



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1183229
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: _____

1183229

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
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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> _____	PRODUCTION INTERVAL: _____ _____
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DRILL STEM TEST REPORT

Prepared For: **TDI INC**

1310 Bison RD
Hays KS 67601

ATTN: Herb Dines

Alta #1

21-15s-18w Ellis,KS

Start Date: 2013.12.11 @ 00:38:07

End Date: 2013.12.11 @ 10:05:07

Job Ticket #: 039770 DST #: 1

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

Printed: 2013.12.13 @ 13:46:06

TDI INC
21-15s-18w Ellis,KS
Alta #1
DST # 1
LKC-H-I-J
2013.12.11



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TDI INC
 1310 Bison RD
 Hays KS 67601
 ATTN: Herb Dines

21-15s-18w Ellis,KS
Alta #1
 Job Ticket: 039770 **DST#: 1**
 Test Start: 2013.12.11 @ 00:38:07

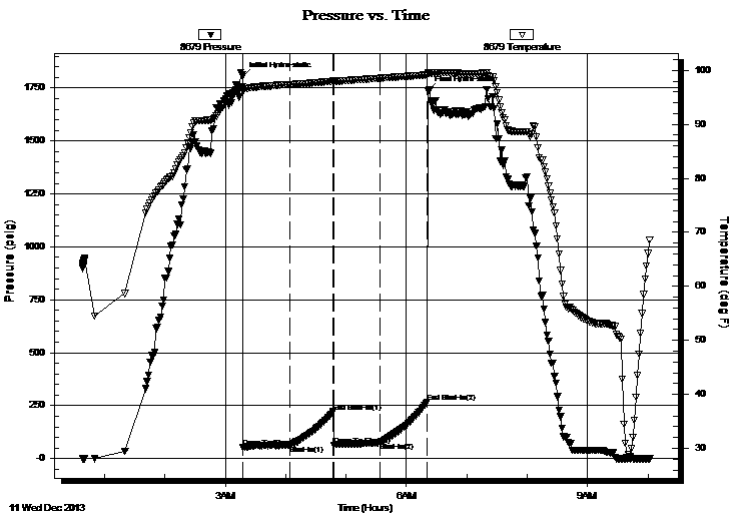
GENERAL INFORMATION:

Formation: **LKC-H-I-J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:17:37
 Time Test Ended: 10:05:07
 Interval: **3418.00 ft (KB) To 3500.00 ft (KB) (TVD)**
 Total Depth: 3700.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Straddle (Initial)
 Tester: Jeff Brown
 Unit No: 67
 Reference Elevations: 2021.00 ft (KB)
 2009.00 ft (CF)
 KB to GR/CF: 12.00 ft

Serial #: 8679 Outside
 Press@RunDepth: 76.78 psig @ 3486.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.11 End Date: 2013.12.11 Last Calib.: 2013.12.11
 Start Time: 00:38:08 End Time: 10:02:07 Time On Btm: 2013.12.11 @ 03:17:07
 Time Off Btm: 2013.12.11 @ 06:21:07

TEST COMMENT: IFP=Good blow BOB in 34-1/2 min
 IS=Dead no blow back
 FFP=Good blow BOB in 7 Min
 FS=Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1805.54	96.91	Initial Hydro-static
1	52.78	96.15	Open To Flow (1)
47	62.10	97.35	Shut-In(1)
90	220.66	97.98	End Shut-In(1)
91	63.83	97.92	Open To Flow (2)
137	76.78	98.53	Shut-In(2)
184	266.25	99.15	End Shut-In(2)
184	1737.71	99.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
36.00	Mud w ith a scum of oil	0.50
31.00	GOCM 25%G 15%O 60%M	0.43
0.00	1102=GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TDI INC
 1310 Bison RD
 Hays KS 67601
 ATTN: Herb Dines

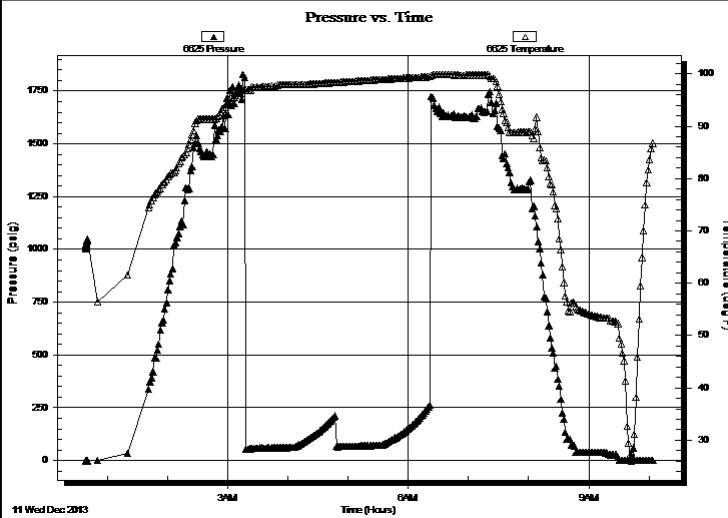
21-15s-18w Ellis,KS
Alta #1
 Job Ticket: 039770 **DST#: 1**
 Test Start: 2013.12.11 @ 00:38:07

GENERAL INFORMATION:

Formation: **LKC-H-I-J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:17:37
 Time Test Ended: 10:05:07
Interval: 3418.00 ft (KB) To 3500.00 ft (KB) (TVD)
 Total Depth: 3700.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Straddle (Initial)
 Tester: Jeff Brown
 Unit No: 67
 Reference Elevations: 2021.00 ft (KB)
 2009.00 ft (CF)
 KB to GR/CF: 12.00 ft

Serial #: 6625 Inside
 Press@RunDepth: psig @ 3486.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.11 End Date: 2013.12.11 Last Calib.: 2013.12.11
 Start Time: 00:38:33 End Time: 10:04:32 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP=Good blow BOB in 34-1/2 min
 IS=Dead no blow back
 FFP=Good blow BOB in 7 Min
 FS=Dead no blow back



