

SUPPLEMENTAL WELL REPORT

FEDERAL "RR" COM #1

FEDERAL "RR" COMM #1, 660 FSL & 1980 FWL, Sec 24, T23S, R26E,
South Carlsbad Field, Eddy County, New Mexico
Obj.: Drill & complete dual in morrow Gas Well

12/31/73 Moving in rigging up Marcum Drlg. Co.

FEDERAL "RR" COM #1

1/1/74 55% RU.

1/2 (1) 392 ND red bed, WOC, 13-3/8 csg, 17½ hole, 3/4 @ 392, S. Mud.
Marcum Drlg Co spudded @ 11 a.m. 1/1/74, ran 13 jts 392'
13-3/8 OD 48# H-40 8rd ST&C csg, Howco cmtd csg on bottom
w/ 400x Class C cmt w/ 2% CaCl, PD @ 5:30 a.m. 1/2/74, cmt
circ, WOC.

FEDERAL "RR" COM #1

1/3 (2) 392 ND, WOC, 13-3/8 csg, prep to drill 12½ hole.

FEDERAL "RR" COM #1

1/4 (3) 1018 drlg sh, 12½" hole, ½ @ 844,
WOC total 25 hrs, test 13-3/8 csg w/ 1000#/ok.

FEDERAL "RR" COM #1

1/5 (4) 1336 ND anhy, 12½" hole, 2¼ @ 1321, Br Wtr.
fish & rec 9 - 7½ DC's and 12½ bit past 6½ hrs, prep to
drill.

1/7 (6) 1735 drlg anhy, 12½ hole, 2° @ 1635. Br Wtr.

FEDERAL "RR" COM #1

1/8 (7) 2400 drlg lm & anhy, 12½ hole, 3/4 @ 1960. Br Wtr.

FEDERAL "RR" COM #1

1/9 (8) 3105 drlg sd & lm, 12½" hole, ½ @ 2915. Br Wtr.

FEDERAL "RR" COM #1

1/10 (9) 3664 drlg lm & sd, 12½ hole, 1° @ 3415. Br Wtr.

FEDERAL "RR" COM #1

1/11 (10) 4080 drlg lm & sd, 12½ hole, ½ @ 3890. Br Wtr.

FEDERAL "RR" COM #1

1/12 (11) 4580 drlg lm & sd, 12½ hole, NND. Br Wtr.

1/14 (13) 5205 drlg lm & sd, 12½ hole, ¼ @ 4705. Br Wtr.

FEDERAL "RR" COM #1

1/15 (14) 5420 ND lm, 12½ hole, 1° @ 5420, Br Wtr.
circ 2 hrs, PCH, LD DC's, prep to run 9-5/8 csg.

FEDERAL "RR" COM #1,

1/16 (15) 5420 ND, WOC 9-5/8 csg, ran 124 jts 5420' 9-5/8 OD
43.50# S95 8rd LT&C csg, Howco cmtd csg on bottom @ 5420
w/ 2700x TLIW containing 7½# salt & ¼# flocele/x + 200x
Class C Neat cmt, PD @ 3:15 pm 1/15/74, cmt did not circ,
lost 100% circ on last 65 bbls of displ, WOC 3 hrs, ran
1" pipe on outside of 9-5/8 csg, tag cmt @ 460, Howco cmtd
thru 1" pipe w/ 160x Class C cmt. cmt circ to surf, now RU

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FEDERAL "RR" COM #1
 1/17 (16) 5475 drlg lm, 8-3/4 hole, NND. Fr Wtr.
 finish NU BOP's, test BOP's and ck manifold 5000#/ok,
 test 9-5/8 csg to 1500#/ok, WOC total of 33½ hrs.

FEDERAL "RR" COM #1
 1/18 (17) 5785 drlg lm, 8-3/4 hole, 1½ @ 5650. Fr Wtr.

FEDERAL "RR" COM #1
 1/19 (18) 6120 drlg lm, 8-3/4 hole, 1° @ 6057. Fr Wtr.

