



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1237959
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

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

1237959

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Perforations
Scheetz #5-21
 335' FNL & 335' FWL
 Section 21-13S-32W
 Logan Co., Kansas
 Badger Field

Zone	Interval*		Ft	No. Holes	SPF	Nom. Gun Size (in)	Acid Conc (%)	Acid Vol (gal)
	Top	Bottom						
Lansing I	4194 -	4198	4	16	4.0	3 1/8"	15	500
	4202 -	4206	4	16	4.0	3 1/8"	15	500
Lansing K	4244 -	4247	3	12	4.0	3 1/8"	15	500
	4252 -	4254	2	8	4.0	3 1/8"	15	250
	4258 -	4262	4	16	4.0	3 1/8"	15	500
Lansing L	4300 -	4304	4	16	4.0	3 1/8"	15	500
Pawnee	4435 -	4439	4	16	4.0	3 1/8"	15	500
Ft Scott	4489 -	4492	4	16	4.0	3 1/8"	15	500
Ft Scott	4504 -	4508	4	16	4.0	3 1/8"	15	500
Johnson	4558 -	4580	22	44	2.0	3 1/8"	15	2000
Miss A	4662 -	4665	3	12	4.0	3 1/8"	15	500
Miss A	4668 -	4670	2	8	4.0	3 1/8"	15	0
Miss C	4693 -	4697	4	16	4.0	3 1/8"	15	500
			64	212				7250

*Depths from Weatherford Compact Photo Density/Comp Neutron/Microresistivity Log of 30-Oct-2014, CBL required 1-2 ft correction for upper intervals



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57488

DST#: 2

ATTN: Austin G.

Test Start: 2014.10.26 @ 09:20:00

GENERAL INFORMATION:

Formation: **Lansing H,I,J**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 12:17:00

Time Test Ended: 18:30:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Justin Harris

Unit No: 58

Interval: 4148.00 ft (KB) To 4240.00 ft (KB) (TVD)

Reference Elevations: 3023.00 ft (KB)

Total Depth: 4240.00 ft (KB) (TVD)

3011.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 12.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 245.73 psig @ 4236.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.26

End Date: 2014.10.26

Last Calib.: 2014.10.26

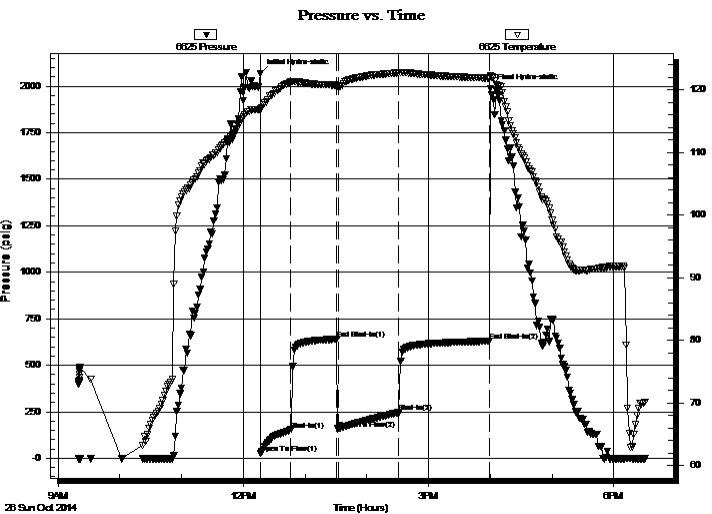
Start Time: 09:20:01

End Time: 18:30:00

Time On Btm: 2014.10.26 @ 12:16:30

Time Off Btm: 2014.10.26 @ 16:00:00

TEST COMMENT: 30: B.O.B in 15 mins.
45: Weak surface blow to 1".
60: B.O.B in 17 mins.
90: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2067.39	116.96	Initial Hydro-static
1	26.51	116.67	Open To Flow (1)
29	150.13	121.20	Shut-In(1)
75	639.61	120.72	End Shut-In(1)
76	158.49	120.56	Open To Flow (2)
135	245.73	122.71	Shut-In(2)
223	629.33	121.87	End Shut-In(2)
224	1987.77	122.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
250.00	gmcw 5%g 5%m 90%w	1.23
126.00	gmocw 1%o 5%g 1-%m 84%w	1.77
108.00	gow cm 5%g 10%o 30%w 55%m	1.51
30.00	gas clean oil 5%g 95%o	0.42

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57488

DST#: 2

ATTN: Austin G.

Test Start: 2014.10.26 @ 09:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

60000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
250.00	gmcw 5%g 5%m 90%w	1.229
126.00	gmocw 1%o 5%g 1-%m 84%w	1.767
108.00	gow cm 5%g 10%o 30%w 55%m	1.515
30.00	gas clean oil 5%g 95%o	0.421

Total Length: 514.00 ft Total Volume: 4.932 bbl

Num Fluid Samples: 0

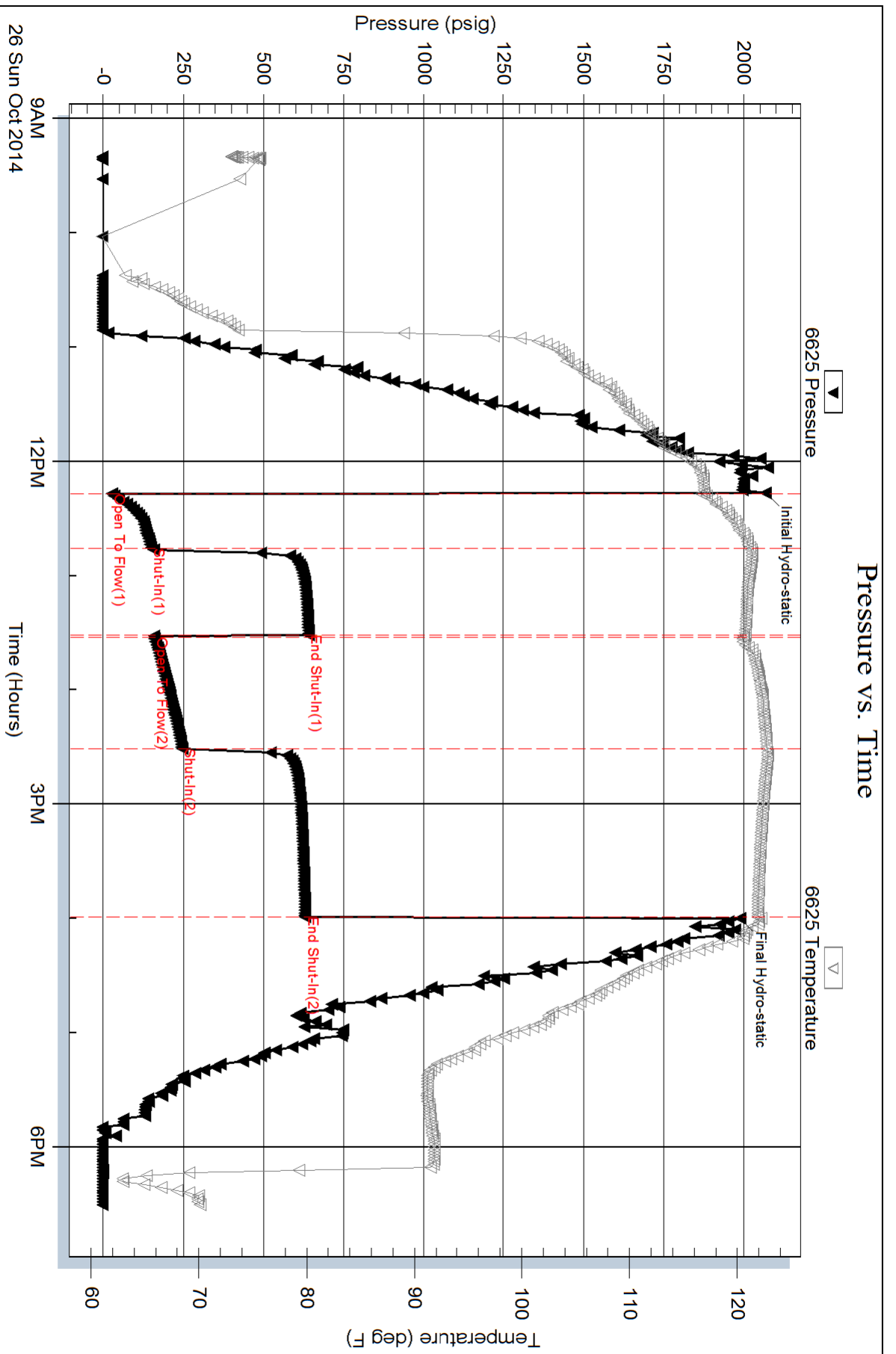
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API RW .09 @ 91 F = 60000 Chlorides





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57487

DST#: 1

ATTN: Austin G.

Test Start: 2014.10.25 @ 05:00:00

GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 07:49:00

Time Test Ended: 13:03:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Justin Harris

Unit No: 58

Interval: 4000.00 ft (KB) To 4047.00 ft (KB) (TVD)

Reference Elevations: 3023.00 ft (KB)

Total Depth: 4047.00 ft (KB) (TVD)

3011.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 12.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 131.99 psig @ 4034.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.25

End Date: 2014.10.25

Last Calib.: 2014.10.25

Start Time: 05:00:01

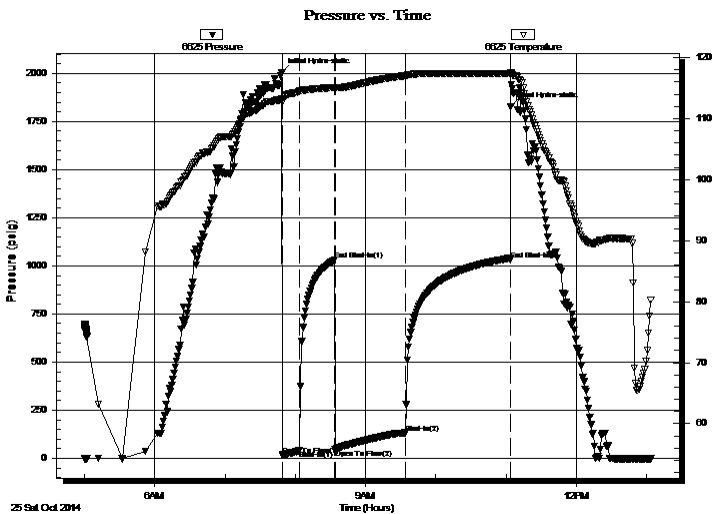
End Time: 13:03:30

Time On Btm: 2014.10.25 @ 07:48:30

Time Off Btm: 2014.10.25 @ 11:04:00

TEST COMMENT: 15: Weak surface blow build to 1 3/4".
30: No Return.
60: Weak surface blow.
90: No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2005.19	113.27	Initial Hydro-static
1	16.84	112.66	Open To Flow (1)
15	40.37	114.50	Shut-In(1)
45	1030.05	115.09	End Shut-In(1)
46	45.94	114.98	Open To Flow (2)
106	131.99	117.02	Shut-In(2)
195	1033.33	117.38	End Shut-In(2)
196	1828.77	117.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
250.00	mcw 15% m 85% w with oil spots	1.23
15.00	mcw 10% m 90% w with oil spots	0.21

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57487

DST#: 1

ATTN: Austin G.

