

MID-WEST PETROLEUM MANAGEMENT

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316-265-0513

Property Management
Evaluations

Well Completion
Registered Engineer

J A Allison
300 West Douglas
Wichita, Kansas 67202

Re: Rush County Farm #2
50°E, 750'S of NENESW
Sec. 23 - 18s - 18w
Rush County, Kansas

5/1/81 Hembree Well Service moved in. Rigged up. Pulled rods. BH pump. 2½" tubing. Electra ran correlation log. Log TD 3762'. Perforated 3388'-91'. 4 DP/ft. Ran cast iron bridge plug on wire line, Could not get below 3717'.

5/4/81 Ran sand pump to bottom, recovered several large pieces of metal. Electra ran blank gun to 3759'. Set cast iron bridge plug at 3744'. Swabbed down. Tested one hour, dry.

5/5/81 Ran swab to 3440', tested dry. Service Acid acidized down 5½" casing with 500 gallons MCA, gradually increased pressure to 900#. Feeding at 6 gallons per minute. Displaced 10 barrels. Pressure declined to 825#. Increased rate to ½ BPM at 900#. Pressure drop. 1 minute to 800#. 35 minutes to 250#. Bled off. Total load 92 barrels. Swabbed down, recovered 88 barrels, no show of oil. Acid not completely spent. Short 4 barrels.

5/6/81 Overnite fillup 1500' fluid. No show of oil on top. Electra perforated 3406'-10' 4 DP/ft. Ran tension packer on 116 joints 2½" tubing set at 3400'. Swabbed down. Testing. Packer leaking or communication. Reset packer. Tested dry 1 hour.

5/7/81 Ran swab. Tested dry 1 hour. Service Acid acidized down 5½" casing with 500 gallons MCA. Maximum pressure 1600#. Broke to 1000#. Feeding 4 GPM. Displaced at 2 BPM, 0#. Total load 33.5 barrels. Swabbed down recovered 28 barrels 1st 30 minute test 1 barrel of fluid trace of oil. 2nd 30 minutes 1 barrel of fluid trace of oil. 3rd 30 minutes 1 barrel of fluid 7% oil.

5/8/81 Fluid level 1300' from surface. Swabbed down recovered 33.76 BF. 1st 30 minutes 2.34 BF trace of oil. 2nd 30 minutes 2.34 BF trace of oil. 3rd 30 minutes 1.67 BF trace of oil.

5/9/81 Pulled tubing and packer.

5/11/81 Fluid level 1000' from surface. Electra perforated 3710'-13', 3694'-96'. 4 DP/ft. Ran tubing and packer set at 3684'. Swabbed down, recovered 27.51 BF. 6 barrels over tubing capacity. Pulling 3/4 BF per 15 minutes.

5/12/81 700' fillup overnite, all water. Swabbed down. Tested 1 hour 2/3 BF per 15 minutes. Reset packer 3676'. Swabbed down. Tested 1 hour 2/3 BF per 15 minutes. Pulled tubing and packer. Released rig.

5/30/81 Ran 15' mud anchor seating nipple, 119 jts. 2" EUE tubing (from Deighton), 2" X 1-1/2" X 12' BHD Pump, 2' pony rods, 1-3/4" rod, 145 5/8" rods, 8'-6'-4' pony rod, 3/4" X 14' polish rod w/liner. Hung on well.

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Re: Rush County Farm #2
50'E & 50'S of NENESW
Sec. 23-18s-18w
Rush County, Kansas

7/29/80 Electra ran radiation guard log. Ran drill pipe to RTD 3757'. Conditioned hole 1½ hours. Laid down drill pipe. Ran 103 joints 5½" 8 rd 20# range 3 casing. Set at 3751' (6' off bottom). Packer shoe, petal basket, five centralizers. Allied cemented with 150 sax 60-40 pozmix salt saturated, with 5 barrels salt flush. Plug down 11:00 PM. Float held. Shoe joint 25.02'. W.O.C.

8/4/80 Hembree Well Service moved in. Rigged up. Ran 128 joint 2½" tubing with 4½" bit. (20# casing.)

8/5/80 Drilled wiper plug, 25' cement, guide shoe, circulated 6' open hole. Pulled tubing and bit. Swabbed fluid to 3300'. 20% oil last pull. Hauled tubing and reverse circulator to Rush County Farm #1.

8/12/80 Hembree Well Service moved in. Rigged up. Fluid level 2500' from surface.

