

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

GRAND MESA OPERATING CO.

WELL: SPONEY #1-33
 LOC.: 1052' FSL 583' FWL
 SEC. 33-13S-31W
 GOVE COUNTY, KANSAS
 API: 15-063-21926-00-00

DRILLING CONTR.: MURFIN RIG #24
 SPUD: 07-18-11 COMP: 07-28-11
 MUD UP: 3500' TYPE MUD: CHEM.
 DRILL TIME: 3600-RTD
 RTD: 4680' LTD: 4675'
 SAMPLES SAVED: 3800'-RTD
 GEOLOGIST: ROBERT J. PETERSEN

ELEVATION

KB: : 2934'
 GL: 2929'
 LOG MEASURED FROM: KB

SURFACE CASING

Ran 5 jts of new 2 3/8" 8 5/8" surface csg., Tally 212.58', Set @ 222' KB. Cemented w/165sxs Common, 3% CC, 2% Gel.

PRODUCTION CASING

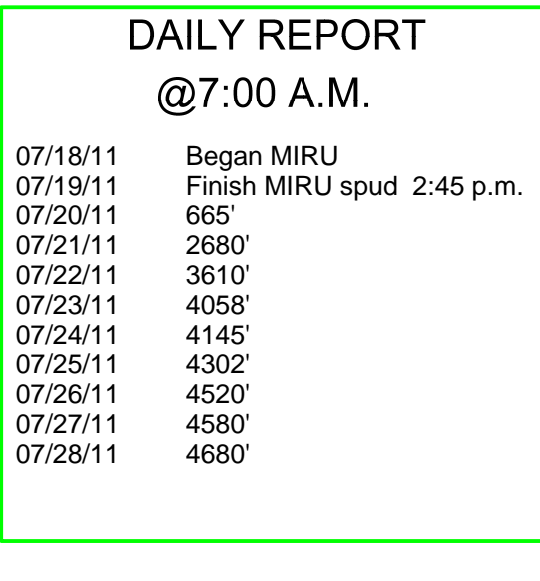
Ran 113 jts 15.50# 5 1/2" S-55 casing. Tally 4671' set @ 4671' cemented with 175 sx D.V. Tool @ 2421' Cemented with 300 sx circulated to surface.

WELL LOG SURVEYS

DIL/CDL w/micro

ELECTRIC LOG TOPS

Formation	Depth	Datum	Well A		Well B	
			Klaus-Hess 1-33	Hess 1-4	Klaus-Hess 1-33	Hess 1-4
SC	2430	504	-4	-17		
BSC	2452	482	-4	-16		
HEEB	3949	-1015	-5	-10		
LANS	3994	-1060	-9	-13		
Muncie Cr	4150	-1216	-13	-14		
Stark	4240	-1306	-15	-17		
Hushpuckney	4275	-1341	-15	-16		
Marmaton	4343	-1409	-12	-15		
Little Osage	4457	-1523	-5	-9		
Excello	4481	-1547	-3	-6		
Johnson	4556	-1622	-7	-9		
Morrow	4578	-1644	-8	-10		
Miss	4598	-1664	-2	-3		



REFERENCE WELL:

WELL A: GMOC Klaus-Hess #1-33 Gove County, KS 332' FNL & 2551' FEL Sec. 33-13S-31W

WELL B: GMOC Hess 1-4 Gove County, KS 834' FNL & 356' FWL 4-14-31W

REMARKS AND RECOMMENDATIONS

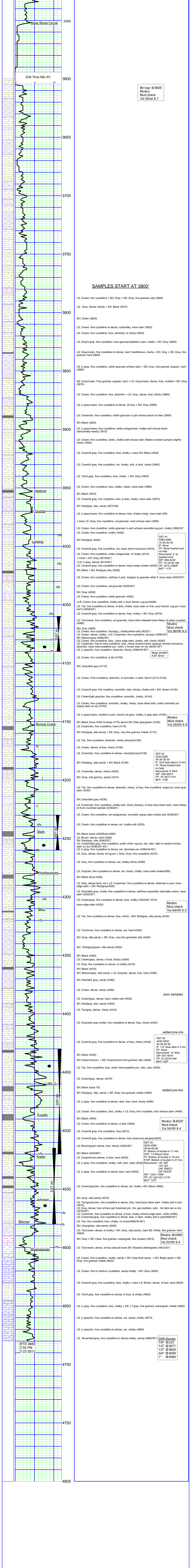
Production casing has been run to further test this well. Respectfully submitted,

Robert J. Petersen
 Robert J. Petersen

DAILY REPORT

@7:00 A.M.

