



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1175685
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: _____

1175685

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
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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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

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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Form	ACO1 - Well Completion
Operator	Werth, Andy dba Werth Exploration Trust
Well Name	Walz-Mustang SOL 11
Doc ID	1175685

Tops

Name	Top	Datum
ANHYDRITE	1504	+558
TOPEKA	3098	-1036
HEEBNER SHALE	3306	-1244
LKC	3344	-1282
BKC	3565	-1503
SIMPSON SHALE	3638	-1576
ARBUCKLE	3654	-1592
RTD	3725	-1663
LTD	3726	-1664

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

No. 7053

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

Date	1-16-14	Sec.	7	Twp.	11	Range	20	County	Ellis	State	KS	On Location		Finish	4:15 PM
Location								Ellis 10N to Riverview 2W 1N 1/2 W Niner							

Lease	Waltz - Mustang SOL	Well No.	11	Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor	Skytop			Charge To	Werth Exploration
Type Job	Surface	T.D.	243'	Street	
Hole Size	12 1/4	Depth	243'	City	State
Csg.	8 5/4	Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tbg. Size		Depth		Cement Amount Ordered 160 com 3% cc 2% Gel	
Tool		Depth			
Cement Left in Csg.	20'	Shoe Joint			
Meas Line		Displace	14661		

EQUIPMENT				Common	160
Pumptrk	18	No.	Cementier Helper	Poz. Mix	
			Cody		
Bulktrk	14	No.	Driver	Gel.	3
			David		
Bulktrk	Pu	No.	Driver	Calcium	5
			Brett		

JOB SERVICES & REMARKS		Hulls
Remarks:		Salt
Rat Hole		Flowseal
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
		Handling 168
		Mileage

Cement		FLOAT EQUIPMENT	
		Guide Shoe	
		Centralizer	
		Baskets	
		AFU Inserts	
		Float Shoe	
		Latch Down	

Pumptrk Charge	Surface	Tax	
Mileage	31	Discount	
		Total Charge	
Signature		John Buehler	

OPERATOR

Company: ANDY WERTH DBA WERTH EXPLORATION TRUST
 Address: 1308 SCHWALLER AVE.
 HAYS, KANSAS 67601

Contact Geologist: ANDY WERTH
 Contact Phone Nbr: 785-625-4968
 Well Name: WALZ-MUSTANG SOL # 11
 Location: NW SE NE SE Sec.7-11s-20w
 Pool: API: 15-051-26,654-00-00
 State: KANSAS Field: UNNAMED
 Country: USA

Scale 1:240 Imperial

Well Name: WALZ-MUSTANG SOL # 11
 Surface Location: NW SE NE SE Sec.7-11s-20w
 Bottom Location:
 API: 15-051-26,654-00-00
 License Number: 30259
 Spud Date: 1/14/2014 Time: 2:45 PM
 Region: ELLIS COUNTY
 Drilling Completed: 1/23/2014 Time: 6:05 AM
 Surface Coordinates: 1927' FSL & 346' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 2054.50ft
 K.B. Elevation: 2062.00ft
 Logged Interval: 3000.00ft To: 3725.00ft
 Total Depth: 3725.00ft
 Formation: LANSING-KANSAS CITY
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.575178 Latitude: 39.1077009
 N/S Co-ord: 1927' FSL
 E/W Co-ord: 346' FEL

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: SKYTOP DRILLING LLC
 Rig #: 1
 Rig Type: MUD ROTARY
 Spud Date: 1/14/2014 Time: 2:45 PM
 TD Date: 1/23/2014 Time: 6:05 AM
 Rig Release: 1/24/2014 Time: 3:00 PM

ELEVATIONS

K.B. Elevation: 2062.00ft Ground Elevation: 2054.50ft
 K.B. to Ground: 7.50ft

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF DRILL STEM TESTS AND LOG ANALYSIS

OPEN HOLE LOGGING BY NABORS COMPLETION & PRODUCTION SERVICES CO: DUAL INDUCTION LOG, COMPENSATED DENSITY/NEUTRON LOG, MICRO LOG

DRILL STEM TESTING BY SUPERIOR TESTERS ENTERPRISES LLC: ONE (1) CONVENTIONAL TEST AND ONE (1) STRADDLE TEST

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

WALZ-MUSTANG SOL #11
NW SE NE SE
SEC. 7-11S-20W
2054.5'GL 2062'KB


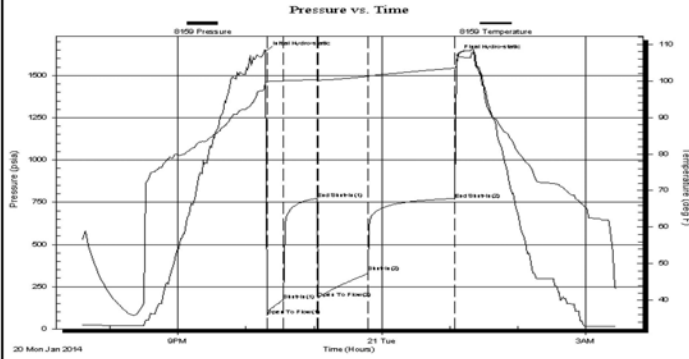
MIXER # 1
SE NE SE
SEC. 7-11S-20W

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>	<u>COMPARISON</u>
Anhydrite	1504 +558	1504 +558	+ 547
B-Anhydrite	1545 +517	1544 +518	+ 518
Topeka	3096-1034	3098-1036	-1045
Heebner Shale	3306-1244	3306-1244	-1253
Toronto	3326-1264	3327-1265	-1273
LKC	3343-1281	3344-1282	-1291
BKC	3561-1499	3565-1503	-1511
Simpson Shale		3638-1576	-1576
Arbuckle		3654-1592	-1587
RTD	3725-1663	3726-1664	-1591


SUMMARY OF DAILY ACTIVITY

- 1-15-14 RU, Spud 2:45 PM,
- 1-16-14 244', set 8 5/8" surface casing to 243' w/160 sxs Common 2%Gel
3%CC, WOC 8 hrs, drill plug at 1:45 PM
- 1-17-14 840', drilling
- 1-18-14 1665', drilling
- 1-19-14 2375', drilling
- 1-20-14 2965', drilling, displaced at 3000'
- 1-21-14 3336', drilling, CFS 3336' short trip, CFS 3390', CFS 3410', DST # 1
3368'-3410' "C-D" LKC
- 1-22-14 3410', TIWB, drilling, CFS 3614', CFS 3644', CFS 3652'
- 1-23-14 3725', RTD 6:05 AM, short trip, TOWB, slope 1 degree, logs, DST #2
straddle 3657'-3675' Arbuckle
- 1-24-14 3725', finish DST # 2, decision to plug and abandon well

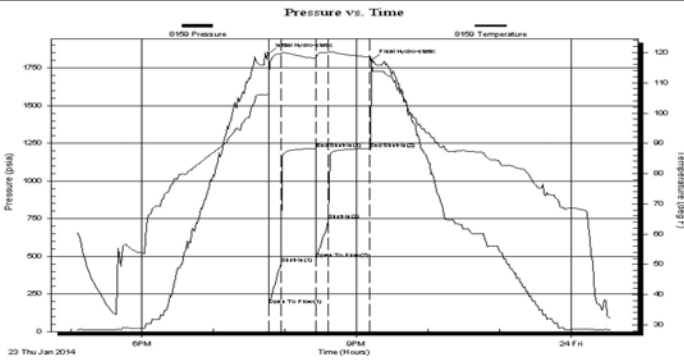
DST # 1 3657' TO 3675' "C" AND "D" ZONE OF LKC

