OPERATOR

Company:	MIKE KELSO OIL, INC		
Address:	P.O. BOX 467 CHASE, KANSAS 67524-0467		
Contact Geologist:	MIKE KELSO		
Contact Phone Nbr:	620-938-2943		
Well Name:	VOLKLAND A #7		
Location:	NW SW SE NW S27 T18S R10W	API:	15-159-22,770-0000
Pool:		Field:	ORTH
State:	KANSAS	Country:	USA

Scale 1:240 Imperial

Well Name:	VOLKLAND A #7		
Surface Location:	NW SW SE NW S27 T18S R10W		
Bottom Location:			
API:	15-159-22,770-0000		
License Number:	31528		
Spud Date:	4/1/2014	Time:	8:15 PM
Region:	RICE COUNTY		
Drilling Completed:	4/7/2014	Time:	11:20 PM
Surface Coordinates:	2079 FNL & 1342 FWL		
Bottom Hole Coordinates:			
Ground Elevation:	1745.00ft		
K.B. Elevation:	1752.00ft		
Logged Interval:	2100.00ft	To:	3200.00ft
Total Depth:	3188.00ft		
Formation:	PRE-CAMBRIAN		
Drilling Fluid Type:	CHEMICAL/FRESH WATER GEL		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:	-98.4199176	Latitude:	38.4578400
N/S Co-ord:	2079 FNL		
E/W Co-ord:	1342 FWL		

LOGGED BY

SOLUTIONS CONSULTING

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

CONTRACTOR

Contractor:	SKYTOP DRILLING		
Rig #:	1		
Rig Type:	MUD ROTARY		
Spud Date:	4/1/2014	Time:	8:15 PM
TD Date:	4/7/2014	Time:	11:20 PM
Rig Release:	4/9/2014	Time:	12:00 AM

ELEVATIONS

K.B. Elevation:	1752.00ft	Ground Elevation:	1745.00ft
K.B. to Ground:	7.00ft		

NOTES

DECISION WAS MADE TO SET 5 1/2" PRODUCTION CASING TO FURTHER TEST ZONES WITH FAVORABLE OIL AND GAS SHOWS

OPEN HOLE WELL LOGGING BY PIONEER WIRELINE: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, AND MICRORESISTIVITY LOG

NO DRILL STEM TESTS WERE PERFORMED

FORMATION TOPS AND SUMMARY OF DAILY ACTIVITIES

	WELL NAME		COMPARISON WELL	COMPARISON WELL
	VOLKLAND A #7		HABIGER #8	HOELSCHER #1
	API: 15-159-22770		API: 15-159-21620	API: 15-159-21715
FORMATION	SAMPLE TOPS	LOG TOPS	LOG TOPS (DATUM)	LOG TOPS (DATUM)
TOPEKA	2463' (-711')	2463' (-711')	-707'	-708'
HEEBNER	2730' (-978')	2729' (-977')	-967'	-970'
TORONTO	2749' (-987')	2750' (-988')	-985'	-991'
DOUGLAS	2760' (-1008')	2758 (-1006')	-1000'	-998'
BROWN LIME	2846' (-1094')	2846' (-1094')	-1085'	-1089'
LKC	2867' (-1115')	2865' (-1113')	-1103'	-1108'
BKC	3136' (-1384')	3133' (-1381')	-1374'	-1392'
CONGLOMERATE	3149' (-1397')	3150' (-1398')	-1386'	NA
PRECAM. QTZ	3176' (-1424')	3175' (-1423')	-1423'	-1458'
RTD	3188' (-1436')	3188' (-1436')	-1642'	-1500'

SUMMARY OF DAILY ACTIVITY

4-1-14 R.U., spud @ 8:15pm, 17 1/4" bit

4-2-14 285', 13 3/8" surface casing set at 436' w/400 sxs common, 2% gel, 3% cc, short trip, survey 1/4°, WOC

