

**OPERATOR**

Company: AARON OIL  
 Address: 1409 WASHINGTON CIRCLE  
 HAYS, KANSAS 67601

Contact Geologist: STEVE STEWART  
 Contact Phone Nbr: 785-628-8177  
 Well Name: BIEKER #1-25  
 Location: SE NE NE Sec.25-15s-19w  
 Pool: WILDCAT  
 State: KANSAS

API: 15-051-26,437-00-00  
 Field: UNNAMED  
 Country: USA

**Scale 1:240 Imperial**

Well Name: BIEKER #1-25  
 Surface Location: SE NE NE Sec.25-15s-19w  
 Bottom Location:  
 API: 15-051-26,437-00-00  
 License Number: 31828  
 Spud Date: 11/30/2012  
 Region: ELLIS COUNTY  
 Drilling Completed: 12/6/2012  
 Surface Coordinates: 980' FNL & 330' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 1970.00ft  
 K.B. Elevation: 1978.00ft  
 Logged Interval: 2800.00ft  
 Total Depth: 3700.00ft  
 Formation: LANSING-KANSAS CITY  
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

Time: 2:15 PM  
 Time: 7:32 AM  
 To: 3700.00ft

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: Latitude:  
 N/S Co-ord: 980' FNL  
 E/W Co-ord: 330' FEL

**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: DISCOVERY DRILLING INC.  
 Rig #: 4  
 Rig Type: MUD ROTARY  
 Spud Date: 11/30/2012  
 TD Date: 12/6/2012  
 Rig Release: 12/7/2012

Time: 2:15 PM  
 Time: 7:32 AM  
 Time: 3:00 AM

**ELEVATIONS**

K.B. Elevation: 1978.00ft  
 K.B. to Ground: 8.00ft  
 Ground Elevation: 1970.00ft

**NOTES**

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON POSITIVE RESULTS OF DST # 1 AND NUMEROUS ZONES WITH HYDROCARBON POTENTIAL AS EVIDENCED BY SCATTERED LITE STAINING AND LITE ODOR.

OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY LOG, BOREHOLE COMPENSATED SONIC LOG

DRILL STEM TESTING BY TRILOBITE TESTING INC: ONE (1) CONVENTIONAL TEST

**FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY**


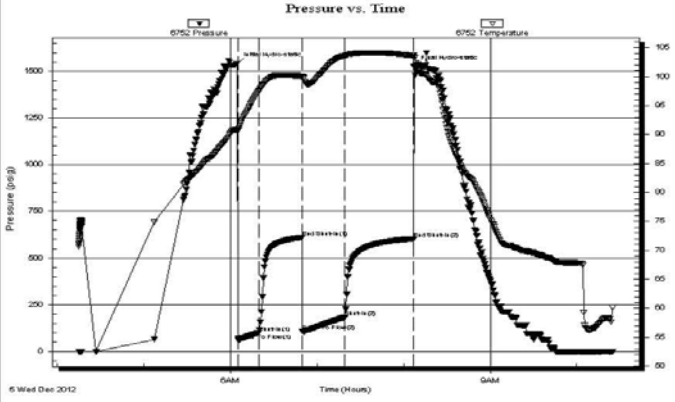
**BIEKER # 1-25  
 980' FNL & 330' FEL, NE/4  
 Sec.25-15s-19w  
 1970' GL 1978' KB**

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>
Anhydrite		1155+ 823
B-Anhydrite		1188+ 790
Topeka	2943- 965	2942- 964
Heebner Shale	3221-1243	3223-1245
Toronto	3241-1263	3242-1264
LKC	3265-1287	3270-1292
BKC		3511-1533
Marmaton		3556-1578
Arbuckle		3603-1625
RTD	3700-1722	
LTD		3704-1726

**CHRONOLOGY OF DAILY ACTIVITY**

- 11-30-12 RU, spud
- 12-01-12 drilling surface hole
- 12-02-12 1155', set 8 5/8" surface casing to 1155' w/ 425 sxs Common, 2% gel, 3%CC, plug down 8:30AM, WOC 12 hours
- 12-03-12 1930', drilling
- 12-04-12 2795', drilling, displace 2848-2900
- 12-05-12 3300', short trip, CCH, DST # 1 3248' to 3300' "A – C" LKC
- 12-06-12 3684', RTD @ 3700' at 7:32AM, CCH, mini short trip, CCH 1 ½ hrs, out for logs, TIWB, CCH 1 hr lay down drill pipe and run casing

