Confidentiality Requested:
☐ Yes ☑ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1213702

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 # 30259
Name: Werth, Andy dba Werth Exploration Trust
Address 1: 1308 SCHWALLER AVE
Address 2:
City: HAYS State: KS Zip: 67601 + 2242
Contact Person: ANDY WERTH
Phone: (785) 625-4968
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: BRUCE BASYE/HERB DEINES
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 #:

7/3/2014	7/8/2014	7/8/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-065-24048-00-00
Spot Description:
SW NW SW NE Sec. 16 Twp. 7 S. R. 22 ☐ East ☑ West
3310 Feet from ☐ North / ☑ South Line of Section
2364 Feet from ☑ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Graham
Lease Name: Worcester Well #: 16-5
Field Name:
Producing Formation: NONE
Elevation: Ground: 2333 Kelly Bushing: 2341
Total Vertical Depth: 3804 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1220 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: 50000 ppm Fluid volume: 600 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date:
☐ **Confidential Release Date:**
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 07/17/2014

[redacted] 1213702

Operator Name: Werth, Andy dba Werth Exploration Trust Lease Name: Worcester Well #: 16-5

Sec. 16 Twp. 7 S. R. 22 ☐ East ☑ West County: Graham

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

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

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

RADIATION GUARD LOG
MICRORESISTIVITY LOG

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

Name	Top	Datum
ANHYDRITE	1964	+377
TOPEKA	3323	-982
HEEBNER SHALE	3524	-1183
TORONTO	3548	-1207
LKC	3566	-1225
BKC	3759	-1418
RTD	3804	-1463

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
SURFACE	12.25	8.625	23	220	COMMON	150	2%GEL 3%CC

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	- -			

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

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

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: ☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)* _____

PRODUCTION INTERVAL:

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

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 509

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-3-14	16	7	22	Graham	KS		6:30 PM

Location Dogue 18 & 24 W to 310 5 N into

Lease Worcester Well No. 16-5

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 Discovery #1

Type Job Surface

Hole Size 12 1/4 T.D. 220'

Csg. 8 5/8 Depth 220'

Charge To Werth Exploration

Street

Tbg. Size Depth

City State

Tool Depth

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 20' Shoe Joint

Cement Amount Ordered 150 com 3% cc 2% Gel

Meas Line Displace 12 3/4 bbl

EQUIPMENT

Pumptrk 5	No.	Cementer Helper	David
Bulktrk 14	No.	Driver Driver	Clayton
Bulktrk PU	No.	Driver Driver	Brett

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Cement Circulated!!

Common	150
Poz. Mix	
Gel.	3
Calcium	5
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	159
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge	Surface
Mileage	44
Tax	
Discount	
Total Charge	

X Signature

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 309

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-8-14	16	7	22	Graham	KS	11:30 AM	2:15 P.M.

Location Bogue ave 24 hy W to

Lease Worcester Well No. 16-5

Owner 3/0 SW Winto

Contractor Discovery 1

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.

Type Job plug

Hole Size T.D. 3804

Charge To Werth Exploration

Csg. Dill pipe Depth

Street

Tbg. Size Depth

City State

Tool Depth

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. Shoe Joint

Cement Amount Ordered 255 60/40 4% gel 1/4# flow

Meas Line Displace

EQUIPMENT

Pumptrk 20 No. Cementer Mitch
Helper

Bulktrk 4 No. Driver Driver Mitch

Bulktrk pu No. Driver Driver Lonnie M Tytch

Common ~~255~~ 153

Poz. Mix 102

Gel. 9

Calcium

Hulls

Salt

Flowseal 63#

Kol-Seal

Mud CLR 48

CFL-117 or CD110 CAF 38

Sand

Handling 264

Mileage

8 5/8 **FLOAT EQUIPMENT**

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Wood plug

Pumptrk Charge plug

Mileage 44

Tax

Discount

Total Charge

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 SKS

Mouse Hole 15 SKS

Centralizers

Baskets

D/V or Port Collar

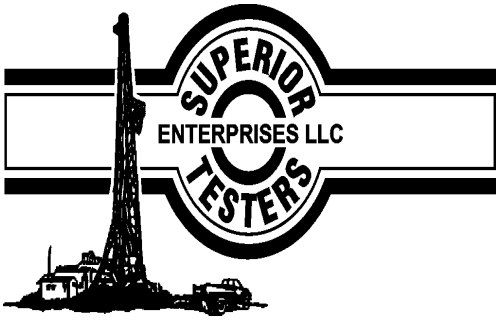
1st 1980ft - 50 SKS

2nd 1185ft 100 SKS

3rd 270ft 50 SKS

4th 40ft 10 SKS

x Signature Cliff Mayfield



DRILL STEM TEST REPORT

Prepared For: **Werth Exploration Trust**

1308 Schwaller Ave.
Hays Kansas 67601

ATTN: Herb Deines

Worcester 16-5

16-7s-22w-Graham

Start Date: 2014.07.07 @ 01:48:00

End Date: 2014.07.07 @ 07:50:00

Job Ticket #: 18348 DST #: 1

Superior Testers Enterprises LLC

PO Box 138 Great Bend KS 67530

1-800-792-6902

Printed: 2014.07.07 @ 09:10:58

DRILL STEM TEST REPORT

Werth Exploration Trust

1308 Schwaller Ave.
Hays Kansas 67601

ATTN: Herb Deines

16-7s-22w-Graham

Worcester 16-5

Job Ticket: 18348 **DST#: 1**

Test Start: 2014.07.07 @ 01:48:00

GENERAL INFORMATION:

