

# LITHOLOGY STRIP LOG

## WellSight Systems

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

Well Name: SHEETZ #5-22  
Location: NE NE SW SE  
License Number: API: 15-109-21252-00-00  
Spud Date: March 1, 2014  
Surface Coordinates: 1144' FSL, 1435' FEL Section 22-Twp 11 South - Rge 33 West  
Region: Logan County, Kansas  
Drilling Completed: March 14, 2014

Bottom Hole Vertical Hole  
Coordinates:  
Ground Elevation (ft): 3143 K.B. Elevation (ft): 3151  
Logged Interval (ft): 3700 To: 4800 Total Depth (ft): 4800  
Formation: Mississippi  
Type of Drilling Fluid: Chemical Mud, Displace at 3448'.  
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### OPERATOR

Company: American Warrior, Inc.  
Address: 3118 Cummings RD  
PO Box 399  
Garden City Kansas 67846

### GEOLOGIST

Name: W. Scott Alberg  
Company: Alberg Petroleum, LLC  
Address: 609 Meadowlark Lane  
Pratt, Kansas 67124

### FORMATION TOPS

	SAMPLE TOPS	LOG TOPS
ANHYDRITE	2638(+513)	2636(+515)
B/ANHYDRITE	2663(+488)	2661(+490)
HEEBNER	4050(-899)	4049(-898)
TORONTO	4078(-927)	4080(-929)
LANSING	4094(-943)	4092(-945)
B/KC	4387(-1236)	4383(-1232)
LENEPAH	4410(-1259)	4408(-1257)
PAWNEE	4519(-1368)	4516(-1365)
FT SCOTT	4571(-1420)	4570(-1419)
CHEROKEE SHALE	4601(-1450)	4598(-1447)
JOHNSON	4644(-1493)	4644(-1493)
MISSISSIPPIAN	4702(-1551)	4701(-1550)
RTD	4800(-1649)	
LTD		4798(-1647)

## COMMENTS

Surface Casing: Set 8 joints new 24#, 8 5/8" at 325', 225 sks common, 3% cc, 2% gel, plug down 10:00 pm on March 1, 2014. Cement did circulate.

Production Casing: 5 1/2" Casing Ran.

Deviation Surveys: 325' - 1/2, 982' - 1/2, 1928' - 1/2, 4140' - 3/4, 3/4 - 4800'.

Contractor Bit Record: 1- 12 1/4 out @ 330'.

2- 7 7/8" out @ 4262'.

3- 7 7/8" out @ 4670'.

4- 7 7/8" out @ 4800'.

Gas Detector: MBC

Mud System: Mud Co, Reid Atkins, Engineer

DSTs: by Trilobite Testing

Logged By Pioneer Energy Services

LTD 4798'.

## DSTs

DST #1 - Lansing A & B

Test Interval: 4096 to 4140', Times 30-60-15-60

1st opening - BOB 2 1/2 minutes, no blow back

2nd opening - BOB 3 minutes, no blow back.

Recovery 344' MW (55% W, 45% M), 314' MW (85% W, 15% Mud), 1003' MW (95% W, 5% M)

IHP 2020# FHP 1995#

IFP 77-592# FFP 591-780#

ISIP 1235# FSIP 1235#

Temp 118 - Chlorides 52,000

DST #2 - H Zone,

Test Interval: 4227 to 4262', Times 30-30-30-30

1st Opening - Weak Surface Blow, no blow back.

2nd Opening - No blow, no blow back.

Recovery: 1' Mud with oil spots.

IFP 17-19# FFP 19-19#

ISIP 48# FSIP 39#

IHP 2101# FHP 2090#

Temp 113

DST #3 - I & J Zones

Test Interval 4260 to 4314'; Times 30-60-30-60

1st Opening - Built to 4", no blow back.

2nd Opening - Built to 6", no blow back.

