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In Lieu of  
Form 3160  
(June 1990)

UNITED STATES  
DEPARTMENT OF INTERIOR Bureau of Land Management  
BUREAU OF LAND MANAGEMENT Farmington Field Office

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

## SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION TO DRILL" for permit for such proposals

5. Lease Designation and Serial No.  
NMSF-078766
6. If Indian, Allottee or Tribe Name
7. If Unit or CA, Agreement Designation
8. Well Name and No.  
ROSA UNIT #100E
9. API Well No.  
30-039-25135
10. Field and Pool, or Exploratory Area  
BASIN DK
11. County or Parish, State  
RIO ARRIBA, NM

## SUBMIT IN TRIPPLICATE

1. Type of Well  
Oil Well ☒ Gas Well ☐ Other ☐
2. Name of Operator  
WILLIAMS PRODUCTION COMPANY
3. Address and Telephone No.  
PO BOX 3102 MS 25-4, TULSA, OK 74101 (918) 573-3046
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1570' FSL & 870' FEL, NE/4 SE/4, SEC 21-T31N-R06W

## CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

## TYPE OF SUBMISSION

- Notice of Intent
- ☒ Subsequent Report
- Final Abandonment

## TYPE OF ACTION

- Abandonment
- Recompletion
- Plugging Back
- Casing Repair
- Altering Casing
- ☒ Other COMMINGLE

- Change of Plans
- New Construction
- Non-Routine Fracturing
- Water Shut-Off
- Conversion to Injection
- Dispose Water
- (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

07-03-2008

LO rig & equip @ the Rosa #62 and road to the Rosa #100E. MIRU, spot & NU w/ FB tank, circ pump & spot & fill frac tank w/ 2% kcl. MSFN, rig will be idle until Monday, 7/7/08. NOTE: Had to use most of the gravel @ wellsite to fill in holes around wellsite.

07-07-2008

Csg = 60#, SS & LS tbg = 75#. BD to FB tank. Kill w/ 2% kcl. Set BP valves in SS & LS tbg. ND w/ xmas tree. NU w/ BOP & off-set spool. NU w/ WP. Unland SS tbg & ret BP valve. TOH w/ 11/2" x 2.9" SS tbg, meas & LD in sgls. Rec 101 jts 11/2" SS tbg = 3200'. Tbg covered w/ 1/8" to 1/4" scale, sent sample to Champion Chem for analysis. ND w/ off-set spool & unland 11/2" LS tbg. Pulled 20,000# & LS parted. TOH w/ LS tbg recovered 63 jts & 10' piece = 1995', left fish top @ 2015'. Ordered out WL Spec, WO WL, TIH w/ 2000" 2 3/8" WS tbg, meas & PU in sgls. TOH w/ 23/8" WS tbg, stood back in derrick in doubles. WL Spec arrived, MU w/ 4 11/16" full bore overshot & TIH w/ same on 23/8" WS tbg, eng fish @ 2015'. MIRU w/ WL Spec, TIH w/ 17/16 FP, stopped @ 3091'. TIH w/ chisel, work to 3120'. TIH w/ 13/8" chem cutter, cut @ 3100' = 4' above collar. ND w/ FP, did not get clear cut due to scale. Work pipe free @ 18,000#. TOH w/ WS tbg & fish, rec 7', fish top @ 2022', MSFN.

RCVD SEP 23 '08  
OIL CONS. DIV.  
DIST. 3

Continued on attached sheets:

DHC 4023

14. I hereby certify that the foregoing is true and correct

Signed

*Rachel Lipperd*  
Rachel Lipperd

Title Engineering Technician II

Date September 16, 2008

(This space for Federal or State office use)

Approved by

Title

Date

SEP 22 2008

Conditions of approval, if any:

FARMINGTON FIELD OFFICE

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

#### 07-08-2008

Csg = 10#, TIH w/ WL Spec 1.39" jet cutter. Made jet cut @ 3102'. TOH, ND w/ WL Spec, 2 3/8" WS tbg & fish. Rec 35 jts = 1108'. Fish top @ 3110'. Rec fish hvy coat of scale w/ some holes & hvy corrosion. MU 5 1/2" x 6 1/8" washover shoe w/ 4 3/4" concave mill assemb, 3 1/8" jars, 4 x 3 1/8" DC's & TIH w/ same on 2 3/8" WS tbg, PU replacement tbg in sgls, meas & rabbit. Tag fish top @ 3116'. NU w/ PS & air pack. Break circ w/ 12 bph A/S/CI in 15 min @ 550 psi. Milled & dressed fish top from 3116' to 3117.5'. Circ clean & made soap sweeps. ND w/ PS & AP. TUH & hung off @ 3050', MSFN.

#### 07-09-2008

Csg = 220 psi, bled to FB tank. TOH w/ concave mill assembly & WS tbg. MU 5 3/4" x 6 1/8" wash shoe, 8 x 3 3/4" wash pipe, 3 1/8" jars, 4 x 3 1/8" DC's & TIH w/ same on 2 3/8" WS tbg. Eng fish top @ 3116'. NU w/ PS & AP. Break circ w/ 14 bbls A/S/CI in 15 min @ 660 psi. Disp 35 bbls form wtr w/ air. Circ & rotated washing over 1 1/2" fish from 3116' to 3386', hvy scale all the way. Reciprocated pipe 8-10 times from 3116' to 3386', rattling scale from inside csg & outside of 1 1/2" fish. Rec hvy scale returns. Circ WB clean & made soap sweeps. ND w/ PS & AP. TOH w/ 2 3/8" WS tbg, hung off @ 1000', MSFN.

