MUD LOG

WellSight Systems

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

Well Name:	**MARCOTTE #2**		
Location:	**660'FNL & 400' FEL: Sec. 20 ;Twnsp. 9s.; Rge. 18w.**		
License Number:	**34795**	**Region:**	**Rooks County, KS**
Spud Date:	**4-02-2013**	**Drilling Completed:**	**4-07-2013**
Surface Coordinates:	**W/2 E/2 NE NE** **700' FNL & 400' FEL**		
Bottom Hole Coordinates:			
Ground Elevation (ft):	**2161'**	**K.B. Elevation (ft):**	**2166'**
Logged Interval (ft):	**2800' To: 3650'**	**Total Depth (ft):**	**3950'**
Formation:	**Arbuckle**		
Type of Drilling Fluid:	**Chemical**		

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OPERATOR

Company: ABUNDANT OIL PARTNERSHIP
Address: P.O. Box 2216
Grand Island, NE 68802

GEOLOGIST

Name: Mike Bair
Company: Abundant Oil Partnership
Address: Longmont, CO.

FORMATION TOPS

FORMATION	LOG TOP	SAMPLE TOP
Anhydrite	1494 (+672)	1494 (+672)
Topeka	3078 (-912)	3080 (-914)
Heebner	3289 (-1123)	3290 (-1124)
Toronto	3308 (-1142)	3310 (-1143)
Lansing	3330 (-1164)	3330 (-1164)
BKC	3551 (-1384)	3551 (-1384)
Arbuckle	3572 (-1406)	3574 (-1408)
TD	3650 (-1484)	3950 (-1784)

DSTs

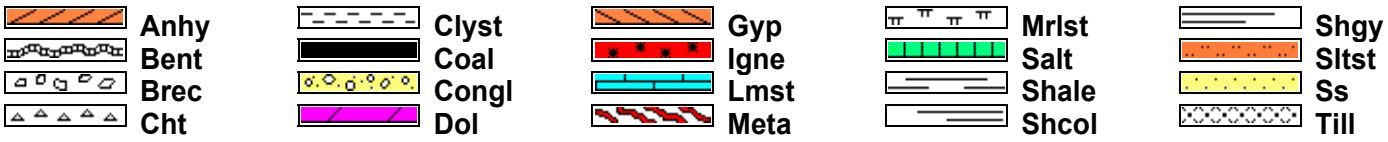
None due to high LCM

Comments

8 5/8" set at 307'
5 1/2" set at 3700 '

Well was drilled to 3950' RTD in case it needs to be converted to a SWD in the future. Casing was set to 3700' and further test of the economic potential of the Arbuckle formation is recommended by all parties.

