

# M. Bradford Rine

## Consulting Geologist, Licensed and Certified

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

Well Name: Shelly #1  
Location: C - NE - NE, Section 25 - T23S - R30W  
License Number: API #15-055-22112-00-00  
Spud Date: August 09, 2011  
Surface Coordinates: 660' FNL & 660' FEL  
Region: Finney County, Kansas  
Drilling Completed: August 18, 2011, P & A

Bottom Hole Vertical Test P & A  
Coordinates:  
Ground Elevation (ft): 2793 K.B. Elevation (ft): 2798  
Logged Interval (ft): 3800 To: 4880 Total Depth (ft): RTD 4880 ft, LTD 4875 ft  
Formation: Pennsylvanian (Topeka) to Mississippian (St. Louis)  
Type of Drilling Fluid: Chemical

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

### Operator

Company: HESS OIL COMPANY  
Address: PO Box 1009  
McPherson, Kansas 67460 + 1009

### Geologist

Name: M. Bradford Rine  
Company: Consulting Geologist, Kansas Lic. #204, Wyo #189, AAPG Cert. #2647  
Address: 100 South Main, Suite #415  
Wichita, Kansas 67202

### Remarks

Based on sample observations, Drill Stem Test results, and electric log evaluation, it was the decision of the Operator to plug and abandon the "Shelly #1" on, August 18, 2011.

Respectfully submitted,  
M. Bradford Rine, Consulting Geologist

Hess Oil Company KB 2798 Ft. Section 27 - T23S - R30W					Hess Oil Company "Old Paint #1" Section 36 - T23S - R30W
Formation:	Sample Top:	Datum:	Log Top:	Datum:	Comparison:
Anhydrite	1992	806	1990	808	-8
B/Anyhydrite	2004	794	2002	796	-8
Heebner	4000	-1202	3996	-1198	(+13)
Toronto	4015	-1217	4011	-1213	(+16)
Lansing	4052	-1254	4042	-1244	(+19)
Stark Sh	4364	-1566	4357	-1559	(+18)
B/Kansas City	4483	-1685	4477	-1679	(+24)
Marmaton	4541	-1743	4530	-1732	(+28)
Pawnee	4579	-1781	4577	-1779	(+25)
Cherokee Sh	4623	-1825	4617	-1819	(+24)
Morrow Sh	4730	-1932	4729	-1931	(+24)
Morrow Sd	4733	-1935	4337	-1939	No Clean Sand in Shelly #1
Miss (St. Gen.)	4749	-1951	4744	-1946	(+34)
St. Louis Porosity	4844	-2046	4838	-2040	No Porosity Break in Old Paint #1
Total Depth	4880	-2082	4875	-2077	NA * LTD 5 ft shallow to RTD

### Drilling Information

**Rig:** Mallard JV, Inc. #2  
**Pump:** Emsco D-375 6 x 14  
**Drawworks:** Emsco BDW  
**Collars:** 486' 2-1/4" x 6-1/4"  
**Drillpipe:** 4-1/2" 16.6# XH  
**Toolpusher:** Lavon Urban

**Mud:** Mudco (Justin Whiting)  
**Gas Detector:** None  
**Drill Stem Tests:** Trilobite (Will MacLean)  
**Logs:** Log-Tech (C. Desaire)  
**Water:** Well Drilled On Location

**Company Representatives:**  
**Office:** Jim Hess  
**Field:** None

### Daily Drilling Status

**Date:** Morning Operations/Depth/Comments:  
 08-09-11 MIRT, RU, Spud 2:30 pm, set surf csg, pd @ 8:15 pm  
 08-10-11 Drilling @ 292 ft  
 08-11-11 Drilling @ 1945 ft  
 08-12-11 Drilling @ 2849 ft  
 08-13-11 Drilling @ 3452 ft  
 08-14-11 Drilling @ 4040 ft  
 08-15-11 Drilling @ 4475 ft  
 08-16-11 Drilling @ 4740 ft  
 08-17-11 Down For Repairs @ 4778 ft  
 08-18-11 Logging @ 4880', RTD. Done logging 10:15 AM.

Plugging Completed at 6:30 PM.

## Casing Record, Bit Record, Deviation Surveys

### CASING:

Conductor: None

Surface: Ran 5 jts 8-5/8" 20#, set at 234', cem/150 sx common  
2% gel, 3% CC. CDC. PD at 8:15 pm

Production: None. P & A. Plugging completed by "Allied", as per orders by Lacey, KCC.