#### 07-10-2008

Csg = 320 psi, BD to FB tank. Comp TOH w/ WP assemb. MU 3 7/8" outside pipe cutter, 8 x 3 3/4" wash pipe, 4 x 3 1/8" DCs & TIH w/ same on 2 3/8" WS tbg. Tag fish top @ 3116'. Sgl out drl line to 4 lines w/ line indicator. NU w/ PS. Work over fish top @ 3116', work down to 3358'. Made outside cut on 1 1/2" LS tbg. ND w/ PS & dbl up drl line to 2 lines. TOH w/ tbg & outside cutter assemb. LD 1 1/2" fish from WP. Rec 7 jts 1 1/2" LS tbg plus 1.5' & 18' piece = 238', leaving fish top @ 3357'. TOH w/ wash over pipe. MU 4 - 1 1/16" overshot w/ 5 3/4" guide & 1.9" basket grapple, TIH w/ same on 2 3/8" WS tbg. Hung off above all perfs @ 3100' & MSFN.

#### 07-11-2008

TDH w/ tbg & OS, eng fish @ 3357'. MIRU w/ WL Spec, 1 17/16" FP tool, stopped @ 3357'. TOH w/ FP tool. TIH w/ 1 1/4" chisel & jars, stopped @ 3377'. TOH w/ C&J. TIH w/ 1" SB, stopped @ 3667'. TOH w/ SB. TIH w/ 1.23" jet cutter, stopped @ 3641'. Made jet cut @ 3639', good cut. Cutter hung up in fish @ 3599'. Worked & pump kcl, unable to pull free. Pulled line out of rope socket left 7' jet cutter in pipe. RD w/ WL Spec. TOH w/ tbg & fish pull slowly to keep tool inside fish. Recov jet cutter, 9 jts 1 1/2" LS tbg + 14' = 295' to-date rec 115 jts LS tbg plus 13' = 3636', fish top @ 3636'. Rec fish coated inside & out w/ 1/4" scale. MU 5 1/2" x 6 1/8" mill shoe w/ 4 3/4" concave mill, 3 1/8" jars, 4 x 3 1/8" DC's & TIH w/ same on 2 3/8" WS tbg. Hung off @ 3100' above all perfs, MSFN.

#### 07-14-2008

Csg = 50 #, bleed down to FB tank. TDH w/ mill assemb to fish top @ 3651'. NU w/ PS & AP. Tbg plugged, press to 2000#. ND w/ AP & PS. TOH w/ mill assemb, 60' DC's & mill assemb plugged w/ scale. CO tools. TIH w/ concave mill assemb & tbg, break circ each 600' make sure pipe clear & unloading WB of wtr, rec 81 bbls form wtr, fluid level 1700'. Eng fish top @ 3651', NU w/ PS & AP. Brk circ w 14 BPH A/S/CI. Milled & dressed fish top from 3651' to 3654'. Circ clean & made soap sweeps. ND w/ PS & AP. TOH w/ concave mill assemb & WS tbg. Mill indicated good fish top looking up. MU w/ 5 3/4" x 6 1/8" shoe, 8 x 3 3/4" wash pipe, 3 1/8" jars, 4 x 3 1/8" DC's. TIH w/ same on 2 3/8" WS tbg. Hung off at 3100' above all perfs. NU w/ air pack & broke circ w/ air to make sure pipe clear. ND w/ air pack & MSFN.

#### 07-15-2008

Csg = 300#, BD to FB tank. TDH w/ WP assemb. Eng fish top @ 3654'. NU w/ PS & AP. Break circ w/ 14 bph A/S/CI in 15 min @ 600#. Circ & rotated washing over LS tbg fish from 3654' to 3856', top of liner. Reciprocated WO pipe 8/10 strokes per each connection to rattle scale from inside csg & outside of LS fish. Circ WB clean & made soap sweeps. ND w/ PS & AP. TOH w/ wash over pipe assy. Broke off WP shoe. MU 3 7/8" outside cutter, 8 x 3 3/4" wash over pipe & TIH w/ same on 2 3/8" WS tbg. NU w/ PS. Engaged fish top @ 3654'. Work cutter down over fish. Made outside cut on 1 1/2" LS fish @ 3853'. ND w/ PS. TOH w/ outside cutter assy & tbg. Recovered 6 jts + 10' 1 1/2" LS tbg = 198'. Leaving top of fish @ 3853' = 3' above liner top. TOH w/ wash over pipe & MSFN.