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

Recovery		
Length (ft)	Description	Volume (bbl)
36.00	Mud w with a scum of oil	0.50
31.00	GOCM 25%G 15%O 60%M	0.43
0.00	1102=GIP	0.00

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI INC
1310 Bison RD
Hays KS 67601
ATTN: Herb Dines

21-15s-18w Ellis,KS
Alta #1
Job Ticket: 039770 **DST#: 1**
Test Start: 2013.12.11 @ 00:38:07

Tool Information

Drill Pipe:	Length: 3410.00 ft	Diameter: 3.80 inches	Volume: 47.83 bbl	Tool Weight:	2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	40000.00 lb
			<u>Total Volume: 47.83 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	30000.00 lb
Depth to Top Packer:	3418.00 ft			Final	32000.00 lb
Depth to Bottom Packer:	3500.00 ft				
Interval between Packers:	82.00 ft				
Tool Length:	302.00 ft				
Number of Packers:	3	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3399.00	
Shut In Tool	5.00			3404.00	
Hydraulic tool	5.00			3409.00	
Packer	4.00			3413.00	20.00 Bottom Of Top Packer
Packer	5.00			3418.00	
Stubb	1.00			3419.00	
Perforations	3.00			3422.00	
Change Over Sub	1.00			3423.00	
Drill Pipe	62.00			3485.00	
Change Over Sub	1.00			3486.00	
Recorder	0.00	6625	Inside	3486.00	
Recorder	0.00	8679	Outside	3486.00	
Perforations	10.00			3496.00	
Blank Off Sub	1.00			3497.00	
Stubb	3.00			3500.00	82.00 Tool Interval
Packer	1.00			3501.00	
Stubb	1.00			3502.00	
Perforations	2.00			3504.00	
Recorder	0.00	8166	Below	3504.00	
Change Over Sub	1.00			3505.00	
Drill Pipe	190.00			3695.00	
Change Over Sub	1.00			3696.00	
Bullnose	4.00			3700.00	200.00 Bottom Packers & Anchor
Total Tool Length:	302.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI INC

21-15s-18w Ellis,KS

1310 Bison RD
Hays KS 67601

Alta #1

Job Ticket: 039770

DST#: 1

ATTN: Herb Dines

Test Start: 2013.12.11 @ 00:38:07

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
36.00	Mud with a scum of oil	0.505
31.00	GOCM 25%G 15%O 60%M	0.435
0.00	1102=GIP	0.000