Formation: **Lansing C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:29:30
Time Test Ended: 07:50:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Ellis
Unit No: 3315-Hays-132

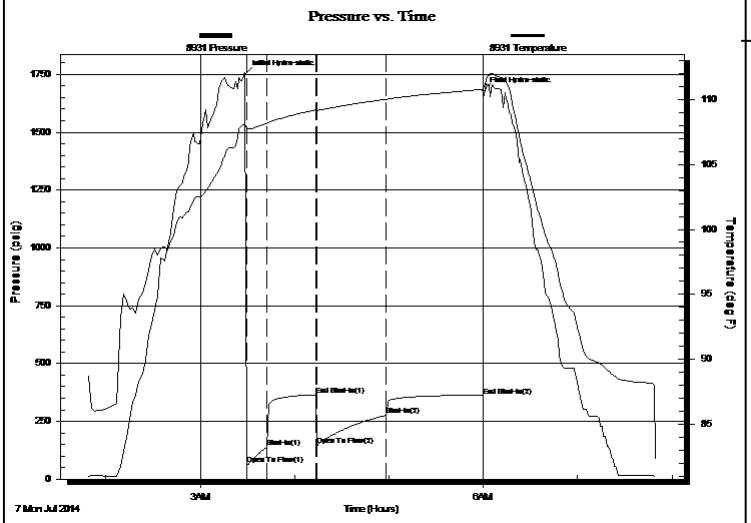
Interval: 3582.00 ft (KB) To 3610.00 ft (KB) (TVD)
Total Depth: 3610.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2341.00 ft (KB)
2334.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8931 **Inside**
Press@RunDepth: 276.14 psig @ 3605.00 ft (KB)
Start Date: 2014.07.07 End Date: 2014.07.07
Start Time: 01:48:00 End Time: 07:50:00

Capacity: 5000.00 psig
Last Calib.: 2014.07.07
Time On Btm: 2014.07.07 @ 03:28:30
Time Off Btm: 2014.07.07 @ 06:00:00

TEST COMMENT: 1st Open 15 minutes Strong building blow built to the bottom of a 5 gallon bucket of water in 6 minutes.
1st Shut in 30 minutes No blow back
2nd Open 45 minutes Strong building blow built to the bottom of a 5 gallon bucket of water in 11 minutes.
2nd Shut in 60 minutes No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1750.88	108.15	Initial Hydro-static
1	62.60	107.76	Open To Flow (1)
14	139.26	108.17	Shut-In(1)
45	364.81	109.19	End Shut-In(1)
46	147.54	109.09	Open To Flow (2)
90	276.14	110.02	Shut-In(2)
152	359.02	110.78	End Shut-In(2)
152	1677.57	111.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
183.00	Very lightly oil spotted watery mud	2.57
0.00	Mud 90% Water 10%	0.00
305.00	Muddy water water95% mud 5%	4.28
0.00	Chlorides 48,000 .3ohms 56 degrees	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Werth Exploration Trust

1308 Schwaller Ave.
Hays Kansas 67601

ATTN: Herb Deines

16-7s-22w-Graham

Worcester 16-5

Job Ticket: 18348 **DST#: 1**

Test Start: 2014.07.07 @ 01:48:00

GENERAL INFORMATION:

Formation: **Lansing C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:29:30
Time Test Ended: 07:50:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Ellis
Unit No: 3315-Hays-132

Interval: 3582.00 ft (KB) To 3610.00 ft (KB) (TVD)
Total Depth: 3610.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

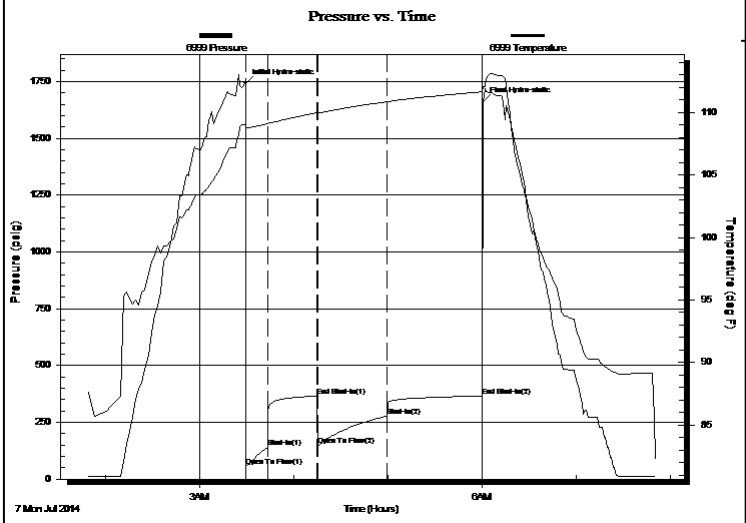
Reference Elevations: 2341.00 ft (KB)
2334.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6999 **Outside**