#### 07-16-2008

Csg = 160#, bleed to FB tank. MU four 1 1/16" OS w/ guide & 1.9" basket grapple, 3 1/8" bumper sub, 4 x 3 1/8" DC's, 3 1/8" accelerator. TIH w/ fish assy on 2 3/8" N-80 WS tbg. Tag fish top @ 3853'. Sgld out w/ drl line to 4 line string up & installed line wt indicator. Engaged 1 1/2" LS fish top & started jarring on fish. Started jarring @ 40,000# increasing each 30 min to 65,000#. Jarring @ 65,000#. Jars stopped working. Attempted to release from overshot. NU w/ PS & AP. Unable to release from fish, apparently fish top bottle necked. ND w/ PS & AP. Worked pipe to part same, parted 1 1/2" LS tbg @ 80,000#. TOH w/ fishing assy & 2 3/8" N-80 work string tbg. Rec 8 jts + 20' piece = 282'. Rec to-date 4116' = 130 jts. Left to rec to packer 4 jts + 10', MSFN.

#### 07-17-2008

Csg = 350 psi, BD to FB tank. MU 3 3/4" WO shoe, dressed to 3 7/8", 8 x 3 3/4" WO pipe, 3 1/8" jars, 4 x 3 1/8" DC & TIH w/ wash over assembly on 2 3/8" N-80 WS tbg. Tag liner top @ 3856'. NU w/ PS & AP. Break circ w/ 14 bph A/S/CI in 15 min @ 550#. Circ & rotate reciprocating pipe 8/10 strokes each connection to rattle scale from inside liner from 3856' to top of fish @ 4116'. Engaged fish @ 4116', WO 1 1/2" LS fish from 4116' to very hard scale at 4136'. Milled on hard scale to 4166' - unable to get below 4166'. Rec metal flakes appears to be the pkr. Ran on pkr to get picture on WO shoe. Circ clean & made soap sweeps. ND w/ PS & AP. TOH w/ tbg & WO assembly. MU 3 3/4" overshot w/ 2" basket grapple, 3 1/8" jars, 4 x 3 1/8" DC's, 3 1/8" accelerator & TIH w/ fish assembly on WS tbg. Hung off @ 3100' above perfs, MSFN.

#### 07-18-2008

Csg = 350 psi, BD to FB tank. TDH w/ fishing assy & engaged fish @ 4116'. Started jarring on 1 1/2" LS fish @ 45,000# & increased 5,000# each hr. At 1300 hrs jarring @ 70,000# no movement & not stretching pipe. Jarred @ 70,000# unable to jar free. Worked pipe to part same. Pipe parted at 80,000# pull. TOH w/ 2 3/8" WS tbg & fish assy. Rec 31' x 1 1/2" LS fish leaving 22' fish on top of

07-21-2008

Csg = 60# - BD to FB tank. MU 3 3/4" x 3 7/8" MO shoe, 2 x 3 3/4" WO pipe, 3 1/8" jars, 4 x 3 1/8" DC's & TIH w/ same on 2 3/8" WS tbg. Staged in hole unloading form wtr, rec 100 bbls, FL @ 2100'. Tag pkr top @ 4166'. Sgl out drl line to 4 lines w/ line indicator. NU w/ AP & PS. Break circ w/ 14 bph A/S/CI. Milled over pkr from 4166' to 4219', fell through. Circ WB clean & made soap sweeps. ND w/ AP & PS. Dbl up w/ drl line to 2 lines. TOH w/ MO shoe assy & 2 3/8" WS tbg, hung up w/ shoe @ 4036', jarred @ 70,000# w/ no movement. NU w/ PS, torque up & jarred on fish, pulled free. ND w/ PS. TOH w/ WO shoe & tbg. Shoe indicated that junk was around the wash over shoe, MSFN.

07-22-2008

Csg = 400 psi, BD to FB tank. MU w/ 3 1 1/16" overshot w/ 2 1/4" basket grapple, 3 1/8" BS, 3 1/8" jars, 4 x 3 1/8" DC's. TIH w/ fishing assy on 2 3/8" WS tbg. Tagged fish top @ 4155'. Sgld out w/ drlg line to 4 line string up w/ line indicator. Engaged fish top @ 4155'. Jarred on 1 1/2" LS fish @ 65000#. Unable to get fish moving, unable to release overshot. NU w/ PS. Worked free from overshot. ND w/ PS. Doubled up drlg line to 2 line string up. TOH w/ fishing assy & 2 3/8" WS tbg. Overshot packed full of scale. MU w/ 3 3/4" x 3 7/8" mill over shoe, 8 x 3 3/4" WO pipe, 3 1/8" jars, 4 x 3 1/8" DC's. TIH w/ washover assy on 2 3/8" WS tbg. Hung off above all perfs @ 3100'. MSFN.

07-23-2008

Csg = 400 psi, bled to FB tank. TDH w/ mill shoe assy, tag 1 1/2" LS fish top @ 4155'. Sgl out w/ drl line to 4 line string up w/ line indicator. NU w/ AP & PS. Brk circ w/ 14 BPH A/S/CI in 30 min @ 1140 psi, disp 60 bbls form wtr w/ air. Work over 1 1/2" LS fish top @ 4155'. Circ & rotate to solid scale @ 4219'. Milled solid scale from 4219' to 4276', milling on pkr remnant. Milled & pushed pkr remnant from 4276' to 4284' spinning on top of pkr. Rec very little cuttings, rec some frac sand, rubber & metal shavings. Circ clean & made soap sweeps. ND w/ PS & AP. Dbl up w/ drl line to 2 line string up. TOH w/ mill shoe assy & 2 3/8" WS tbg & MSFN.

