

GRAND MESA

OPERATING COMPANY

(316) 265-3000
FAX: (316) 265-3455

1700 N. WATERFRONT PARKWAY
BLDG. 600
WICHITA, KANSAS 67206-5514

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

Well Name: Schweizer
Well Id: 5-35
Location: 340' FNL & 2204' FEL, Sec 35-T22S-R10W, Reno County, Kansas
License Number: API: 15-155-21788 Region: Reno County
Spud Date: 03/13/2022 Drilling Completed: 03/19/2022
Surface Coordinates: NAD83
Lat: 38.0996054, Long: -98.3890904
Bottom Hole Vertical hole
Coordinates:
Ground Elevation (ft): 1741' K.B. Elevation (ft): 1746'
Logged Interval (ft): 2300' To: RTD Total Depth (ft): 3820'
Formation: Arbuckle at RTD
Type of Drilling Fluid: Chemical

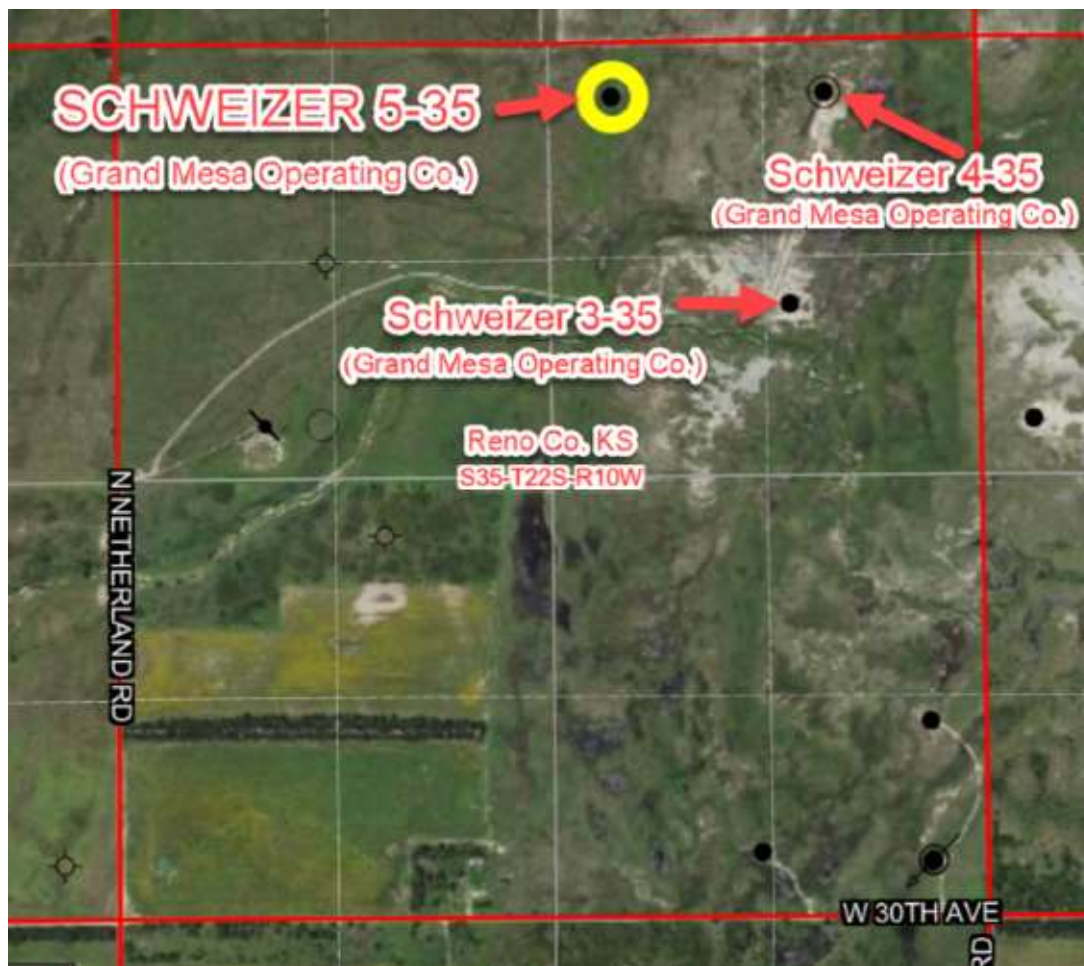
Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Grand Mesa Operating Company
Address: 1700 N. Waterfront Parkway; Bldg. 600
Wichita, KS 67206-5514
316-265-3000

WELLSITE GEOLOGIST

Name: Kent R. Matson
Company: Matson Geological Services, LLC
Address: 33300 W. 15th Street S.
Garden Plain, Kansas 67050
316-644-1975; kent4m@hotmail.com



COMMENTS

Grand Mesa Company Geologist: Steve Stribling, 316-265-3000 (office).