Test Start: 2014.10.25 @ 05:00:00

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:

40000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
250.00	mcw 15%m 85%w with oil spots	1.229
15.00	mcw 10%m 90%w with oil spots	0.210

Total Length: 265.00 ft Total Volume: 1.439 bbl

Num Fluid Samples: 0

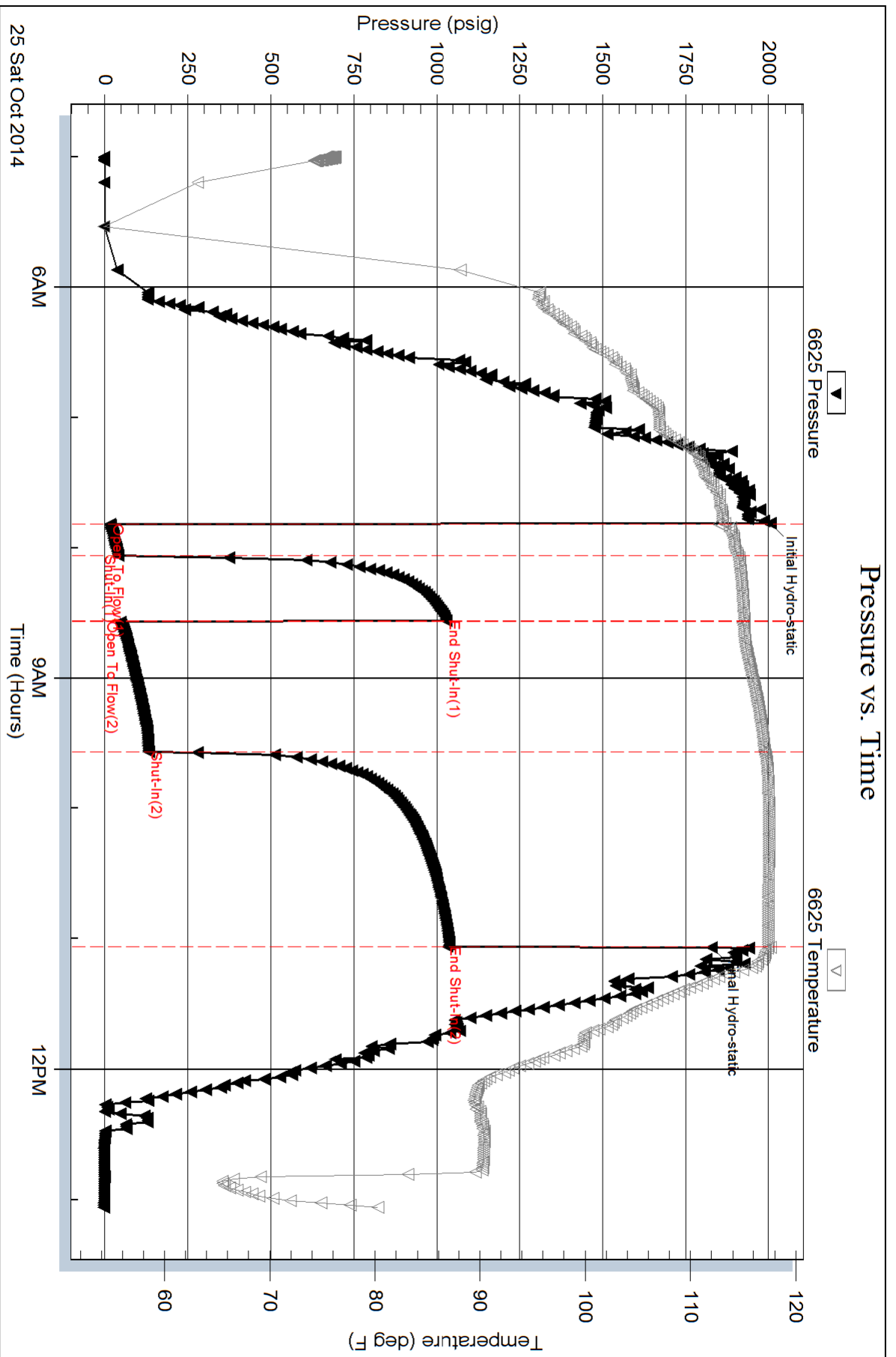
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API RW .15 @ 86 F Chlorides 40000





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57489

DST#: 3

ATTN: Austin G.

Test Start: 2014.10.28 @ 00:05:00

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 03:37:30

Time Test Ended: 08:20:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Justin Harris

Unit No: 58

Interval: 4488.00 ft (KB) To 4518.00 ft (KB) (TVD)

Reference Elevations: 3023.00 ft (KB)

Total Depth: 4518.00 ft (KB) (TVD)

3011.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 12.00 ft

Serial #: 6625 Outside

Press@RunDepth: 16.52 psig @ 4489.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.28

End Date:

2014.10.28

Last Calib.: 2014.10.28

Start Time: 00:05:01

End Time:

08:20:30

Time On Btm: 2014.10.28 @ 03:37:00

Time Off Btm: 2014.10.28 @ 05:33:00

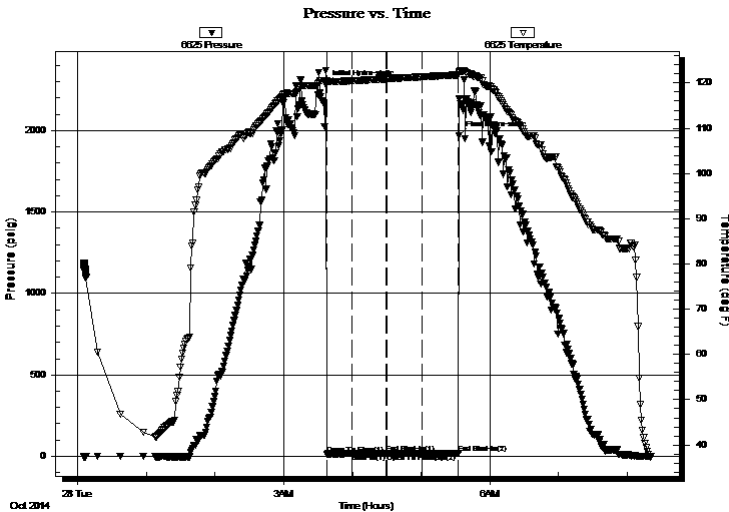
TEST COMMENT: 15: Weak surface blow died in 9 mins.

30: No Return.

30: No Blow .

30: No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2280.66	120.61	Initial Hydro-static
1	14.70	120.22	Open To Flow (1)
23	16.75	120.49	Shut-In(1)
53	20.38	120.92	End Shut-In(1)
53	20.40	120.92	Open To Flow (2)
84	16.52	121.37	Shut-In(2)
116	17.94	121.80	End Shut-In(2)
116	1968.43	122.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57489

DST#: 3

ATTN: Austin G.

Test Start: 2014.10.28 @ 00:05:00

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

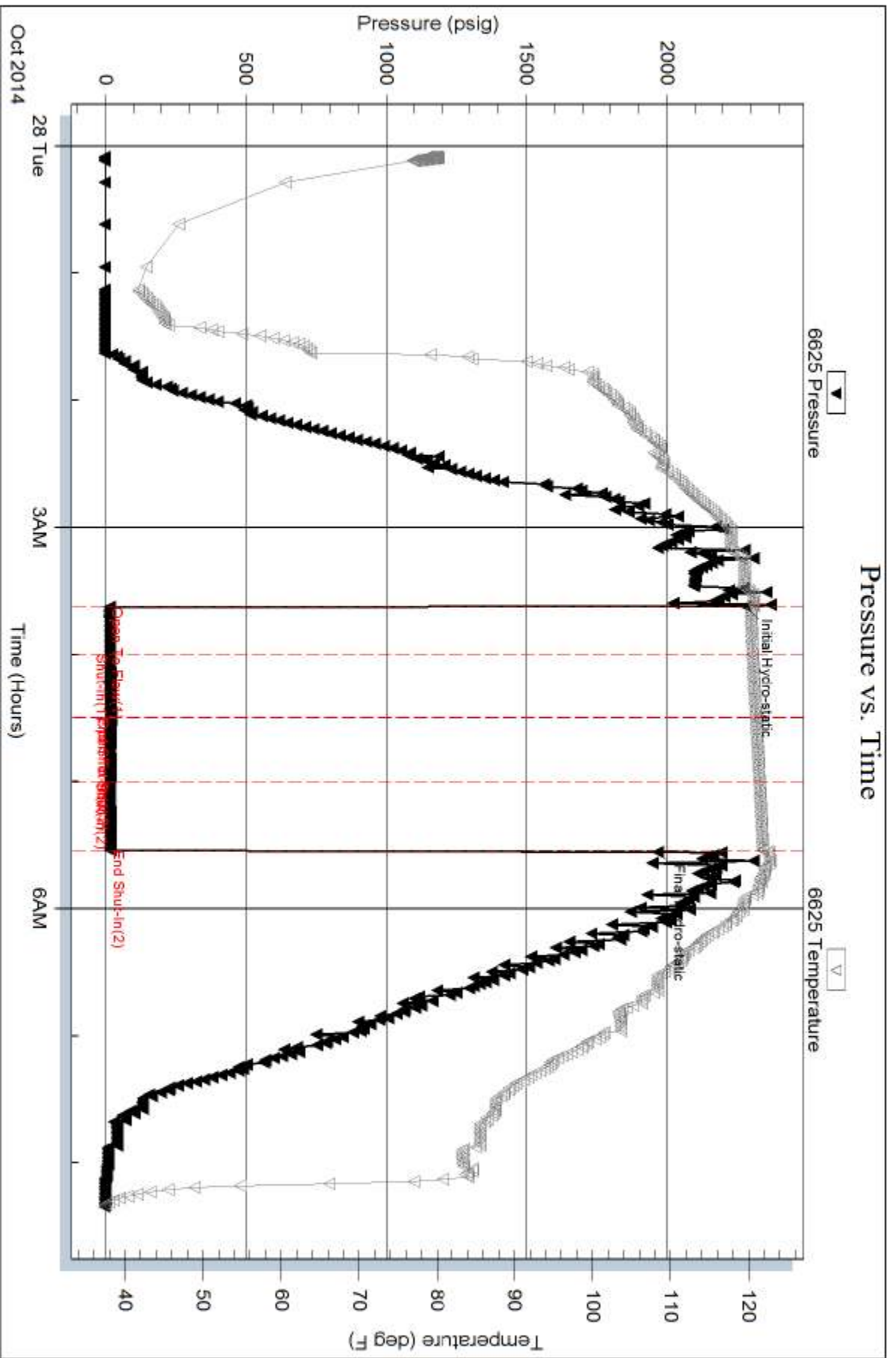
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57490

DST#: 4

ATTN: Austin G.

Test Start: 2014.10.28 @ 19:45:00

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 22:05:00

Time Test Ended: 02:47:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Justin Harris

Unit No: 58

Interval: 4529.00 ft (KB) To 4580.00 ft (KB) (TVD)

Reference Elevations: 3023.00 ft (KB)

Total Depth: 4580.00 ft (KB) (TVD)

3011.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 12.00 ft

Serial #: 8319

Inside

Press@RunDepth: 29.34 psig @ 4563.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.28

End Date:

2014.10.29

Last Calib.:

2014.10.29

Start Time: 19:45:01

End Time:

02:47:00

Time On Btm:

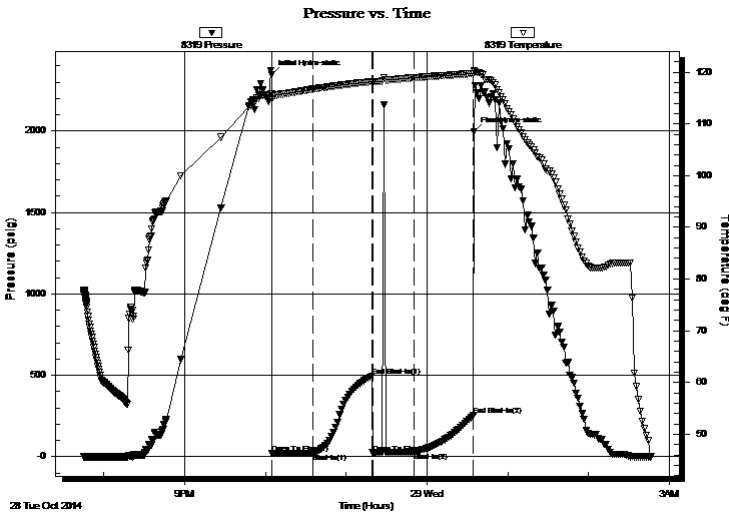
2014.10.28 @ 22:04:30

Time Off Btm:

2014.10.29 @ 00:35:00

TEST COMMENT: 30: Weak Surface blow died in 17 mins.
45: No Return.
30: No Blow Flush tool then no blow .
45: No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2348.32	115.85	Initial Hydro-static
1	19.47	114.91	Open To Flow (1)
31	23.30	116.69	Shut-In(1)
75	495.73	118.15	End Shut-In(1)
75	24.55	118.05	Open To Flow (2)
106	29.34	118.92	Shut-In(2)
150	255.66	119.75	End Shut-In(2)
151	1996.05	120.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w ith oil spots	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57490

DST#: 4

ATTN: Austin G.