### BITS:

No:	Size:	Make:	Type:	Depth In:	Depth Out:	Feet:	Hours:
1	12-1/4	HTC	RT	0	234	234	2
2	7-7/8	Smith	F27	234	4880	4646	133

### DEVIATION SURVEYS:

Deviation:	Depth:	Deviation:	Depth:
3/4 *	234'		
1-1/2 *	4770'		
1-1/2 *	4880'		



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Hess Oil Co  
P.O Box 1009  
McPherson KS 67640  
ATTN: Brad Rine

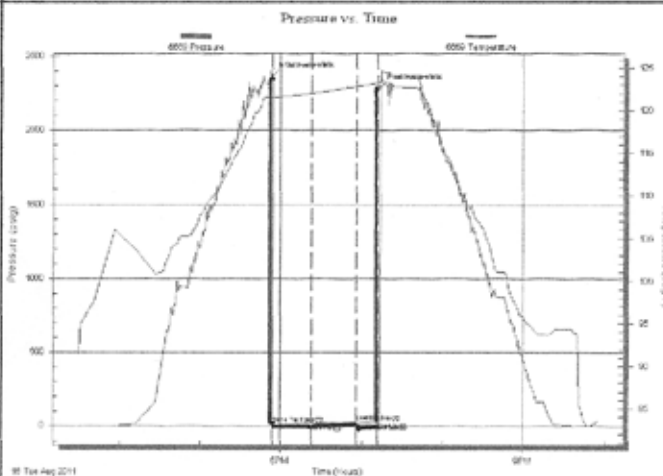
**Shelly #1**  
**25-23s-30w**  
Job Ticket: 43287      DST#: 1  
Test Start: 2011.08.16 @ 15:30:15

### GENERAL INFORMATION:

Formation: **Morrow**  
Deviated: **No Whipstock:**                      ft (KB)  
Time Tool Opened: 17:53:45  
Time Test Ended: 21:55:30  
Interval: **4707.00 ft (KB) To 4770.00 ft (KB) (TVD)**  
Total Depth: **4770.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**  
Test Type: **Conventional Bottom Hole**  
Tester: **Will MacLean**  
Unit No: **48**  
Reference Elevations: **2798.00 ft (KB)**  
**2793.00 ft (CF)**  
KB to GR/CF: **5.00 ft**

Serial #: **6669**      Outside  
Press@RunDepth: **17.98 psig @ 4708.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2011.08.16**      End Date: **2011.08.16**      Last Calib.: **2011.08.16**  
Start Time: **15:30:15**      End Time: **21:55:30**      Time On Btm: **2011.08.16 @ 17:53:30**  
Time Off Btm: **2011.08.16 @ 19:13:45**

TEST COMMENT: IF-Weak Surface Blow Died in 45 seconds  
IS- No Blow  
FF- No Blow  
FS- Pull Tool



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2368.46	121.66	Initial Hydro-static
1	16.68	121.51	Open To Flow (1)
30	17.98	122.08	Shut-in(1)
63	27.00	122.86	End Shut-in(1)
63	19.55	122.85	Open To Flow (2)
79	24.83	123.26	Shut-in(2)
81	2288.21	123.74	Final Hydro-static


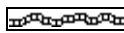
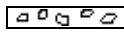

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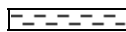



