

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1254892  
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: \_\_\_\_\_

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Arnold E Unit 1-1
Doc ID	1254892

All Electric Logs Run

Spectral Density Dual Spaced Neutron Log
Microlog
Array Compensated True Resistivity Log
Borehole Compensated Sonic Array Log

Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Arnold E Unit 1-1
Doc ID	1254892

Tops

Name	Top	Datum
Heebner (base)	3710	-370
Toronto	3723	-383
Lansing	3766	-426
KS City (base)	4331	-991
Marmaton	4356	-1016
Ft. Scott	4534	-1194
Morrow	5016	-1676
Chester	5478	-2138
St. Genevieve	5534	-2194
RTD	5610	-2270
LTD	5606	-2266



# ALLIED OIL & GAS SERVICES, LLC

Federal Tax I.D. # 20-8651475

2107  
063861  
108.83 112.00

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

SERVICE POINT:  
Dealey

DATE <u>4/2/15</u>	SEC. <u>7</u>	TWP. <u>29</u>	RANGE <u>40</u>	CALLED OUT	ON LOCATION	JOB START <u>10:00 AM</u>	JOB FINISH <u>2:00 PM</u>
LEASE <u>Arroyo</u>		WELL# <u>1-1</u>	LOCATION <u>Ampride Johnson Cr. - E 50ft</u>		COUNTY <u>Stanton</u>	STATE <u>TX</u>	
OLD OR <u>NEW</u> (Circle one)			<u>S 1/4 W. 10. into</u>				

CONTRACTOR <u>Beredco 1</u>	OWNER <u>Some</u>
TYPE OF JOB <u>Long Surface</u>	
HOLE SIZE _____ T.D. _____	CEMENT _____
CASING SIZE <u>8 1/2</u> DEPTH <u>1209</u>	AMOUNT ORDERED <u>645 AW 65/35 670 gal 370cc</u>
TUBING SIZE _____ DEPTH _____	<u>1/4 16 Fl Seal</u>
DRILL PIPE <u>4 1/2</u> DEPTH _____	<u>150 Com 370cc</u>
TOOL _____ DEPTH _____	
PRES. MAX _____ MINIMUM _____	COMMON <u>150 G/L @ 17.20 2685.00</u>
MEAS. LINE _____ SHOE JOINT <u>42'</u>	POZMIX _____ @ _____
CEMENT LEFT IN CSG. <u>42'</u>	GEL _____ @ _____
PERFS. _____	CHLORIDE <u>2107 @ 1.10 2317.20</u>
DISPLACEMENT _____	ASC _____ @ _____

EQUIPMENT	
PUMP TRUCK # <u>015981</u>	CEMENTER <u>Alan Ryan</u>
BULK TRUCK # <u>897</u>	HELPER <u>Alan Ryan</u>
BULK TRUCK # <u>818</u>	DRIVER <u>Lakene Wentz</u>
	DRIVER <u>Cory Brown</u>

AW 65/35 670 gal - 645 G/L @ 19.20	12822.00
Fl Seal 156.16 @ 2.22	463.32
Material Total @	18288.60
(2,229.87/45%) @	
HANDLING <u>903.50</u> @ <u>2.40</u>	2240.80
MILEAGE <u>25</u> @ <u>7.68</u>	3128.00
<b>TOTAL</b>	

**REMARKS:**

Arroyo, Circularity, mix 645 G/L AW 65/35 670 gal 370cc  
1/4 Fl Seal w/ 150 Com 370cc, Displace w/ 107  
88L H2O w/ 600 PST 4FT  
Bring Plug to 1009 PST  
Fl Seal Held.

Cement Ord Circularity  
Fl Seal  
Alan, Alan, Lakene, Cory

CHARGE TO: Beredco  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**SERVICE**

DEPTH OF JOB _____	
PUMP TRUCK CHARGE _____	2213.25
EXTRA FOOTAGE @ _____	
MILEAGE <u>30</u> @ <u>7.68</u>	231.20
MANIFOLD <u>Head</u> @ _____	14.00
<u>Circularity 30</u> @ <u>4.80</u>	288.00
<b>TOTAL</b>	8034.62

**PLUG & FLOAT EQUIPMENT**

AFU <u>Enner T</u> 1 @ _____	447.00
<u>Smile shoe</u> 1 @ _____	460.00
<u>Centralizers</u> 3 @ <u>25.00</u>	205.00
<u>700 Rubber Plug</u> 1 @ _____	131.00
<b>TOTAL</b>	1263.00

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 \_\_\_\_\_  
 SIGNATURE [Signature]

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES 27,586.24  
 DISCOUNT 12,413.80 (45%) IF PAID IN 30 DAYS  
Bid 15772.43 Net.



# CEMENTING LOG

STAGE NO. \_\_\_\_\_

Date 4/8/15 District Padley Ticket No. 263861  
 Company Burco Rig Buraco 1  
 Lease Arnold Unit Well No. 1-1  
 County Stanton State Ky  
 Location \_\_\_\_\_ Field \_\_\_\_\_

CEMENT DATA:

Spacer Type: \_\_\_\_\_  
 Amt. \_\_\_\_\_ Skts Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

LEAD: Pump Time \_\_\_\_\_ hrs. Type 65/35 60 mgal 14 P60

Excess \_\_\_\_\_  
 Amt. 145 Skts Yield 122 ft<sup>3</sup>/sk Density 12.5-2 PPG

TAIL: Pump Time \_\_\_\_\_ hrs. Type \_\_\_\_\_

Excess \_\_\_\_\_  
 Amt. 150 Skts Yield 133 ft<sup>3</sup>/sk Density 14.2 PPG

WATER: Load 10 gals/sk Tail 12 gals/sk Total \_\_\_\_\_ Bbls.

Pump Trucks Used 480 289

Bulk Equip. 890  
818

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 8.518 Type Open Weight 27 Collar \_\_\_\_\_

Casing Depths: Top KB Bottom 17.09

Drill Pipe: Size 4 1/2 Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 12 1/4 T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:

Casing: Bbls/Lin. ft. 0.2657 Lin. ft./Bbl. \_\_\_\_\_

Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_

Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_

Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_

Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

Float Equip. Manufacturer \_\_\_\_\_

Shoe: Type Guide Depth 1709

Float: Type AFN Insert Depth 1667

Centralizers: Quantity 3 Plugs Top 1 Btm. \_\_\_\_\_

Stage Collars \_\_\_\_\_

Special Equip. \_\_\_\_\_

Disp. Fluid Type H<sub>2</sub>O Amt. \_\_\_\_\_ Bbls. Weight \_\_\_\_\_ PPG

Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG

COMPANY REPRESENTATIVE \_\_\_\_\_

CEMENTER AK

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
7:00						Deployment on RTG with Setup
						Priming, Circulate
10:00				165	3 1/2	Max ALW 378 CC 14 P60
				22-0	3 1/2	Max ALW 378 CC
	600			107.0	5.0	Displacement w/ H <sub>2</sub> O
	1000					Plug Plug to 1000 P60
12:00						Job Complete
						Cement Add Circulate