Drilling Contractor: Murfin Drilling Company Inc., Rig #104.

Tool Pusher: James Mayfield, 785-269-7684 (cell).

Gas Detector System (iball/Bloodhound): Keith Reavis, 620-617-4091 (cell).

Surface Casing: 8 5/8" set at 252' (KB) w/175 sx cement.

Production Casing: Based on field observations of drill cuttings and electric log review, production casing (5.5") was installed to further evaluate potential oil production.

Mud by: MudCo/Service Mud, Inc.; Brad Bortz, 620-793-2421 (cell) and Justin Whiting, 620-214-3630 (cell).

DST's by: Trilobite Testing: No DSTs were conducted.

Reserve pit pumping/transfer: Monster Pump Operations, Inc., Matt Smith, 785-623-4488 (office).

Logs by: ELI Wireline (CND w/PE, DI w/SP, Micro, Sonic), Jeff Luebbers, 785-259-1435 (cell).

RTD= 3820', -2074'.

LTD= 3820', -2074'.

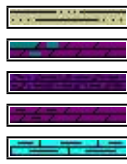
FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Tarkio	2443'	-697	2442'	-696
Topeka	2602'	-856	2600'	-854
Heebner	3002'	-1256	3003'	-1257
Lansing	3187'	-1441	3186'	-1440
Stark Shale	3412'	-1666	3406'	-1660
Base KC	3487'	-1741	3486'	-1740
Viola	3598'	-1852	3596'	-1850
Simpson SH	3718'	-1972	3717'	-1971
Arbuckle	3788'	-2042	3788'	-2042
RTD	3820'	-2074		
LTD			3820'	-2074

ROCK TYPES

LITHOLOGY

	Anhy
	Cht
	Coal
	Congl
	Dol
	Gyp
	Lmst
	Salt
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Carb sh
	Dol
	Dtd
	Gry sh
	Sandy lms
	Shale
	Sltstn
	Shlyslts



Siltysh
Sdy dolo
Silty dolo
Shy dolo
Shaly ls

FOSSIL

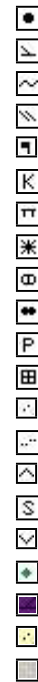
	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral
	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite



