



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

Well Name: Arnold #1
Location: 6-29S-40W
License Number: API: 15-187-21324
Spud Date: 12/26/15
Surface Coordinates: 490' FSL, 1515' FEL

Region: Stanton Co., KS
Drilling Completed: 01/05/16

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 3311 **K.B. Elevation (ft):** 3322
Logged Interval (ft): 4200 **To:** 5700 **Total Depth (ft):** 5700
Formation: Mississippian
Type of Drilling Fluid: Chemical

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

OPERATOR

Company: White Exploration, Inc.
Address: 1635 N. Waterfront Pkwy.
St. 100
Wichita, KS 67206

GEOLOGIST

Name: Andrew White
Company: White Exploration, Inc.
Address:

Remarks

After log and DST evaluation, it was decided that casing be run on the Arnold #1 to perforate the Keyes Sand.

General Info

Drilling Contractor: Murfin Rig 21

Logs: CJ Cased Hole Solutions
Compensated Density/Neutron, Dual, Micro, Sonic

Drilling Mud: Mudco/Service Mud, Inc.

DST: Trilobite Testing

Surveys: 595'-.75, 907'-.75, 3767'-.75, 5430'-1, 5700'-1

Daily Status

12/26/15: Spud Well @ 3:00 A.M.

12/27/15: Lost Circulation @ 1413

12/28/15: Lost Circulation @ 1492, Drill to 1721' run 41 joints of 8-5/8" 24# Surface Casing, cement with 430 sacks A-Con Blend Cement with 3% CC, 1/4# polyflake and .2%WCA-1 and 150 sacks of Premium Plus Cement with 2%CC and 1/4# polyflake

12/29/15: Waiting on Cement for top 150' of surface casing, cement from top thru 1" with 200 sacks common cement with 2% CC

12/30/15: Drilling @ 1985', lost circ @ 2337

12/31/15: Drilling @ 3100'

01/01/16: Drilling @ 4292'

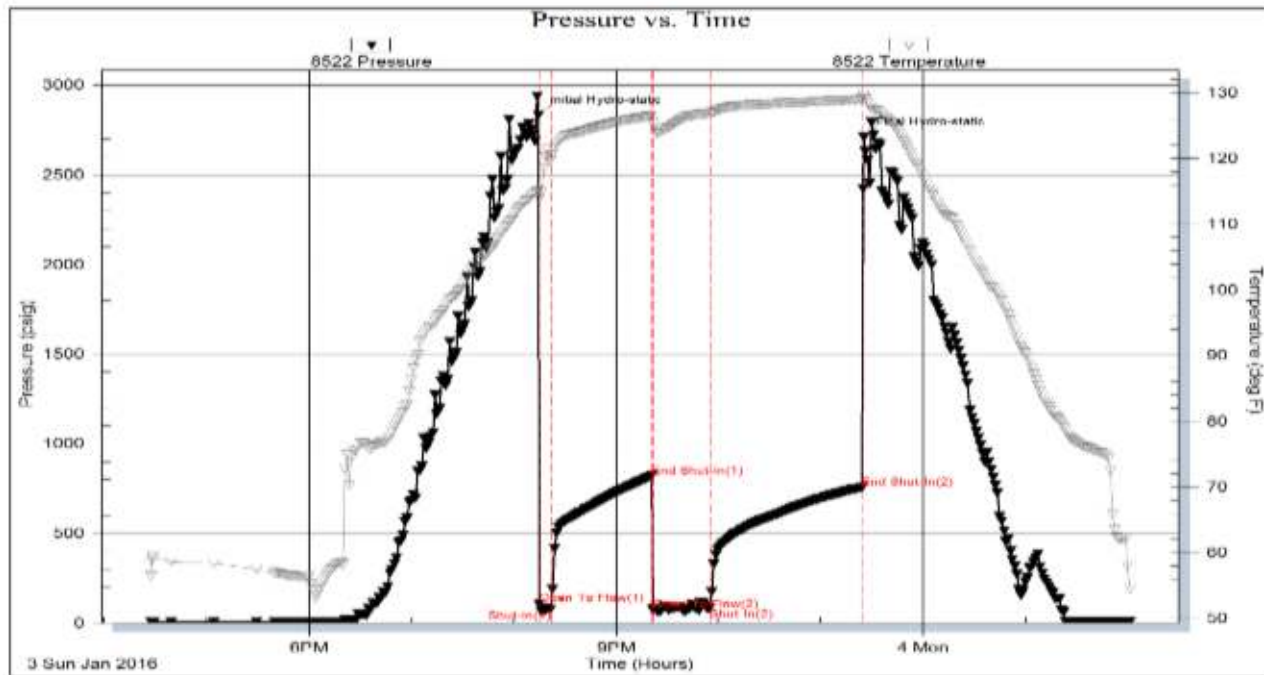
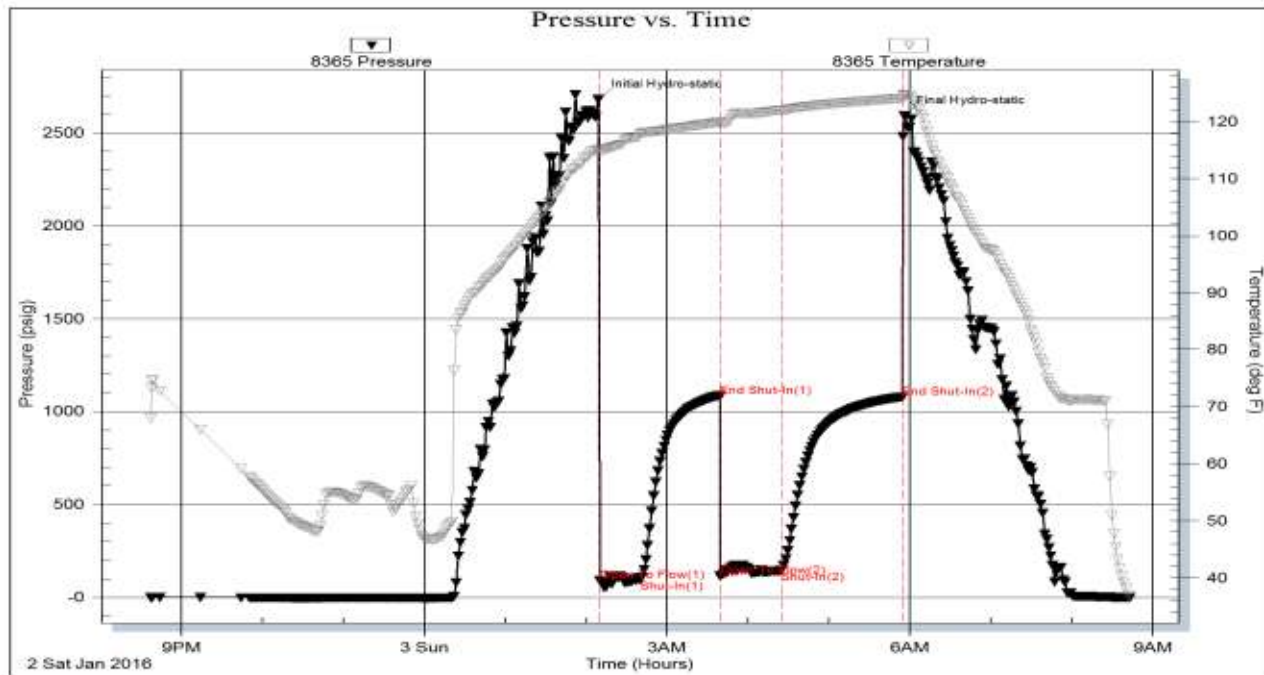
01/02/16: Drilling @ 5189'