4-3-14	460', drilling, 12 1/4" bit
4-4-14	1119', TOWB, change to 7 7/8" bit, TIWB, drilling
4-5-14	1900', drilling
4-6-14	2625', drilling, CFS @ 2690'
4-7-14	3117', drilling, CFS @ 3159', TD @ 3188' @ 11:20PM, CTCH, short trip, CTCH 1 HRS, TOWB, survey 3.4°, strap 2.64' short to board, TOWB for logging
4-8-14	3188', logging, prepare to set 5 ½" production casing
4-9-14	release rig

ROCK TYPES

Congl, Lmst fw<7, Lmst fw7>, shale, grn, shale, gry, Carbon Sh, shale, red, Meta, Qtz Cryst

ACCESSORIES

MINERAL
Glauconite
Pyrite
Chert White
Mica

FOSSIL
Fossils < 20%
Gastropod
Oolite
Oomoldic
Fussilinid

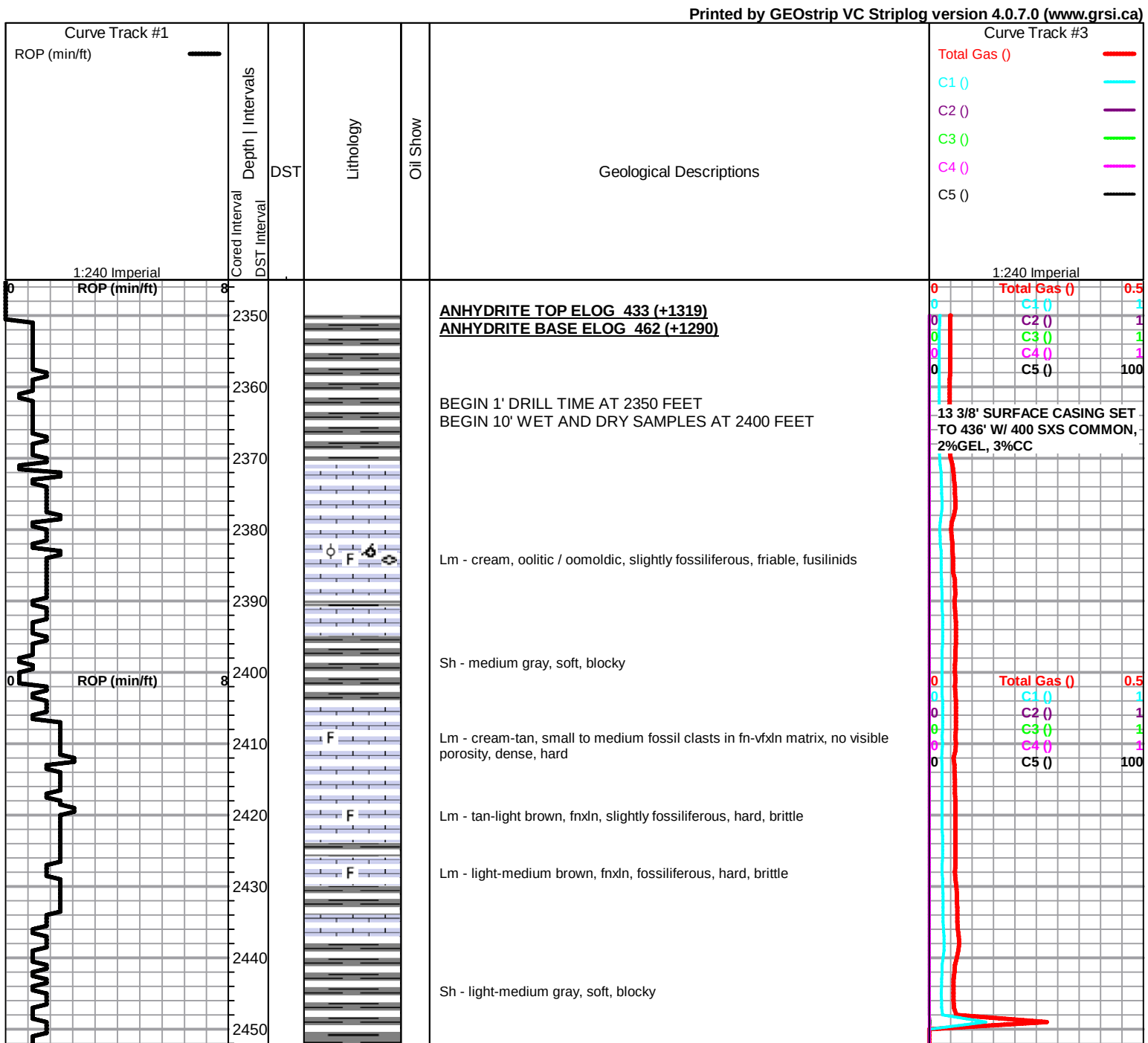
STRINGER