Length (ft)	Description	Volume (bbl)
5.00	100%m	0.02
	Few Oil Spots in Tool	





### Gas Rates

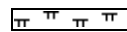

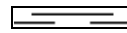

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

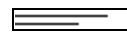



### Rock Types

-  Anhy
-  Bent
-  Brec
-  Cht

-  Clyst
-  Coal
-  Congl
-  Dol
















-  Gyp
-  Igne
-  Lmst
-  Meta















-  Mrlst
-  Salt
-  Shale
-  Shcol

-  Shgy
-  Sltst
-  Ss
-  Till
















### 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

-  OIL SHOW
-  Even

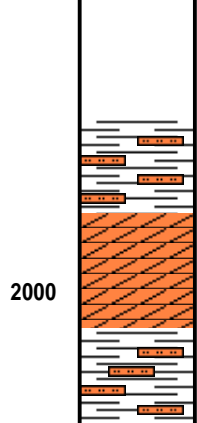
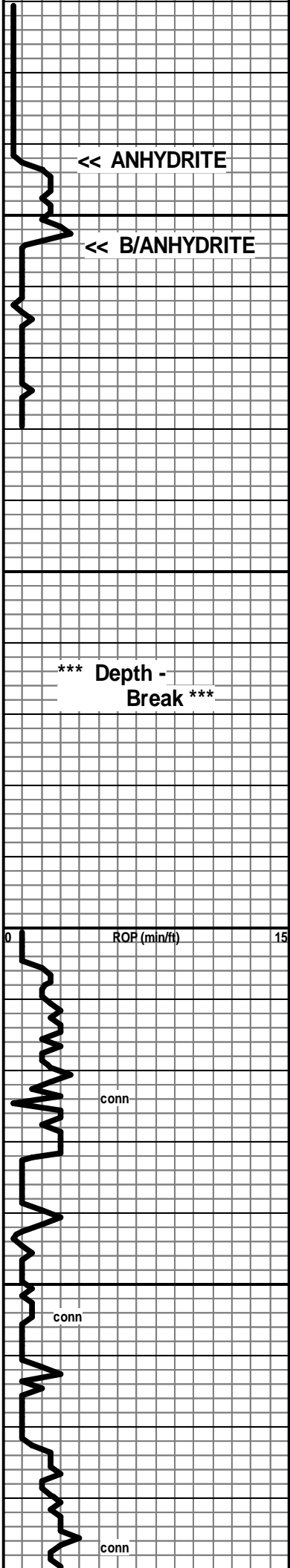
-  Spotted
-  Ques

-  Dead

-  INTERVAL
-  Core

-  Dst

ROP (min/ft)					
ROP (min/ft)	Depth	Lithology	Shows	Geological Descriptions	Remarks
0					
15	1900				
	1950				

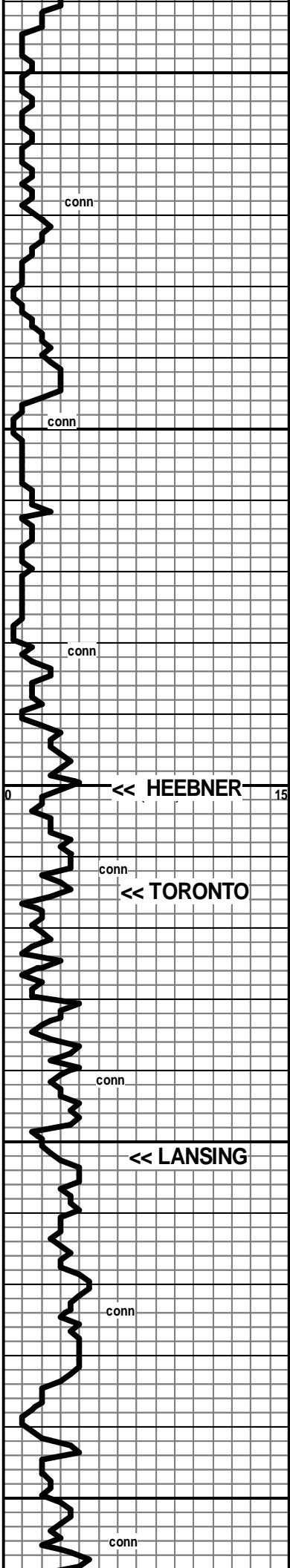


ANH Interval based on drill time only!

< 1992

< 2004

\* Displace and Mud up @ 3573"



3900  
3950  
4000  
4050  
4100

LS wh-pl gy, fn xln, fr xln por, scatt pp por, sli foss

LS wh-cr-pl gy, fn xln, pr-fr xln por, foss

LS cr-tan, fn xln, pr-fr xln por, ool-oom, scatt oom and pp por, foss

LS cr-pl gy, fn xln, dns to pr xln por, foss, cherty: fresh, gy, foss

SH black, carb

LS cr, fn xln, dns, foss

SH gy, subsilty text

LS wh-cr, fn xln, pr-fr xln por, scatt pp and vug por, foss, chert: fr, wh, opa, q,

[No Show]

LS cr, fn xln, dns, foss

SH gy-dk gy-grnish

LS wh-cr, fn xln, mostly dns, scatt pr xln por and scatt Rr pp por

[NoShow]