Ostra
Pelec
Pellet
Pisolite
Plant
Strom
Fuss
Oomold

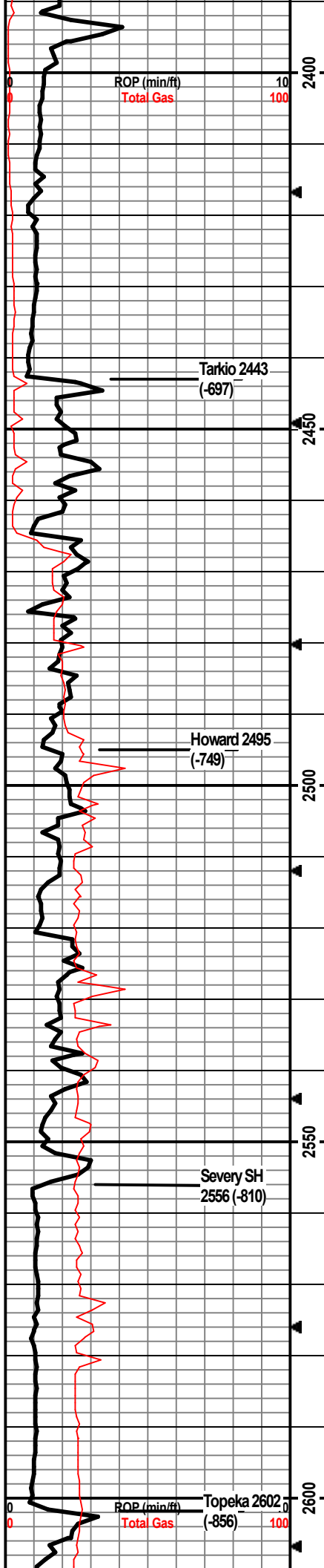
MINERAL

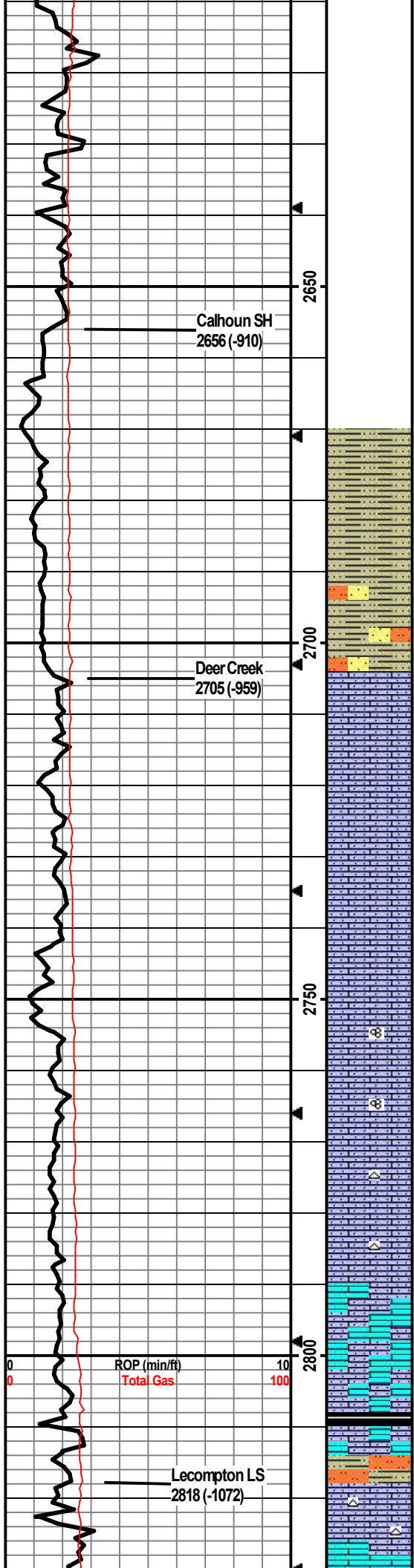
	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	Dol
	Feldspar



Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff
Chlorite
Dol
Sand
Sltly

Rate of Penetration (ROP) ROP (min/ft) ——— Total Gas ———		DEPTH	Lithology	CFS Point	Oil Shows	Geological Descriptions	Remarks
0	ROP (min/ft)	10				Morning Report Depth/Activity (7:00 am) 03/12/2022: MIRU. 03/13: Spud. 03/14: Drilling @ 845'. 03/15: Drilling @ 2045'. 03/16: Drilling @ 2680'. 03/17: Drilling @ 3275'. 03/18: Drilling @ 3640'; 09:15pm TD @ 3820'. 03/19: Electric Logging.	Mud-Co/Service Mud Inc. Check #1 @ 0' 03/11/22; predrilling instructions.
0	Total Gas	100					Mud-Co/Service Mud Inc. Check #2 @ 1049' 03/14/22 10:00am wt vis pH chl 9.3 28 7.0 44000 Filt LCM n/c 0 Mud-Co/Service Mud Inc. Check #3 @ 2160' 03/15/22 10:45am wt vis pH chl 9.7 29 7.0 95000 Filt LCM n/c 0
		2250				Drilling was conducted with 7 7/8" tricone button bit.	
						Oil Shows Indicator: Left Block 0-10 sample tray pcs w/show, Middle Block 10-20 tray pcs w/show, Right Block 20+ tray pcs w/show.	At 2289' connection, made 32 std TOO H up to SC to replace rig air compressor.
		2300				Geologist on location @ 2289', 03/15/2022	
						ROP Data begins @ 2300' on 03/15/2022. Recorded from drillers geograph record, and iball/Bloodhound gas detector system.	Drill cutting samples at 20' intervals start at 2300'. Samples from 2300' to 2700' were too fine (poor) for descriptions.
						Formation tops and lithologies have been adjusted to correlate to the electric log.	
		2350					
							Survey Record Deg @ Ft 0.75 @ 282' 1.0 @ 3820'
						Stotler 2374 (-628)	





SH: lt-dk gry/min red-bm/min maroon, some vry silty/sndy, slt carb, soft-firm.

SH: as above w/Sltstn/SS: lt gry, vr-f, pred qtz, friable, no odor, ns.