Recovery: 70' GIP, 50' GOCM (5% G, 5% O, 90% M)

IHP 2120# FHP 2169#

IFP 21-31# FFP 30-41#

ISIP 327# FSIP 297#

Temp 115

DST #4 - Johnson Zone

Test Interval 4592 to 4670'; Times 30-60-40-60

1st Opening - BOB 11 1/2 minutes, 1" blow back.

2nd Opening - BOB 7 1/2 minutes, blow back BOB in 24 minutes.

Recovery: 536' Weak GIP, 82' GMCO ( 7% G, 80% O, 13% M), 126' GMCO (30% G, 58% O, 12% M), 124' GOCM (20% G, 25% O, 55% M), Gravity 31 API

IFP 25-78# FFP 95-155#

ISIP 1005# FSIP 978#

IHP 2312# FHP 2291#

Temp 124

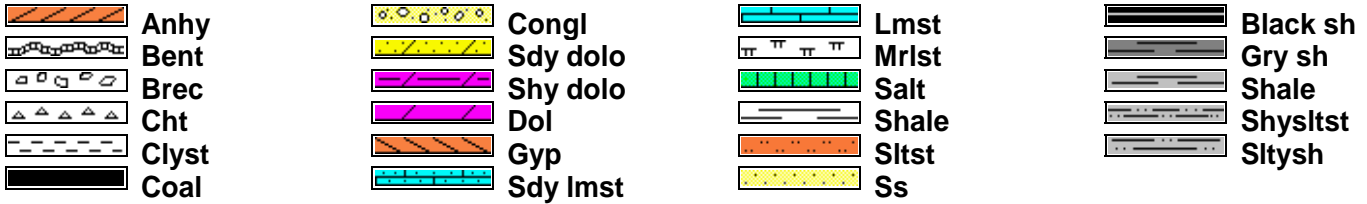
## RECOMMENDATIONS

BASED ON SAMPLES SHOWS, STRUCTURAL POSITION, DST RESULTS AND LOG CALCULATIONS, IT WAS RECOMMENDED BY ALL PARTIES THAT THIS TEST WELL HAVE CASING RAN TO FURTHER EVALUATE POTENTIAL PAY ZONES.