	DRILL STEM TEST REPORT																																						
	Werth Exploration Trust 1308 Schw aller Avenue Hays, Kansas 67801 ATTN: Herb Deines	7/11S/20W/Ellis Walz-Mustang SOL #11 Job Ticket: 19191 DST#: 1 Test Start: 2014.01.20 @ 19:35:00																																					
GENERAL INFORMATION:																																							
Formation: Lansing/Kansas City Deviated: No Whipstock: ft (KB) Time Tool Opened: 22:18:00 Time Test Ended: 03:27:00		Test Type: Conventional Bottom Hole (Initial) Tester: Ken Swinney Unit No: 3330 Hays/50 Reference Elevations: 2062.00 ft (KB) 2055.00 ft (CF) KB to GR/CF: 7.00 ft																																					
Interval: 3368.00 ft (KB) To 3410.00 ft (KB) (TVD) Total Depth: 3410.00 ft (KB) (TVD) Hole Diameter: 7.80 inches Hole Condition: Poor																																							
Serial #: 8159 Outside Press@RunDepth: 767.86 psia @ 3407.00 ft (KB) Start Date: 2014.01.20 End Date: 2014.01.21 Start Time: 19:35:00 End Time: 03:27:00		Capacity: 5000.00 psia Last Calib.: 2014.01.20 Time On Btm: 2014.01.20 @ 22:17:30 Time Off Btm: 2014.01.21 @ 01:07:00																																					
TEST COMMENT: 1ST Open 15 Minutes/Good blow /Blow built to bottom of bucket of diesel in 4 minutes 30 seconds 1ST Shut In 30 Minutes/Weak surface blow back 2ND Open 45 Minutes/Good Blow /Blow built to bottom of bucket of diesel in 7 minutes 30 seconds 2ND Shut In 75 Minutes/Blow back built to 1 inch																																							
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Superior Testers Enterprises LLC Ref. No: 19191		Printed: 2014.01.20 @ 03:50:55																																					

DST # 2 3657' TO 3675' ARBUCKLE STRADDLE TEST BOTTOM PACKER HELD

	DRILL STEM TEST REPORT		
	Werth Exploration Trust 1308 Schw aller Avenue Hays, Kansas 67801 ATTN: Herb Deines	7/11S/20W/Ellis Walz-Mustang SOL #11 Job Ticket: 19192 DST#: 2 Test Start: 2014.01.23 @ 17:05:00	
GENERAL INFORMATION:			
Formation: Arbuckle Deviated: No Whipstock: ft (KB) Time Tool Opened: 19:46:30 Time Test Ended: 00:34:00		Test Type: Conventional Straddle (Initial) Tester: Ken Swinney Unit No: 3330 Hays/50 Reference Elevations: 2062.00 ft (KB) 2055.00 ft (CF) KB to GR/CF: 7.00 ft	
Interval: 3657.00 ft (KB) To 3675.00 ft (KB) (TVD) Total Depth: 3675.00 ft (KB) (TVD) Hole Diameter: 7.80 inches Hole Condition: Fair			
Serial #: 8159 Inside Press@RunDepth: 743.85 psia @ 3669.00 ft (KB) Start Date: 2014.01.23 End Date: 2014.01.24 Start Time: 17:05:00 End Time: 00:34:00		Capacity: 5000.00 psia Last Calib.: 2014.01.22 Time On Btm: 2014.01.23 @ 19:46:00 Time Off Btm: 2014.01.23 @ 21:13:00	

TEST COMMENT: 1ST Open 10 Minutes/Strong blow /Blow built to bottom of bucket of diesel in 50 seconds
 1ST Shut In 30 Minutes/Blow back built to 1/2 inch
 2ND Open 10 Minutes/Strong blow /Blow built to bottom of bucket of diesel in 45 seconds
 2ND Shut In 30 Minutes/No blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1847.82	106.55	Initial Hydro-static
1	178.17	112.06	Open To Flow (1)
11	453.42	119.61	Shut-In(1)
40	1215.19	118.06	End Shut-In(1)
40	486.30	118.06	Open To Flow (2)
51	743.85	120.08	Shut-In(2)
85	1214.76	118.54	End Shut-In(2)
87	1804.80	114.29	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
1426.00	Mud cut Water with show of oil	18.64
0.00	Mud 3% Water 97%	0.00
0.00	Recov. Chlorides 32,000 ppm	0.00
0.00	Recov. Resist .28 ohms @ 50 deg	0.00

