

WELL NAME: MCFARLAND QUEEN "A" UNIT #4632 OPERATOR: PETRUS OIL COMPANY, L.P.
COUNTY/STATE: ANDREWS COUNTY, TEXAS PHONE: 214/788-3300
FIELD: MCFARLAND QUEEN ENGINEER/GEOLOGIST: SPENCE/WARD
BUDGETED DEPTH: WI: 100%

FILE COPY

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- 08-01-89 PD 1766', FTG 1766', MW 9.3, VIS 30. PA: TOH to run csg. OP: 3-1/2 hrs MIRU. 1-1/2 hrs Drill mouse & rat hole. 4-1/2 hrs Drlg. Spud well @ 12:00 PM 7-31-89. 1/4 hr Survey @ 485' - .5 deg. 2-1/2 hrs Drlg. 1/4 hr Survey @ 980' - 1.25 deg. 4-1/2 hrs Drlg. 1/4 hr Survey @ 1428' - 1.5 deg. 5 hrs Drlg. 1 hr Circ. 3/4 hr Drop survey & TOH to run 8-5/8" csg.
DC: \$18,588
CC: \$18,588
- 08-02-89 PD 2017', FTG 251', MW 10, VIS 29. PA: Drlg. OP: 1/2 hr TOH. 4 hrs Run 8-5/8" csg. guide shoe .50, shoe jt 45.28, float collar 1.50, 40 jts 1700.28. Total ftg 1747.56'. 1/2 hr Circ. 1 hr Cmt plug dn @ 1:00 PM. Circ 120 sx. 4 hrs WOC. 2 hrs TIH. 1/2 hr Test pipe rams to 1000 psi, ok. 1 hr WOC. 1/2 hr Drill out, tagged cmt @ 1720'. 5-1/2 hrs Drlg.
DC: \$22,496
CC: \$41,084
- 08-03-89 PD 3515', FTG 1466', MW 10, VIS 29. PA: Drlg. OP: 4-1/2 hrs Drlg. 1/2 hr Survey @ 2256' - 1.5 deg & rig service. 5-1/2 hrs Drlg. 1/2 hrs Survey @ 2752' - 1.75 deg. 6-1/2 hrs Drlg. 1/2 hr Survey @ 3246' - .75 deg. 1-3/4 hrs Drlg. 1/4 hr Tighten stuffing box pit side. 4 hrs Drlg.
DC: \$10,934
CC: \$52,018
- 08-04-89 PD 4341', FTG 826', MW 10, VIS 29. PA: Trip. OP: 6 hrs Drlg. 1/2 hr Survey @ 3715' - 1 deg & rig service. 11-1/4 hrs Drlg. 1/2 hr Survey. 2-1/2 hr Drlg. 1/4 hr Tighten liner pit side. 3/4 hr Drlg. 2-1/4 hr Trip for bit.
DC: \$6,440
CC: \$58,458
- 08-05-89 PD 4791', FTG 450', MW 10.1, VIS 30. PA: Trip for bit. OP: 2-3/4 hrs Finish trip for bit #3. 1/2 hr Wash 40' to btm. 1-1/2 hr Drlg. 1/4 hr Rig service. 12 hrs Drlg. 1/2 hr Survey @ 4681' - 1 deg. 5-1/2 hrs Drlg. 1 hr Trip for bit #4.
DC: \$3,845
CC: \$62,303
- 08-06-89 PD 4905', FTG 114', MW 10.1, VIS 34. PA: Logging. OP: 3-1/2 hrs Trip for new bit. 1/2 hr Wash 20' to btm. 2-1/4 hr Drlg. 1/4 hr Rig service. 3-1/4 hr Drlg. 1/2 hr Change out Diesel pmp motor. 8-3/4 hrs Drlg. 1 hr Circ F/logs. 1/4 hr Survey @ 4905' - 1.25 deg. 3-3/4 hrs Strap out of hole F/logs.
DC: \$1,460
CC: \$63,763