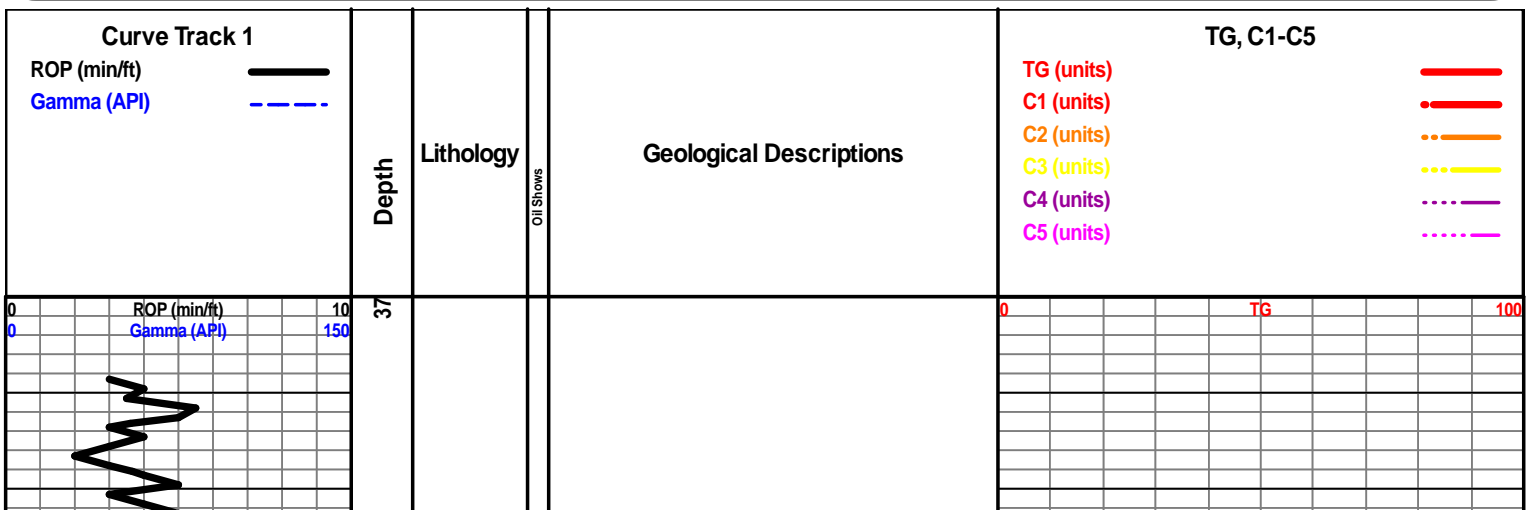
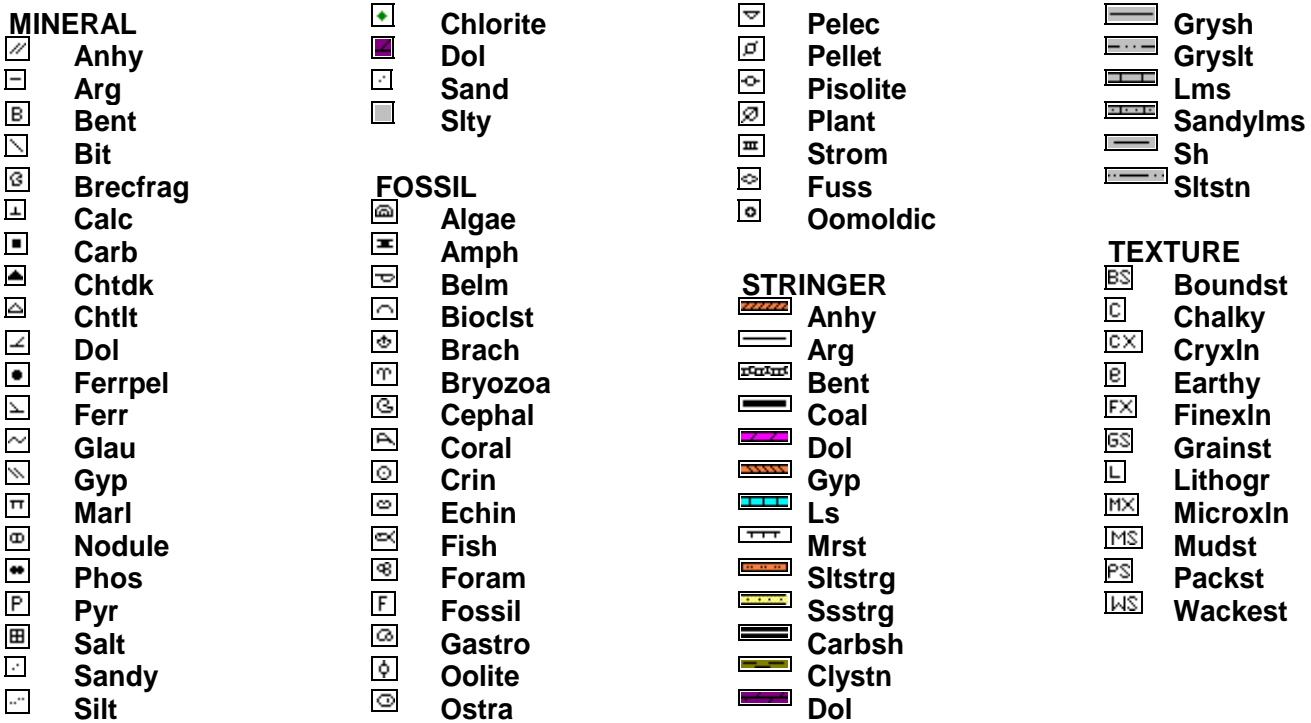
RESPECTFULLY,