Test Start: 2014.10.28 @ 19:45:00

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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud w ith oil spots	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

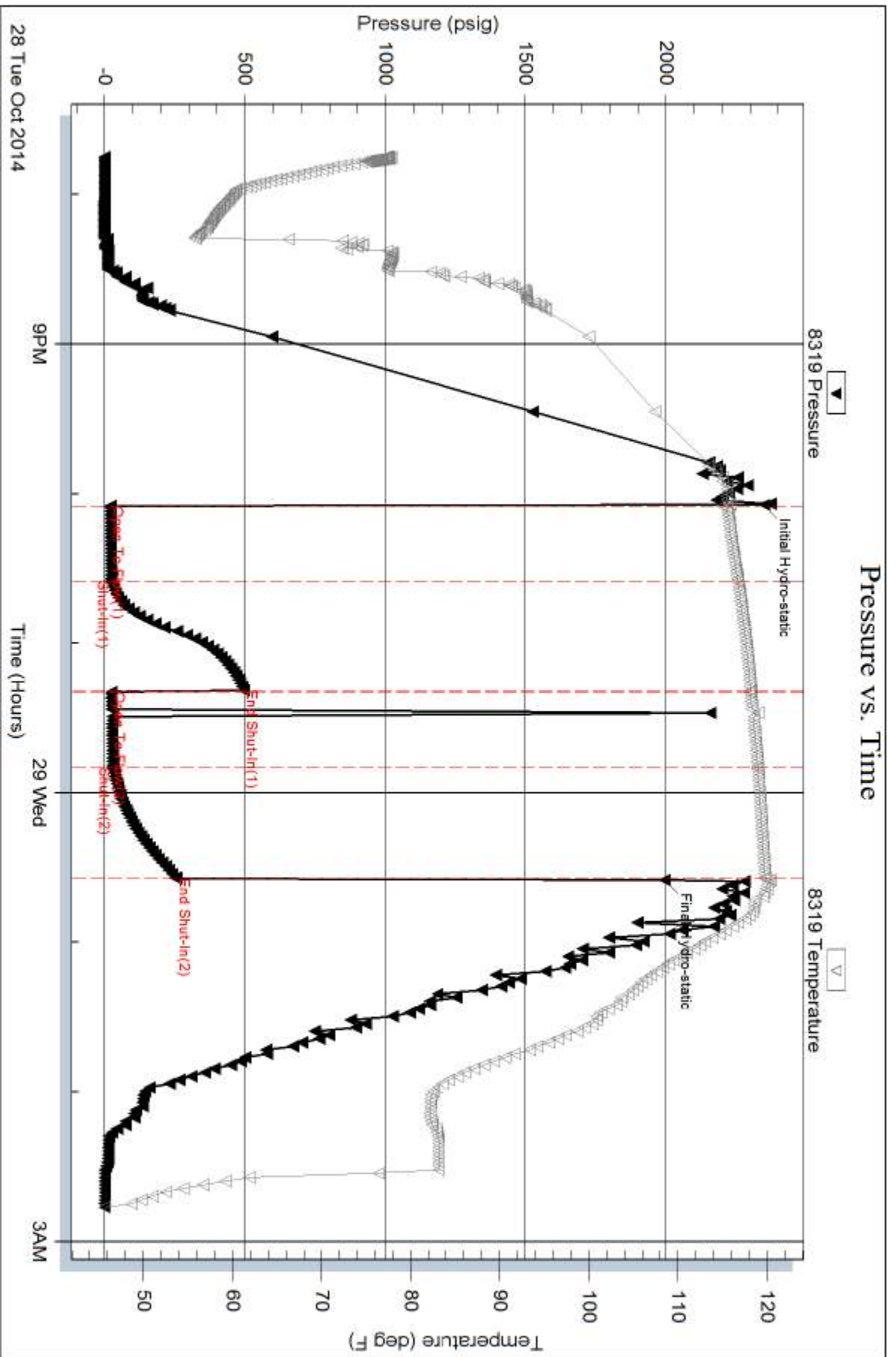
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57491

DST#: 5

ATTN: Austin G.

Test Start: 2014.10.29 @ 18:06:00

GENERAL INFORMATION:

Formation: **St. Louis / miss.**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 21:09:30

Time Test Ended: 02:08:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Justin Harris

Unit No: 58

Interval: 4640.00 ft (KB) To 4692.00 ft (KB) (TVD)

Reference Elevations: 3023.00 ft (KB)

Total Depth: 4692.00 ft (KB) (TVD)

3011.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 12.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 20.33 psig @ 4675.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.29

End Date: 2014.10.30

Last Calib.: 2014.10.30

Start Time: 18:06:01

End Time: 02:08:00

Time On Btm: 2014.10.29 @ 21:09:00

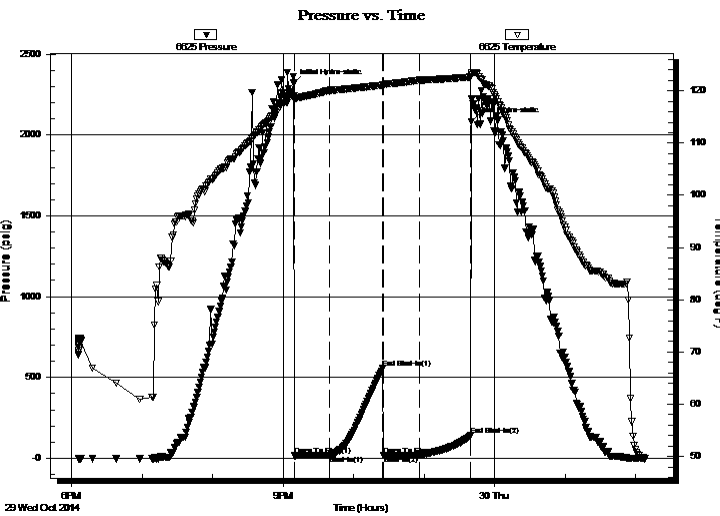
Time Off Btm: 2014.10.29 @ 23:40:00

TEST COMMENT: 30: Weak surface blow died in 10 mins.

45: No Return.

30: No Blow .

45: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2319.97	118.99	Initial Hydro-static
1	16.36	118.64	Open To Flow (1)
31	19.50	120.09	Shut-In(1)
76	555.29	121.08	End Shut-In(1)
76	20.40	121.01	Open To Flow (2)
107	20.33	122.01	Shut-In(2)
151	140.50	122.64	End Shut-In(2)
151	2082.92	123.18	Final Hydro-static

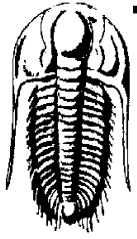
Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w ith oil spots	0.05

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Chaco Energy Company

21-13s-32w Logan countyP.O. Box. 1587
Denver Co, 80201**Scheetz 5-21**

ATTN: Austin G.

Job Ticket: 57491

DST#: 5

Test Start: 2014.10.29 @ 18:06:00

GENERAL INFORMATION:

Formation: **St. Louis / miss.**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 21:09:30

Time Test Ended: 02:08:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Justin Harris

Unit No: 58

Interval: **4640.00 ft (KB) To 4692.00 ft (KB) (TVD)**

Total Depth: 4692.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 3023.00 ft (KB)

3011.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 8319

Press @RunDepth: psig @ ft (KB)

Start Date: 2014.10.29

End Date:

2014.10.30

Start Time: 18:06:01

End Time:

02:08:30

Capacity: 8000.00 psig

Last Calib.:

2014.10.30

Time On Btm:

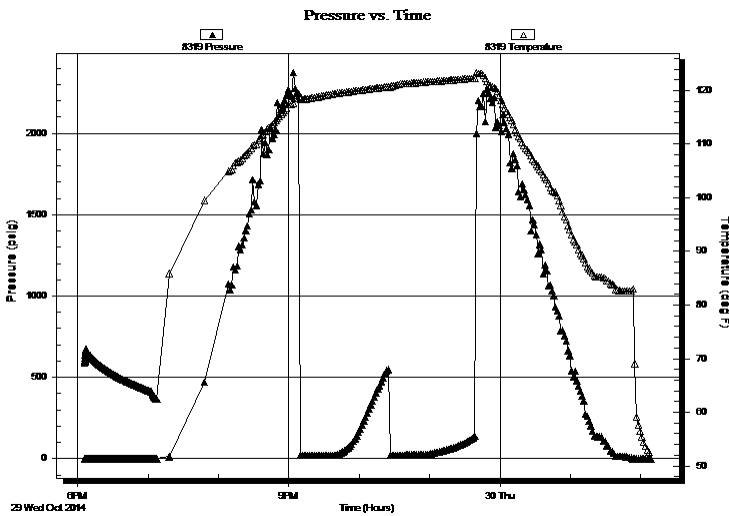
Time Off Btm:

TEST COMMENT: 30: Weak surface blow died in 10 mins.

45: No Return.

30: No Blow .

45: No Return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w ith oil spots	0.05

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Chaco Energy Company

21-13s-32w Logan county

P.O. Box. 1587
Denver Co, 80201

Scheetz 5-21

Job Ticket: 57491

DST#: 5

ATTN: Austin G.

