

**OPERATOR**

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

Contact Geologist: TOM DENNING  
 Contact Phone Nbr: 785-259-3141  
 Well Name: KATHY # 1  
 Location: NW NE SW SW Sec.2-15s-19w  
 Pool: WILDCAT  
 State: KANSAS

API: 15-051-26,344-00-00  
 Field: UNNAMED  
 Country: USA



**TDI, Inc.**  
 1310 BISON ROAD  
 HAYS, KANSAS 67601  
 (785) 628-2593

Scale 1:240 Imperial

Well Name: KATHY # 1  
 Surface Location: NW NE SW SW Sec.2-15s-19w  
 Bottom Location:  
 API: 15-051-26,344-00-00  
 License Number: 4787  
 Spud Date: 9/1/2012 Time: 3:00 PM  
 Region: ELLIS COUNTY  
 Drilling Completed: 9/11/2012 Time: 9:35 AM  
 Surface Coordinates: 1150' FSL & 840' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2050.00ft  
 K.B. Elevation: 2057.00ft  
 Logged Interval: 2900.00ft To: 3750.00ft  
 Total Depth: 3750.00ft  
 Formation: LANSING-KANSAS CITY  
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: Latitude:  
 N/S Co-ord: 1150' FSL  
 E/W Co-ord: 840' FWL

**LOGGED BY**

Company: SOLUTIONS CONSULTING  
 Address: 108 W 35TH  
 HAYS, KS 67601

Phone Nbr: (785) 639-1337  
 Logged By: Geologist Name: HERB DEINES

**CONTRACTOR**

Contractor: SOUTHWIND DRILLING INC.  
 Rig #: 4  
 Rig Type: MUD ROTARY

Rig Type: MUD ROTARY  
Spud Date: 9/1/2012  
TD Date: 9/11/2012  
Rig Release: 9/12/2012

Time: 3:00 PM  
Time: 9:35 AM  
Time: 2:00 PM

### ELEVATIONS

K.B. Elevation: 2057.00ft  
K.B. to Ground: 7.00ft

Ground Elevation: 2050.00ft

### NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL DUE TO NEGATIVE RESULTS OF DSTS.

WELL LOGS BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY.

DRILL STEM TESTING COMPANY: TRILOBITE TESTING INC. 3 TESTS

### FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

#### KATHY # 1

1150' FSL & 840' FWL, SW/4

Sec. 2-15s-19w

2050' GL 2057' KB

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1270+787	1273+ 784
B-Anhydrite	1309+ 748	1311+ 746
Topeka	3021- 964	3027- 970
Heebner Shale	3286-1229	3293-1236
Toronto	3304-1247	3312-1255
LKC	3332-1275	3340-1283
BKC	3580-1523	3585-1528
Conglomerate Sand		3653-1596
Arbuckle	3659-1602	3663-1606
RTD	3750-1693	
LTD		3758-1701

### SUMMARY OF DAILY ACTIVITY

9-01-12 RU, Spud, set 8 5/8" surface casing to 413' w/ 200 sxs Common, 2%Gel, 3%CC, plug down 11:00PM, slope 1 degree

9-02-12 413', shut down for holiday


9-03-12 413', shut down for holiday

9-04-12 413', drilling plug

9-05-12 1425', drilling

9-06-12 2166', drilling  
 9-07-12 2541', fishing for drill collars, displaced 2889'  
 9-08-12 3100', drilling  
 9-09-12 3370', drilling, DST #1 3342'-3370' "C"  
 9-10-12 3458, drilling  
 9-11-12 3690' drilling, RTD 3750', logging, DST # 2 straddle test 3418'-3530'  
 mis-run, DST # 3 straddle test 3386'-3530', P&A well  
 9-12-12 3750', finish DST#3, P&A Plugging complete at 2:00PM

### DST # 1 TEST SUMMARY

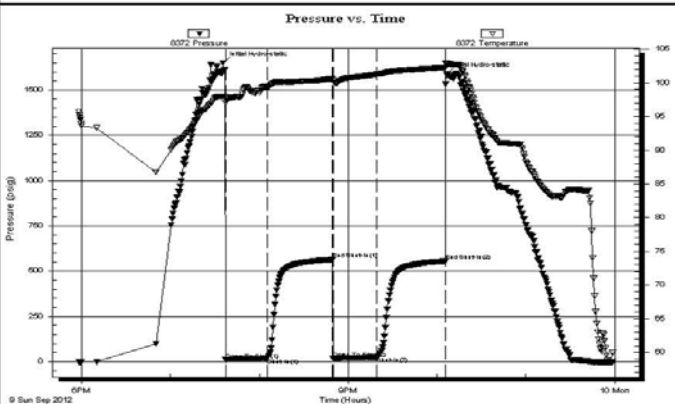
	<b>DRILL STEM TEST REPORT</b>	
	TDI inc. 1310 Bison Rd Hays Ks. 67601 ATTN: Herb Deines	<b>2-15s-19w Ellis</b>  <b>Kathy #1</b> Job Ticket: 49305 <b>DST#: 1</b> Test Start: 2012.09.09 @ 17:58:05