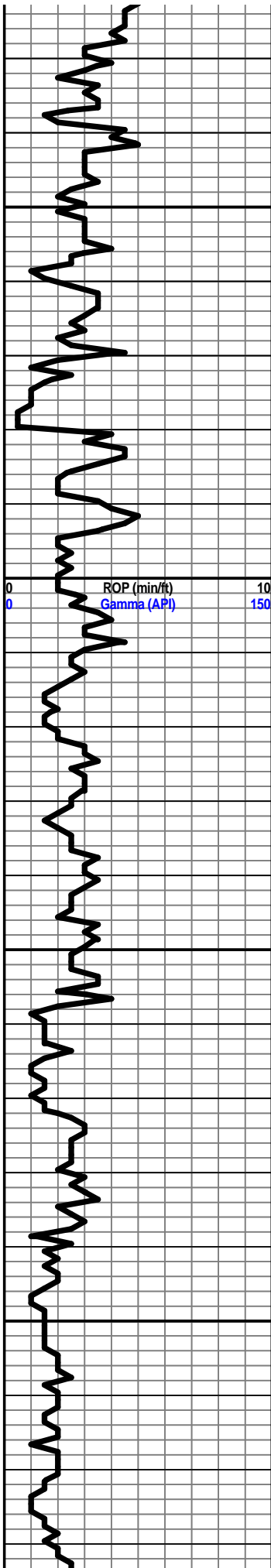
SCOTT ALBERG  
PG #54

### ROCK TYPES



### ACCESSORIES



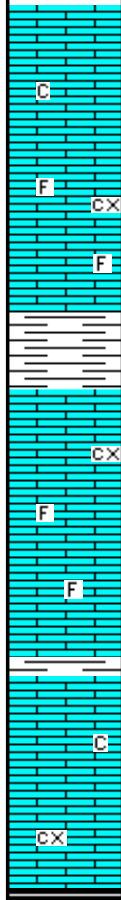


3750

3800

3850

3900



Limestone, cream, tan, finely crystalline, dense, slightly chalky.

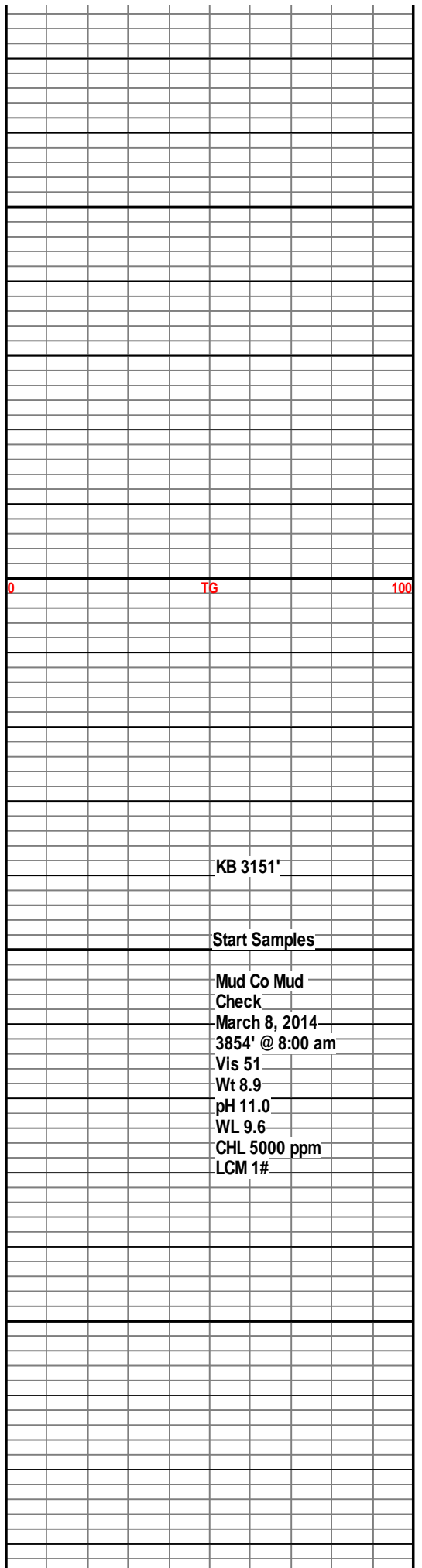
Limestone, cream, off-white crystalline, fossils, fossiliferous porosity, no visible shows.