Test Start: 2014.10.29 @ 18:06:00

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: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud w ith oil spots	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

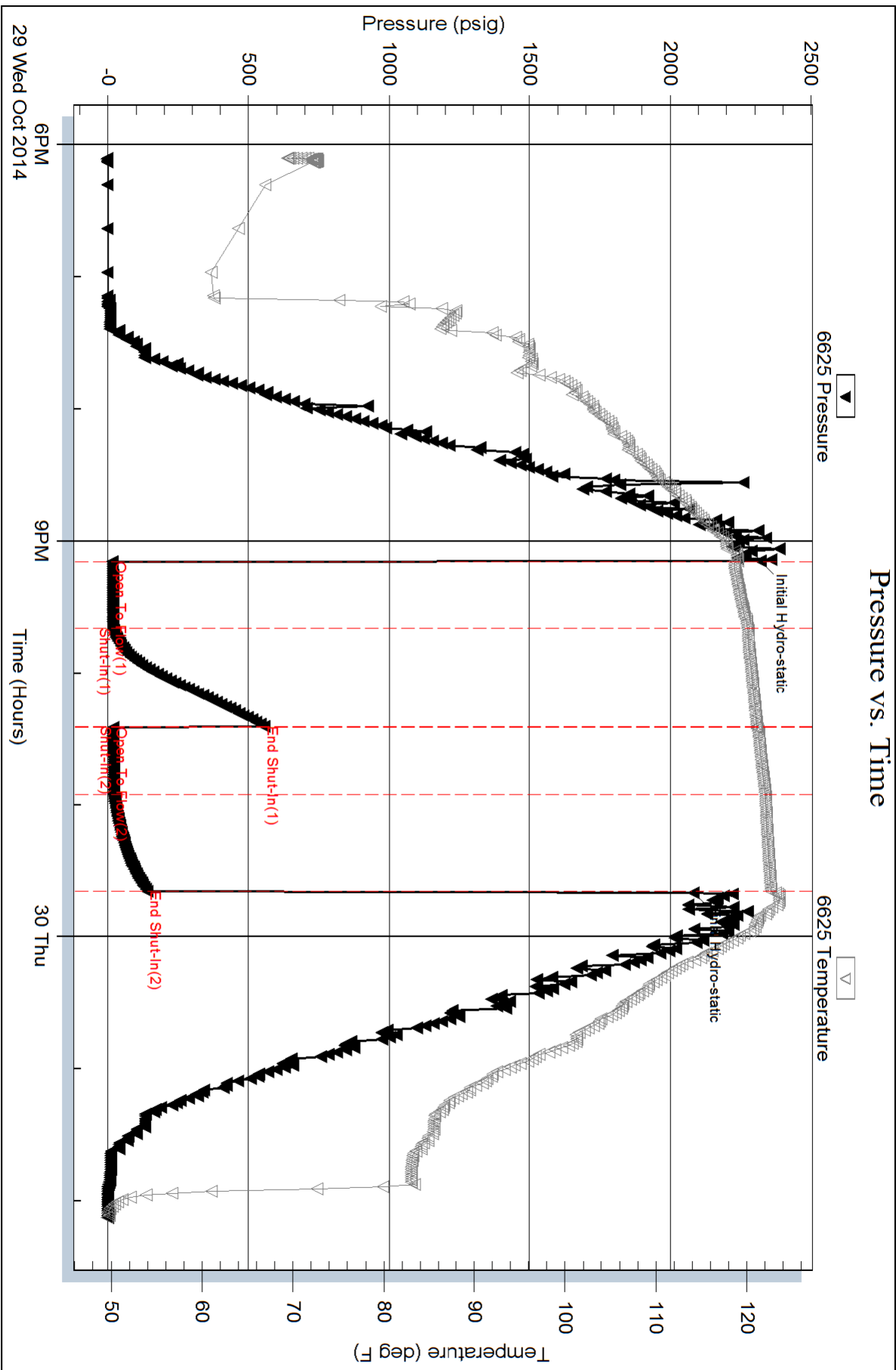
Num Gas Bombs: 0

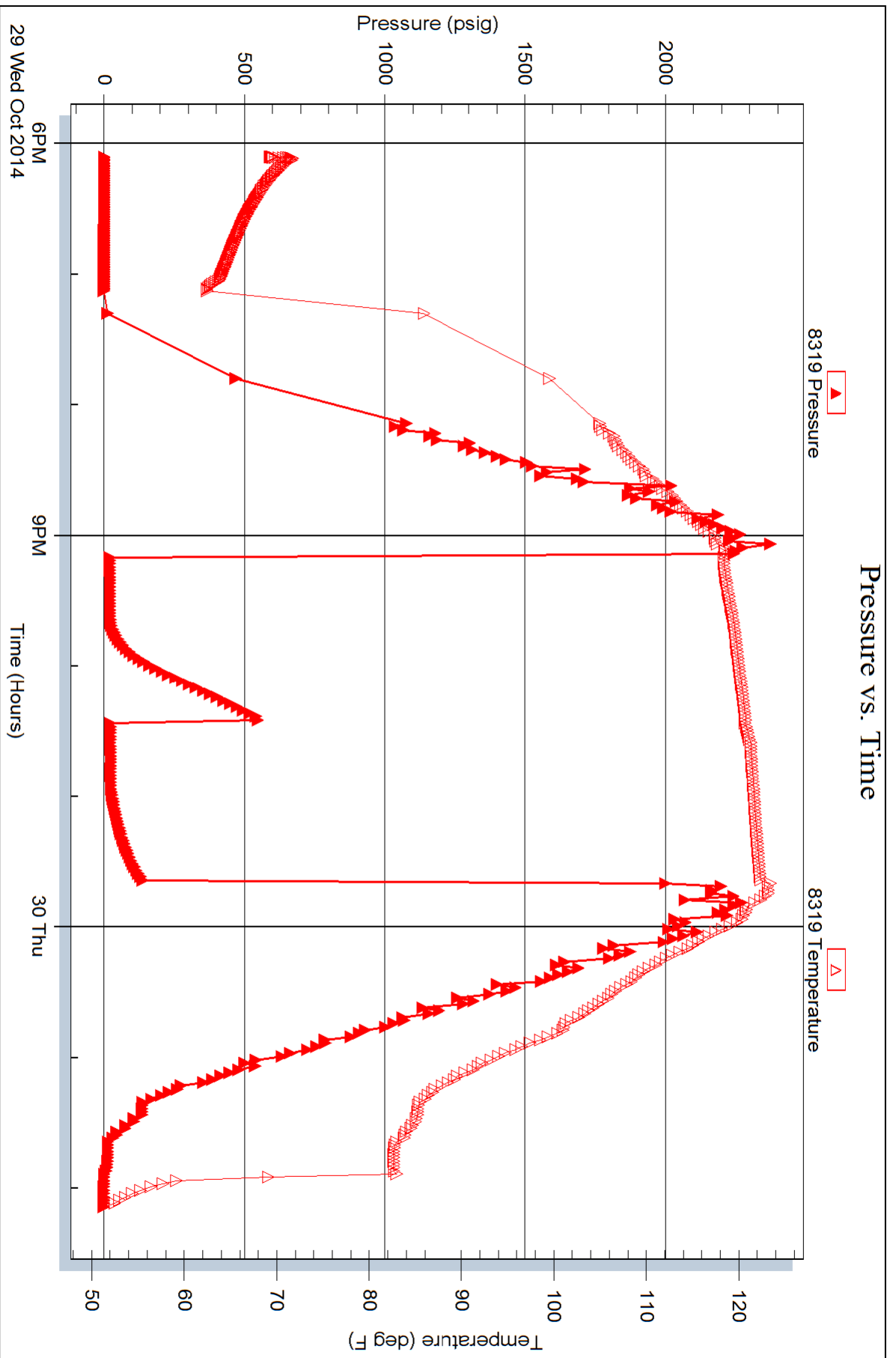
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 146631

Invoice Date: Oct 21, 2014

Page: 1

Voice: (817) 546-7282
Fax: (817) 246-3361

Federal Tax I.D.#: 20-8651475

Bill To:
Chaco Energy Company P O Box 1587 Denver, CO 80201

Customer ID	Field Ticket #	Payment Terms	
Chaco	64331	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Oct 21, 2014	11/20/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Scheetz #5-21		
135.00	CEMENT MATERIALS	Class A Common	17.90	2,416.50
254.00	CEMENT MATERIALS	Gel	1.05	266.70
381.00	CEMENT MATERIALS	Chloride	1.10	419.10
146.77	CEMENT SERVICE	Cubic Feet Charge	2.48	363.99
99.93	CEMENT SERVICE	Ton Mileage Charge	2.75	274.81
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
15.00	CEMENT SERVICE	Pump Truck Mileage	7.70	115.50
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
15.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	66.00
1.00	EQUIPMENT SALES	8-5/8 Wooden Plug	110.00	110.00
1.00	CEMENT SUPERVISOR	LaRene Wentz		
1.00	EQUIPMENT OPERATOR	Wayne McGhghy		

REVISED

Alan Peterson
NOV 14 2014

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$ 1,745.96

ONLY IF PAID ON OR BEFORE

Nov 20, 2014

Subtotal	5,819.85
Sales Tax	245.74
Total Invoice Amount	6,065.59
Payment/Credit Applied	
TOTAL	6,065.59

\$ 4319.63

SCANNED

ALLIED OIL & GAS SERVICES, LLC 064331

Federal Tax I.D. # 20-3651475

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

SERVICE POINT:
Oakley, KS

DATE <u>10-21-14</u>	SEC. <u>21</u>	TWP. <u>13</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION <u>2:00am</u>	JOB START <u>3:30am</u>	JOB FINISH <u>4:00am</u>
LEASE <u>Scheefe</u>	WELL # <u>5-21</u>	LOCATION <u>Oakley 135, 1W, 1S,</u>	COUNTY <u>Logan</u>	STATE <u>Ks</u>			
OLD OR NEW (Circle one)			<u>1 1/4 West 5 into</u>				

CONTRACTOR <u>H2 Rig</u>	OWNER <u>same.</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>225'</u>
CASING SIZE <u>8 7/8</u>	DEPTH <u>221.63</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <u>15'</u>	
PERFS.	
DISPLACEMENT <u>13.22</u>	

CEMENT	
AMOUNT ORDERED <u>135 sfs cement 37% cc</u>	
<u>290 gal</u>	
COMMON <u>135 sfs</u>	@ <u>12.90</u> <u>2416.50</u>
POZMIX	@
GEL <u>254#</u>	@ <u>1.00</u> <u>266.96</u>
CHLORIDE <u>381#</u>	@ <u>1.10</u> <u>419.10</u>
ASC	@

EQUIPMENT	
PUMP TRUCK # <u>422</u>	CEMENTER <u>Lakae Swente</u>
BULK TRUCK # <u>870/241</u>	HELPER <u>Wayne McHughy</u>
BULK TRUCK #	DRIVER <u>Oskar Mascorro (TW)</u>
BULK TRUCK #	DRIVER

Material Total	@	<u>3102.30</u>
<u>(520.46/20%)</u>	@	
HANDLING <u>146.77 sfs</u>	@ <u>2.98</u>	<u>363.99</u>
MILEAGE <u>6.46 x 15x</u>	@ <u>2.95</u>	<u>274.82</u>
		TOTAL

REMARKS:
Mix 20 135 sfs cement
Displace with water
Cement did circulate.
To cellar only

Thank you

SERVICE		
DEPTH OF JOB <u>221.63'</u>		
PUMP TRUCK CHARGE		<u>1512.25</u>
EXTRA FOOTAGE	@	
MILEAGE <u>MEAD</u>	@ <u>2.90</u>	<u>113.50</u>
MANIFOLD <u>Head</u>	@	<u>275.00</u>
<u>MILD</u>	@ <u>4.40</u>	<u>66.00</u>
		TOTAL

CHARGE TO: Chaco Energy

STREET _____

CITY _____ STATE _____ ZIP _____

(501.51/20%) TOTAL 2,607.56

PLUG & FLOAT EQUIPMENT		
<u>Wooden plug</u>	@	<u>110.00</u>
	@	
	@	
	@	
	@	
		TOTAL <u>110.00</u>

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 5,819.86

DISCOUNT 1141.97 (20%) IF PAID IN 30 DAYS

4,677.88 Net

PRINTED NAME Randy Smith

SIGNATURE [Signature]

30% Discount - \$1745.96
Net Invoice total - \$4073.90



NOV 06 2014

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 146631
Invoice Date: Oct 21, 2014
Page: 1

Voice: (817) 546-7282
Fax: (817) 246-3361

Federal Tax I.D.#: 20-8651475

Bill To:
Chaco Energy Company P O Box 1587 Denver, CO 80201

Customer ID	Field Ticket #	Payment Terms	
Chaco	64331	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Oct 21, 2014	11/20/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Scheetz #5-21		
135.00	CEMENT MATERIALS	Class A Common	17.90	2,416.50
254.00	CEMENT MATERIALS	Gel	1.05	266.70
381.00	CEMENT MATERIALS	Chloride	1.10	419.10
146.77	CEMENT SERVICE	Cubic Feet Charge	2.48	363.99
99.93	CEMENT SERVICE	Ton Mileage Charge	2.75	274.81
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
15.00	CEMENT SERVICE	Pump Truck Mileage	7.70	115.50
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
15.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	66.00
1.00	EQUIPMENT SALES	8-5/8 Wooden Plug	110.00	110.00
1.00	CEMENT SUPERVISOR	LaRene Wentz		
1.00	EQUIPMENT OPERATOR	Wayne McGhghy		