ROCK TYPES



ACCESSORIES

MINERAL

- 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

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY

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

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW

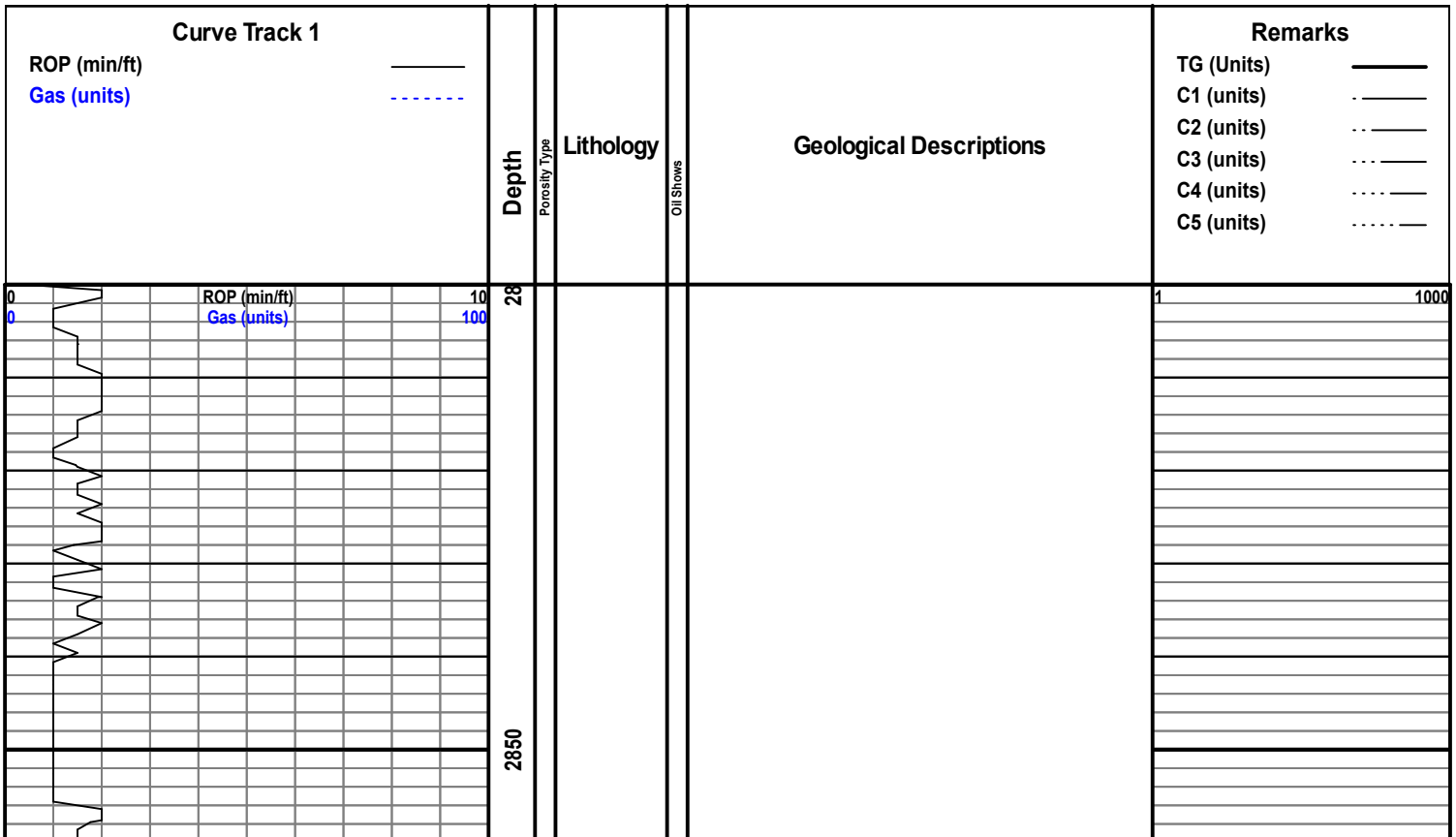
- Even
- Spotted
- Ques
- Dead

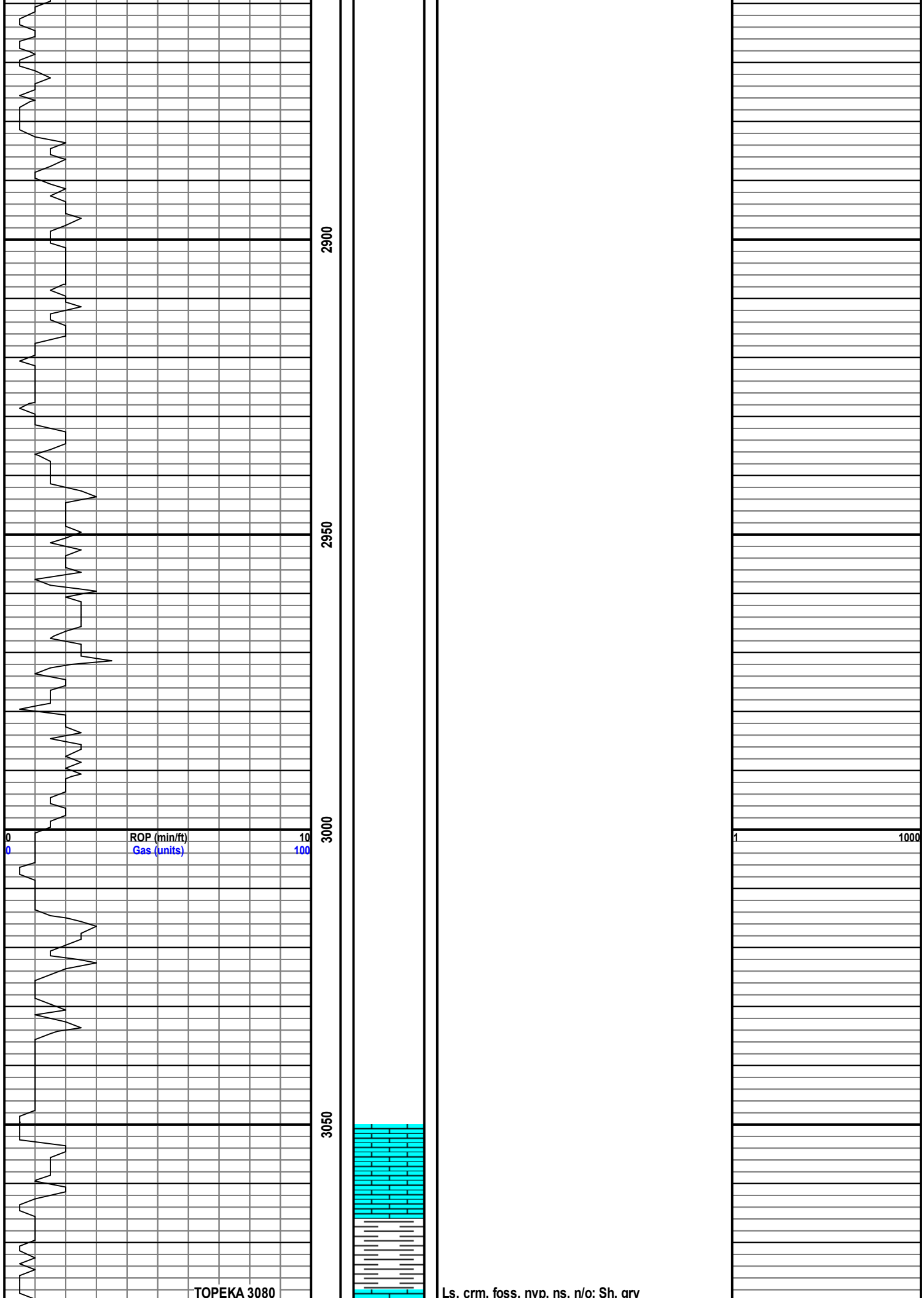
INTERVAL

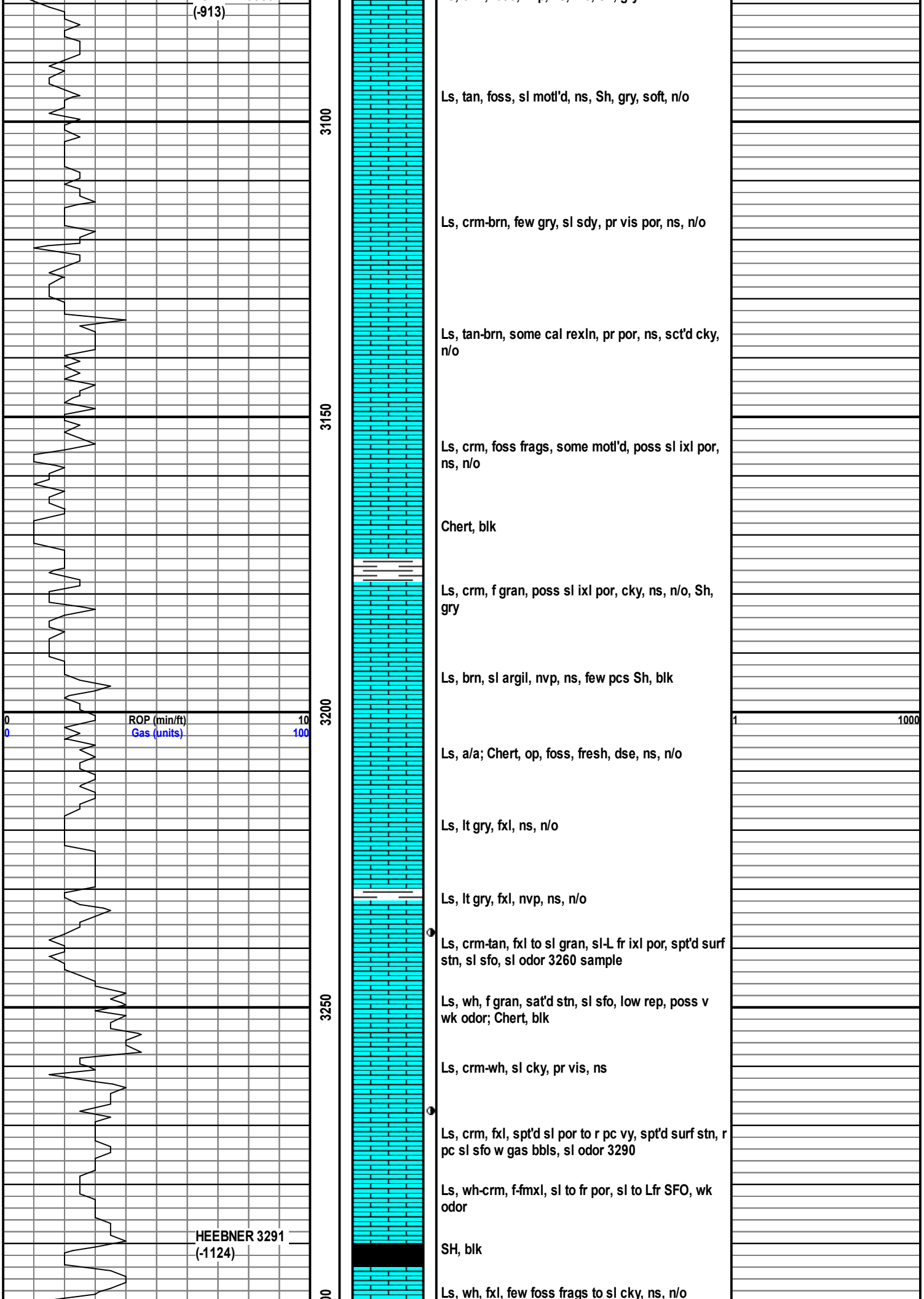
- Core
- Dst

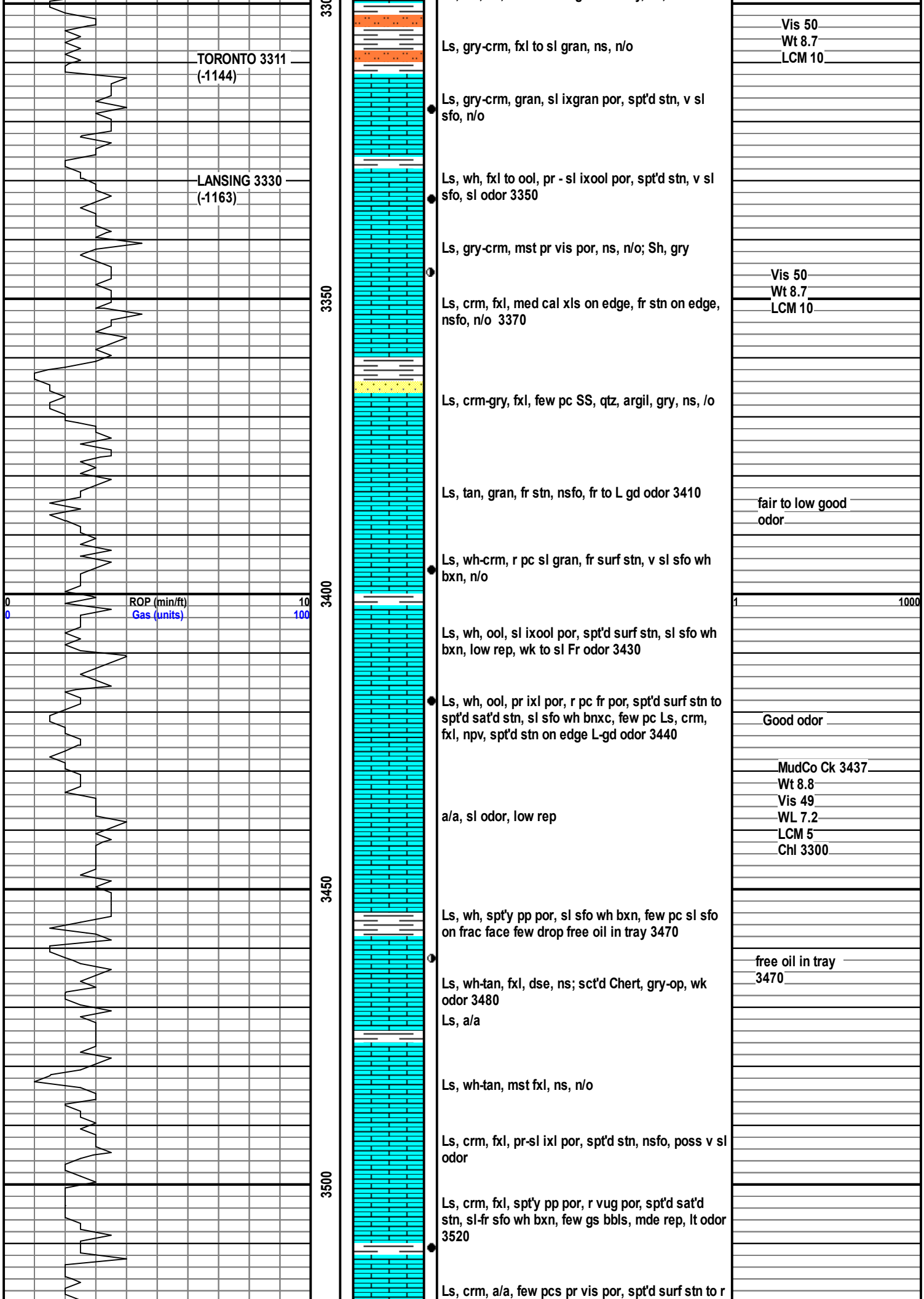
EVENT

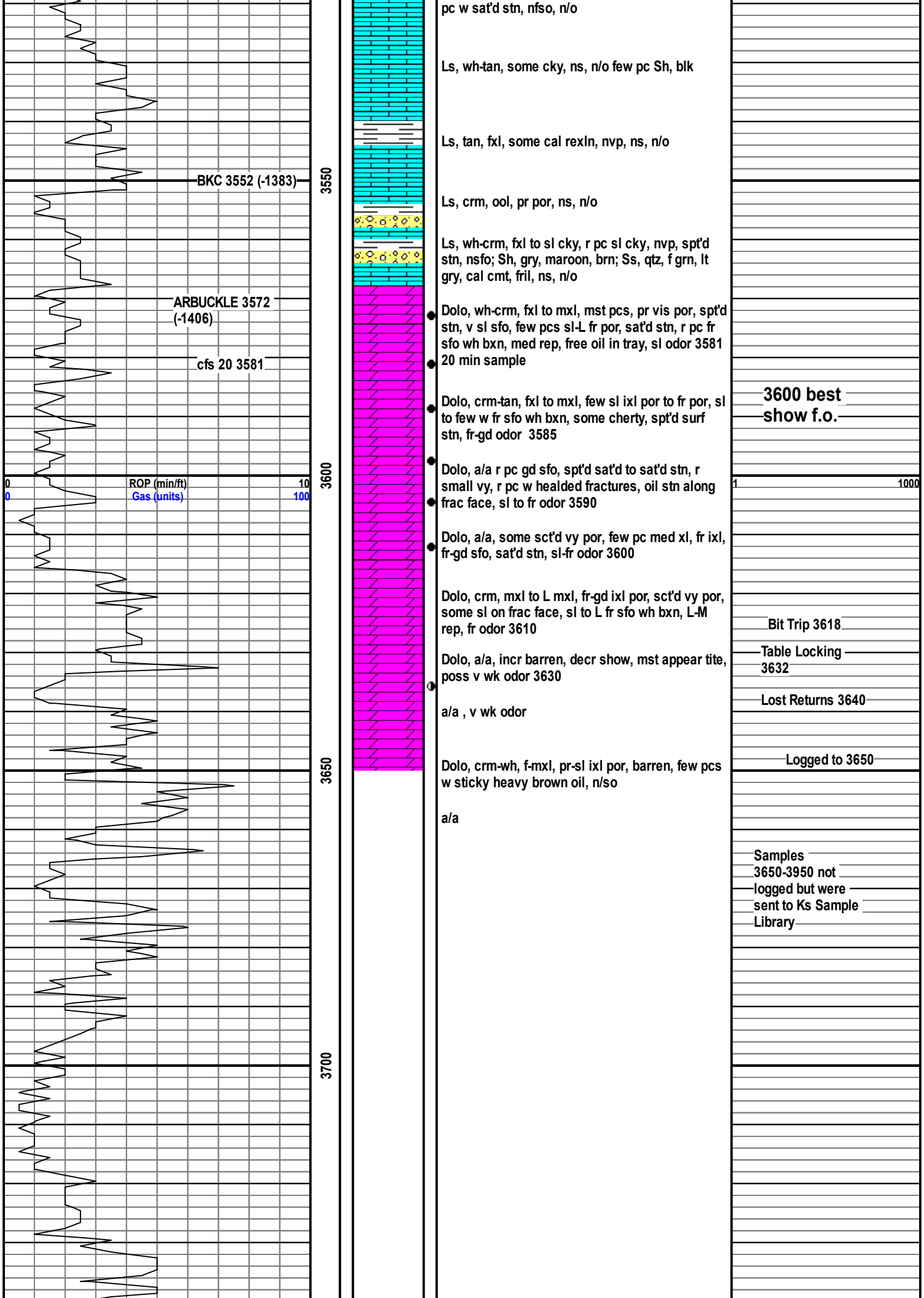
- Rft