1/21 (20) 6792 drlg lm, 8-3/4 hole, 3/4 @ 6648. Fr Wtr.

FEDERAL "RR" COM #1
 1/22 (21) 7114 drlg lm, 8-3/4 hole, NND. Fr Wtr.

FEDERAL "RR" COM #1
 1/23 (22) 7520 drlg lm, 8-3/4 hole, 3/4 @ 7175. Fr Wtr.

FEDERAL "RR" COM #1
 1/24 (23) 8000 drlg lm, 8-3/4 hole, 3/4 @ 7672. Fr Wtr.

FEDERAL "RR" COM #1
 1/25 (24) 8443 drlg lm, 8-3/4 hole, 1½ @ 8125. Br Wtr.

FEDERAL "RR" COM #1
 1/26 (25) 8790 drlg lm, 8-3/4 hole, 1° @ 8540. Br Wtr.

1/28 (27) 9670 drlg lm, 8-3/4 hole, 3/4 @ 9507. Br Wtr.

FEDERAL "RR" COM #1
 1/29 (28) 10,022 drlg lm, 8-3/4 hole, 1° @ 9942. Br Wtr.

FEDERAL "RR" COM #1
 1/30 (29) 10,281 drlg lm, 8-3/4 hole, 3/4 @ 10,050. Br Wtr.

FEDERAL "RR" COM #1
 1/31 (30) 10,567 drlg lm, 8-3/4 hole, NND. Br Wtr.

FEDERAL "RR" COM #1
 2/1 (31) 10,932 drlg lm, 8-3/4 hole, NND. Br Wtr.

FEDERAL "RR" COM #1
 2/2 (32) 11,110 drlg lm, 8-3/4 hole, 1½ @ 10,985. Br Wtr.

2/4 (34) 11,407 drlg lm & sh, 8-3/4 hole, NND. 10.2-35-7.0.

FEDERAL "RR" COM #1
 2/5 (35) 11,555 drlg lm & sh, 8-3/4 hole, NND. 10.1-34-7.0.

FEDERAL "RR" COM #1
 2/6 (36) 11,718 drlg lm & sh, 8-3/4 hole, NND. 10.2-34-6.2.

FEDERAL "RR" COM #1
 2/7 (37) 11,848 drlg lm & sh, 8-3/4 hole, 2¼ @ 11,715. 10.2-34-6.2.

FEDERAL "RR" COM #1
 2/8 (38) 12,000 TD lm & sh, 8-3/4 hole, NND, 10.2-40-3.2.
 prep to circ to run logs.