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

Superior Testers Enterprises LLC

Ref. No: 19192

Printed: 2014.01.22 @ 01:09:38

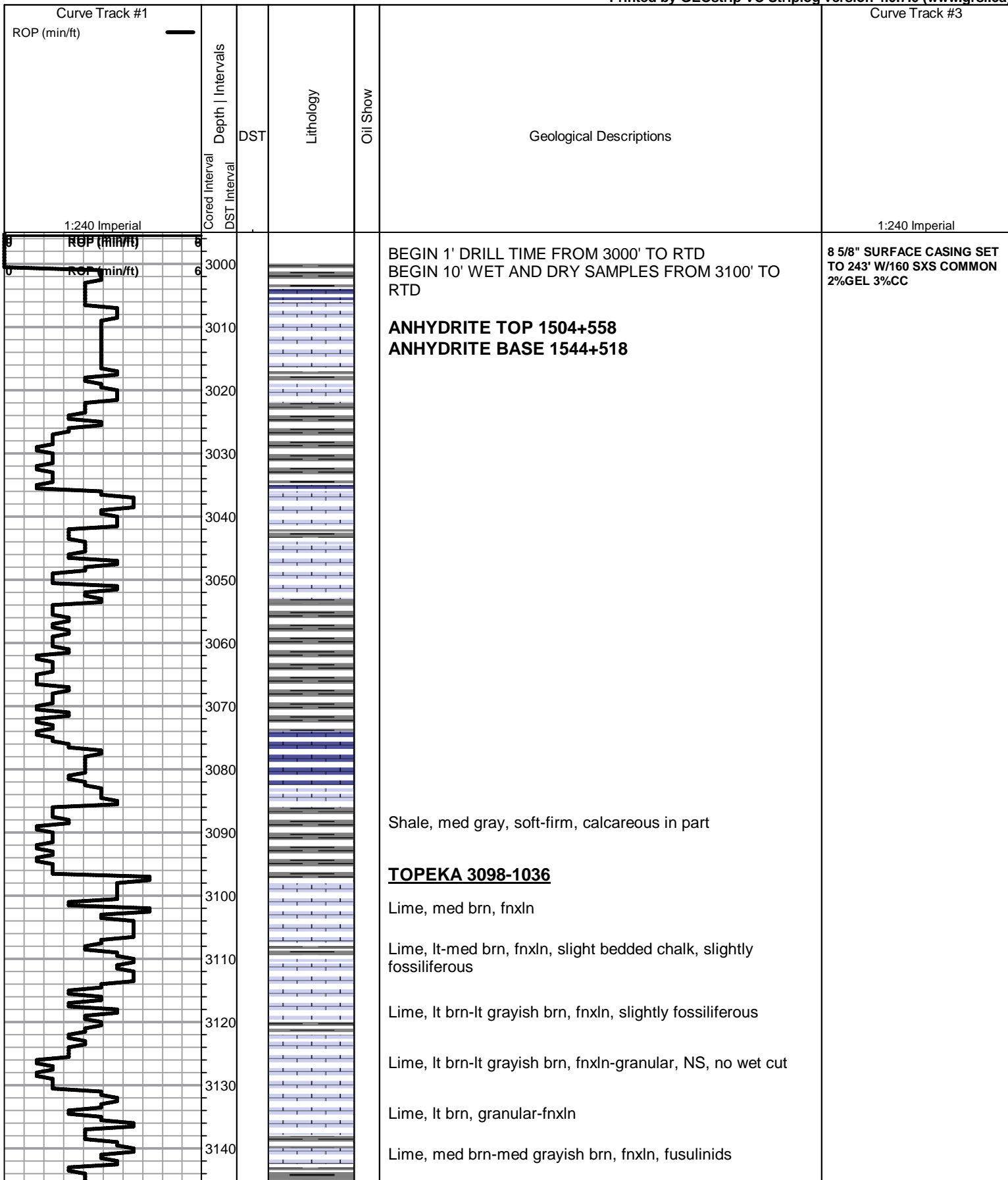
ROCK TYPES

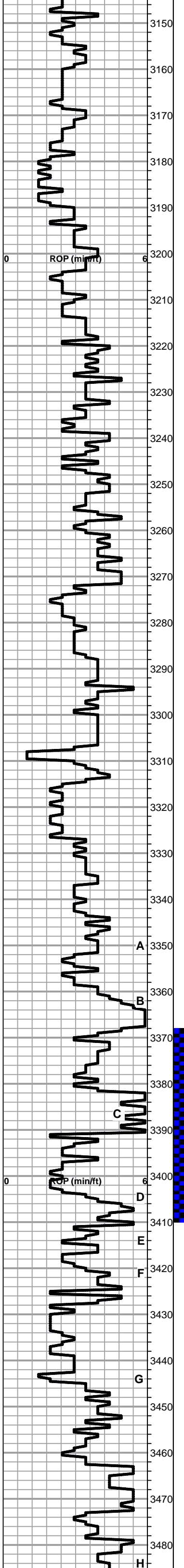
Clystgy	Dolprim	Lmst fw<7	shale, grn	shale, red
Clystcol	Dolsec	Lmst fw7>	shale, gry	
Chtcong1	Dol Lime	Lscong1	Carbon Sh	

ACCESSORIES

- MINERAL**
 Z Nodules
 P Pyrite
 Varicolored chert
 Chert White

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





Lime, lt-med brn, fnxln, fossiliferous in part

Lime, lt-med brn, fn-granular in part, slightly fossiliferous, calcareous shale in part

Lime, lt-med brn, fnxln, slightly fossiliferous

Lime, lt-med brn, fnxln-granular, slightly fossiliferous, bedded chalk with sticky clumps in part, lt white chalk wash

Lime, med brn-med grayish brn, fnxln, hard on crush

Shale, black carbonaceous
Lime, lt-med brn, fnxln, slightly fossiliferous

Lime, lt brn, fn-vfxln, hard on crush, slightly fossiliferous

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

Lime, lt-med brn, fnxln, fusulinids, increasing gray tint and shaley near lime-shale boundary

Lime, lt grn-lt gray, vfxln

Shale, black carbonaceous

Lime, lt brn, fn-vfxln, slightly fossiliferous

Lime, tan-lt brn, fn-vfxln, slight bedded chalk

Lime, tan-lt brn, fnxln

Lime, tan-lt brn, fnxln, slight bedded chalk, NS

Lime, tan-lt brn, fnxln, slight bedded chalk

Lime, tan-lt brn, fnxln, slight bedded chalk

HEEBNER SHALE 3306-1244
Shale, black carbonaceous, fissile, blocky
Lime, lt brn, vfxln, slightly fossiliferous, well cemented

Shale, reddish brn grading into lime green soft shale

TORONTO 3327-1265
Lime, tan-lt brn, fnxln, few granular chips with slight chalk, NS, scattered fossils

LKC 3344-1282
Lime, crm, fn-vfxln, slightly fossiliferous, slight bedded chalk, NS, No Odor

Lime, crm-tan, fnxln-granular with lt chalk wash, NS

Lime, crm-tan, fn-vfxln, bedded chalk, tan chert, fresh, sharp

● Lime, tan, fnxln, with few chips oolitic/fossil fragments, scattered stain with lt odor

Lime, crm-tan, fnxln, bedded chalk

Shale, med gray, firm blocky

● Lime, crm-tan, fnxln with few chips oolitic, lt scattered staining, no odor, NFO

Lime, crm-tan, fnxln, bedded chalk

Shale, black carbonaceous, blocky
Lime, pale gray tint, fnxln
Shale, lt gray, forming soft mud

Lime, crm-tan, fnxln, bedded chalk, 2 chips with spotty stain, appears poorly developed

