

NMOCD Case No. 11996
July 28, 1998

EXHIBITS RELATING TO PICTURED CLIFFS VOLUMETRIC ANALYSIS

(4 PAGES)

NMOCD CASE #11996
PENDRAGON ENERGY
EXHIBIT

m-3

EXHIBIT _____

NMOCD Case No. 11996

BIRDWELL INDUCTION ELECTRIC LOG

CHACO #1
NW SE NW SECTION 18-T26N-R12W

24/1
perforated

Lower Zone

Perforated Zone

Porosity = 26.27%

Sw = 38.96%

% Clay = 8.55

HCPV = 3.9072

Lower Zone

Porosity = 23.72%

Sw = 67.01%

% Clay = 17.37

HCPV = 2.0837

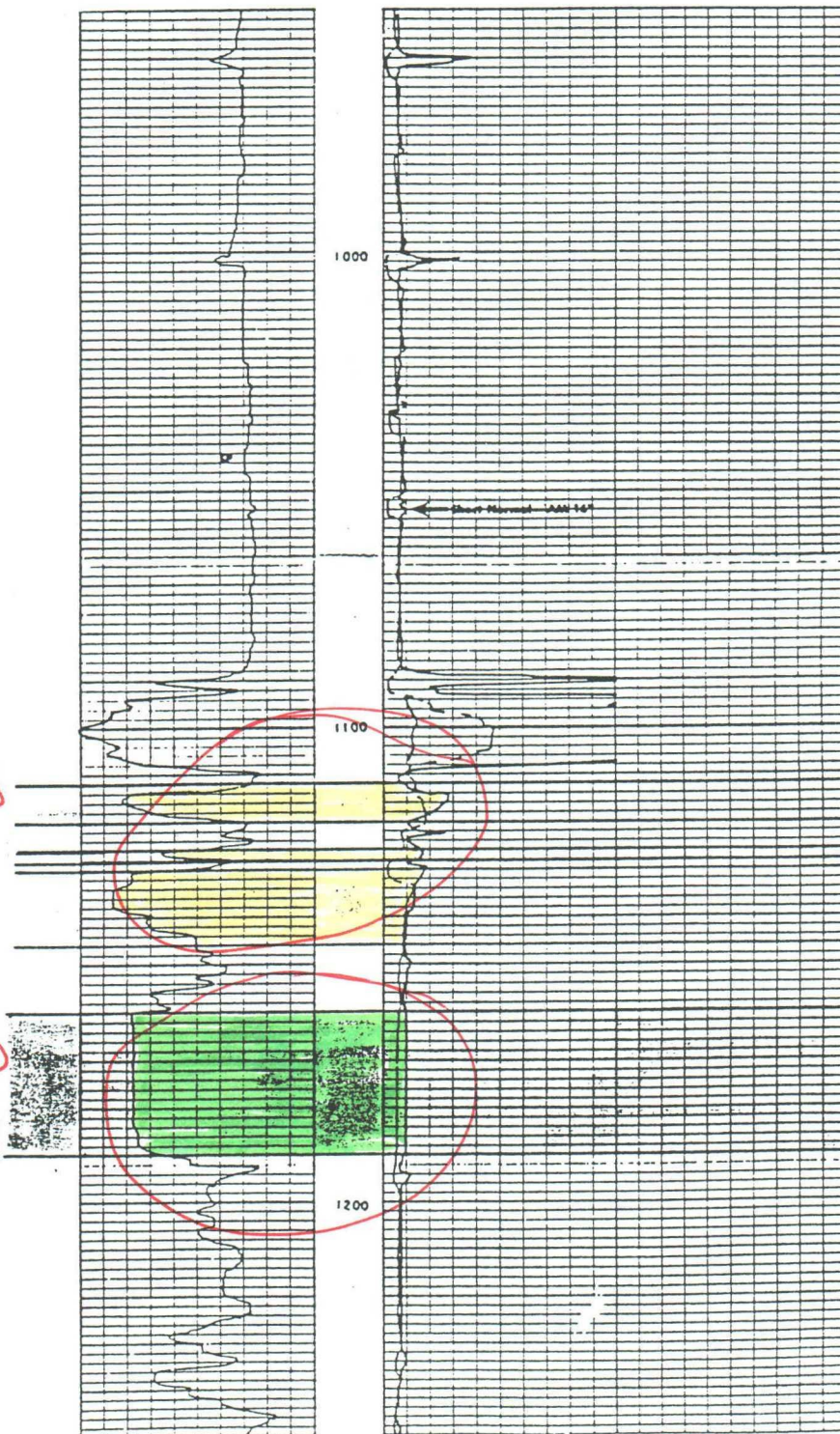


EXHIBIT _____

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BIRDWELL INDUCTION ELECTRIC LOG

