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3-33

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Revised November 7, 2006

Geological Well Report

Aspen Operating LLC Hamilton 3-33
NW NW Sec 33, T13S R95W
River Oil & Gas Program
Delta County, Colorado

545 in Kcl - B
TD is 19' below top of B est

Prognosis:

Dakota Formation top:	3,240
TD in Dakota Formation	3,314

Results:

Elevation:	df	5840 ? 5840 GL 5847 DF
Mancos Shale		on surface
Dakota Formation top:		3,214 elev. ~~2626~~ +2633
TD in Dakota Formation		3,270 elev. 2570
Aspen Sh		3204 (+2643)

Geological well summary:

Richard B. Wells, wellsite geologist, arrived on location October 16,2006.
Correlated GR log with Dyco Petroleum City of Delta - 1, a twin well some 150-ft to the northeast.
~~Projected~~ top of the Dakota at 3214.

Commenced drilling cement inside casing with air late in the morning of October 17 and reached TD before 5 PM. Took cuttings samples from flow line at 5-ft intervals. Sample quantity was very low and sample quality is considered good. Most sandstone cuttings are oil-coated, due to compressor oil in the air stream. Fluorescence evaluation for presence of oil was not attempted.

Stopped operations to check for gas flow at 3220, 3225, 3230, 3240, 3252, 3260, 3262. First gas to surface was a weak blow at 3260 in the Dakota B. Gas flow increased slightly at TD 3262, and increased to a fair blow after 5-min shut in.

Made 8-ft downhole depth correction at TD, from 4262 to 3270. Error was due to incorrect pipe tally obtained from the supplier. Gas pressure was 315 psi after all-night shut in, although the true reservoir pressure may be more than that, decreased by leaks in surface equipment.

TD is in the Dakota Sandstone, near the base of the B interval. Top of the Dakota was picked at 3214 (+2626), 15 feet high to the offset well, Dyco City of Delta-1. Top of the B interval was not recorded on the log, but, based on cuttings samples and by projection from the Dakota A, the top of the B is at approximately 3251 (+2589). This point is 15 feet high to the Dyco City of Delta-1.

Sample descriptions:

DAKOTA SANDSTONE, BENCH A:

3215-20: Shale, medium gray, very fine sandy to silty, fissile to blocky.

Sandstone (trace): Light gray brown, very fine grained, salt & pepper, friable, trace poor intergranular porosity. This 5-ft interval drilled very fast, possibly indicating friable sandstone. Heavy cement contamination in samples.

Ss3220-25: Sandstone, off white to light tan, very fine grained, silty, calcareous, friable, poor to fair intergranular porosity. Interbedded shale as above.

3225-30: Shale, mottled gray, silty, calcareous, poor fissility.
Sandstone, about 10%, as above, fair to good intergranular porosity.

3230-35: Sandstone, light gray brown, very fine grained, silty, calcareous, salt & pepper, in part friable, in part hard, blocky. Poor to fair intergranular porosity.
Shale, gray, silty, calcareous, as above.
This interval drilled slowly, hard streak.

3235-40: Sandstone, light gray brown, very fine grained, silty, calcareous, part friable. Poor to fair intergranular porosity.
Shale, gray, silty, calcareous, soft to moderately firm, sub-blocky.

3240-45: Shale, medium gray, waxy, calcareous, platy to sub-blocky.
Sandstone, 10%, as above, poor to fair intergranular porosity.

3245-50: Sandstone, 60%, light gray brown, very fine grained, calcareous, locally silty, friable, fair to good porosity.
Shale, 40%, as above, locally good fissility, part papery.

DAKOTA SANDSTONE, BENCH B

3250-55: Sandstone, light gray brown, fine and medium grained, slightly calcareous, firm to friable, locally good porosity.
Shale, as above, waxy, decrease in silt content.

3255-60: Decrease in cuttings.
Sandstone, very light gray, very fine to medium grained, friable, poor to good porosity.
Shale, light gray, calcareous, waxy, fissile.

3260-62: Sandstone, very light gray, very fine to medium grained, friable, fair to good porosity.
Shale, light gray, calcareous, waxy, fissile. Some grains show interlaminated sandstone and shale.

Geologic Structure:

The Hamilton ranch is located on southwest flank of the Piceance Basin, and regionally, the bedding dips NNE at a low angle. This monoclinal dip is interrupted by some local structures which may be significant for Dakota gas development. For example, Hail (1972) shows bedding attitudes which outline a north-south trending anticline in Tongue Creek valley, some two miles east of the Hamilton 3-33 location. A short field study of surface structures in this area could provide valuable guidance in selecting future drilling locations for Dakota gas wells. A portion of Hail's map is attached.

Casing Program:

Surface casing:	8.625-in diam., set at 350'
Protection string:	5.5-in set at 3215'

Logging Program:
Mesa Wireline ran GR-CCL log, 3184 to surface, October 13, 2006.
CBL Log not yet run.

Note: This well was drilled under very difficult conditions of heavy rain and sleet, causing deep mud on location and access road. The crew is to be commended.

Reference:

Hail, W. J. Jr., 1972. Reconnaissance Geologic Map of the Cedaredge Area, Delta County, Colorado. U.S. Geol. Survey, Misc. Inv. Map I-697.

ENCLOSURES:

Sample Log
Topographic Map: Parts of Delta North, Hells Kitchen, Orchard City and Cedaredge Quadrangles
Geologic Map: Part of Reconnaissance Geologic Map of Cedaredge Area.