8/13/80 Fluid level 2400' from surface. Swabbed down, recovered 13.36 barrels of fluid last pull, 40% oil. 30 minutes swab test. 1st hour 1.25 BF trace of water. 2nd hour 1.40 BF trace of water. 3rd hour 1.25 BO. 4th hour 20 gallons of oil.

8/15/80 42 hours fillup 200'. Swabbed down. 100% oil. 1 hour test 1.25 BO. 2nd hour 20 gallons oil. Service Acid acidized down 5½" 20# casing with 1000 gallons 15% HCL NE acid. Displaced 700 gallons at 1 BPM at 100#. Pressure increased to 500#. Gradually displaced acid at maximum pressure 1300# over 3 hour period. Final pressure 1250#. Bled of pressure. Total load 108 barrels. Swabbed down recovered 87 barrels. 30 minute test 3.34 BF. 80% oil. Short 18 barrels load

8/16/80 Overnite fillup 200' fluid. (100' oil and 100' water,) Swab test. 1st 30 minutes 1.5 BF. 50% oil. 2nd 30 minutes 1.5 BF. 50% oil. Ran sand pump, recovered 2 gallons cement and formation. Service Acid acidized down 5½" 20# casing with 2000 gallons 15% HCL NE acid. Displaced 28 barrels acid. Hole loaded. Displaced 5 barrels at 1 BPM, pressure increased to 1350#. Broke to 900#. Pumped 20 barrels at 1 BPM. Final pressure 1000#. 15 minutes pressure drop to 600#. 25 minutes drop to 550#. Total load 136 barrels. Swabbed down recovered 112 barrels. Short 24 barrels load. Show of oil.

NOV 1 9 1980
CONSERVATION DRILL
Wichita, Kansas

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Well Completion
Registered Engineer

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Re: Rush County Farm #2
50'E & 50'S of NENESW
Sec.23-18s-18w
Rush County, Kansas

/26/81 Hembree Well Service, moved in and rigged up. Pulled rods, BHP, tubing. Ran sand pump, recovered large pieces of metal (packer shoe) Several pieces of formation and cement. Cleaned out approximately 1 foot.

/27/81 Ran sand pump. Hole clean. Ran tubing, BHP, and rods. Replaced bottom 3 joints of tubing, 3 rods, 5 rod boxes. Replaced rods were worn flat on one side, and grooves in tubing indicating bottom of casing is severely crooked.

STATE LAND COMMISSION

NOV 1 9 1987

PROPERTY DIVISION
WICHITA, KANSAS

DAILY DRILLING REPORT

ELL RUSH #2
ONTRACTOR WOODMAN & IANNITTI DRILG. CO.
" PHONE 316-265-7650 (Wichita)
" RIG PHONE
" TOOLPUSHER
FIELD

S-T-R Sec. 23-18S-18W
SPOT 50' E. & 50' S. of NE NE SW
COUNTY RUSH
ELEVATION 1991 Gr.
1996 KB
GEOLOGIST

ELECTRIC LOG TOPS	DEPTH	DATUM
Anhydrite	1124	(+872)
Basic Anhydrite	1156	(+840)
Heebner	3326	(-1330)
Lansing	3381	(-1385)
Bas Kansas City	3649	(-1653)
Conglomerate	3718	(-1722)
Conglomerate Sand	3728	(-1732)
Arbuckle	3738	(-1742)
Conglomerate Shale	3743	(-1747)
Arbuckle	3747	(-1751)
Log TD	3756	(-1760)
RTD	3757	(-1761)

MIRT July 21, 1980
SPUD July 22, 1980
SURFACE 8-5/8" @ 1134'