CHACO #4

SE NW NW SECTION 1-T26N-R12W

Perforated Zone

Porosity = 26.78%

Sw = 37.18%

% Clay = 8.25

HCPV = 3.6213

Lower Zone

Porosity = 21.01%

Sw = 74.34%

% Clay = 20.52

HCPV = 3.3635

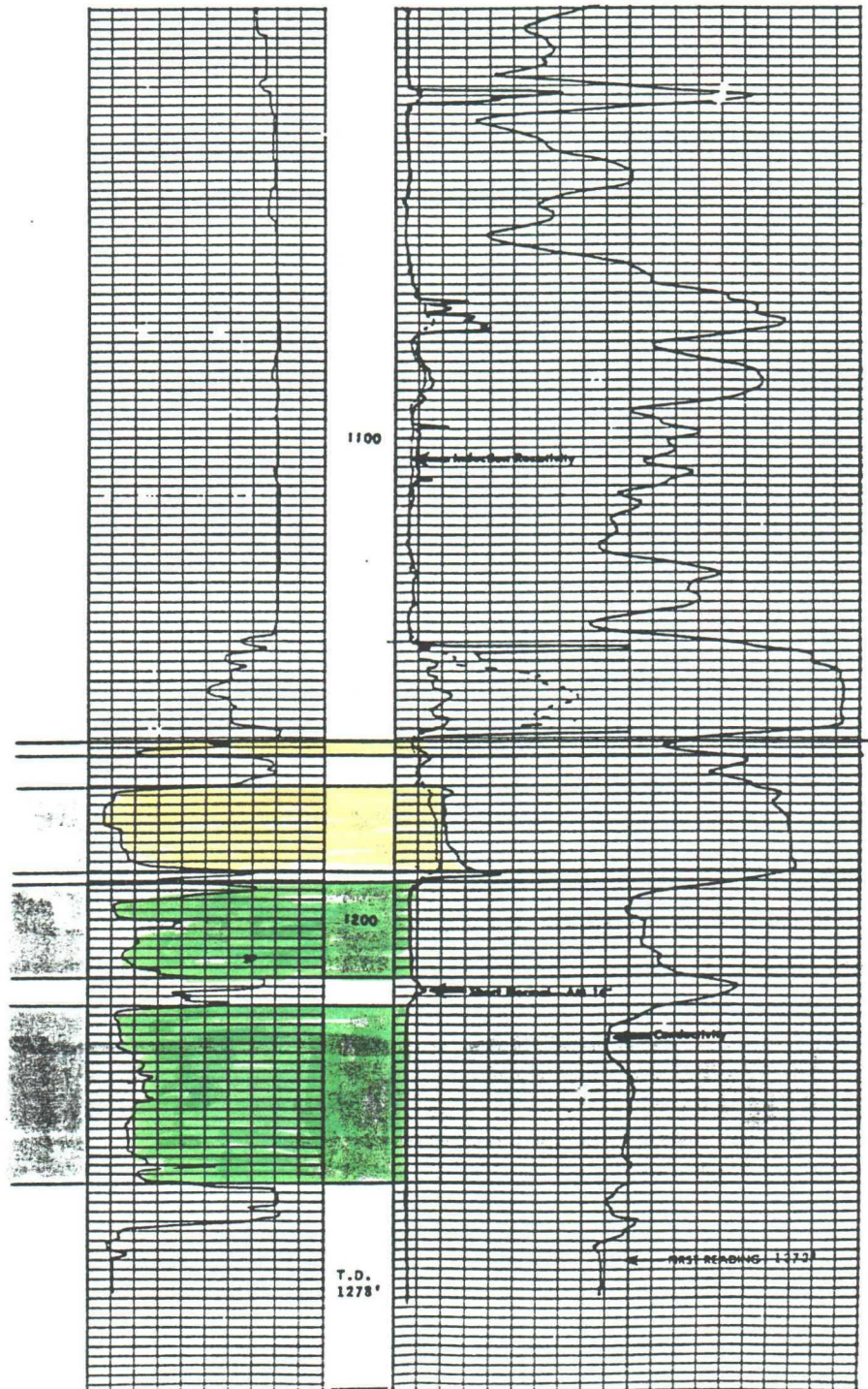


EXHIBIT _____

NMOCD Case No. 11996

BIRDWELL INDUCTION ELECTRIC LOG

CHACO #5
NW SE SE SECTION 1-T26N-R13W

Perforated Zone

Porosity = 24.30%

Sw = 40.53%

% Clay = 11.31

HCPV = 3.4955

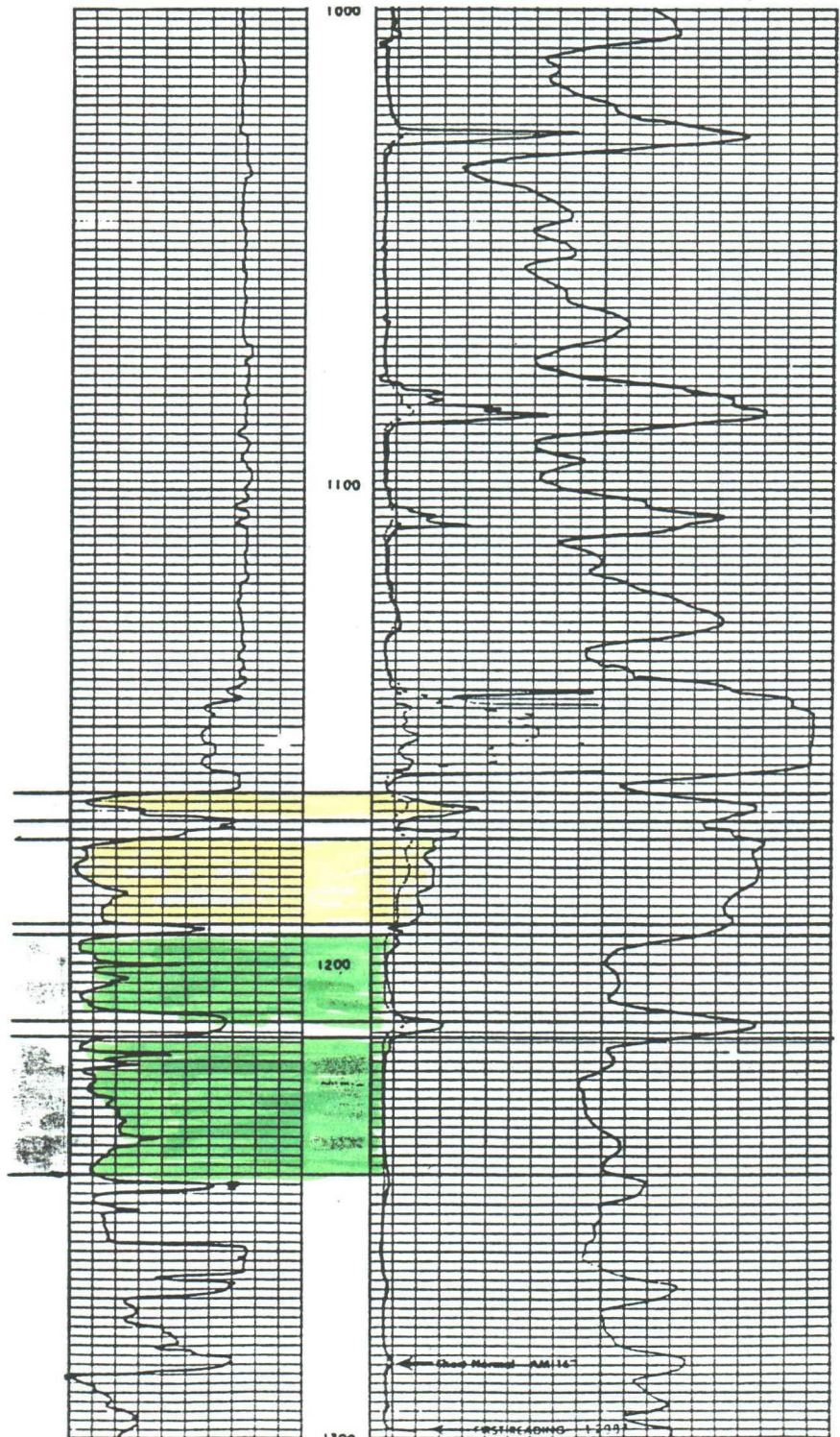
Lower Zone

Porosity = 20.15%

Sw = 78.37%

% Clay = 18.80

HCPV = 2.0137



PICTURED CLIFFS WELL VOLUMETRIC RESERVE ESTIMATES
BASED ON 320 ACRES

WELL NAME	LOCATION	PERFORATED ZONE		LOWER ZONE		TOTAL VOLUMETRIC ESTIMATED OGIP (MCF)
		ESTIMATED OGIP OGIP (MCF)		ESTIMATED OGIP (MCF)		
CHACO #1	SE NW Section	18-26N-12W	883,715	471,283		1,354,998
CHACO #4	NW NW Section	7-26N-12W	819,051	760,743		1,579,794
CHACO #5	SE SE Section	1-26N-13W	790,598	455,451		1,246,049
TOTALS			2,493,364	1,687,477		4,180,841

COMMENTS:

GOOD POROSITY DEVELOPMENT WITH RELATIVELY LOW WATER SATURATIONS AND CLAY CONTENT IN PERFORATED ZONE.
GOOD POROSITY DEVELOPMENT BUT HIGHER WATER SATURATION AND CLAY CONTENT IN LOWER ZONES.