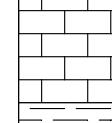
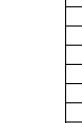
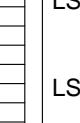
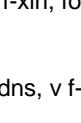
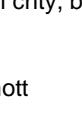


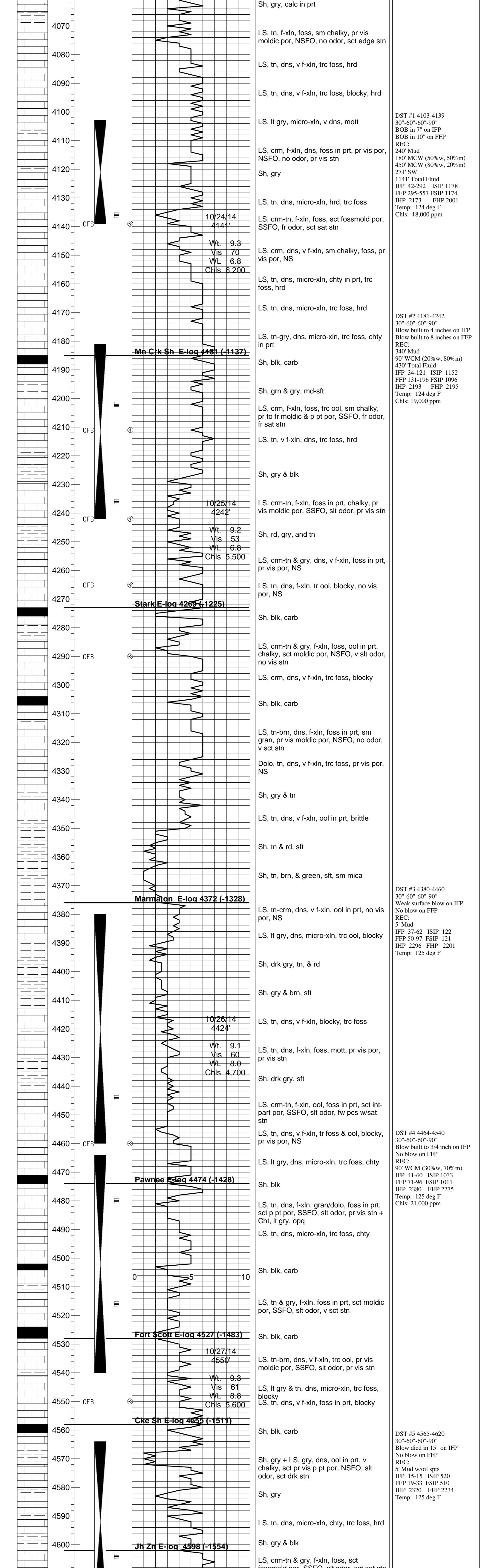
Geologist's Report	
Drilling Time and Sample Log	
OPERATOR	Murfin Drilling Co., Inc
LEASE	WWWM 'A'
FIELD	High Hat
LOCATION	990' FSL & 335' FEL
SEC.	4
COUNTY	Logan
ELEVATION	
CONTRACTOR	Murfin Drilg Co Rig #4
COMM	10/18/2014
RTD	4750'
SAMPLES SAVED FROM	3670'
DRILLING TIME KEPT FROM	3670'
SAMPLES EXAMINED FROM	3670'
GEOLOGICAL SUPERVISION FROM	3700'
MUD UP	3300'
COMP	10/30/2014
LOG TD	4748'
TO 4750'	
TO 4750'	
TO 4750'	
PRODUCTION	5 1/2" at 4747 KB w/175sx
CASING RECORD	
SURFACE	8 5/8" at 222 KB w/170sx
Remarks And Recommendations:	Production casing was set to further evaluate the #4 WWWM 'A' for possible production or water injection.

LEGEND

	Anhydrite		Salt		Sandstone		Shale		Carb Shale		Limestone		Ool Limestone		Chert		Dolomite
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DRILLING TIME IN MINUTES

Depth	Per Foot	Sample Descriptions	Remarks
3700		Sh, tn & gry, md-sft	
3710		LS, wht-crm, f-xln, ool, sct foss, brittle, gd oomold por, NS	Deviation Surveys: 1/2 deg @ 223' 1/2 deg @ 1031' 1 deg @ 1539' 1 deg @ 2459' 3/4 deg @ 3475' 1/2 deg @ 4139' 1/4 deg @ 4460' 1/4 deg @ 4750'
3720		Sh, gry & tn	
3730		Sh, lt gry & tn, md-sft	
3740		Sh, gry & marrn, sft, silty	
3750		LS, tn, dns, v f-xln, trc foss, blocky	
3760		Sh, gry	
3770		LS, tn & crm, f-xln, foss, sm chalky, pr vis por, NS	
3780		LS, tn & gry, v f-xln, dns, trc foss	
3790		LS, crm-lt tn, f-xln, foss, v chalky, pr vis por, NS	
3800		LS, tn & wht, f-xln, chalky, trc ool, sft, pr vis por	
3810		LS, lt gry, dns, v f-xln, trc foss, mott	
3820		Sh, gry & tn, md-hrd	
3830		LS, tn, dns, f-xln, ool in prt, blocky, pr vis por	
3840		LS, crm-wht, f-xln, ool in prt, foss, v chalky, fr moldic por, NS	
3850		LS, crm-tn, f-xln, foss, sm chalky, v sct por, NS	
3860		LS, tn, v f-xln, foss, sm chty, brittle	
3870		LS, gry, dns, v f-xln, mott	
3880		Sh, drk gry	
3890		Slstn, gry, v f-grn, silty in prt, mica	
3900		AA + Sh, drk gry, silty	
3910		LS, crm, f-xln, foss in prt, gran/dolo, pr vis int-xln por, NS	
3920		Sh, gry & tn	
3930		LS, lt gry, dns, micro-xln, mott in prt, trc foss	
3940		Sh, drk gry, md-hrd + LS, gry, dns, mott, argill	
3950		LS, crm-gry, f-xln, foss, trc moldic por, NSFO, no odor, trc blk stn	
3960		LS, tn, dns, v f-xln, trc foss, blocky	
3970		LS, crm, f-xln, dns, foss in prt, v chalky, sft	
3980		LS, lt gry, f-xln, dns, foss in prt, sm chty, hrd	
3990		Sh, blk, carb	
4000		Sh, gry, tn, & brn, md-sft	
4010		LS, crm-wht, f-xln, co-ool, foss, chalky, sct int-part por, NS	
4020		LS, crm-gry, f-xln, co-ool, mott, pr vis int-ool por, NS	
4030		Sh, gry, md-sft	
4040		LS, crm, f-xln, foss in prt, blocky, chty	



Geological log diagram for borehole 4620' (10/28/14) showing lithology, thickness, and elevation.

Log Data:

Elevation (ft)	Lithology Description
4610	Loss/mold por, SSPO, silt odor, scl sat str
4620	CFS
4620'	10/28/14
4620'	Wt. 9.2
4620'	Vis 52
4620'	WL 8.4
4620'	Chls 4,100
4630	Sh, drk gry & blk
4640	Sh, gry, tn, & blk, md hrd
4650	Sh, AA + SS, gry-wht, v f-grn, sb rd, v tite, argill
4660	Sh, tn, yell, & gry, sdy in prt, sft
4670	LS, crm-gry, f-xln, ool in prt, sm v sdy, sft
4680	LS, crm-gry, chlky, v f-xln, sm mott, trc foss & sd grns

Miss Edge 4666 (-1622)