**DST # 1 TEST SUMMARY "A-C" LKC**

	<h3>DRILL STEM TEST REPORT</h3>																																						
Aaron Oil Co 1409 Washington Cir. Hays KS 67601  ATTN: Herb Deines	<b>25 15s 19w Ellis</b>  <b>Bieker 1-25</b> Job Ticket: 51535 <b>DST#: 1</b> Test Start: 2012.12.05 @ 04:15:00																																						
<b>GENERAL INFORMATION:</b> Formation: <b>LKC "A - C"</b> Deviated: No Whipstock: 1978.00 ft (KB) Time Tool Opened: 06:05:30 Time Test Ended: 10:25:00  <b>Interval: 3248.00 ft (KB) To 3300.00 ft (KB) (TVD)</b> Total Depth: 3300.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair  Test Type: Conventional Bottom Hole (Initial) Tester: Jim Svaty Unit No: 41  Reference Elevations: 1978.00 ft (KB) 1970.00 ft (CF) KB to GR/CF: 8.00 ft																																							
<b>Serial #: 6752      Inside</b> Press@RunDepth: 181.93 psig @ 3263.00 ft (KB) Start Date: 2012.12.05      End Date: 2012.12.05 Start Time: 04:15:01      End Time: 10:25:00		Capacity: 8000.00 psig Last Calib.: 2012.12.05 Time On Btm: 2012.12.05 @ 06:04:40 Time Off Btm: 2012.12.05 @ 08:07:10																																					
<b>TEST COMMENT:</b> 15-IFP- BOB in 2 1/2min. 30-ISIP- Surface Blow Building to 3 1/2in. 30-FFP- BOB in 30sec. 45-FSIP- BOB in 2 1/2min.																																							
		<b>PRESSURE SUMMARY</b>																																					
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Serial #: 6752