Total Length: 67.00 ft Total Volume: 0.940 bbl

Num Fluid Samples: 0

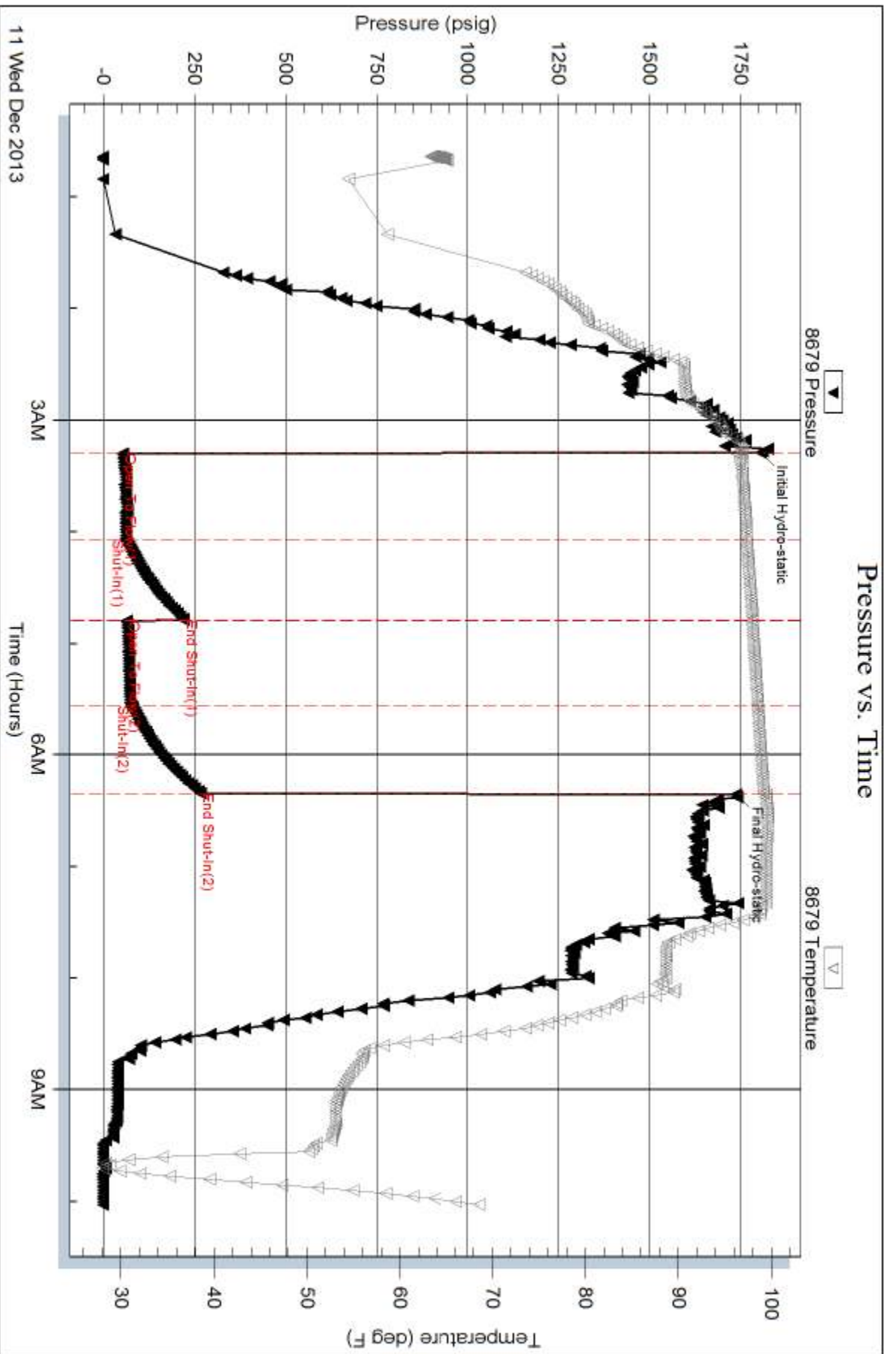
Num Gas Bombs: 0

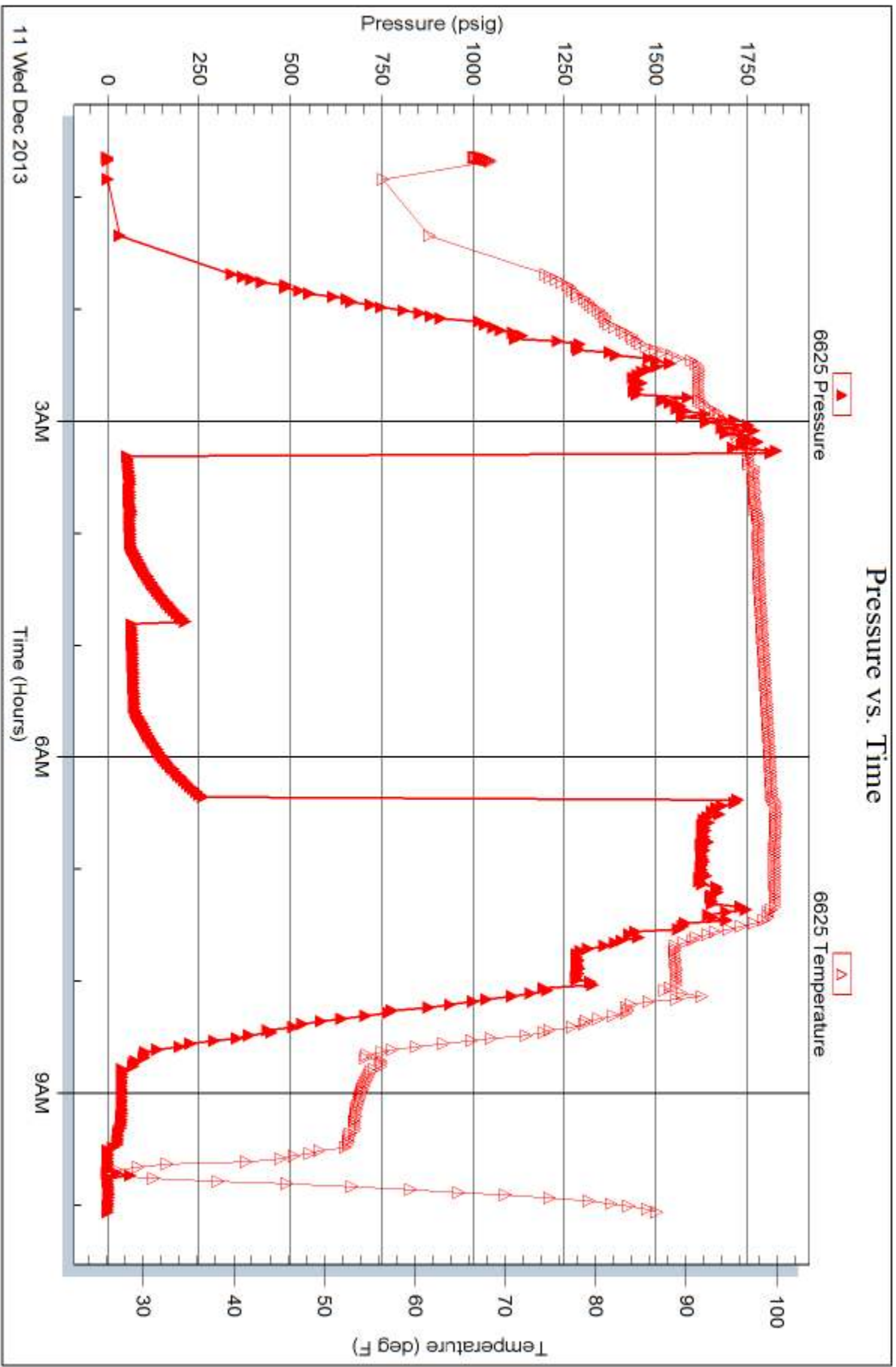
Serial #:

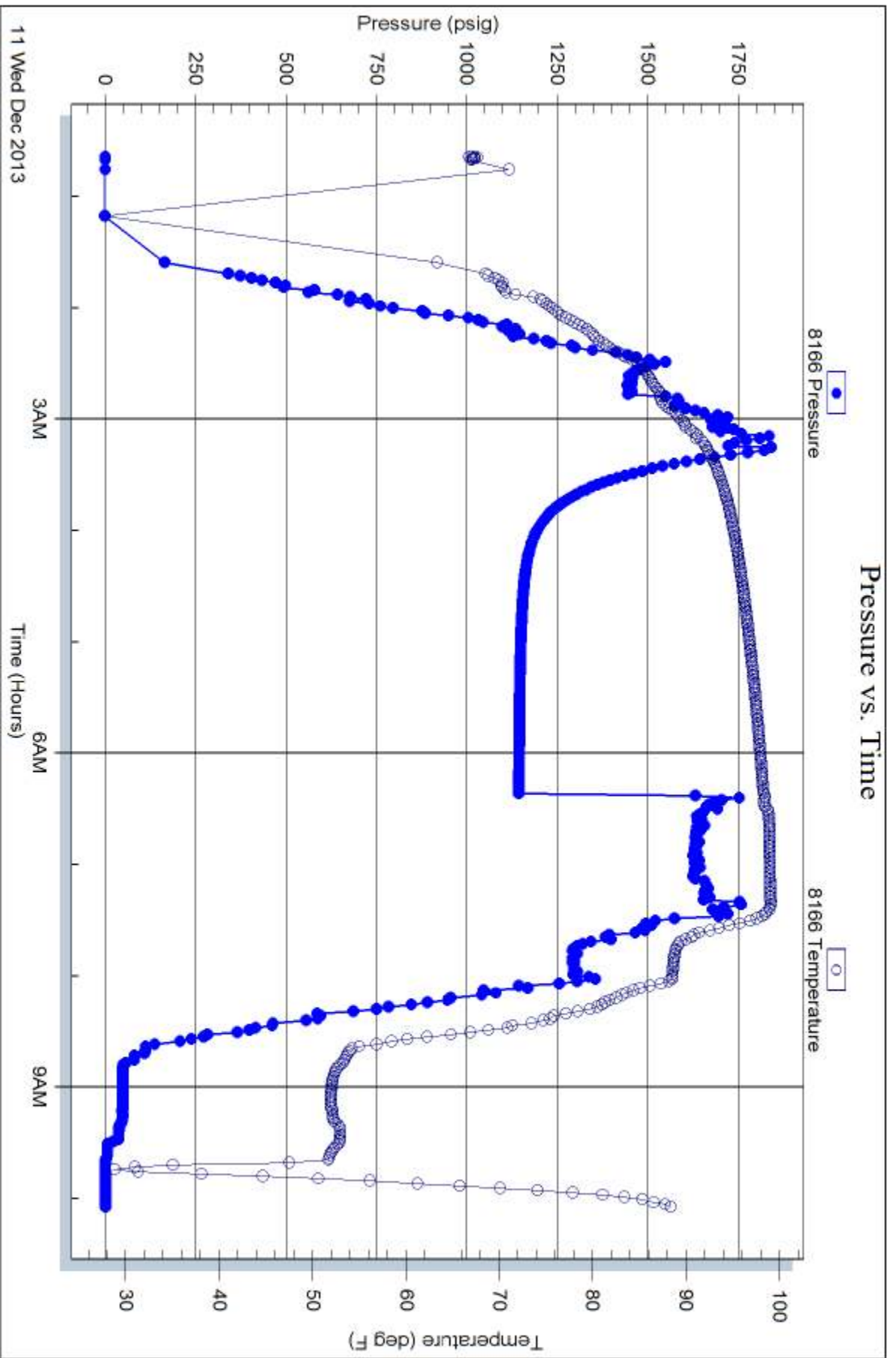
Laboratory Name:

Laboratory Location:

Recovery Comments:









TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 039770

4/10

Well Name & No. Alta #1 Test No. 1 Date 12-10-13
 Company TDI INC Elevation 2021 KB 2009 GL
 Address 1310 BISON RD Hays KS 67601 + 9696
 Co. Rep / Geo. _____ Rig SOUTH WIND #1
 Location: Sec. 21 Twp. 15 S Rge. 18 W Co. ELLIS State KS

Interval Tested 3418 - 3500 Zone Tested LKC - H-I-F
 Anchor Length 82 Anchor 200' Tq.L Drill Pipe Run 3410 Mud Wt. 9.0
 Top Packer Depth 3413 Drill Collars Run 0 Vis 53
 Bottom Packer Depth 3418 Wt. Pipe Run 0 WL 7.6
 Total Depth 3700 Chlorides 5900 ppm System LCM 2
 Blow Description AP - Good Blow BOB IN 34 1/2 min
BI - Dead NO Blow Back
AP - Good BOB IN 7 min
BI - Dead NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>36</u>	<u>Mud with a scum of oil</u>				
<u>31</u>	<u>60cm</u>	<u>25</u>	<u>15</u>		<u>60</u>
	<u>1102 - GIP</u>				

Rec Total 607 BHT 99 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1806 Test 1150 T-On Location 23:50
 (B) First Initial Flow 53 Jars _____ T-Started 00:38
 (C) First Final Flow 62 Safety Joint _____ T-Open 3:19
 (D) Initial Shut-In 221 Circ Sub _____ T-Pulled 6:19
 (E) Second Initial Flow 64 Hourly Standby _____ T-Out 10:05
 (F) Second Final Flow 77 Mileage 26 RT 40.30 Comments _____
 (G) Final Shut-In 246 Sampler _____
 (H) Final Hydrostatic 1738 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1790.30
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1790.30

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45

Approved By _____ Our Representative Jeff Brown

TriLOBITE Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

OPERATOR

Company: TDI, INC.
 Address: 1310 BISON ROAD
 HAYS, KANSAS 67601

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-628-2593
 Well Name: ALTA # 1
 Location: SE NW SW NW, Sec.21-15s-18w
 Pool: API: 15-051-26,640-00-00
 State: KANSAS Field: SCHOENCHEN WEST
 Country: USA



Scale 1:240 Imperial

Well Name: ALTA # 1
 Surface Location: SE NW SW NW, Sec.21-15s-18w
 Bottom Location:
 API: 15-051-26,640-00-00
 License Number: 4787
 Spud Date: 12/4/2013 Time: 11:00 PM
 Region: ELLIS COUNTY
 Drilling Completed: 12/10/2013 Time: 9:18 AM
 Surface Coordinates: 1820' FNL & 420' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2011.00ft
 K.B. Elevation: 2021.00ft
 Logged Interval: 2900.00ft To: 3700.00ft
 Total Depth: 3700.00ft
 Formation: CONGLOMERATE SAND
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.3365124 Latitude: 38.7354881
 N/S Co-ord: 1820' FNL
 E/W Co-ord: 420' FWL