LS: wht/cmlt gry, vf-med xtal, silty, min foss frags, some m-crs/vug in-xtal por, no odor, ns.

LS: wht/cmlt bm/lt gry, vf-m xtal, silty, min foss frags, no vis por, no odor, ns.

LS: wht/cmlt gry, vf-m xtal, silty, chalky, min foss frags/fusln, min ppt-vf in-xtal por, no odor, ns.

LS: wht/cmlt gry, vf-f xtal, silty, min lt bm chert, min foss frags, no vis por, no odor, ns.

LS: cm/lt gry/lt-m bm, vf-m xtal, some silty, foss frags, no vis por, no odor, ns.

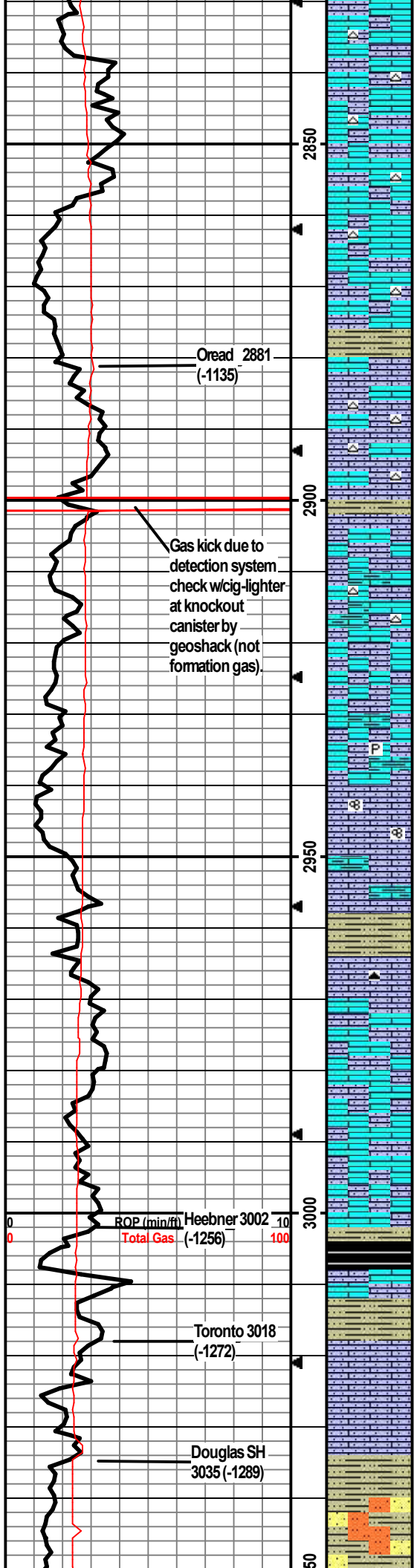
SH: lt-dk gry/blk/bm, some vry silty, slt carb, soft-firm; some lt gry Sltstn.

LS: cm/lt gry/lt bm, micro-m xtal, some vry silty, min lt bm/gry chert, foss frags, min ppt-f in-xtal por, no odor, ns.

NOTE: Samples 2700'-2800' very fine and mostly shale, poor quality. Sample quality improved at 2800' after mud displacement.

Displaced drilling mud @ 2798' (700 bbls). Stopped drilling during displacement due to pumping from small transfer pit to reserve pit approx 3/4-mile SW of rig.

Mud-Co/Service Mud Inc.
Check #4 @ 2806' 03/16/22
12:30pm
wt vis pH chl
8.7 58 11.0 5000
Filt LCM
2.2



LS: cm/lt-m bm/lt gry, vf-m, some chalky, some vry silty, wht/gry chert, some foss frags, no vis por, no odor, ns.

LS: cm/lt gry/lt bm, micro-m, some chalky, silty/sndy, wht/lt gry chert, some foss frags, no vis por, no odor, ns.

SH: m-dk gry, silty, slit carb soft-firm.

LS: cm/lt bm, vf-m xtal, some vry silty/sndy, wht/lt gry chert, foss frags/grainy, no vis por, no odor, ns.

LS: cm/lt bm/lt gry, vf-m xtal, some silty, some chalky, wht/lt gry chert, foss frags, no vis por, ns.

LS: cm/lt gry, micro-m xtal, some chalky, some silty, min foss frags, no vis por, ns.