- 2/9 FEDERAL "RR" COM #1
 (39) 12,005 TD lm & sh, 8-3/4 hole, 10.2-40-3.2.
 circ 3½ hrs, POH, Dresser-Atlas ran GRComp-N TD-surf,
 Comp D-Cal & LL 5416-TD/14 hrs, ran bit to 12,005, now
 cont circ to run csg.
- 2/10 & 11 12,005 TD, WOC 7" liner, ran 161 jts 7" 8RT 26# LT&C liner
 on BWS Type C hanger set @ 11,997, T/liner @ 5236, Howco
 cmt'd w/ 1200x TLW 0.5 of 1% Halad 9 + 250x Type E Neat, job
 compl 4 am MDT 2/10/74, lost returns, last 80 bbls displ,
 WOC 6 hrs, ran 8-3/4 bit to top liner @ 5236, no cmt,
 pumped over top liner 5 BPM 1000 psi, POH, ran 9-5/8 RTTS
 pkr on DP set @ 5050, then Howco cmt'd 7" liner w/ 500x
 Class C ¼# Flocele/x, Max Press 1000 psi, WOC 12 hrs, POH,
 ran bit, tagged cmt @ 5146, prep to DO to top liner.
- 2/12 FEDERAL "RR" COM #1, 12,005 TD.
 DO cmt 5146 to top liner @ 5236, press on csg 2000#/30
 min/ok, LD DP & DC's, clean pits, remove BOP, Rel Marcum
 Drlg Co rig @ 7 pm MDT 2/11/74.
- 2/13 FEDERAL "RR" COM #1, 12,005 TD.
 MORT.
- 2/14 FEDERAL "RR" COM #1, 12,005 TD.
 WO Completion unit.
- 2/15 FEDERAL "RR" COM #1, 12,005 TD.
 WO completion unit.
- 2/16 FEDERAL "RR" COM #1, 12,005 TD.
 WO Completion unit.
- 2/17 & 18 WO Completion unit, prep to RU xpert DD unit.
- 2/19 Rig up x-pert well Ser unit, ran 6-1/8" bit on 4
 4½" DCs & 65jts 2-3/8" tbq, SDFN.
- 2/20 FEDERAL "RR" COM #1, 12,005 TD.
 Ran bit to 5284, drilled cement in 7" liner 5284-5315,
 ran bit to 10,534, drilled cement to 10,564, SDFN.
- 2/21 FEDERAL "RR" COM #1, 12,005 TD.
 Drill cement in 7" liner from 10,564 - 11,020, SDFN.
- 2/22 FEDERAL "RR" COM #1, 12,005 TD.
 Drill cement in 7" liner from 11,020-11,560', SDFN.
- 2/23 FEDERAL "RR" COM #1 12,005 TD.
 Drill cement in 7" liner from 11,560-11,953', circulate
 hole clean, test csg 2500#, OK, displaced hole w
 10.5# CaCl wtr, SDFN.
- 2/24 FEDERAL "RR" COM #1
 POH w 2-3/8" tbq, LD DCs & bit, Dresser-Atlas ran
 GR-Collar-Corr log from 5233-11,941, then perforated
 7" liner in the marrow @ 11,512-516; 11,558-568;
 11,576-582; 11,623-629; 11,634-644; 11,706-710 &
 11,868-11,875 w 1 JSPF total of 54 holes, Dresser ran
 Baker 7" model D pkr to 11,450', pkr failed to set,
 SDFN

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- 2/25 Dresser-Atlas ran & set Baker 7" model D pkr @ 11,460' ran 2-3/8" tbg w F nipple 10'x2-3/8" sub Baker latch in seal assembly 8' sub Baker ER receptacle & 2-3/8" EUE 8 rd: N80 tbg to surface, tested to 5000# while running, prep to displace hole w 9.5# TSW.
- 2/26 FEDERAL "RR" COM #1, 12,005 TD.
Displaced hole w 9.5# TSW, latched back onto Baker receptacle, inst tree, test tree w 5000#, OK, bottom up end of tbg @ 11,478' PSI F nipple w 1.81 ID @ 11,473' Baker latch in seal assembly @ 11,460, Baker ER receptacle @ 11,445' w 1.87 ID, rig up & swab 80 BLW in 11 hrs 3500' FIH, gd sh of gas, down 3 hrs repairing lubricator, cont to swab.
- 2/27 FEDERAL "RR" COM #1, 12,005 TD.
Swab tbg dry to 10,500 in 9 hrs, Western Co acidized perfs 11,512-11,875 w 5000 gals 7½% MS acid used 45 RCNBS flushed w KCL wtr, all fluid contained 1000 SCF N₂ per bbl, TTP 8300-8000#, AIR 7.6 BPM, ISIP 4500# 5 min SIP 4150# job comp@ 5:00 pm, 2/26/74, F to pits 11½ hrs on 1" ck, TP 3600 to 0 to 35#, cont to clean to pits.
- 2/28 FEDERAL "RR" COM #1, 12,005 TD.
Flow to pits 24 hrs on 1" ck, TP 35-40#, flow estimated 3-5 BAW per hr, cont to test.
- 3/1 FEDERAL "RR" COM #1, 12,005 TD.
F 8 hrs on 1" ck, TP 35-40#, then F 3 hrs on 48/64 ck TP 70-75#, flowing tr of wtr, SI 13 hrs, TP 3200#.
- 3/2 FEDERAL "RR" COM #1, 12,005 TD.
F 4 hrs on 24/64 ck to 1" ck, TP 3200#-50#, Made 1 slug of wtr, SI 2 hrs, TP 2700#, flow spray of wtr in 2 hrs on 1" ck, TP 2700-50#, SI 2 hrs, TP 2650#, flow spray of wtr 1 hr on 1" ck, TP 2650-50#, SI 13 hrs, TP 3050#, prep to set plug in receptacle.
- 3/4 Cecil Horne Wire Line Co set plug in receptacle @ 11,445' bled off TP 3050-0, load tbg w 9.5# SW, unlatch from receptacle, POH, now going in hole w 3½" OD Buttress N80 tbg 135 jts in hole, testing while running.
- 3/5 FEDERAL "RR" COM #1, 12,005 TD.
Running & testing 3½ tbg, 356 jts in hole.
- 3/6 FEDERAL "RR" COM #1, 12,005 TD.
Finish running & testing 3½ Buttress tbg to Baker recpt @ 11,445, spaced out w/ 15,000# T, sw dry to 5000, Cecil Horne Wire Line Co ret plug from recpt, then flow & clean to pits/9 hrs on 1" ck, TP 50, making small amt of LW, cont to clean to pits.
- 3/7 FEDERAL "RR" COM #1, 12,005 TD.
F1 to pits 11 hrs on 1" ck, TP 50-40, rec spray of wtr, SI, prep to treat.