**GENERAL INFORMATION:**

Formation: <b>LKC"C"</b>	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Andy Carreira
Time Tool Opened: 19:37:10	Unit No: 39
Time Test Ended: 23:58:29	Reference Elevations: 2057.00 ft (KB)
<b>Interval: 3342.00 ft (KB) To 3370.00 ft (KB) (TVD)</b>	2051.00 ft (CF)
Total Depth: 3370.00 ft (KB) (TVD)	KB to GR/CF: 6.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Poor

<b>Serial #: 8372</b>	<b>Outside</b>	Capacity: 8000.00 psig
Press@RunDepth: 24.58 psig @ 3343.00 ft (KB)	End Date: 2012.09.09	Last Calib.: 2012.09.10
Start Date: 2012.09.09	End Time: 23:58:29	Time On Btm: 2012.09.09 @ 19:35:30
Start Time: 17:58:05		Time Off Btm: 2012.09.09 @ 22:06:30

**TEST COMMENT:** IF:(30min) Surface blow died in 25 min.  
 ISl:(45min) No Return  
 FF:(30min) Surface blow  
 FSl:(45min) No Return



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1649.91	97.98	Initial Hydro-static
2	11.39	97.11	Open To Flow (1)
30	18.29	99.47	Shut-In(1)
74	563.89	100.63	End Shut-In(1)
75	19.42	100.38	Open To Flow (2)
104	24.58	101.29	Shut-In(2)
151	555.56	102.30	End Shut-In(2)
151	1590.91	102.97	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
30.00	WMw =25% m=75%	0.42