? OFFICE
HARRY TO HANDLE
NOV 13 2014

30h BID

Subtotal	5,819.85
Sales Tax	245.74
Total Invoice Amount	6,065.59
Payment/Credit Applied	
TOTAL	6,065.59

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$ ~~1,141.97~~

ONLY IF PAID ON OR BEFORE
Nov 20, 2014

ALLIED OIL & GAS SERVICES, LLC 064331

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:
Oakley, KS

DATE <u>10-21-14</u>	SEC. <u>21</u>	TWP. <u>13</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION <u>7:00am</u>	JOB START <u>3:30pm</u>	JOB FINISH <u>4:20pm</u>
LEASE <u>Scheefe</u>	WELL# <u>5-21</u>	LOCATION <u>Oakley 135, 1W19,</u>		COUNTY <u>Logan</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one) <u>NEW</u>		<u>1 1/2 West Sinto</u>					

CONTRACTOR H₂ Rig
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 225'
 CASING SIZE 8 7/8 DEPTH 221.63
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT 13.22

OWNER same.
 CEMENT AMOUNT ORDERED 135 sfs Core 3% CC
29 gal
 COMMON 135 sfs @ 17.90 2416.50
 POZMIX @
 GEL 254# @ 1.25 317.50
 CHLORIDE 381# @ 1.10 419.10
 ASC @

EQUIPMENT
 PUMP TRUCK # 422 CEMENTER Labar Swente
 HELPER Wayne McHugh
 BULK TRUCK # 890/241 DRIVER Oskar Mascoma (TW)
 BULK TRUCK # DRIVER

Material Total @ 3162.80
(520.46/20%)
 HANDLING 146.77 @ 2.48 363.99
 MILEAGE 6.66 x 15 @ 2.95 274.82

REMARKS:
Mix 20 135 sfs cement
Dis place with water
Cement did circulate
To cellar only
Thank you

TOTAL

CHARGE TO: Chaco Energy
 STREET
 CITY STATE ZIP

SERVICE
 DEPTH OF JOB 221.63'
 PUMP TRUCK CHARGE 1512.25
 EXTRA FOOTAGE @
 MILEAGE MEHU @ 2.90 115.50
 MANIFOLD Head @ 275.00
MELU @ 4.40 66.00
(591.51/20%) TOTAL 2,607.56

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.

PLUG & FLOAT EQUIPMENT
Wooden plug @ 110.00
 TOTAL 110.00

PRINTED NAME Randy Smith
 SIGNATURE Randy Smith

SALES TAX (If Any)
 TOTAL CHARGES 5,819.86
 DISCOUNT 1141.97 (20%) IF PAID IN 30 DAYS
4,677.88 Net

1163.97

ALLIED

L & GAS SERVICES, LLC

NOV 13 2014

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 146750
Invoice Date: Oct 31, 2014
Page: 1

Voice: (817) 546-7282
Fax: (817) 246-3361

Federal Tax I.D.#: 20-8651475

Bill To:
Chaco Energy Company P O Box 1587 Denver, CO 80201

Customer ID	Field Ticket #	Payment Terms	
Chaco	64340	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Oakley	Oct 31, 2014	11/30/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Scheetz #5-21		
603.00	CEMENT MATERIALS	Class A Common	17.90	10,793.70
67.00	CEMENT MATERIALS	Pozmix	9.35	626.45
3,691.00	CEMENT MATERIALS	Gel	0.50	1,845.50
1,144.00	CEMENT MATERIALS	Salt	0.68	777.92
113.00	CEMENT MATERIALS	Flo Seal	2.97	335.61
12.00	CEMENT MATERIALS	Super Flush	25.00	300.00
2.00	CEMENT MATERIALS	Cla Pro	34.40	68.80
755.12	CEMENT SERVICE	Cubic Feet Charge	2.48	1,872.70
499.50	CEMENT SERVICE	Ton Mileage Charge	2.75	1,373.63
1.00	CEMENT SERVICE	Production -- Bottom Stage	2,765.75	2,765.75
1.00	CEMENT SERVICE	Production -- Top Stage	2,406.25	2,406.25
15.00	CEMENT SERVICE	Pump Truck Mileage	7.70	115.50
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
15.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	66.00
1.00	EQUIPMENT SALES	4-1/2 D V Tool	4,832.00	4,832.00
1.00	EQUIPMENT SALES	4-1/2 AFU Float Shoe	425.00	425.00
1.00	EQUIPMENT SALES	4-1/2 Latch Down Plug	655.00	655.00
9.00	EQUIPMENT SALES	4-1/2 Centralizer	57.00	513.00
3.00	EQUIPMENT SALES	4-1/2 Basket	315.00	945.00
1.00	CEMENT SUPERVISOR	LaRene Wentz		

Subtotal	Continued
Sales Tax	Continued
Total Invoice Amount	Continued
Payment/Credit Applied	
TOTAL	Continued

ALL PRICES ARE NET, PAYABLE
30 DAYS FOLLOWING DATE OF
INVOICE. 1 1/2% CHARGED
THEREAFTER. IF ACCOUNT IS
CURRENT, TAKE DISCOUNT OF

\$ 9,297.84

ONLY IF PAID ON OR BEFORE
Nov 30, 2014



PO Box 93999
Southlake, TX 76092

Voice: (817) 546-7282
Fax: (817) 246-3361

INVOICE

Invoice Number: 146750
Invoice Date: Oct 31, 2014
Page: 2

Federal Tax I.D.#: 20-8651475

Bill To:
Chaco Energy Company P O Box 1587 Denver, CO 80201

Customer ID	Field Ticket #	Payment Terms	
Chaco	64340	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Oakley	Oct 31, 2014	11/30/14

Quantity	Item	Description	Unit Price	Amount
1.00	EQUIPMENT OPERATOR	Wayne McGhghy		
1.00	OPERATOR ASSISTANT	Shawn Tatro		

Alan Erickson
NOV 18 2014

SCANNED

~~22877~~ 21694.97
.0546
0545

Subtotal	21694.96	30,992.61
Sales Tax	+ 1184.42	1,692.03
Total Invoice Amount	<u>22879.38</u>	32,684.84
Payment/Credit Applied		
TOTAL		32,684.84

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$ 9,297.84 ^{28.4%}

ONLY IF PAID ON OR BEFORE
Nov 30, 2014

32654.84
- 9297.84
23357
23091.79
22879.38

ALLIED OIL & GAS SERVICES, LLC 064340

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Dakley, TX
11520 W 12100N

DATE <u>10-31-14</u>	SEC. <u>21</u>	TWP. <u>13</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION <u>2:30pm</u>	JOB START <u>12:00p</u>	JOB FINISH <u>1:00pm</u>
LEASE <u>Schoetz</u>	WELL# <u>S-21</u>	LOCATION <u>Dakley, 139, 14, 15,</u>			COUNTY <u>Hogan</u>	STATE <u>KS</u>	
OLD OR (NEW) (Circle one)			<u>1 1/4 W, 5 into</u>				

CONTRACTOR <u>H2 Rig 2</u>	OWNER <u>Same.</u>
TYPE OF JOB <u>Production 2 stage</u>	
HOLE SIZE <u>7 7/8</u>	T.D. <u>4760'</u>
CASING SIZE <u>4 1/2</u>	DEPTH <u>4754'</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL <u>DD</u>	DEPTH <u>2500'</u>
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT <u>25.0'</u>
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT <u>73.3661</u>	

EQUIPMENT	
PUMP TRUCK CEMENTER <u>Lohane Budant</u>	<u>Salt 1144# @ .68 777.92</u>
# <u>423/281</u> HELPER <u>Wayne McElroy</u>	<u>Flu-seal 113# @ 2.99 333.61</u>
BULK TRUCK	<u>Super Flush 12661 @ 25.00 300.00</u>
# <u>566/595</u> DRIVER <u>Juan Tamez (TJD)</u>	<u>Clay Pro (KCL) 2902 @ 24.90 68.80</u>
BULK TRUCK	<u>Material (KCL) @ 19.1479</u>
# <u>891/310</u> DRIVER <u>Shawn Tatro</u>	<u>(4424.39 / 30%) @</u>
	HANDLING <u>75312 SF @ 2.48 1872.90</u>
	MILEAGE <u>333 tan X 15 X 2.95 1393.63</u>
	TOTAL _____

REMARKS:
Pump ball through 400# Circ 1 hr.
Mix 2205 lbs cement, Displace
with water & mud.
Load plug 2000# float held open
Detach Circ 1 1/2 hrs Plug in HRH.
Mix 400 lbs cement, Displace with
water Load Plug 2000# float held
Cement Circ 1 hr 205 lbs pit
Thank you.

CHARGE TO: Chaco Energy
STREET _____
CITY _____ STATE _____ ZIP _____

SERVICE	
DEPTH OF JOB	<u>25</u>
PUMP TRUCK CHARGE	<u>2763.63</u>
EXTRA FOOTAGE	<u>2466.25</u>
MILEAGE (MTH)	<u>15 @ 7.70 115.50</u>
MANIFOLD head	<u>@ 273.00</u>
MTH	<u>15 @ 4.40 66.00</u>
	TOTAL <u>8871.83</u>

PLUG & FLOAT EQUIPMENT	
<u>4 1/2" Weatherford</u>	
<u>DU Tool</u>	<u>@ 4832.00</u>
<u>AFU Float Shoe</u>	<u>@ 423.00</u>
<u>Katchelosa Plug</u>	<u>@ 653.00</u>
<u>9 (7) Centralizer</u>	<u>@ 57.00 513.00</u>
<u>(3) Baskets</u>	<u>@ 315.00 945.00</u>
	TOTAL <u>7,370.00</u>

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 AVEN WEAVER
SIGNATURE [Signature]

SALES TAX (If Any) _____
TOTAL CHARGES 30,992.81
DISCOUNT 9,291.84 / 30% IF PAID IN 30 DAYS
BTD 21,694.96 Net

MBC WELL LOGGING LLC

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

Well Name: SCHEETZ 5-21 CHACO ENERGY CO.
 Location: LOGAN COUNTY, KANSAS USA
 Licence Number: 31217
 Spud Date: 10-20-14
 Surface Coordinates: 335'fnl, 335'fwl SEC 21-T13S-R32W
 Bottom Hole Coordinates: HLS-DIL/SP/GR CNL/CAL/PE/BHV SONIC SFC
 Ground Elevation (ft): 3011' K.B. Elevation (ft): 3023'
 Logged Interval (ft): 3700 To: 4760 Total Depth (ft):
 Formation: ST LOUIS
 Type of Drilling Fluid: MUDCO DRILLING FLUIDS

Region: WILDCAT
 Drilling Completed: 10-30-2014

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






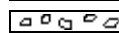




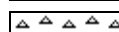
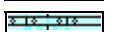

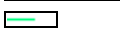
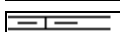
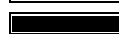



