

# State Department of Geology and Mineral Industries

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Memo on ditch samples taken from Northwest Oil Co., Morrow #1; sec. 18, T. 12 S., R. 15 W., Jefferson County. T.D. 1200 feet.

Sample #P-14864 "from just below screen"

The cuttings are predominantly dark gray to black, hard, dense, brittle shale. There are also a few grains of greenish siltstone and an occasional fragment of bentonite (cavings?). Under the microscope the shale appears to be composed mostly of quartz and feldspar although much of the material is isotropic and presumed to be clay. The feldspars all show incipient alteration to clay.

Sample #P-14865 "from cuttings trough"

The cuttings are predominantly light grayish to buff bentonitic siltstone which is fairly calcareous. Sample breaks down readily in water. Larger grains imbedded in the very fine grained matrix are largely clay with a few grains of feldspar and quartz. The sample also contains a few fragments of red clay (cavings?). This red zone may prove to be a good marker horizon if future wells are drilled in this area. Under the microscope the material is predominantly isotropic (amorphous clay). That which is anisotropic shows incipient alteration and is presumed to be feldspar. A few very small fragments of clear grains are probably quartz.

Report by: R.E.C.  
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