**Gas Rates**

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

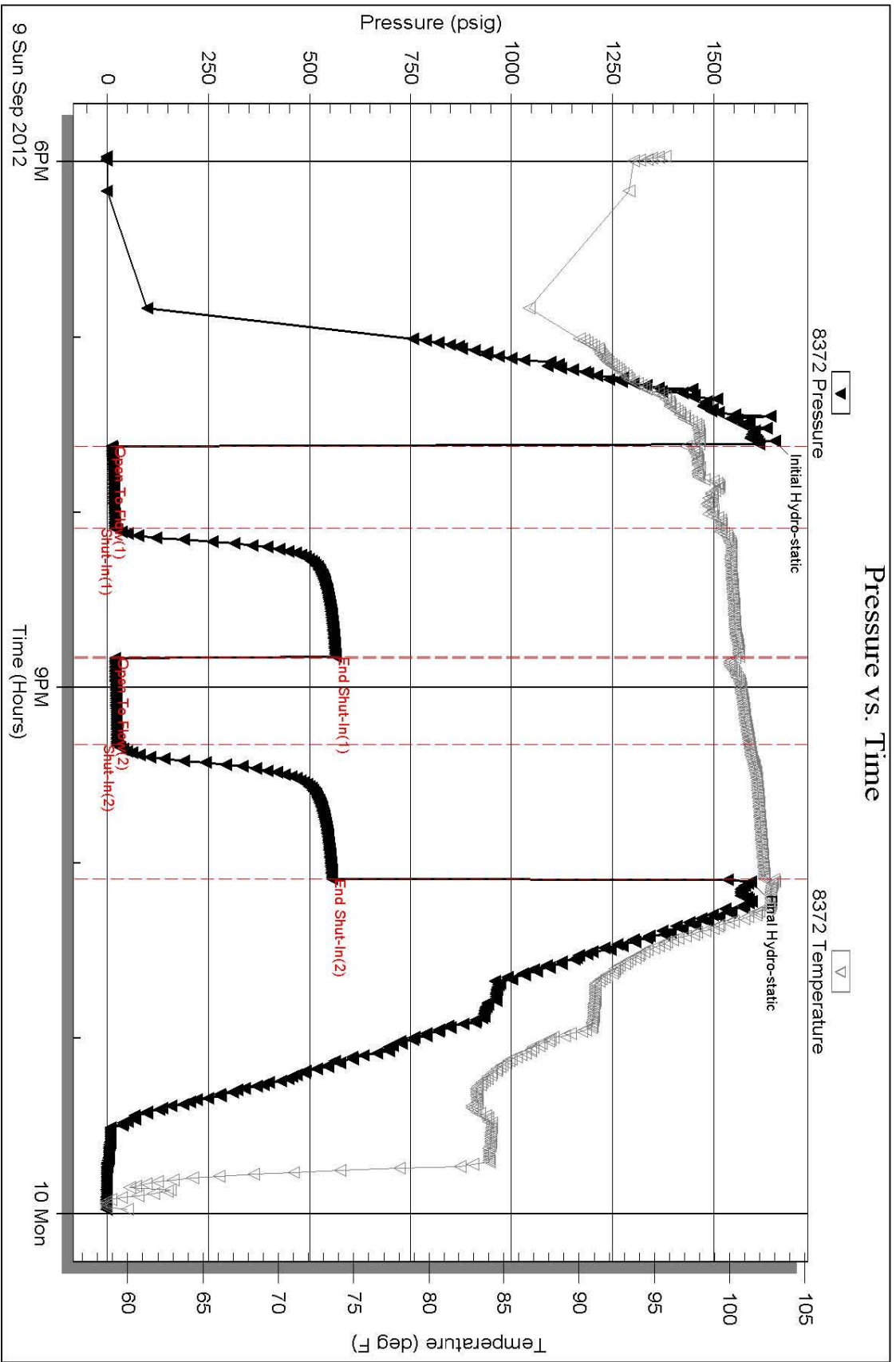
### DST # 1 EXPANDED CHART

Serial #: 8372

Outside TDI Inc.

