NMOCD

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT --" for such proposals

5. Lease Designation and Serial No. LC-065347

6. If Indian, Alottee or Tribe Name

SUBMIT IN TRIPLICATE

RECEIVED
JUL 07 2005
OCD-ARTESIA

7. If Unit or CA, Agreement Designation

1. Type of Well: ☐ OIL WELL ☑ GAS WELL ☐ OTHER

8. Well Name and Number
ESTILL FEDERAL AD
1

2. Name of Operator
CHEVRON USA INC

3. Address and Telephone No.
15 SMITH RD, MIDLAND, TX 79705 432-687-737

9. API Well No.
30-015-22118

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Unit Letter J : 1650' Feet From The SOUTH Line and 1650' Feet From The EAST Line Section 19 Township 24-S Range 26-E

10. Field and Pool, Exploaratory Area
WHITE CITY PENN

11. County or Parish, State
EDDY , NM

12. Check Appropriate Box(s) To Indicate Nature of Notice, Report, or Other Data

TYPE OF SUBMISSION	TYPE OF ACTION	
☑ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☑ Altering Casing	☐ Conversion to Injection
	☑ OTHER: ADD PAY & Frac	☐ 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,)*.

CHEVRON U.S.A. INC. INTENDS TO ADD PERFS & FRAC THE SUBJECT WELL IN THE MORROW RESERVOIR IN THE WHITE CITY PENN FIELD. THE WELL IS CURRENTLY SHUT-IN IN THE MIDDLE MORROW RESERVE BASE. THERE IS RECOMPLETION POTENTIAL IN THE LOWER AND UPPER MORROW.

THE CURRENT AND PROPOSED WELLBORE DIAGRAMS ARE ATTACHED FOR YOUR APPROVAL.

THE INTENDED PROCEDURE IS ALSO ATTACHED.

A PIT WILL NOT BE USED FOR THIS WORKOVER. A STEEL FRAC TANK WILL BE UTILIZED.

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

SIGNATURE Denise Pinkerton TITLE Regulatory Specialist DATE 6/23/2005

TYPE OR PRINT NAME Denise Pinkerton

(This space for Federal or State office use)

APPROVED (ORIG. SGD.) ALEXIS C. SWOBODA

CONDITIONS OF APPROVAL, IF ANY: TITLE PETROLEUM ENGINEER DATE JUL 06 2005

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.

DeSoto/Nichols 12-93 ver 1.0

Well: Estill AD Federal No. 1 Field: White City Reservoir: Morrow

Location:
1650' FSL & 1650' FEL
Section: 19 (NE/4 SW/4)
Township: 24S
Range: 26E Unit: J
County: Eddy State: NM

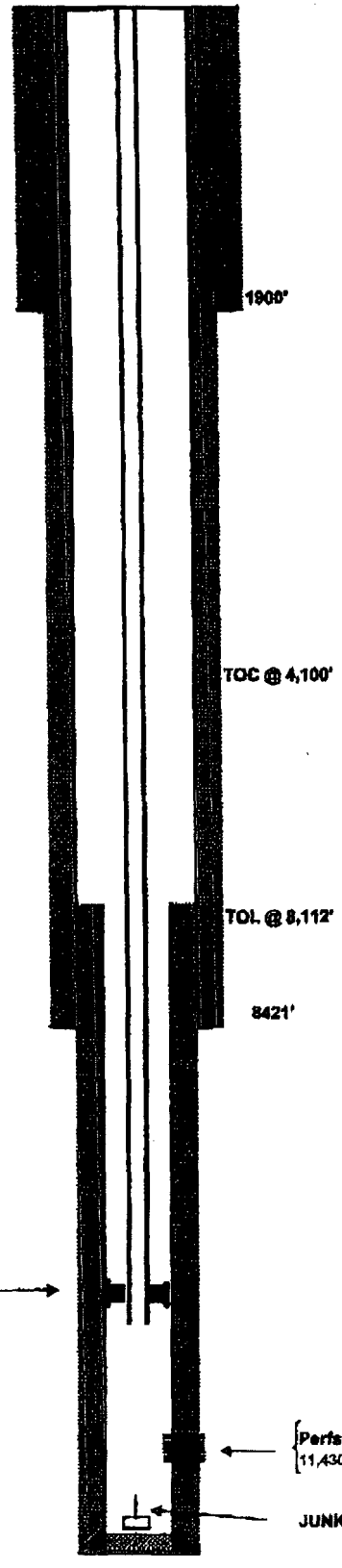
Elevations:
GL: 3435.8'
KB: 3451'
DF: 3450'