Lime, tan-lt brn, fnxln-granular, bedded chalk, NS

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

Lime, crm-tan, fn-vfxln, slight bedded chalk content

Lime, med brn, fnxln

Shale, black carbonaceous
Lime, crm-tan, fnxln

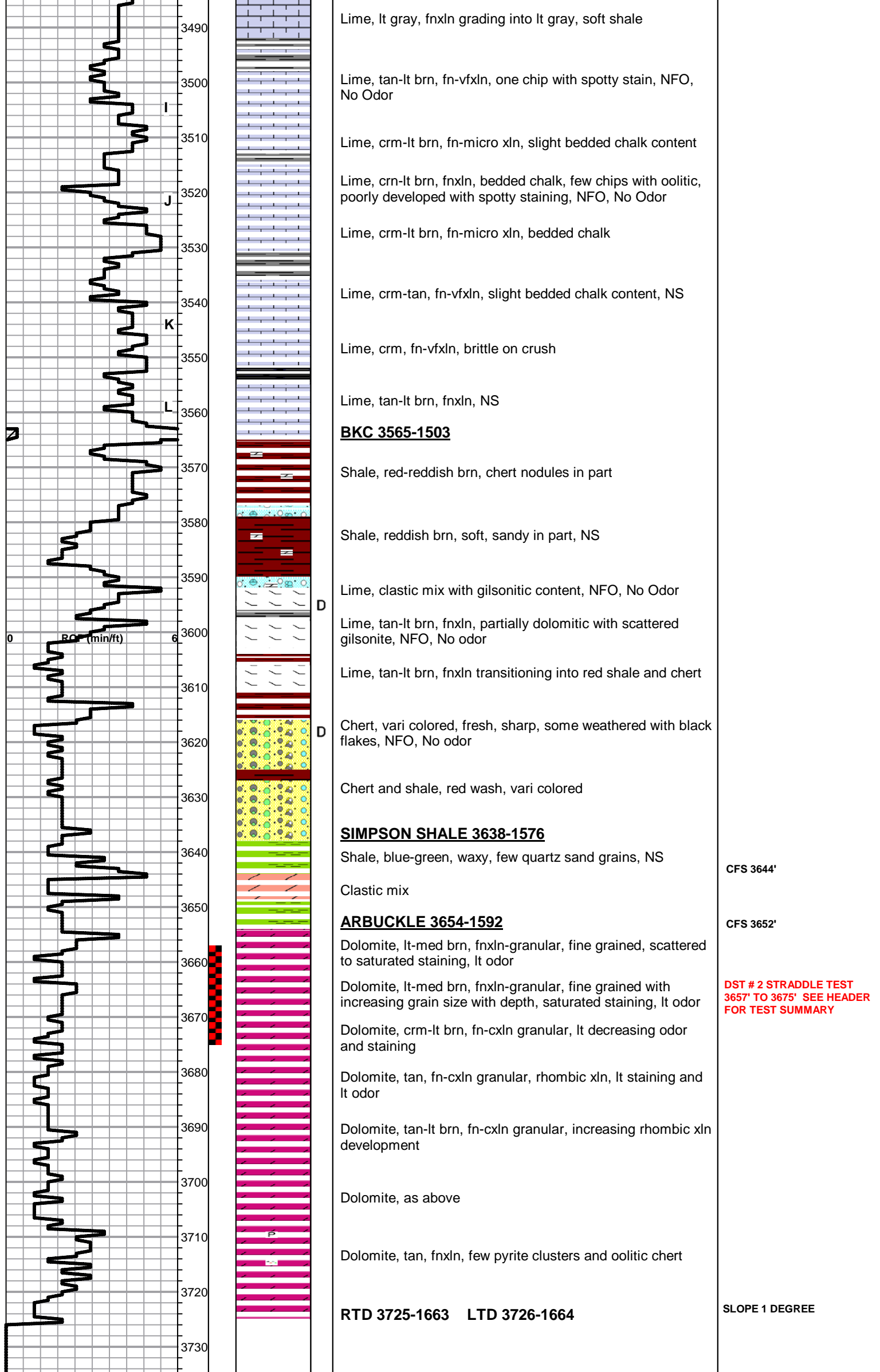
Lime, crm-tan, fn-vfxln, NS

SHORT TRIP 3336'

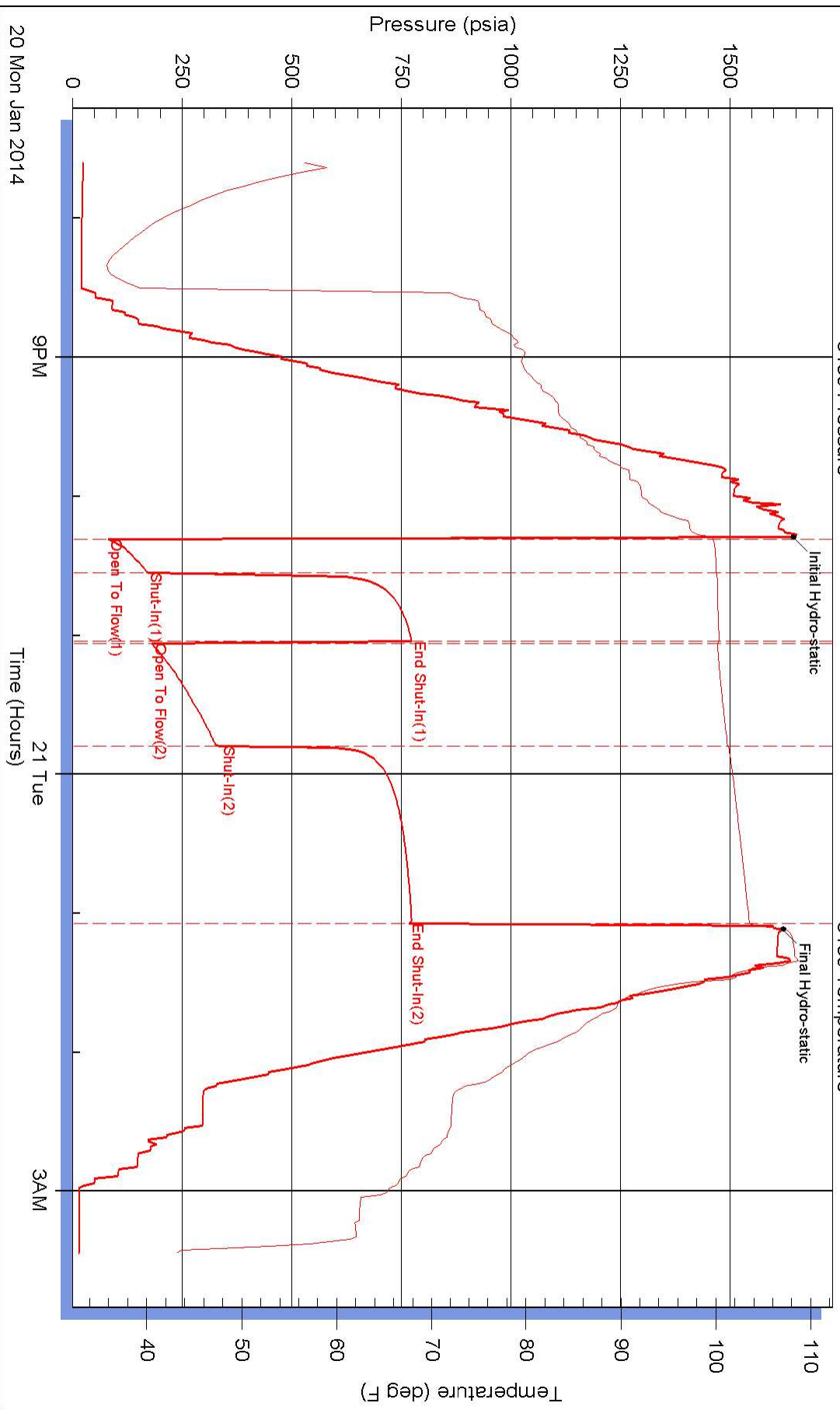
DST # 1 3363' TO 3410' "C-D"
SEE HEADER FOR TEST SUMMARY

CFS 3390'

CFS 3410'



Pressure vs. Time





DRILL STEM TEST REPORT

FLUID SUMMARY

Werth Exploration Trust
 1308 Schwaller Avenue
 Hays, Kansas 67601
 ATTN: Herb Deines

7/11S/20W/Ellis
Walz-Mustang SOL #11
 Job Ticket: 19191 **DST#: 1**
 Test Start: 2014.01.20 @ 19:35:00

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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.60 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	77 feet of gas in pipe	0.000
434.00	Mud cut Water/Mud 5% Water 95%	4.721
155.00	Gas and Oil cut Muddy Water	2.174
0.00	Gas 5% Oil 5% Mud 30% Water 60%	0.000
15.00	Clean Gassy Oil/Gas 5% Oil 95%	0.210
0.00	Recov. Chlorides 90,000 ppm	0.000
0.00	Recov. Resist. .28 ohms @ 50 deg	0.000