Kathy #1

DST Test Number: 1


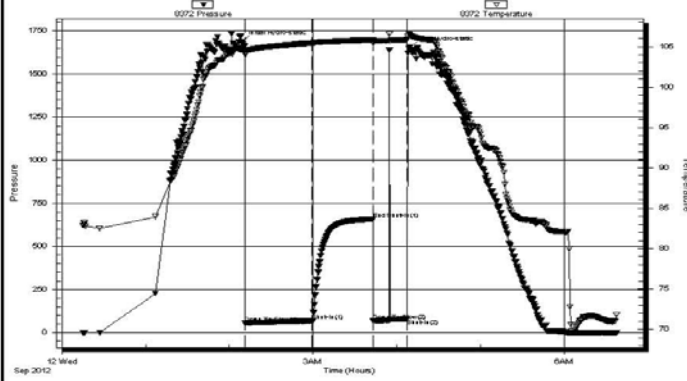


Trilobite Testing, Inc

Ref. No: 49305

Printed: 2012.09.10 @ 02:51:25

### DST # 3 STRADDLE TEST SUMMARY

	<h2 style="margin: 0;">DRILL STEM TEST REPORT</h2>																																		
TDI inc. 1310 Bison Rd Hays Ks. 67601  ATTN: Herb Deines	<b>2-15s-19w Ellis</b>  <b>Kathy #1</b> Job Ticket: 49307 <b>DST#: 3</b> Test Start: 2012.09.12 @ 00:15:05																																		
<b>GENERAL INFORMATION:</b>																																			
Formation: <b>LKC"D thru J"</b> Deviated: No Whipstock:                      ft (KB) Time Tool Opened: 02:11:20 Time Test Ended: 06:37:29		Test Type: Conventional Straddle (Reset) Tester: Andy Carreira Unit No: 39																																	
Interval: <b>3386.00 ft (KB) To 3530.00 ft (KB) (TVD)</b> Total Depth: 3758.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Poor		Reference Elevations: 2057.00 ft (KB) 2051.00 ft (CF) KB to GR/CF: 6.00 ft																																	
<b>Serial #: 8372      Outside</b>																																			
Press@RunDepth: 67.82 psig @ 3392.00 ft (KB) Start Date: 2012.09.12      End Date: 2012.09.12 Start Time: 00:15:05      End Time: 06:37:29		Capacity: 8000.00 psig Last Calib.: 2012.09.12 Time On Btm: 2012.09.12 @ 02:08:50 Time Off Btm: 2012.09.12 @ 04:09:10																																	
<b>TEST COMMENT:</b> IF:(45min) 1" Blow . Decreased & Died in 10 min. ISI:(45min) No Return FF:(15min) No Blow . Flushed, Surged, Surface Blow Died in 5 min. Pulled Tool																																			
<b>Pressure vs. Time</b>		<b>PRESSURE SUMMARY</b>																																	
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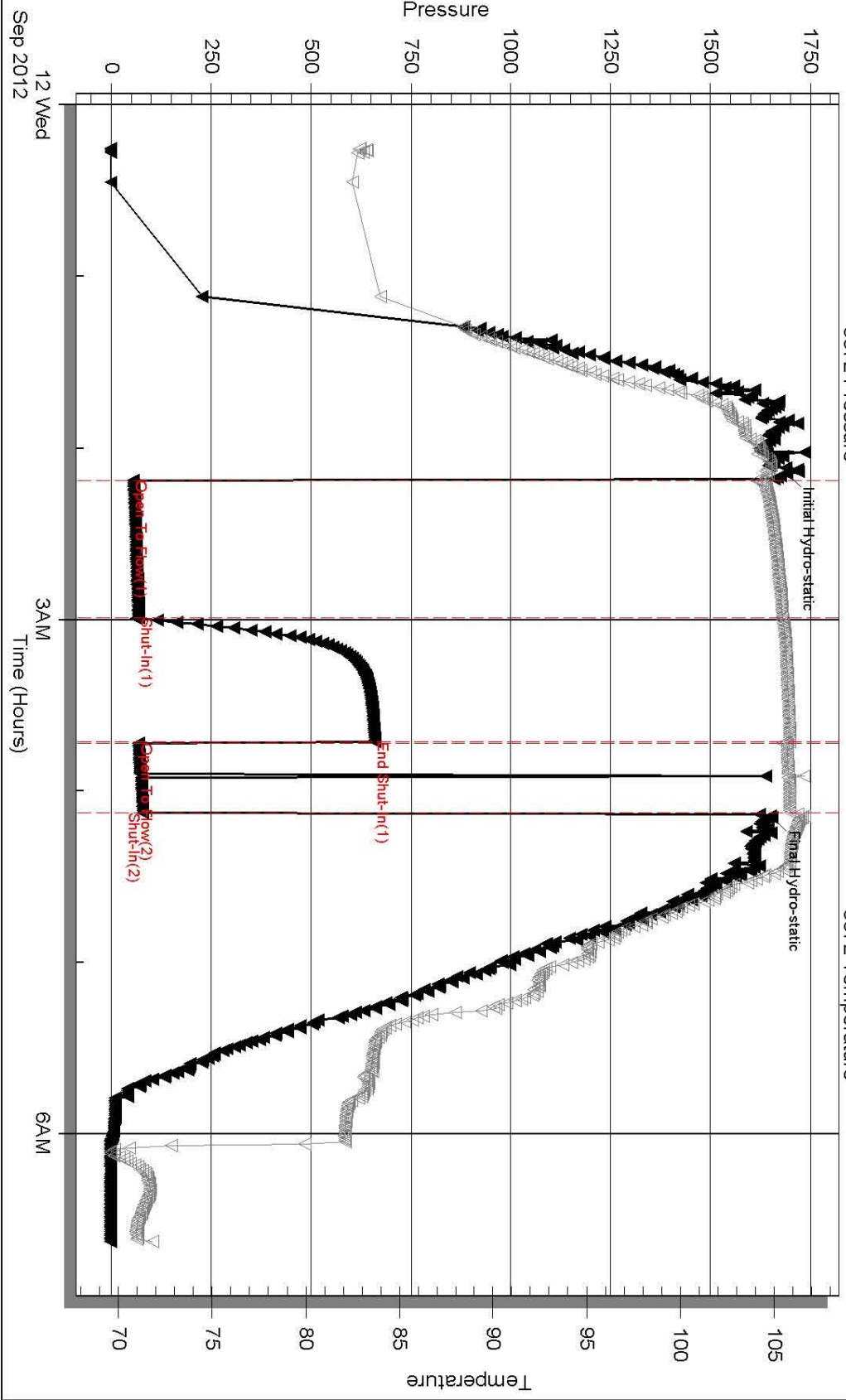
Trilobite Testing, Inc

Ref. No: 49307

Printed: 2012.09.12 @ 08:37:56

### DST # 3 STRADDLE TEST EXPANDED CHART

### Pressure vs. Time



### ROCK TYPES

- |  |          |  |           |  |            |  |            |  |          |
|--|----------|--|-----------|--|------------|--|------------|--|----------|
|  | Cht vari |  | Dolsec    |  | shale, grn |  | shale, red |  | Lscong1  |
|  | Clystgy  |  | Lmst fw<7 |  | shale, gry |  | Ss         |  | Dol Lime |
|  | Dolprim  |  | Lmst fw>7 |  | Carbon Sh  |  |            |  |          |