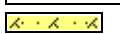

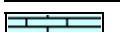




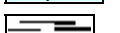

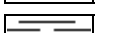

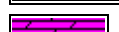


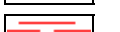

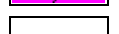



OPERATOR

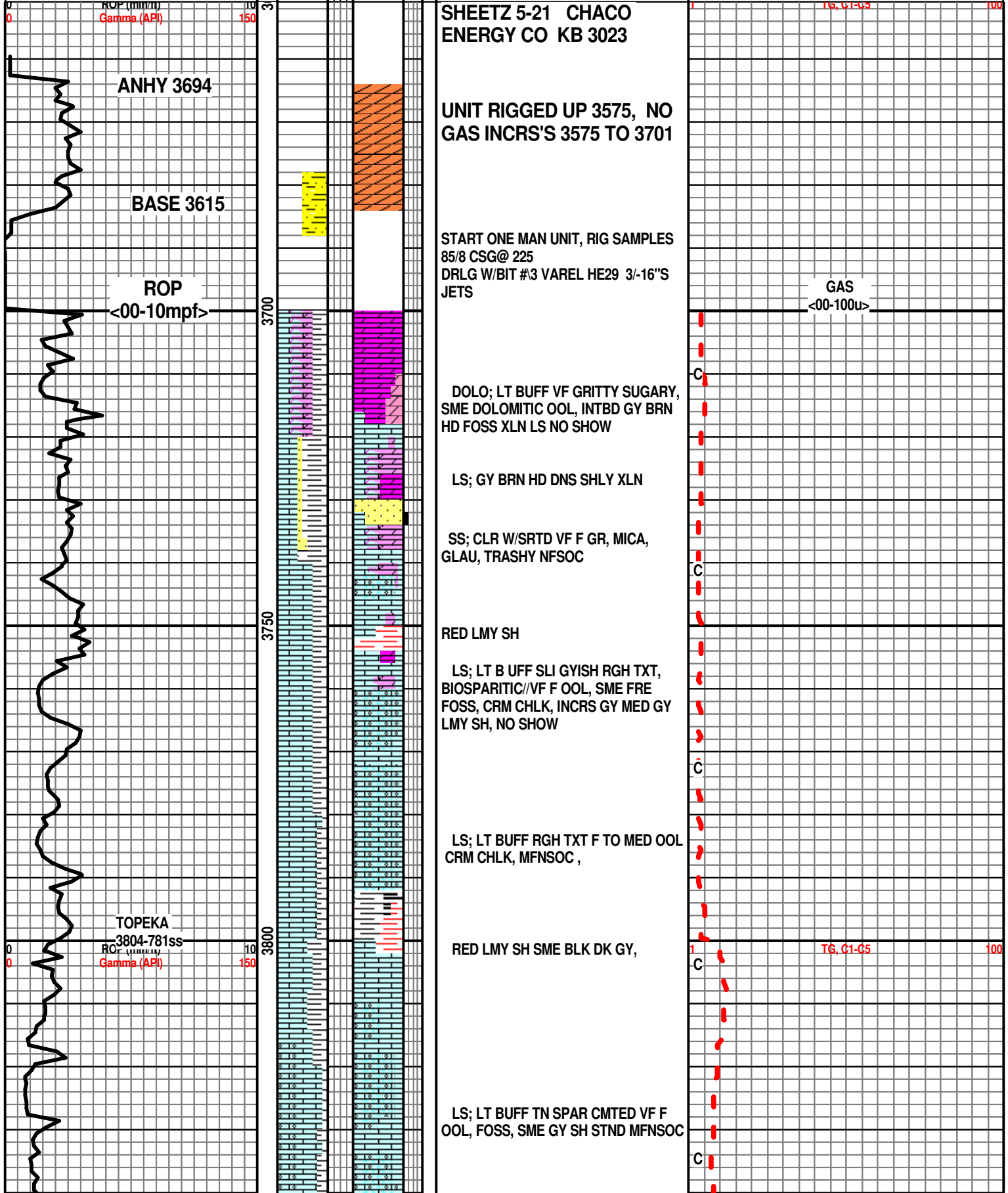
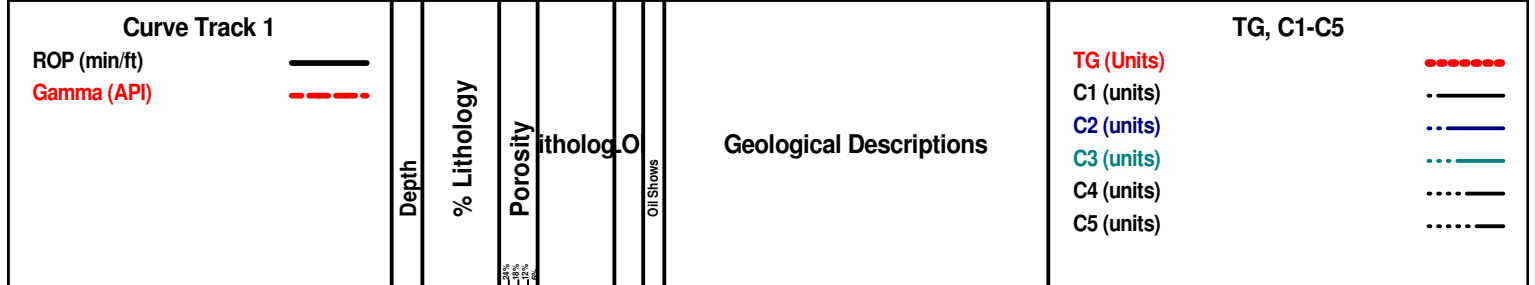
Company: CHACO ENERGY CO
 Address: CHRIS GOUGH % GEOLOGY
 1615 CALIFORNIA ST STE 409
 DENVER, COLORADO 80202

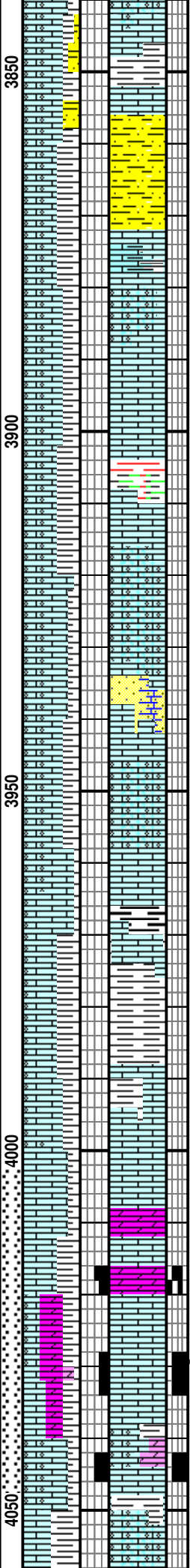
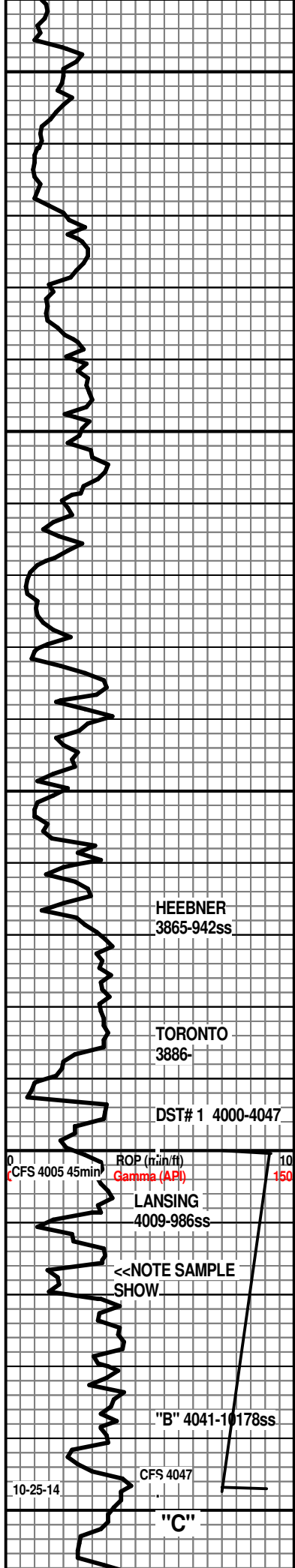
MUDLOGGER

Name: AUSTIN GARNER
 Company: MBC WELL LOGGING LLC
 Address: 21156 RD 22
 MEADE, KANSAS 67864

ROCK TYPES

	Anhy		Newdolo ls		Gyp		Arkosic snd		Sndy ool ls
	Brec		Ls & ooids		Sltst		Ss		Sndy-ls-1
	Cht		Oolitic ls -1		Salt		Grn sh strk		Calc shale
	Coal		Stgensndy-		Sndy sh--reg		Lmy sh-2		Granitewash
	Congl		New ls-1		Sndy sh		Grn mott gy		Ls shly-b
	Dolo new		Carby shale		Sltst-1		Shale-1		Poor sortd ss
	New dolomite		Lmy carby		Sltly-shale		Red sh-1		Snd-ls-sh
	New symbol		Carb sh		Lmy ss-1		Stgensndy-arkos		





SH; DKS GY BLK, SME RGH SLTY

SLTST; LT GY GY, VF GR LMY SHLY
PYR COMNGLD TN FOSS XLN LS NO
SHOW

LS GYS TN HD XLN

LS; BUFF, TR YEL STND, RHG TXT
SPAR CMTD BIOSPARITIC//OOL,
MFNSOC

SH; RGH RED TO MOTT GY-GRN LMY

LS; BUFF TN SME POOR SORTED
BIOSP[ARITIC//P-SORTD OOL, PRED
RGH TXT OOL, SLI DOLOMITIC IP,
MFNSOC

LS; LT BUFF BRN RGH TXT, GRNY,
MICRO CARB PCES SME DK BRN CARB
PLANT PXCE, ABTD WH TO CRM CHLK,
MFNSOC

HEEBNER
3865-942ss

TORONTO
3886-

DST# 1 4000-4047

LANSING
4009-986ss

<<NOTE SAMPLE
SHOW

"B" 4041-10178ss

CFS 4047

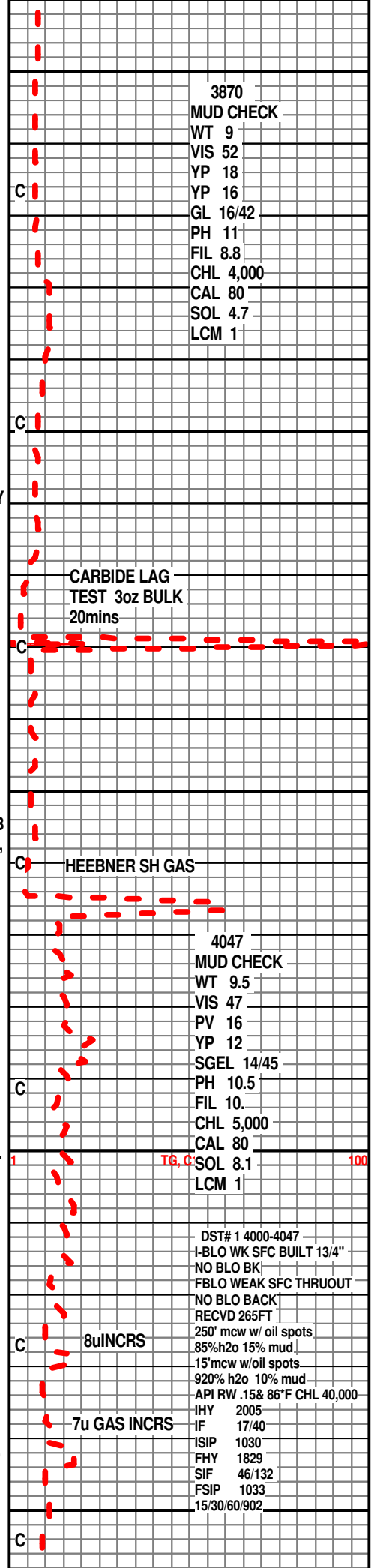
"C"