**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: ARNLDEUNT1-1DST1

TIME ON: 0055  
TIME OFF: 0630

Company BEREXCO LLC Lease & Well No. ARNOLD E UNIT #1-1  
Contractor BEREDCO LLC RIG 1 Charge to BEREXCO LLC  
Elevation 3329 GL EST Formation UPPER MORROW Effective Pay \_\_\_\_\_ Ft. Ticket No. M762  
Date 4/16/2015 Sec. 01 Twp. \_\_\_\_\_ 29 S Range \_\_\_\_\_ 41 W County STANTON State KANSAS  
Test Approved By EDWIN H. GRIEVES Diamond Representative MIKE COCHRAN

Formation Test No. 1 Interval Tested from 5015 ft. to 5061 ft. Total Depth 5061 ft.  
Packer Depth 5010 ft. Size 6 3/4 in. Packer depth NA ft. Size 6 3/4 in.  
Packer Depth 5015 ft. Size 6 3/4 in. Packer depth NA ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 4997 ft. Recorder Number 5448 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 5017 ft. Recorder Number 0063 Cap. 5,000 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEM Viscosity 50 Drill Collar Length 620 ft. I.D. 2 1/4 in.  
Weight 9.2 Water Loss 8.0 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 650 P.P.M. Drill Pipe Length 4363 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 3 Test Tool Length 32 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 46 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: \_\_\_\_\_  
2nd Open: \_\_\_\_\_

Recovered \_\_\_\_\_ ft. of LOST CIRC WHILE TIH  
Recovered \_\_\_\_\_ ft. of MISRUN  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
_____	Total

Time Set Packer(s) \_\_\_\_\_ A.M. \_\_\_\_\_ P.M. Time Started Off Bottom \_\_\_\_\_ A.M. \_\_\_\_\_ P.M. Maximum Temperature 112°F

Initial Hydrostatic Pressure..... (A) \_\_\_\_\_ P.S.I.  
Initial Flow Period..... Minutes (B) \_\_\_\_\_ P.S.I. to (C) \_\_\_\_\_ P.S.I.  
Initial Closed In Period..... Minutes (D) \_\_\_\_\_ P.S.I.  
Final Flow Period..... Minutes (E) \_\_\_\_\_ P.S.I. to (F) \_\_\_\_\_ P.S.I.  
Final Closed In Period..... Minutes (G) \_\_\_\_\_ P.S.I.  
Final Hydrostatic Pressure..... (H) \_\_\_\_\_ P.S.I.

Diamond Testing shall not be liable for damages of any kind to 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 statement or opinion concerning the result 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.

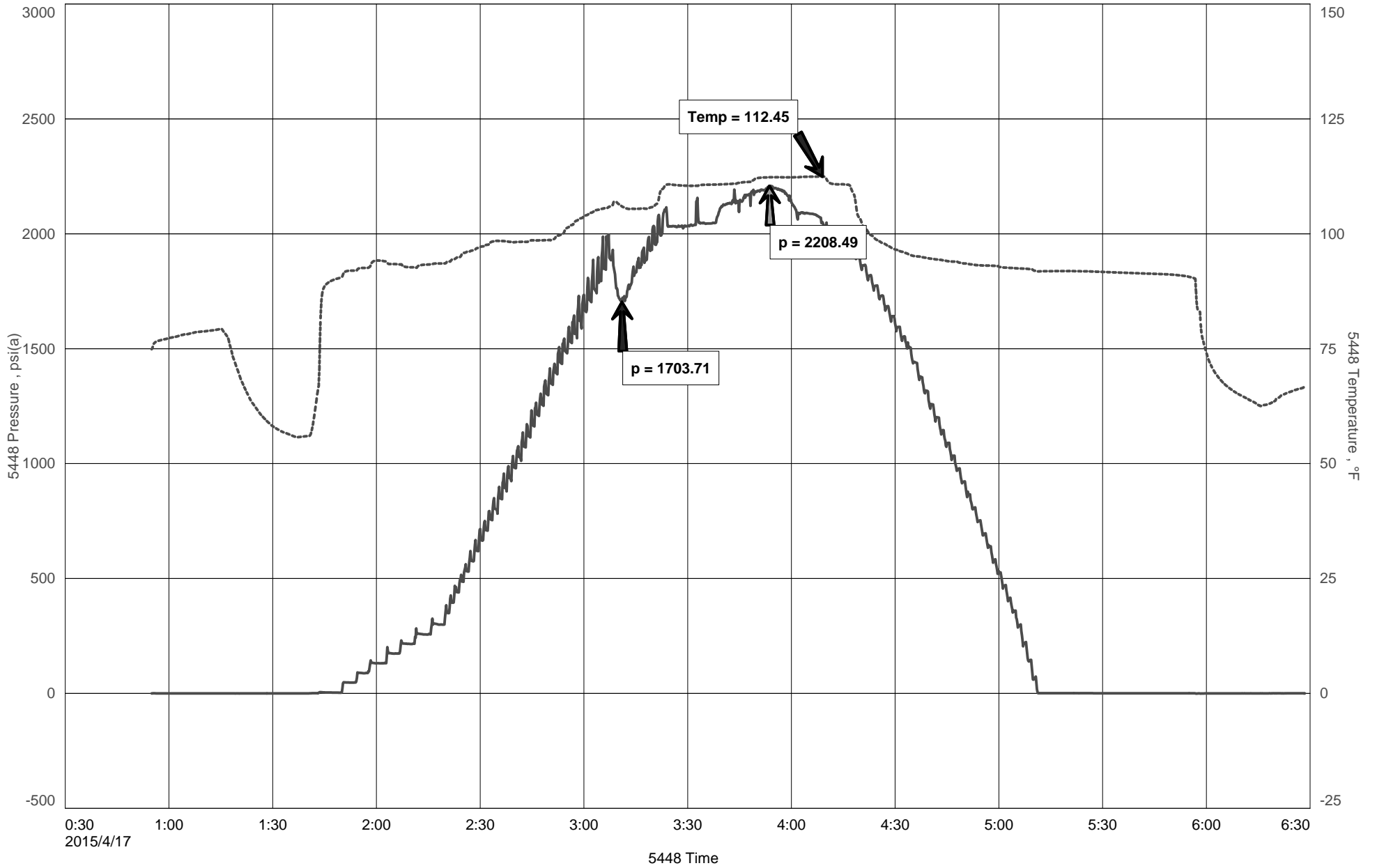




BEREXCO LLC  
DST#1 5015-5061 UPPER MORROW  
Start Test Date: 2015/04/17  
Final Test Date: 2015/04/17

