

Covey

The Well Watchers

Scale 1:240 (5"=100') Imperial

Well Name: GRASSLANDS #1
Location: Section 8 - Township 12 South - Range 32 West
Licence Number: 15-109-21,031. 0000 Region: Logan County, KS.
Spud Date: 7 Sept 2011 Drilling Completed:
Surface Coordinates: 1,860' FNL & 1,220' FEL , NE/4
(Approximately SW NW SE NE)

Bottom Hole
Coordinates:
Ground Elevation (ft): 3,009 K.B. Elevation (ft): 3,019'
Logged Interval (ft): 3,600' To: Total Depth (ft):
Formation: Topeka -----> Miss (St. Louis)
Type of Drilling Fluid: Chemical; Low Solids (non-dispersed)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: NEW GULF OPERATING, LLC.
Address: 6310 East 102nd Street POC Geologist:
Tulsa, Oklahoma 74137 Joe Baker
(918) 728-3020

GEOLOGIST

Name: Curtis Covey
Company: COVEY - The Well Watchers
Address: 6548 Bedford Circle
Derby, Kansas 67037
Office: (316) 776 - 0367 Cell: (316) 258-9976

KB: 3,019'

FORMATION TOPS

GL: 3,009'

Formation	Rotary Sample Depth (Datum)	E-log Depth (Datum)
Anhydrite	2,541' (+478')	
B / Anhydrite	2,564' (+455')	
Stotler	3,622' (-603')	
Topeka	3,752' (-733')	
Heebner Shale	3,976' (-957')	
Lansing	4,027' (-1,008')	
Muncie Creek SH		
Stark SH		
B / KC		
Pawnee LS		
Ft. Scott		
Cherokee Sh		
'Johnson' Zone		
Morrow Sandstone		
Miss (Erosional)		

Loggers:

RTD: LTD: ATD: E-log is to rotary sample depth, uphole.
E-log is to rotary sample depth, mid- & down hole sample logged interval.

12-1/4" Hole

7-7/8" Hole

7-7/8" Hole

7 Sept --- Spud @ 6pm.
 Drill to 268'.
 Run 8-5/8" casing (23#)
 Set casing @ 267'.
 8 --- Cemented w/ 200 sx Class A
 (2% Gel + 3% CC).
 [Allied]
 Cement did circulate.
 Plug down @ 1:45am.
 WOC.

9 Sept --- WOC.
 6:30am @ 268'.
 Under surface casing @ 4:15pm.
 10 --- 6:30am @ 1,415'.
 11 --- 6:30am @ 2,420'.
 12 --- 6:30am @ 3,080'.
 Displace Mud @ 3,402'.
 13 --- 6:30am @ 3,545'.
 14 --- 6:30am @ 4,040'.
 Start and
 15 --- Finish DST #1: Lansing
 (4,084'-4,122').
 6:30am @

HOLE DEVIATION 268' - '

DEPTH / TVD	INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
268' /	--- 0.50 (Surface)						
1,197' /	--- 0.75						
2,191' /	--- 1.25						
3,191' /	--- 1.00						
4,122' /	--- (DST #1)						

STRAP @

Board:
 Strap:
 Diff:

CONTRACTOR

VAL Energy --- Rig #4

10,500 E. Berkeley Square Parkway, Suite 1000
 Wichita, Kansas 67230
 Office: (316) 636-2090

Rig #4 - (620) 617-2793

Larry Hinderliter - (620) 804-0097

Pump: National K-500A
 6" x 15" @ 58 SPM.
 1,000 PSI @ Standpipe.

Uphole Hole:
 WOB 35M @ 80 RPM.

After Mudup / Main Hole:
 WOB 38M @ 75 RPM.