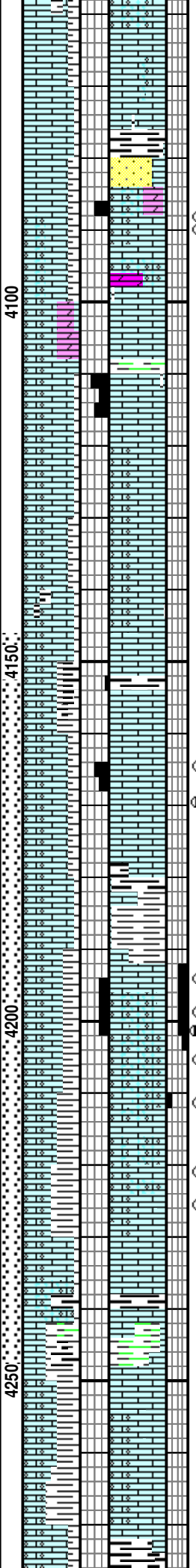
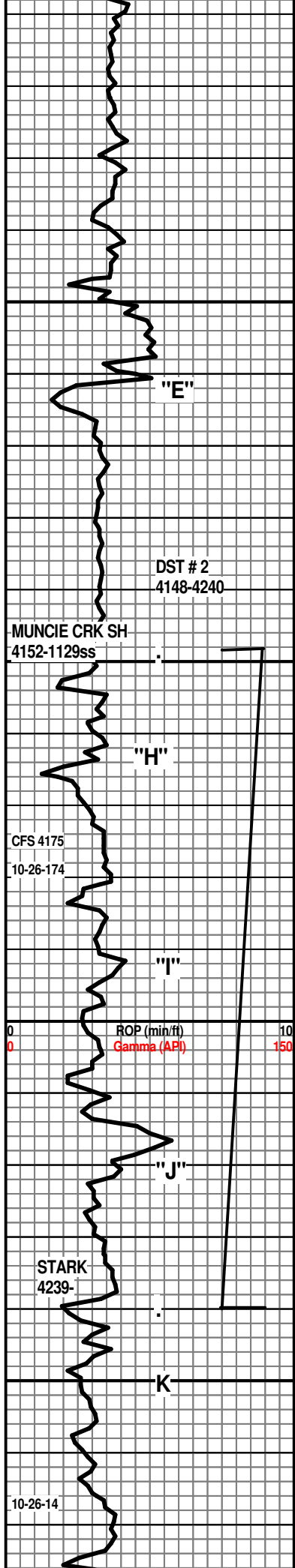
DOLO; TN SUGARY DK BRN MOTT STNG,
FLASH THIN STRM-MILKEY CUT5 PP VUG &
INTRXTL POR

LS; TN CRM F XLN W/FOSS, FRAC, MED GOLD
FLOR SME BRITE, BRN INTR PART & FRAC FILL
STNG, & FOSS, FLASH MILKEY STRM CUT
GOOD RESID CUT

LS; LT BUFF OOL & FLAKEY FRAC, DULL
LUSTRE, SME FOSS, SME MISHMASH, PP VUGS,
DK BRN STND IN FRAC LEACHED FOSS, DULL
WWEAK GOLD FLOR, NO ODOR, FLASH STRMG
MILKY HEAVY CUT

LS;S BUFF WH CHLKY GRNY VF-F
OOL CRM WH CHLK MFNSOC





LS; PALE TNNGY WH MED EDNS VF F OOL, SPARITIC TO DOLOMITIC MFNSOC

BLK SFT CARB SH

LS; TN WH RGH TXT P/SRTD BIOSPARITIC-P/SRTD OL, SME OOLMOLD, THIN RIM COAT, COMNGLD VIT OOLO CHT, SCATT INTR OOL & FOSS DK BRN STNG, NO ODOR, FLASH THIN SLO STRM/MILKEY

GY GRN FOSS SH

LS; V/LT BUFF/WH SLI GY BRTL CHLKY F OOL, PURPL; FLOR NSOC

LS; LT TN HD DNS OOL/FOSS XLN, FRAC NO SHOW

BLK BRITTLE CARB SH

TN XLN FOSS CRYP TO F XLN

TR (2) PCES BUFF GRITTY F-OOL, BRN INTR OOL STNG, MED YEL FLOR, FLASH STRM/MILKEY CUT

TR BLK CARB SH PRED BRN, GRN W/FOSS & PYR TR MAROON/BRN

LS; LT BUFF RGH TXT, BIOSPARITIC/POOR SRTD VF F-OOL, CRS IMBD CRIN & SPAR XTLS, SHARP ODOR, BRN INTR OOL & FOSS STNG, DK BRN, GAS BUBLS AFTER 30min, FREE DK BRN PP OIL, MED YEL-GOLD FLOR, FLASH HEAVY STRM.MILKEY CUT

LS; BUFF-WH GRITTY VF F OOL, & FOSS, PP BRN OIL, FREE DK BRN MED SPTS, FR ODOR,

LS; WH SLI GY LT BUFF, RGH TXT, SPARITIC, FOSS & OOL, TR PARTIAL STNG, PREDPP DK BRN INTR OOL & FOSS, SHARP ODOR,

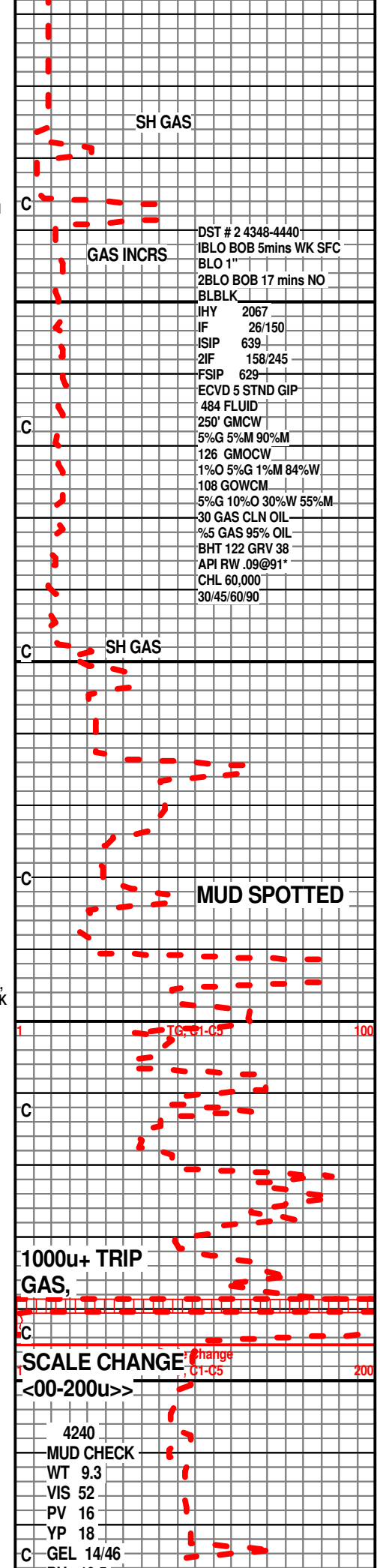
LS; GY TN HD FOSS F & MED-XLN, F-CALCITE EDGES IP,

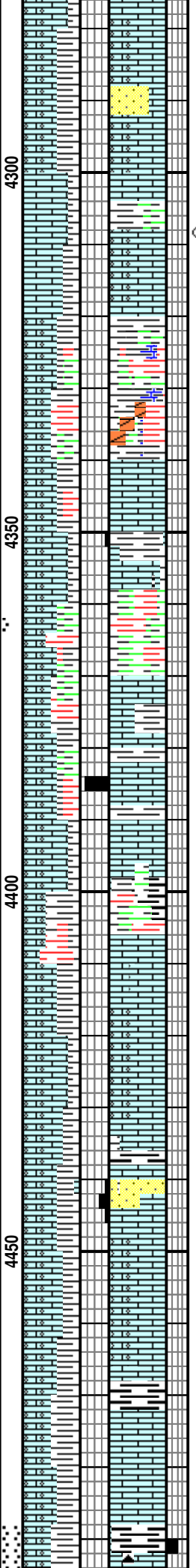
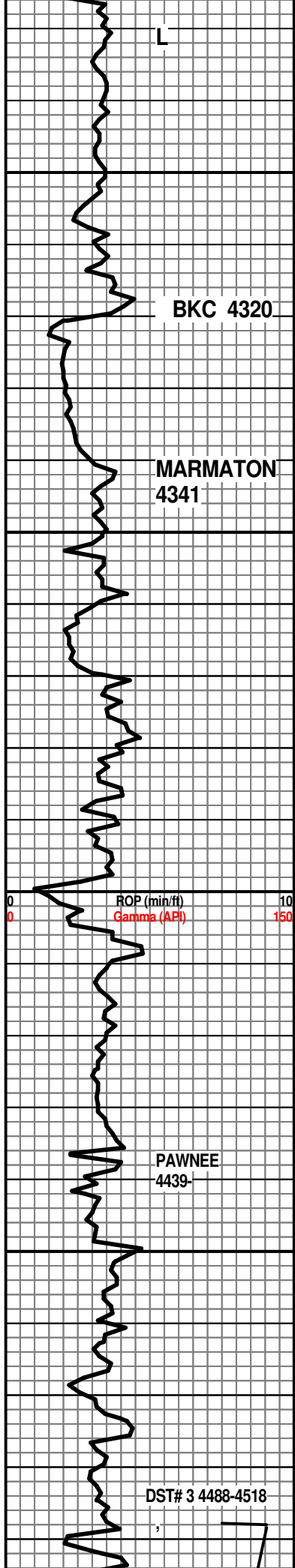
BLK CARB SH

