

# COLUMBINE LOGGING

Scale: 5" / 100'  
Measured Depth Log

Well Name Loeffler K1-66-1HN\_HORIZ

Location SEC. 1, T4N, R66W

State COLORADO

Country USA

API Number 05-123-35834

Region DJ BASIN

Spud Date 10/18/2013

Surface Coordinates 1650' FNL x 333' FWL

Bottom Hole Coordinates 2310' FNL x 535' FEL

County WELD

Rig Number PRECISION 829

Field WATTENBERG

Drilling Completed 10/22/2013

Ground Elevation 4666'

K.B. Elevation 4682'

Logged Interval 6300' To 6512'

Total Depth 6512'

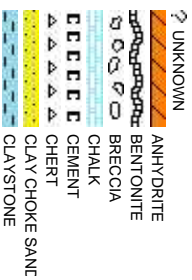
Formation NIOBRARA C CHALK

Type of Drilling Fluid LSND

Company Noble Energy, I  
Address 1625 BROADW  
DENVER, COL

Name Holly Duncan  
Company Noble Energy, I  
Address 1625 BROADW  
DENVER, COL  
303.389.3600

Wellsite Geologists





Slide/Rotate

ROP  
ROF  
GAMMA

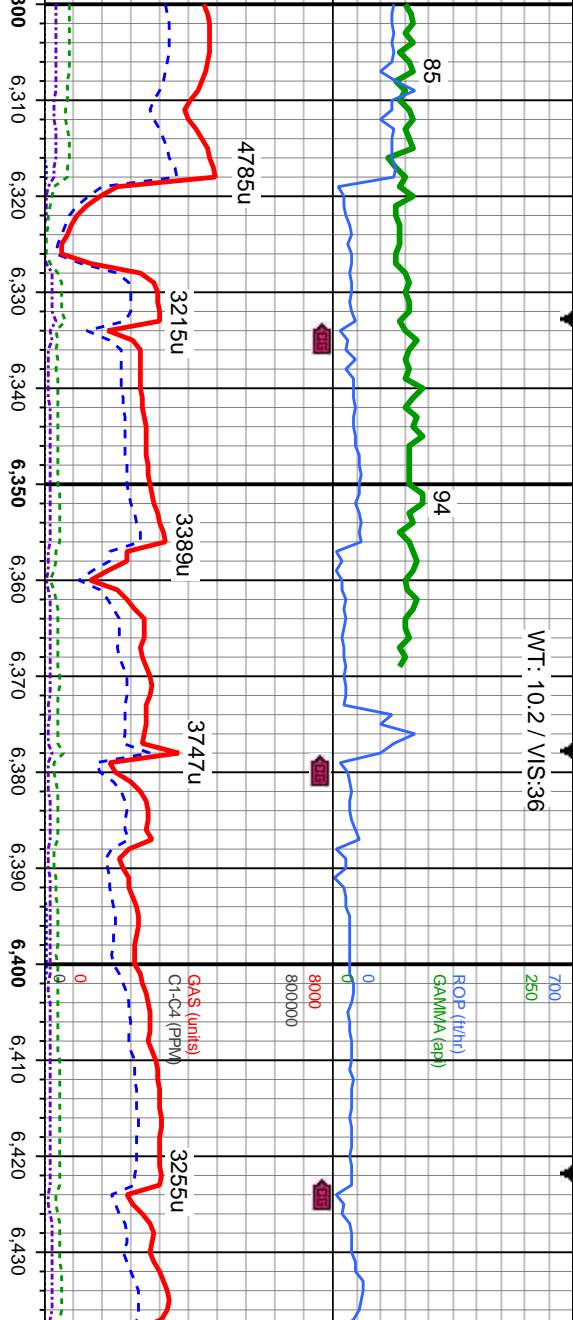
ROP Limits  
0 - 700 ft/hr  
Gamma Limits  
0 - 250 API

Total Gas & Chromatograph  
GAS  
C1  
C2  
C3  
C4

Gas Limits  
0 - 8000 units  
C1-C4 (PPM)

Depth Labels

Begin 50' Samples



% Lith

COLUMBINE LOGGING INC. RIGGED  
UP ON 10/20/2013 MANNED  
2-PERSON LOGGING WITH  
BLOODHOUND GAS  
CHROMATOGRAPH UNIT # 0715

Well Bore  
TVDD

TVDD (ft)

MD: 6,328  
Inclination: 1.1 °  
Azimuth: 117.9 °  
TVDD: 6,284.69  
VS: 33.89'

MD: 6,372  
Inclination: 3.1 °  
Azimuth: 106.8 °  
TVDD: 6,328.66  
VS: 35.46'

MD: 6,417  
Inclination: 5.5 °  
Azimuth: 107.4 °  
TVDD: 6,373.53  
VS: 38.79'

Oil Show

E  
G  
M  
F  
T  
S

7800

90% SLTY SH: lt gy-gy, mod frm, pty-sb blk, sly tex 10%  
SHY SS:wh-lt gy, s&p, frm, fri, f gr, sb pty-sb blk, sl calc

7800

90-95% SLTY SH: lt gy-g  
wh-lt gy, s&p, frm, fri, f gr

Images