01/03/16: Coming out of hole with DST #1

01/04/16: Drilling @ 5509'


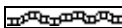
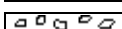
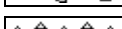
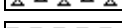


01/05/16: Logging





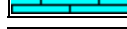

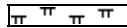

	White Ex			Berexco		J.M. Huber		Stelbar	
	Arnold #1			Earl Arnold 7-2		Earl Arnold 7-1		#1-31 Plummer	
	629S-40W			7-29S-40W		7-29S-40W		31-28S-40W	
	490' FSL, 1515' FEL			335' FNL, 335' FWL		2300' FNL, 500' FWL		1310' FSL, 1300' FEL	
	KB:3322			KB: 3336		KB: 3337		KB: 3321	
	Sample	Log	Datum	Relationship		Relationship		Relationship	
Heebner		3693	-371	-7		9		-4	
Lansing		3783	-461	-22		-20		4	
Cherokee	4545	4547	-1225	-20		-17		-3	
Morrow	5020	5021	-1699	-27		-20		-2	
LMM	5345	5341	-2019	-27		-17		-13	
Miss	5654	5579	-2257	-20		-18		-22	

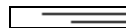
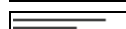














ROCK TYPES





LITHOLOGY

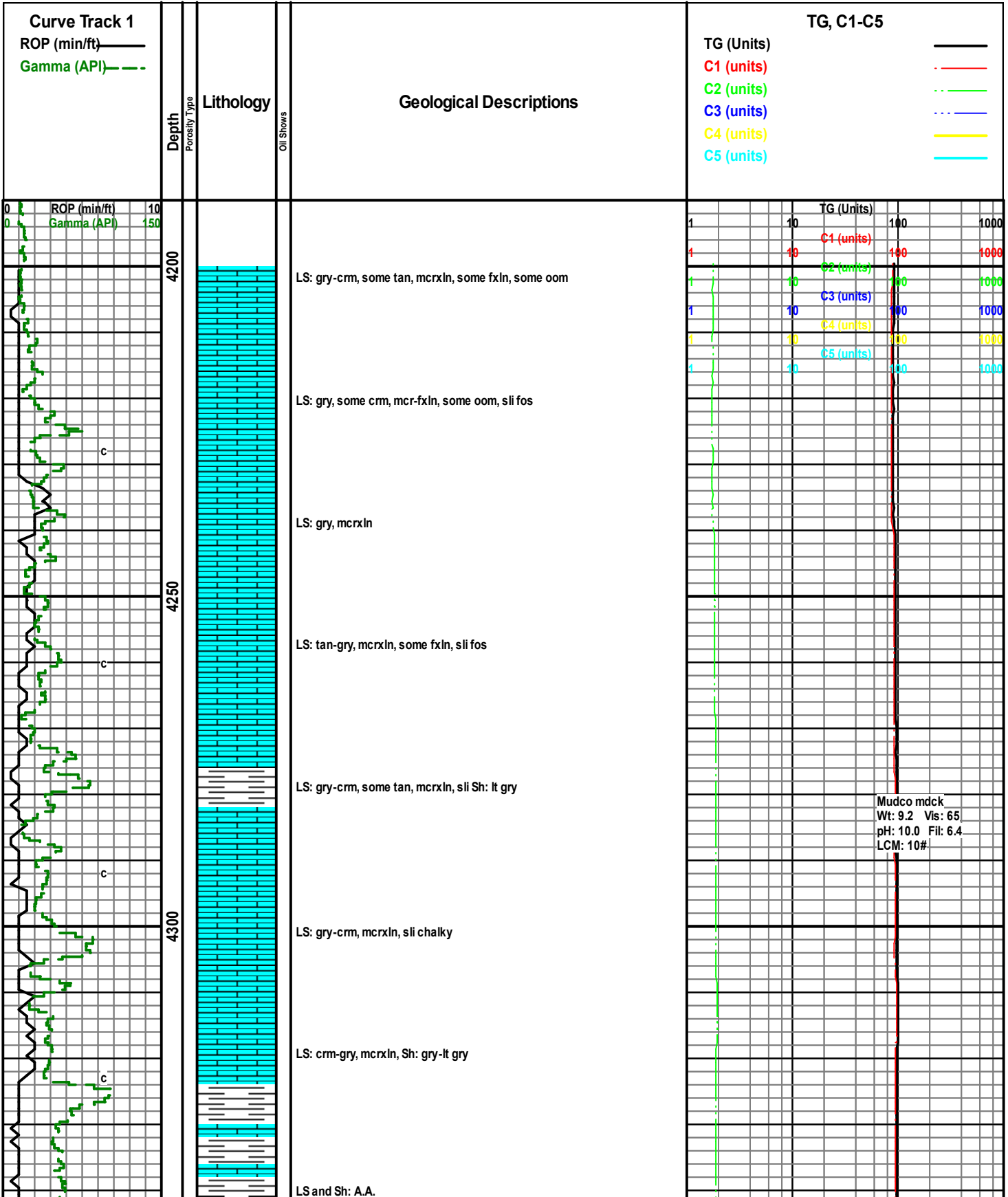
-  Anhy
-  Bent
-  Brec
-  Cht
-  Clyst
-  Black shale
-  Congl

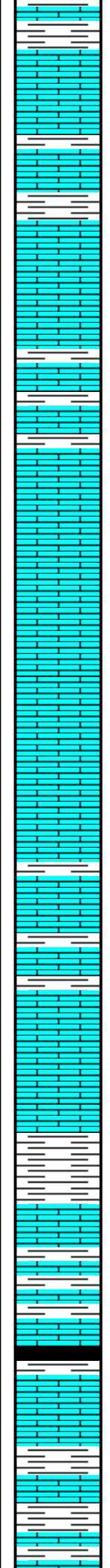
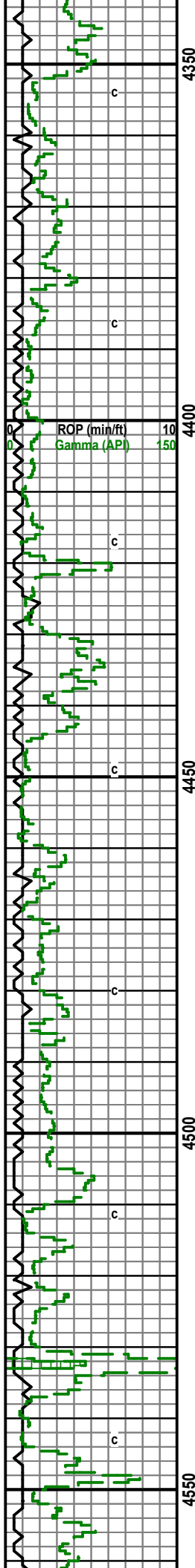
-  Dol
-  Gyp
-  Igne
-  Lmst
-  Meta
-  Mrlst
-  Salt
-  Shale

-  Shcol
 -  Shgy
 -  Sltst
 -  Ss
 -  Till
- STRINGER**
-  Anhy

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

- OIL SHOW**
-  Even
 -  Spotted
 -  Ques
 -  Dead





LS: crm, sli tan-gry, mcr-fxln, sli Sh: lt gry, some slt

LS: crm-tan, mcr-fxln, sli ool, some oom

LS: crm, sli gry, mcrxln, Sh: lt gry, sli stly

LS: crm-gry, sli tan, mcrxln, some fxln, sli oom, some chlk

LS: A.A. with some ool

LS: crm-gry, mcr-fxln, some mxln, sli fos, sli oom, sli chlky, some Sh: gry-drk gry

LS: crm-gry, f-mxln, sli fos, sli chlk, some Sh: A.A.