GY GRN LMY SH

LS; LT TN TN CHLKY OOL W/FOSS, SME DUSTY GRITTY OOL, NO ODOR, SCATT BRITE YEL MIN FLOR NSOC

LS; TN HD DNS FOSS XLN SME OOL





SH; BLK CARB, BRN TO MAROON
FREE PYR

TR 1) SS OFF WH CLRN W/SRTD VF
GR CALC NO SHOW

LS; TN HD XLN LS

SH; DK GY TO GRN

LS; TN BUFF WHBIOSPARITIC//VF
FOOL, COMNGLD GRN SH, TN CHT, NO
ODOR, MED GOLD MIN FLOR NSOC

SH; MOTT GRN GY PURPL MOTT GRN
MAROON TR ANHY NOD

LS; GY TN HD DNS FRAC F-XLN,
W./SHADOW OOL, BRNPELL, TR VF F
OOL, NO ODOR, NFSOC

SH; GRN, GY MOTT GRN, RUST REDS
SFT GUMMY SME PHOS NOD

LS; GY TN BIOSPARITIC//VF OOL, TR
RED XLN NO SHOW

SH GRN GY MO9TT MAROON TR YEL

LS; TN LT TN SLI GYISH/WH,
SHADOW VF OOL, , DUSTY SLTY
AHADOW VF OOL, NO ODOR, DK
PURPL FLOR NSOC

SH; LT GRNISH GY REDISH YEL BRTL
NON CALC

LS; PALE TN P/SRTSD
BIOSPARITIC//P-SRTD OOL, NO ODOR,
PURPL FLOR NSOC

TR TN MISMASH FOSS & OOL TO F
-XLN, W/ BRN F-PELL PURPL FLOR
NSOC

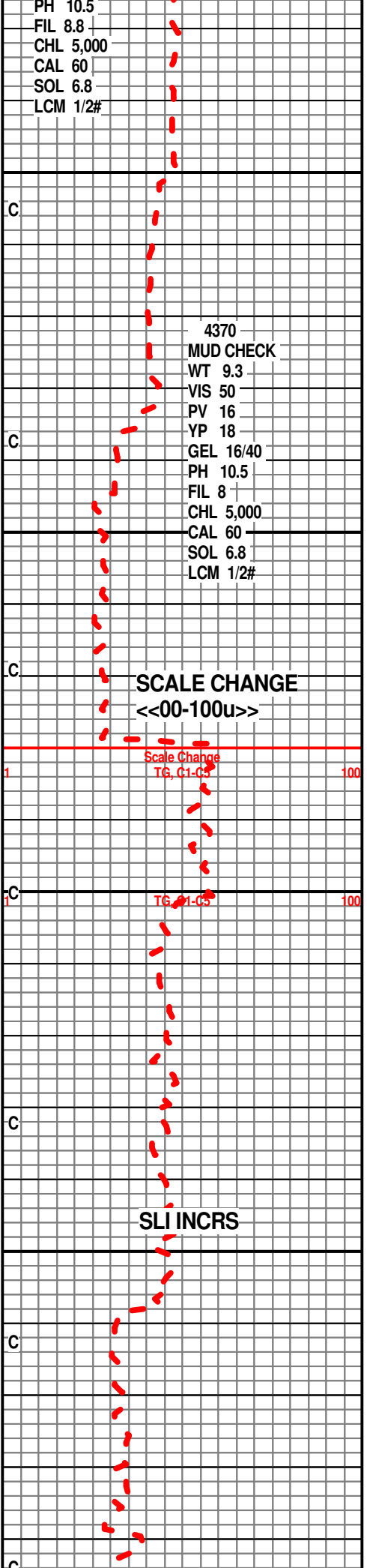
SSH; BNK DULL DK GY TR GY HD TT
SS

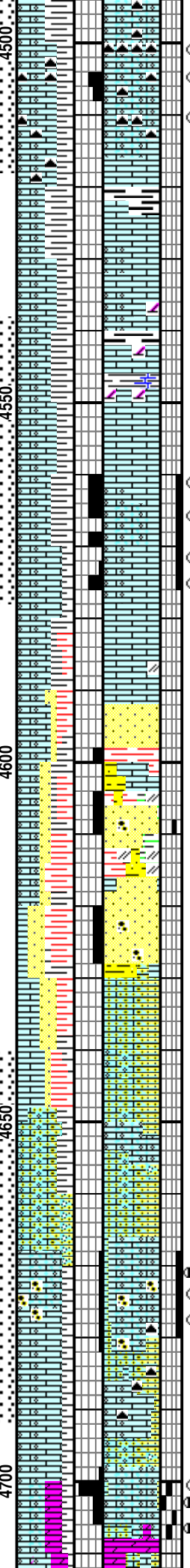
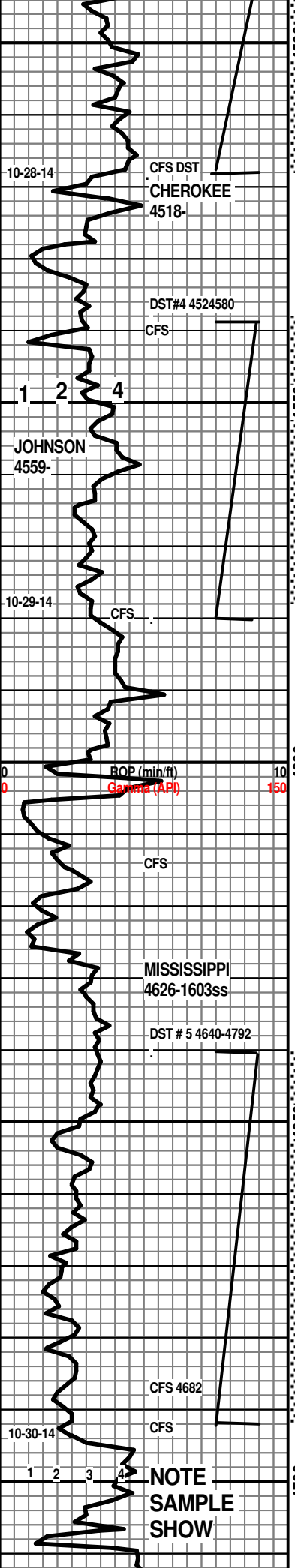
LS; CRM TN SPAR CMTED FOSS &
OOL, SME CHT, PYR PURPL FLOR
NSOC

SH; DK GY TO BLK CARB

LS; TN DK BRN HD DNS FOSS FRAC
XLN SME CHT NO SHOW

SH; BLK CARB





LS; BUFF BRNISH, DIRTY, SPAR
 CMTED VF F OOL, SME FOSS, ABDT
 OOL/CHRT, BRN OIL STNG INTR OOL,
 FAR ODOR, FLASH MILKEY STRM CUT
 TR FREE OIL

SH; BLK CARB

BLK CARB SH

LS; TN BRN DULL SPAR XCMTESD
 VF-F OOL,-FOSS, MISHMASH GOOD
 ODOR, DULLFAINT GOLD FLOR, FREE
 DK BRN MEDOILSPTS, FLASH MILKEY
 STRM CUT, INTR OOL SME VUG POR

SS; WH SME YEL STND SME SLI GRN,
 MED TT, SILIC CMT, VF-F GR, MICRO
 BLKMIN SPKS, SME GRN
 GLAUCONITIC, TR PYR, PROB
 FLUSHED, VERY CLEAN, NO FLOR NO
 ODOR, NSOC

SS; OPAQ CLR, VF F GR TO UPPR
 FINE, MED TT TR GLAU, TR PYR, NO
 ODOR, NFSOC
 VARI SH W/ANHY NODS

SS; CLR-OPAQ, SME W/SRTD VF F
 GR S-ANG SME P/SRTD FTOMED TR
 FREE PEBLY W/SECOND QTZ, NO
 ODOR, NFOR NSOC
 INCRS GRINSH TO YEL TINTED SNDY
 SH

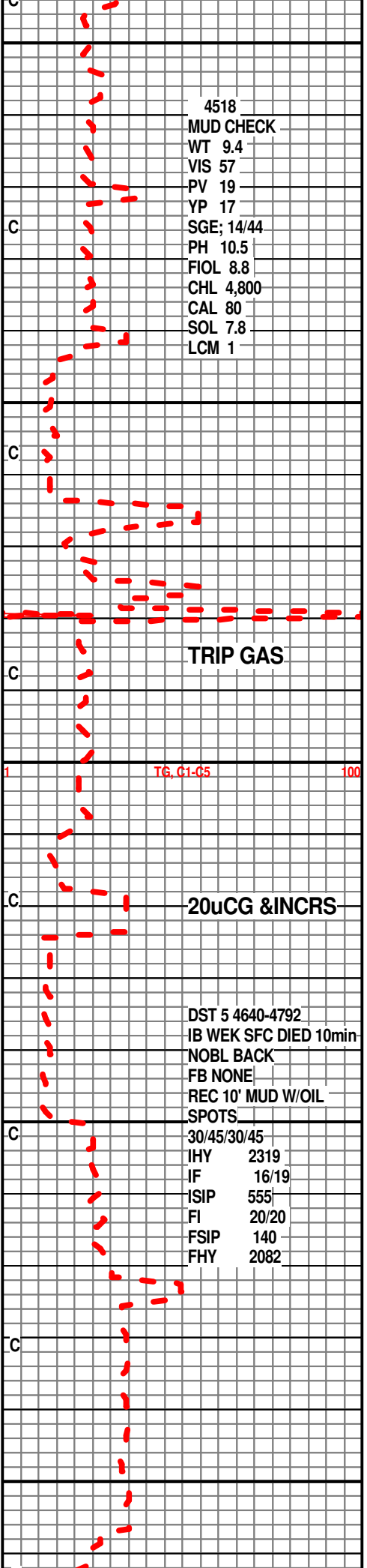
LS; GY TN HD DNS F XLNINCRS TO
 WHAREN CHLKY LS NO SHOW

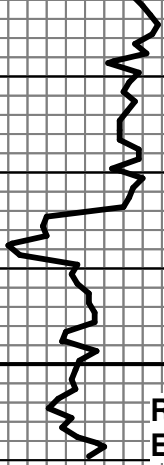
LS; CRM WH OOL CHLK, TO LTBUFF
 TN BIOSPARITIC/O/OL, FREE PBLY
 ANG FRAC SPAR XTLS, PURPL LFOR
 NSOC

LS; LT TN SPAR CMTED VF-F OOL,
 SME IMBD F-QTZ, SLI SOUR ODOR,
 FREE DK BRNOIL SPTS, MED GOLD
 FLOR, SME INTGR OOL & GR STNG,
 FLASH THIN MILKEY CUT

LS; LT TN GY VF-F OOL, & QTZ, NO
 SHOW

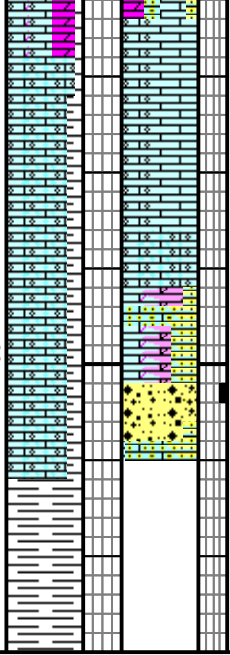
LS; TN SPAR CMTED F & MED OOL,,
 INTROOL DK BRN STNG, FREE DK BRN
 OIL SPTS, DULL GOLD FLOR FLASH
 YEL WH STRMMILKEY CUT, INTR OOL
 ROP





RTD 4760
E-LOG

4750



FOR

DOL; DK BRN VFSGUARY

MED TN HD DNS OOL XLN LS

LS; BUFF TN BRTL VF F OOL, VF
FOSS, SME OOL/FOSS--CHLKY,
PURPL FLOR NSOC

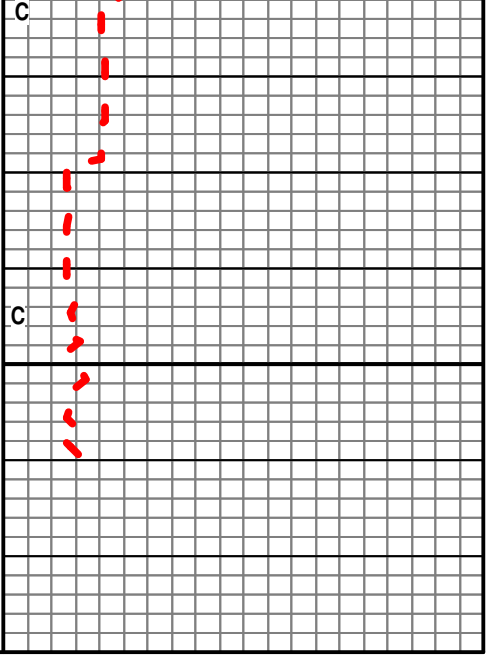
DOLO//LS DK TN HD XLN

SS; CRL MED GR, SILIC, W/ F ORNG
SPSOTS & FLAST ONRG CHTLENS,
TRCHOR, NO FLOR NSOC NO ODOR

THANKS FOR USING
MBC WELL LOGGING
ASUTIN & MARLA GARNER

C

C



Formation Tops and Other Depths of Interest

Scheetz #5-21
335' FNL & 335' FWL
Section 21-13S-32W
Logan Co., Kansas
Badger Field

<u>Zone/Accessory/Other</u>	<u>Depth (ft)</u>	<u>Subsea (ft)</u>
<i>Design TOC - 4 1/2" long string - stage 2</i>	0	3016
<i>Depth to bottom of fresh water</i>	150	2866
<i>Base of 12 1/4" hole (8 5/8" surface csg point)</i>	222	2794
<i>Depth to bottom of usable water</i>	1550	1466
Base Anhydrite	2492	524
Topeka	2492	524
Heebner	3964	-948
Lansing	4004	-988
Lansing J (top)	4164	-1148
Lansing J (bottom)	4168	-1152
Lansing I (top)	4196	-1180
Lansing I (bottom)	4202	-1186
Stark Shale	4234	-1218
Marmaton	4341	-1325
U Pawnee (top)	4434	-1418
U Pawnee (bottom)	4442	-1426
Ft Scott	4488	-1472
Cherokee	4514	-1498
Johnson	4558	-1542
Mississippian (t)	4694	-1678
Mississippian (b)	4698	-1682
<i>Base of 7 7/8" hole (4 1/2" prod. csg. point)</i>	4760	-1744

	KB (calc)	KB ht	GL (probable post-construction)
	3016	12	3004

01/08/2015
01:35 PM