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- 08-07-89 PD 4905', FTG 0'. PA: Moving. OP: 2-3/4 hrs Logging. Loggers TD 4904'. 1-1/2 hrs TIH. 1 hr Circ. 3-3/4 hrs LD pipe & collars. 3/4 hr ND. 3-1/4 hrs Run 4-1/2" csg. Float shoe 1.50, shoe jt 15.00, float collar 1.50, 20 jts 11.60# 846.41, 116 jts 1050# 4053.03. Total ftg 4917.44'. 1/2 hr Circ. 1-1/2 hrs Cmt. 1 hr WOC. floats did not hold. 4-1/2 hr Open cmt head - no bleed off, cut off, install pack off & clean steel pits. 3-1/2 hrs RD. Cmt w/875 sx lead, 300 sx tail. Displaced w/62 bbls acid, 14 bbls wtr. Plug dn @ 10:00 PM 8-6-89. Circ 105 sx. Rig release @ 3:30 AM 8-7-89.
DC: \$30,220
CC: \$93,983
- 08-09-89 RU Wedge Wireline and ran CBL, CCL and Gr log form 4886'-4000'. Showed good cmt bond. TIH w/3-1/8" hollow carrier csg gun and perf from 4814'-4820' and 4838'-4860', w/2 spf 90 deg phasing. RD Wedge Wireline. RU Brownlee pmp trk and formation broke dn @ 2400#. Pmpd 47 bbls into formation at 3 bpm and 1200#. ISIP 900# and 15 min 0#.
DC: \$2,625
CC: \$2,625
- 08-12-89 MIRU Halliburton and fracture stimulate well as follows:
- Pumped 2000 gal 7-1/2% NEFE HCL acid dn 4-1/2" csg. CP 1820#.
- Pumped 2000 gals 2% KCL treated brine wtr pre-pad dn 4-1/2" csg. CP 1880 psig.
- Pumped 13,000 gals 2% KCL 30 lb/gal Borate LGC brine wtr pad. CP 1800# increasing to 2550 psig.
- Pumped 13,500 gals 30 lb/gal Borate LGC fld. Start ramp frac w/1# to 6#/gal 16/30 Ottawa sand. Total sand 54,700 lbs. CP 2390# decreased to 2000 psig.
- Pumped 2500 gals 30 lb/gal Borate fld w/6 lb/gal 12/20 Ottawa sand. Total sand 15,000 lbs CP 2200# - 2500#.
- Flushed w/3190 gals of treated wtr. CP 2180#.
- | | |
|--------|----------|
| ISIP | 2040# TP |
| 5 min | 1980# TP |
| 10 min | 1910# TP |
| 15 min | 1840# TP |
- AIR 18.0 bpm. Avg CP 2300 psig. SI 18 hrs after frac. CP 0#.
DC: \$21,309
CC: \$23,934
- 08-13-89 SI 42 hrs after frac. CP 0#.
- 08-14-89 SI 66 hrs after frac. CP 0#.

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08-15-89 MIRU S & N Well Service to put on production. TIH w/1 jt 2-3/8 muleshoe and 154 jts 2-3/8" tbg. Tagged sand at 4849". RU reverse unit. Cleaned sand from 4849' to 4893'. RD reverse unit. TOH w/154 jts 2-3/8" tbg. SDFN.
DC: \$974
CC: \$24,908

08-16-89 RU Atlas Wireline and ran prism log 4888' to 4000'. RD Atlas Wireline.

| | | | | |
|--------|-----|-----|-------------------------------------|-----------------|
| TIH w/ | 1 | jt | 2-3/8" EUE 8rd J-55 tbg w/bull plug | 32.82' |
| | | 1 | 2-3/8" x 4' perf sub | 4.00' |
| | | 1 | 2-3/8" SN | 1.10' |
| | 4 | jts | 2-3/8" EUE 8rd J-55 tbg | 123.24' |
| | | 1 | 2-3/8" x 4-1/2" TAC | 3.80' |
| | 152 | jts | 2-3/8" EUE 8rd J-55 tbg | 4682.58' |
| | | | | <u>4847.54'</u> |

Set TAC w/12,000# in tension @ 4686', SN @ 4810' and EOT @ 4847.54'.

| | | |
|--------|-----|-----------------------------|
| TIH w/ | 1 | 20 x 125 x RWAC x 16-3-S-00 |
| | 6 | 1-1/2" K-bars |
| | 130 | 3/4" rods |
| | 55 | 7/8" rods |
| | 1 | 1-1/4" x 22' polish rod |

Spaced out pmp and HWO. RDMO. Waiting on pmpg unit.
DC: \$4,632
CC: \$29,540

08-20-89 24 hrs 40 BO, 118 BW. TR = 40 BO, 118 BW.

08-21-89 24 hrs 42 BO, 126 BW. TR = 82 BO, 244 BW.

08-22-89 24 hrs 24 BO, 71 BW. TR = 106 BO, 315 BW.

08-23-89 24 hrs 45 BO, 45 BW. TR = 151 BO, 360 BW.

08-24-89 Well tied into battery, unable to test.