### ACCESSORIES

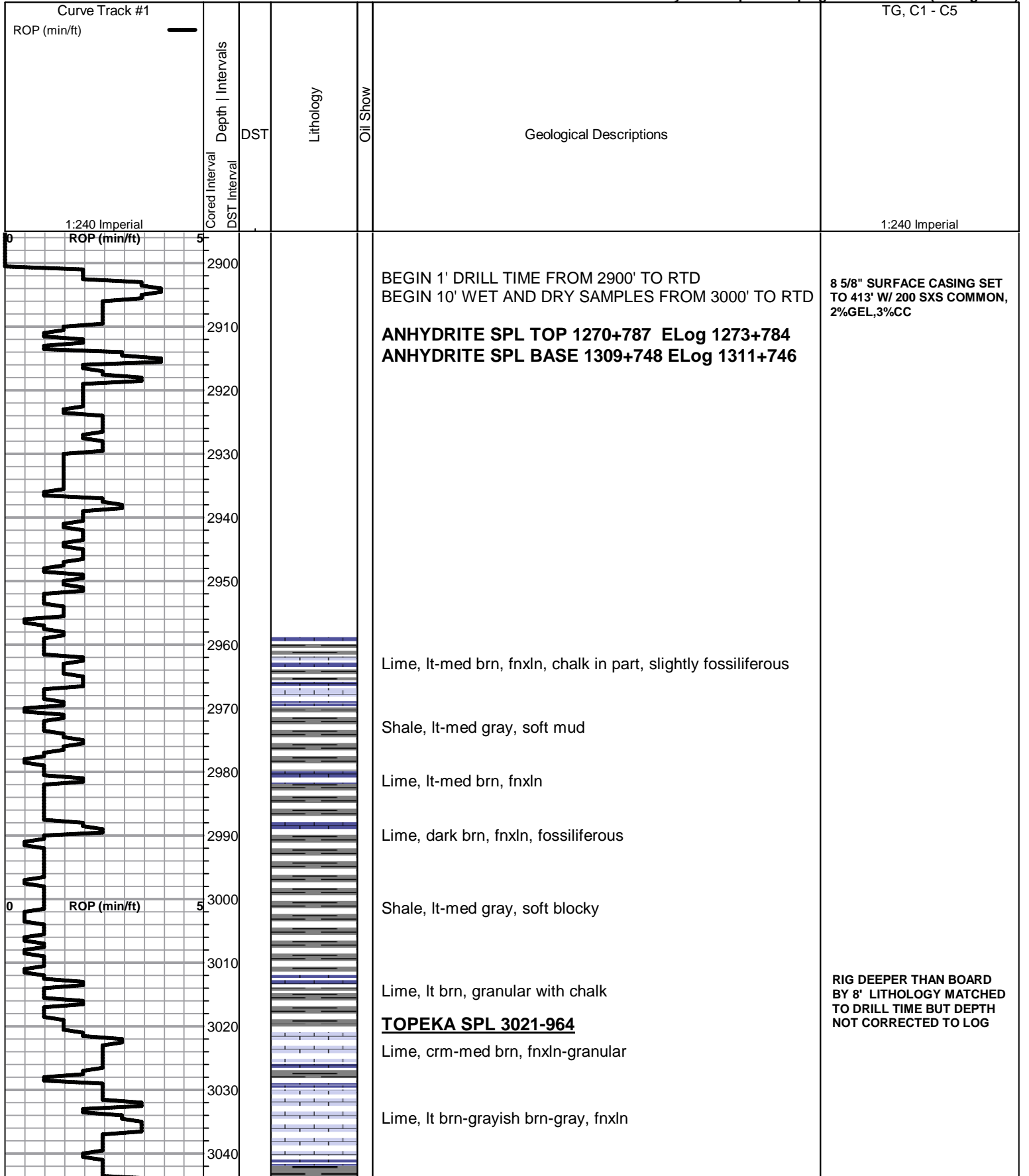
- MINERAL**
- ▨ Nodules
  - ◊ Varicolored chert
  - △ Chert White