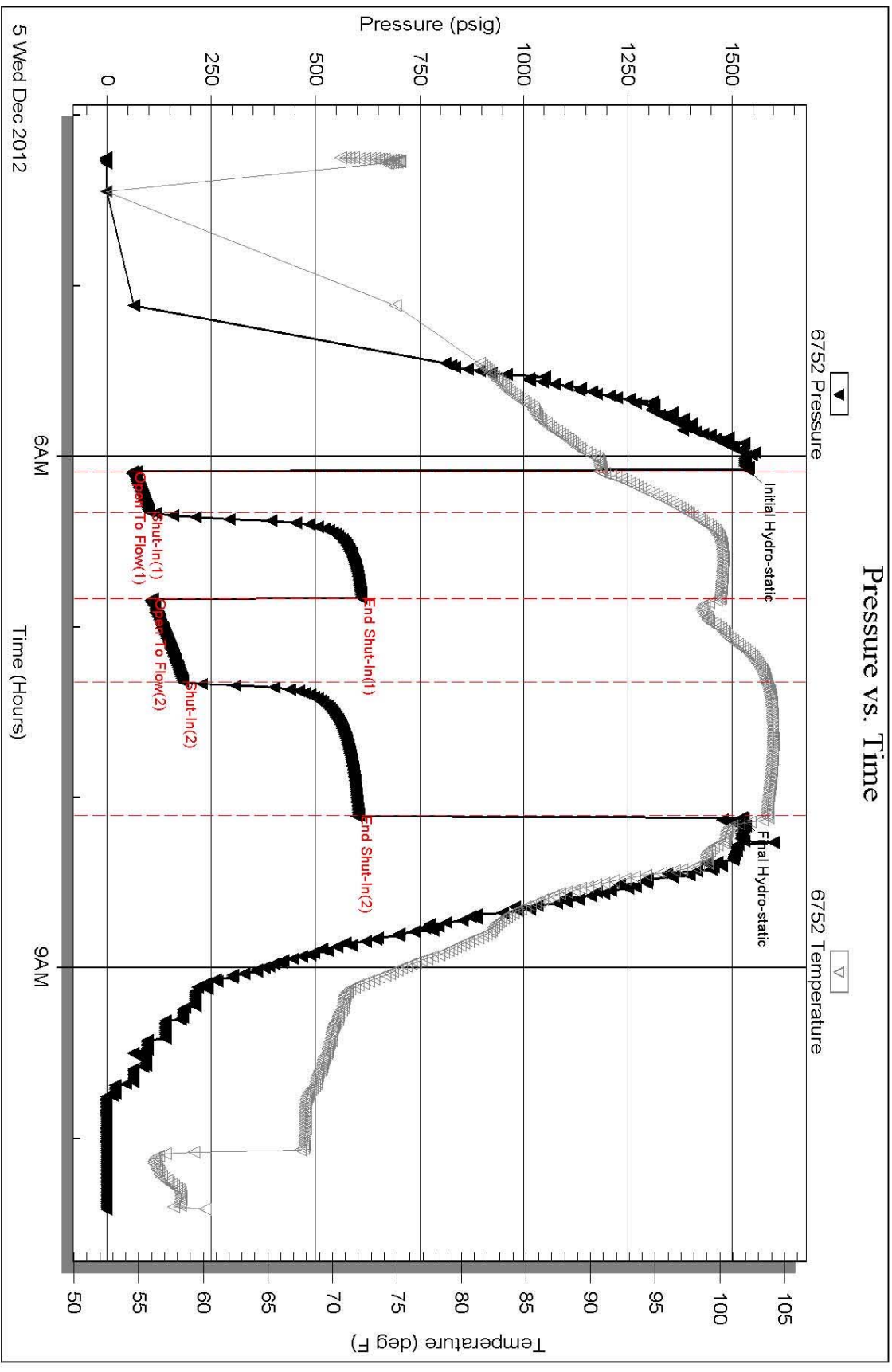
Inside

Aaron Oil Co

Bleker 1-25

DST Test Number: 1

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 51535

Printed: 2012.12.05 @ 11:07:55

ROCK TYPES

	Congl		Lmst fw7>		Carbon Sh		Dol Lime
	Dolprim		shale, grn		shale, red		Lscongl
	Lmst fw<7		shale, gry		Arg/Shale		

### ACCESSORIES

#### MINERAL

- ▲ Chert, dark
- ≡ Nodules
- P Pyrite
- Sandy
- ◊ Varicolored chert
- △ Chert White