Press@RunDepth: 364.77 psig @ 3605.00 ft (KB)
Start Date: 2014.07.07 End Date: 2014.07.07
Start Time: 01:48:00 End Time: 07:50:30

Capacity: 5000.00 psig
Last Calib.: 2014.07.07
Time On Btm: 2014.07.07 @ 03:29:00
Time Off Btm: 2014.07.07 @ 06:00:30

TEST COMMENT: 1st Open 15 minutes Strong building blow built to the bottom of a 5 gallon bucket of water in 6 minutes.
1st Shut in 30 minutes No blow back
2nd Open 45 minutes Strong building blow built to the bottom of a 5 gallon bucket of water in 11 minutes.
2nd Shut in 60 minutes No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1742.17	109.07	Initial Hydro-static
1	55.06	108.75	Open To Flow (1)
14	139.36	109.07	Shut-In(1)
46	363.55	109.97	End Shut-In(1)
46	147.19	109.95	Open To Flow (2)
90	277.43	110.85	Shut-In(2)
151	364.77	111.65	End Shut-In(2)
152	1659.89	112.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
183.00	Very lightly oil spotted watery mud	2.57
0.00	Mud 90% Water 10%	0.00
305.00	Muddy water water95% mud 5%	4.28
0.00	Chlorides 48,000 .3ohms 56 degrees	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Werth Exploration Trust

1308 Schwaller Ave.
Hays Kansas 67601

ATTN: Herb Deines

16-7s-22w-Graham

Worcester 16-5

Job Ticket: 18348 **DST#: 1**

Test Start: 2014.07.07 @ 01:48:00

Tool Information

Drill Pipe:	Length:	3567.00 ft	Diameter:	3.80 inches	Volume:	50.04 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:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		72000.00 lb
					Total Volume:	50.04 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		5.00 ft					String Weight:	Initial	50000.00 lb
Depth to Top Packer:		3582.00 ft						Final	51000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		28.00 ft							
Tool Length:		48.00 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			3567.00		
Hydraulic tool	5.00			3572.00		
Top Packer	5.00			3577.00		
Packer	5.00			3582.00	20.00	Bottom Of Top Packer
Anchor	23.00			3605.00		
Recorder	0.00	8931	Inside	3605.00		
Recorder	0.00	6999	Outside	3605.00		
Bull Plug	5.00			3610.00	28.00	Anchor Tool
Total Tool Length:	**48.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Werth Exploration Trust

1308 Schwaller Ave.
Hays Kansas 67601

ATTN: Herb Deines

16-7s-22w-Graham

Worcester 16-5

Job Ticket: 18348 **DST#: 1**

Test Start: 2014.07.07 @ 01:48:00

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:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.40 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	750.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