- 3/8 FEDERAL "RR" COM #1, 12,005 TD.
SI 14 hrs TP 2800, clean to pits 3 hrs on 1" ck, TP 2800 to 50, then Western Co frac Morrow perfs w/ 30,000 gals 5% MS gel fluid + 46 tons liquid CO₂, 36,000# 20/40 Ottawa sd, 9000# 12/20 glass beads, 30 RCNBS, TTP 6800-8750, AIR 23.0 BPM, ISIP 3800, 5 min SIP 3200, job compl 1:30 pm 3/7/74, fl to pits 5 hrs on 1" ck, TP 2600 to zero, then S & F to pits past 9½ hrs, cont to test.
- 3/9 FEDERAL "RR" COM #1, 12,005 TD.
S 1 hr then fl to pits past 23 hrs on 1" ck, TP 50, cont to clean to pits.
- 3/10 Fl est 66 BLW/11 hrs on 1" ck, TP 50, SI for press buildup.
- 3/11 SI 36 hrs TP 2600, prep to test.
- 3/12 FEDERAL "RR" COM #1, 12,005 TD.
Fl to pits 11 hrs on 1" ck, TP 2600-75, fl heavy slug of LW, SI 13 hrs, TP 2500.
- 3/13 FEDERAL "RR" COM #1, 12,005 TD.
Fl to pits 11 hrs on 1" ck, TP 2500-75, fl heavy slug of wtr, then spray of wtr for remainder 11 hrs, SI 13 hrs, TP 2400, prep to P & LD 3½ tbq.
- 3/14 FEDERAL "RR" COM #1, 12,005 TD.
Cecil Horne Wire Line Co ran & set plug in ER recpt @ 11,440, bled TP 2400-250, ret plug, ran new plug, bled TP 1600-300, WO plug 2 hrs, ran & set plug in R nipple w/ 1.81 ID @ 11,463, bled TP to zero 35 min, unlatch from recpt @ 11,440, loaded tbq w/ 9.5# br wtr, SDFN, prep to LD 3½ tbq.
- 3/15 FEDERAL "RR" COM #1, 12,005 TD.
Equalize press 1 hr, P & LD 211 jts 3½ OD Buttress tbq, SDFN.
- 3/16 FEDERAL "RR" COM #1, 12,005 TD.
Finish LD 3½ Buttress tbq, ran 2-3/8 N80 EUE 8rd tbq latched onto recpt @ 11,440, inst'l tree, Knox Serv Co loaded csg tbq annulus w/ 70 bbls 9.5# SW, press up to 1200#, leaked off to 400#, TP zero, SDFN.
- 3/18 FEDERAL "RR" COM #1
Cecil Horne Wire Line Co attempted to ret plug from R nipple @ 11,463 w/ no success, ran bailer, CO to plug, ran fishing tools, caught plug, unable to pull, cut line on top of tools, sw tbq dry to 4300, SDFN, SI 12 hrs, TP 1350, ran fishing tools, fished tools and plug, TP 1400, loaded csg w/ 23 BSW, PI 50 BSW, PP 400, did not effect TP, fl to pits 6 hrs on 1" ck, TP 1400-70, SI 13 hrs, TP 2450, CP very sl vac, prep to clean to pits.
- 3/19 FEDERAL "RR" COM #1, 12,005 TD.
Clean to pits 11 hrs on 1" ck, TP 2400-70-60#, SI 13 hrs, TP 2300, CP zero, cont to clean to pits.