ARNOLD E UNIT #1-1  
Formation: DST#1 5015-5061 UPPER MORROW  
Pool: WILDCAT  
Job Number: M762

# ARNOLD E UNIT #1-1



Date 4-22-15 District Oakley Ticket No. 064200  
 Company Berexco Rig Berexco 1  
 Lease Arnold Unit Well No. 1-1  
 County Stanton State Ks  
 Location 1 29 41 Field \_\_\_\_\_  
Johnson 2.5 N+W into

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Liner   
 Size 5 1/2 Type \_\_\_\_\_ Weight 15.5 Collar \_\_\_\_\_

Casing Depths: Top KOB Bottom 5610'

Drill Pipe: Size \_\_\_\_\_ Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 5 7/8 T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. 0.238 Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

CEMENT DATA:  
 Spacer Type: LC spacer  
 Amt. 12 Bbls Skys Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

LEAD: Pump Time \_\_\_\_\_ hrs. Type Lite 9th Gilsomite  
Vyflo-seal Excess \_\_\_\_\_  
 Amt. 150 Skys Yield 2 ft<sup>3</sup>/sk Density 12.35 PPG

TAIL: Pump Time \_\_\_\_\_ hrs. Type 2.25 sks ASC 28% c.  
6th Gilsomite Vyflo-seal 5th Fluid Loss Excess \_\_\_\_\_  
 Amt. 275 Skys Yield 1.59 ft<sup>3</sup>/sk Density 14.51 PPG

WATER: Lead \_\_\_\_\_ gals/sk Tail \_\_\_\_\_ gals/sk Total \_\_\_\_\_ Bbls.

Pump Trucks Used \_\_\_\_\_  
 Bulk Equip. \_\_\_\_\_

Float Equip: Manufacturer Weatherford  
 Shoe: Type API float shoe Depth 5610'  
 Float: Type lath down plug Depth 5526.40'  
 Centralizers: Quantity 12 Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stago Collars DV TOOL 3125'  
 Special Equip. 4 baskets  
 Disp. Fluid Type water mud Amt. 137.48 Bbls. Weight \_\_\_\_\_ PPG  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG

COMPANY REPRESENTATIVE \_\_\_\_\_ CEMENTER Andrew

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
				12	4	Pump SL spacer
						Mix 150 sks Lite
						Mix 275 sks ASC
						Wash pump and line clean
						Release plug
				10		Start displacement with water
				10		
				10		
				10		
				10	4	
				10		water in
				10		start mud
	800			10		
				10		
				10		
	1200			10		
	1200			10	4	
	1200			3	2	plug landed
						Float held
	800					Open DV TOOL

FINAL DISP. PRESS: 1200 PSI BUMP PLUG TO 1600 PSI BLEEDBACK 1/2 BBLs. THANK YOU



# CEMENTING LOG

STAGE NO. 2

Date 4-22-15 District Oakley Ticket No. 069700  
 Company B-redeco Rig B-redeco 1  
 Lease Arnold's unit Well No. 1-1  
 County Stanton State Ks  
 Location 1 29 41 Field \_\_\_\_\_  
Johnson 25 NW 1/4

CASING DATA: Conductor  PTA  Squeeze  Misc   
 Surface  Intermediate  Production  Lher   
 Size 5 1/2 Type \_\_\_\_\_ Weight 15.5 Collar \_\_\_\_\_

Casing Depths: Top 80 Bottom 5410'

Drill Pipe: Size \_\_\_\_\_ Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size 7 7/8 T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. 0.238 Lin. ft./Bbl. \_\_\_\_\_  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

CEMENT DATA:

Spacer Type: \_\_\_\_\_  
 Amt. \_\_\_\_\_ Ska Yield \_\_\_\_\_ (t<sup>3</sup>/sk Density \_\_\_\_\_ PPG

LEAD: Pump Time \_\_\_\_\_ hrs. Type Life Kello-seal  
 Excess \_\_\_\_\_

Amt. 350 Ska Yield 1.97 (t<sup>3</sup>/sk Density 12.92 PPG

TAIL: Pump Time \_\_\_\_\_ hrs. Type ASC 2 1/2 gal  
6# Cibacite .5% Fluidloss, 140# Potash  
 Excess \_\_\_\_\_

Amt. 50 Ska Yield 1.58 (t<sup>3</sup>/sk Density 14.1 PPG

WATER: Lead \_\_\_\_\_ gal/sk Tail \_\_\_\_\_ gal/sk Total \_\_\_\_\_ Bbls.

Pump Trucks Used \_\_\_\_\_  
 Bulk Equip. \_\_\_\_\_

Float Equip: Manufacturer \_\_\_\_\_  
 Spha. Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Float Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Centralizers: Quantity \_\_\_\_\_ Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Steps Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type \_\_\_\_\_ Amt. \_\_\_\_\_ Bbls. Weight \_\_\_\_\_ PPG  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG

COMPANY REPRESENTATIVE \_\_\_\_\_

CEMENTER Andrew

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
						plug mouse hole 20 sts
						plug Rat hole 30 sts
						start mix life down 5 1/2 casing
						life mixed
						start ASC
						ASC mixed.
						wash pump and line clean
						release plug
						start displacement
				10		
				10		
	400			10		
				10		
	1000			10		
				10		
	1000			10		
	1600			7		plug landed
						TOOC closed
						Cement did circulate

FINAL DISP. PRESS: 1000 PSI BUMP PLUG TO 1600 PSI BLEEDBACK 1/2 BBLs. THANK YOU

# ALLIED OIL & GAS SERVICE, LLC 064700

Federal Tax I.D. # 20-8651475

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

6:42:00 min trucks late that  
SERVICE POINT: Oakley

DATE <u>4-22-15</u>	SEC. <u>7</u>	TWP. <u>29</u>	RANGE <u>4B</u>	CALLED OUT	ON LOCATION <u>12:30 PM</u>	JOB START <u>4:00 AM</u>	JOB FINISH <u>5:30 AM</u>
Arnold Ex. LEASE unit				WELL # <u>1-1</u>	LOCATION <u>Johnson east side 2.5</u>	COUNTY <u>Stanton</u>	STATE <u>KS</u>
OLD OR NEW (Circle one)				<u>W + N into</u>			

CONTRACTOR <u>Beredco 1</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Production (2 stage)</u>	
HOLE SIZE <u>7 7/8</u>	T.D. <u>5210'</u>
CASING SIZE <u>5 1/2</u>	DEPTH <u>5210'</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL <u>D.V.</u>	DEPTH <u>3195'</u>
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT <u>4360'</u>
CEMENT LEFT IN CSG. <u>4360'</u>	
PERFS. <u>Bottom</u>	<u>TOP</u>
DISPLACEMENT <u>132.48</u>	<u>76.04</u>