#### FOSSIL

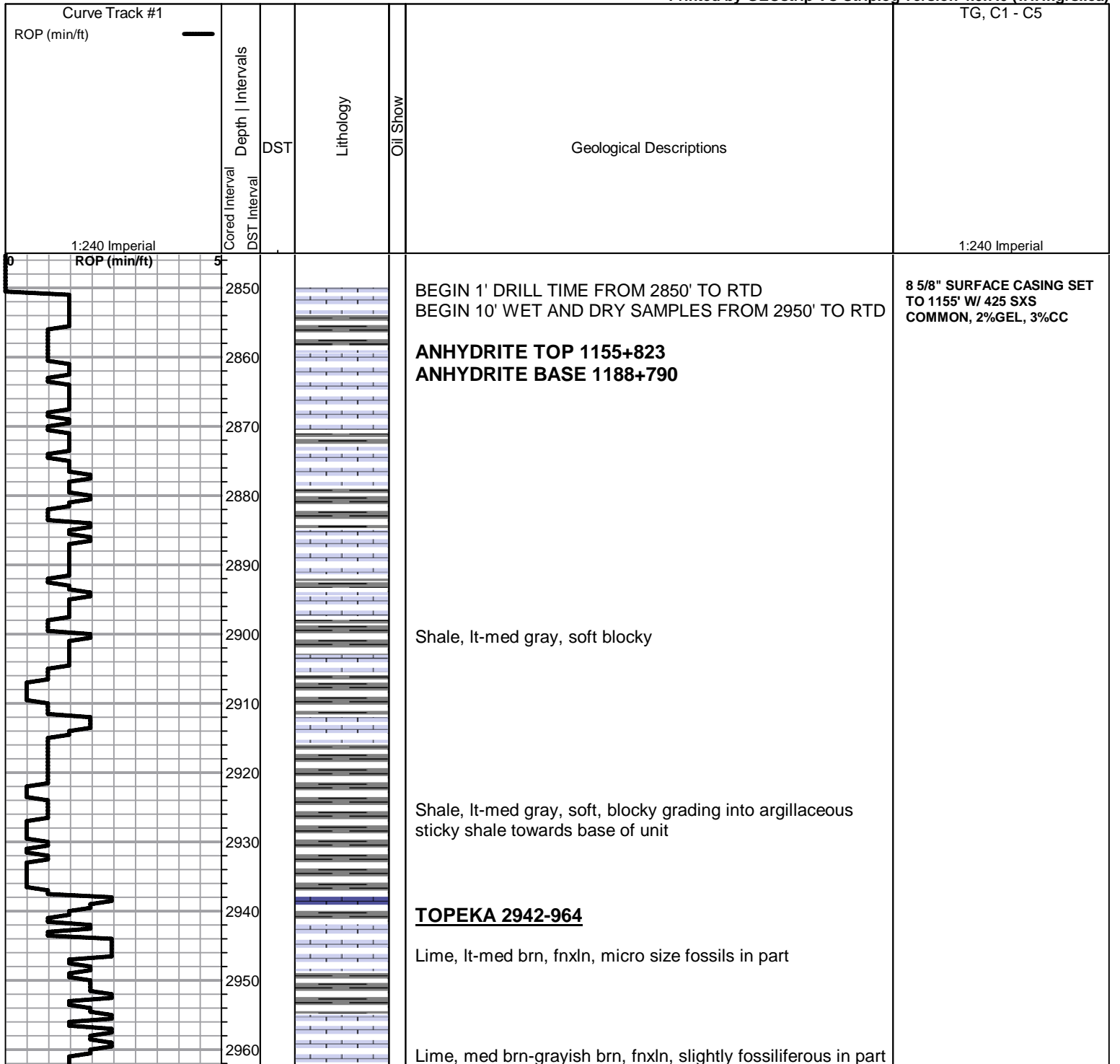
- Oolite
- ⊕ Oomoldic

### OTHER SYMBOLS

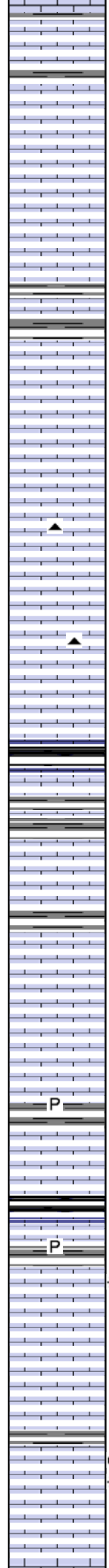
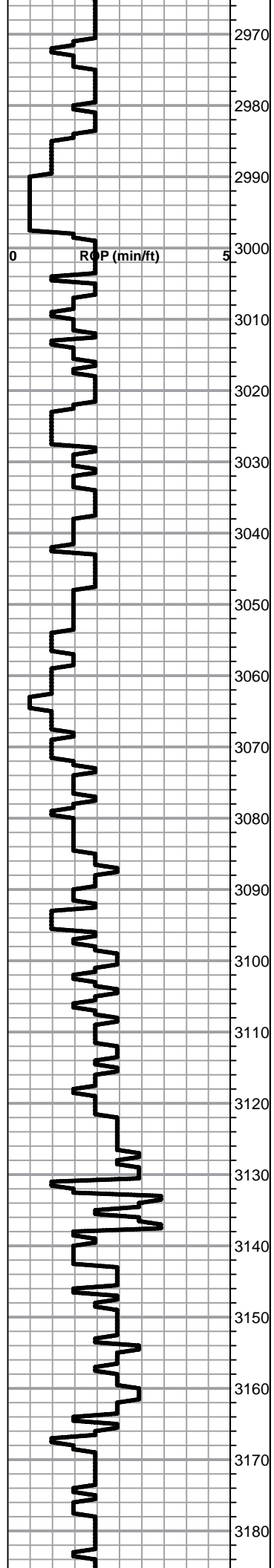
#### DST