Total Length: 604.00 ft Total Volume: 7.105 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



DRILL STEM TEST REPORT

TOOL DIAGRAM

Werth Exploration Trust
 1308 Schwaller Avenue
 Hays, Kansas 67601
 ATTN: Herb Deines

7/11S/20W/Ellis
Walz-Mustang SOL #11
 Job Ticket: 19191 **DST#: 1**
 Test Start: 2014.01.20 @ 19:35:00

Tool Information

Drill Pipe:	Length: 3208.00 ft	Diameter: 3.80 inches	Volume: 45.00 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 150.00 ft	Diameter: 2.25 inches	Volume: 0.74 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 45.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3368.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3353.00	
Hydraulic Tool	5.00			3358.00	
Packer	5.00			3363.00	20.00 Bottom Of Top Packer
Packer	5.00			3368.00	
Perforations	37.00			3405.00	
Recorder	1.00	6806	Inside	3406.00	
Recorder	1.00	8159	Outside	3407.00	
Bullnose	3.00			3410.00	42.00 Bottom Packers & Anchor

Total Tool Length: 62.00



DRILL STEM TEST REPORT

Werth Exploration Trust
 1308 Schwaller Avenue
 Hays, Kansas 67601
 ATTN: Herb Deines

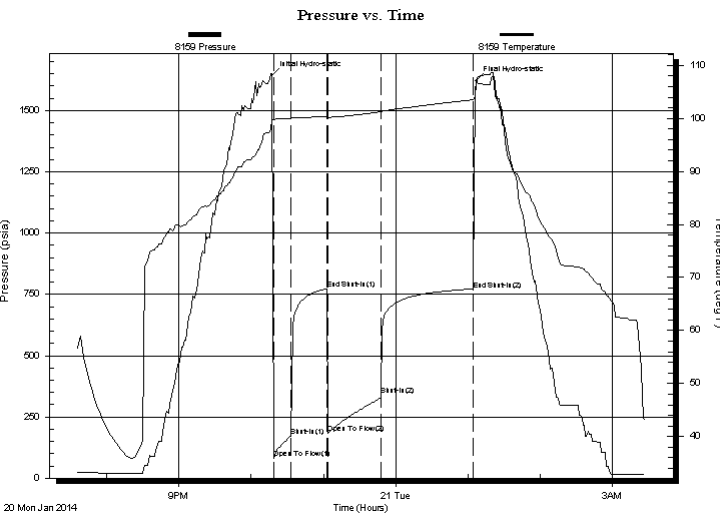
7/11S/20W/Ellis
Walz-Mustang SOL #11
 Job Ticket: 19191 **DST#: 1**
 Test Start: 2014.01.20 @ 19:35:00

GENERAL INFORMATION:

Formation: **Lansing/Kansas City**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 22:18:00 Tester: Ken Swinney
 Time Test Ended: 03:27:00 Unit No: 3330 Hays/50
 Interval: **3368.00 ft (KB) To 3410.00 ft (KB) (TVD)** Reference Elevations: 2062.00 ft (KB)
 Total Depth: 3410.00 ft (KB) (TVD) 2055.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Poor KB to GR/CF: 7.00 ft

Serial #: 8159 Outside
 Press @ Run Depth: 767.86 psia @ 3407.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2014.01.20 End Date: 2014.01.21 Last Calib.: 2014.01.20
 Start Time: 19:35:00 End Time: 03:27:00 Time On Btm: 2014.01.20 @ 22:17:30
 Time Off Btm: 2014.01.21 @ 01:07:00

TEST COMMENT: 1ST Open 15 Minutes/Good blow/Blow built to bottom of bucket of diesel in 4 minutes 30 seconds
 1ST Shut In 30 Minutes/Weak surface blow back
 2ND Open 45 Minutes/Good Blow/Blow built to bottom of bucket of diesel in 7 minutes 30 seconds
 2ND Shut In 75 Minutes/Blow back built to 1 inch



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1643.86	99.66	Initial Hydro-static
1	81.58	99.71	Open To Flow (1)
16	171.39	100.00	Shut-In(1)
45	772.42	100.38	End Shut-In(1)
46	181.12	100.21	Open To Flow (2)
91	337.13	101.26	Shut-In(2)
167	767.86	103.54	End Shut-In(2)
170	1620.22	107.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	77 feet of gas in pipe	0.00
434.00	Mud cut Water/Mud 5% Water 95%	4.72
155.00	Gas and Oil cut Muddy Water	2.17
0.00	Gas 5% Oil 5% Mud 30% Water 60%	0.00
15.00	Clean Gassy Oil/Gas 5% Oil 95%	0.21
0.00	Recov. Chlorides 90,000 ppm	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Prepared For: **Werth Exploration Trust**