07-24-2008

Csg = 400#, BD to FB tank. MU w/ 3 1/6" overshot w/ 2 1/4" basket grapple, 3 1/8" BS, 3 1/8" jars, 4 x 3 1/8" DC's. TIH w/ fish assy on 2 3/8" WS tbg. Tag fish top @ 4155'. Sgl out w/ drl line to 4 line string up w/ line indicator. Eng fish @ 4155'. Jarred on ALS fish @ 65,000#, fish parted. Dbl up w/ drl line to 2 line string up. TOH w/ 2 3/8" WS tbg & fish assy, rec 4 jts 1 1/2" LS tbg = 128', leaving pkr & seal assy @ 4284'. MU 3 3/4" x 3 7/8" WO mill shoe, 4 jts 3 3/4" WO pipe, 3 1/8" jars, 4 x 3 1/8" DC's, TIH w/ WO assy on WS tbg. Tag pkr @ 4284'. Sgl out to 4 line string up w/ line indicator. NU w/ PS & AP. Break circ w/ 14 bph A/S/CI. Mill over pkr from 4284' to 4285', pkr fell away. TDH w/ WO pipe from 4285' to 4410', did not touch anything. ND w/ PS & AP. Dbl up w/ drlg line to 2 line string up. TOH w/ WO mill shoe assy & 2 3/8" WS tbg. MSFN & SD until Monday, 8/28/08.

07-28-2008

Csg = 400 psi, BD to FB tank, kill w/ kcl. MU w/ 3 3/4" OS w/ 2 7/8" basket grapple, 3 1/8" bumper sub, 3 1/8" jars, 4 x 3 1/8" DC's. TIH w/ fish assemb on 2 3/8" WS tbg. Tag fish top @ 4279'. Sgld out w/ drl line to 4 line string up w/ line indicator. Engaged fish top @ 4279'. Jarred on 1 1/2" LS fish @ 70,000#, unable to get fish moving up hole pipe started stretching. NU w/ PS attempted to release overshot to no avail. ND w/ PS. Worked tbg pulling 75,000# fish parted at 65,000#. Doubled up w/ drlg line to 2 line string up. TOH w/ 2 3/8" WS tbg & fishing assembly. Recovered 14 jts 1 1/2" LS fish plus seal bore assemb = 449'. Leaving fish top @ 4728', left 938' LS fish in hole fish top looking up clean body break 2' above collar. MU 3 3/4" x 3 7/8" MO shoe, 8 x 3 3/4" WO pipe, 3 1/8" jars, 4 x 3 1/8" DCs. TIH w/ WO assemb on 2 3/8" WS tbg. Hung off above perfs @ 3100', MSFN.

07-29-2008

Csg = 400#, bled to FB tank. Comp TIH w/ WO mill assemb. Tag fish top @ 4729'. NU w/ AP & PS, sgl out w/ drl line to 4 lines w/ line indicator. Break circ w/ 14 bph A/S/CI. Work over fish top. Circ & rotate from 4729' to 4954', light scale resistance. Milled from 4954' to 4994', hard scale resistance. Circ clean & made soap sweeps. ND w/ AP & PS double up drl line to 2 line string up, TOH w/ 2 3/8" WS tbg & MO assemb. MU 3 7/8" outside cutter, 8 x 3 3/4" wash over pipe, TIH w/ cutter assemb on 2 3/8" WS tbg. Hung off above all perfs at 3100' & MSFN.

07-30-2008

Csg = 400#, bleed to FB tank. Comp TIH w/ OS cutter assy. Tag fish top @ 4729'. Sgl out drl line to 4 line string up w/ line indicator. NU w/ PS. Work over fish top. Work cutter down to 4990'. Made outside cut on 1 1/2" LS fish @ 4970'. ND w/ PS. Dbl up drlg line to 2 line string up. TOH w/ 2 3/8" WS tbg & cutter assy w/ fish. Rec 8 jts plus piece 1 1/2" LS fish = 256' leaving clean fish top @ 4970'. MU 3 3/4" x 3 7/8" wash over mill, 8 jts 3 3/4" WO pipe, 3 1/8" jars, 4 x 3 1/8" DC's & TIH w/ WO mill assy on 2 3/8" WS tbg. Hung tbg off at 3100' above all perfs, MSFN.

07-31-2008

Csg = 400#, bled to FB tank. TDH w/ WO mill assy, tag fish top @ 4970'. NU w/ PS & AP. Sgl out w/ DL to 4 lines w/ line indicator. Brk circ w/ 14 bph A/S/CI. Disp 40 bbls FW w/ air. Wrk over fish top @ 4970', circ & rotate over fish from 4970' to 5125' w/ minimal resistance. Milled solid hard scale from 5125' to 5237'. Circ clean & made SS. ND w/ AP & PS. Dbl up DL to 2 lines. TOH w/ WO mill assy & WS tbg. MU 3 3/4" outside cutter, 8 jts 3 3/4" WOP, 3 1/8" jars. TIH w/ cutter assy on 2 3/8" WS tbg. Tag fish top @ 4970'. NU w/ PS & AP. Sgl out DL to 4 line w/ line indicator. Work over fish top @ 4970' & TDH to 5200'. Made outside cut at 5177' trouble working over fish & making cut. ND w/ PS & air pack. Dbl up w/ drl line to 2 line string up. TOH w/ cutter assy & tbg, rec 7 jts 1 1/2" fish = 207'. Top of fish @ 5177' leaving 479' of 1 1/2" LS fish in hole. Fish rec was corkscrewed causing problems washing over & making outside cut, MSFN.