CEMENT		
AMOUNT ORDERED	<u>150 sks Lite 4" Wilsonite</u>	
	<u>1/4" Flo-seal, 235 sks ASC 1 1/2" Wilsonite 2" Gel</u>	
	<u>1 1/2" Fluid loss, 14% Defoamer or 1/4" Flo-seal</u>	
	<u>500 sks Lite 1/4" Flo-seal 50 sks ASC</u>	
COMMON	@	
POZMIX	@	
GEL	@	
CHLORIDE	@	
ASC <u>285 sks</u>	@ <u>23.50</u>	<u>6697.50</u>
Lite <u>550 sks</u>	@ <u>19.88</u>	<u>10934.00</u>
	@	
Flo-seal <u>273#</u>	@ <u>2.97</u>	<u>810.81</u>
Wilsonite <u>2310#</u>	@ <u>.98</u>	<u>2263.80</u>
Fluid loss <u>135#</u>	@ <u>18.90</u>	<u>2551.50</u>
	@	
Defoamer <u>38#</u>	@ <u>3.50</u>	<u>133.00</u>
LC spacer <u>12 BBL</u>	@ <u>225.00</u>	<u>2700.00</u>
HANDLING <u>1029.63 cu/ft</u>	@ <u>2.48</u>	<u>2553.48</u>
MILEAGE <u>2.25 ton/mile 42296 ton</u>		<u>3528.91</u>
material Total		<u>26,090.61</u>

EQUIPMENT	
PUMP TRUCK # <u>495-281</u>	CEMENTER <u>Andrew Forstund</u>
	HELPER <u>Paul Druver</u>
BULK TRUCK # <u>891</u>	DRIVER <u>Darren Ruethe</u>
BULK TRUCK # <u>870</u>	DRIVER <u>Marken Spangenberg</u>

REMARKS:

Pump 12 BBL LC spacer, mix 150 sks Lite 235 sks ASC wash pump and line clean Displace Plug, 1200# lift 1600 Lard Plugs Plug landed float held, open DV tool good, Plug in 420 sks R4 30 sks mix Lite followed by ASC, wash pump and line clean, Displace 1000# lift 1100# Lard Plug, Tool closed, cement did circulate.  
Thank you

SERVICE		
DEPTH OF JOB <u>5210'</u>		
PUMP TRUCK CHARGE <u>3099.25</u>		<u>2406.25</u>
EXTRA FOOTAGE	@	
MILEAGE <u>30 miles</u>	@ <u>7.70</u>	<u>231.00</u>
MANIFOLD. head	@ <u>225.00</u>	<u>N/C</u>
Light vehicle	@ <u>4.40</u>	<u>132.00</u>
Waiting time 4 hrs	@ <u>440.00</u>	<u>1760.00</u>
Waiting time 2 hrs		<u>N/C</u>
material Total		<u>26,090.61</u>
(11745.77/45%)		
SERVICE		
DEPTH OF JOB <u>5210'</u>		
PUMP TRUCK CHARGE <u>3099.25</u>		<u>2406.25</u>
EXTRA FOOTAGE	@	
MILEAGE <u>30 miles</u>	@ <u>7.70</u>	<u>231.00</u>
MANIFOLD. head	@ <u>225.00</u>	<u>N/C</u>
Light vehicle	@ <u>4.40</u>	<u>132.00</u>
Waiting time 4 hrs	@ <u>440.00</u>	<u>1760.00</u>
Waiting time 2 hrs		<u>N/C</u>
material Total		<u>26,090.61</u>
(6169.90/45%)		
SERVICE		

CHARGE TO: Beredco  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT		
<u>5 1/2</u>		
1 Abu float shoe	@	<u>545.00</u>
1 Latch down plug Assy	@	<u>460.00</u>
1 DV TOOL	@	<u>5335.00</u>
4 Baskets	@ <u>395.00</u>	<u>1580.00</u>
12 Centralizers	@ <u>57.00</u>	<u>684.00</u>
(3967.80/45%)		
TOTAL		<u>8,709.00</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 <u>48,605.50</u>		
DISCOUNT <u>21,872.47 (45%)</u>		
IF PAID IN 30 DAYS		
<u>26,733.03 Net</u>		

PRINTED NAME \_\_\_\_\_  
SIGNATURE [Signature]

**WELL FILE** **GEOLOGIST'S REPORT**  
**DRILLING TIME & SAMPLE LOG**

COMPANY Berexco LLC  
 LEASE Arnold E Unit NO. 1-1  
 LOCATION 335' FSL + 200' FEL  
 SEC. 1 TWP. 29S RNG. 41W  
 COUNTY Stanton, STATE Kansas  
 FIELD Wildcat

ELEVATIONS  
 KB 3340  
 DF 3338  
 GL 3328

MEASUREMENTS ARE ALL FROM KB

CONTRACTOR Beredco Dril Rig #1  
 COMM. 4-5-2015 COMP. 4-22-2015  
 RTD 5610 LTD 5606

CASING RECORD  
858' of 1708 w/     SK.  
    of     w/     SK.  
    of     w/     SK.  
    of     w/     SK.

No. of DST'S One No. of CORES None

EL. LOG AR. Res. SPGR  
DEINERT OR Caliper  
ML Sonic

SAMPLES SAVED FROM 3500 TO TD  
 DRILLING TIME KEPT FROM 3500 TO TD  
 SAMPLES EXAMINED FROM 3500 TO TD  
 GEOLOGICAL SUPERVISION FROM 3500 TO TD  
 GEOLOGIST ON WELL Edwin H. GRIEVES