- 3/20 FEDERAL "RR" COM #1, 12,005 TD.
Clean to pits 11 hrs on 1" ck, TP 2300-70-100-55, SI 13 hrs, TP 2300.
- 3/21 FEDERAL "RR" COM #1, 12,005 TD.
Clean to pits 11 hrs on 1" ck, TP 2300-65, fl load wtr by slugs, SIFN, RD & rel unit @ 9 am 3/20/74.
- 3/22 FEDERAL "RR" COM #1, 12,005 TD.
SI 13 hrs TP 2300#, F to pits 11 hrs on 1" ck, TP 2300 to 100#, flow slugs of water, SI for night.
- 3/23 FEDERAL "RR" COM #1, 12,005 TD.
SI 13 hrs, TP 2250#, F to pits 11 hrs, TP 2250# - 125# flowing wtr by heads, SI for nite.
- 3/2 5 SI 13 hrs, TP 2250#, F to pits 11 hrs on 1" CK TP 2250 to 100# flowing wtr by heads, SI 13 hrs, TP 2250#, F to pits 11 hrs on 1" ck, TP 2250 to 100#, flowing wtr by heads, SI.
- 3/26 FEDERAL "RR" COM #1, 12,005 TD.
SI 13 hrs TP 2150#, F 11 hrs on 1" ck TP 2150 to 100#, Cont to flow wtr by heads, SI for nite.
- 3/27 FEDERAL "RR" COM #1, 12,005 TD.
SI 13 hrs, TP 2150#, F 11 hrs on 1" ck TP 2150# to 100# flow wtr by heads, SD for nite, will catch wtr sample today.
- 3/28 FEDERAL "RR" COM #1, 12,005 TD.
SI 13 hrs, TP 2150#, F 11 hrs on 1" ck, TP 2150 to 150#, flowing wtr by heads, water sample indicated acid wtr & formation wtr, SI for nite.
- 3/29 FEDERAL "RR" COM #1, 12,005 TD.
SI 13 hrs, TP 2000#, F 11 hrs on 1" ck, TP 2000 to 50#, flow fine spray of wtr, SI for nite.
- 3/30 FEDERAL "RR" COM #1, 12,005 TD.
SI 14 hrs, TP 2000#, F 11 hrs on 1" ck, TP 2000 to 50# flow fine spray of wtr, SI.
- 4/1 SI, prep to test.
- 4/2 FEDERAL "RR" COM #1, 12,005 TD.
Rel well to Prod @ 8:00 AM, 4/1/74 to test. Tying up test equip.
- 4/3 FEDERAL "RR" COM #1, 12,005 TD
Completed test equipment, prep to test.

PRELIMINARY NUC POT: SI TP 2180, Csg I ss 0.

POTENTIAL

Pt. 1 - 7/64 ck, TP 2000#, GV 677 MCFPD, Time - 1 hr,
Fluid - 0.

Pt. 2 - 10/64 ck, TP 1764#, GV 1161 MCFPD, Time - 1 hr,
Fluid - 0.

Pt. 3 - 13/64 ck, TP 1360#, GV 1265 MCFPD, Time - 1 hr,
4 BW.

Pt. 4 - 17/64 ck, TP 973#, GV 1737 MCFPD, Time - 1 hr,
4 BW.

CAOF = 2 MMCFPD, Completion Date 3/7/74, SI pending pipeline
connection. Drop from report.