08-01-2008

Csg = 400#, bleed to FB tank. MU w/ 3 3/4" x 3 7/8" WO mill shoe, 8 x 3 3/4" WO pipe, 3 1/8" jars, 4 x 3 1/8" DCs. TIH w/ WO mill assy on 2 3/8" WS tbg. Tag fish top @ 5177'. NU w/ AP & PS. Sgl out w/ DL to 4 lines w/ line indicator. Brk circ w/ 14 bph A/S/CI. Disp 40 bbls form wtr w/ air. Work over fish top @ 5177'. Circ & rotated from 5177' to solid hard scale @ 5250'. Milled hard scale from 5250' to 5434' a lot of hvy torque. Circ clean & made soap sweeps. ND w/ AP & PS. Dbl up w/ drlg line to 2 line string up.

TOH w/ WO mill Assy & 2 3/8" WS tbg. MU three 1 1/16" overshot w/ 1.9" basket grapple, 1/8" bumper sub, 3 1/8" jars, 4 x 3 1/8" DC's. TIH w/ fishing Assy on 2 3/8" WS tbg & MSFN.

#### 08-04-2008

Csg = 400 psi, BD to FB tank. Comp TIH w/ FA on WS tbg. Tag fish top @ 5177'. Sgl out drl line to 4 lines. Eng fish @ 5177'. Jarred on fish @ 65,000#, fish parted. Dbl up w/ drl line to 2 lines. TOH w/ tbg & fish Assy. Rec 1 jt plus 2 pcs of 1 1/2" LS fish = 59'. Leaving 13 jts place, rec pc of 1 1/2" LS fish = 420'. Redressed overshot w/ 1.9" basket grapple. TIH w/ fish Assy on WS tbg. Sgl out w/ drl line to 4 lines w/ line indicator. Jarred on 1 1/2" LS fish @ 65,000#, fish parted. Dbl up w/ drl line to 2 lines. TOH w/ 2 3/8" WS tbg & fish Assy. Rec 5 jts plus piece of 1 1/2" LS fish = 167'. Top of fish at 5404'. Leaving 8 jts 1 1/2" LS fish = 204' in hole to fish. MU w/ 3 3/4" x 3 7/8" WO mill shoe, 8 x 3 3/4" jts WO pipe, 3 1/8" jars, 4 x 3 1/8" DC's. TIH w/ MO mill Assy on 2 3/8" WS tbg. Hung off above all perfs at 3100', MSFN.

#### 08-05-2008

Csg = 400#, bled to FB tank. TIH w/ WO mill Assy to fish top @ 5404'. Sgl out w/ drlg line to 4 line string up. NU w/ PS & AP. Brk circ w/ 14 bph A/S/CI. Disp 40 bbls form wtr w/ air. Work over fish top @ 5404'. Circ & mill from 5404' to very hard scale @ 5442'. Mill hard scale from 5442' to frac sand @ 5600'. Milled light scale & hvy frac sand from 5600' to 5626' = 30' above fish bottom. Torquing up unable to get below 5626'. Believe to be pkr remnants binding on outside of WO shoe. ND w/ AP & PS. Dbl up w/ drlg line to 2 line string up. TOH w/ WO mill Assy & 2 3/8" WS tbg. MU w/ three 1 1/16" overshot w/ 2 7/8" basket grapple, 3 1/8" bumper sub, 3 1/8" jars, 4 x 3 1/8" DCs. TIH w/ fishing Assy on 2 3/8" WS tbg. Hung off above all perfs at 3100', MSFN.

#### 08-06-2008

Comp TIH w/ tbg & fishing assembly to fish top @ 5404'. Singled out w/ drilling line to 4 lines w/ line indicator. Eng fish @ 5404'. Jarred on 1 1/2" LS fish @ 65,000#. Fish parted. Dbl up w/ drill line to 2 lines. TOH w/ 2 3/8" WS tbg & fish assembly. Rec 6 jts 1 1/2" LS fish = 193'. Leaving fish top at 5597'. Left 2 jts 1 1/2" LS fish in hole. Laid down with 5 joints 3 3/4" WO pipe. Made up w/ 3 3/4" x 3 7/8" WO mill shoe -- 3 x 3 3/4" WO pipe -- 3 1/8" jars -- 4 x 3 1/8" DCs. TIH w/ WO mill assembly on 2 3/8" WS tbg. Hung off above all perforations at 3100'. Made well safe for night.

