

PAUL BACA PROFESSIONAL COURT REPORTERS

**OIL CONSERVATION
DIVISION**

CASE # 14199

EXHIBIT

13

BIG HATCHET UNIT

The proposed Big Hatchet Unit is located within the Playas Valley of southwest New Mexico in Hidalgo County. The unit is within the northern portion of the Pedregosa basin that extends southward into Mexico (exhibit #8). The Animas Mountains are to the west and the Big Hatchet Mountains are to the east of the unit.

The Big Hatchet Unit has been designed to test the Percha Shale. The Percha shale is age equivalent to the Devonian Woodford shale in the Permian Basin and will be encountered from depths of 5000' to over 10,000' across the unit. The Play involves the exploitation of shale gas similar to that of the Barnett shale in Texas. The Percha shale is expected to range in thickness from 350' to 450' across the unit. The initial proposed unit well located in nw se sec 14 T30S R17W will test the producibility of this shale and establish what drilling and completion techniques will be utilized in future drilling if successful(exhibit #10)

The closest well is approximately ½ mile to the northwest of the proposed location where the Percha was encountered at a depth of 5150' and had a measured thickness of 430' (exhibit #11). All other wells in the area which penetrated the Percha as well as outcrop measurements document a regionally pervasive thickness of 350' to 450'. Structure as mapped on top of the Mississippian illustrates a large north/south trending platform with localized structural features (exhibit #9). The proposed location will test the same eastward plunging anticline that the Cockrell # 1-14 Playas State was drilled on. Exhibit # 10 is a Percha Shale Distribution map which illustrates areas where the Percha shale will be encountered above 10,000' and areas where the shale will be encountered below 10,000'.

The Percha is expected to produce dry gas. Additional pay may be encountered uphole in the Horquilla and Epitaph formations. Immediately below the Percha, the Montoya and El Paso formations also offer potential pay horizons.