Shale, grey.

Limestone cream, tan, buff, crystalline, fossils, trace fossiliferous porosity, no visible shows, no odor.

Limestone, tan, crystalline, dense, fossils, slightly chalky, no shows.

Shale, grey-black



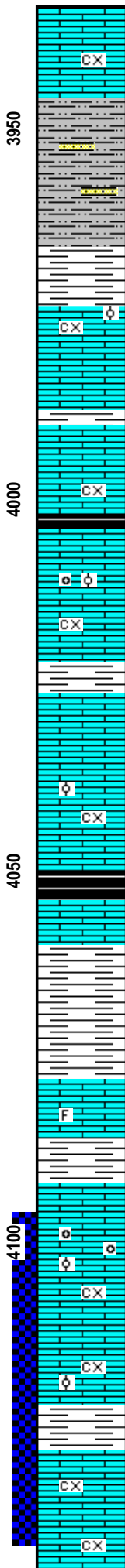
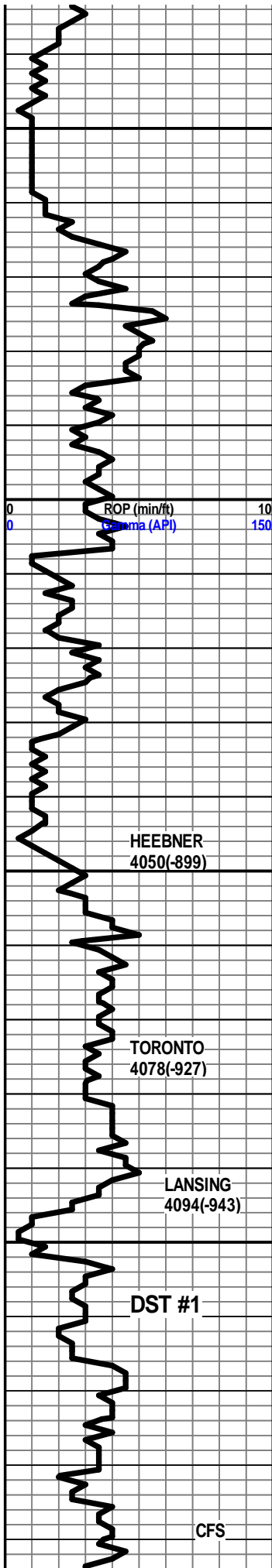
TG

100

KB 3151'

Start Samples

Mud Co Mud  
Check  
March 8, 2014  
3854' @ 8:00 am  
Vis 51  
Wt 8.9  
pH 11.0  
WL 9.6  
CHL 5000 ppm  
LCM 1#



Shale, grey-black.

Limestone, grey-white, crystalline, dense,

Sandstone, grey-white, silty, fine grained, sub angular, shaley in part.

Shale reddish-brown soft.

Limestone, cream, tan-white, crystalline traces of oolites, no visible shows.

Shale reddish-brown, soft. grey.

Limestone, tan, buff, off-white, finely crystalline, trace fossils, trace chalky, no visible shows, no odor.

Shale, grey-black.

Limestone, tan, buff, crystalline, oolitic, trace oolimoldic porosity, very faint show heavy asphaltic oil, no odor, no fluorescence.

Shale, grey.

Limestone, grey-white, mottled, fossils.

Limestone buff, tan, crystalline, trace oolites, fossils, slightly chalky, trace stain, no odor.

Limestone, buff tan, crystalline fossils, fossiliferous porosity no visible shows.

Shale, grey-black

Limestone, grey-white, crystalline dense.

Shale, reddish-brown, soft.

Limestone tan, buff, crystalline, fossils, fossiliferous porosity, tite, no odor, no visible shows.

Shale, reddish-brown, grey.

Limestone, tan, buff, crystalline, oolitic, oolimoldic, mostly barron, traces of heavy oil, spotty staining, trace free oil when crushed, traces of nvrte. no odor.