LS cr, fn xln, dns, foss

SH gy-dk gy

LS wh-cr, fn xln, pr-fr xln por, ool-oom (mostly well com)

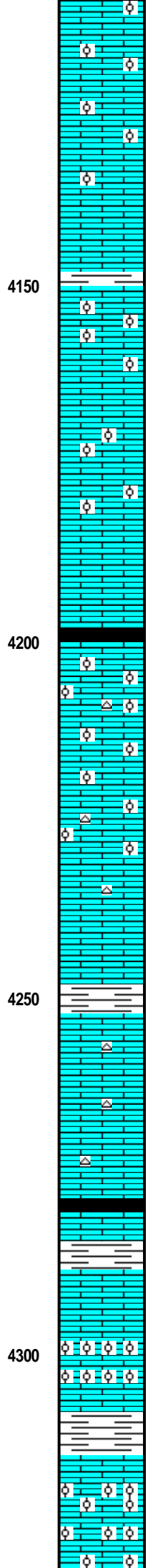
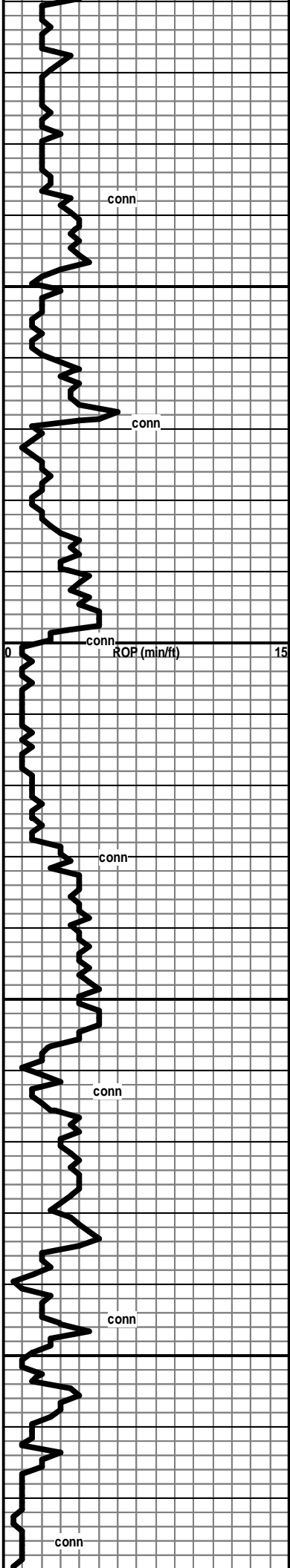
WOB 40,000  
RPM 60  
PP 900  
SPM 60

< 4000

< 4015

7:00 am, August 14, 2011, Drlg @ 4040 ft

< 4052



LS wh-cr, fn xln, pr-fr xln por, ool in pt (mostly well-cem)  
foss, abund calcite patches

[No Show]

SH gy-grnish

LS cr, fn xln, frgi xon por in pt with some subsucrosic text,  
foss in pt, ool in pt

[No Show]

LS cr, fn xln, dns, foss

SH black, carb

LS wh-cr, fn xon, pr-fr xln por, foss, mealy text in part,  
ool-packed ool with scatt fr inter-ool por, chert: fresh,  
wh-cr-gy, subopaq, foss

[No Show]

LS wh-cr, fn xln, dns-pr xln por, foss

SH gy-reddish, silty in part

LS wh-cr, fn xln, pr-fr xln por, foss in pt, chert: fresh,  
wh-tan-gy, subtransl-subopaq

[No Show]