- Sidewall

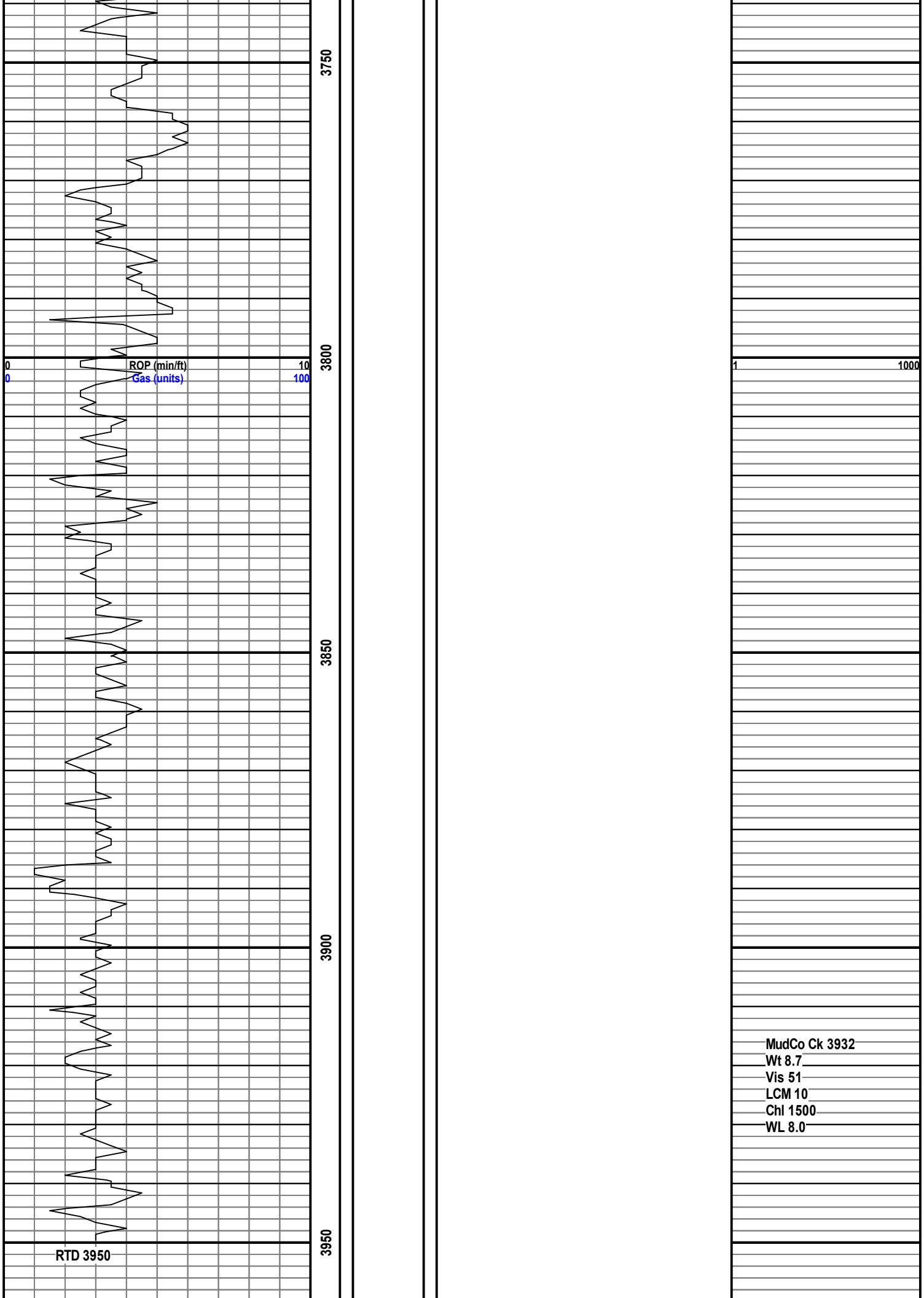



2900
2950
3000
3050
0
ROP (min/ft)
10
0
Gas (units)
100
1
1000
TOPEKA 3080
Ls, crm, foss, nvp, ns, n/o; Sh, gry


(-913)
3100
3150
3200
0
ROP (min/ft)
10
0
Gas (units)
100
1
1000
Ls, tan, foss, sl motl'd, ns, Sh, gry, soft, n/o