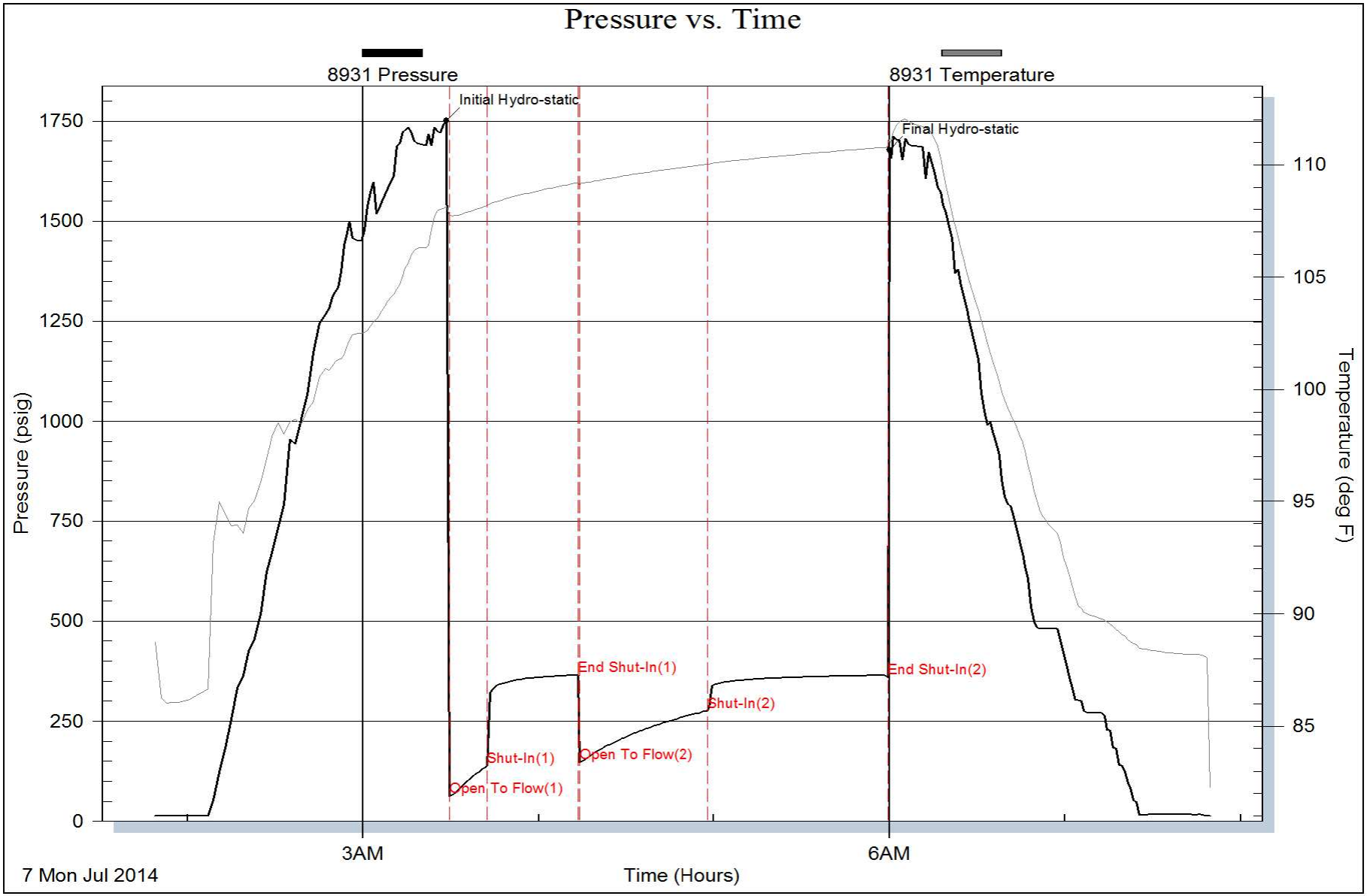
Recovery Table

Length ft	Description	Volume bbl
183.00	Very lightly oil spotted watery mud	2.567
0.00	Mud 90% Water 10%	0.000
305.00	Muddy water water95% mud 5%	4.278
0.00	Chlorides 48,000 .3ohms 56 degrees	0.000

Total Length: 488.00 ft Total Volume: 6.845 bbl

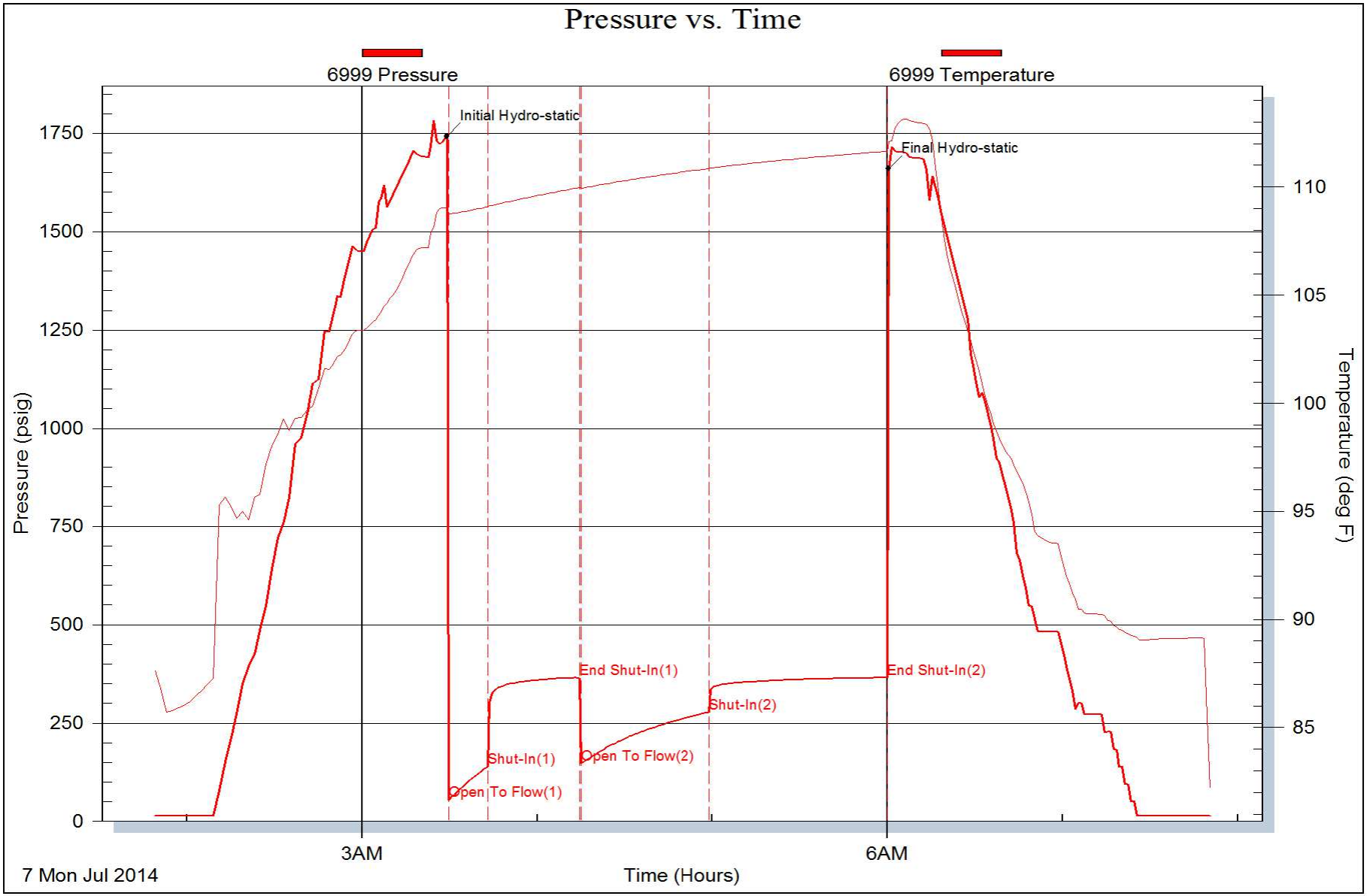
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8931 **Inside** Werth Exploration Trust Worcester 16-5 DST Test Number: 1