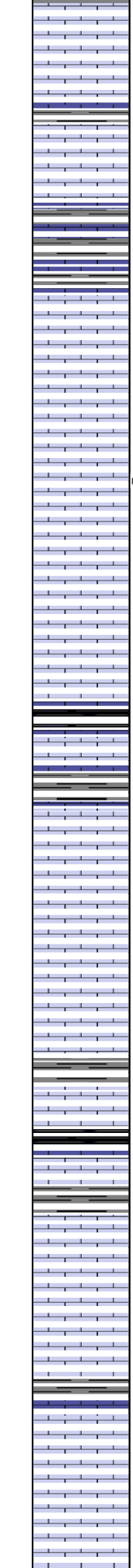
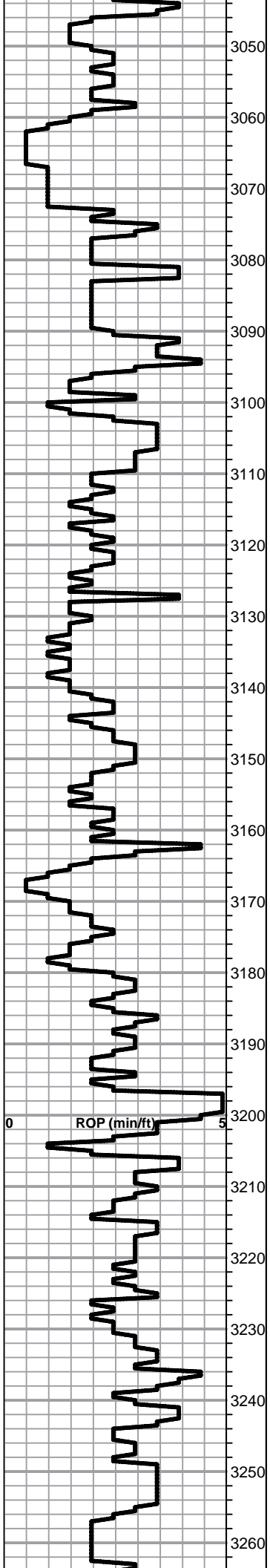
- FOSSIL**
- Oolite
  - ⊗ Oomoldic

**OTHER SYMBOLS**

- DST**
- DST Int
  - DST alt
  - Core

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





Lime, med brn-gray, fnxln, fossil fragments-fusulinids

Lime, tan-lt brn, fnxln grading into granular

Lime, tan-lt brn, granular, slight chalk in part, NS

Lime, med-dark brn, fnxln-granular, slightly fossiliferous

Lime, crm-med brn, fnxln, slight chalk in part, granular in part

Lime, lt-med brn, fnxln

Lime, lt-med brn, granular, few chips with scattered oil specks, No Odor

Lime, tan-lt brn, fnxln-granular, scattered chalk

Lime, lt-med brn, granular, chalky with sticky chalk clumps

Shale, gray-black carbonaceous

Lime, lt-med brn, fnxln

Shale, med gray, soft blocky

Lime, lt-med brn, fnxln

Lime, crm. fnxln with chalk

Lime, crm-tan, fnxln-granular, chalky

Lime, crm-tan, fnxln-granular, chalky white wash

Shale, black carbonaceous, fissile, blocky

Lime, crm-lt brn, fnxln

Lime, lt-med brn, fnxln-granular, slight chalk

Lime, lt-med brn, fnxln-granular

Shale, med gray, soft blocky

Lime, crm-lt brn, fnxln-granular, light chalk, slightly fossiliferous

Lime, crm-lt brn, fnxln, slight chalk

Lime, crm-lt brn, fnxln-granular, slightly fossiliferous



Lime, crm-lt brn, fnxln-granular, slightly fossiliferous

Lime, crm-lt brn, fnxln, slightly chalky

**HEEBNER SHALE SPL 3286-1229**

Shale, black carbonaceous, fissile, blocky  
Lime, lt-med brn, fnxln  
Shale, lime green, soft mud grading to lt grey mud

**TORONTO SPL 3304-1247**

Lime, white-crm, fnxln-lithographic with chalk in part, NS

Lime, white-crm, fnxln

**LKC SPL 3332-1275**

Lime, grayish brn, fnxln, hard on crush, NS

Lime, med brn-grayish brn, fnxln, hard

Lime, tan-lt brn, oolitic/oolmoldic with scattered to saturated staining, V Lt Odor, SFO on break

Lime, lt brn, fnxln, chalk in part

Lime, crm-lt gray, fnxln, bedded chalk in part, scattered specks of oil stain, no visible porosity

Lime, crm, fnxln-granular, NS

Shale, gray-black carbonaceous  
Lime, lt gray, fnxln

Lime, crm-tan, fnxln, NS noted in interval

Shale, gray-grayish green, soft blocky  
Lime, crm-tan, soft on crush, bedded chalk, NS