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
 Address: 108 W 35TH
 HAYS, KS 67601
 Phone Nbr: (785) 639-1337
 Logged By: GEOLOGIST Name: HERB DEINES

CONTRACTOR

Contractor: SOUTHWIND DRILLING INC.
 Rig #: 1
 Rig Type: MUD ROTARY
 Spud Date: 12/4/2013 Time: 11:00 PM
 TD Date: 12/10/2013 Time: 9:18 AM
 Rig Release: 12/11/2013 Time: 8:45 PM

ELEVATIONS

K.B. Elevation: 2021.00ft Ground Elevation: 2011.00ft
 K.B. to Ground: 10.00ft

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON LOW STRUCTURE TO OFFSET WELLS AND NEGATIVE RESULTS OF DST # 1

OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG.

ATTEMPTED MICRORESISTIVITY LOG BUT HUNG UP IN SALT SECTION.

DRILL STEM TESTING BY TRILOBITE TESTING INC: ONE STRADDLE TEST

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY


	ALTA # 1	GRABBE # 1	ROTH # 1
	SE NW SW NW	NE SW NW	SW SW NW
	SEC.21-15S-18W	SEC.21-15-18W	SEC.21-15-19W
	2011'GL 2021'KB	KB 2034'	KB 2007'
<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1175 +846	+ 844	NG
B-Anhydrite	1208 +813	+ 808	NG

Topeka	2981 -960	- 951	NG
Heebner Sh.	3258-1237	-1231	-1239
Toronto	3283-1262	-1250	-1263
LKC	3307-1286	-1278	-1289
BKC	3531-1510	-1505	-1515
Congl. Sand	NONE	-1568	-1571
Arbuckle	3610-1589	-1591	-1613
RTD	3700-1679	-1636	

SUMMARY OF DAILY ACTIVITY

- 12-04-13 RU, Spud 11:00 PM
- 12-05-13 531', drilling surface hole
- 12-06-13 1175', set 8 5/8" surface casing to 1173' w/ 375 sxs SMD, slope 1 1/2 degree, plug down 5:45AM, WOC 12 hrs
- 12-07-13 1520', drilling
- 12-08-13 2500', drilling, displaced 2865'-2880'
- 12-09-13 3160', drilling
- 12-10-13 3625', RTD 3700' @9:17AM, ST, CCH, TOWB, logs, start DST # 1 straddle test 3418' to 3500' "H" to "J" LKC,
- 12-11-13 3700', TOWT, P&A, plug down 8:30PM, RD

DST # 1 STRADDLE TEST 3418' TO 3500' "H" TO "J" BOTTOM PACKER HELD

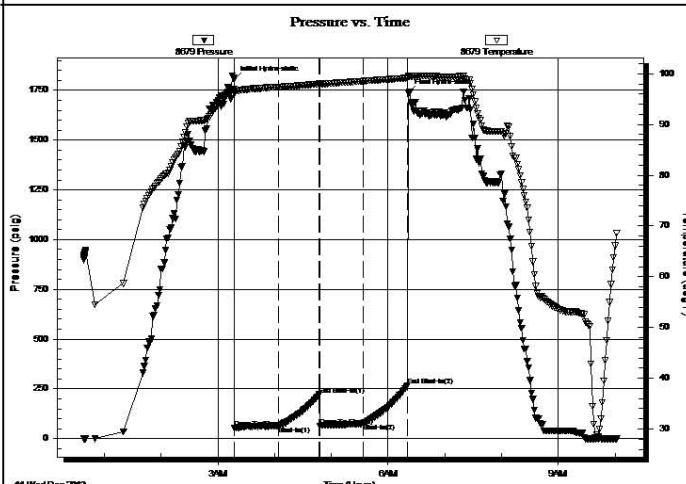
	DRILL STEM TEST REPORT	
	TDI INC 1310 Bison RD Hays Ks 67601 ATTN: Herb Dines	21-15s-18w Alta #1 Job Ticket: 039770 DST#: 1 Test Start: 2013.12.11 @ 00:38:07

GENERAL INFORMATION:

Formation: LKC-H-I-J	Test Type: Conventional Straddle (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Jeff Brown
Time Tool Opened: 03:17:37	Unit No: 67
Time Test Ended: 10:05:07	
Interval: 3418.00 ft (KB) To 3500.00 ft (KB) (TVD)	Reference Elevations: 2021.00 ft (KB)
Total Depth: 3700.00 ft (KB) (TVD)	2009.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good	KB to GR/CF: 12.00 ft

Serial #: 8679 Outside	Capacity: 8000.00 psig
Press@RunDepth: 76.78 psig @ 3486.00 ft (KB)	Last Calib.: 2013.12.11
Start Date: 2013.12.11 End Date: 2013.12.11	Time On Btm: 2013.12.11 @ 03:17:07
Start Time: 00:38:08 End Time: 10:02:07	Time Off Btm: 2013.12.11 @ 06:21:07

TEST COMMENT: IFP=Good blow BOB in 34-1/2 min
 ISI=Dead no blow back
 FFP=Good blow BOB in 7 Min
 FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1805.54	96.91	Initial Hydro-static
1	52.78	96.15	Open To Flow (1)
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Recovery

Length (ft)	Description	Volume (bbl)
36.00	Mud w with a scum of oil	0.50
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0.00	1102=GIP	0.00