Ls, crm-brn, few gry, sl sdy, pr vis por, ns, n/o
Ls, tan-brn, some cal rexln, pr por, ns, sct'd cky, n/o
Ls, crm, foss frags, some motl'd, poss sl ixl por, ns, n/o
Chert, blk
Ls, crm, f gran, poss sl ixl por, cky, ns, n/o, Sh, gry
Ls, brn, sl argil, nvp, ns, few pcs Sh, blk
Ls, a/a; Chert, op, foss, fresh, dse, ns, n/o
Ls, lt gry, fxl, ns, n/o
Ls, lt gry, fxl, nvp, ns, n/o
Ls, crm-tan, fxl to sl gran, sl-L fr ixl por, spt'd surf stn, sl sfo, sl odor 3260 sample
Ls, wh, f gran, sat'd stn, sl sfo, low rep, poss v wk odor; Chert, blk
Ls, crm-wh, sl cky, pr vis, ns
Ls, crm, fxl, spt'd sl por to r pc vy, spt'd surf stn, r pc sl sfo w gas bbls, sl odor 3290
Ls, wh-crm, f-fmxl, sl to fr por, sl to Lfr SFO, wk odor
SH, blk
Ls, wh, fxl, few foss frags to sl cky, ns, n/o
3250
HEEBNER 3291
(-1124)