Sh: gry-drk gry, some blk, some slty, few LS: gry-crm, mcrxln

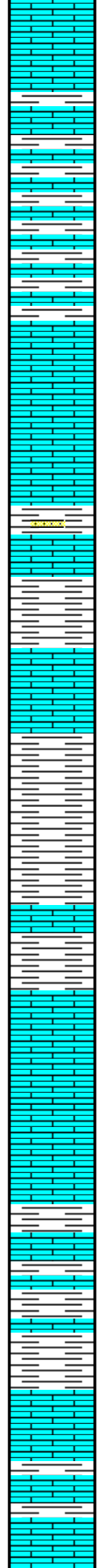
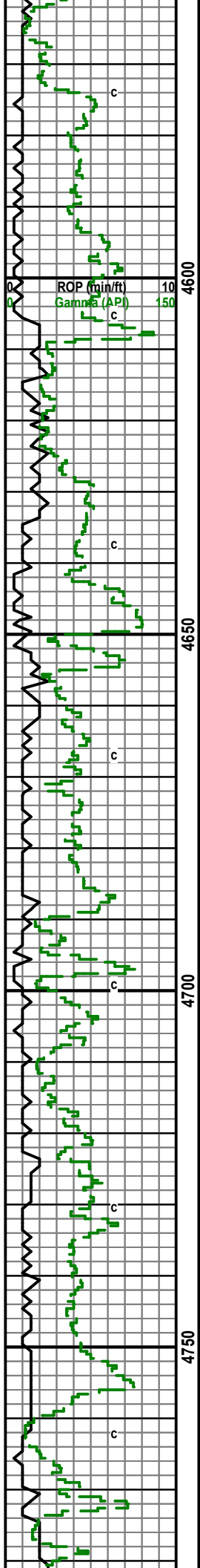
LS: gry-crm, mcr-fxln, dense, sli fos, Sh: drk gry-gry

LS; gry, mcrxln, Sh: drk gry-gry-lt gry, some slty

LS: gry, sli crm, mcrxln, Sh: gry

	TG (Units)		
1	10	100	1000
1	10	C1 (units)	1000
1	10	C2 (units)	1000
1	10	C3 (units)	1000
1	10	C4 (units)	1000
1	10	C5 (units)	1000

Cherokee Shale: 4545 (-1223)



LS: gry--crm, mcr-fxlIn, sli Sh: gry-lt gry

LS: crm-gry, mcr-fxlIn, some mxln, sli fos

Sh: drk gry-gry, some silty, sli SS: gry-clr vf-fgrn, some LS: gry-crm, fxln, no show

Mostly Sh: A.A. with some SS: clr-gry, vf-fgrn, pos sli odor, no fluor, pos vvr show, some LS: A.A.