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

Lime, crm-tan, oolitic-oolmoldic, barren, NS No Odor

Lime, crm-tan, fnxln, bedded chalk, NS

Lime, crm-tan, fnxln, bedded chalk NS

Lime, crm-tan, fnxln, chalk in part

Lime, crm-tan, fnxln

Lime, crm-tan, fn-vfxln, NS

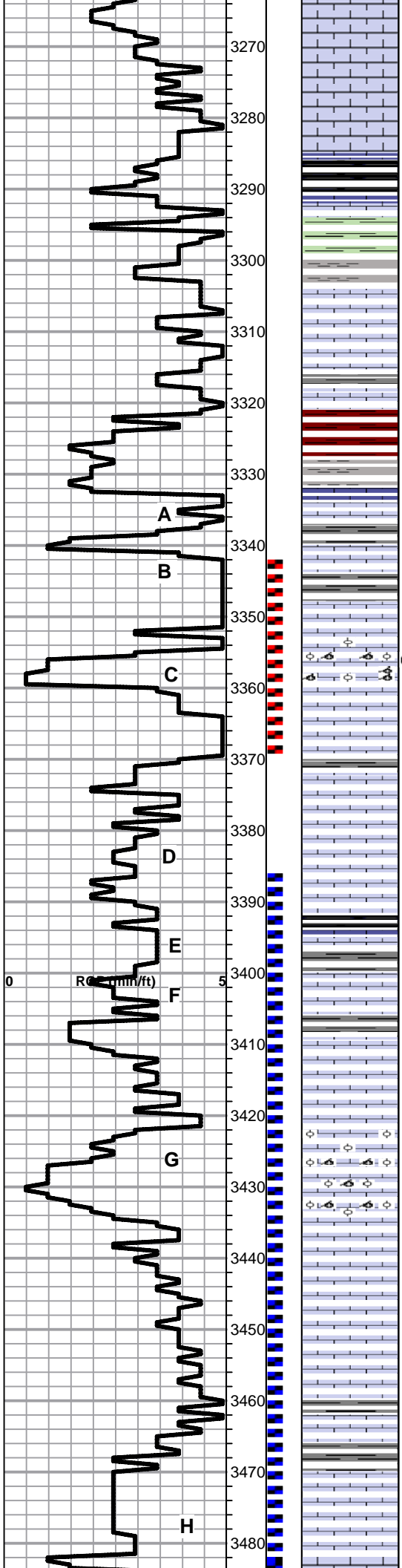
Lime, crm-tan, fnxln

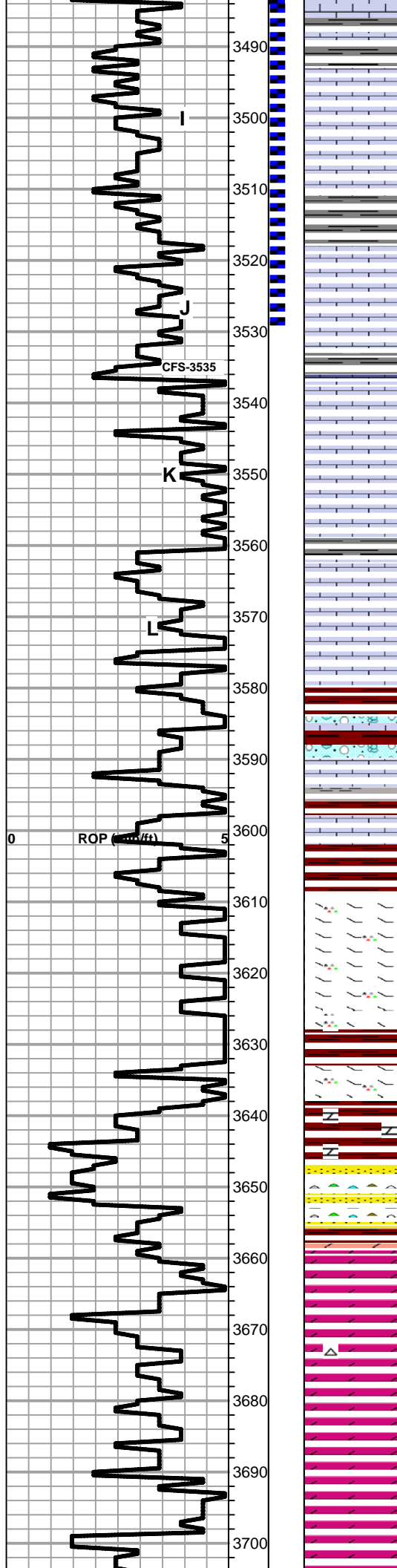
DST # 1 3342'-3370' SEE  
HEADER FOR TEST  
SUMMARY