Drill Collars: 6-1/8" x 2.50" --- 524'. (83.5#/ft)
 Dry Collar Weight: 45,754#
 (@ 8.8 ppg / Buoyancy Factor 0.866)
 Bouyancy Collar Weight: 37,891#
 Design Factor: 15%, therefore:
 available WOB is 32,207#
 Drill Pipe: 4-1/2"XH. (16#/ft - used)

BIT RECORD

DATE	SIZE	TYPE	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	ROP
7 Sept 2011	12-1/4"	REED RR	3 / 15's	0' / 268'	268'	1.75	153.1
8 Sept 2011	7-7/8"	JZ QX-21S	13 - 14 - 13	268' / '			

ROCK TYPES

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

LITHOLOGY

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Granite wash
- Congl
- Dol lmst
- Silty dol

- Calc dol
- Dol 2
- Dol
- Gyp
- Igne
- Lmst 2
- Lmst
- Meta
- Mrlst
- Salt
- Shale 3
- Shale 3
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Till
- Ss 2

MINERAL

- Mica
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl

- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Copper
- Ooliticastic
- Ooloid
- Oolite
- Sucrosic
- Dark specks

STRINGER

- Calc dol
- Silty dol
- Anhy

- Arg
 - Bent
 - Coal
 - Dol
 - Gyp
 - Ls
 - Mrst
 - Calc dol
 - Sltstrg
 - Ssstrg
 - Chalk
 - New symbol
- SHOW**
- Oil
 - Spotted
 - Ques
 - Dead
 - Gas
 - Oil/gas
 - Bed contact

ACCESSORIES

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Spore
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro

- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

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OTHER SYMBOLS

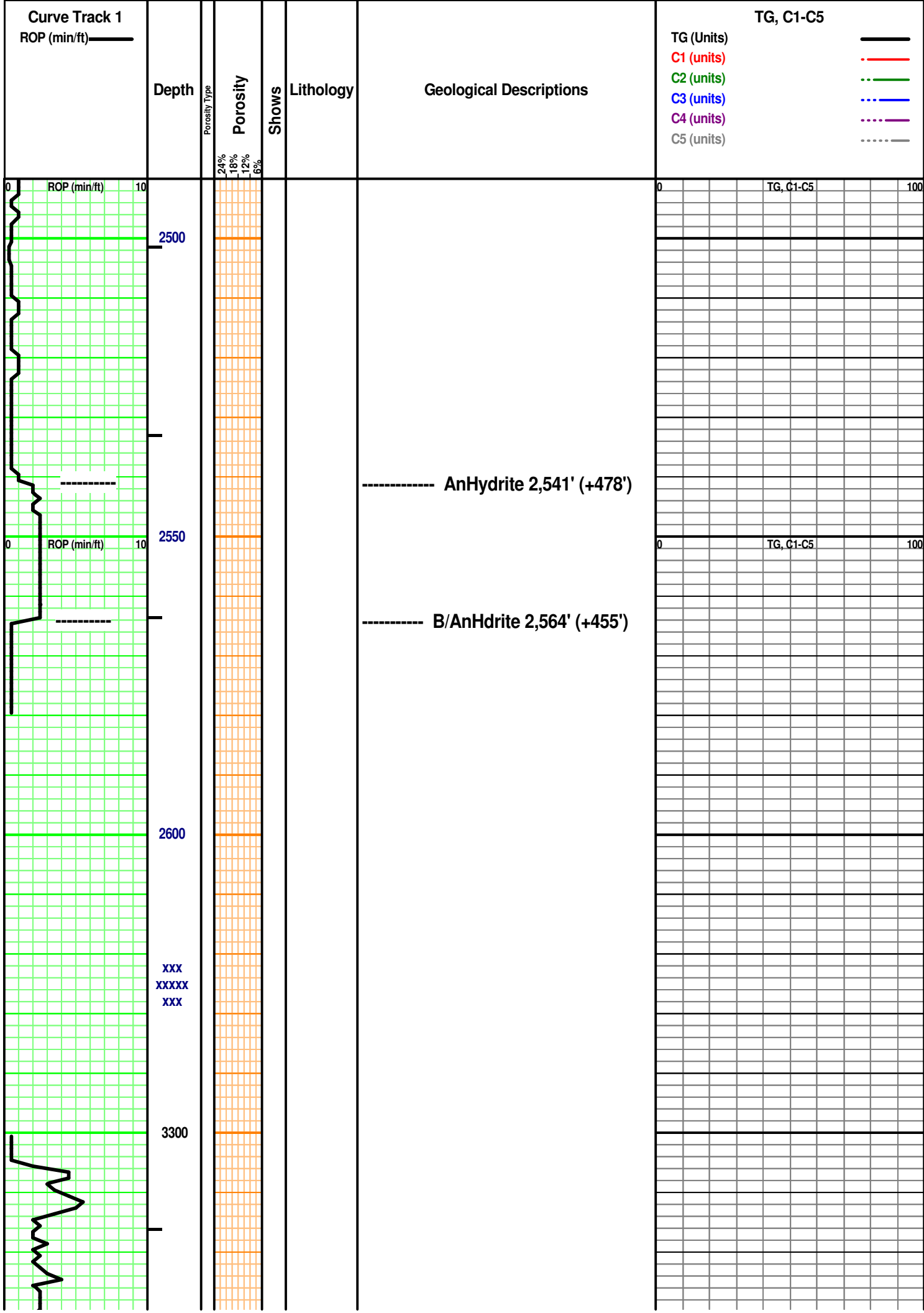
ACTIVITY

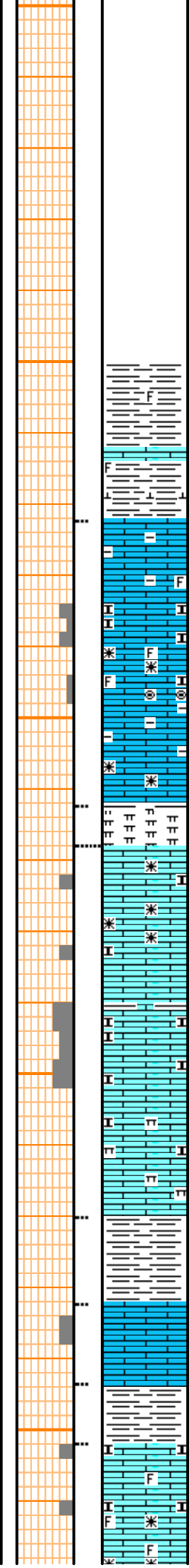
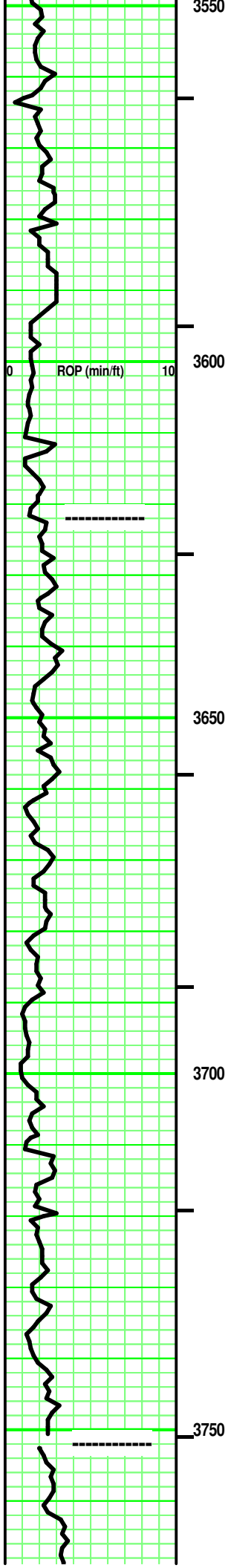
- Lost circluation
- Circulate for same

- Circulate for same
- Rtd
- Trip

- EVENT
- Connection
- Rft

- Sidewall





Interbedded SH & LS
 SH - Lt & Med Gray. tr Tannish Gray to rare Brownish Gray. tr limy streaks. some calc in part. rare fossil frag. soft.