LS: cm/lt-m bm/lt gry, micro-m xtal, some silty, arg, chalky, min lt gry chert, foss frags, no vis por, no odor, ns.

LS: cm/lt bm, vf-m xtal, silty/sndy, some chalky, foss frags, no vis por, no odor, ns.

LS: cm/lt-m gry/lt-m bm, vf-m xtal, some vry silty/arg, some pyritic, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm, vf-m xtal, silty, foss frags/fusln, no vis por, no odor, ns. (Smpl flood of SH).

LS: cm/lt-m bm/lt gry, vf-m xtal, some silty/arg, foss frags, no vis por, no odor, ns.

SH: lt-dk gry, some vry silty, slit carb, soft-firm.

LS: cm/lt gry/lt bm, vf-f xtal, cm/lt gry/lt bm, vry silty/sndy, min dk gry chert, min foss frags, no vis por, no odor, ns.

LS: lt bm, micro-m xtal, some silty, some chalky, min foss frags, no vis por, no odor, ns.

LS: lt-m bm/lt gry-bm, vf-f xtal, some silty/chalky, min foss frags, no vis por, no odor, ns.

LS: cm/lt bm/lt gry, vf-f xtal, some silty, min foss frags, no vis por, no odor, ns.

SH: m-dk gry/blk/lt gry-green, some silty, slit carb, soft-firm.

LS: cm/lt-med bm, micro-m xtal, some silty, foss frags, no vis por, no odor, ns.

SH: m-dk gry/blk/min lt gry-green/dk bm/red-bm, some silty, slit carb, soft-firm.

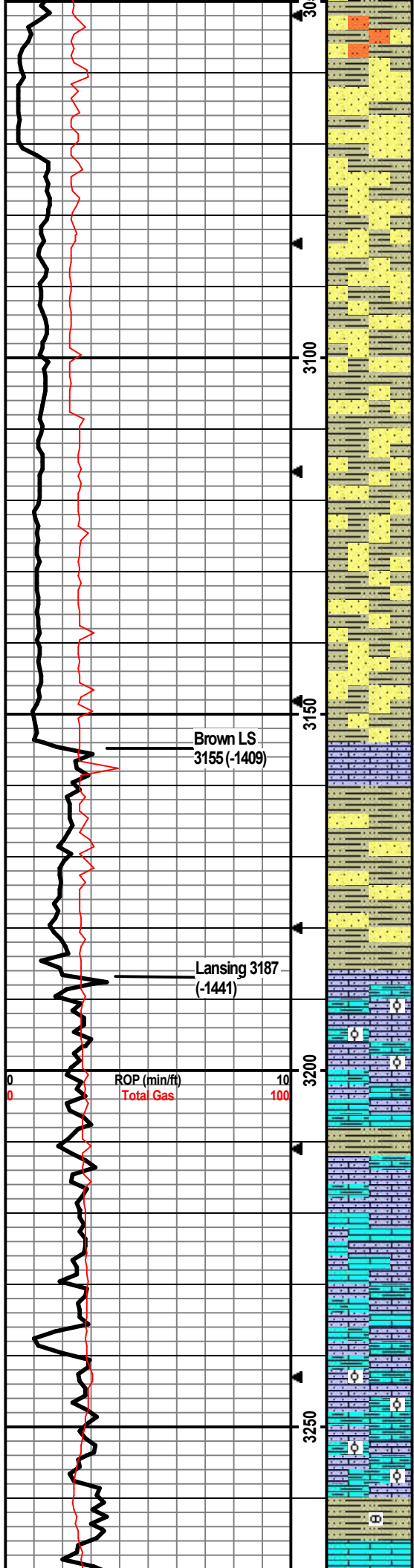
LS: cm/lt-m bm/lt gry-bm, vf-f xtal, silty, vry chalky, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry, some silty, slit carb, soft-firm.

SH: lt-dk gry/lt green-gry/red-bm/maroon, some silty, some carb, soft-firm.

Drill cutting samples at 10' intervals start at 2900'.

Checked gas detection system at 2913' w/lighter w/cig-lighter at knockout canister by geoshack.



Siltstn/SS: lt gry, vf-f, pred qtz, hard/mable, no odor, ns.

SS: lt gry, pred qtz, min mafic, vf-f, sr-wr, hard/friable, no odor, ns. Min SH: lt-dk gry/lt gry-green, some silty, some carb, soft-firm.