1308 Schwaller Avenue
Hays, Kansas 67601

ATTN: Herb Deines

Walz-Mustang SOL #11

7/11S/20W/Ellis

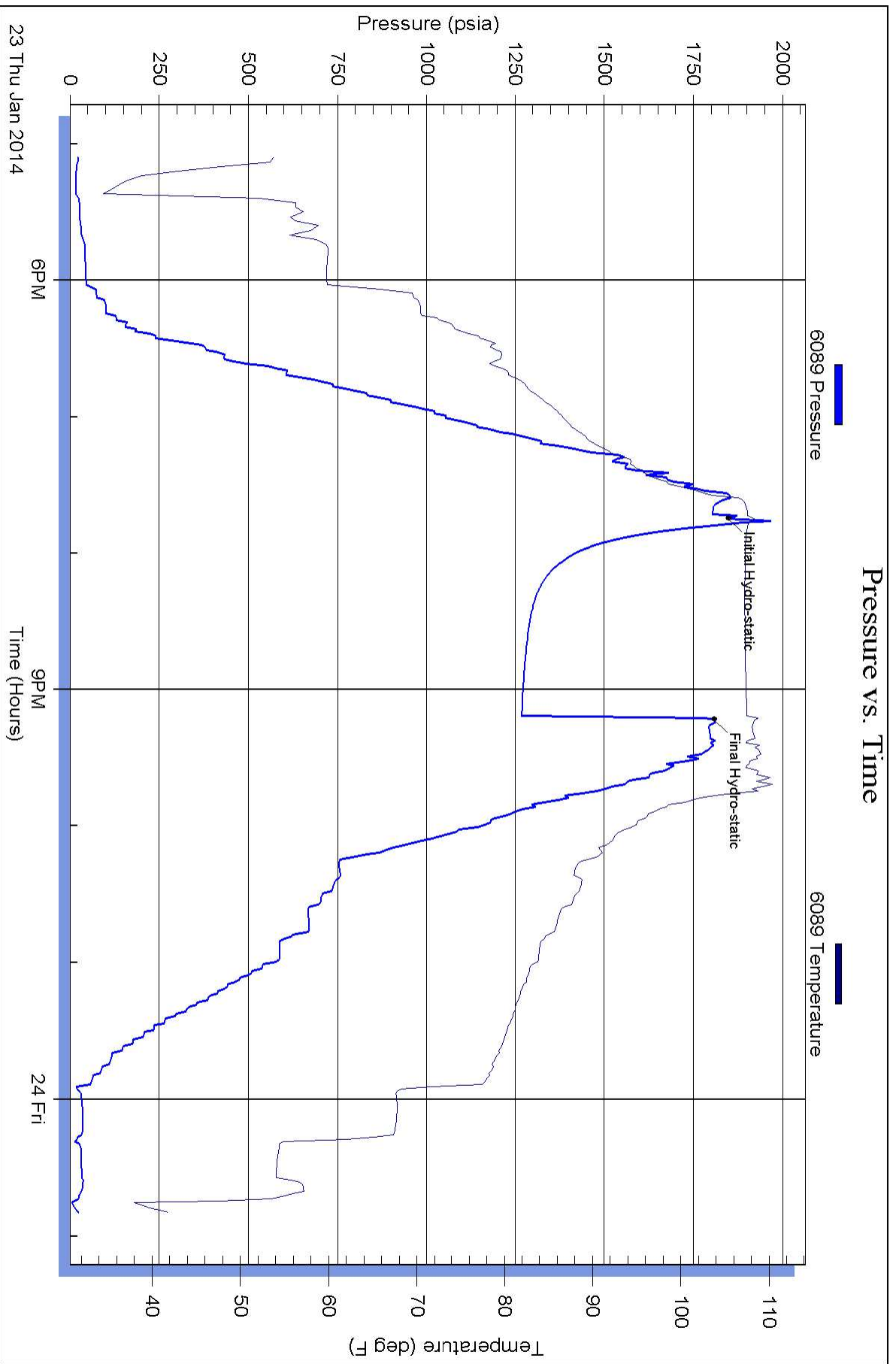
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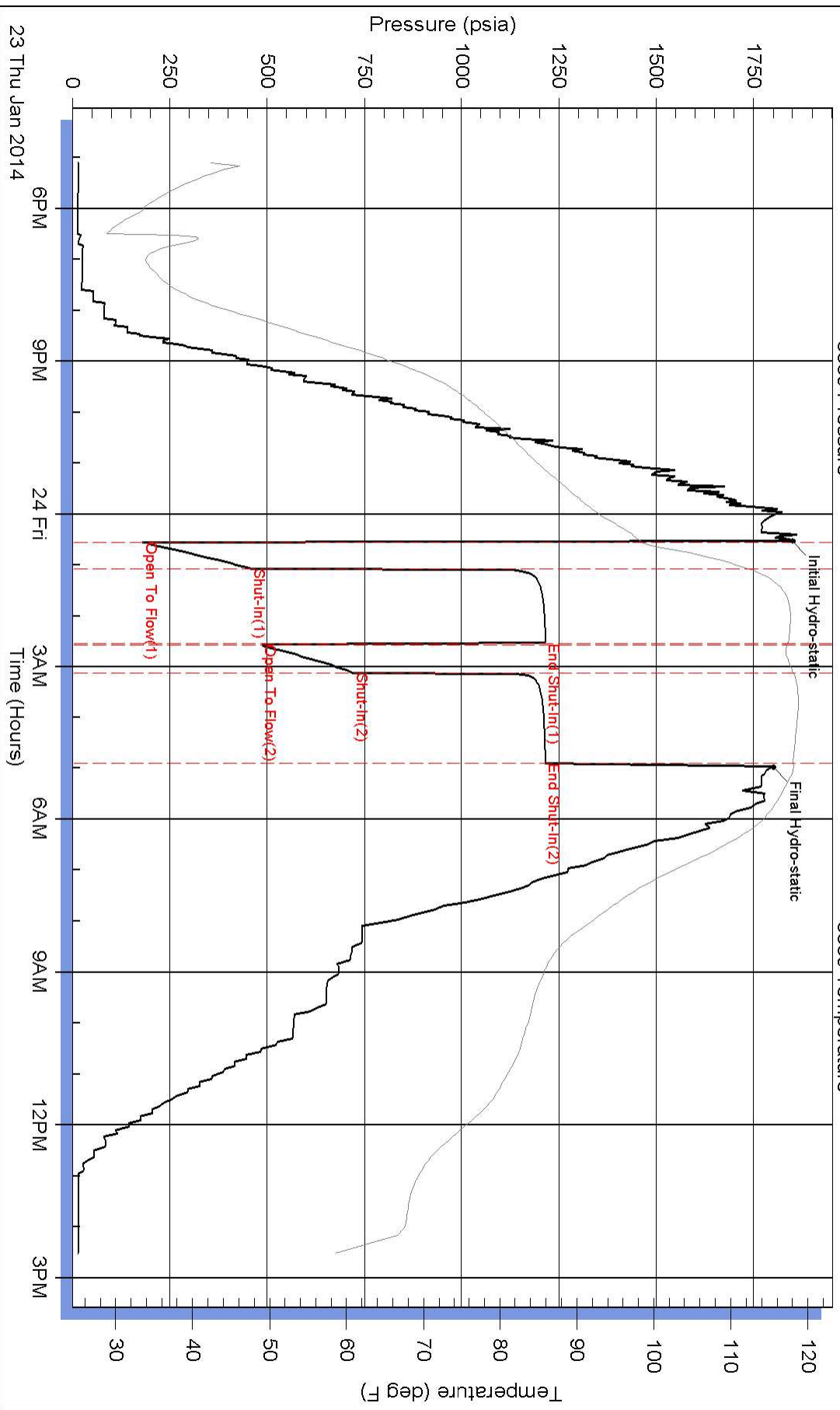
Job Ticket #: 19191 DST #: 1