FORMATION TOPS

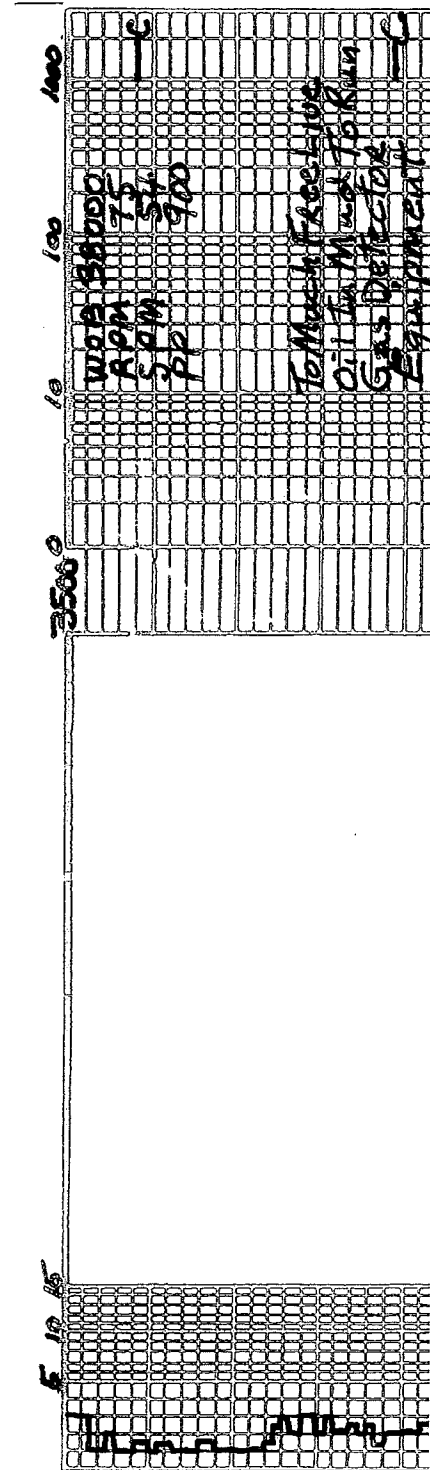
	SAMPLE	LOG	SUBSEA
<u>Base Heebner</u>	<u>3709</u>	<u>3710</u>	<u>- 370</u>
<u>Toronto</u>	<u>3724</u>	<u>3723</u>	<u>- 383</u>
<u>Lansing Fm.</u>	<u>3767</u>	<u>3766</u>	<u>- 426</u>
<u>BKC</u>	<u>4320</u>	<u>4331</u>	<u>- 991</u>
<u>Marmaton</u>	<u>4351</u>	<u>4356</u>	<u>- 1016</u>
<u>Et Scott</u>	<u>4536</u>	<u>4534</u>	<u>- 1194</u>
<u>Morrow</u>	<u>5018</u>	<u>5016</u>	<u>- 1676</u>
<u>Chester</u>	<u>5481</u>	<u>5478</u>	<u>- 2138</u>
<u>St. Genevieve</u>	<u>5552</u>	<u>5534</u>	<u>- 2194</u>
<u>TD</u>	<u>5610</u>	<u>5606</u>	<u>   </u>

API# 15-187-21320

REMARKS Earth-Tech had an unmanned gas detection trailer on this well from 3500 feet to total depth.

Lost Circulation or Partial Returns 5061 - 5194  
Lost More Than 1500 bbls mud

*Edwin H. Grievess*  
 Geologist



Interbedded limestones  
① Faster Drlg. Lms. trs. to extly  
abn. wht. to cream-chlk & lt. tan to  
tan, grayish. IP's, crypto to v. fine.  
v. sub-cr. trs. to abn. phantoms  
oolites & por. trs. to abn. colites IP's  
dual. H. yell. fluor.; No cut; a bn. pr.  
to tr & h. y. trs. gd. to excel  
micro -p.p. por & prob. interx. por

② Slower Dalg. Lms. tanish H. gray,  
grayish tan to tan, crypto. to  
v. fine. x. fine. tan sub-chlk, sub-sucro  
& packs. Inid. yell. to dual. lt. yell.  
fluor.; No cut; No vis por.

3600

Sh. v. drk. gray. to black-carb.

Lms. grayish tan, crypto. x. fine. chlk. to  
sub-lithog. & id. yell. fluor.; No cut; No vis por  
Sh. H. gray to H. green; Silty IP's v. soft &  
mushy when wet

Lms. trs. wht. to cream-chlk & cream to  
H. tan, crypto. to v. fine. tan; sub-chlk, sub-sucro  
to trs. sucro; dual. v. to dual. H. yell. fluor.  
No cut; scattered trs. v. fine. micro. pp. por

Lms. med to lt. gray - sh. to grayish tan  
to tan, crypto. to v. fine. tan. fine. ph. it. sub-cr. to  
yellowish; sub-sucro & packs. to  
dual. yell. fluor. IP's No cut; No vis por

Sh. H. med to trs. drk. gray; sl. to  
extly calc

Lms. grayish. tan to tan, crypto. to  
v. fine. x. fine. sub-chlk sub-sucro to  
sucro & trs. packs. tan; sl. to v.  
phantoms. oolitic IP's. sl. to v. very  
oolitic IP's. dual. H. yell. fluor.;  
No cut; No vis por. Ros. it. y  
w/ sl. trs. Chert gray; to tan, oppne

3800

pp  
\$4  
900

To Mass. Facilities  
Oil In Mass. To Run  
Gas Detector  
Equipment

Base Harner  
3709 - 369

Toronto  
3724 - 328

Lansing Arm  
3767 - 427

W.M.A. 2500

v. v. tan. x. l. u. s. sub-dk. sub-sucro to  
sucro & trs. packstn; sl. to v.  
phantom oolitic. No Vis. Fluor. No  
cut. No Vis. Porosity  
w/ sl. trs. Chert gray to tan, opaque

3767-427

Lms. tan, grayish. IP's, crypto to tan, tan  
x. l. u. s. sub-sucro, packstn and trs  
sub-lithog. dual. yel. to dual. H. yel  
fluor. No cut. No Vis. Por.  
w/ sl. trs. Chert gray to tan, opaque

WDB 3500  
RPM 75  
SPM 60  
PP 1000

3824-3956 Interbedded limestones

① Slower Dalg. Lms. H. to med. gray. sl.  
to fine. sh. to tan; crypto. to  
v. v. fine. sh. sub-dk. sub-sucro. to

sub-sucro. packstn to trs  
sub-lithog. scattered trs to trs  
phantom oolitic to oolitic IP's  
dual. H. yel. fluor. No cut. No Vis. Por.

WDB 31000  
RPM 65  
SPM 60  
PP 1000

② Faster Dalg. Lms. trs. wht. cam to tan  
chlk & grayish. tan to tan; crypto.  
to v. v. fine. sh. sub-dk. sub-sucro. to  
sucro & trs. packstn; sl. to fine. sh.  
phantom oolitic to oolitic IP's  
dual. yel. to dual. H. yel. fluor. No cut  
scattered trs to hv trs for. to tr  
micro-pp. por. & loss Interstr.  
IP's

3900

③ trs. Chert gray to tan, opaque

Lms. trs. to abn. wht. to cam. chlk & grayish. tan  
to tan; crypto. to v. v. fine. sh. v. very to  
extly oolitic. v. o. sl. to v. oolitic  
matrix trs. sub-dk. sub-sucro. to  
sucro. packstn; dual. yel. to yel. & d. l. g. l. yel.  
No cut. Extra. abn. trs. ad to excel.  
oolitic por. & trs to hv trs for. to tr  
micro-pp. por.