Sh: drk gry-gry

Sh: A.A. with some LS: crm-gry, mcrxln

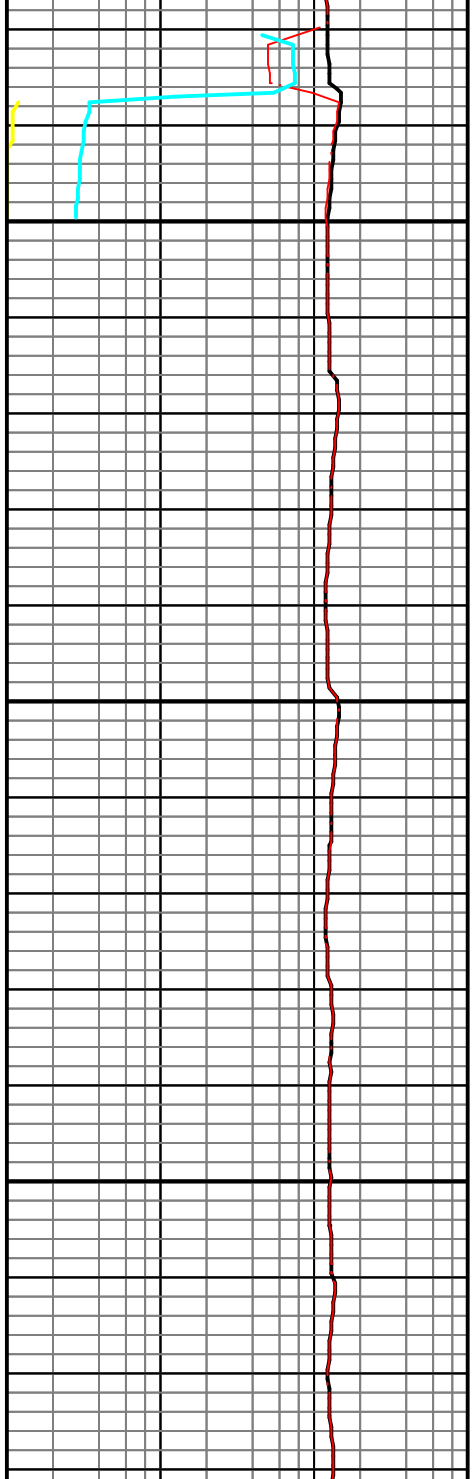
LS: crm, some gry, mcrxln

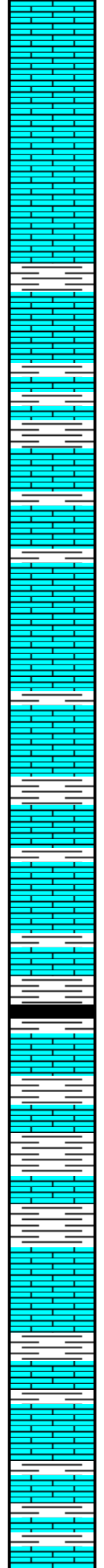
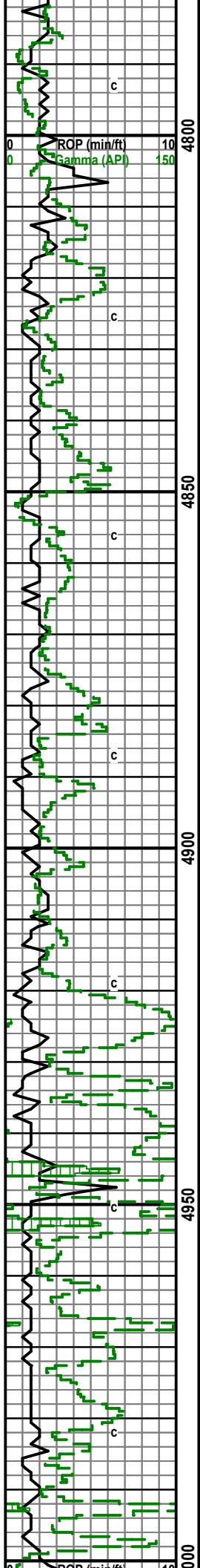
Sh: gry, sli lt-drk gry

Sh: A,A, with LS: crm-gry, mcrxln

LS: crm-gry mcrxln some fxln

	TG (Units)		
1	10	100	1000
1	10	100	1000
1	10	100	1000
1	10	100	1000
1	10	100	1000
1	10	100	1000
1	10	100	1000





LS: gry-crm, mcrxln, sli fos, few chalky

LS: A.A. with Sh: drk gry-gry

LS: crm-gry, sli tan, mcrxln, Sh: A.A.

LS: tan-crm, sli gry, mcr-fxln, Sh: drk gry-gry

LS: gry, sli crm-tan, mcr-fxln, Sh: drk gry-gry

LS: gry-crm, mcrxln, Sh: A.A.

LS: gry, sli crm, mcrxln, Sh: drk gry, some gry

LS: gry-crm, mcrxln, Sh: A.A.

LS and Sh A.A. with some blk

Sh: drk gry- blk-gry, LS: gry, sli crm, mcrxln

Sh: A.A. LS: A.A.

Sh: drk gry-gry, slty lt gry

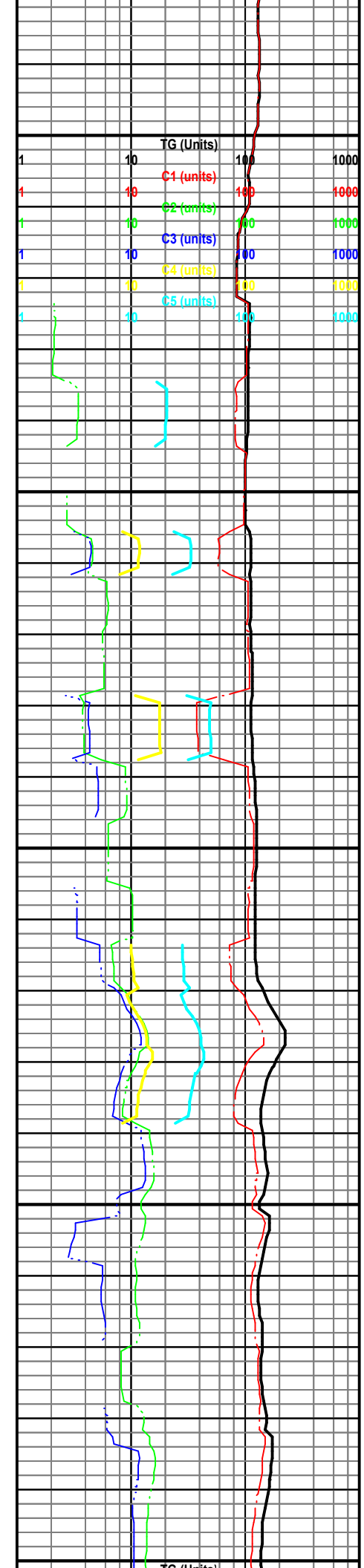
Sh: gry-drk gry, few slty, LS: gry-crm, mcr-fxln, sli cherty