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

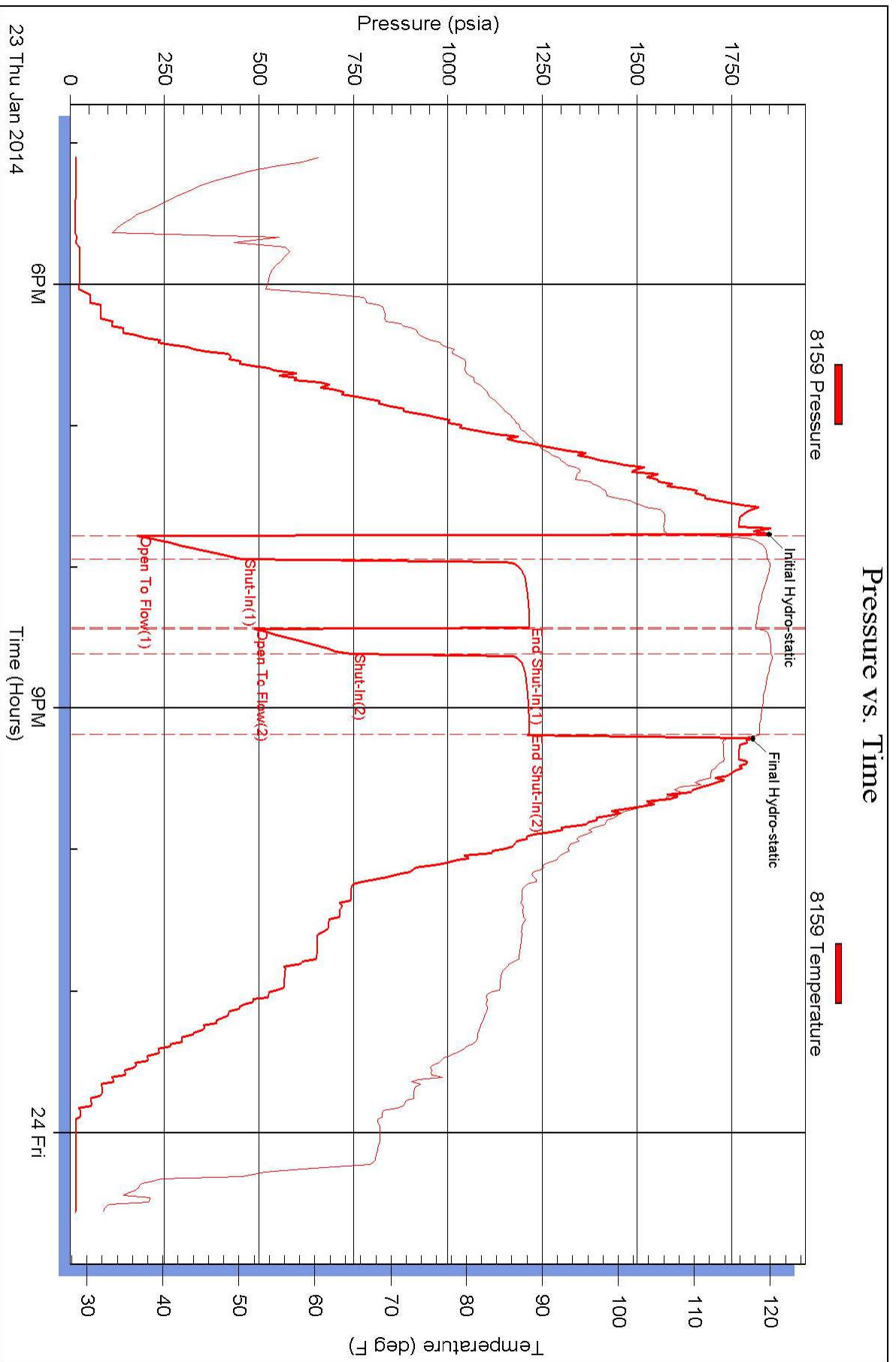
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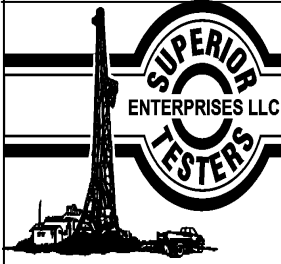


Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

FLUID SUMMARY

Werth Exploration Trust
1308 Schwaller Avenue
Hays, Kansas 67601
ATTN: Herb Deines

7/11S/20W/Ellis
Walz-Mustang SOL #11
Job Ticket: 19192 **DST#: 2**
Test Start: 2014.01.23 @ 17:05:00

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: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.00 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 5000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1426.00	Mud cut Water with show of oil	18.637
0.00	Mud 3% Water 97%	0.000
0.00	Recov. Chlorides 32,000 ppm	0.000
0.00	Recov. Resist .28 ohms @ 50 deg	0.000

Total Length: 1426.00 ft Total Volume: 18.637 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



DRILL STEM TEST REPORT

TOOL DIAGRAM

Werth Exploration Trust
 1308 Schwaller Avenue
 Hays, Kansas 67601
 A T T N : Herb Deines

7/11S/20W/Ellis
Walz-Mustang SOL #11
 Job Ticket: 19192 **DST#: 2**
 Test Start: 2014.01.23 @ 17:05:00

Tool Information

Drill Pipe:	Length: 3495.00 ft	Diameter: 3.80 inches	Volume: 49.03 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 150.00 ft	Diameter: 2.25 inches	Volume: 0.74 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 49.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.85 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3657.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	3723.88 ft			
Interval between Packers:	66.88 ft			
Tool Length:	83.73 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3645.15	
Hydraulic Tool	5.00			3650.15	
Packer	5.00			3655.15	16.85 Bottom Of Top Packer
Packer	1.85			3657.00	
Handling Sub	5.00			3662.00	
Perforations	7.00			3669.00	
Recorder	0.00	8159	Inside	3669.00	
Recorder	0.00	6839	Inside	3669.00	
Blank Off Sub	0.75			3669.75	
Travel Collar	1.82			3671.57	
Packer Anchor side	1.85			3673.42	
Packer Tail Side	1.74			3675.16	
Perforations	13.00			3688.16	
Change Over Sub	0.71			3688.87	
Drill Pipe	31.33			3720.20	
Change Over Sub	0.68			3720.88	
Recorder	0.00	6806	Below	3720.88	
Bullnose	3.00			3723.88	66.88 Bottom Packers & Anchor

Total Tool Length: 83.73



DRILL STEM TEST REPORT

Werth Exploration Trust
 1308 Schw aller Avenue
 Hays, Kansas 67601
 ATTN: Herb Deines

7/11S/20W/Ellis
Walz-Mustang SOL #11
 Job Ticket: 19192 **DST#: 2**
 Test Start: 2014.01.23 @ 17:05:00

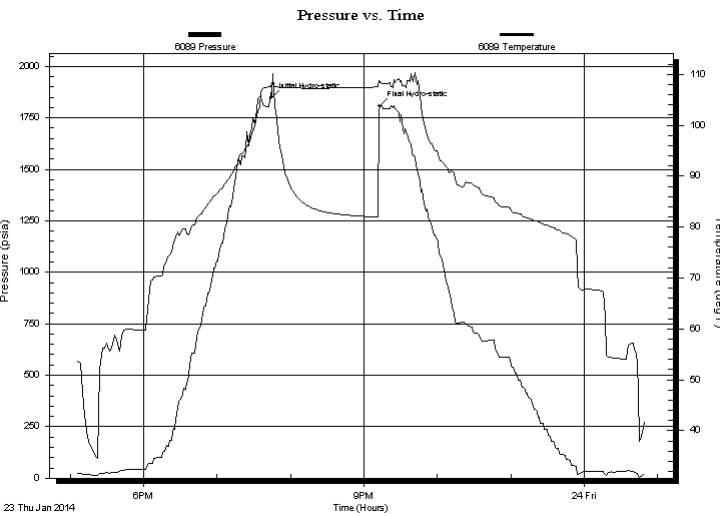
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Straddle (Initial)
 Time Tool Opened: 19:46:30 Tester: Ken Swinney
 Time Test Ended: 00:34:00 Unit No: 3330 Hays/50
 Interval: **3657.00 ft (KB) To 3675.00 ft (KB) (TVD)** Reference Elevations: 2062.00 ft (KB)
 Total Depth: 3675.00 ft (KB) (TVD) 2055.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 6089

Press @ RunDepth: psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2014.01.23 End Date: 2014.01.24 Last Calib.: 2014.01.22
 Start Time: 17:05:00 End Time: 00:49:30 Time On Btm: 2014.01.23 @ 19:44:30
 Time Off Btm: 2014.01.23 @ 21:13:00