3984-4018 Lms. similar 3956-3984

becoming extly chlk. wht. to cam  
w/ chlk oolitic IP's & less  
oolitic & more oolitic

4000

Lms. similar description # 1  
3824-3956

WDB 38000  
RPM 65  
SPM 54  
PP 950

Lms. similar 3956-3984

Lms. H. to med. gray, tanish IP's;  
crypto to v. v. fine. sh. sub-sucro;  
packstn. & trs. sub-lithog.  
dual. yel. fluor. IP's; No cut.  
No Vis. Por.



Lms. H. to med. gray, tanish lps;  
CRYST. to v. v. ch. shly; sub-sucro,  
pale str. & TRS. sub-lithog. A.  
dual. vel. fluor. lps; No cut;  
No Vis POR

4100

Lms. similar 4035-4128  
w/ scattered Faster Drsg  
whf. to cream-chlk w/ TRS  
chlk oolites

4153-4160 Lms. to med. gray, tanish lps;  
CRYST. to v. v. ch. shly; sub-sucro,  
pale str. & TRS. sub-lithog. A.  
dual. vel. fluor. lps; No cut;  
No Vis POR

4160-4180 Lms similar 4035-4128

Lms similar 4153-4160

4200

4128 - 4320

Lms. scattered sl. TRS. wht to cream-  
chlk & H. to med. gray, tanish lps;  
Sl: to fely. Shly; egyptia to sl. TRS  
v. u. fr. x lms; Sl: TRS. sub-sucro, A.  
pale str. to TRS. sub-lithog. A.  
scattered TRS. dual. vel. fluor. j  
No cut; No Vis POR

To Much Facel Live Oil  
To Mud To Run GAS  
Detection Equipment

4300

4320-4351 Sh. H. med. to med. gray  
fely to ext. fely calc grading  
to Shly Lms.

WDB  
RAM  
SPM  
PP  
38000  
65  
5K  
750

BKC 4320-9800

4320-4351 Sh. H. med. to drk. gray  
faily to extremely calc gading  
to shly lms.

Lms. trs. wht. to cream-chalk to H. gray, cream  
to tan; crypto. to sli. trs. v. v. fn. xln; v. to brn;  
trs. chlk. sub-chlk; sli. trs.  
sub-sucro, packstn. to sub-lithogr.  
dul. H. yel. fluor.; No Cut; No Vis POR  
w/sli. trs chert tan, opaque

Lms. zbn. wht. to cream-chlk & tan; trs.  
grayish; crypto. to v. v. fn. xln; v. to brn;  
calicastic to sli. to v. oolitic; 4400  
matrix sub-sucro to sucro and  
packstn; dul. H. yel. to dul. yel. fluor  
No cut; v. zbn. fadyd to excel  
calicastic por.; Quest. Perm

Lms. H. to med. gray; tanish IP's;  
crypto to sli. trs. v. v. fn. xln; v. to brn;  
sli. trs. sub-sucro to packstn; dul. yel  
fluor. IP's; No cut; No Vis. POR.

4445-4452 Lms. trs. wht to cream-  
chlk & cream; crypto to xln; sub-chlk-  
to trs packstn; dul. yel. fluor.  
No cut; No Vis POR w/trs chert  
H. gray opaque

Lms. Similar 4413-4445

Lms. sli. trs. wht. to cream-chlk &  
cream to tan; grayish. IP's; crypto  
to v. v. fn. xln; chlk; sub-chlk;  
sub-sucro & trs packstn; zbn sli  
to v. phantom oolitic POR oolitic;  
dul. H. yel. to trs. H. yel. fluor;  
No cut; No Vis. POR. w/sli. trs  
Chert; gray to tan; opaque

Sh. v. drk. gray to black carb

Lms. Similar 4483-4533

4550-4890  
Interbedded Limestones & Shales

Lms. sli. trs. wht. to cream-chlk IP's  
& H. gray. gading to tan; crypto.  
to v. v. fn. xln; chlk; sub-chlk;

DISC 4540-7000

MARION  
4351-1011

To Markle Face line on  
Map to Row  
Chromatograph

Half Wire

FR. SCOTT  
4536-1196

BIT TAY  
4563 6

40000  
RPM  
54  
1000

Interbedded Limes lones & snails 4600

① Lms. sli. tes. wht. to cream-chalk lps, & lt. gray grading to tan crypto. to v. v. fn. xln, chlk, sub-chlk, sub-sucro. & packstn; phanton oolitic for a bu oolitic lps; dul. H. zel. to tes. lt. vel. fluor.; No cut. No Vis for

② Lms. lt. med. to drk gray - sli. to extrly. Shly. lps grading to calc shs.; crypto. xln; sub-chlk &/or shly; packstn. & sub-lithogr. dul. vel. fluor. lps. No cut.

③ Sh. lt. med, drk. to v. drk. gray & tes black; v. to extrly calc. lps grading. to extrly. Shly Lmsts.

WOB 39000  
RPM 70  
SPM 54  
PP 1100

4700

4800

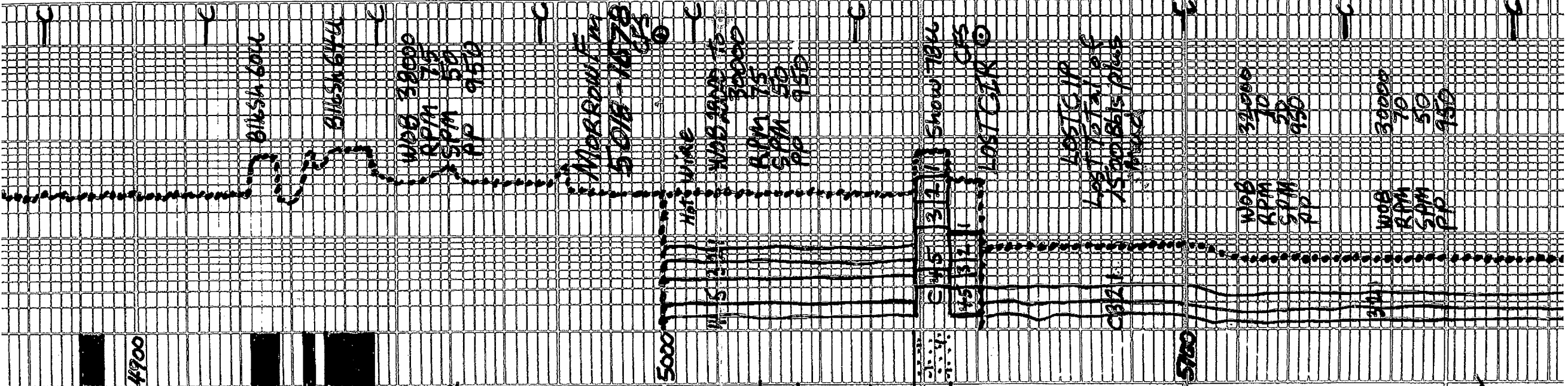
Interbedded Lmsts & shales  
 Similar 4550-4890  
 w/ abn. interbeds shales  
 black-carb

Lms w/ thin interbeds shs  
 ① Lms. med. to drk gray - v. to extly  
 shly marled IP's thin; cryptic in  
 Pa. chstn to sub. lithogr.; no trace  
 No cut; No Vis for  
 ② Shs. v. drk. gray - calc to  
 black-carb.