Log Formation Tops	
Cisco / Canyon	
Atoka	
Morrow	

TUBING DETAIL - 6/13/1977
TBG NIPPLE 8-RD. 4.7# EUE
10' & 8' & 4' TBG SUBS N-80 8-RD. 4.7# EUE
371 jt 2-3/8" 8rd 4.7# N-80 tbg
2 3/8 8RD X 6' LOCATOR SUB KEY LOCATOR
COLLAR W/RA MARKER ON BOTTOM OF SUB
1 JTS N-80 EUE 8RD
2 3/8" EUE 8RD N-80 PKR HANDLING SUB
BAKER "FR-2" SEAL RECP UNIT W/1.875"
PROFILE 2 3/8 EUE 8RD (5 11/16 OD X 26" X16")

Refer to Tubing Landing Detail

Current Wellbore Diagram



Baker 5" lok-set pkr @ 11,375'
w/ EL-1 long tbg on/off assembly
w/ 1.87" BFC in profile

Perfs
11,430 -11,443 w/ 4 - .32 dia. spf

Status
Morrow - Open

JUNK: Possible Vann Tools Co. PAVA tbg release sub and csg gun.

CGTD: unknown
PBTD: 11,556'
TD: 11,600'

Well ID Info:
Chevno: EP5184
API No: 30-015-22118
L5/L6: UCU971400
Spud Date: 4/13/77
Rig Released:
Compl. Date: 6/28/77

Surface Csg: 10 3/4" 40.5# K-55
Set: @ 1900' w/ 1500 sx
Hole Size: 14 3/4"
Circ: Yes **TOC:** Surface **TOC By:** Circulation

Intermediate Csg: 7 5/8" 26.4# & 29.7#, S-95 & N-80
Set: @ 8,421' Cmt'd w/ 700 sx
Hole Size: 9 1/2"
Circ: No **TOC:** 4,100' from surf. **TOC By:** TS

Production Liner: 5" 18# N-80 X-line liner
Set: @ 8,112'-11,600' Cmt'd w/400 sx
Hole Size: 6 1/2"
Circ: Yes **TOC:** 8112' **TOC By:** Circ to top of liner
Note: Tst liner top w/ 2,500 psi for 30 min. Good Tst.

Initial Completion:
Initial Completion - Perf'd 11,431 - 11,444 using 4 spf (52 - .32" dia). Under balanced using Vann Gun System. Flw to surf in 7 min. Tst 5.2 MMcf @ TP = 2850 psi. (Tst unit maxed out) Well cleaned up. SITP 4100 psi. Performed 4 point tst. 1st flw rate 1690 Mcfgpd @ TP=3738 psi, 2nd flw rate 2450 Mcfgpd @ TP=3810 psi, 3rd flw rate 3712 Mcfgpd @ 3170 psi, 4th flw rate 5293 Mcfgpd @ TP=2595 psi. CAOF = 8441 Mcfgpd. Off Report.

Subsequent Work
9/11/84: Fish tbg @ 4012. Tbg parted due to excessive corrosion on the 135 & 136 jts. RIH & redressed on/off tool and replaced 2 3/8" tbg. Hydrotest tbg to 5,000 psi. Circ hole w/pkr fluid. Tst csg/tbg annulus to 400 psi for 15 min. Good test. Swab tbg dwn & flow to clean up.

11/88: Well on compression - details unknown. Compressor removal date unknown.