Chert
Limestone
Siltstone

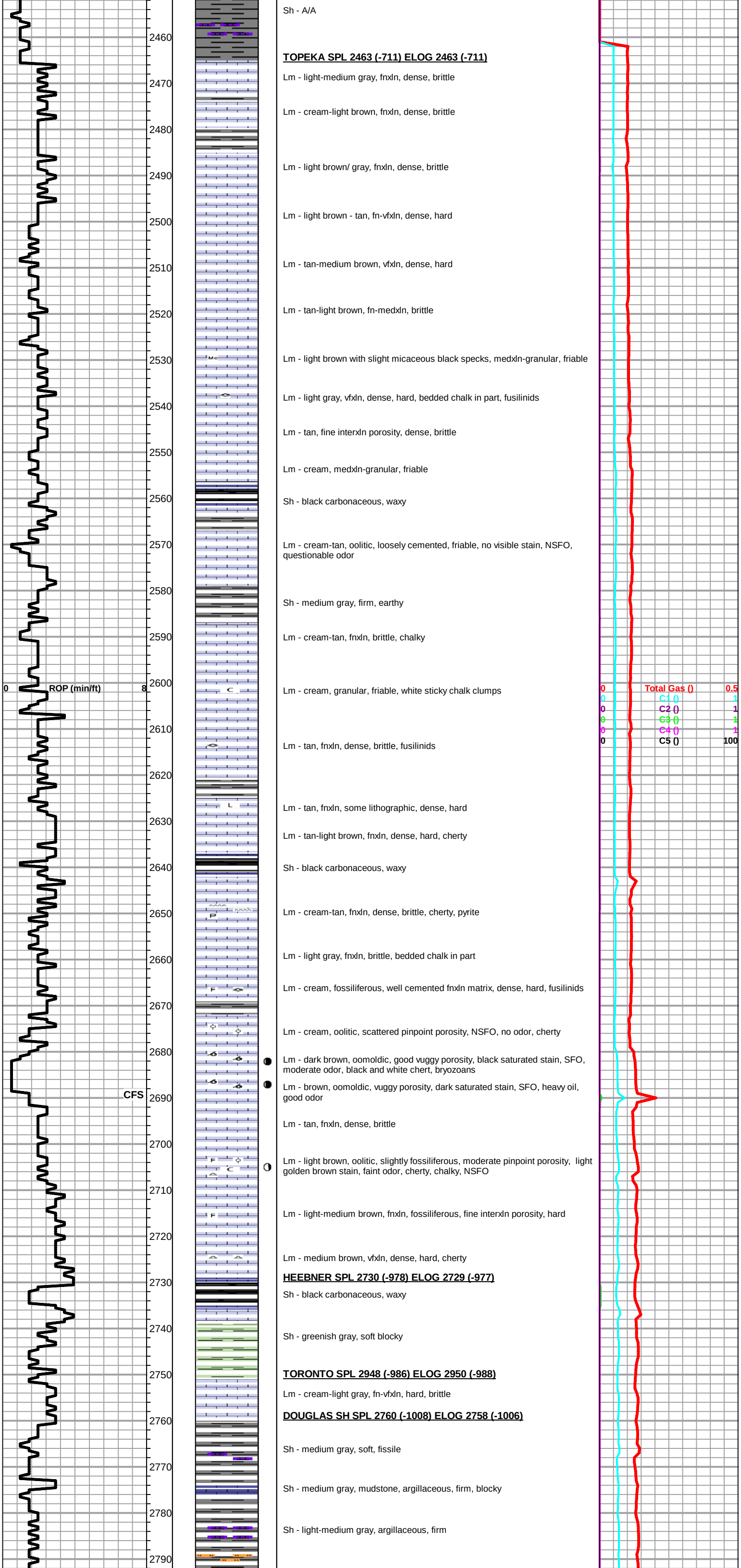
TEXTURE
Chalky
Lithogr

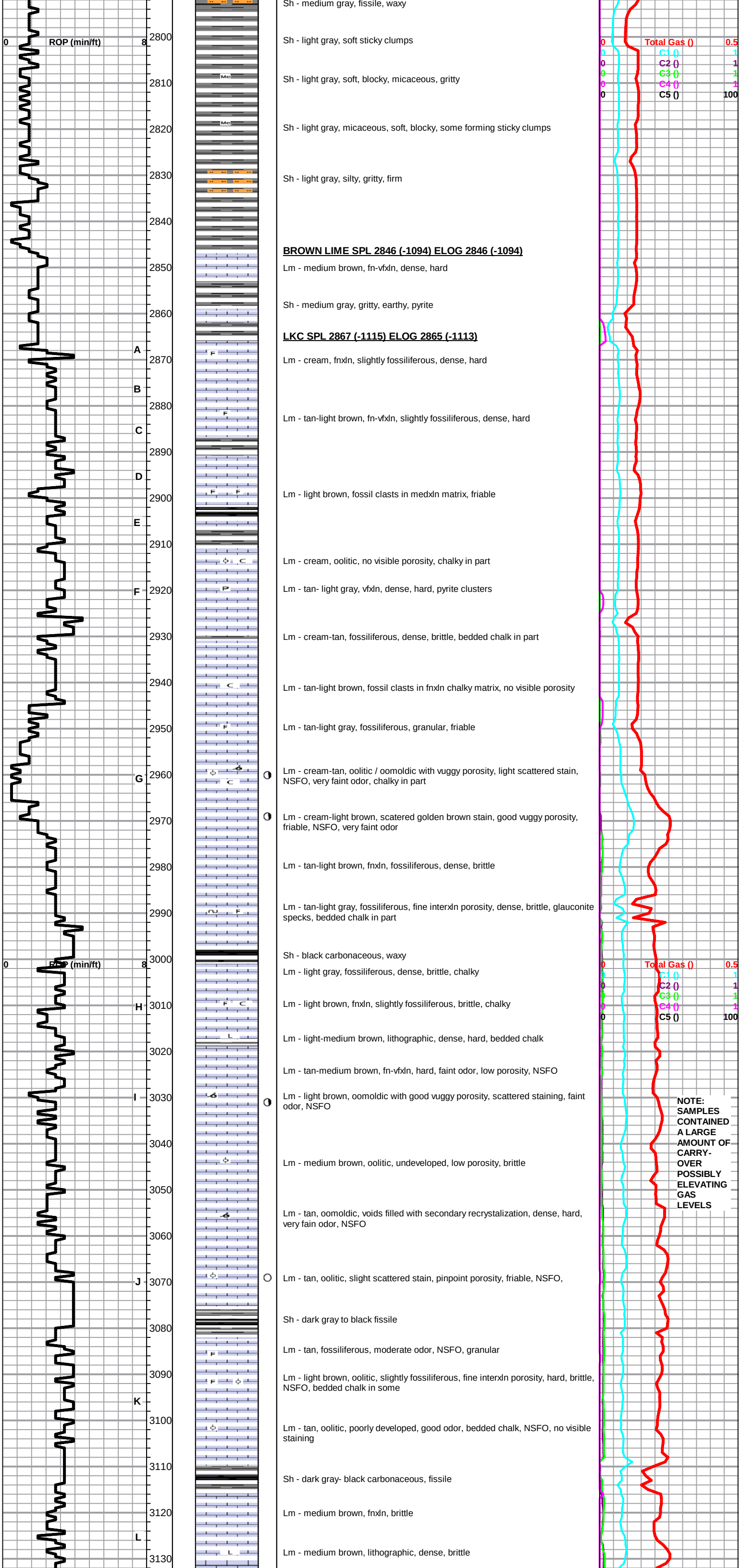
OTHER SYMBOLS

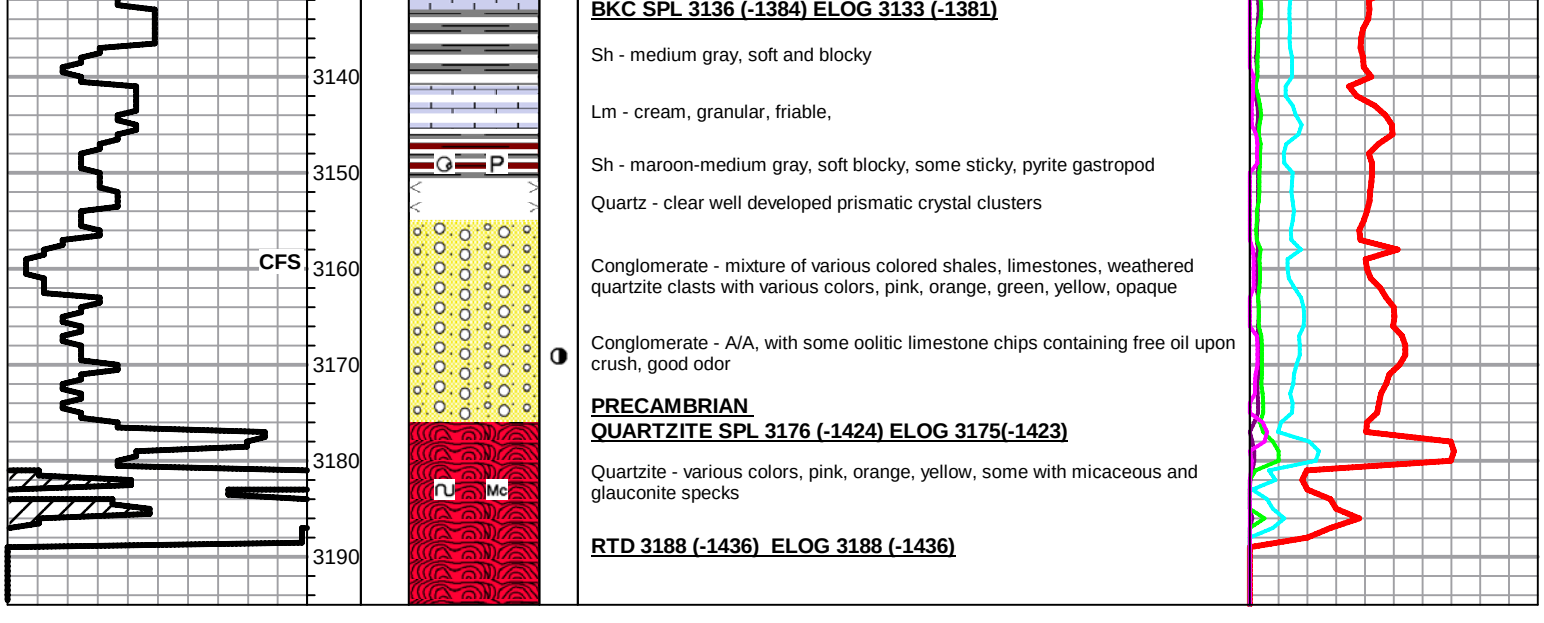
DST
DST Int
DST alt

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




0
ROP (min/ft)
8
CFS
2460
2470
2480
2490
2500
2510
2520
2530
2540
2550
2560
2570
2580
2590
2600
2610
2620
2630
2640
2650
2660
2670
2680
2690
2700
2710
2720
2730
2740
2750
2760
2770
2780
2790
Sh - A/A
TOPEKA SPL 2463 (-711) ELOG 2463 (-711)
Lm - light-medium gray, fnxln, dense, brittle
Lm - cream-light brown, fnxln, dense, brittle
Lm - light brown/ gray, fnxln, dense, brittle