Superior Testers Enterprises LLC Ref. No: 18348 Printed: 2014.07.07 @ 09:10:58

Serial #: 6999 **Outside** Werth Exploration Trust Worcester 16-5 DST Test Number: 1



Superior Testers Enterprises LLC Ref. No: 18348 Printed: 2014.07.07 @ 09:10:58

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:	WORCESTER # 16-5		
Location:	SW NW SW NE Sec.16-T7S R22W		
API:	15-065-24,048-00-00		
Pool:		Field:	ALDA
State:	KANSAS	Country:	USA

Scale 1:240 Imperial

Well Name:	WORCESTER # 16-5		
Surface Location:	SW NW SW NE Sec.16-T7S R22W		
Bottom Location:			
API:	15-065-24,048-00-00		
License Number:	30259		
Spud Date:	7/3/2014	Time:	2:45 PM
Region:	GRAHAM COUNTY		
Drilling Completed:	7/7/2014	Time:	10:20 PM
Surface Coordinates:	3310' FSL & 2364' FEL		
Bottom Hole Coordinates:			
Ground Elevation:	2334.00ft		
K.B. Elevation:	2341.00ft		
Logged Interval:	3170.00ft	To:	3804.00ft
Total Depth:	3804.00ft		
Formation:	LANSING-KANSAS CITY		
Drilling Fluid Type:	CHEMICAL/FRESH WATER GEL		

SURFACE CO-ORDINATES

Well Type:	Vertical
Longitude:	-99.7783882
Latitude:	39.4463488
N/S Co-ord:	3310' FSL
E/W Co-ord:	2364' FEL

LOGGED BY

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

CONTRACTOR

Contractor:	DISCOVERY DRILLING, INC.		
Rig #:	1		
Rig Type:	MUD ROTARY		
Spud Date:	7/3/2014	Time:	2:45 PM
TD Date:	7/7/2014	Time:	10:20 PM
Rig Release:	7/8/2014	Time:	1:00 PM

ELEVATIONS

K.B. Elevation:	2341.00ft	Ground Elevation:	2334.00ft
K.B. to Ground:	7.00ft		

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF DST # 1 AND LOG ANALYSIS

OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: RADIATION GUARD LOG, MICRORESISTIVITY LOG

DRILL STEM TESTING BY SUPERIOR TESTERS: ONE (1) CONVENTIONAL TEST

FORMATION TOPS COMPARISON

	WORCESTER 16-5 SW NW SE NE SEC.16-T7S-R22W 2333'GL 2341'KB	**WORCESTER B-1 SW SW NE SEC.16-T7S-R22W KB 2334'**	**WORCESTER F-16 NW SW NE SEC.16-7S-22W KB 2343'**
FORMATION	LOG TOPS	LOG TOPS	LOG TOPS
Anhydrite	**1964 +377**	**+374**	**+383**
B-Anhydrite	**1994 +347**		**+352**
Topeka	**3323 -982**	**-986**	**-983**
Heebner Sh.	**3524-1183**	**-1183**	**-1183**
Toronto	**3548-1207**	**-1205**	**-1207**
LKC	**3566-1225**	**-1226**	**-1227**
BKC	**3759-1418**	**-1418**	**-1419**
Arbuckle	**NR**	**NR**	**-1547**
RTD	**3804-1463**	**-1551**	**-1555**