7-21-80 - MIRT
7-22-80 - Set 8-5/8" Surface Casing @ 1134' with 425 sacks cement - circulated - plugged down @ 9:45 A.M.
7-23-80 - Drilling @ 1940'.
7-24-80 - Drilling @ 2750'.
7-25-80 - Drilling @ 3360'.
7-26-80 - DST #1 (Kansas City) 3389-3415'; op 30, si 45; op 60, si 45; rec. 114' gas in pipe, 134' Very Heavy Oil Cut Mud, 30% Oil, 50% Mud, 10% Filtrate; ISIP 1126, FSIP 1083; IFP 32-43, FFP 54-65, Temp. 108°, curve tite; drilling @ 3545'.
7-27-80 - DST #2 (Conglomerate) 3713-3730'; op 30, si 45; op 30, si 45; weak blow; 1st open dead, second open recovered 15' oil cut mud, 15% oil, ISIP 382, FSIP 98; IFP 32-32, FFP 43-43, Temp. 121°.
7-28-80 - DST #3 (Arbuckle) 3713-3739', op 30, si 45; op 60, si 45; rec. 30' slightly oil cut mud; ISIP 163, FSIP 76, IFP 32-32, FFP 43-43, Temp. 103°. Next 10' drilled rough, samples 1/3 Conglomerate shale, 1/3 Conglomerate chert; 1/3 Dolomite show.
DST #4 3713-3751', op 30, si 30; op 30, si 30; weak blow 10 min., rec. 20' very slightly oil cut mud, ISIP 120, FSIP 98; IFP 43-43; FFP 43-43, Temp. 103°.
7-29-80 - Drilled 6' deeper, last 2' rough; DST #5 3713-3757', op 30, si 30; op 30, si 30, strong blow, recovered 500' muddy oil, ISIP 577, FSIP 458; IFP 120-218; FFP 229-229, 30% mud, 70% oil. Electra ran Radiation Guard Log. Ran DP to TD 3757', conditioned hole 1 1/2 hrs. lay down DP, ran 103 joints of 5 1/2" 8rd 20# Range 3 Casing, set @ 3751' (6' off bottom), packer shoe, petal basket, 5 centralizers. Allied cemented with 150 sacks 60/40 Poz salt sat. 5 bbl. salt flush, plugged down @ 11:00 P.M., float held, shoe 25.02 - WOC. (Return 3 joints 20#).
8-04-80 - Hembree Well Service moved in and rigged up, ran 128 joints of 2 1/2" tubing, with 4 1/2" bit (20# Casing) 4-3/4" Bit No Go.
8-05-80 - Drilled wiper plug 25' cement guide shoe, circ. 6' open hole, pulled tubing and bit, swab fluid to 3300', 20% oil last pull, hauled tubing and reversed circulator to Rush#1.
8-13-80 - Fluid level 2400' from surface - swab down - rec. 13.3 bbls. fluid, last pull 40% oil; 30 min. swab test - 1st pull 1.25 bbls. fluid, trace water; 2nd pull 1.40 bbls. fluid, trace water; 3rd pull 1.25 bbls. Oil, no water; 4th pull 20 gals. Oil.
8-15-80 - 42 hr. fillup, 200' fluid - swab down, 100% Oil - 1st hr. 1.25 bbls. oil, 2nd hr. 20 gal. oil. Service Acid acidized down 5 1/2" 20# casing with 1000 gals. 15% HCLNE Acid, displaced 700 gals. @ 1 bbl. per minute @ 100# pressure, increased to 500# gradually displaced @ maximum pressure of 1300# over a 3-hr. period. Final pressure 1250# - bled off pressure. Total load 108 bbls. fluid, swab down, rec. 87 bbls. load, 30 min. test 3.34 bbls. fluid, 80% Oil.
8-16-80 - 200' fillup overnight, 50% - 50% - sand pumped, rec. 2 gal. cement and formation, (big nodules half dollar size, shale reddish). Service Acid acidized down 5 1/2" 20# casing with 2000 gals. 15% HCL NE displaced 28 bbls., hole loaded, displaced 5 bbls. @ 1 bbl. per min, press. to 1350#, broke to 900#, pumped 20 bbls. @ 1 bbl. per min., final 1000# 15 min., pres. dropped to 600#, 25 min. to 550#, total load 136 bbls., short 24 bbls. load, show oil. (Cont'd on Page #2)

COMPLETION REPORT CONTINUED:

9-17-80 - Swab down, recovered 9.96 bbls. fluid, 30% Oil; 30 min. 4.98 bbls. fluid; 30 min. 2.90 bbls. fluid, 30% Oil; 30 min. 4.56 bbls. fluid, 50% Oil; start test
1st hr. 4.59 bbls. fluid, 80% Oil
2nd hr. 6.24 " " 80% Oil
3rd hr. 3.23 " " 80% Oil
4th hr. 3.23 " " 80% Oil
5th hr. 1.15 (bad cups)
6th hr. 2.01 bbls. fluid, 80% Oil.