Slope @3370' 3/4 degree

DST # 2 STRADDLE TEST  
3418' TO 3530' PACKER  
FAILED-MIS-RUN

DST # 3 STRADDLE TEST  
3386' TO 3530' SEE HEADER  
FOR TEST SUMMARY





Lime, crm-tan, fnxln

Lime, crm-tan, fnxln, bedded chalk, NS

Shale, lt gray-lt green, soft

Lime, crm-tan, fnxln, chalk in part NS

Lime, crm-tan, fn-vfxln

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

Lime, crm-tan, fnxln

Lime, crm-tan, fnxln, slight bedded chalk in part

**BKC 3580-1523**

Shale, reddish brn, blocky

Lime, clastic lime mix with shale

Shale, gray, red sticky clumps

Lime, tan, fnxln, bedded chalk

Shale, red wash

Lime, tan-med brn, dolomitic, hard on break  
Cherts vari light color

Lime, as above

Shale, red wash with lime as above

Shale, red wash with chert nodules in part

Mix of poorly sorted sandstones, cherts and shales

**ARBUCKLE SPL 3659-**

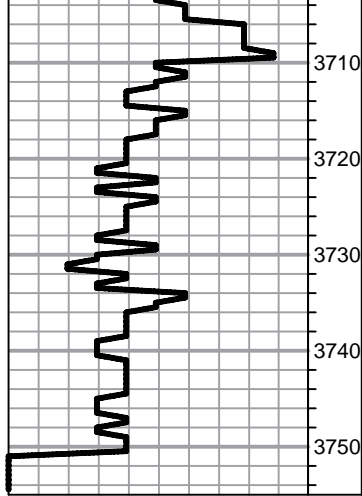
Dolomite, crm, fnxln, NS

Dolomite, crm, fnxln, NS

Dolomite, crm-lt brn, fnxln

Dolomite, crm-lt brn, fn-cxln, sucrosic in part

Dolomite, crm-tan, fn-cxln, hard



Dolomite, crm, fnxln

Dolomite, crm, fn-cxln, sucrosic

Dolomite, crm, fn-md xln

Dolomite, crm, fn-md xln, soft sticky white chalk

1st plug @3643' w/ 25 sxs  
2nd plug @ 1300' w/ 25 sxs  
3rd plug @ 560' w/ 100 sxs  
4th plug @ 40' w/ 10 sxs  
RH w/ 30 sxs

Slope @3750' 3/4 degree

# 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. 219

Date	9-1-12	Sec.	12	Twp.	15	Range	19	County	ELLIS	State	KANSAS	On Location		Finish	11:00 pm
Lease	KATHY		Well No.	#1		Location	ANTONINO LW-1S								
Contractor	SOUTHWIND #4				Owner	T.D.I									
Type Job	SURFACE				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.										
Hole Size	12 1/4		T.D.	413'		Charge To	T.D.I								
Csg.	8 5/8"		Depth	413'		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	15'		Cement Amount Ordered	200com 3cc-2gel								
Meas Line			Displace	25 Bbls											

**EQUIPMENT**

Pumptrk #5	No.	Cementor	Helper	BRETT	Common	200
Bulktrk #14	No.	Driver	LONNIE	Poz. Mix		
Bulktrk PLU	No.	Driver	CISCO	Gel.	47	

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
Cement	Sand
CIRCULATED	Handling 211
	Mileage

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge		Tax	
Mileage	Surface	Discount	
Signature		Total Charge	

# 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. 740

Date	9-12-12	Sec.	2	Twp.	15	Range	19	County	ELLIS	State	KS	On Location		Finish	2.00pm	
Lease	Kathy	Well No.	#1	Location		Antino 15 1W										
Contractor	Southwind Rig 4							Owner								
Type Job	plug							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.								
Hole Size	T.D. 3707							Charge To								
Csg.	Depth 3643							T D I								
Tbg. Size	Depth							Street								
Tool	Depth							City State								
Cement Left in Csg.	Shoe Joint							The above was done to satisfaction and supervision of owner agent or contractor.								
Meas Line	Displace							Cement Amount Ordered 245 $\frac{60}{40}$ 490 gal								

**EQUIPMENT**

Pumptrk	16	No.		Cementer	Matt	Common	147
Bulktrk	4	No.		Driver	FRANIS	Poz. Mix	98
Bulktrk	pu	No.		Driver	LANNIE	Gel.	9

**JOB SERVICES & REMARKS**

Remarks:		Hulls
Rat Hole	30 545	Salt
Mouse Hole	15 545	Flowseal
Centralizers		Kol-Seal
Baskets		Mud CLR 48
D/V or Port Collar		CFL-117 or CD110 CAF 38
		Sand
		Handling
		Mileage

**FLOAT EQUIPMENT**

1st	3643ft	25 545	Guide Shoe
2nd	1300ft	25 545	Centralizer
3rd	1560ft	100 545	Baskets
4th	40ft	10 945	AFU Inserts
			Float Shoe
			Latch Down
			Wood Plug
			Pumptrk Charge
			Mileage

X Signature

Tax  
Discount  
Total Charge