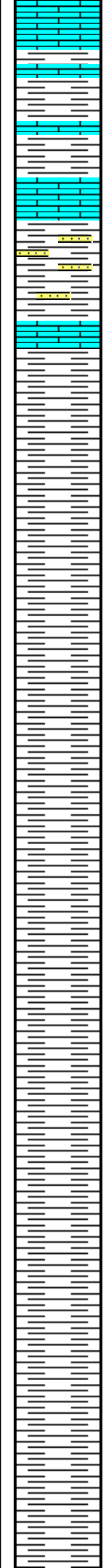
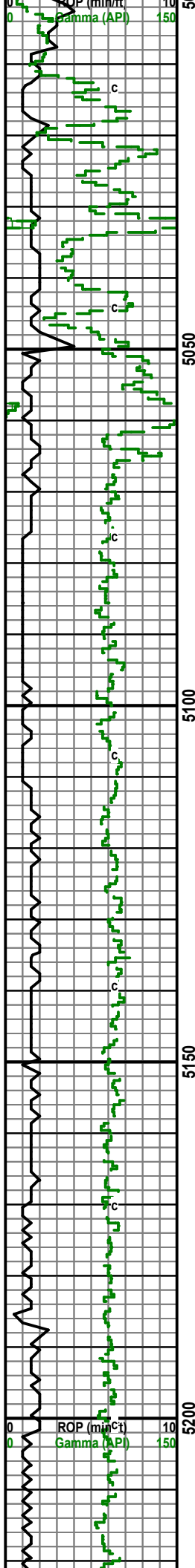
LS: gry-crm mcrxln, Sh: drk gry-gry

Sh: drk gry-blck, few LS: gry, sli crm, mcrxln

LS: gry-crm, mcrxln, Sh: drk gry-blck-gry

LS: gry-crm, mcrxln, Sh: drk gry-gry





LS: gry, sli crm, mcrxln, Sh: gry-drk gry

Sh: gry-drk gry, some LS: gry, mcrxln

Sh: gry-drk gry-lt gry, some SS: clear, sli gry, vfgrn, glauc, NS

Sh: A.A. with few SS: A.A.

Sh: gry-drk gry, some lt gry stly, some LS: crm-gry, mcrxln

Sh: gry-drk gry some blk, some lt gry stly

Sh: gry-drk gry-lt gry, some stly

Sh: gry-drk gry-lt gry

Sh: gry-drk gry

Sh: A.A.

Sh: gry-drk gry

Sh: A.A.

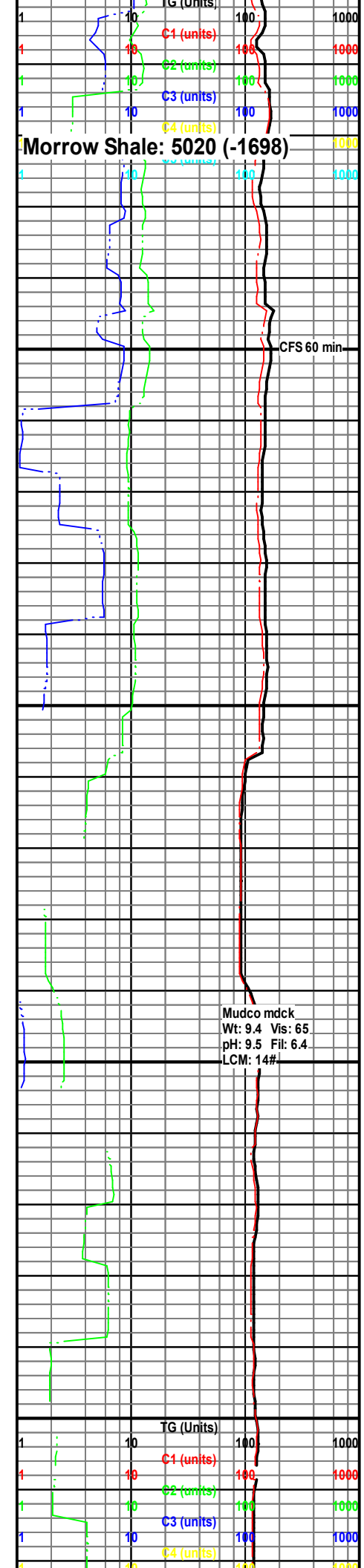
Sh: A.A.

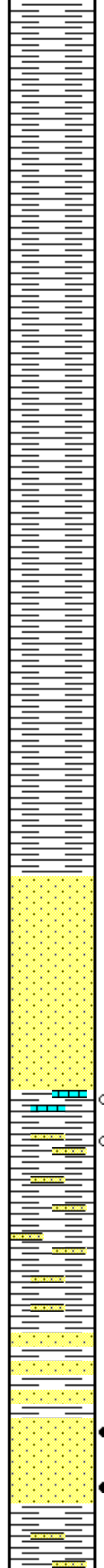
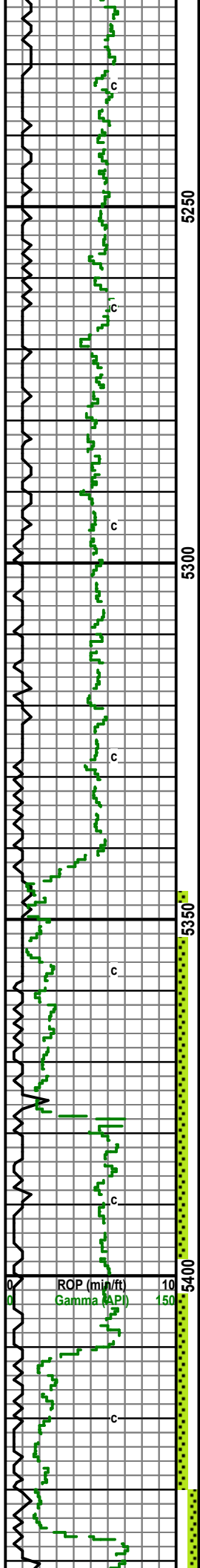
Sh: A.A.