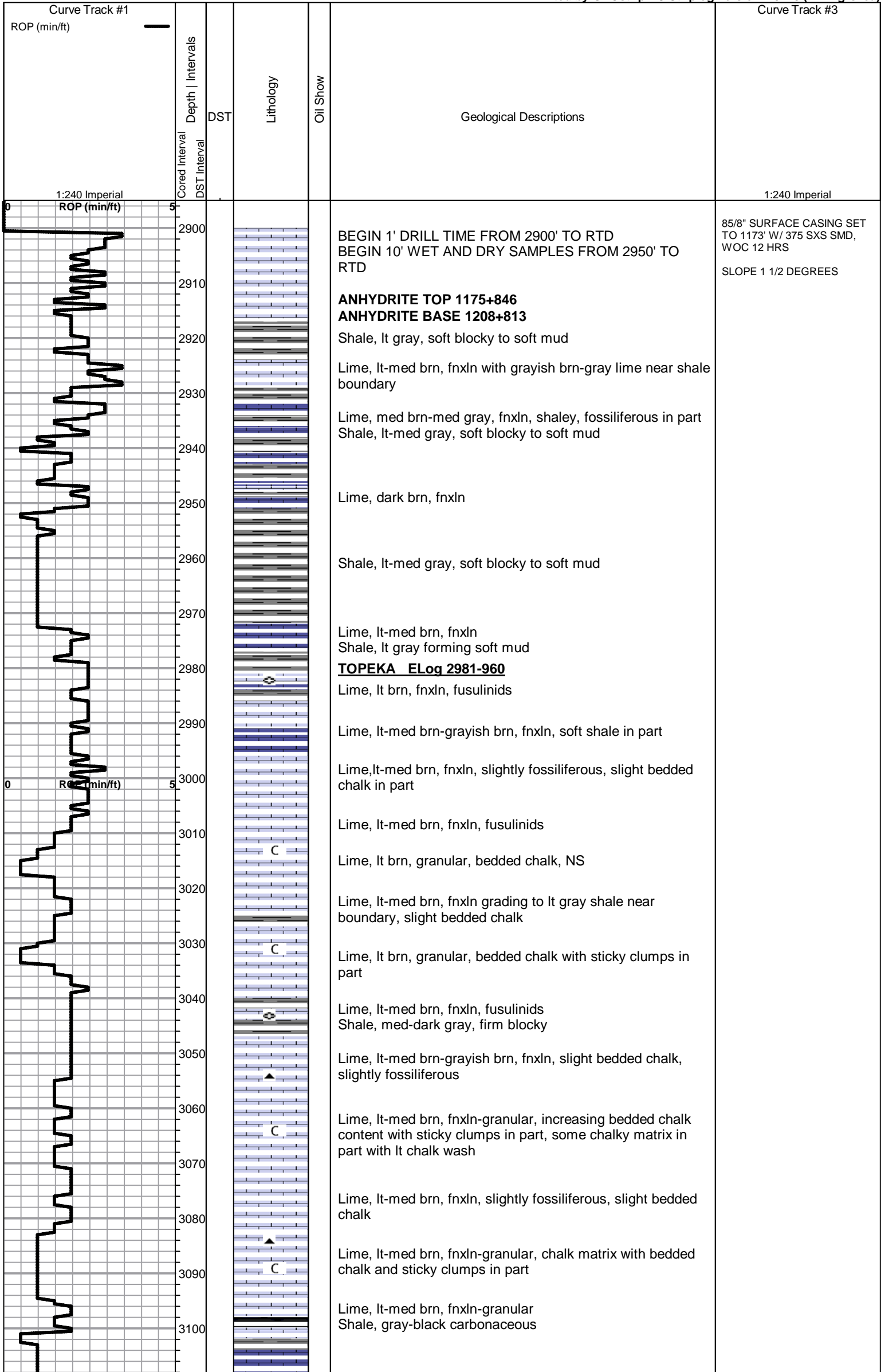
Gas Rates

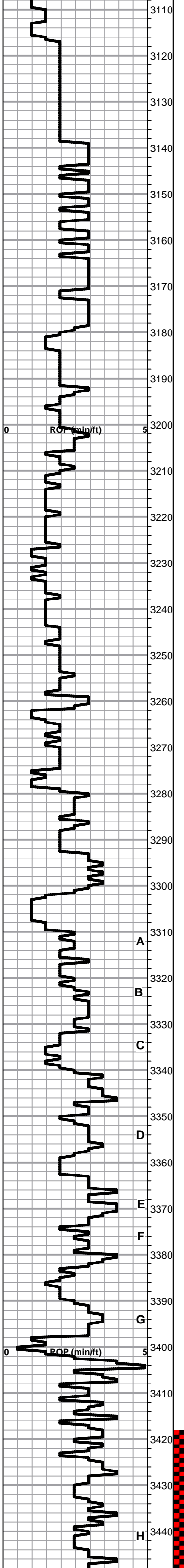
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

ROCK TYPES					
	Clystgy		Lmst fw<7		shale, grn
	Dolprim		Lmst fw7>		shale, gry
	Dol Lime		Lscongl		Carbon Sh
					shale, red
					Shcol

ACCESSORIES		
MINERAL	FOSSIL	TEXTURE
▲ Chert, dark	○ Oolite	C Chalky
P Pyrite	⊕ Oomoldic	
• Sandy	⊕ Fossilinid	
△ Chert White		

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





Lime, lt brn-lt grayish brn, fnxln

Lime, tan-lt brn, fnxln, sublithographic, bedded chalk, slightly fossiliferous

Lime, tan-lt brn, fnxln

Lime, lt-med brn, fn-micro xln, slight bedded chalk

Lime, tan-lt brn, fn-micro xln

Lime, tan-lt brn, fn-vfxln, bedded chalk in part

Shale, gray-black carbonaceous, firm, blocky
Lime, crm-tan, fn-vfxln, slight fossiliferous