Limestone, cream, tan, buff, crystalline, oolitic, fossils, trace chalky, no shows.

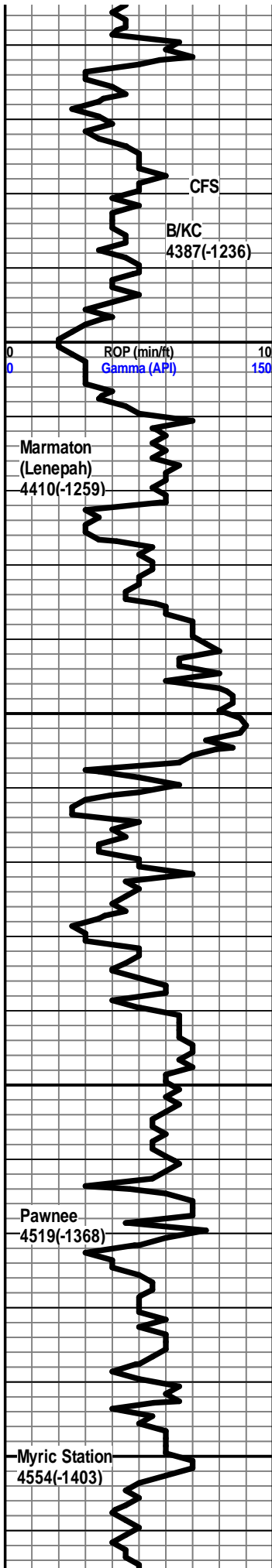
Shale, grey-red, soft.

Limestone, tan-buff, finely crystalline, crystalline porosity, poor overall porosity very faint show heavy oil, no odor.

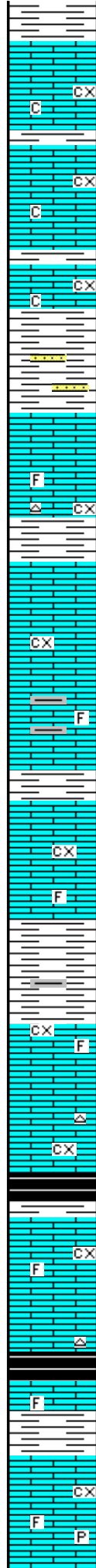
Shale, grey-red, soft.

0	TG	100
DST #1 4096 to 4140		
Times 30-60-15-60		
1st Opening - BOB		
2 1/2 minutes, no blow back.		
2nd Opening - BOB 3 minutes, no blow Back.		
Recovery: 344'		
MW (45% M, 55% W)		
314' MW (85% W, 15% M)		
1003' MW (95% W, 5% M)		
IFP 77-592#		
FFP 591-780#		
ISIP 1235#		
FSIP 1235#		
IHP/FHP		
2020/1995#		
Chlorides 52,000		
Temp 118		
Mud Co Mud Check		
March 9, 2014		
4140' @ 9:00 am		
Vis 50		
Wt 9.2		
pH 10.0		
WL 9.6		
Survey 3/4 degree.		





4400  
4450  
4500  
4550



Shale, grey-black.

Limestone, cream, tan, crystalline, dense, trace chalky, very faint odor, no visible show of oil. spotty fluorescence.

Limestone, cream, buff, finely crystalline, dense, trace crystalline porosity, chalky in part.

Limestone, tan, buff-white, crystalline, dense, slightly chalky.

Shale, grey, green, reddish-brown pale green sandstone, fine grained, friable, no visible shows.

Limestone, cream, off-white, crystalline dense, trace fossils, trace of tan chert.

Shale, grey, red-green.

Limestone, tan, buff, grey-white, crystalline, dense, trace fossils, shaley in part.

Shale, grey-black.

Limestone, buff, tan crystalline, dense, trace fossils.

Shale, grey, dark grey.

Limestone, tan, buff, crystalline, dense, trace fossils.

Shale, grey-black.

Limestone, cream, tan, buff, crystalline, trace fossils, trace crystalline porosity, traces of tan chert, no visible shows.