SUMMARY OF DAILY ACTIVITY

7-03-14	**Spud 2:45 PM, set 8 5/8" surface casing to 220' w/ 150 sxs Common 2% Gel 3% CC, slope 3/4 degree, plug down 6:30 PM, WOC 8 Hours**
7-04-14	**700', drill plug at 2:30AM**
7-05-14	**2640', displaced at 3249'**
7-06-14	**3359', drilling, CFS 3564', short trip 25 stands, CFS 3610', CCH, TOWB**
7-07-14	**3610', DST # 1 3582'-3610' "C" LKC, RTD 3804' @10:20 PM, CCH, TOWB**
7-08-14	**3804', logs, LDDP, P&A**

DST # 1 TEST SUMMARY

DRILL STEM TEST REPORT

Werth Exploration Trust

1308 Schwaller Ave.
Hays Kansas 67601

ATTN: Herb Deines

16-7s-22w-Graham

Worcester 16-5

Job Ticket: 18348 **DST#: 1**

Test Start: 2014.07.07 @ 01:48:00

GENERAL INFORMATION:

Formation: **Lansing C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:29:30
Time Test Ended: 07:50:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Ellis
Unit No: 3315-Hays-132

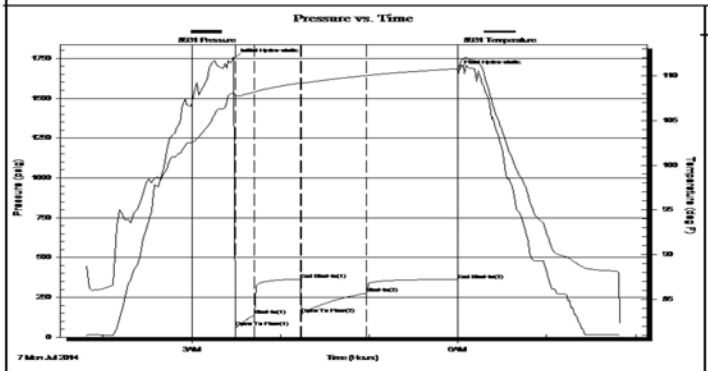
Interval: 3582.00 ft (KB) To 3610.00 ft (KB) (TVD)
Total Depth: 3610.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2341.00 ft (KB)
2334.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8931 **Inside**
Press@RunDepth: 276.14 psig @ 3605.00 ft (KB)
Start Date: 2014.07.07 End Date: 2014.07.07
Start Time: 01:48:00 End Time: 07:50:00

Capacity: 5000.00 psig
Last Calib.: 2014.07.07
Time On Btm: 2014.07.07 @ 03:28:30
Time Off Btm: 2014.07.07 @ 06:00:00

TEST COMMENT: 1st Open 15 minutes Strong building blow built to the bottom of a 5 gallon bucket of water in 6 minutes.
1st Shut in 30 minutes No blow back
2nd Open 45 minutes Strong building blow built to the bottom of a 5 gallon bucket of water in 11 minutes.
2nd Shut in 60 minutes No blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1750.88	108.15	Initial Hydro-static
1	62.60	107.76	Open To Flow (1)
14	139.26	108.17	Shut-In(1)
45	364.81	109.19	End Shut-In(1)
46	147.54	109.09	Open To Flow (2)
90	276.14	110.02	Shut-In(2)
152	359.02	110.78	End Shut-In(2)
152	1677.57	111.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
183.00	Very lightly oil spotted watery mud	2.57
0.00	Mud 90% Water 10%	0.00
305.00	Muddy water water95% mud 5%	4.28
0.00	Chlorides 48,000 .3ohms 56 degrees	0.00