Lm - light brown - tan, fn-vfxln, dense, hard
Lm - tan-medium brown, vfxln, dense, hard
Lm - tan-light brown, fn-medxln, brittle
Lm - light brown with slight micaceous black specks, medxln-granular, friable
Lm - light gray, vfxln, dense, hard, bedded chalk in part, fusilinids
Lm - tan, fine interxln porosity, dense, brittle
Lm - cream, medxln-granular, friable
Sh - black carbonaceous, waxy
Lm - cream-tan, oolitic, loosely cemented, friable, no visible stain, NSFO, questionable odor
Sh - medium gray, firm, earthy
Lm - cream-tan, fnxln, brittle, chalky
Lm - cream, granular, friable, white sticky chalk clumps
Lm - tan, fnxln, dense, brittle, fusilinids
Lm - tan, fnxln, some lithographic, dense, hard
Lm - tan-light brown, fnxln, dense, hard, cherty
Sh - black carbonaceous, waxy
Lm - cream-tan, fnxln, dense, brittle, cherty, pyrite
Lm - light gray, fnxln, brittle, bedded chalk in part
Lm - cream, fossiliferous, well cemented fnxln matrix, dense, hard, fusilinids
Lm - cream, oolitic, scattered pinpoint porosity, NSFO, no odor, cherty
Lm - dark brown, oomoldic, good vuggy porosity, black saturated stain, SFO, moderate odor, black and white chert, bryozoans
Lm - brown, oomoldic, vuggy porosity, dark saturated stain, SFO, heavy oil, good odor
Lm - tan, fnxln, dense, brittle
Lm - light brown, oolitic, slightly fossiliferous, moderate pinpoint porosity, light golden brown stain, faint odor, cherty, chalky, NSFO
Lm - light-medium brown, fnxln, fossiliferous, fine interxln porosity, hard
Lm - medium brown, vfxln, dense, hard, cherty
HEEBNER SPL 2730 (-978) ELOG 2729 (-977)
Sh - black carbonaceous, waxy
Sh - greenish gray, soft blocky
TORONTO SPL 2948 (-986) ELOG 2950 (-988)
Lm - cream-light gray, fn-vfxln, hard, brittle
DOUGLAS SH SPL 2760 (-1008) ELOG 2758 (-1006)
Sh - medium gray, soft, fissile
Sh - medium gray, mudstone, argillaceous, firm, blocky
Sh - light-medium gray, argillaceous, firm
0
Total Gas ()
0.5
0
C1 ()
1
0
C2 ()
1
0
C3 ()
1
0
C4 ()
1
0
C5 ()
100