Updated: 2-8-05 by LS Adams

Well: Estill AD Federal No. 1 Field: White City Reservoir: Morrow

Location:
1650' FSL & 1650' FEL
Section: 19 (NE/4 SW/4)
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Range: 26E Unit: J
County: Eddy State: NM

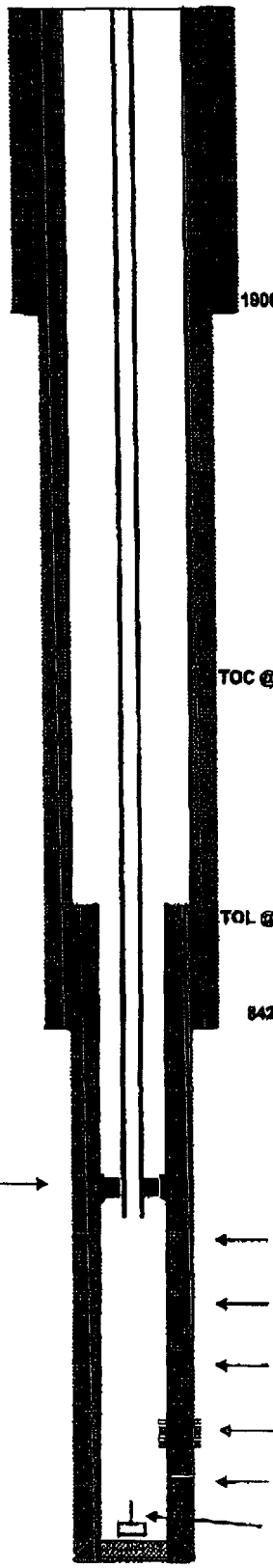
Elevations:
GL: 3435.8'
KB: 3451'
DF: 3450'

Log Formation Tops	
Cisco / Canyon	
Atoka	
Morrow	

TUBING DETAIL -

Pending

Proposed Wellbore Diagram



Baker 5" lok-set pkr @ 11,00'
w/ EL-1 long tbg on/off assembly
w/ 1.87" BFC in profile

Perfs 11,042 - 52' w/4 - .32 dia. Spf — Morrow (U)

Perfs 11,192 - 98' w/4 - .32 dia. Spf — Morrow (U)

Perfs 11,368 - 71' & 11,375 - 82' w/4 - .32 dia. Spf — Morrow (U)

Perfs 11,430 -11,443 w/ 4 - .32 dia. spf — **Status** Morrow - Cmt sqz'd

Perfs 11,526 - 41' w/4 - .32 dia. Spf — Morrow (L)

JUNK: Possible Vann Tools Co. PAVA tbg release sub and csg gun.

COTD: unknown
PBTD: 11,556'
TD: 11,600'

Well ID Info:
Chevno: EP5184
API No: 30-015-22118
L5/L6: UCU971400
Spud Date: 4/13/77
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Circ: Yes **TOC:** Surface **TOC By:** Circulation

Intermediate Csg: 7 5/8" 26.4# & 29.7#, S-95 & N-80
Set: @ 8,421' Cmt'd w/ 700 sx
Hole Size: 9 1/2"
Circ: No **TOC:** 4,100' from surf. **TOC By:** TS

Production Liner: 5" 18# N-80 X-line liner
Set: @ 8,112'-11,600' Cmt'd w/400 sx
Hole Size: 6 1/2"
Circ: Yes **TOC:** 8112' **TOC By:** Circ to top of liner
Note: Tst liner top w/ 2,500 psi for 30 min. Good Tst.

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Initial Completion - Perf'd 11,431 - 11,444 using 4 spf (52 - .32" dia). Under balanced using Vann Gun System. Flw to surf in 7 min. Tst 5.2 MMcf @ TP = 2850 psi. (Tst unit maxed out) Well cleaned up. SITP 4100 psi. Performed 4 point tst. 1st flw rate 1690 Mcfgpd @ TP=3736 psi, 2nd flw rate 2450 Mcfgpd @ TP=3610 psi, 3rd flw rate 3712 Mcfgpd @ 3170 psi, 4th flw rate 5293 Mcfgpd @ TP=2595 psi. CAOF = 8441 Mcfgpd. Off Report.