Gas Rates

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

Superior Testers Enterprises LLC Ref. No: 18348 Printed: 2014.07.07 @ 09:10:58

Image Header 03

Image Header 04

Image Header 05

ROCK TYPES

Clystgy
Lmst fw7>
shale, gry
shale, red
Lmst fw<7
shale, grn
Carbon Sh

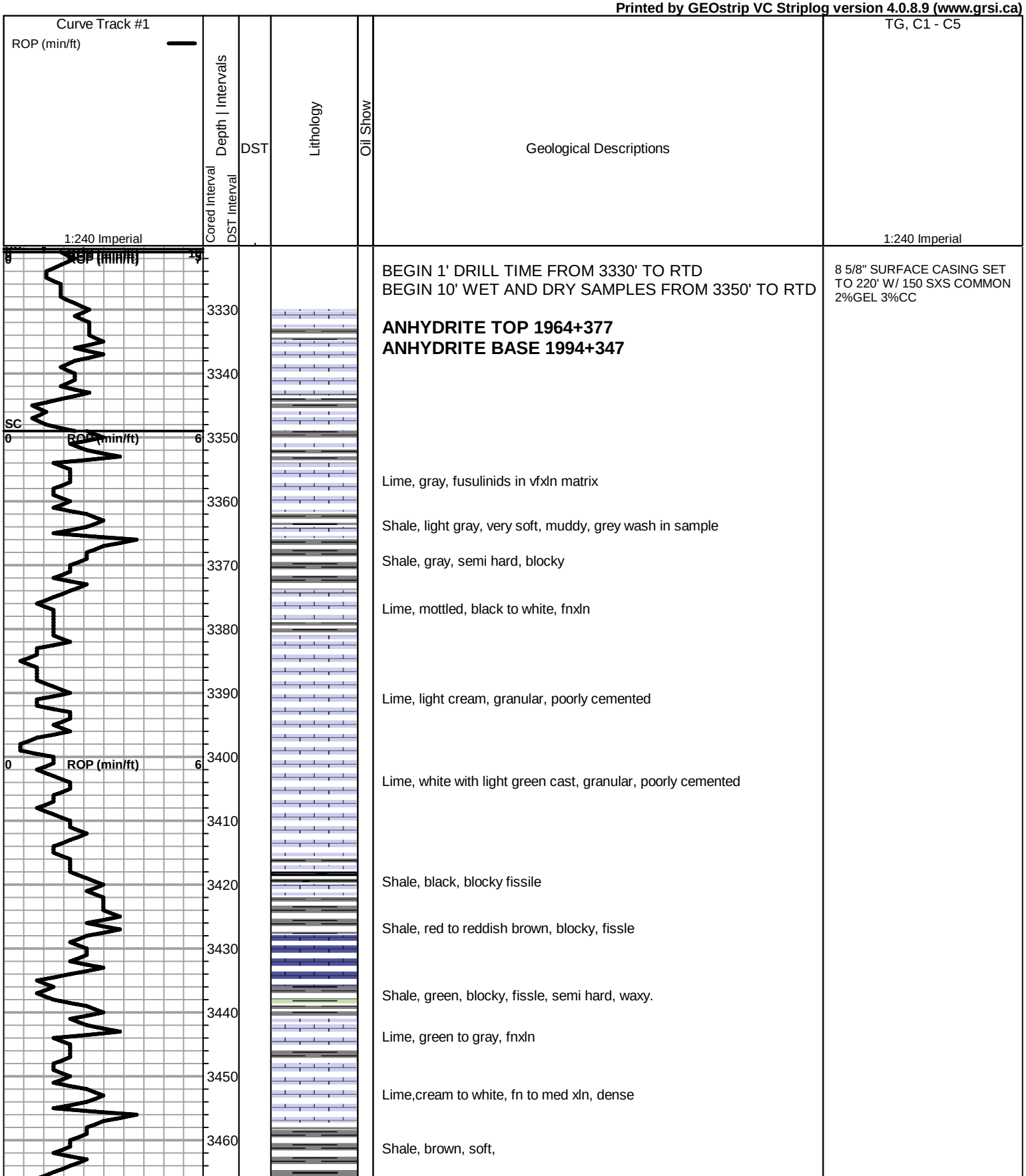
ACCESSORIES

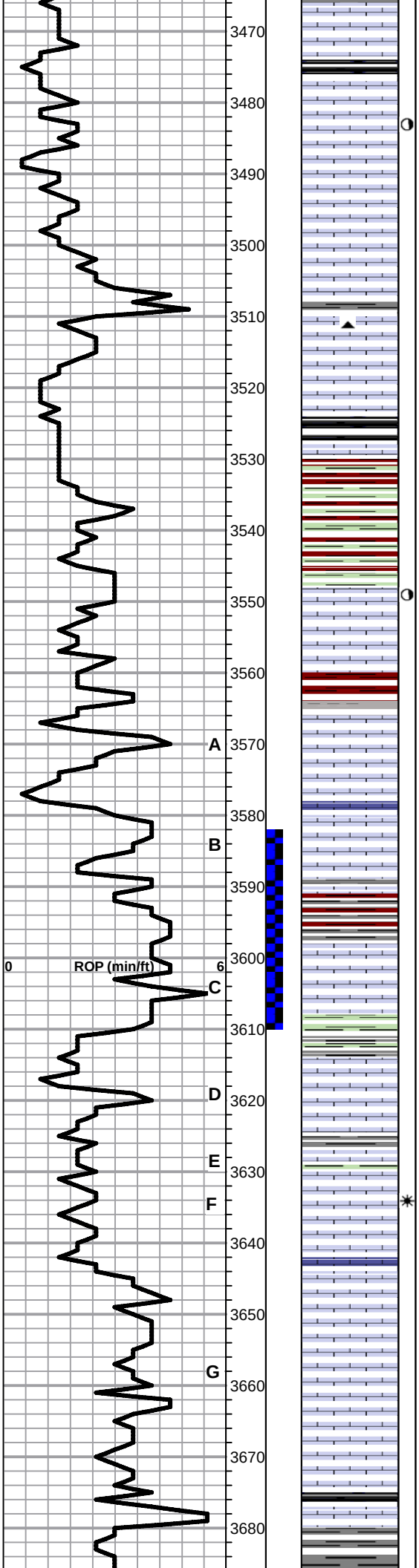
MINERAL
▲ Chert, dark

OTHER SYMBOLS

DST
DST Int
DST alt
Core

Printed by GEOstrip VC Striplog version 4.0.8.9 (www.grsi.ca)





