GRAND MESA OPERATING COMPANY

2121 SAN JACINTO
DALLAS, TEXAS 75201
(214) 220-2401

17503 N. PRESTON ROAD, SUITE 200
DALLAS, TEXAS 75248
(972) 931-0700

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

Well Name: SC- LR #1-15
Location: SE SW NE SW; 33-16S-33W, Scott County, Kansas
Licence Number: API: 15-171-21701
Spud Date: 5-13-12
Surface Coordinates: 1980' FNL & 2310' FEL
Bottom Hole Coordinates: Long: -100.9731741
Latitude: 38.6227261
Ground Elevation (ft): 3042
K.B. Elevation (ft): 3057
Logged Interval (ft): 3700 To: 5750
Total Depth (ft): 4840
Formation: Morrow/Lansing-Kansas City
Type of Drilling Fluid: Chemical
Drilling Contractor: Red Tiger Drilling
Rig #: 1
Spud Date: 5-13-12
TD Date: 5-17-12
Rig Release: 5-18-12

Prepared by WellLOG from Wellsight Systems 1-800-447-1534 www.WellSight.com

GEOLOGIST

Name: Bob Schreiber
Company: Grand Mesa Operating
Address: 100 NE 230 Rd
Pratt(Hopkins) KS 67544
620-653-7451

COMMENTS

Contractor: Duke Drlg Rig #4 #
Pusher: Rich Wheeler
Surface Casing: 8 5/8" set at 217' w/150sxs
Production Casing: 5 1/2" set @ 4837' cmtd w/175 sxs
Mud by: MudCo
DST's by: Diamond Testing
Logs by: Log Tech - DIL, CN-CD, ML,SONIC
KCC#- 23647
LTD#- 4839'

FORMATION TOPS

FORMATION	SAMPLE TOPS Depth	Datum	LOG TOPS Depth	Datum
Stone Corral	2417	+639	2417	+640
Bir/Bow Corral	2437	+619	2437	+620
Topeka	3735	-679	3734	-677
Heebner Shale	3972	-916	3972	-915
Lansing	4010	-954	4010	-953
Muncie Creek Shale	4164	-1108	4164	-1107
Stark Shale	4262	-1204	4264	-1203
Hushpuckney Shale	4300	-1242	4302	-1241
Marmaton	4414	-1355	4412	-1356
Upper Fort Scott	4519	-1448	4518	-1445
Little Osage Shale	4544	-1473	4543	-1470
Excello Shale	4582	-1511	4581	-1508
Johnson Zone	4631	-1559	4631	-1558
Morrow	4677	-1605	4677	-1604
Mississippian	4738	-1665	4738	-1665
RTD	4840	-1867		
LTD			4839'	-1766

Running Report Depth/Activity

- 12/04/2012 Dark Spot: Spud @ 4:00 PM on 5 5/8" surface pipe set @217', set to 150 sxs 70 QD/30 PM
- 12/05/2012 Drlg: 1 hrs
- 12/06/2012 Drlg: 24 hrs
- 12/07/2012 Drlg: 24 hrs
- 12/08/2012 Drlg: 24 hrs
- 12/09/2012 Drlg: 24 hrs
- 12/10/2012 Drlg: 24 hrs
- 12/11/2012 Drlg: 24 hrs
- 12/12/2012 Drlg: 24 hrs (Kansas Dst(1): @ 4100-4240' Lansing-Kansas City Zone)
- 12/13/2012 Drlg: 24 hrs
- 12/14/2012 Drlg: 24 hrs (Kansas Dst(2): @ 4500-4600' Marmaton Zone)
- 12/15/2012 Drlg: 24 hrs (Kansas Dst(3): @ 4700-4840' Morrow Zone)
- 12/16/2012 Drlg: 24 hrs (Kansas Dst(4): @ 4700-4840' Morrow Zone)
- 12/17/2012 Rig Down 11:45 PM

Survey
0 deg @ 237'
1 deg@ 1122'
1 deg@ 1638'
1 deg@ 2604'
1 deg@ 3097'
1 deg@ 3577'
1 deg@ 4097'
1 deg@ 4840'

Dunne Trust 1
KCC #23647

Depth | Lithology | Sample Shows | Log Shows | Geological Descriptions | Remarks

SP:0/40
Stone Corral 2417 +639
Bir/Bow Corral 2437 +619
Topeka 3735 -679
Heebner Shale 3972 -916
Lansing 4010 -954
Muncie Creek Shale 4164 -1108
Stark Shale 4262 -1204
Hushpuckney Shale 4300 -1242
Marmaton 4414 -1355
Upper Fort Scott 4519 -1448
Little Osage Shale 4544 -1473
Excello Shale 4582 -1511
Johnson Zone 4631 -1559
Morrow 4677 -1605
Mississippian 4738 -1665
RTD 4840 -1867
LTD 4839' -1766

Dark Spot 3700
Topeka 3735 -679
Heebner 3972 -916
Lansing 4010 -954
Muncie Creek 4164 -1108
Stark 4262 -1204
Hush 4300 -1242
Marm 4414 -1355
UFS 4519 -1448
LOS 4544 -1473
Excello 4582 -1511
Johnson 4631 -1559
Morrow 4677 -1605
Miss 4738 -1665
RTD 4840 -1867
4700
Morrow 4677 -1605
Miss 4738 -1665
RTD 4840 -1867
4800

MGO @ 3797
MF:0-4
VF:0-4
FOC:0-4
Odor:None
Stain:None
Flor:None
Cut:None

MGO @ 4240'
MF:0-4
VF:0-4
FOC:0-4
Odor:None
Stain:None
Flor:None
Cut:None

DST(1) Lans: H:2 4192-4200' IF:40-40-40 Isi:30/30 10" FF:40-40-40 Fsi:30/0 Rec:20% Mud Sample: 1100 CL: 19000 PPM SP: 1080-1130# FP: 20-4-20-0# CH: 39.000

DST(2) Lans: H:2 4492-4500' IF:40-40-40 Isi:30/30 10" FF:40-40-40 Fsi:30/0 Rec:200 MSW 310' SCWM Sample: 1100 CL: 19000 PPM FP: 117-27# SP: 1187-1138# HP: 2164-2084# Cut:28.000

MGO @ 4700'
MF:0-4
VF:0-4
FOC:0-4
Odor:None
Stain:None
Flor:None
Cut:None

DST(3) Ali/Pawn 4687-4690' IF:30-30-30 Isi:30/30 30" FF:30-30-30 Fsi:30/0 Rec:100 MSW 310' SCWM Sample: 1100 CL: 19000 PPM FP: 117-27# SP: 1187-1138# HP: 2164-2084# Cut:28.000

MGO @ 4700'
MF:0-4
VF:0-4
FOC:0-4
Odor:None
Stain:None
Flor:None
Cut:None

DST(4) Johnson 4690-4702' 30-30-30-30 Isi:30/30 30" 2nd:no blow Rec:10'SOCOCM Sample: 1100 CL: 19000 PPM FP: 0-0-0-0# SP: 2084-2084# HP: 2164-2084# HP: 2087-2087#

Mississippian 4738-4840'
Rec:10'SOCOCM
Sample: 1100 CL: 19000 PPM
FP: 0-0-0-0#
SP: 2084-2084#
HP: 2087-2087#

Sample: 4488-44 Sand:1475-1 shop: -1.72

Sample: 4488-44 Sand:1475-1 shop: -1.72

Sample: 4488-44 Sand:1475-1 shop: -1.72