- DST Int
- DST alt
- Core

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



8 5/8" SURFACE CASING SET TO 1155' W/ 425 SXS COMMON, 2%GEL, 3%CC



2970 Lime, lt-med brn, fnxln, bedded chalk in part

2980 Lime, lt brn-gray, fnxln-granular, soft on crush, slight chalk, NS


2990 Lime, lt brn, granular, slight bedded chalk in part, NS

3000 Lime, tan-lt brn, fnxln, chalk in part  
Shale, lt gray-lt green, soft, argillaceous clumps


3010 Lime, med brn-med grayish brn, fnxln, hard on crush, slightly fossiliferous, bedded chalk in part

3020 Lime, med brn-med grayish brn, fnxln-granular, bed chalk in part, slightly fossiliferous

3030 Lime, lt brn, fnxln-granular, increasing chalk content, NS

3040  Lime, med brn-grayish brn, fnxln-granular with chalk, trashy appearance in part

3050 Lime, lt-med brn, granular with chalk, slightly fossiliferous

3060  Lime, tan-lt brn, granular, chalky

3070 Lime, tan-lt brn, granular


3075 Shale, black carbonaceous, fissile, blocky

3080 Lime, crm, fn-vfxln, lithographic in appearance

3090 Lime, crm-tan-lt brn, granular, slightly chalky, NS


3100 Lime, tan-lt brn, fnxln-granular, bedded chalk, slightly fossiliferous


3110 Lime, crm-lt brn, fnxln-granular, slightly fossiliferous, slight chalk in part

3120  P

3130 Lime, lt-med brn, fnxln, slightly chalky


3135 Shale, black carbonaceous, fissile, blocky

3140  P

3145  Lime, lt-med brn, fnxln, few chips hard on crush with fine vuggy porosity with Lt Odor on break, NFO

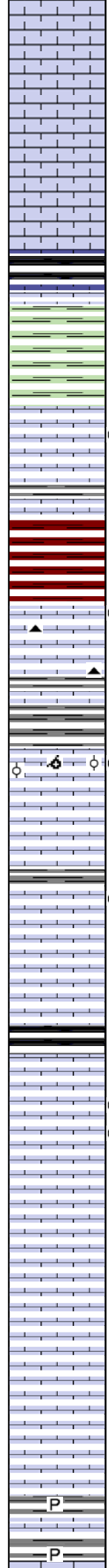
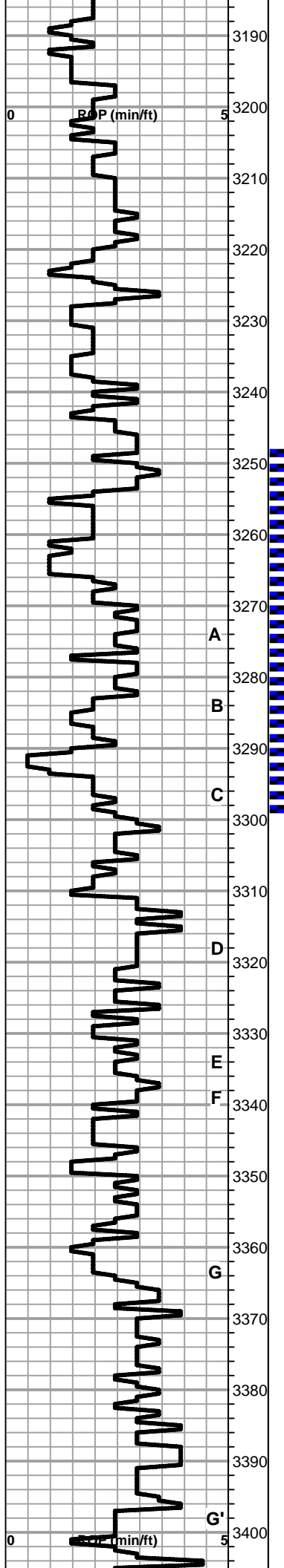
3150 Lime, lt brn-lt grayish brn, fnxln-granular, slightly chalky

3160 Lime, lt-med brn, granular with chalk

3170  Lime, lt-med brn, fnxln with chalk with thin bed of oolitic with fossil fragments, lt scattered stain, lt odor, NFO

3180 Lime, lt brn, granular, slight chalk in part, slightly fossiliferous

PERFORATE 3170-73, TREAT WITH LOW PRESSURE AND SWAB TEST FOR POTENTIAL



Lime, crm-lt brn, mostly granular, slight chalk, slightly fossiliferous

Lime, lt brn, granular with soft fnxln, bedded chalk in part

Lime, lt brn, fnxln

**HEEBNER SHALE ELOG 3223-1245**

Shale, black carbonaceous, fissile, blocky

Lime, med brn, fn-vfxln

Shale, lime green, soft, blocky with soft mud in part

**TORONTO ELOG 3242-1264**

Lime, crm, fn-vfxln, trace of lite stain, NFO, No Odor

Lime, crm-lt brn, fn-vfxln

Shale, reddish brn, soft blocky with lite red wash

**LKC ELOG 3270-1292**

Lime, lt brn, mostly vfxln, few chips with lt staining in fine, interxln porosity, NFO, very lite odor

Lime, lt brn, fn-vfxln, trashy lime-shale boundary

Lime, lt brn, fnxln, oolitic/oolmoldic with scattered stain, NFO, very lite to no detectable odor.