Lime, varied colors, fossil fragments in vfxln matrix

Shale, black carbonaceous, fissile, blocky

Lime, light gray, fxln, small scattered vugs, MSFO, no odor, scattered staining

Liime, light cream, to white, fnxln, dense

Lime, light gray to light green, oolitic, poorly cemented, breaks easy

Lime, gray to light green, fn-micro xln, dense

Chert, bedded, white to light blue, hard break, conq fracture.

HEEBNER SHALE 3524-1183

Shale, black carbonaceous, fissile, blocky
Lime, light brown to tan, fnxln, platey

Shale, reddish brown, blocky, fissile

Shale, red to bright ochre, blocky, waxy, semi hard

TORONTO 3548-1207

Lime, white, gray caste, mxln, very hard.
Circulated for samples, 20 min. slight odor, strong odor in 40, 60 min.
Scattered oil in rock.

SHORT TRIP 3554'

Shale, lt gray to gray, blocky, fissle, waxy in part, semi-hard.

LKC 3566-1225

Lime, vfxln, light gray, chert like, dense

Lime, white to cream, fossil fragments, in fnxln matrix

Lime, fnxln, white with very lite green cast in part

Shale, red, blocky, fissle

DST # 1 3582' TO 3610' "C"
SEE HEADER FOR TEST SUMMARY

Lime, white to cream, chalky, soft

Shale, green, soft, green wash in sample

Lime, light green, fxln to mxln, chalky in part

Shale, very light gray, blocky fissile

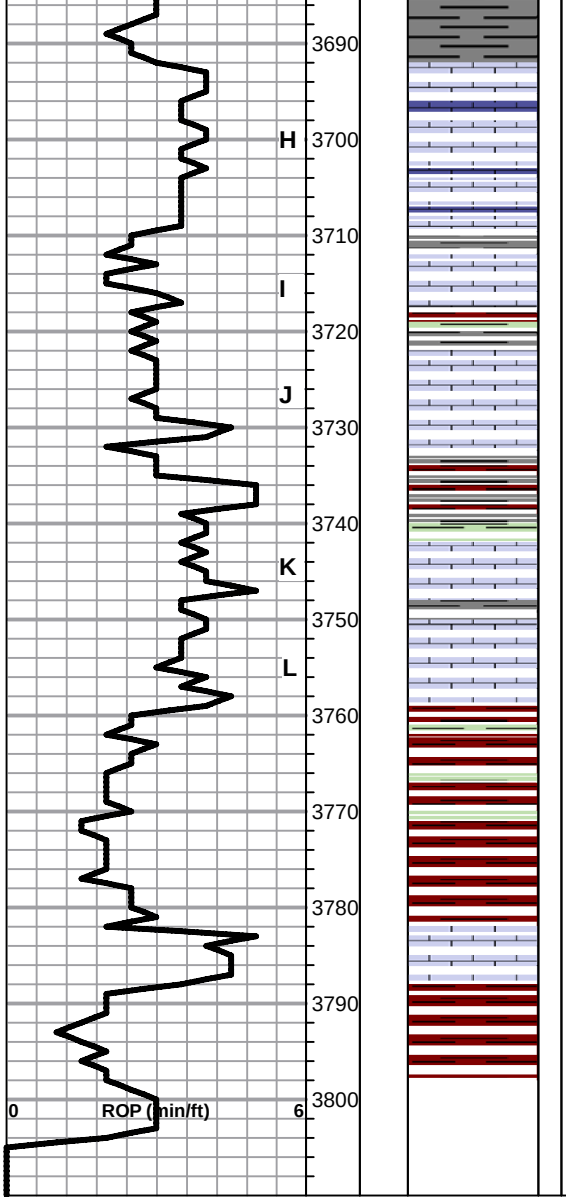
Lime, white to cream, oolitic clusters, poorly developed porosity, poor permeability. Chalky, oolitic casts present in sample Strong odor, NFO

Lime, white to cream, fossil frags in fnxln matrix, Strong odor, no free oil.

Lime, white to cream, fn to vfxln

Lime, white with light green caste, fn-micro xln

Shale, gray to black, hard, very competent.



Lime, white, very light green caste, fnxln, brittle

Lime, reddish brown, fnxln

Lime white to cream, fnxln, platey

Shale, various colors, red, gray, black, blocky

Lime, cream, oolitic, clusters, poorly developed porosity, perms.

Shale, green, gray, red, blocky

Lime, brown white mottled, large grain, hard

Lime, cream, chalky, soft

BKC 3759-1418

Shale, green with black specs, soft

Shale, lt green, soft, mudstone

Shale, red to reddish brown, blocky fissile.