SH: lt-dk gry/min lt green-gry, some vry silty, silt carb, soft-firm. SS: lt gry, pred qtz w/min mafic, vf-f, sr-wr, friable, no odor, ns.

Increase in SH: lt-dk gry, some vry silty, carb, soft-firm. SS: as above, no odor, ns.

SH/SS mix as above, no odor, ns.

SH/SS mix as above, no odor, ns.

LS: cm/lt-m bm, vf-m xtal, silty/sndy, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/min lt gry-green, some vry silty, silt carb, soft-firm. SS: lt gry, f-m, sr-wr, firm-hard, friable; no odor, ns.

LS: cm/lt gry, micro-m xtal, some vry silty/arg, chalky, foss frags/dense ool, no vis por, no odor, ns.

LS: cm/lt bm/lt gry, vf-m xtal, some vry silty/arg, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/min red-bm, vry silty, silt carb, soft-firm.

LS: cm/lt-m bm/lt gry, vf-m xtal, some vry silty/arg, some chalky, foss frags, no vis por, no odor, ns.

LS: cm/lt bm, vf-m xtal, some silty, min chalky, min foss frags, no vis por, no odor, ns.

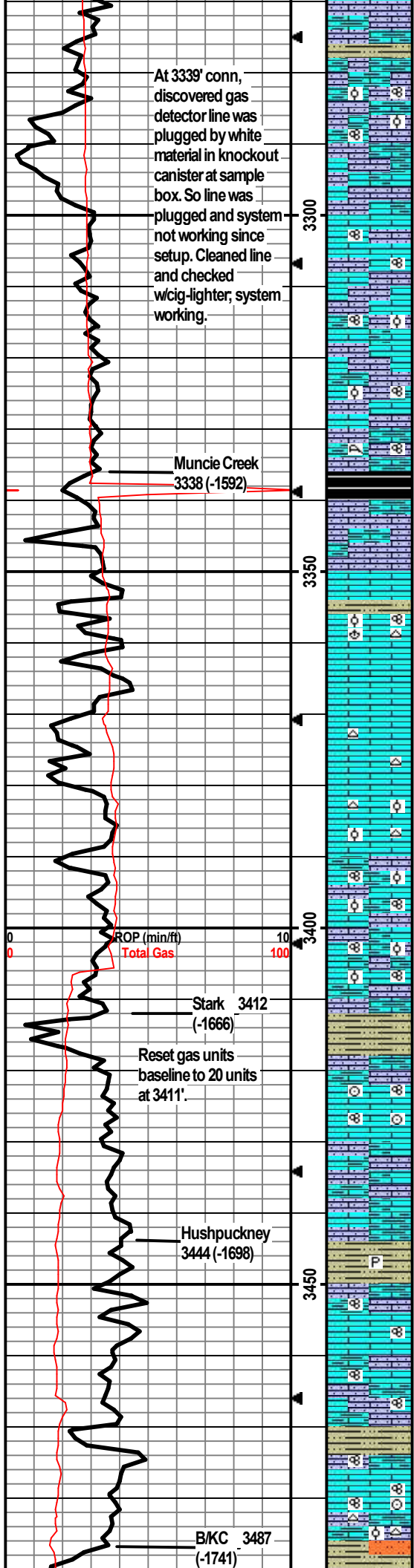
LS: cm/lt-m gry-bm, vf-m xtal, some vry silty/arg, some chalky, min lt bm chert, foss frags, 3 pcs w/sfo w/ppt-m in xtal por, dul yel fl, silt odor, ssfo.

LS: cm/lt-m bm/lt gry-bm, vf-m xtal, some silty/arg/chalky, foss frags/dense ool, 4 pcs w/sfo as above, silt odor, sfo.

LS: cm/lt-m bm/lt gry, vf-m xtal, some silty/arg/chalky, foss frags/min dense ool, no vis por, 1 pce w/sfo assume from above, no odor, ns.

SH: lt-dk gry, some vry silty, carb, min nodules, soft-firm.

LS: cm/lt-dk bm/lt-m gry, vf-m xtal, some chalky, foss frags/some grainy, no vis por, no odor, ns.



LS: lt-m bm/gry-bm, vf-m xtal, some silty/arg/chalky, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/lt-m gry, micro-m xtal, some vry silty/arg/chalky, foss frags/fusln/dense ool, no vis por, no odor, ns.

LS: lt-m bm/m-dk gry, vf-m xtal, some silty/arg, some vry chalky, foss frags, no vis por, no odor, ns.

