API #15-023-21424

Saman Shaffaie
Petroleum Geologist

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

WELL NAME: Hess 32-33-4-58
LEASE: Fee
COUNTY: Williams
STATE: ND
LOCATION: SW/SE, Sec. 33, T154N, R98W
ELEVATION: GL: 2,012 ft
KB: 2,037 ft
SPUD DATE: 04/08/15
TD DATE: 04/15/15
CASING POINT: 9 5/8" @ 2,100 ft
TOTAL DEPTH: 10,500 ft
DRILLING CONTRACTOR: Patterson-UTI Drilling #344
MUD COMPANY: Fluid Control
MUD TYPE: Fresh Water
MUD WT: 8.33 - 9.0 ppg
MUD CO: Fluid Control
DIRECTIONAL CO: Ryan Directional
MWD: Ryan Directional
GAMMA: Ryan Directional
CASING: 9 5/8" @ 2,100 ft
7" @ 6,900 ft
ELECTRICAL: Schlumberger
CORING: None
DST'S: None
GEOLOGICAL SUPERVISION FROM: 3,737'
GEOLOGICAL SUPERVISION TO: 10,500'
PROJECTED TO BIT: 10,500'
PROJECTED TO TD: 10,500'
PROJECTED DIP: 0.00°
PROJECTED AZIMUTH: 0.00°
PROJECTED TVD: 10,500'
PROJECTED VS: 0.00'
PROJECTED NS: 0.00'
PROJECTED EW: 0.00'

Formation	Sample Tops	Log Tops	Diff
Kibbey Lime	7,000	7,000	0
Charles	7,150	7,150	0
Base Last Salt	7,800	7,800	0
Mission Canyon	7,970	7,970	0
Lodgepole	8,650	8,650	0
False Bakken	10,350	10,350	0
Scallion	10,360	10,360	0
Upper Bakken	10,370	10,370	0
Middle Bakken	10,390	10,390	0
Lower Bakken	10,450	10,450	0
Pronghorn	10,480	10,480	0
Three Forks	10,500	10,500	0

REMARKS: Due to poor to fair shows of oil in multiple pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,
Saman Shaffaie
Petroleum Geologist

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*Tops have been adjusted to electric logs.

Curve Track 1
BIT (depth)
Gamma (API)
Gas (units)

Curve Track 2
BIT (depth)
Gamma (API)
Gas (units)

Depth | Lithology | Geological Descriptions | Engineering Data

BIT (depth)

Antelope 3182 (+52)

Base Antelope 3195 (+19)

BIT (depth)

Curve Track 1
BIT (depth)
Gamma (API)
Gas (units)

Curve Track 2
BIT (depth)
Gamma (API)
Gas (units)

Depth | Lithology | Geological Descriptions | Engineering Data

DAILY PENETRATION
@ 7:00 AM

04/06/15 - Spudded at 1:30 PM
04/07/15 - Drilling at 1,000'
04/08/15 - Trip after bad trip at 2005'
04/09/15 - Drilling at 2,100'
04/10/15 - Drilling at 3,61'
04/11/15 - Drilling at 4322'
04/12/15 - Tripping at 6210'
04/13/15 - Tripping at 8210'
04/14/15 - Logging at 8782'

Pierre Shale (+1,997)

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