

1347
Large Exhibits

1009 W. MISSOURI
MIDLAND, TEXAS
MC 144 2-1463

73R
MONTGOMERY OIL CORPORATION

OCTOBER 12, 1957

SUMMARY AND RECOMMENDATIONS

A dome, based upon reliable seismograph data, has been found, the highest measured point of which is located on the west side of the NW₂ of the NW₂ of Sec. 1, T 15 S, R 33 E. This uplift covers the better part of four sections, and shows an excess of 12 to 18 feet. It is recommended that any available acreage on these tracts be acquired. It is further recommended that a test be drilled on the dome, and that the formation be closely located as closely as practicable to the highest measured point. The second feature will require more seismograph work before drilling is indicated.

Leads to two possible structures are found in Secs. 27 and 19, T 14 S, R 34 E. The shooting of these leads is recommended, provided that the land situation makes such a course feasible.

INTRODUCTION

The greater portion of the area investigated centers on the common boundary between Tps 14 and 15 N, R 34 E, although three lines extend into R 33 E. It is situated four miles east of the Saunders Field, which produces from the Pennsylvanian and Devonian formations north of the Townsend Field, which produces from the Wolfcamp formation, and west of the Caudill and Dean Fields, which produce from the Pennsylvanian and Devonian formations.

[illegible]

VELOCITY CONTROL AND COMPUTATIONAL PROCEDURES

Velocity surveys from the Hunt - #1 State, 3 1/4, 7 15 S, 8 3/4 E, the Shell Oil Company - #1 William unit, Sec. 8, 7 16 S, 8 3/4 E, the Humble Oil and Refining Company - #1 Federal-Elliott, Sec. 1, 7 16 S, 7 3/4 E and the Ada Oil Company - #1 Coalsen, Sec. 13, 7 15 S, 8 35 E, were available. The velocity was distributed early between the Hunt, Humble and Shell wells, and was projected along the strike as derived checked the experimental data in the Ada-Coalsen well, very closely.

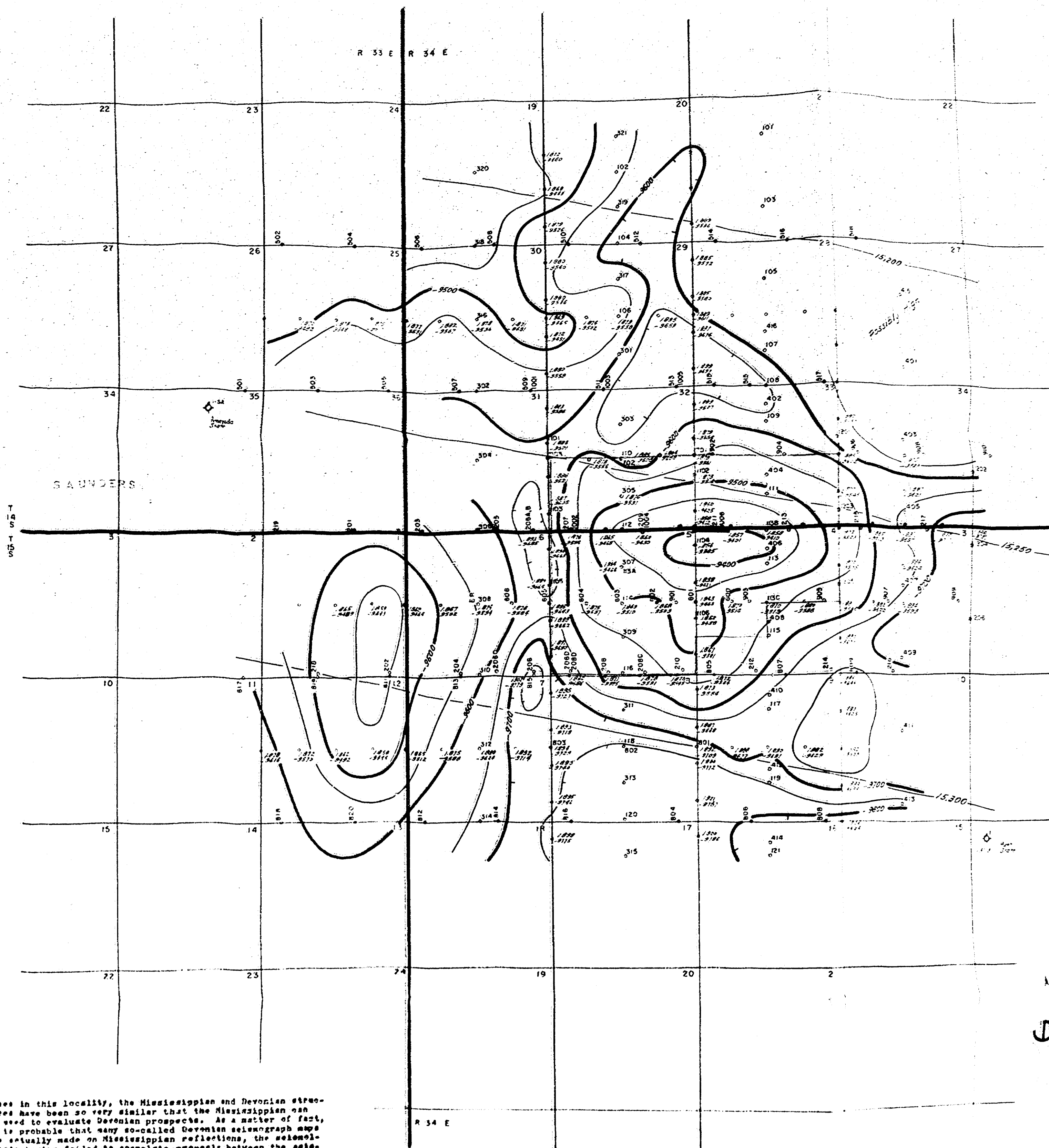
The time values were converted to depth according to the following procedure: a value of 0.120 of a sec was subtracted from each time value, this comprised of 0.05 for the time of travel of the wave through the water, 0.026 for phase, and 0.039 for the time of travel of the wave through the water. Correction for this latter correction was made because it was evident that the trough which was picked was a second phase of the Mississippiian reflection. The remainders were multiplied by one-half the velocity of the wave in the crustal velocity structure, and the distance of 10,000' was subtracted from the products to yield the surface elevations.