LS: cm/lt-dk bm, micro-m xtal, some chalky, some silty, foss frags/fusln, no vis por, no odor, ns.

LS: cm/lt-m bm/gry-bm, micro-m xtal, some silty/arg, foss frags/fusln/dense ool, no vis por, no odor, ns.

LS: cm/lt-dk bm/lt-m gry-bm, vf-m xtal, silty/arg/chalky, foss frags/coral/fusln, no vis por, no odor, ns.

SH: lt-dk gry/blk, some silty, silt carb, soft-firm.

LS: cm/lt-m bm, micro-m xtal, some silty/sndy/arg, some chalky, foss frags, min ppt-f in-xtal por, no odor, ns.

LS: cm/lt-m bm, micro-m xtal, some chalky, lt bm chert, foss frags/ool/fusln/brac, min ppt-f in-xtal w/med oo-castic por, no odor, ns.

LS: cm/lt bm, micro-m xtal, some chalky, min foss frags, no vis por, no odor, ns.

LS: cm/lt bm, micro-m xtal, chalky, min wht/lt bm chert, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/gry-bm, micro-m xtal, some silty, some chalky, wht/lt bm chert, foss frags/dense ool, no vis por, no odor, ns.

LS: cm/lt-m bm/min lt gry-bm, micro-m xtal, some silty/arg/chalky, foss frags/fusln/dense ool/grainy, no vis por, no odor, ns.

LS: same as above, no odor, ns.

SH: m-dk gry/dk bm-gry, some vry silty, silt carb, soft-firm.

LS: cm/lt-dk bm, micro-m xtal, some silty/arg, some chalky, foss frags/fusln/crin/grainy, no vis por, no odor, ns.

LS: cm/lt-m bm/lt-m gry-bm, micro-m xtal, some chalky, some arg/silty, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry/min maroon, some vry silty, silt pyritic, carb, firm.

LS: cm/lt-m bm/lt-m gry-bm, vf-m xtal, some silty/arg/chalky, foss frags/fusln/grainy, no vis por, no odor, ns.

LS: cm/lt bm/lt-m gry, micro-m xtal, some chalky, some silty/arg, foss frags/fusln/grainy, no vis por, no odor, ns.

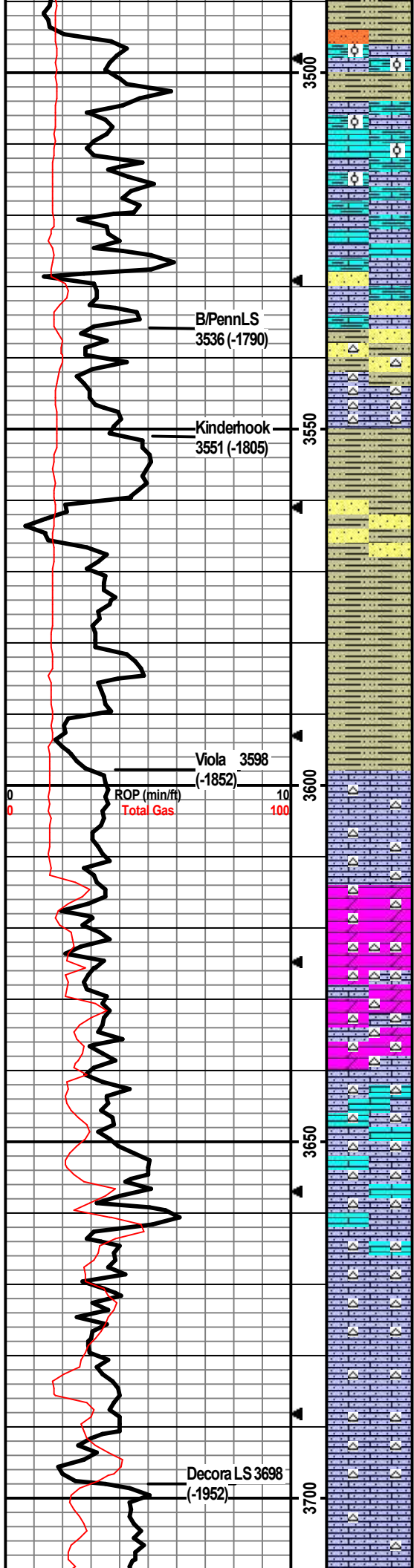
SH: lt-dk gry, some vry silty, silt carb, soft-firm.