Lime, crm-lt brn, fnxln-granular, slight bedded chalk

Lime, crm-lt brn, fnxln-granular in part

Lime, crm-lt brn-lt gray, fnxln, slight bedded chalk

Lime, lt-med brn, granular, bedded chalk, NS

Lime, lt-med brn, granular, bedded chalk

Lime, as above

Lime, crm-lt brn, fnxln-granular, bedded chalk

Lime, tan-lt brn, fnxln, chalky with lt chalk wash
HEEBNER SHALE ELog 3258-1237

Shale, black carbonaceous

Shale, lime green-med grayish green, soft blocky to soft mud

TORONTO ELog 3283-1262

Lime, crm, fnxln, white chalk wash, NS

Lime, lt-med brn, fn-vfxln, bedded chalk

Shale, reddish brn, soft-firm blocky
LKC ELog 3307-1286

Lime, crm-lt brn, fnxln, lot of bedded chalk, NS

Lime, med brn-med grayish brn, fn-vfxln, chalk in part

Lime, tan, fnxln with bedded chalk grading into granular lime with bedded chalk with sticky clumps in part, NS

Lime, tan, mostly fnxln, few chips, fossiliferous in inter foss porosity, spotty staining, sparry calcite backfill, very lt odor, NFO

Lime, tan, fnxln, bedded chalk

Shale, gray-black carbonaceous

Lime, crm-tan, few oolitic/oolmoldic chips with spotty staining, NFO, very lt odor, appears poorly developed

Lime, tan, fnxln-granular, lot of bedded chalk, NS

Lime, tan, fnxln, scattered oolitic and granular chips, NS

Lime, tan, fnxln, oolmoldic in part, NS

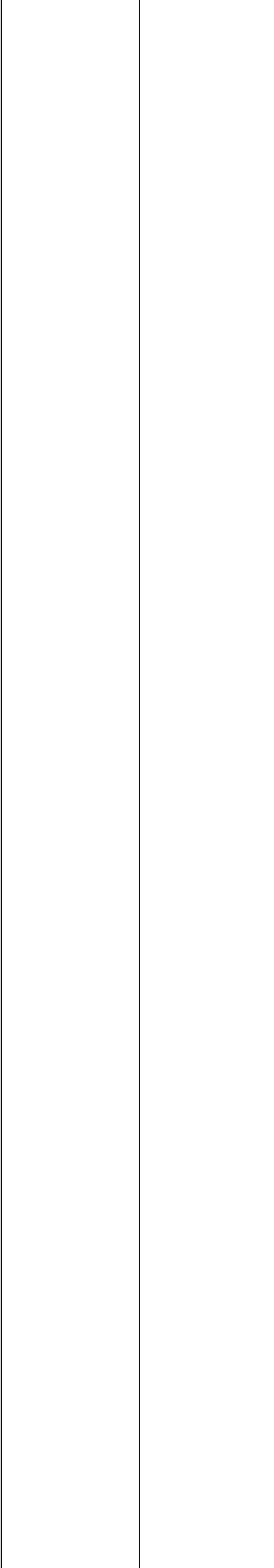
Lime, grayish brn, fnxln, NS

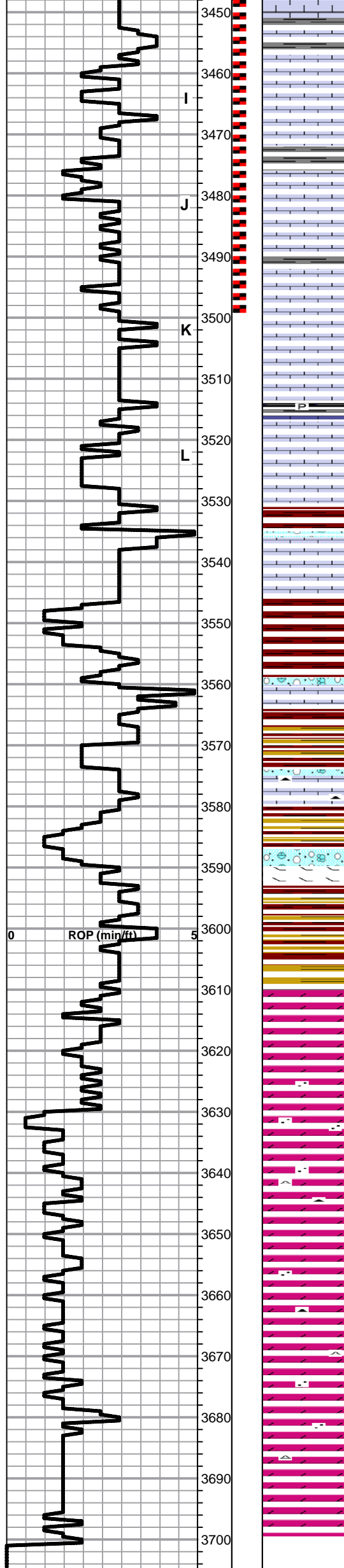
Lime, lt brn-gray, fnxln

Lime, tan, fnxln, bedded chalk

Shale, med gray, firm blocky

Lime, tan, fnxln, few oolitic/oolmoldic chips, trace of staining, no odor, NFO





Lime, tan, fnxn, bedded chalk

Lime, white-frm, fnxn, bedded chalk

Lime, frm-white, fnxn, slightly oolitic with dead flaky staining, NFO, No Odor

Lime white-frm, fnxn, bedded chalk

Lime, lt brn, fn-micro xln, bedded chalk

Lime, white-tan, fnxn, lot of bedded chalk with chalk wash

Shale, gray-black carbonaceous

Lime, lt-med brn, fnxn, bedded chalk

BKC ELog 3531-1510
Shale, reddish brn, soft blocky, lt red wash

Lime, clastic mix with red shale stain grading into frm-tan lime, fnxn, slight bedded chalk

Shale, red, soft mud with lt red wash

Lime, clastic in part, frm-tan, fnxn

Shale, vari colors, reds, grays, yellow, brns

Shale, red, tans, grays, soft sticky clumps in part

Lime, frm-tan, reworked clastic mix, fnxn, soft on crush

Shales, vari color

Clastic lime mix, NS

Shale, vari color and deep red wash in part

ARBUCKLE ELog 3610-1589
Dolomite, frm-tan, fnxn, few chips with med-cxln, rhombic development, lt odor, lt even staining in fine grained chips. zone appears to be mostly fine grained dolomite with poor visible porosity

Dolomite, frm, fn-med xln, very lt odor, lt staining, quartz grain inclusions.