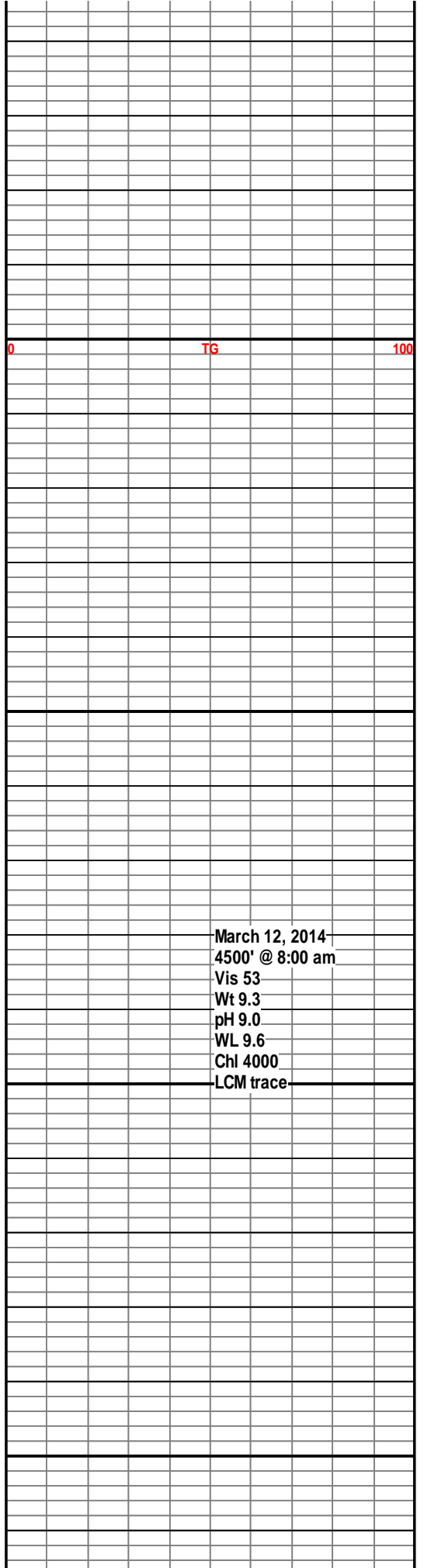
Limestone, tan, crystalline, fossils, traces of tan chert, dense, no visible shows.

Shale grey-black.

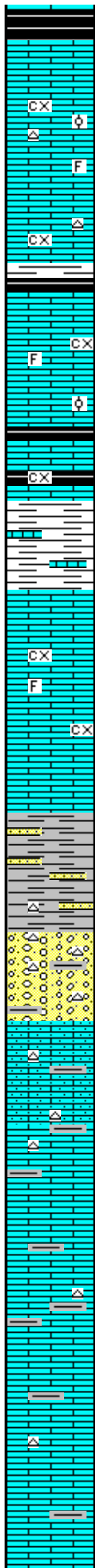
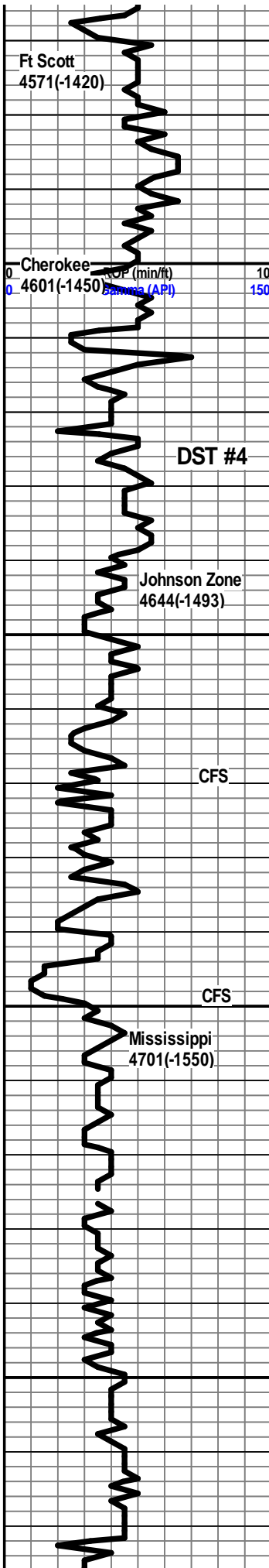
Limestone, tan-brown, crystalline, dense fossils.