#### 08-07-2008

sg = 400 psi - bled to FB tank. Comp TIH w/ WO mill assembly. Tag sand top @ 5600'. Sgl out w/ drilling line to 4 line string up w/ line indicator. NU w/ PS & AP. Brk circ w/ 12 bph A/S/CI. Displaced 40 bbls form wtr w/ air. Circ and rotated hard scale -- pkr remnants & frac sand from 5600' to 5786'. Rec some metal pieces and cuttings -- hvy scale & frac sand. Circ. Made soap sweeps. ND w/ PS & AP. Dbl up w/ drill line to 2 lines. TUH w/ WO mill assembly and 2 3/8" WS tbg. Hung off above all perforations at 3100'. Made well safe for night.

#### 08-08-2008

Csg = 400# bled to FB tank. TIH w/ WO mill assembly -- tagged top of sand fill at 5780' = 6' sand entry overnight. TOH w/ WO mill assembly & 2 3/8" WS tbg. Laid 3 3/4" WO pipe down in sgls. Made up 3 1/16" overshot w/ 2 3/8" basket grapple - 3 1/8" BS - 3 1/8" jars - 4 x 3 1/8" DCs - 3 1/8" accelerator. TIH w/ fish assembly on 2 3/8" WS tbg. Tagged fish top @ 5728'. Sgl out w/ drill line to 4 line string up w/ line indicator. Engaged 1 1/2" LS fish @ 5728'. Worked fish & got moving up hole. Dbl up w/ drilling line to 2 line string up. TOH w/ 2 3/8" WS tbg & fishing assembly. Rec 2 jts 1 1/2" LS tbg - mule shoe and seat nipple. Broke down & loaded out with fishing assembly. Made well safe for night.

#### 08-11-2008

Csg = 400# - BD to FB tank. Made up 6 1/8" bit - 6 1/8" string mill -- 3 1/8" jars - 4 x 3 1/8" DCs. TIH w/ mill assembly on 2 3/8" WS tbg to 3000'. TOH w/ 1000' tbg - laid down in sgls. NU w/ PS & AP. Brk circ w/ 10 bph A/S/CI. Circ & milled from 2000' to 3000' --- repeating the process to liner top @ 3856'. Broached dressed csg from 2000' to liner top. Encountered heavy scale and resistance from 3200' to 3240' -- med to light resistance 3240' to liner top. Circ clean & made SS. ND w/ air pack and power swivel. TOH w/ tbg & mill assembly. Made up 3 7/8" junk mill - 3 7/8" string mill - 3 1/8" jars - 4 x 3 1/8" DCs. TIH w/ mill assembly on 2 3/8" WS tbg. Hung off at 3100' above all perfs. MSFN.

#### 08-12-2008

Csg = 400# - bled to FB tank. Tripped down hole w/ tbg & mill assembly to top of liner @ 3856'. Tripped out of hole w/ 2000' 2 3/8" WS tbg - laid down in sgls. TDH w/ tbg to top of liner. Sgl out w/ drilling line to 4 line string up w/ line indicator. NU w/ PS & AP. Brk circ w/ 10 bph air/soap/corrosion inhibitor. Circ and rotated w/ mill assembly -- reciprocating 4 strokes each joint of tbg -- broaching and cleaning scale deposits from liner walls. Broached from liner top @ 3856' to 5760'. Bottom perf @ 5686' = 94' of rat hole. Circ and made soap sweeps. ND w/ AP & PS. Dbl up w/ drill line to 2 line string up. TUH w/ mill assembly & tbg. Hung off at 3100' - above all perfs. MSFN.

#### 08-13-2008

Csg = 400 psi, bled to FB tank. TDH w/ WS tbg & mill Assy. Tag fill @ 5770' = 10' fill entry over night. NU w/ air pack. Brk circ w/ 10 bph A/S/CI in 20 min @ 800 psi. Disp 30 bbls form wtr w/ air. Fluid level 3894', liner filling up w/ form fluid over night. Circ frac sand & scale from 5770' to phtd @ 5780'. Circ w/ air, making soap sweeps each hour. Rec 2 cups frac sand/scale at start of circ in 5 gal bucket test, 50 sec to fill bucket. Rec 20 BPH form wtr w/ no HSP. Rec no sand or scale @ end of circulating. Made soap sweeps. ND w/ air pack. TUH w/ mill Assy & tbg. Hung off at 3100' above all perfs, MSFN.

#### 08-14-2008

Csg = 400# - bled down to FB tank. TDH w/ WS tbg & mill assembly. Tagged at PBTD - no fill entry. TOH w/ 2 3/8" WS tbg & mill assembly. Laid 3 1/8" DCs down in sgls. Broke down & loaded out w/ mill assembly. Made up w/ Weatherford 4 1/2" AS - 1X - 10 K packer. TIH w/ PKR assembly on 2 3/8" WS tbg. Set PKR @ 5242'. Made safe for night. NU w/ flowback lines & choke manifold in preparation for flowback post acid pump. MSFN.

