2)
212	1751.36	137.62	End Shut-In(2)
214	2910.54	134.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
558.00	water 100%w	7.83
248.00	mcw 90%w 10%m	3.48
350.00	mw 50%w 50%m	4.91
0.00	62 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company

25-33-31 Seward ks

9427 E Cross Creek
Wichita, KS 67206

Charles 1-25

Job Ticket: 51373

DST#: 5

ATTN: Paul Gerlach

Test Start: 2013.05.16 @ 18:38:57

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

78000 ppm

Viscosity: 74.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
558.00	water 100%w	7.827
248.00	mcw 90%w 10%m	3.479
350.00	mw 50%w 50%m	4.910
0.00	62 GIP	0.000

Total Length: 1156.00 ft Total Volume: 16.216 bbl

Num Fluid Samples: 0

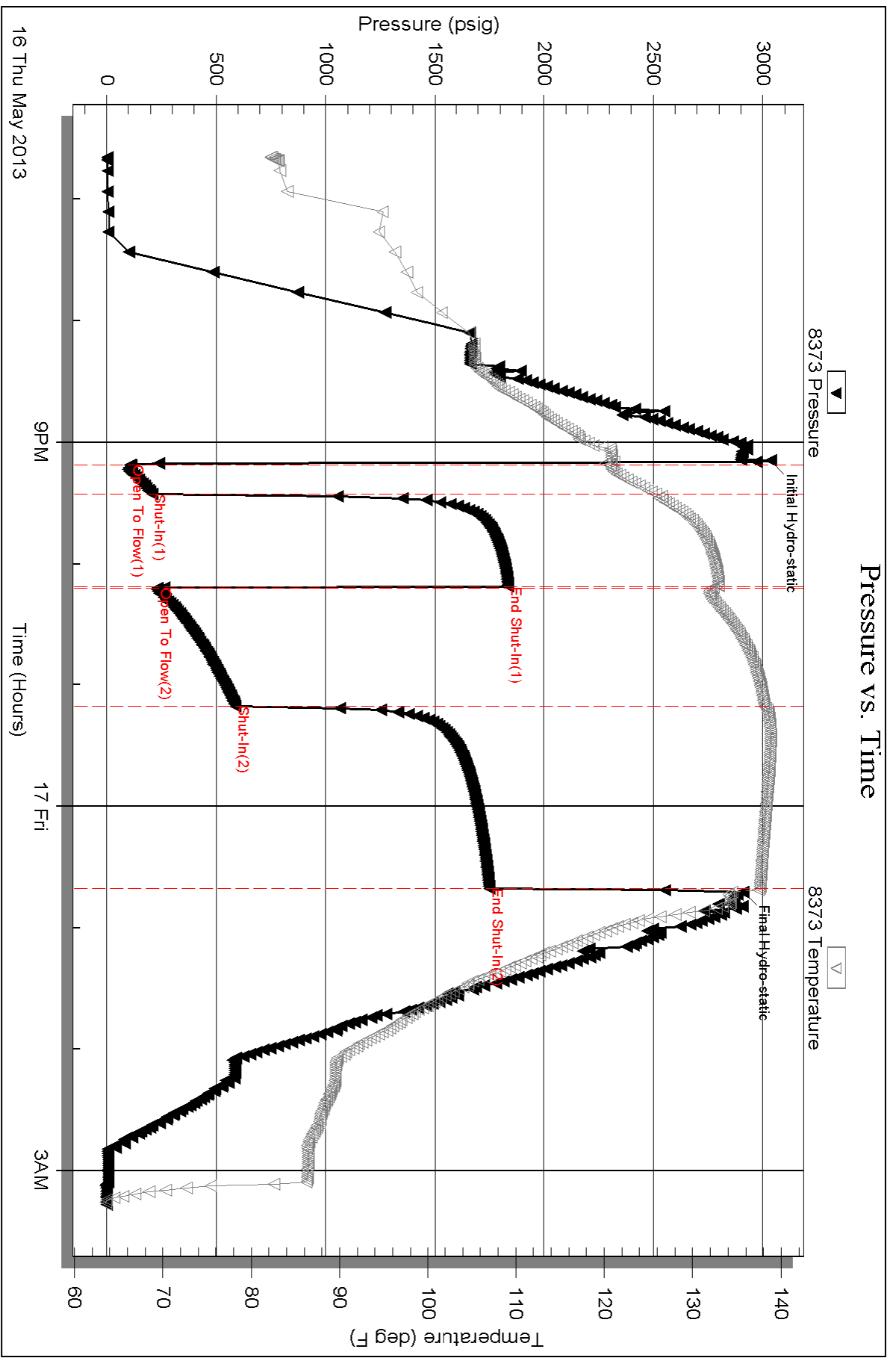
Num Gas Bombs: 0

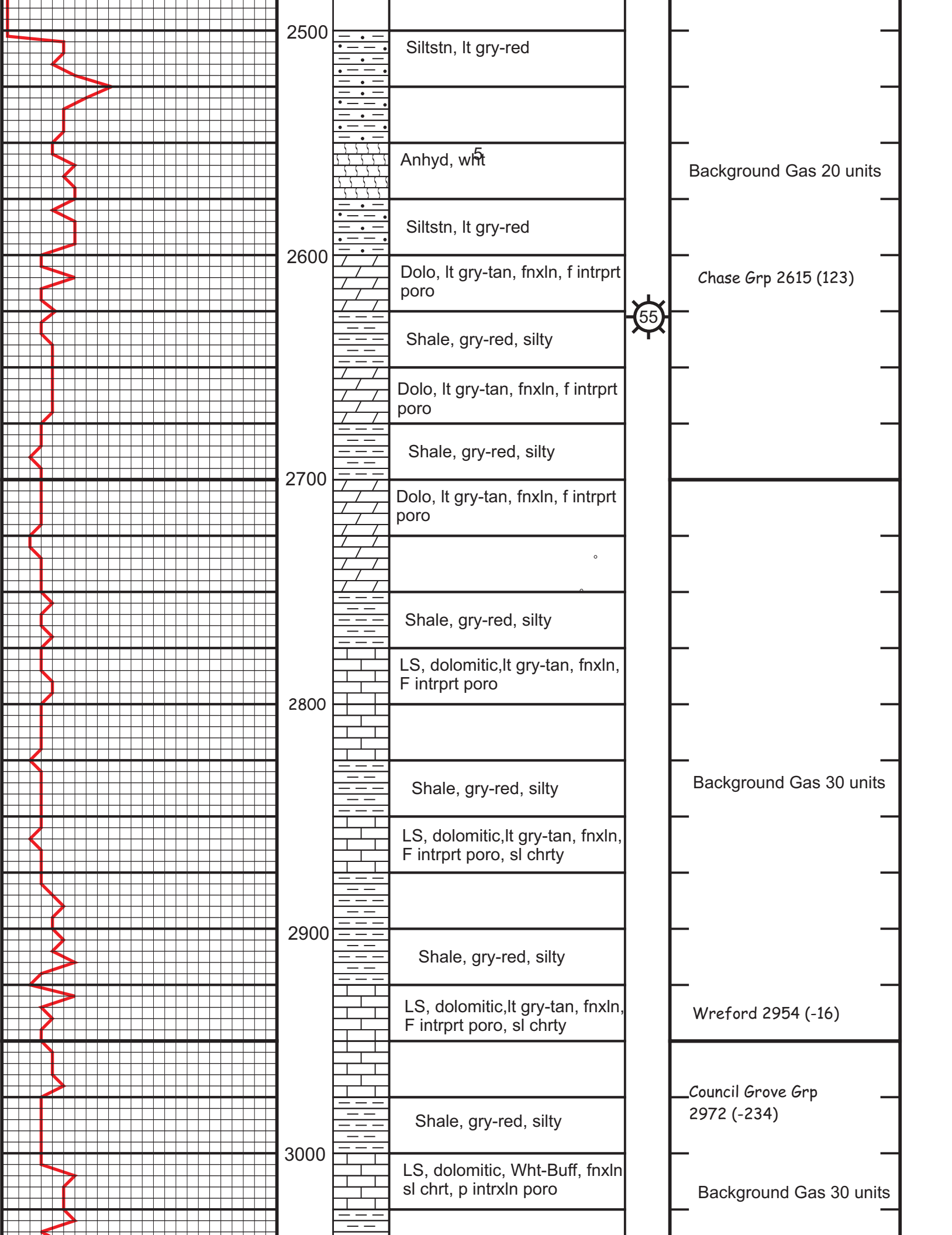
Serial #:

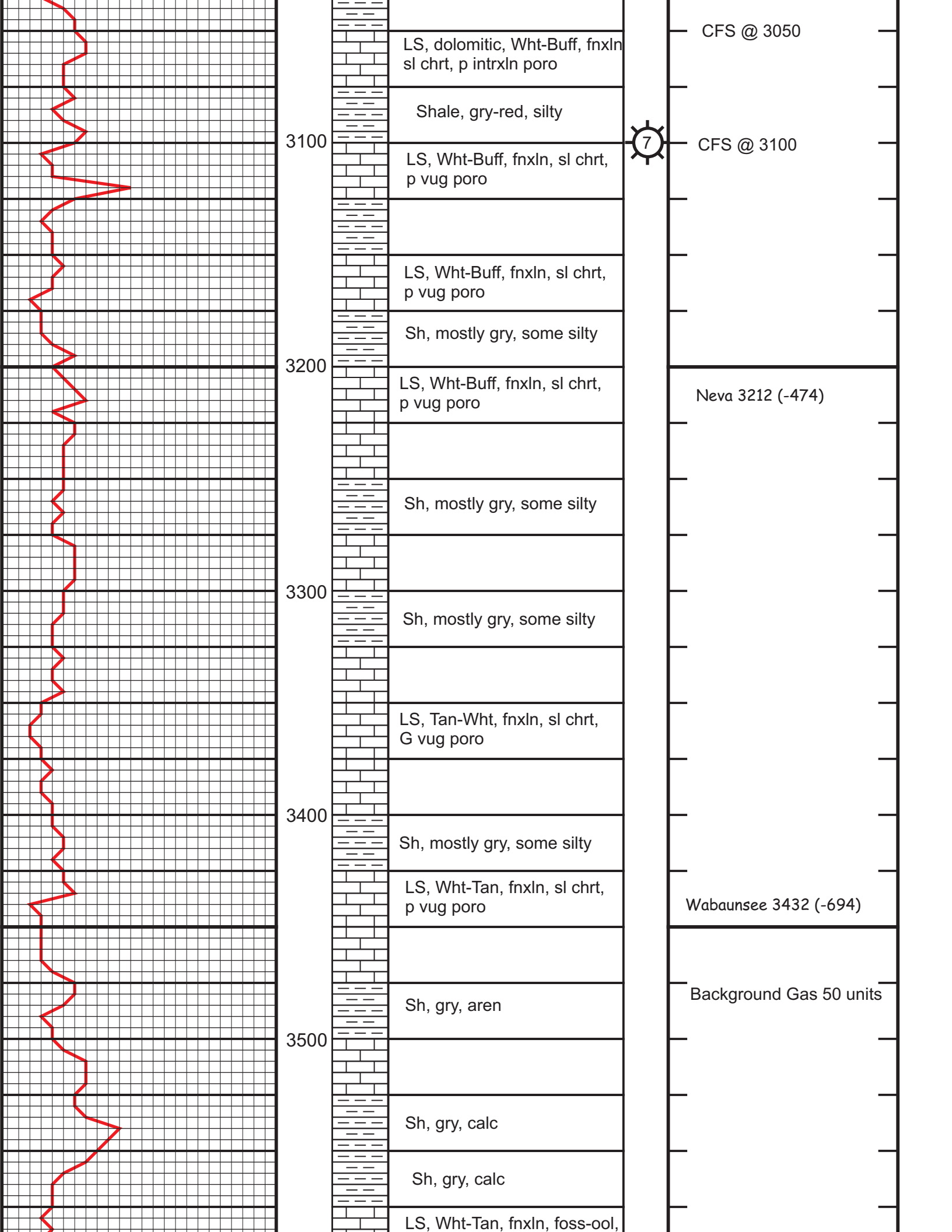
Laboratory Name:

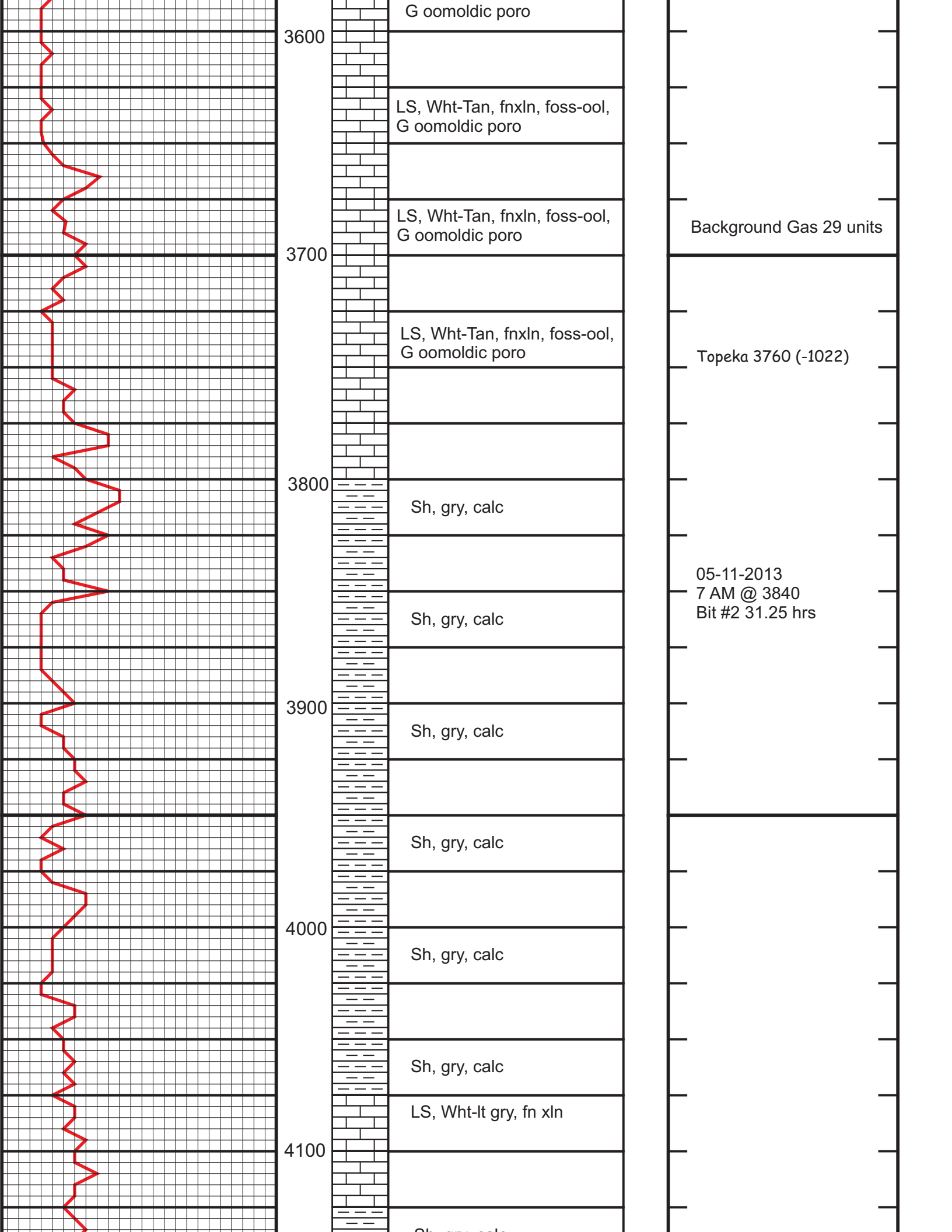
Laboratory Location:

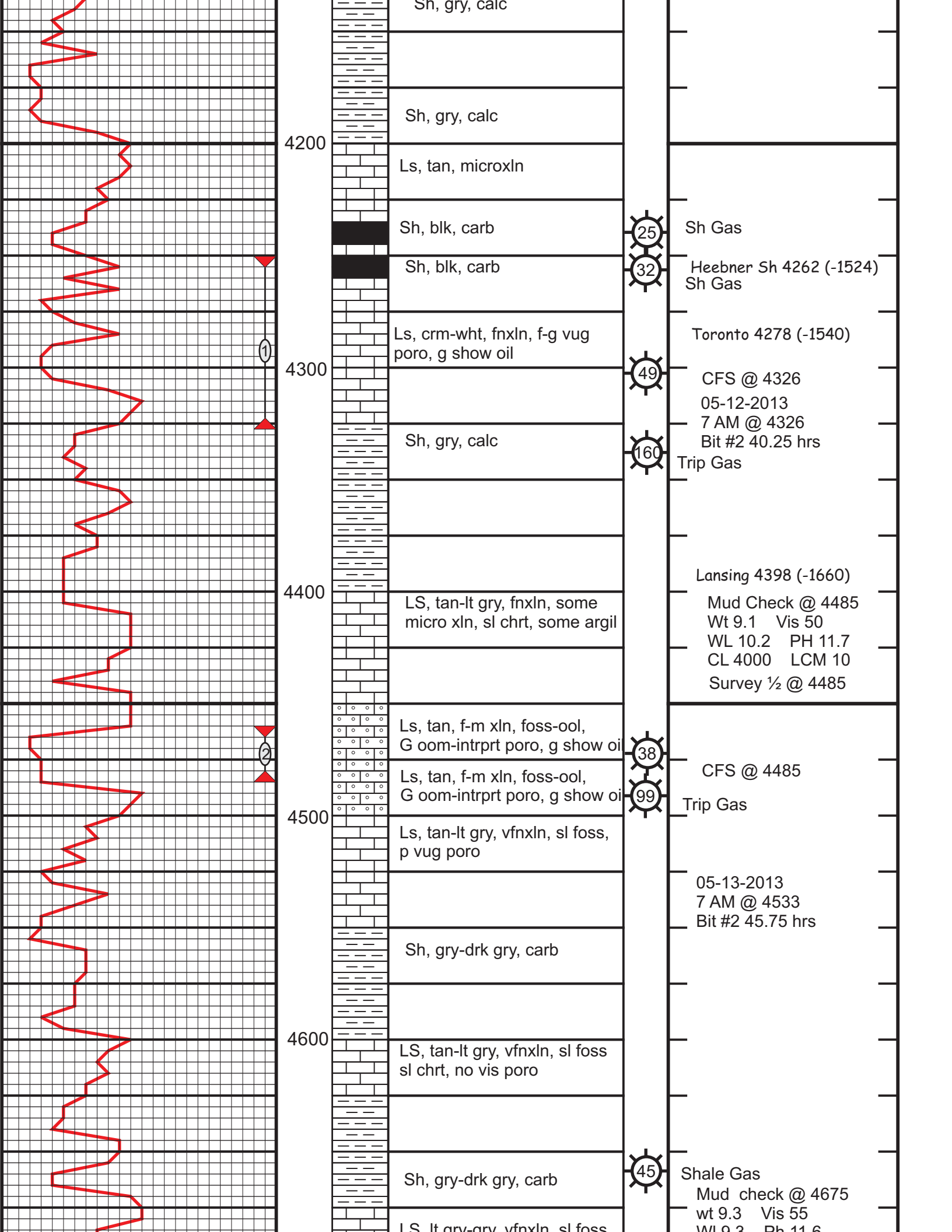
Recovery Comments: .11@65=78000

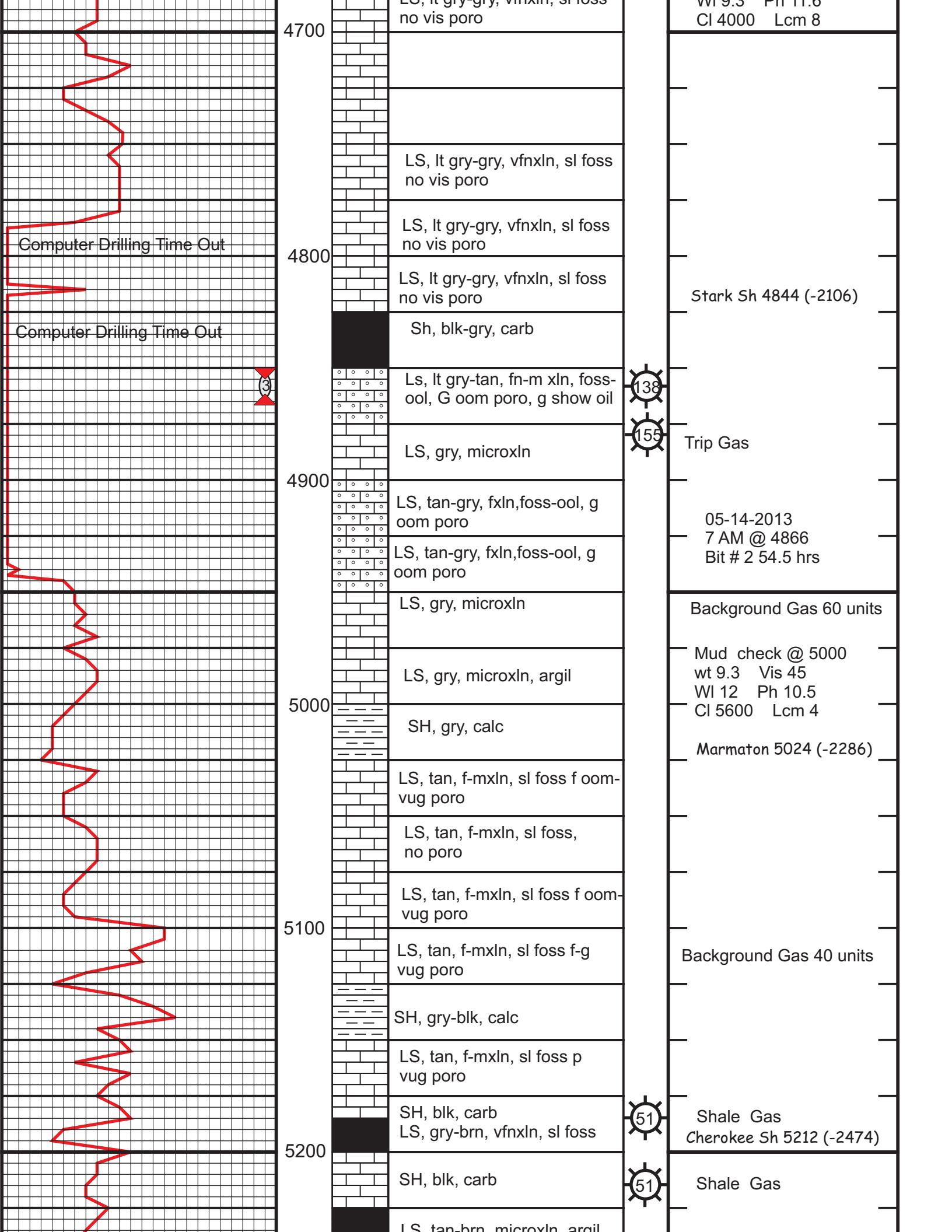


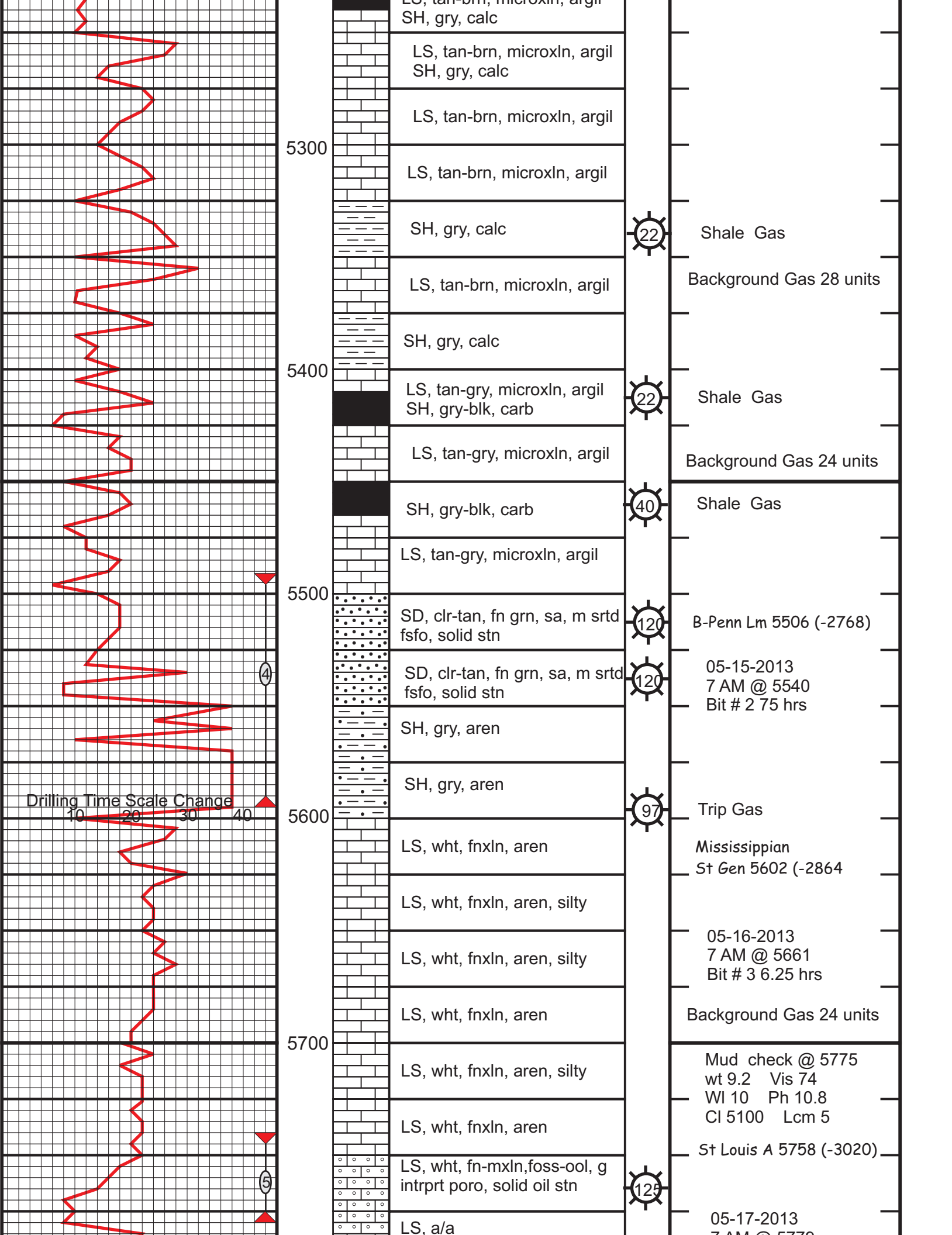


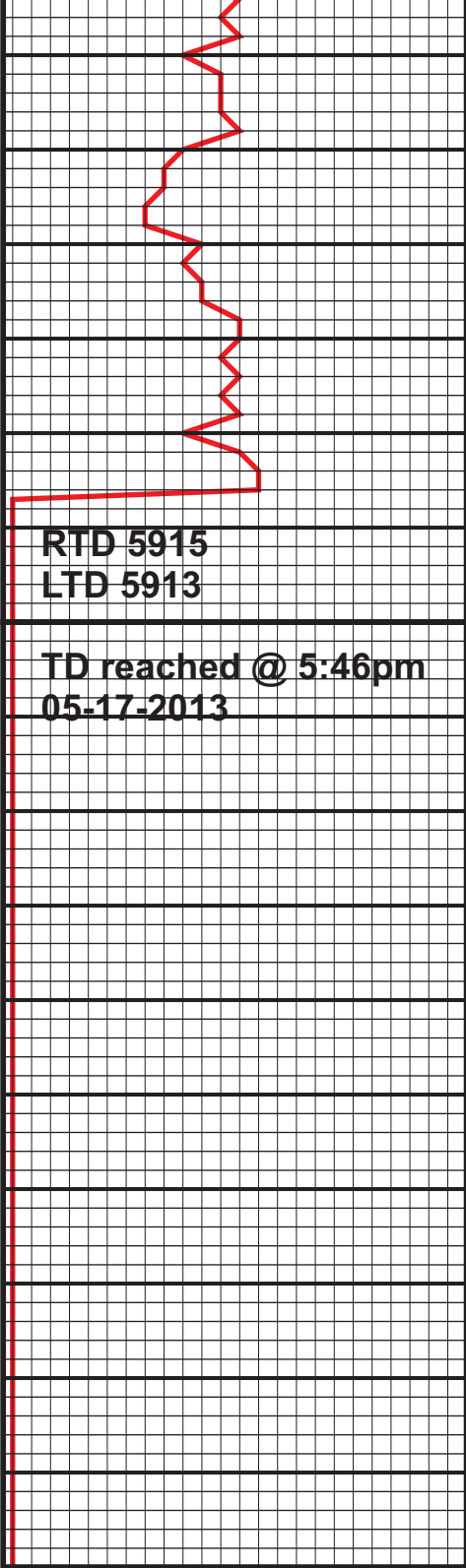












5800

5900

6000

	LS, wht, fnxln, ool, no poro
	LS, wht, fnxln, foss-ool, G intrprt poro, no show
	LS, a/a, p intrprt poro
	Dolo, tan-whr, mxln, sl foss, p intrxln poro
	Dolo, tan-whr, mxln, sl foss, f-g intrxln poro



7 AM @ 5779
Bit # 3 19 hrs

Mud check @ 5800
wt 9.2 Vis 60
Wl 8 Ph 11
Cl 3200 Lcm 6

Spergen 5874 (-3136)
Background Gas 25 units

05-18-2013
7 AM @ 5913
Bit # 3 31 hrs