TORONTO 3311
(-1144)
LANSING 3330
(-1163)
3300
3350
3400
3450
3500
0
ROP (min/ft)
10
0
Gas (units)
100
Ls, gry-crm, fxl to sl gran, ns, n/o
Ls, gry-crm, gran, sl ixgran por, spt'd stn, v sl sfo, n/o
Ls, wh, fxl to ool, pr - sl ixool por, spt'd stn, v sl sfo, sl odor 3350
Ls, gry-crm, mst pr vis por, ns, n/o; Sh, gry
Ls, crm, fxl, med cal xls on edge, fr stn on edge, nsfo, n/o 3370
Ls, crm-gry, fxl, few pc SS, qtz, argil, gry, ns, /o
Ls, tan, gran, fr stn, nsfo, fr to L gd odor 3410
Ls, wh-crm, r pc sl gran, fr surf stn, v sl sfo wh bxn, n/o
Ls, wh, ool, sl ixool por, spt'd surf stn, sl sfo wh bxn, low rep, wk to sl Fr odor 3430
Ls, wh, ool, pr ixl por, r pc fr por, spt'd surf stn to spt'd sat'd stn, sl sfo wh bnxc, few pc Ls, crm, fxl, npv, spt'd stn on edge L-gd odor 3440
a/a, sl odor, low rep
Ls, wh, spt'y pp por, sl sfo wh bxn, few pc sl sfo on frac face few drop free oil in tray 3470
Ls, wh-tan, fxl, dse, ns; sct'd Chert, gry-op, wk odor 3480
Ls, a/a
Ls, wh-tan, mst fxl, ns, n/o
Ls, crm, fxl, pr-sl ixl por, spt'd stn, nsfo, poss v sl odor
Ls, crm, fxl, spt'y pp por, r vug por, spt'd sat'd stn, sl-fr sfo wh bxn, few gs bbls, mde rep, lt odor 3520
Ls, crm, a/a, few pcs pr vis por, spt'd surf stn to r
Vis 50
Wt 8.7
LCM 10
Vis 50
Wt 8.7
LCM 10
fair to low good odor
1
1000
Good odor
MudCo Ck 3437
Wt 8.8
Vis 49
WL 7.2
LCM 5
Chl 3300
free oil in tray 3470


BKC 3552 (-1383)
ARBUCKLE 3572
(-1406)
cfs 20 3581
0
ROP (min/ft)
10
0
Gas (units)
100
3550
3600
3650
3700
pc w sat'd stn, nfso, n/o
Ls, wh-tan, some cky, ns, n/o few pc Sh, blk
Ls, tan, fxl, some cal rexln, nvp, ns, n/o
Ls, crm, ool, pr por, ns, n/o
Ls, wh-crm, fxl to sl cky, r pc sl cky, nvp, spt'd stn, nsfo; Sh, gry, maroon, brn; Ss, qtz, f grn, lt gry, cal cmt, fril, ns, n/o
Dolo, wh-crm, fxl to mxl, mst pcs, pr vis por, spt'd stn, v sl sfo, few pcs sl-L fr por, sat'd stn, r pc fr sfo wh bxn, med rep, free oil in tray, sl odor 3581
20 min sample
Dolo, crm-tan, fxl to mxl, few sl ixl por to fr por, sl to few w fr sfo wh bxn, some cherty, spt'd surf stn, fr-gd odor 3585
Dolo, a/a r pc gd sfo, spt'd sat'd to sat'd stn, r small vy, r pc w healded fractures, oil stn along frac face, sl to fr odor 3590
Dolo, a/a, some sct'd vy por, few pc med xl, fr ixl, fr-gd sfo, sat'd stn, sl-fr odor 3600
Dolo, crm, mxl to L mxl, fr-gd ixl por, sct'd vy por, some sl on frac face, sl to L fr sfo wh bxn, L-M rep, fr odor 3610
Dolo, a/a, incr barren, decr show, mst appear tite, poss v wk odor 3630
a/a , v wk odor
Dolo, crm-wh, f-mxl, pr-sl ixl por, barren, few pcs w sticky heavy brown oil, n/so
a/a
3600 best show f.o.
1
1000
Bit Trip 3618
Table Locking 3632
Lost Returns 3640
Logged to 3650
Samples 3650-3950 not logged but were sent to Ks Sample Library


0
ROP (min/ft)
10
0
Gas (units)
100
1
1000
3750
3800
3850
3900
3950
RTD 3950
MudCo Ck 3932
Wt 8.7
Vis 51
LCM 10
Chl 1500
WL 8.0