Sh. drk. to v. drk. gray

5025-5048 Lms. w/ thin interbed shs  
 similar 4545-5018 w/ trms  
 glaucophanite IP's & trs siltstn  
 It. gray to H. green from glaucophan  
 ch. gray to calc. IP's; dense; fractured  
 No fiber; No cut; No Vis for  
 5048-5055 trs. loose Qtz gas  
 v. u. fr. to trs med gas; glauc. to white  
 aug. to trs. sub. aug. to sub. rounded  
 w/ trs. v. small clusters  
 v. u. fr. n. g. & trs Lms v. fr. sh. in  
 w/ glauc. IP's; glauc. med. drk. gray  
 w/ glauc. IP's; glauc. med. drk. gray  
 glauc. IP's to interbed  
 poor

5055-5332  
 Sh. trs to hvy trs med gray w/  
 silky luster & drk gray - splintery  
 IP's w/ trs Olive green  
 w/ scattered interbeds  
 Lms. gray to tan; cryptic to v. fr.  
 sh. drk. to v. drk. gray



silky luster of dk grey-splintery  
 IP's w/tes Olive green  
 w/scattered interbeds  
 Lms. gray. to tan; cryptot. to v. fn.  
 xln; tes. phantom. oolitic to  
 tes. oolitic; tes. sub-sucro  
 patches of tes. sub-lithog.  
 d. w/yel. fluor IP's; No cat  
 No vis. por

5200

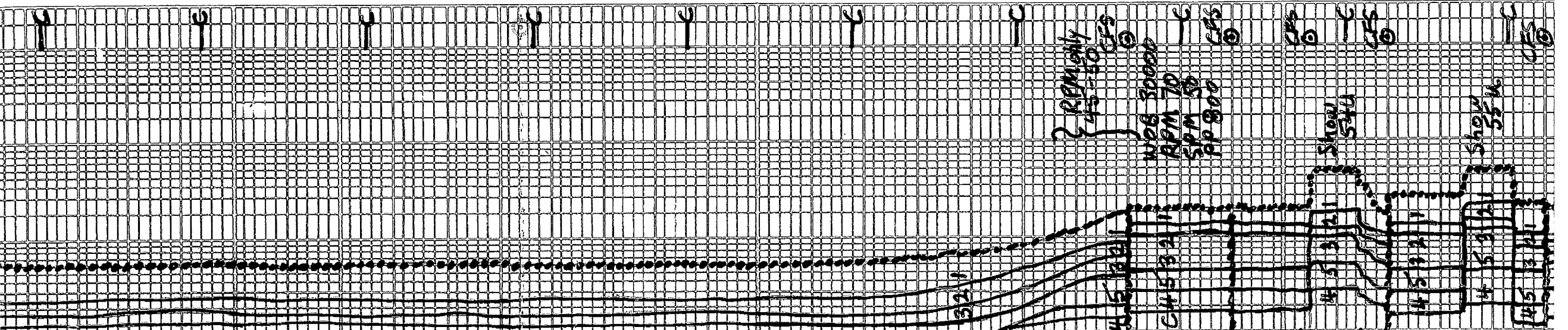
5300

5332-5352  
 Qtz. lms. SdSt 0-100 @ 29 to  
 0-100 Lm. q. as. j. Lms. H. gray to tan  
 v. fn. to med. gray; ang. to sub-renal IP's  
 to Qtz. Sd. H. gray; tanish IP's; v. fn. to  
 v. fn. to tes. fung. ang. ip. py. SdSt.  
 Tes. to 2bn. g. auc. w/och. lentic. IP's  
 w/finely disseminated pyrite

No cat. No vis. por  
 5352-5403 Sh. med. gray, silky  
 luster IP's to dk grey-splintery IP's  
 A 5403-5415 Qtz. SdSt H. gray to  
 CR my tes. tanish; silt. tes. Lm. q. as.  
 IP's; v. fn. to v. fn. g. w/tes. fn.  
 to med. gray; ang. to tes. sub-ang.  
 to tes. sub-angled; ip. py. SdSt.  
 silt & clay filled IP's; v. to 2bn  
 glauc. v. och. ch. lentic. tes. w/finely  
 disseminated pyrite; silt. to  
 f. calc. to a dolomitic; tes.  
 glauc. yel. fluor. w/flush. Ford  
 staining; cat. No vis. por  
 tes. lms. Qtz. g. as. v. v. tan. gray  
 to med. gray

5100

A 5415-5435 Prob. Sh. similar  
 5352-5403  
 C 5435-5450 Qtz. SdSt w/tes. grey  
 to H. gray w/lytes tan to ben. from  
 oil stn; tan foiled; v. v. to 2bn  
 w/tes. to v. 2bn med. to coarse gr.  
 ang. w/2bn sub. ang. sub. end. to 2bn  
 prly. sox. silt. to v. g. auc. to och. lentic  
 carb. patches IP's; d. al. old myel.  
 fluor. w/tes. yel. to glauc. yel. fluor.  
 to 2bn. staining to 2bn. IP's; silt.  
 tes. pr. mic. no. por. IP's; por. IP's; por.  
 interg. a. por. IP's; w/tes. 2bn



C  
Fluor w/ trs yel. to gld. yel. fluor  
fctgd. staining to gdr in spots;  
trs. br. mica - poor / Proposs  
int. b. g. a. por. pp. w/ ext. r. b.  
D  
loose Qtz grains, close to yel. to  
amber; v. fine gr. g. to well rounded  
gr. v. fine. g. to well rounded  
E  
R. 5450-60 Qtz sdst H. gray to  
H. gray. Prob from glaucophane  
chlorite & hy. f. w/ s. p. d.  
Tan oil stain; faint oil order  
v. v. fine. to v. fine. j. poly s. o. r.  
Aug. j. hy. trs. fine. disseminated  
pyrr. j. trs. carb. par. r. i. n. g. s.  
b. r. t. yel. to b. g. d. y. yel. fluor  
w/ flash to excel. Staining cuts  
No. 16 por. j. extra. abn v. v. f. t. r. l.  
loose Qtz grains clear. Aug.