9-22-80 - Pulled 4½" Bit & 2½" Tubing. 96 hr. fillup 700' fluid. Service Acid acidized down 5½" 20# casing with 5000 gals. 15% NE Acid. Pumped 68 bbls. hole loaded, pumped @ 2½ bbls. per minute, pressure increased to 1100#, decreased rate to 2 Bbls. per min., @ 1150#, 1½ bbls. per min. @ 1200#, 97 bbls. displaced - pressure gradually broke to 750#, 5 bbls. overflush. In 30 min. pressure dropped to 480#, bled off, total load 208 bbls., swab down, rec. 121.36 bbls. fluid, last pull trace of oil.

3-80 - 64 bbl. load to recover - overnight fillup 800', 40% oil, swab down, 22.82 bbls. fluid
Swab test - 1st hr. 7.10 bbls. fluid, 27% oil
2nd hr. 5.43 " " 27% oil
3rd hr. 4.18 " " 27% oil
4th hr. 3.35 " " 33% oil
5th hr. 3.76 " " 33% oil
6th hr. 3.34 " " 33% oil
7th hr. 4.18 " " 33% oil
8th hr. 2.93 " " 33% oil - recovered 57 bbls. out of 64 bbl. load.

9-24-80 - Check fluid level, sand pump bottom - release rig.

1-26-81 - Hembree Well Service moved in from Seuser #2 - rigged up double drum. Pulled tubing and rods, ran sand pump, recovered large pieces metal (shoe?) and formation. Recovered 8 to 10 inches in 6 runs. Hole condition - 3½ joints in fluid, tubing at least 6' off bottom and the bottom 3 rods were worn flat. Pump shows extreme corrosion-electrolysis. (Similar problems on Bahr which had cong. open with Arbuckle.)

2-81 - Ran sand pump. Hole clean. Ran tubing, BHP, and rods. Replaced bottom 3 joints of tubing, 3 rods, 5 rod boxes. Replaced rods were worn flat on one side, and grooves in tubing indicating bottom of casing is severely crooked.

----- RECOMPLETION IN LANSING ZONE

01-81 - Hembree moved in and pulled rods and tubing - Electra perf. 3388-3392, 4 DP's per ft. Ran iron bridge plug on wireline - would not go past 3716' - pulled out.

5-04-81 - Ran sand pump to bottom, recovered several large pieces of metal. Electra ran blank gun to 3759', set cast iron bridge plug @ 3744', swab down, tested dry in 1 hr.

5-05-81 - Ran swab to 3440', tested dry. Service Acid down 5½" casing with 500 Gals. MCA, gradually increasing pressure to 900#, feed @ 6 gal. per minute, displaced 10 bbls., pressure declined to 825 lbs., increased rate to 1/2 bbl. per minute @ 900 lbs., pressure dropped in 1 min. to 800 lbs; 35 min. to 250 lbs. - bled off, total load 92 bbls., swab down, rec. 88 bbls., no show oil, acid not spent.

5-06-81 - Overnight fillup 1500' fluid, no show oil on top. Electra perf. 3406-3410', 4 DP's/ft. Ran Tension Packer on 116 jts. 2½" tubing, set at 3400', swab down, testing - Packer leaking or communication. Reset packer, tested dry in 1 hr.

5-07-81 - Ran swab, tested dry in 1 hr. Service Acid acidized down 2½" Tubing with 500 Gals. MC maximum pressure 1600#, broke to 1000#, feed @ 4 gal. per min., displaced 2 bbl. per min - 0 pounds - total load 33.5 bbls., swab down - 30 min. tests: 1st 1 BF, Trace Oil 2nd - 1 BF, Trace Oil; 3rd - 1 BF, 7% Oil.

5-08-81 - Overnight fillup 1300' from surface, swab testing. Swab down, recovered 33.6 Bbls. Fluid 30 min. tests: 1st - 2.34 BF - Trace Oil; 2nd - 2.34 BF - Trace Oil; 3rd - 1.67 BF - Trace Oil

5-11-81 - Fluid level 1000' from surface. Electra perf. 3710-13; 3694-96, 4 DP/ft., swab down, recovered 27.51 bbls. fluid, 6 bbls. over tubing cap - pulling 3/4 bbls. fluid per 15 min. = 3 BFPH, no show - Packer @ 3684'.

5-28-81 - 700' fillup, all water. Swab down test 1 hr. 2/3 bbls. fluid/15 min.; reset packer 3676', swabbed down 2/3 bbls. fluid/15 min. Pulled tubing and packer. Released Rig.

30-81 P-2, 2" T69 & 5/8 rods 2 x 1½ x 17' BHD

State Corr. 1000 ft. 1000 ft.

1000 ft. 1000 ft.
Quality Control
Quality Control