07/18/11	Began MIRU
07/19/11	Finish MIRU spud 2:45 p.m.
07/20/11	665'
07/21/11	2680'
07/22/11	3610'
07/23/11	4058'
07/24/11	4145'
07/25/11	4302'
07/26/11	4520'
07/27/11	4580'
07/28/11	4680'



SAMPLES START AT 3800'

LS: Cream, fine crystalline + SH; Gray + SS; Gray, fine grained, silty (3800)

LS; Gray, dense, blocky + SH; Black (3810)

SH; Green (3820)

LS; Cream, fine crystalline to dense, subchalky, trace stain (3820)

LS; Cream, fine crystalline, foss, dolomitic, sil cherty (3830)

LS; Gray/t gray, fine crystalline, foss-granular/pelletal in part, chalky + SH; Gray (3840)

LS; Gray/cream, fine crystalline to dense, hard, fossiliferous, cherty + SH; Gray + SS; Gray, fine grained, hard (3850)

LS; Lt gray, fine crystalline, oolitic-granular w/trace stain + SS; Gray, fine grained, angular, hard (3860)

SS; Gray/cream. Fine grained, angular, hard + LS; Gray/cream, dense, foss, mottled + SH; Gray (3870)

LS; Cream, fine crystalline, foss, dolomitic + LS; Gray, dense, foss, blocky (3880)

LS; Lt gray/cream, fine crystalline to dense. Sil foss + SH; Gray (3900)

LS; Cream/tan, fine crystalline, oolitic-granular in part w/trace black oil stain (3900)

SH; Black (3900)

LS; Lt gray/cream, fine crystalline, oolitic-subgranular, chalky-soft w/trace black stain(chalky-mealy) (3910)

LS; Cream, fine crystalline, oolitic, chalky-soft w/trace stain (flakes-crushed sample) slightly cherty (3920)

LS; Cream/t gray, fine crystalline, foss, chalky + trace SH; Black (3930)

LS; Cream/t gray, fine crystalline, ool, chalky, soft, sil dolo, cherty (3940)

LS; Tan/t gray, fine crystalline, foss, chalky + SH; Gray (3950)

LS; Cream, fine crystalline, foss, chalky, mealy, trace stain (3960)

SH; Black (3970)

LS; Cream/t gray, fine crystalline, foss, sil dolo, chalky, trace stain (3970)

SH; Red/gray, silty, sandy (3970-80)

LS; Lt gray/cream, fine crystalline to dense, foss, chalky-mealy, trace stain (80)

+ trace LS; Gray, fine crystalline, ool-granular, hard w/trace stain (3990)

LS; Cream, fine crystalline, oolitic-granular in part w/trace oomoldic/vug por, chalky (3990/20')

LS; Cream, fine crystalline, chalky (4000)

SH; Red/gray (4000)

LS; Cream/t gray, fine crystalline, ool, trace chert inclusions (4010)

LS; Cream, fine crystalline, oolitic-subgranular, sil chalky (4015)

+ Chert + SH; Gray (4015/20')

+LS; Lt gray, dense (4015/40')

LS; Cream/t gray, fine crystalline to dense, trace mealy w/stain (4030)

SH; Black + SH; Red/gray silty (4035)

LS; Cream, fine crystalline, ool/foss in part, subgran to granular w/fair fl, trace stain (4035/20')

LS; Cream, fine crystalline, ool-granular (4035/40')

SH; Gray (4050)

LS; Cream, fine crystalline, oolitic-granular (4050)

+LS; Cream, fine crystalline, chalky-soft, tr poor barren vug por(4058)

LS; Tan, fine crystalline to dense, sil dolo, chalky, trace stain on frac-poor barren vug por, trace dull fl (4058/20')

LS; Cream/t gray, fine crystalline to dense, foss, chalky + SH; Gray (4070)

LS; Tan/cream, fine crystalline, ool-granular, trace stain-released trace flakey oil when crushed (4080)

SH; Gray (4080)

LS; Cream, fine crystalline, foss(atg.), chalky(white-soft) (80/20')

LS; Cream, dense, chalky +LS; Cream/tan, fine crystalline, ool-gran (4080/40')

SH; Maroon/gray (4080/40')

LS; Cream, fine crystalline, foss., trace edge stain, chalky, soft, cherty (4090)

LS; Cream/tan, fine to med crystalline, foss, cherty (brown/cream opaque) w/chert inclusions, dolomitic, trace intercrystalline por, vsfso, tr brown stain on dry (90/00-40')

LS; Lt gray, fine crystalline to dense, ool, decrease por (4260/40-60')

LS; Gray, dense, blocky w/vug por + Dolo; Gray, fine crystalline (4270)

LS; Gray, fine crystalline to dense, ool, chalky-cherty (4280)

LS; Gray/tan, fine crystalline to dense, ool, cherty, chalky, trace black shale(4290)

SH; Black (flood 4300)

LS; Gray, dense hard, ool + LS; Cream/tan, fine crystalline to dense, dolomitic in part, trace edge stain + SH; Red/gray(4300)

LS; Gray/dark gray, mottle, fine crystalline to dense, pell/foss w/partly subchalky matrix, trace stain (4302/20')

LS; Cream/gray, fine crystalline to dense, foss, chalky (4302/40' 4310)

trace edge stain (4320)

LS; Tan, fine crystalline to dense, foss, cherty +SH; Red/gray, silty-sandy (4330)

LS; Tan/brown, fine crystalline, chalky, ool, hard (4340)