08-15-2008

Tbg = 400# - csg = 350# - bled to FB tk. Wait on BJ Serv. MIRU w/ BJ Serv. Tst lines & held safe mtg. Wrk on BJ equip. Pump 50 Qual Nitrogen acid wash across MV perfs 5304' to 5780'. Pmp ahead w/ 10 bbls acid. Pmp into form @ 578#. Pmp 120 bbls 15% HCL w/ 50% qual foam w/ 24 MR ball sealers (intermittently in first 90 bbls) recorded some ball action. Min press = 0# - max press = 1658# - aver press = 1350#. Min surf rate = 10 bpm. Flush 15 over flush w/ kcl @ 1500#. ISIP = 0# -- 5-10 & 15 min on a vacuum. Pmp 120 bbls 15 % HCL total -- Pumped 46 bbls 2 % KCL total. Shut in @ 1300 Hrs. ND w/ BJ - rig to flowback thru choke manifold. Opened up -- well on a vacuum - no change. ND w/ FB equip. Rel PKR. Pmp 20 bbls kcl dwn tbg - on a vacuum. TOH w/ tbg & pkr (pull slowly out of liner). Made & TIH w/ mule shoe & on 23/8" WS tbg. Hung tbg off @ 3100' above all perfs. MSFN.

08-16-2008

Csg = 370 psi - bled dwn to FB tk. TDH w/ 23/8" WS tbg. Tag up @ PBTD - no fill entry. NU w air pack - brk circ w/ 15 bph A/S/CI - in 20 min @ 800 psi. Disp 40 bbls form wtr w/ air (most likely 30 bbls from PC zone & 10 bbls from MV zone). PH reading at start of wtr rec = 3. At end of wtr rec = 6. No solids recovered. Ordered out BJ Chem. TUH & hung tbg off at 5681' @ bottom perforation. NU w/ air pack and dried up wellbore w/ air. MIRU w/ BJ Chemical equipment. Pumped 110 gals Techni-Sow 2000 (barium dissolver) mixed w/ 10 bbls fr wtr. Spotted across MV perfs @ 5204' - 5686'. Rigged out w/ BJ Chemical equip. TUH w/ 23/8" tbg and hung off at 3100', MSFN.

08-18-2008

Csg = 400# - bled dwn to FB tk. TOH w/ 23/8" WS tgg. Made up Weatherford 41/2" TS pkr type RBP w/ ret head. TIH w/ RBP assem on 23/8" WS tbg. Set RBP @ 3950'. Rel from RBP and spotted 15' frac snd on top of RBP -- top of sand @ 3935'. TOH w/ 23/8" tbg & ret head. Made up Weatherford 7" AS - 1X - 10K PKR. TIH w/ PKR assem on 23/8" WS tbg. Set PKR @ 3104' -- isolating PC perfs @ 3156' to 3218'. Rigged flowback lines to choke manifold for flowback of acid pump in PC perfs, MSFN.

08-19-2008

Tbg = 380# - BD to FB tk. MIRU w/ BJ Serv equip. Held safe mtg. Press tst lines @ 5000#. Acid pmp brk dn. Order out new acid pmp. MIRU new acid pmp. Pumped BJ50 Quality Nitrogen Acid Wash across PC perfs 3156' to 3218' = 53 holes as follows :: Pumped ahead w/ 10 bbls hcl. Started pmping into form @ 500#. Pmp 120 bbls 2% kcl w/ 120 bbls 15% hcl w/ 24 bio frac ball dispersed intermittently through out acid wash -- no ball action recorded. Min press = 2000# -- max press = 2550# -- aver press = 2200#. Min rate = 7 bpm -- aver rate = 7 bpm -- flush rate = 3.5 bpm. Over flush w/ 10 bbls kcl. ISIP = 1270# -- 5 min = 890# -- 10 min = 750# -- 15 min = 631#. Pmp a total of 120 bbls 15% hcl. pmp a total of 146 bbls 2% kcl. Pmp a total of 86,000 scf nitrogen. Shut well in @ 1445 hrs. Rig out w/ BJ equip. Rig to FB thru 2" choke manifold. FB thru 2" CM. Start press = 380#. Rec hvy wtr and acid. Making wtr in slugs. Flow back over night thru choke manifold w/ flowback hand on loc to monitor flowback.

08-20-2008

FB overnight thru 2" choke manifold. Rec 145 bbls acid & wtr -- surging. Shut in & well press up to 100 psi in 5 min. Mixed soda ash in FB tk rolled w/ air to neutralize acid. Pmp 15 bbls kcl dwn tbg to flush and kill. Releas pkr. Tripping out of hole w/ tbg & pkr. Rig broke main drive chain -- called out mechanic. Got rig running. Comp TOH w/ tbg & pkr. Brk dwn & load out pkr. Made up 41/2" ret head. TIH w/ ret head on 23/8" WS tbg. Hung off at 3434' - below perfs. NU / AP - brk circ w/ 10 bph A/S/CI. in 25 min @ 640 psi.

08-21-2008

Csg = 350#. Bled to FB tk & kill dwn tbg. TDH w tbg & ret head. Hung off @ 3434'. NU w/ AP. Brk circ w/ 10 bph A/S/CI in 15 min @ 520#. Disp 16 bbls acid & wtr w/ air. Circ w/ air - rec 20 bbls form wtr w/ no solids & PH factor of 4 at start of circ. At end of Circ PH factor @ 6/7. ND w/ AP. TDH w/ tbg & ret hd. Tagged sand plug @ 3935'. NU w/ AP. Brk circ w/ air. Circ sand plug from 3935' to RBP @ 3950'. Circ clean & made soap sweeps. ND w/ AP. Pmp 20 bbls kcl on top of RBP. Engaged RBP and released same. TOH w/ tbg & RBP. Loaded out w/ RBP equip. Made up w/ mule shoe and TIH w/ same on 23/8" WS tbg. Hung tbg off at 3100' above all perforations, MSFN.