LS wh-cr, fn xln, dns, foss, cherty as above

SH grnish-black

LS wh-cr, fn xln, pr-fr xln por, dns in pt, foss

LS wh, packed ool in pt in wh-brn cement

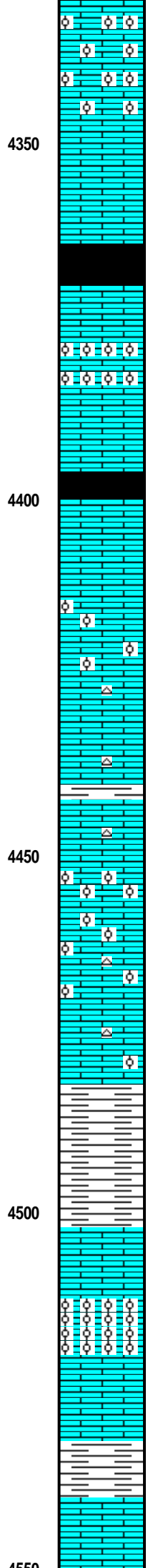
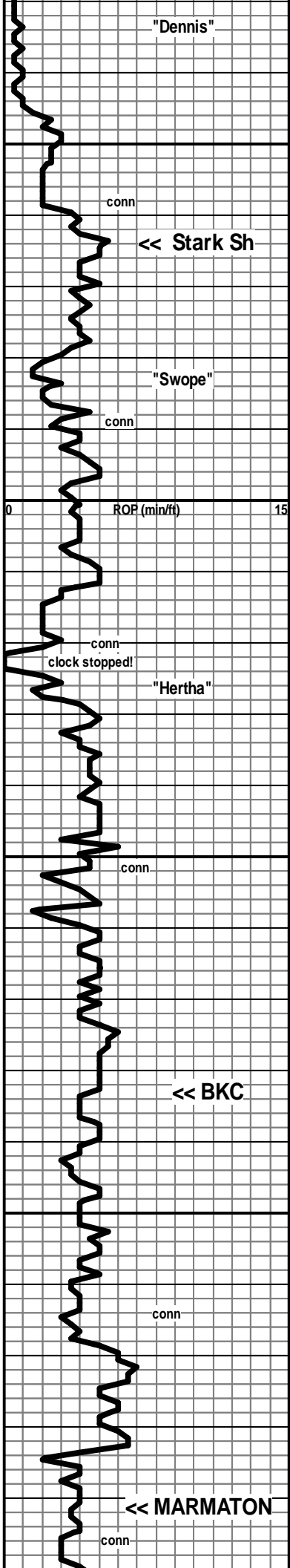
SH grn-grnish gy

LS cr-tan, packed ool in mix of well-cemented to fr  
inter-ool xln por and pp por

Mud Check @ 4168' Drlg:

Vis	Wt	WL	LCM	PV	YP
45	9.2	9.6	1	14	14
Chl	Hd	pH			
2500	20	9.5			





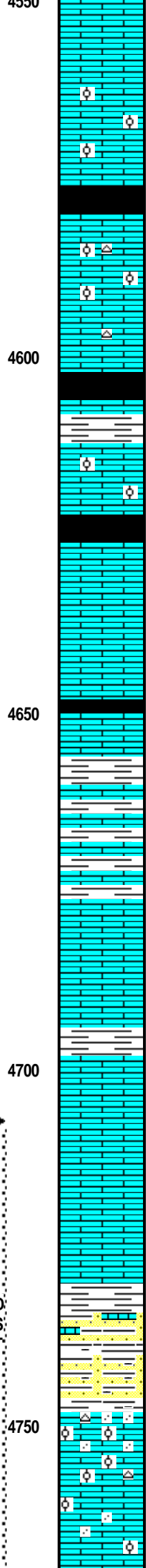
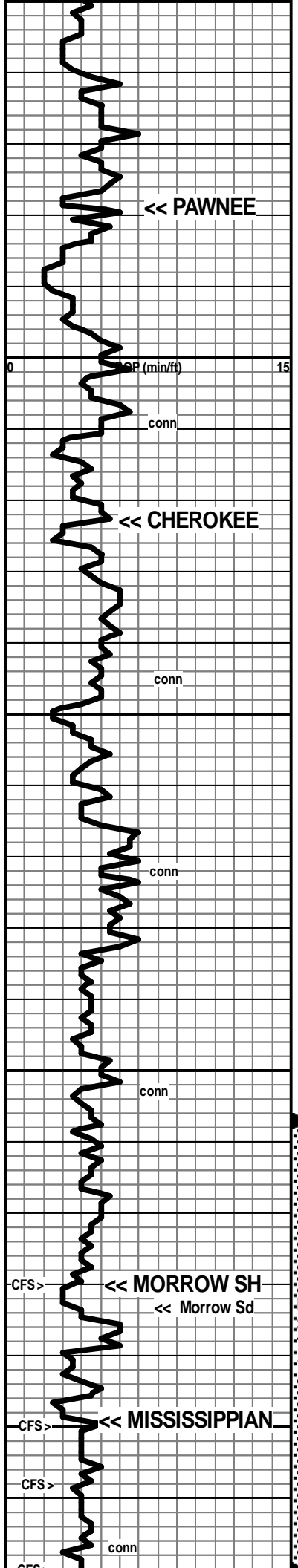
[NoShow]  
 LS cr-tan, fn xln, pr-fr xln por, foss, scatt vugs  
 SH black (porly repres in spls)  
 LS cr-tan, fn xln, dns, foss  
 LS tan, packed ool and oom, fr-gd oom por  
 [No Show]  
 SH gy-black, carb in pt  
 LS wh-cr-tan, fn xln, dns in pt, chalky in pt, foss  
 LS wh-cr, fn xln, pr-fr xln por, subgrainy text in pt, foss, micro-ool?, chert: fresh-subgrainy, gy, subopaq  
 [NoShow]  
 LS wh-cr, fn xln, dns, foss  
 SH gy  
 LS cr-tan-pl gy, fn xln, dns, pyritic in pt, foss, cherty as above  
 LS tan, ool-packed ool, well-cem to some inter-ool por  
 [No Show]  
 LS cr-tan, fn xln, dns, ool, chert: fresh, wh-tan, ool, opa  
 SH gy-dk gy-grnish, silty in pt to shaly siltstone in pt, calc in pt  
 LS wh-cr, fn xln, mostly packed ool in dns cement to cement with scatt pr-fr xln por, foss in pt  
 LS cr-tan-pl gy, fn xln, mostly dns, scatt pr xln por, foss  
 SH gy-grnish, calc in pt, silty in pt  
 LS cr, fn xln, vfn-fn xln, dns, foss in pt, scatt calcite