Sh: A.A.

Sh: gry-drk gry-lt gry

Sh: A.A.





Sh: A.A.

Sh: A.A.

Sh: A.A.

Sh: A.A.

Sh: A.A.

Sh: A.A. with SS: clear, vf-fgrn, dense, glauc, subang, pr sort

Sh and SS: A.A. with some sand more limy

Sh: A.A. with SS: crm-clr, sli glauc, limy, LS: gry-crm, mcr-fxln some of the SS had a possible sli show gas, and there is a possible faint odor, no fluor, pr por

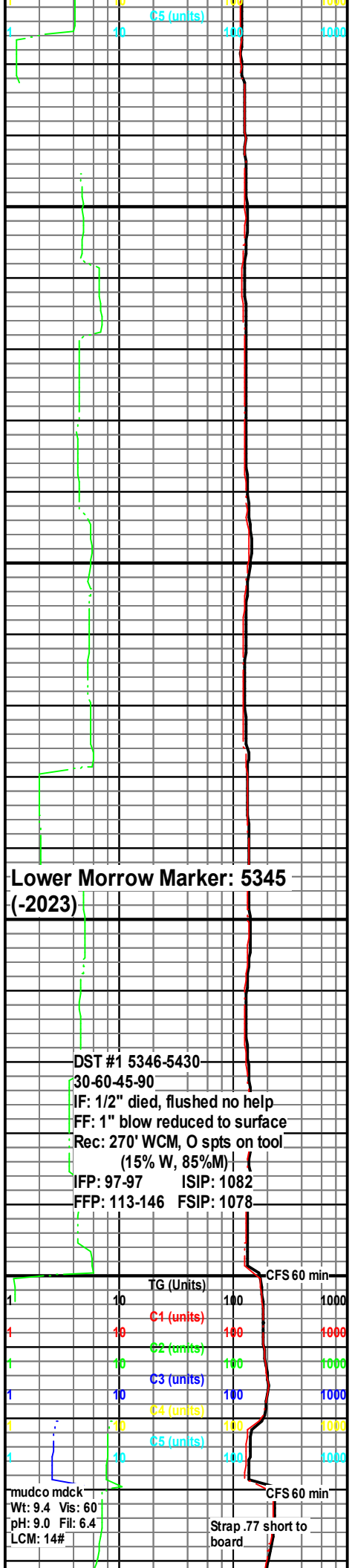
Sh: gry-drk gry, few SS cluster: clear, f-vfgrn, glauc, pr sort, sub ang

Sh: gry-drk gry, some SS: A.A.

Sh: A.A. with SS: clr, f-mgrn, friable, sub ang, fr sort, sli odor, sli fluor, sli-fr SO

SS: clr, f-mgrn, some vfgrn, friable, sub ang, fr sort, sli odor, sli fluor, sli-fr SO, some gas bubbles, sli glauc

Sh: gry-drk gry, few pieces of SS: clr, vf-fgrn. NS



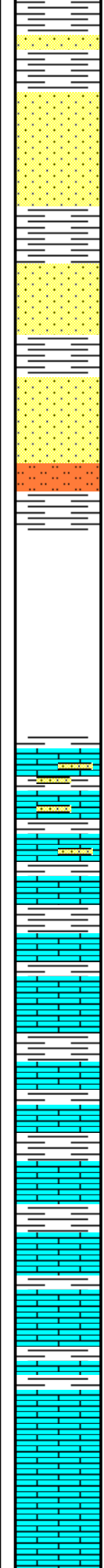
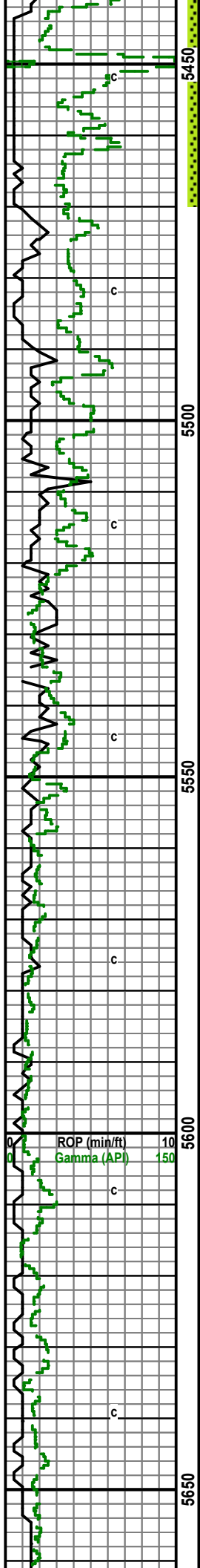
Lower Morrow Marker: 5345 (-2023)