Lime, lt brn, fnxln

Shale, lt gray, soft, blocky

Lime, crm-tan, thin bed of oolitic w/ fossil fragments, scattered lt staining with lite odor, some visible sparry calcite backfill in pore spaces.

Lime, crm-tan, fnxln, lt of bedded chalk

Shale, black carbonaceous, fissile, blocky

Lime, pale gray, fnxln

Lime, crm-tan, fnxln, small chips of oolitic material with lt scattered staining, NFO, No Odor

Lime, crm-tan-lt brn, fnxln, chalky, soft on crush

Lime, crm-tan, fnxln, soft on crush, chalk in part, NS

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

Lime, crm-tan, fnxln, slight bed chalk

Lime, crm-tan grading into med brn, fnxln

Shale, med-dark gray, slivers

PERMEABILITY IN LOG INTERVAL FROM 3245-47. NOT A KNOWN PRODUCING ZONE IN AREA BUT SHOULD BE PERFORATED AND TESTED PRIOR TO ABANDONMENT OF WELL

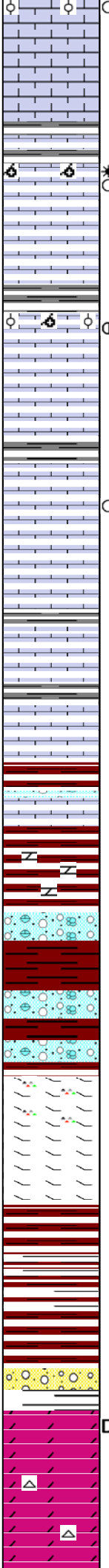
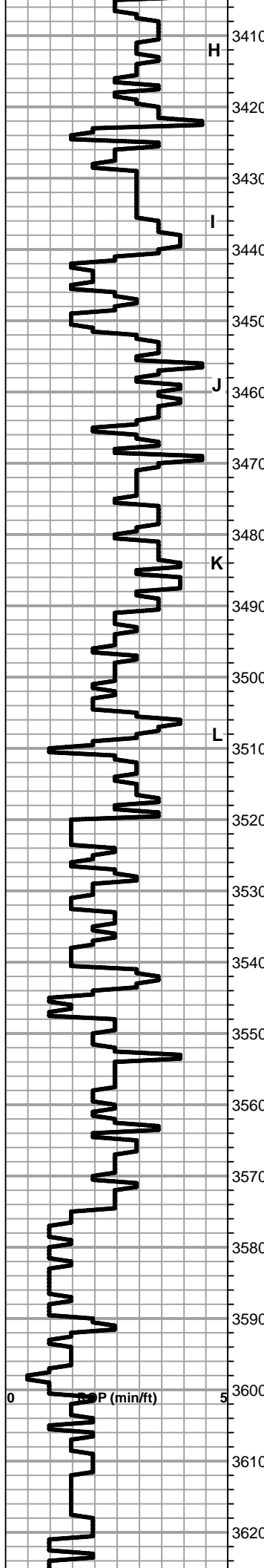
DST # 1 3248' TO 3300' SEE HEADER FOR TEST SUMMARY  
PERMEABILITY IN LOG INTERVAL 3270-72, ZONE SHOULD BE PERFORATED AND TESTED PRIOR TO ABANDONMENT OF WELL

ALTHOUGH THE SAMPLES DIDN'T DO THIS ZONE JUSTICE, DST # 1, SHOWED THE "C" ZONE TO BE PRODUCTIVE. PERFORATE 3310-15, TREAT AND TEST. ZONE RESPONDS WELL TO ACID TREATMENT

"D" KNOWN PRODUCTIVE ZONE IN WELLS TO THE NW, RECOMMEND PERFORATING LOG INTERVAL 3310-15, TREATING, AND TESTING FOR POTENTIAL

LOG INTERVAL FROM 3338-40 AND 3343-47 SHOULD BE PERFORATED, TREATED AND TESTED PRIOR TO ABANDONMENT OF WELL.