< 4364

7:00 am, August 15, 2011, Drlg @ 4475 ft

< 4483

< 4541



[No Show]

LS cr-tan, fn xln, dns, subchalky in pt, foss, ool in pt patches

SH dk gy - black, carb in pt

LS wh-cr-tan, fn xln, pr vis xln por, chalky in pt, micro-ool in pt, foss, cherty: fr, tan, transl.

[No Show]

SH black, carb

LS cr-tan-brn, vfn-fn xln, dns, foss, ool in pt

[No Show]

SH black, carb

LS wh-cr-tan, fn xln, dns, foss-abund foss

[No Show]

LS cr-gy, fn xln, dns

SH gy-black, carb in pt

LS cr-tan, vfn-fn xln, dns

SH gy-dk gy-grnish

LS cr-tan, vfn-fn xln, dns, foss-abund foss, scatt pyritic

SH gy-black

LS cr-tan, vfn-fn xln, dns, foss

SH gy

LS cr-tan, vfn-fn xln, dns

LS cr-tan-pl gy, vfn-fn xln, dns, scatt subchalky patches

[V. Fnt Odor, Rr spotty Dk Stn, No show of FO in subchalky Ls]

SH gy-dk gy-pl grn-grn, subsilty in pt, subfiss in pt

SD glassy-tan, fn grn, well-sorted, subrounded, pr-gd friability, pr-fr inter-grnlr por in pt, clusters subround to sharp, some loose grns in spls, some shaly sd, some calc sd

[No odor, even dull four, dk brn-black spotty Stn with sli show DO & NVL Oil on brk]

LS wh-cr-tan, fn xln, dns, sdy in pt, ool in pt, cherty in pt: fresh, tan, subtranslucent

[No odor, No flour, Rr sm patches of black residual Stn]

LS wh-cr-tan, fn xln, dns and firm to softer and subchalky, scatt ool, scatt sdy

< 4579

Mud Check @ 4572' Drlg:

Vis	Wt	WL	LCM	PV	YP
56	9.45	10	1	17	17
Chl	Hd	pH			
2000	40	9.0			

< 4623

Short Trip @ 4703'. Pulled 25 stands, circ 60-min after short trip.

