

12-31-3W

GEOLOGICAL REPORT

No. 2 Hare "A"

Location: SW NW NE Sec. 12-31S-3W, Sumner County, Kansas

Operator: Jones-Gebert Oil Co.

Total Depth: 3375, Plug back 3330'

Elevation: Gr. 1297'; D.F. 1300'; R.K.B. 1301'

Commenced: Spud April 7, 1960

Completed: April 28, 1960

Contractor: Twin Drilling, Inc.

Casing: 8-5/8" @ 198' w/160 sax cement
4-1/2" @ 3374' w/75 sax cement

Shows: Oil staining and free oil from 3312' to 3321'
Slight oil staining from 3366' to 3370'

DST: No. 1, 3308-20'; recovered 132' heavily oil and gas cut mud in 1 hr., BHP 755-565, FP 30-55.
No. 2, 3362-75'; recovered 15' mud in 1 hr., BHP 1146-1055, FP 0-15.

Logs: Schlumberger Laterlog-Gamma Ray-Neutron and Perforating Collar logs.

Perforations: 4 jets per ft. 3314-18' (16 holes)

Tops: Kansas City 3168' (-1867)
Pay section 3312' (-2011)
Second zone 3366' (-2065)

State Potential: May 10, 1960, 68 bbl. oil + 12% water, 24 hrs.

Summary: This well was drilled on an 80 acre farmout from the Pure Oil Co. located N $\frac{1}{2}$ NE $\frac{1}{4}$ of Sec. 12-31S-3W, in Sumner County, Kansas. This is in the Moyer Field offsetting the Pure Oil Company's Meyer lease with two productive wells. It is flat on top of the pay zone with the #1 Meyer and 4' higher than the #2 Meyer. Pay zone thickness in the #2 Hare "A" is 9', consisting of granular limestone with good intergranular and oolitic porosity. Excellent shows of free oil and oil staining were observed in this section, and it is the thickest and best developed pay

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section found in the Moyer Field to date. A second zone with oil staining was found from 3366-70' but was drill stem tested with no oil recovery. This is a new potential zone for the area and may well be productive north of our present well. Casing was set through this zone so that it may be tested at a later date if desired.

Completion was made by perforating from 3314-18' and treating with 2000 gallons of 16% acid. Initial production on this well was lower than Pure's No. 1 Moyer to the south (95 BOPD) but it is not pumping at its maximum rate due to the large amount of gas.

This is an excellent well and we would recommend additional drilling on this lease in sixty to ninety days if production remains satisfactory.

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Daily Drilling Log:

- April 6, 1960 Moving in and rigging up.
- April 7, 1960 Set 198' of 8-5/8" w/160 sx common cement 2% jel, 2% calcium chloride. Plug down @ 9:45 pm.
- April 8, 1960 Drlg. at 670' w/bit #1, in line; drilled out plug at 9:45 pm.
- April 9, 1960 Drlg. at 1305'.
- April 10, 1960 Drlg. at 2090'.
- April 11, 1960 Drlg. at 2725'.
- April 12, 1960 Drlg. at 3185'.
Top K.C. 3168' (-1267)
Flat with Meyer #1 on K.C.
7' higher Meyer 2.
- April 13, 1960 Lost bit cone in hole while making trip at 3230'; fished with magnet; did not find cone; drlg. at 3263'.
- April 14, 1960 Drlg. to 3320'; DST #1, 3308-20' (Johnston) open 1 hr., strong blow, rec. 132' very heavy oil and gas cut mud, IBHP 755, FBHP 565, IFP 30, FFP 55.

Drlg. to 3375'-T.D., ran Schlumberger Gamma-Ray Neutron Laterolog, had porosity and staining 3366-70' will run DST #2.

Pay section 3312-21', good oolitic and intergranular porosity, excellent staining, odor, and free oil show. Log calculates 18% porosity, 20-25% W, 3313-18; 17% porosity, 35-40% W, 3318-21.

3366-70', good oolitic porosity, fair staining; log calculates 10-15% porosity and 35-50% W.
- April 15, 1960 DST #2, 3362-75, 1 hr., rec. 15' mud, IBHP 1146, FBHP 1055, IFP 0, FFP 15, set 4 1/2 csg. at 3374' w/75 sx WOC.
- April 22, 1960 Move in cable tools, rig up swab hole dry.
- April 23, 1960 Schlumberger ran Gamma Ray-Collar log, perforated 3314-18 w/4 jets per ft.; swab 2 gal. oil per hr.; B-J attempted 2000 gal. J type acid; after pumping 5 bbl. circulated between 4 1/2" and 8-5/8" csg. annulus; pumped down plug, found leaking collar at 2866'; pump thru collar 0.8 bbl./min. at 1600#.

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Daily Drilling Log (contd.):

April 24, 1960 Pushed plug to 2897'; perf. 3 jet holes at 2875, circulated water at rate of 5 RPM at 1000#; cemented w/50 sx pozmix cmt. circulated cement at 200#; had returns in csg. annulus; plug at 2836'; WOC will drill out plug and complete well.

April 26, 1960 Swab dry; drld. cmt. plug from 2836 to 2875'; drove HOWCO plug to bottom; 500' fluid in hole.

April 27, 1960 800' fluid in hole (300' oil) swab down; making 1½ BOPH no water; cement job on leaking collar holding, *ran HOWCO R-3 pkr. on 2" upset tbg. set at 3293'; acidized with 2000 gal. B-J J type acid; swabbed and flowed 28 bbl. acid water and oil in 2 hrs.

*drilled up plugs and cement to 3330' (new plugback total depth)

April 28, 1960 1400' fillup in 12 hrs.; swabbed and flowed 71 bbls. oil in 4 hours (load was 48 bbls. of acid + 14 bbls. of water; 62 bbls.).

April 29, 1960 Swab 45 bbls. 1st hour; some water.
 Swab 33 bbls. 2nd hour; water decreasing.

Run 2" upset tbg.; 15' anchor, 2' perf. nipple; 1' seating nipple anchor 2' off bottom (P.B. 3330) pump seated at 3310, pumping thru 4' gas anchor. Run 5/8" rods w/8' O'bannon 1½", metal to metal insert pump.

May 5, 1960 Put on pump 4 pm, 42" stroke, 12/min.

Completed April 28, 1960.