F  
E 5460-5480 Shs similar 5352-5403  
w/ interbeds Sst. Similar 5450-60

F 5480-5521 Shs w/ m conglomerate  
1. Shs Red-silty 1st-m. yel. to dr. gray  
2. Lms. gray to tan, trs. pinkish crypto  
to v. fine. x. l. i. s. sub. s. o. o. p. p. d. s. t.  
s. t. t. s. sub-lith. o. r. e. Trs. j. o. h. n. i. t. e. s.  
s. i. l. t. y. to v. v. f. n. g. t. z. s. d. s. t. Aug.  
d. w. yel. fluor pp. No cut. No. 16 por

G  
5521-5532 Sh & Lm Congl.  
Similar 5480-5521 w/ hyrites.  
Lms. H. gray to tan, pinkish  
crypto to v. fine. x. l. i. s. v. to ext. r. b.  
micro-politic s. i. s. i. t. y. o. u. Q. r. e. s. d. y.  
v. v. f. n. g. a. - aug. j. m. a. t. e. i. x.  
t. r. s. s. y. b. - ch. l. i. s. s. u. b. - s. u. c. c. o.  
p. a. c. k. s. t. a. j. d. u. l. H. to H. yel. fluor  
No cut. No. 16 por

5552-5610 Lms. H. gray to tan  
crypto. to v. v. fine. x. l. i. s. v. to ext. r. b.  
micro-politic & s. i. s. i. t. y. o. u. Q. r. e. s. d. y.  
v. v. f. n. g. a. - aug. j. m. a. t. e. i. x.  
t. r. s. s. y. b. - ch. l. i. s. s. u. b. - s. u. c. c. o.  
p. a. c. k. s. t. a. j. d. u. l. H. to H. yel. fluor  
No cut. No. 16 por

# TD 5610

7 1/2 inch Bit Info: in out  
1. New GT 254 1709 4563  
2. New GT 254 4563 5610 TD

## Cir. Points

- 4563 5. 5390 9. 5465
- 5000 6. 5405 10. 5480
- 5061 7. 5420 11. 5500
- 5370 8. 5450 12. 5610 TD

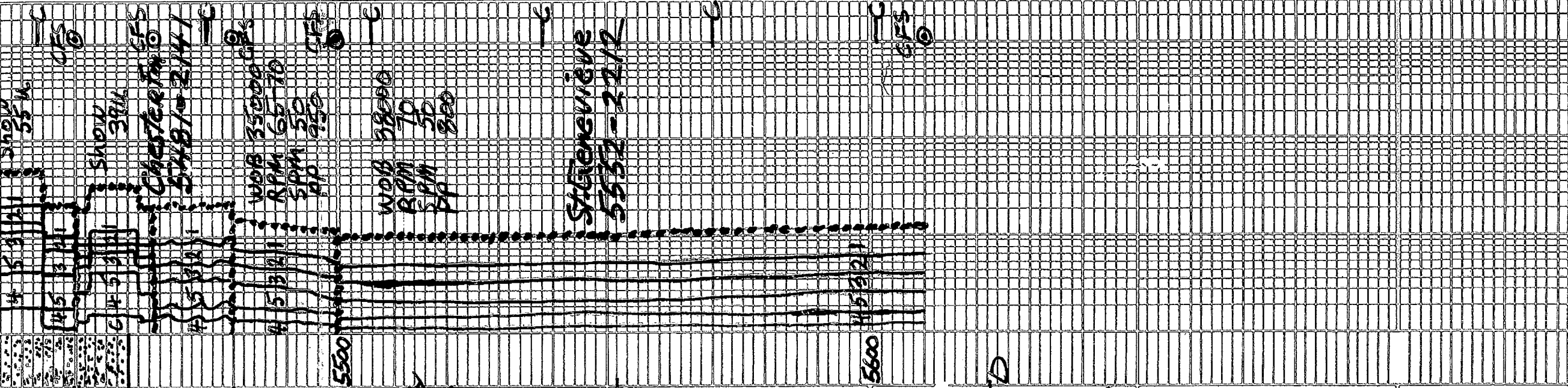
## Dev. Scales

- 511 3/4 4. 4563 124°
- 1004 1° 5. 5061 34° TD
- 2191 124° 6. 5610 234° TD

## Daily Drilg Prog

- 3500 7:44 AM 4-12-15
- 3630 7:00 AM 4-12-15
- 4040 7:00 AM 4-13-15
- 4442 7:00 AM 4-14-15
- 4659 7:00 AM 4-15-15
- 4974 7:00 AM 4-16-15
- 5061 7:00 AM 4-17-15
- 5087 7:00 AM 4-18-15
- 5194 7:00 AM 4-19-15
- 5420 7:00 AM 4-20-15
- 5555 7:00 AM 4-21-15
- 5610 7:00 AM 4-22-15

DST #1 Upper Morrow  
5015-5061  
Miss Run Due To  
Lost Circulation



8. 5087 7:00AM 4-18-15  
 9. 5194 7:00AM 4-19-15  
 10. 5420 7:00AM 4-20-15  
 11. 5555 7:00AM 4-21-15  
 12. 5610 7:00AM 4-22-15

DST #1 Upper Morrow  
 5015-5061  
 Miss Run Due To  
 Lost Circulation

MudInfo:

Date	4-17 4:30A	4-18 4:15A	4-19 4:15A	4-20 5:15A	4-21 5:15A	4-22 5:00A	4-23 4:00A	4-24 5:00A
Depth	3975	4420	4625	4746	5061	5061	5061	5061
WT	8.5	9.0	9.1	9.2	9.2	8.6	8.5	8.5
Vis	48	45	47	53	50	47	43	46
PV	15	15	15	16	16	13	10	12
YP	12	14	16	19	19	13	12	13
GS	10 1/2	13 1/2	19 3/4	14 1/2	17 3/5	17 3/5	17 3/5	17 3/5
WL	5.5	6.0	6.4	7.2	8.0	8.4	8.8	9.0
cake	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32
PH	11.5	10.5	10.5	10.5	10.0	10.0	10.5	11.0
chl	700	700	700	650	650	450	400	300
Ca	20	20	40	40	40	20	40	40
LCM	3	3	5	6	6	16	17	17

Date	4-18 1:00A	4-19 4:30A	4-20 4:30A	4-21 4:30A
Depth	5125	5448	5596	
WT	8.5	8.85	9.0	
Vis	85	71	67	
PV	24	19	18	
YP	21	20	19	
GS	2 1/4	19 5/8	10 1/4	
WL	6.0	7.2	7.6	
cake	1/32	1/32	1/32	
PH	9.5	9.0	9.5	
chl	700	1000	500	
Ca	20	40	20	
LCM	25	24	20	

OPERATOR Berexco LLC  
 LEASE Arnold E Unit No. 1-1  
 ELEVATION 334048 RTD 5610

LOCAL ION 335'ESL + 200'FEL  
 SEC 1 TWP. 29S RNO. 41W  
 COUNTY Stanton STATE KANSAS