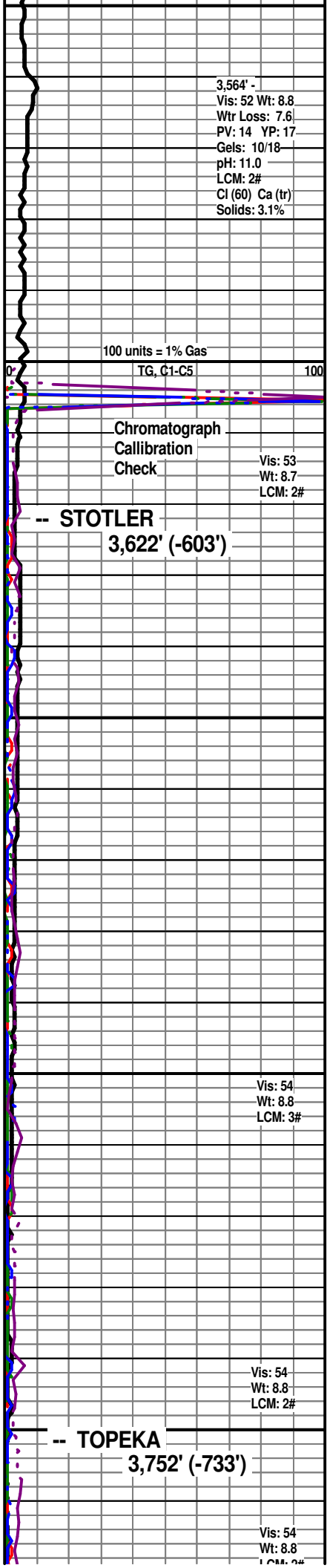
LS - Tan/ tr Pale Gray, some Lt Gray. Sing. XF-/ Micro-xln. xln por. tr subchalky in part. tr argil in part. misc fossil frags & micro-Oolites. partly Firm. No/ tr vis por.

MARL - Grays. Hi argil/shaly at top. soft.

Interbedded SH & LS
 SH - Lt & Med Gray. tr/ some Tannish Gray. tr/ some limy streaks. some calc in part. soft.
 LS - Tans / tr Pale to Lt Grays. Sing. XF-/ some Micro-xln. xln por. rare Re-xln. tr argil in part. subchalky & marly in part and intermixed. No/ tr vis por.

SH - Lt/ Med Gray. Sing. highly limy (Tannish & Pale Gray) to LS stringers (Tan, Micro-xln).

LS - Grays/ Tans. Sing/ some to mostly Mot. XF-/ mostly Micro-xln. xln por. some to lots of subchalky/ chalky. tr/ fair fossil frags in part. some intermixed/ interbedded argil or shale (Med/Dark Gray). Firm. No/ tr vis por.



3,564' -
 Vis: 52 Wt: 8.8
 Wtr Loss: 7.6
 PV: 14 YP: 17
 Gels: 10/18
 pH: 11.0
 LCM: 2#
 Cl (60) Ca (tr)
 Solids: 3.1%