Subsequent Work
9/11/84: Fish tbg @ 4012. Tbg parted due to excessive corrosion on the 135 & 138 jts. RIH & redressed on/off tool and replaced 2 3/8" tbg. Hydrotest tbg to 5,000 psi. Circ hole w/pkr fluid. Tst csg/tbg annulus to 400 psi for 15 min. Good test. Swab tbg dwn & flow to clean up.

11/88: Well on compression - details unknown. Compressor removal date unknown.

Updated: 2-24-05 by LS Adams

Estill AD Federal No. 1
Workover Procedure & Information
Lea County, New Mexico

✓Locate and secure for use 11,600' of frac quality 2 7/8" N-80 workstring.

✓Locate and secure for use 11,100' of 2 3/8" 4.7# N-80 EUE 8rd production tubing.

Workover Procedure:

1. MIRU PU. Pressure tst tbg-csg annulus to 1000 psi. ND wellhead and NU BOPE.
2. Kill well w/4% KCL wtr. Release 5" Baker Lok-Set packer @ 11,375'.
3. TOOH LD 2 3/8" tbg. and Baker 5" Lok- set packer. Send tbg for inspection.
4. PU & TIH w/ 3 7/8" bit on 2 7/8" tbg and CO wellbore to 11,550'. Circ. Wellbore clean.

   NOTE: Top of release sub on Vann Gun @ approx. 11,556'. Fill was tagged by SL on 2-16-2005 @ 11,417' w/1.50" gauge ring.
5. PU bit to 11,400'. SI csg and establish a pump-in rate for cmt sqz design into open perfs @ 11,430 – 443' using clean FW. Report pump-in rate and surface pressure to Jim Prementine for development of cmt sqz design.
6. POOH w/ 2 7/8" tbg & bit.
7. TIH w/ 5" CICR on 2 7/8" tbg. Set CICR @ approx. 11,400'. Load and tst csg-tbg annulus to 500 psi. **Cement squeeze Morrow perforations 11,430'- 443'** as directed by Jim Prementine & DS.
8. POOH w/ 2 7/8" tbg & stinger.
9. RIH w/ 3 7/8" bit & 3 1/8" DC's on 2 7/8" tbg. DO CICR & cmt. Circ. Clean & tst cmt sqz to 1,000 psi.
10. POOH w/2 7/8" tbg and BHA.
11. RIH w/5" pkr on 2 7/8" tbg. Set pkr @ 8,150'. Load and tst csg-tbg annulus to 500 psi. Tst tbg & liner to 4,000 psi. for 20 minutes.

    NOTE: Before continuing to Step 12 advise Jim Prementine/Larry Adams of test results.
12. POOH w/ 2 7/8" tbg & pkr.
13. RIH w/5 ¼" polish mill on 2 7/8" tbg. Polish liner hanger receptacle as per Weatherford Completion Systems specifications. POOH & LD polish mill.
14. PU & RIH w/ liner tieback assembly (Liner TBSA, 7 5/8" liner top pkr w/top PBR assembly, & top TBSA) on 2 7/8" tbg. Sting into liner hanger PBR with tie back assembly. Load and tst csg-tbg annulus to 500 psi. Tst tbg & tieback to 1500 psi for 20 min. while monitoring csg-tbg annulus.

    NOTE: If tbg & tieback test is Good – continue to step 15. If tbg & tieback test is Bad – contact Jim Prementine for supplemental procedure.

Estill AD Federal No. 1
Workover Procedure & Information
Lea County, New Mexico

15. Set tieback assembly pkr. Load and tst csg-tbg annulus to 500 psi. Tst tbg & liner tieback assembly to 4000 psi. Rls. 2 7/8" tbg and POOH.

16. ND BOPE & Tbg Head. Install 5 ½" WHE.

17. RU casing crew & handling equipment. PU & RIH w/TBSA on approx 8,112' of 5 ½" 15.5# K-55 LT&C csg. Sting into PBR. Space out csg & install slips & flange. RD casing crew.