08-22-2008

Csg = 400# - BD to FB tk. TDH w/ WS tbg. Tagged snd fill @ 5745' = 39' fill - pbtd at 5786'. NU w/ AP. Brk circ w/ 10 bph A/S/CI in 25 min @ 560#. Disp 37 bbls form wtr w/ air -- fluid level @ 3500'. Circ snd & scale fill from 5745' to pbtd @ 5786'. Circ wellbore clean and made soap sweeps. ND w/ air pack. TOH w/ 23/8" WS tbg -- laid tbg dwn in singles, MSFN.

08-25-2008

Recap: Csg = 270# - BD to FB tk. Made up 23/8" screened mud anchor w/ 1.78" F-nipple - 16 jts 23/8" x 10-NUE tbg & TIH w/ same on new 23/8" x 8-EUE tbg - picked up in sgls - meas & rabbit same. Ran 14/1" SS steel chem line on out side top 225' of tbg. NU w/ chem adaped tbg hgr. Set Type B tbg anchor @ 3081' - land tbg OA @ 5729' & f-nipp @ 5698'. ND w/ BOP & WP. NU w/ chem adap B-1 flange. NU w/ new prod head. Rig for rods. Made up new RWAC x 2" x 11/2" x 18' w/ dip tube -- 3 x 11/2" sinker bars. TIH w/ pump & rods -- picked rods up in sgls. Dressed polished rod and spaced pump. Fill tbg w/ kcl and press tst to 500# w/ rig pmp - solid. Stroked pump to 500# w/ pulling unit - good pmp action. Loaded out w/ rig tools. Laid dwn w/ rig mast and cleaned location. Made ready to move out w/ rig and equip in the morning (8/26/08) to the Rosa 233A.

# ROSA UNIT #100E

## PC/MV

**Location:** 1570' FSL, 870' FEL  
NE/4 SE/4 Section 21, T31N, R6W  
Rio Arriba, NM  
Elevation: 6268' GR

API: 30-039-25135

Pumping Unit  
Dansco 320-250-120

Spudded: 11/05/91  
MV/PC Completed: 11/20/94  
1st Delivery: 10/29/99  
Pump Install: 08/25/08

Tops                      Depth

Nacimiento	N/A
Ojo Alamo	2310'
Kirtland	2414'
Fruitland	2894'
Pictured Cliffs	3154'
Lewis	3440'
Cliff House	5235'
Menefee	5324'
Point Lookout	5536'
Mancos	5845'
Greenhorn	7606'
Graneros	7656'
Dakota	7786'

Rod String: 3 - 1 1/2" sucker bars, 146 - 3/4" sucker rods, 78 - 7/8" sucker rods, 8' x 7/8" pony rod, 1 1/4" x 26' polished rod w/ 1 1/2" liner

Pump Install: 2" x 1 1/2" x 18' RWAC  
(Energy Pump) w/ 1" x 6' gas anchor

### STIMULATION

Pictured Cliffs 3156' - 3218' (53 holes @ 0.36 EHD)  
97,000# 20/40 sand in 59,360 gals of 30# X-Link gel in 70 qual foam.

Mesa Verde 5304' - 5686'  
103,200# 20/40 in 101,430 gals

CMT RET @  
7898' no cement

9jts 9-5/8", 36#, K-55 ST&C csg. Landed @ 440'

3156'  
3184'

DV Tool  
@ ?? Ft.

3187'  
3193'

PC Perforations, 53 holes  
@0.36" EHD

3196'  
3204'

3211'  
3218'

Top of Liner @ 3846'

103 jts 7", 23#, K-55, LT&C @4185'

Tbg anchor @ 3081'

MV / PC Tubing: 175 jts of 2 3/8", J-55 tbg @ 5729' as follows: 2 3/8" screened mud anchor, 1.78" F-Nipple @ 5698', 16 jts of 2 3/8", 10-NUE tbg, 64 jts of 2 3/8", 8-EUE tbg, Type B, 7" x 2 3/8" tbg anchor (left hand set, right hand release, neutral position), 95 jts of 2 3/8", 8-EUE tbg, (225' 1/4" stainless steel chem cap string strapped to outside of tbg).

5304'

MV Perforations (32 holes @ 0.36 EHD)

5686'

PBTD @ 6000'

Cement Retainer @  
7721'Sqz w/75 sx (89 cf)  
DK perfs

7788'

7878'

7912'

7938'

4-1/2", 11.6#, N-80 from 3846' to 8000'

PBTD @ 5786'  
TD @ 8000'

HOLE SIZE	CASING	CEMENT	VOLUME	CMT TOP
12-1/4"	9-5/8" 36#	285 sx	336 CUFT	SURFACE
8-3/4"	7" 23#	960 sx	1107 CUFT	SURFACE
6-1/4"	4-1/2" 16#	670 sx	790 CUFT	LINER TOP