TEST COMMENT: 1ST Open 10 Minutes/Strong blow /Blow built to bottom of bucket of diesel in 50 seconds
 1ST Shut In 30 Minutes/Blow back built to 1/2 inch
 2ND Open 10 Minutes/Strong blow /Blow built to bottom of bucket of diesel in 45 seconds
 2ND Shut In 30 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1847.38	108.29	Initial Hydro-static
89	1807.21	108.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1426.00	Mud cut Water with show of oil	18.64
0.00	Mud 3% Water 97%	0.00
0.00	Recov. Chlorides 32,000 ppm	0.00
0.00	Recov. Resist .28 ohms @ 50 deg	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Werth Exploration Trust
 1308 Schwaller Avenue
 Hays, Kansas 67601
 ATTN: Herb Deines

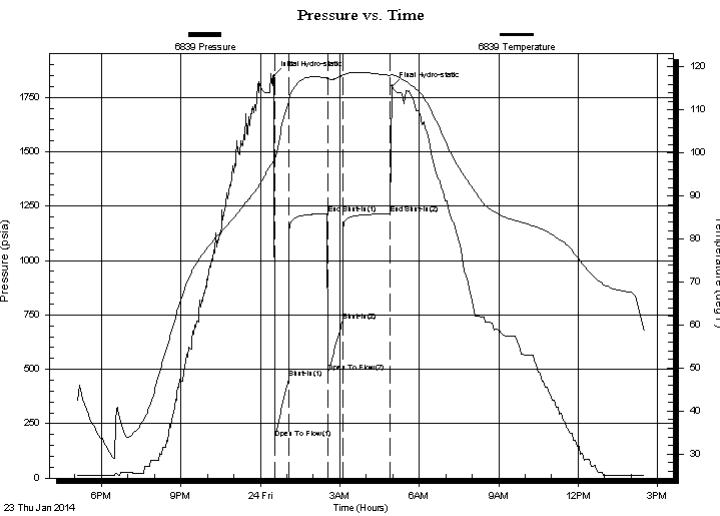
7/11S/20W/Ellis
Walz-Mustang SOL #11
 Job Ticket: 19192 **DST#: 2**
 Test Start: 2014.01.23 @ 17:05:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:46:30
 Time Test Ended: 00:34:00
 Interval: **3657.00 ft (KB) To 3675.00 ft (KB) (TVD)**
 Total Depth: 3675.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: Ken Swinney
 Unit No: 3330 Hays/50
 Reference Elevations: 2062.00 ft (KB)
 2055.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 6839 Inside
 Press @ Run Depth: 1215.30 psia @ 3669.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2014.01.23 End Date: 2014.01.24 Last Calib.: 2014.01.22
 Start Time: 17:05:00 End Time: 14:46:20 Time On Btm: 2014.01.24 @ 00:31:30
 Time Off Btm: 2014.01.24 @ 04:59:00

TEST COMMENT: 1ST Open 10 Minutes/Strong blow/Blow built to bottom of bucket of diesel in 50 seconds
 1ST Shut In 30 Minutes/Blow back built to 1/2 inch
 2ND Open 10 Minutes/Strong blow/Blow built to bottom of bucket of diesel in 45 seconds
 2ND Shut In 30 Minutes/No blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1848.56	98.27	Initial Hydro-static
2	181.11	98.11	Open To Flow (1)
33	457.99	112.11	Shut-In(1)
121	1215.73	117.47	End Shut-In(1)
123	486.76	117.24	Open To Flow (2)
155	721.34	118.06	Shut-In(2)
263	1215.30	118.04	End Shut-In(2)
268	1800.01	118.14	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
1426.00	Mud cut Water with show of oil	18.64
0.00	Mud 3% Water 97%	0.00
0.00	Recov. Chlorides 32,000 ppm	0.00
0.00	Recov. Resist .28 ohms @ 50 deg	0.00

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



DRILL STEM TEST REPORT

Werth Exploration Trust
 1308 Schwaller Avenue
 Hays, Kansas 67601
 ATTN: Herb Deines

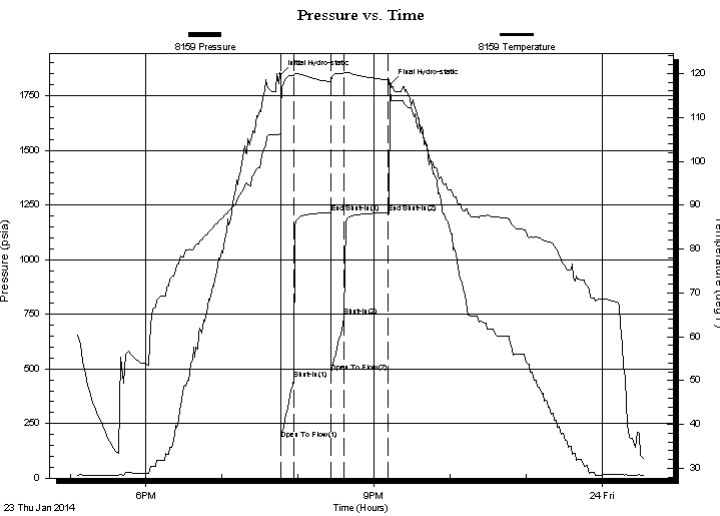
7/11S/20W/Ellis
Walz-Mustang SOL #11
 Job Ticket: 19192 **DST#: 2**
 Test Start: 2014.01.23 @ 17:05:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:46:30
 Time Test Ended: 00:34:00
 Interval: **3657.00 ft (KB) To 3675.00 ft (KB) (TVD)**
 Total Depth: 3675.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: Ken Swinney
 Unit No: 3330 Hays/50
 Reference Elevations: 2062.00 ft (KB)
 2055.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8159 Inside
 Press @ Run Depth: 743.85 psia @ 3669.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2014.01.23 End Date: 2014.01.24 Last Calib.: 2014.01.22
 Start Time: 17:05:00 End Time: 00:34:00 Time On Btm: 2014.01.23 @ 19:46:00
 Time Off Btm: 2014.01.23 @ 21:13:00

TEST COMMENT: 1ST Open 10 Minutes/Strong blow/Blow built to bottom of bucket of diesel in 50 seconds
 1ST Shut In 30 Minutes/Blow back built to 1/2 inch
 2ND Open 10 Minutes/Strong blow/Blow built to bottom of bucket of diesel in 45 seconds
 2ND Shut In 30 Minutes/No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1847.82	106.55	Initial Hydro-static
1	178.17	112.06	Open To Flow (1)
11	453.42	119.61	Shut-In(1)
40	1215.19	118.06	End Shut-In(1)
40	486.30	118.06	Open To Flow (2)
51	743.85	120.08	Shut-In(2)
85	1214.76	118.54	End Shut-In(2)
87	1804.80	114.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1426.00	Mud cut Water with show of oil	18.64
0.00	Mud 3% Water 97%	0.00
0.00	Recov. Chlorides 32,000 ppm	0.00
0.00	Recov. Resist .28 ohms @ 50 deg	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Prepared For: **Werth Exploration Trust**

1308 Schwaller Avenue
Hays, Kansas 67601

ATTN: Herb Deines

Walz-Mustang SOL #11

7/11S/20W/Ellis

Start Date: 2014.01.23 @ 17:05:00

End Date: 2014.01.24 @ 00:34:00

Job Ticket #: 19192 DST #: 2

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2014.01.22 @ 01:09:38