Boxberger Geological Services
0294 Cliff View Circle
Parachute, CO 81635
Phone: 970-285-2494
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Operator: WPX Energy
Well: PA 21-11
Location: Sec. 11 T7S R95W
Field: Parachute
County: Garfield
State: Colorado

Drilling Rig: Cyclone 17
Ground Elevation: 6274'
KB Elevation: 6296'
TVD vs. MD: 458'
Spud Date: 06/19/13
TD Date: 06/25/13

Surface Hole: 2404' FNL x 2097' FWL
Bottom Hole: 208' FNL x 2019' FWL
Drilling Fluid: LSND
Dates Logged: 06/22/13 - 06/25/13
Depth Logged: 4667' - 8260'
Logger: Tarin Boxberger

Torque (KFt Lbs) 0.0 25.0
WOB (Klbs) 0.0 60.0
Stand Pipe Pressure (PSI) 0.0 3600.0
Flow (Percent) 0.0 120.0
ROP (Minutes/Foot) 0.0 4.0
Total Gas (Units) 1.0 10000.0
Rotary (RPM) 0.0 75.0
Differential Pressure (PSI) 0.0 400.0
PVT Mud Gain/Loss (Barrels) -100.0 100.0
Total Mud (Barrels) 400.0 700.0
Comments
4660
4670
4680
4690
4700
8260

Logging depth = 4667'. BGS service begins on 06/22/13 at 05:16.

Bit #3
8 3/4
Uterra
U519
In at 968'

Connection at 4697.4'

Connection at 4792.3'
In: 10.1/66
Out: 10.1/70

Prog Mesaverde
= 4867' MD

In: 10.1/61
Out: 10.1/64
Connection at 4886'

Connection at 4980.2'

Connection at 5073.5'

In: 10.0/70
Out: 10.2/64

Connection at 5166.8'
In: 10.0/71
Out: 10.2/70

In: 10.0/53
Out: 9.9/50

Connection at 5261.1'

In: 9.9/55
Out: 9.9/49

In: 9.9/53
Out: 9.9/48
Connection at 5355.2'

In: 9.8/54
Out: 9.9/50

In: 9.7/52
Out: 9.9/54

Connection at 5448.6'

In: 9.8/52
Out: 10.0/57

Bit #3
FTG: 4575'
HRS: 46.75
Bit #4
8 3/4
Ulterra
U516M
In at 5543'

In: 10.4/75
Out: 10.5/69
Connection at 5637.6'

In: 10.3/74
Out: 10.5/78

Connection at 5732.2'

In: 10.4/77
Out: 10.3/77

Connection at 5826.6'
In: 10.3/80
Out: 10.3/81

In: 10.2/80
Out: 10.2/74

Connection at 5919.9'

In: 10.0/67
Out: 9.9/75

Connection at 6013.8'

In: 10.0/68
Out: 9.9/74

In: 10.2/67
Out: 9.8/75
Connection at 6106.5'

In: 10.2/78
Out: 10.1/80

Connection at 6200.3'

Prog Top Gas
= 6210' MD

In: 10.0/68
Out: 10.1/73
Transfer Mud

Connection at 6293.8'

In: 10.1/55
Out: 9.9/60

In: 10.1/51
Out: 10.2/50

Connection at 6387.4'

In: 10.0/50
Out: 10.0/51

In: 10.0/53
Out: 10.0/55

Connection at 6481.5'

In: 10.0/52
Out: 10.0/51

In: 10.0/53
Out: 10.0/56

Connection at 6575.7'

In: 10.1/55
Out: 9.9/56

Connection at 6668.5'

In: 10.1/53
Out: 10.0/55

Connection at 6763'
In: 10.1/52
Out: 10.0/55

In: 10.1/54
Out: 10.0/53

Connection at 6857.4'
In: 10.1/55
Out: 10.0/54

In: 10.1/51
Out: 10.0/53

Connection at 6951.7'

In: 10.0/52
Out: 9.9/50

In: 10.0/55
Out: 9.9/57

Connection at 7046.1'

In: 10.0/58
Out: 9.9/60

In: 10.0/58
Out: 9.9/56

Connection at 7140.4'

In: 10.0/60
Out: 9.8/60

In: 10.0/58
Out: 9.8/62

Connection at 7234.7'

In: 10.1/60
Out: 9.7/56

Prog Cameo Coals
= 7267' MD

In: 10.1/64
Out: 9.8/64

Connection at 7328.6'
In: 10.1/59
Out: 10.1/63

Connection at 7422.5'
In: 10.0/56
Out: 9.9/59

In: 10.1/53
Out: 10.0/55
Connection at 7516.9'

In: 10.1/52
Out: 10.0/54

Connection at 7610.4'
In: 10.1/55
Out: 10.1/57

In: 10.1/55
Out: 10.1/58

Connection at 7705.4'

In: 10.1/58
Out: 10.0/56

Connection at 7799.5'

In: 10.2/58
Out: 10.0/57

Connection at 7893.2'

In: 10.2/62
Out: 10.1/63

In: 10.2/62
Out: 10.1/65

Connection at 7986.3'

In: 10.3/65
Out: 10.1/67

In: 10.3/67
Out: 10.1/65

Connection at 8079.2'

In: 10.3/70
Out: 10.2/72

In: 10.3/68
Out: 10.1/67

Connection at 8172.7'
In: 10.4/74
Out: 10.2/70

In: 10.4/72
Out: 10.2/72

Prog Rollins SS
= 8210' MD

Bit #4
FTG: 2717'
HRS: 56.5
In: 10.3/74
Out: 10.2/74
PA 21-11 TD'd at 8260' on 06/25/13 at 11:04.