SH; Gray, silty-sandy + SS; Gray, very fine grained/silty (4340)

SH; Red/gray/green, silty-sandy (4350)

SH; Black (4360)

LS; Cream/gray, dense, sil foss, blocky (4360)

LS; Gray, fine crystalline to dense, sil chalky (4370)

SH; Black (4370)

SH; Maroon/gray, silty-sandy + LS; Gray/tan, dense, foss, hard (4380)

SH; Red/dark gray, sandy (4390)

LS; Cream, dense, cherty (4390)

LS; Cream/gray, dense, hard, chalky-soft (4400)

SH; Red/gray, silty, sandy (4400)

LS; Tan/gray, dense, cherty (4410)

LS; Gray/dark gray mottle, fine crystalline to dense, foss, cherty (4420)

LS; Cream/t gray, fine crystalline to dense, sil foss, cherty (4430)

SH; Black (4440)

SH; Green/maroon, + SD; Gray/brown/fine grained, silty (4450)

LS; Tan, fine crystalline, foss, w/fair intercrystalline por, ssto, odor (4450)

LS; Cream/gray, dense, (4470)

SH; Black (trace 70)

SH; Red/gray, silty, sandy + SD; Gray, fine grained, friable (4480)

LS; Lt gray, fine crystalline to dense, dolo, foss, hard, cherty (4480)

LS; Cream, fine crystalline, foss, chalky + LS; Gray, fine crystalline, dolo w/trace stain (4490)

SH; Black (4500)

LS; Cream, fine crystalline to dense, sil dolo (4500)

LS; Cream/t gray, fine crystalline, foss (4510)

LS; Cream/t gray, fine crystalline to dense, foss (improved sample)(4520)

LS; Brown/gray/dense, foss, blocky (4520/30')

SH; Black (4520/60')

LS; Cream/brown/dense, sil foss, hard (4530)

LS; Lt gray, fine crystalline, chalky, soft, odor, ssoo (4540)

Recovered: 120' GIP

124' GO

248' GMCO

120' GOCM

SIP: 1203-1189#

FP: 32-120/1221-217#

BHT: 127F

LS; Cream/gray/tan, fine crystalline to dense, ool, chalky +SH; Black (4560)

SH; Gray, silty-sandy (4570)

LS; Tan/gray/brown, fine crystalline to dense, foss, hard, trace black stain chalky-soft in part (4570)

LS; Gray, dense, foss w/trace ppt fossilcast por, sfo, gas bubbles, odor, full dark sat on dry (4570/20')

LS; Cream/tan, fine crystalline to dense, sil foss, chalky w/trace edge stain, vsfso (4580)

LS; Cream/tan/gray, fine crystalline to dense, foss, tr stain, chalky soft in part(4580/20')

LS; Tan, fine crystalline, foss, chalky, no show(4580/40-60')

SH; Gray/green, silty-sandy (4590)

LS; Tan/cream, dense, sil chalky + SH; Gray, silty-sandy, trace SS; White, fine grained, hard (4600)

SH; Gray + SD; Clear, fine grained, subangular, few clusters (4610)

Mudco @4580'
 Mud check
 Vis 52/Wt 9.4

LS; Tan/cream, dense, sil foss (abund) trace SH; Mustard yellow/green (4610/20')

LS; Cream, fine crystalline, chalky, sandy + SH; Gray-soft sandy + SH; Bright green + SD; Gray, fine grained, friable (4620)

LS; Cream, fine to medium crystalline, sandy-chalky +SH; Gray (4630)

LS; Cream/t gray, fine crystalline, foss, chalky + trace LS; Brown, dense, sil foss, hard (4640)

LS; Tan/t gray, fine crystalline to dense, sil foss, sil chalky (4650)

LS; Lt gray, fine crystalline, foss, chalky + SS; LT gray, fine grained, subangular, friable (4660)

LS; Lt gray/tan, fine crystalline to dense, ool, sandy, chalky (4670)

LS; Lt gray/tan, fine crystalline to dense, ool, chalky (4680)

LS; Brown/tan/gray, fine crystalline to dense, chalky, sandy (4680/45')

added pre-mix

DST #3

4430-4520

30-30-30-30

IF: 12" blow died in 5 min.

FF: None

Recovered: 10' Mud

SIP: 647-491#

FP: 31-132/33-34#

BHT: 120F

LS; Tan, fine crystalline, foss, silty-sandy (4690)

added pre-mix

DST #4

4525-4580'

30-45-60-90

IF: Bottom of bucket in 17 min

ICIP: 1.5 Return bu

FF: Bottom of bucket in 16 min.

FCIP: Bottom of bucket in 27 min.

Recovered: 120' GIP

124' GO

248' GMCO

120' GOCM

SIP: 1203-1189#

FP: 32-120/1221-217#

BHT: 127F

Mudco @4520'
 Mud check
 Vis 54/Wt 9.4

Drift Survey

7/8' @ 222'

1/2' @ 267'

3/4' @ 3605'

3/4' @ 4090'

1' @ 4580'

RTD 4680'
 7:55 PM
 7-27-2011