Dolomite, frm, fn-cxln, quartz grain inclusions with few quartz clusters and fused chips of quartz

Dolomite, white-frm, fn-cxln, interxln porosity, white and tan fresh cherts

Dolomite, frm, fn-med xln, hard on crush

Dolomite, frm, fnxn-granular in part

Dolomite, as above

RTD 3700-1679 LTD 3699-1678

DST # 1 STRADDLE TEST
3418' TO 3500' SEE HEADER
FOR TEST SUMMARY

MARMATON BENCH HIGHLY
ERODED, VERY THIN AND
DIFFICULT TO ISOLATE

HISTORIC OIL/WATER
CONTACT APPEARS TO BE
NEAR -1590 FOR WELLS IN
NEARBY VICINITY

1ST PLUG @3590' W/50 SXS
2ND @1200' W/40 SXS
3RD PLUG @500' W/80 SXS
4TH PLUG @40' W/10 SXS
RATHOLE W/30 SXS
MOUSEHOLE W/15 SXS

SLOPE @3700' 1 DEGREE

JOB LOG

SWIFT Services, Inc.

DATE 7-2-6-13 PAGE NO. 1

CUSTOMER TDI WELL NO. 21 LEASE A119 JOB TYPE Deep Surface TICKET NO. 25308

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0030							on loc w/FE
								TD 8 5/8" x 23 # x 1173' x 60' Cest 1, 3, 14 Baffle 2
	0200							start Csg Break Circulation
	0457	5	0			200		start 500 gal Mudflush
	0500	5	12/0			200		start 20 bbl KCL flush
	0504	5	20/0			200		start 11.2 # SMD
	0520	5	83/0			200		start 12.5 # SMD
	0531	5	57/0			200		start 14 # SMD
	0535		21					End Cement Drop Top Plug
	0544	5	0			150		start Displacement
	0549	4	26			200		Circ Cement
	0600		71			500/100		Land Plug
								circ 75 sks to pit
								Thank you Nick, Don, & Isaac

ALLIED OIL & GAS SERVICES, LLC 054741

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Russell Ks.

DATE <u>12-11-13</u>	SEC. <u>21</u>	TWR. <u>159</u>	RANGE <u>18W</u>	CALLED OUT	ON LOCATION	JOB START <u>9:00</u>	JOB FINISH <u>6:30 PM.</u>
LEASE <u>ALTA</u>	WELL# <u>#1</u>	LOCATION <u>Hay's Mack Dealer</u>			COUNTY <u>Ellis</u>	STATE <u>KANSAS</u>	
OLD OR NEW (Circle one)		<u>1W 1/2 S 1/4 E</u>					

CONTRACTOR <u>Southwind Drllg. Rig #1</u>	OWNER
TYPE OF JOB <u>ROTARY Plug</u>	CEMENT
HOLE SIZE <u>5 7/8</u> TD. <u>3700'</u>	AMOUNT ORDERED <u>225 SX 60 4% Gel</u>
CASING SIZE <u>8 5/8</u> SCALP DEPTH <u>1173'</u>	<u>1/4 # Flt - Seal Per SX</u>
TUBING SIZE DEPTH	
DRILL PIPE <u>4 1/2 X-11</u> DEPTH <u>3590'</u>	
TOOL DEPTH	
PRES. MAX MINIMUM <input checked="" type="checkbox"/>	COMMON <u>135 SX @ 14.90 2416.50</u>
MEAS. LINE SHOE JOINT	POZMIX <u>90 SX @ 9.35 841.50</u>
CEMENT LEFT IN CSG.	GEL <u>8 SX @ 23.40 187.20</u>
PERFS.	CHLORIDE @ <u>187.20</u>
DISPLACEMENT	ASC @
	<u>Flt Seal 2 SX 50' @ 2.97 148.50</u>

EQUIPMENT

PUMP TRUCK CEMENTER <u>GLENN GINTHER</u>
<u>409</u> HELPER <u>NATHAN DANNER</u>
BULK TRUCK
<u>481</u> DRIVER <u>JESSY CAZART</u>
BULK TRUCK
DRIVER

HANDLING <u>241.25 / FT³</u>	@ <u>2.48</u>	<u>598.26</u>
MILEAGE <u>121.044 / 27M</u>	@ <u>2.80</u>	<u>314.71</u>
TOTAL		<u>4506.67</u>

REMARKS:

50 SX @ 3590
40 SX @ 1200
80 SX @ 500
10 SX @ 40 + wired Plug
15 SX @ Mouse Hole
30 SX @ Rat Hole
THANKS

SERVICE

DEPTH OF JOB		
PUMP TRUCK CHARGE		<u>2600.47</u>
EXTRA FOOTAGE @		
MILEAGE <u>HV MT 12</u>	@ <u>7.70</u>	<u>92.40</u>
MANIFOLD @		
<u>HV MT 12</u>	@ <u>4.40</u>	<u>52.80</u>

TOTAL 2745.67

CHARGE TO: T. D. T. Inc.
STREET _____
CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

<u>1 - 8 5/8 wooden Plug</u>	@	<u>107.64</u>
	@	
	@	
	@	

TOTAL 107.64

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 7959.98
DISCOUNT 1813.08 ~~1813.08~~ IF PAID IN 30 DAYS

PRINTED NAME LAMPY BEAVERS
SIGNATURE Lampy Beavers

5546.90