LS: cm/lt bm/lt gry-bm, micro-m xtal, some chalky, some silty/arg, foss frags/grainy/fusln, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, micro-m xtal, some silty/arg, some chalky, lt bm chert, foss frags/fusln/dense ool/crin/grainy, no vis por, no odor, ns.

NOTE: Gas data above 3339' is not real due to plugged hose at knockout canister at sample box cavitator.

Mud-Co/Service Mud Inc.
Check #5 @ 3347' 03/17/22
12:00pm
wt vis pH chl
9.1 46 11.0 6450
Filt LCM
8.4 1.5
Note: make up water is
2000 chlorides, 224
calcium.



SH: lt-dk gry/lt green-gry/red-bm, some vry silty, slt carb, soft-firm. Min Silstn: green-gry, vf, arg, friable, no odor, ns.

LS: cm/lt bm/lt gry-bm, micro-m xtal, chalky, some silty/arg, foss frags/dense ool, no vis por, no odor, ns.

SH: lt-dk gry/redf-bm/maroon, some vry silty, slt carb, soft-firm.

LS: cm/lt gry/lt-m bm, micro-m xtal, some chalky, some silty/arg, foss frags/dense ool/grainy, no vis por, no odor, ns.

LS: wht/cm/lt gry/lt bm/lt rose, micro-m xtal, some vry chalky/silty/sndy/arg, min foss frags, no vis por, no odor, ns.

SH: lt-dk gry/red-bm/lt maroon, some silty/sndy, slt carb, soft-firm. SS: wht/lt gry/lt bm, vf-f, hard/not friable, no vis por, 4 pcs w/dk staining w/lt cut on break/dead oil, no odor.

SH: lt gry/lt gry-green/lt maroon, some vry silty/sndy, carb, soft-firm-hard; Chert: wht/lt orange/cm, sharp, some sndy.

SH: lt green/lt-m gry/red-bm/maroon, some vry silty/sndy, carb, firm-hard.

SH: as above; SS: lt gry/lt green/wht, vf-f, arg, carb, slt friable, no odor, ns.

SH: lt gry/lt green-gry, maroon/min mustard yel, some vry silty/sndy, carb, soft-firm.

SH: lt-dk gry/lt-dk maroon/lt green-gry, mustard yel, some vry silty/sndy, slt carb, soft-firm.

SH: as above.

SH: as above. LS: wht/cm, micro-f xtal, vry chalky, some wht/lt orange chert, no vis por, 1 pce w/bm staining/dul yel cut on break, stg odor, sso.

LS: wht/cm/lt bm, vf-f xtal, vry chalky, some sndy, abund wht/cm/lt yel chert, 1 pce chert and 1 pce wht dolo w/bm staining w/ppt in-xtal por, yel cut on break, stg odor, so.

Dolo: wht/cm, vf-f xtal, some ppt in-xtal por, abund chert: wht/lt yel/cm, some tripolitic, 14 pcs dolo w/staining, gd yel cut on break, gas bubbles, some chert pcs w/staining, yel cut on break, stg odor.

Dolo: wht/cm, vf-f xtal, ppt-vf in-xtal por, abund wht/cm sharp/tripolitic chert, 13 pcs dolo w/staining, yel flr/cut, stg odor.

LS: wht/cm, vf-f xtal, some sndy, grainy, abund wht/cm chert, some ppt in-xtal por, stg odor, nsfo.

LS: wht/cm, vf-f xtal, some sndy, grainy, abund wht/cm chert, no vis por, 1 cm Dolo pce w/so assume from above, stg odor, nsfo.

LS: as above, some chalky, abund wht/cm chert, no vis por, stg odor, nsfo. (Smpl has flood of SH: varied color).

LS: wht/cm/lt gry, vf-f xtal, sndy/chalky, sucrosic, abund wht/cm chert, stg odor, no vis por, nsfo. (SH flood).

LS/Chert as above, slt odor. (SH flood).

LS: wht/cm/lt gry/lt bm, vf-f xtal, silty/sndy, chalky, abund wht/cm chert, slt odor, some ppt in-xtal por, nsfo.

LS: cm/lt bm, micro-f xtal, some wht chert, foss frags/fusin, no vis por, no odor, ns. (SH flood, smpl qual poor).

CFS @ 3640', Stop/30"/60".

Premix added at 3688.

CFS @ 3710', Stop/30"/60".