100 units = 1% Gas
 TG, C1-C5

Chromatograph
 Calibration
 Check
 Vis: 53
 Wt: 8.7
 LCM: 2#

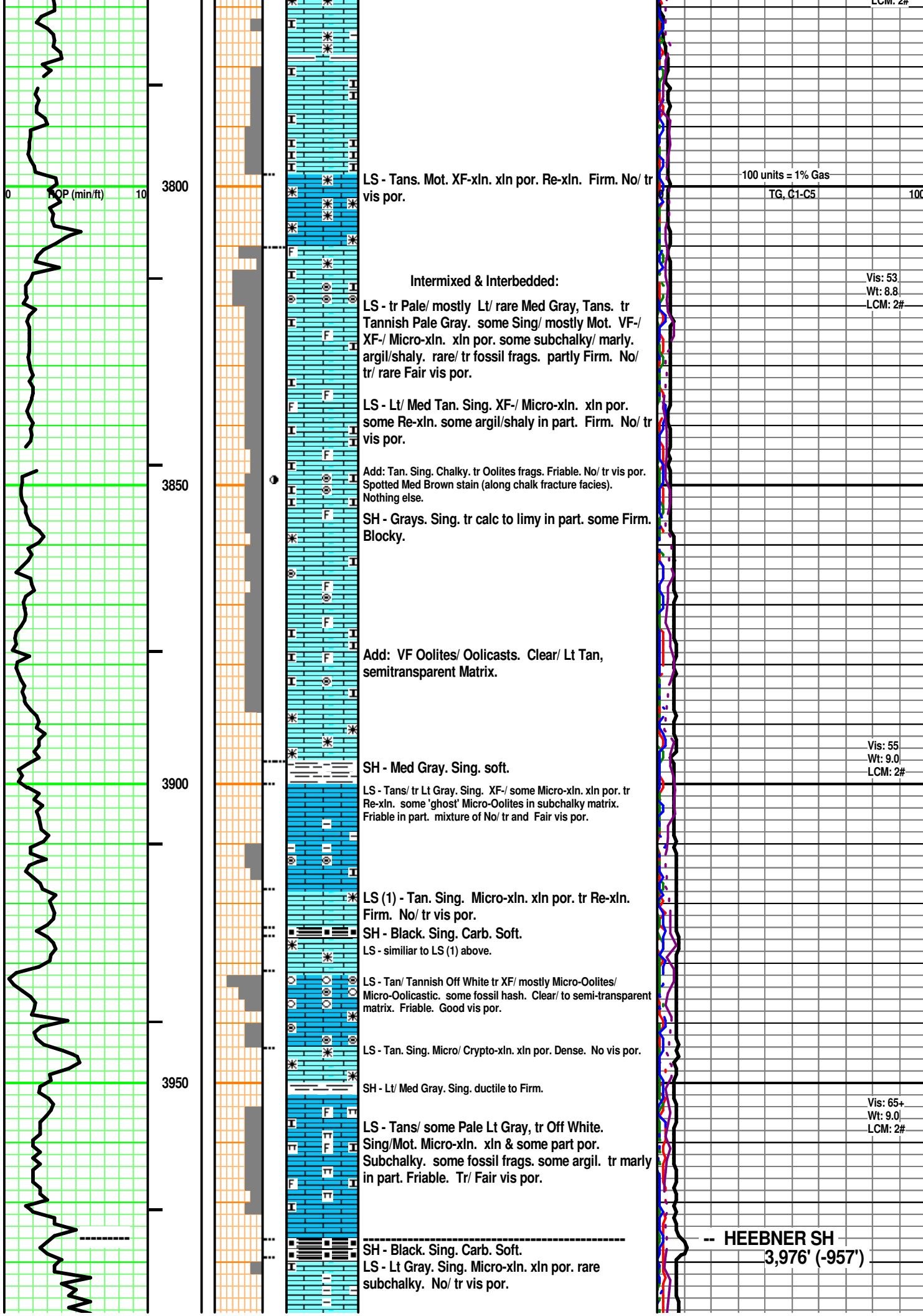
-- STOTLER
 3,622' (-603')