8737476

There were many reliable reflections from the Devonian and Pennsylvanian formations, but none was recorded in the area of the Devonian formation. It has been possible to do an by use of considerable protection, but this course was not elected because of fact that it would have led to a hybridized map because the area was not well defined. The Devonian formation is of only secondary interest, in any event, the great drillers objective being the Devonian formation, of a pre-Pennsylvanian reflections, the stratum, and the area which is the subject of the study, is the Mississippian and Tullahoma the subject of the study.

Enclosure 1, Contains a Reflection from
the Missionary Association with
Velocity Counts

Identification of the original reflection of Mississippi formation is based upon two factors: (1) asymmetry which can be recognized on some of the records, and is believed to be the one between the formation and Mississippi formations; (2) the fact that depth computations fall within the same range of error for the Mississippi formation, or covered by the No. 1 State well, Sec. 14, T. 15 S., R. 3 E., S. 3. The Mississippi formation is not a driller's direction, but is all over



cases in this locality, the Mississippian and Devonian structures have been so very similar that the Mississippian can be used to evaluate Devonian prospects. As a matter of fact, it is probable that many so-called Devonian outcrops are actually made up of Mississippian reflections. The paleogeographic having failed to correlate properly between the paleogeograms and the geological section. On some of the better records, on which the reflection character is well developed it is evident that the continuous phase which was used in mapping, is the second one.

[illegible]

Another dome is found in Secs. 1 and 12, T 11 N, R 21 E, but has not been completely delineated by the aeromagnetic. It is possible that Sec. 21, T 11 N, R 21 E is high, and may be the site of still another dome, but the aeromagnetic data were not diagnostic. Another relief is indicated in Secs. 19, T 11 N, R 21 E.

ETCHEVERRY RANCH AREA
TOS 14 & 15 S., R5 33 & 34 E.
LEA COUNTY, NEW MEXICO

SEISMOGRAPH APPRAISAL FOR
FELMONT OIL CORPORATION
BY JOHN DALY

CONTOURS ON A REFLECTION FROM THE
MISSISSIPPIAN FORMATION
WITH VELOCITY CONTOURS
AND INTERVALS

1988