Shale, grey

Limestone, cream, off-white, grey-white,, finely crystalline, dense, traces of pyrite, trace fossils, no odor, no visible shows.



March 12, 2014  
4500' @ 8:00 am  
Vis 53  
Wt 9.3  
pH 9.0  
WL 9.6  
Chl 4000  
LCM trace



Shale, grey-black.

Limestone, tan, buff, crystalline, oolitic, fossils, poor porosity, no odor, no visible shows.

Limestone, tan, tan=brown, medium crystalline, dense, trace crystalline porosity, trace tan chert, no visible shows.

Shale grey-black.

Limestone, grey-white, tan, crystalline, dense, trace fossils.

Limestone, tan, buff, crystalline, trace oolites, trace fossils, no odor, no visible shows, no fluorescence.

Shale grey-black.

Limestone, tan, crystalline, dense.  
Shale, grey-black.

Limestone, tan, buff, crystalline, dense.

Shale, grey-green, lime stringers.

Limestone, tan, buff, crystalline, fossils, traces of crystalline porosity, small scattered vugs, spotty staining, fair odor, fair show of oil, very dull spotty fluorescence.

Limestone, tan, buff-white, finely crystalline, trace crystalline porosity spotty stain, very faint odor no show free oil.

Shale, red-brown, grey, some vari-colored, trace limestone fragments, some pale green sandstone clusters, tite to friable, no shows, no odor.

Vari-colored cherts, white, clear, tan, sharp, some sand clusters, clear, friable, no shows of oil. no odor.

Limestone, cream, tan, crystalline, some oolites, cherty, vari-colored shales, no shows.

Limestone, tan, cream, crystalline, sandy, traces of chert, very shaley in part, no shows.

Limestone cream, buff, crystalline, trace sandy, tan to off-white cherts, trace fossils, shaley.

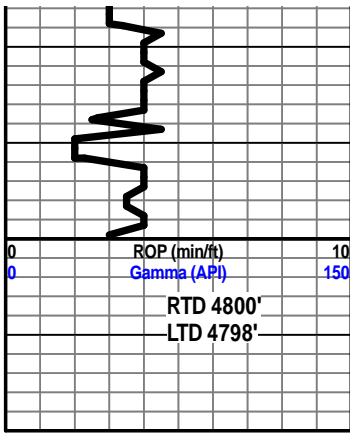
Limestone, tan, buff crystalline, dense, shaley, cherty, no visible shows.

DST #4 4592-4670  
Times 30-60-40-60  
1st opening - BOB  
11 1/2 minutes, 1" blow back.  
2nd Opening - BOB 7 1/2 minutes, off BOB  
25 minutes on final blow back.

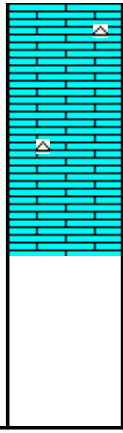
0 TG Recovery: 536' 100  
Weak GIP  
82' GMCO (7% G, 80% O, 13% M)  
126' GMCO (30% G, 58% O, 12% M)  
124' GOCM (20% G, 25% O, 55% M)  
Gravity 31  
IFP 25-89#  
FFP 95-155#  
ISIP 1005#  
FSIP 978#  
IHP/FHP 2312/2291#  
Temp 124

Mud Co Mud  
Check March 13, 2014  
4670' @ 8:00 am  
Vis 56  
Wt 9.3  
pH 9.5  
WL 8.8  
Chl 4500  
LCM 1#





4800



Limestone tan, buff, cream, dense, trace cherts, shaley in part, no visible shows, no odor.