DST #1 5346-5430
 30-60-45-90
 IF: 1/2" died, flushed no help
 FF: 1" blow reduced to surface
 Rec: 270' WCM, O spts on tool (15% W, 85%M) {
 IFP: 97-97 ISIP: 1082
 FFP: 113-146 FSIP: 1078

	TG (Units)	C1 (units)	C2 (units)	C3 (units)	C4 (units)	C5 (units)
1	10	100	1000	10000	100000	1000000
1	10	100	1000	10000	100000	1000000
1	10	100	1000	10000	100000	1000000
1	10	100	1000	10000	100000	1000000
1	10	100	1000	10000	100000	1000000
1	10	100	1000	10000	100000	1000000

mudco mdck
 Wt: 9.4 Vis: 60
 pH: 9.0 Fil: 6.4
 LCM: 14#

Strap .77 short to board



Sample 80% Sh: gry-drk gry, some SS: A.A. with some LS: crm, mcrxln, friable, sli cherty

SS: clear-opaque, vf-fgrn, sub rnd, pr-well sort, vr friable, sli odor, pr-fr SO, sli pp por, dull-bri yellow fluor, ques stain on some, ques dead oil

SS: clr, vf-fgrn, sub rnd, well srt, sub fri, sli odor, prSO, pp por, few pieces dull yellow fluor, ques stain,

SS: clr, vf-fgrn, few mgrn, sub rnd well srt, sub fri, sli odor, vpr-no SO, sli pp por, few pieces dull yellow fluor

SS: clr, vf-fgrn, sub rnd, well sort, sli glauc, no-sli odor, NSO, few dull yellow fluor, Sh: gry-drk gry, sample had some SitS: gry-reddish tan

No Samples

Sh: gry-drk gry-rd, some grn, few pieces SS: clr, vf-fgrn, sli glauc, some LS: crm-reddish brwn, mcrxln

Sh: gry-drk gry-rd, some stly, some sandy LS, crm-reddish brwn

Sh: A.A. with some LS: mcrxln, sandy, red-brwn, some grnish, some crm

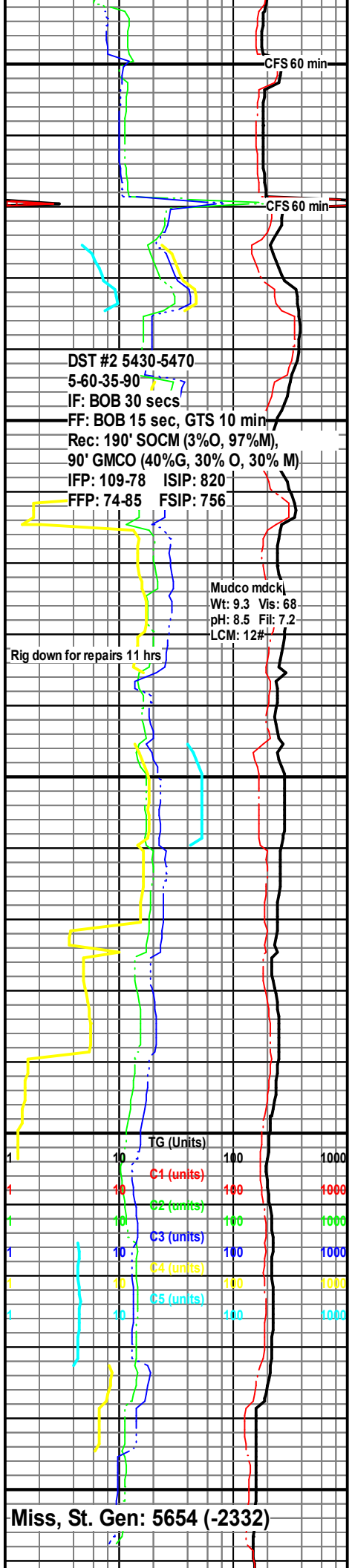
sample A.A.

sample A.A.

LS: reddish brwn-crm some gry, sandy, mcr-fxln, friable, sub dense with Sh: gry-drk gry

LS: crm, mcr-fxln, sli ool, sli chalky

LS: A.A.



DST #2 5430-5470
 5-60-35-90
 IF: BOB 30 secs
 FF: BOB 15 sec, GTS 10 min
 Rec: 190' SOCM (3%O, 97%M),
 90' GMCO (40%G, 30% O, 30% M)
 IFP: 109-78 ISIP: 820
 FFP: 74-85 FSIP: 756

Mudco mdck
 Wt: 9.3 Vis: 68
 pH: 8.5 Fil: 7.2
 LCM: 12#

Rig down for repairs 11 hrs

	TG (Units)	C1 (units)	C2 (units)	C3 (units)	C4 (units)	C5 (units)
1	10	100	1000	1000	1000	1000
1	10	100	1000	1000	1000	1000
1	10	100	1000	1000	1000	1000
1	10	100	1000	1000	1000	1000
1	10	100	1000	1000	1000	1000
1	10	100	1000	1000	1000	1000

Miss, St. Gen: 5654 (-2332)