DST #1: 4707-4770 (Morrow)  
 Times: 30-30-15-Out  
 Initial Blow: V. Wk Surf, died 45 sec.  
 Final Blow: None  
 Rec.: 5' mud with few oil spots  
 IHP: 2368 FHP: 2288  
 IFP: 16-17 FFP: 19-24  
 ISIP: 27 FSIP: NA  
 BHT: 123

< 4730  
 < 4733

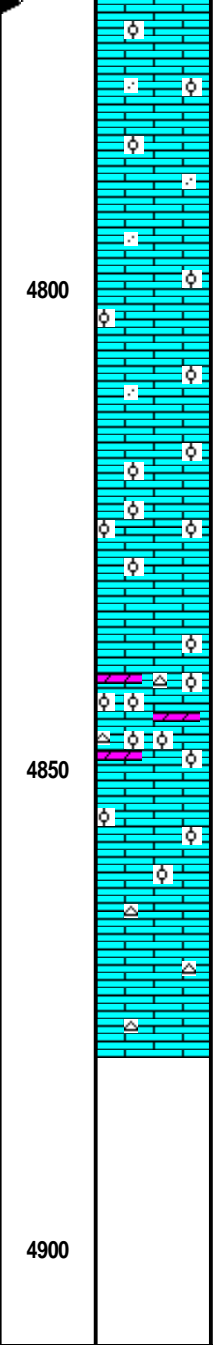
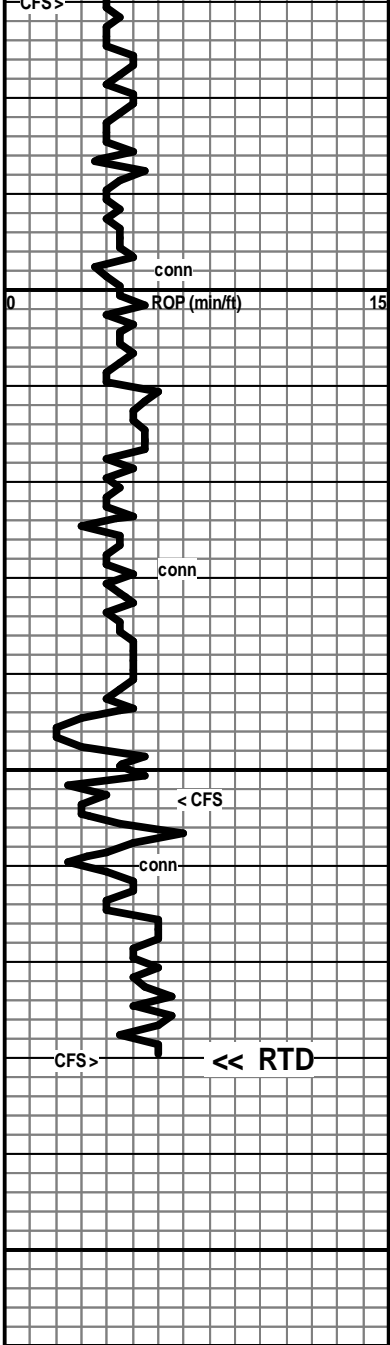
7:00 AM, August 16, 2011, Drlg @ 4740 ft

< 4749

\* Pipe Strap @ 4770': 4.09 ft short

Mud Check @ 4770', Trip Out of Hole:

Vis	Wt	WL	LCM	PV	YP
46	9.4	10.8	Tr	14	15
Chl	Hd	pH			
2500	20	9.5			



LS wh-cr-tan, fn xln, dns and firm to softer and subchalky, Rarely sandy, scatt oolitic

[No Show]

LS cr-tan, fn xln, dns, grny text in pt, ool in pt, brittle text in pt

4830" spl: Rr pcs of packed oolites, well-cem.

[No Show]

LS cr-tan, fn xln, dns, subchalky in pt, ool in pt

LS cr-tan, fn xln, dns, packed ool in pt (well-cem), pr vis inter-ool por, dolom & sucrosic in pt, fn xln, pr vis xln por, chert: fr to subgrainy test, wh-tan, foss, opa q to subtransl.

[No Show]

LS tan-brn, vfn xln, dns, smooth/vitreous text. some ool pcs

LS cr-tan, vfn-fn xln, dns, some subsucrosic text, foss in pt, cherty: Fresh, tan, transl.

[No Show]

7:00 AM, August 17, 2011, DFR @ 4778 ft. Swivel locked up. Delivered replacement swivel-it was locked up. Trip out of hole for additional repairs. DFR approximately 15 hours.

Mud check @ 4778': DFR

Vis	Wt	WL	LCM	PV	YP
45	9.4	9.6	2	14	15
Chl	Hd	pH			
2300	20	9.5			

< 4880 Ft RTD  
August 18, 2011, 1:45 AM