0 ROP (min/ft) 8
Total Gas ()
C1 ()
C2 ()
C3 ()
C4 ()
C5 ()
0 0.5
0 1
0 1
0 1
0 1
0 100
2800
2810
2820
2830
2840
2850
2860
2870
2880
2890
2900
2910
2920
2930
2940
2950
2960
2970
2980
2990
3000
3010
3020
3030
3040
3050
3060
3070
3080
3090
3100
3110
3120
3130
A
B
C
D
E
F
G
H
I
J
K
L
Sh - medium gray, fissile, waxy
Sh - light gray, soft sticky clumps
Sh - light gray, soft, blocky, micaceous, gritty
Sh - light gray, micaceous, soft, blocky, some forming sticky clumps
Sh - light gray, silty, gritty, firm
BROWN LIME SPL 2846 (-1094) ELOG 2846 (-1094)
Lm - medium brown, fn-vfxln, dense, hard
Sh - medium gray, gritty, earthy, pyrite
LKC SPL 2867 (-1115) ELOG 2865 (-1113)
Lm - cream, fnxln, slightly fossiliferous, dense, hard
Lm - tan-light brown, fn-vfxln, slightly fossiliferous, dense, hard
Lm - light brown, fossil clasts in medxln matrix, friable
Lm - cream, oolitic, no visible porosity, chalky in part
Lm - tan- light gray, vfxln, dense, hard, pyrite clusters
Lm - cream-tan, fossiliferous, dense, brittle, bedded chalk in part
Lm - tan-light brown, fossil clasts in fnxln chalky matrix, no visible porosity
Lm - tan-light gray, fossiliferous, granular, friable
Lm - cream-tan, oolitic / oomoldic with vuggy porosity, light scattered stain, NSFO, very faint odor, chalky in part
Lm - cream-light brown, scatered golden brown stain, good vuggy porosity, friable, NSFO, very faint odor
Lm - tan-light brown, fnxln, fossiliferous, dense, brittle
Lm - tan-light gray, fossiliferous, fine interxln porosity, dense, brittle, glauconite specks, bedded chalk in part
Sh - black carbonaceous, waxy
Lm - light gray, fossiliferous, dense, brittle, chalky
Lm - light brown, fnxln, slightly fossiliferous, brittle, chalky
Lm - light-medium brown, lithographic, dense, hard, bedded chalk
Lm - tan-medium brown, fn-vfxln, hard, faint odor, low porosity, NSFO
Lm - light brown, oomoldic with good vuggy porosity, scattered staining, faint odor, NSFO
Lm - medium brown, oolitic, undeveloped, low porosity, brittle
Lm - tan, oomoldic, voids filled with secondary recrystalization, dense, hard, very fain odor, NSFO
Lm - tan, oolitic, slight scattered stain, pinpoint porosity, friable, NSFO,
Sh - dark gray to black fissile
Lm - tan, fossiliferous, moderate odor, NSFO, granular
Lm - light brown, oolitic, slightly fossiliferous, fine interxln porosity, hard, brittle, NSFO, bedded chalk in some
Lm - tan, oolitic, poorly developed, good odor, bedded chalk, NSFO, no visible staining
Sh - dark gray- black carbonaceous, fissile
Lm - medium brown, fnxln, brittle
Lm - medium brown, lithographic, dense, brittle
NOTE: SAMPLES CONTAINED A LARGE AMOUNT OF CARRY-OVER POSSIBLY ELEVATING GAS LEVELS



BKC SPL 3136 (-1384) ELOG 3133 (-1381)

Sh - medium gray, soft and blocky

Lm - cream, granular, friable,

Sh - maroon-medium gray, soft blocky, some sticky, pyrite gastropod

Quartz - clear well developed prismatic crystal clusters

Conglomerate - mixture of various colored shales, limestones, weathered quartzite clasts with various colors, pink, orange, green, yellow, opaque

Conglomerate - A/A, with some oolitic limestone chips containing free oil upon crush, good odor

PRECAMBRIAN
QUARTZITE SPL 3176 (-1424) ELOG 3175(-1423)

Quartzite - various colors, pink, orange, yellow, some with micaceous and glauconite specks

RTD 3188 (-1436) ELOG 3188 (-1436)