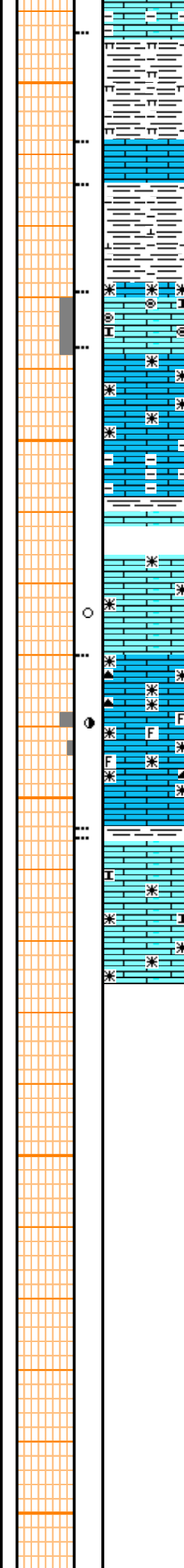
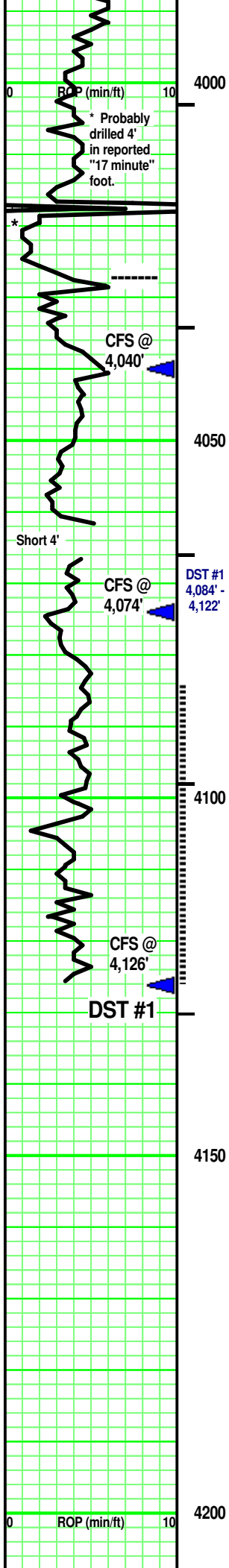
Vis: 54
 Wt: 8.8
 LCM: 3#

Vis: 54
 Wt: 8.8
 LCM: 2#

-- TOPEKA
 3,752' (-733')

Vis: 54
 Wt: 8.8
 LCM: 2#





SH - Med Gray. Sing. Hi marly . Firm. Massive.

LS - Off White/ Tan. Sing/ tr Mot. Micro-xln. xln por. mostly Firm. No/ tr vis por

SH - Lt Gray. Sing. tr calc.

LS - Off White/ Tan. Sing/ tr Mot. Micro-xln. xln & tr Vuggy por. [some VF Oolites in part, Off White. Clear/ Pale Tan, semitransparent Matrix. Friable. Tr vis por.] some Re-xln. rare subchalky in part. mostly Firm. No/ tr vis por.

LS - Tans/ tr Lt Gray with depth. Sing/ tr Mot. XF-/ some Micro-xln. xln por. tr Re-xln. Firm at top. No/ tr vis por.

SH - Med Gray. Sing. tr calc.

3 pcs: LS - Tan. Sing. Micro-xln. xln & rare vuggy calc filled por. tr Re-xln. Firm. No/ tr vis por. tr/ some spotted Lt/Med Brown stain rimming vuggy por. Northing else.

LS - Tan. Sing. XF-xln. xln and some XF vuggy por. some minute Re-xln. [tr/ some CHERT - Gray/ Dark Tan. Sing. Opaque. tr misc inclusions. No tripolitic.] some fossil frags. mostly Firm. tr/ fair vuggy por in part. Faint odor. rare/ Spotted yellow fluorescence. A/C, rare minute Dark Brown free oil spheres floating on wash water. rare gas bubble cling to rx chip. Spotted Med Brown stain. Pos cut/ residual. Pos acid/ residual. rare/ tr Black tarry oil on chert frac face.

SH - Med/ Dark Gray. Sing. Massive. soft.

LS - Lt & Med Tan. Sing/ Mot. XF-/ Micro-xln. xln & particle por. tr Re-xln. rare subchalky in part. Firm. No/ tr vis por. No odo