MICROLOG INDICATES "H"



Lime, crm-tan, fnxln containing oolitic material with scattered lt staining, very Lt Odor, NFO, interoolitic porosity but appears poorly developed

Lime, crm-tan, fnxln

Lime, crm-tan, fnxln, chalk with thin oomoldic zone, with scattered staining and very lite odor

Lime, crm-lt brn, fnxln

Lime, crm-lt brn, oolitic/oolmoldic, scattered vuggy porosity, lt odor, few specks of free oil, scattered staining

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

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

Lime, tan, mostly fnxln, thin oolitic zone, Lt Odor, scattered lite staining, NFO.

Lime, tan, fnxln, bedded chalk in part

Lime, lt brn, fnxln, slight chalk in part

Lime, lt brn, fn-vfxln, brittle to hard on crush, slight chalk

**BKC ELOG 3511-1533**

Shale, reddish brn,grays and greens, firm, blocky  
Clastic lime mix with lt brn , fnxln, dolomitic, hard on crush lime in part

Shale, reddish-brn, soft with small chert nodules

Lime and shale mix with scattered specks of glauconite

Clastic lime mix with red shale, lt red wash

**MARMATON ELOG 3556-1578**

Lime, crm-lt brn, fnxln, dolomitic, hard on crush  
Chert, tan, orange mix, fresh, sharp

Lime, crm-lt brn, dolomitic,

Shale, reddish brn, soft, sticky clumps

Shale, lt gray, reds, soft forming sticky clumps

Thin zone but cemented and not developed

**ARBUCKLE ELOG 3603-1625**

Dolomite, ivory-crm, fn-cxln, granular, flakes of dead oil, NFO, No Odor , fine crystalline pyrite in transition zone

Dolomite, ivory-crm, granular, fn-cxln, clean  
Chert, white, fresh, sharp

ZONE MAY HAVE PERMEABILITY ISSUES BUT SHOULD BE PERFORATED IN LOG INTERVAL FROM 3408-10, TREATED AND TESTED PRIOR TO ABANDONMENT OF WELL

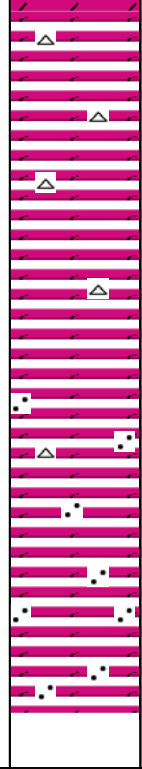
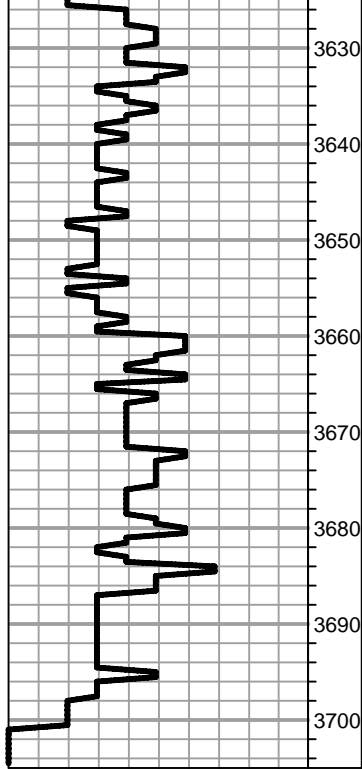
"I" ZONE SHOULD BE PERFORATED IN THE LOG INTERVAL 3429-32, TREATED AND TESTED PRIOR TO ABANDONMENT OF WELL

"J" DOES APPEAR TO HAVE POSSIBLE PERMEABILITY ISSUES IN THE LOG INTERVAL 3451-54 BUT SHOULD BE PERFORATED AND TESTED PRIOR TO ABANDONMENT SINCE IT IS A PRODUCTIVE ZONE IN AREA WELLS.

"K" ZONE LOG INTERVAL FROM 3475-77 SHOULD BE PERFORATED, TREATED AND TESTED PRIOR TO ABANDONMENT OF WELL

ARBUCKLE TOO LOW TO BE PRODUCTIVE





Dolomite, crm, fnxln, hard on crush

Dolomite, fnxln-granular, fn-cxln,

Dolomite, crm, fn-cxln, granular

Dolomite, crm, fn-cxln, granular

Dolomite, crm, fnxln-granular, fn-cxln

Dolomite, crm, fnxln with increasing quartz grains, some fused clusters

Dolomite, crm, fnxln-granular, sandy

Dolomite, crm, fnxln-granular, sandy

**RTD 3700-1722    LTD 3704-1726**