18. NU BOPE. Tst BOPE & WHE to 5,000 psi.

19. RIH w/ 4 1/4" bit on 2 7/8" tbg. to approx. 11,000. Circ wellbore clean with pickling acid per Schlumberger recommendation.

20. RU & swab tbg/csg to approx. 10,500'. POOH w/2 7/8" tbg & bit.

21. RU WL Equipment. **Perforate interval 11,535 - 41'** w/ 4 SPF (24 holes total) using a 3 3/8" Predator gun (3322 charge - .47 OD hole) at 120° phasing. (Use Dresser Atlas CDNL dated 6/8/1977 for depth correlation). RD WL Equipment.

    NOTE: Ensure perf gun weight compensation for possible under balanced reservoir response. (Avg Res. BHP est. @ 2,800 psi)

22. NU Frac valve & Head. Notify Rita Dickey for QC on frac job.

23. RU DS equipment and frac interval 11,535'-541' (Morrow) down csg @ 4,000 psi max surface pressure. Tag sand w/SC46 isotopes.
    - 10,000 gals 4.5-4.0% Clearfrac w/70 quality CO2 foam system
    - 18,000 # 20/40 Carbo Lite
    - 2,000 gals 1% Clearfrac w/70 quality CO2 foam system

24. RU WL Equipment. RIH with 5" Composite BP and set @ 11,500'. Tst Composite BP and csg to 4,000 psi. for 10 min.

25. **Perforate intervals 11,375-82' and 11,366-71'** w/ 4 SPF (48 holes total) using a 3 3/8" Predator gun (3322 charge - .47 OD hole) at 120° phasing. (Use Dresser Atlas CDNL dated 6/8/1977 for depth correlation). RD WL Equipment.

26. Notify Rita Dickey for QC on frac job.

27. RU DS equipment and frac interval 11,366'-382' (Morrow) down csg @ 4,500 psi max surface pressure. Tag sand w/IR192 isotopes.
    - 15,000 gals 4.5-4.0% Clearfrac w/70 quality CO2 foam system
    - 27,000# 20/40 Carbo Lite
    - 3,000 gals 1% Clearfrac w/70 quality CO2 foam system

28. RU WL Equipment. RIH with 5" Composite BP and set @ 11,300'. Tst Composite BP and csg to 4,000 psi. for 10 min.

Estill AD Federal No. 1
Workover Procedure & Information
Lea County, New Mexico

29. **Perforate intervals 11,192-98'** w/ 4 SPF (48 holes total) using a 3 3/8" Predator gun (3322 charge - .47 OD hole) at 120° phasing. (Use Dresser Atlas CDNL dated 6/8/1977 for depth correlation). RD WL Equipment.

30. Notify Rita Dickey for QC on frac job.

31. RU DS equipment and frac interval 11,192'-98' (Morrow) down csg @ 4,500 psi max surface pressure.
    - 10,000 gals 4.5-4.0% Clearfrac w/70 quality CO2 foam system
    - 18,000 # 20/40 Carbo Lite
    - 2,000 gals 1% Clearfrac w/70 quality CO2 foam system

32. RU WL Equipment. RIH with 5" Composite BP and set @ 11,150'. Tst Composite BP and csg to 4,000 psi. for 10 min.

33. **Perforate intervals 11,042-52'** w/ 4 SPF (48 holes total) using a 3 3/8" Predator gun (3322 charge - .47 OD hole) at 120° phasing. (Use Dresser Atlas CDNL dated 6/8/1977 for depth correlation). RD WL Equipment.

34. Notify Rita Dickey for QC on frac job.

35. RU DS equipment and frac interval 11,042'-52' (Morrow) down csg @ 4,500 psi max surface pressure.
    - 15,000 gals 4.5-4.0% Clearfrac w/70 quality CO2 foam system
    - 27,000 # 20/40 Carbo Lite
    - 3,000 gals 1% Clearfrac w/70 quality CO2 foam system

36. RU WL Equipment. RIH with 5" Composite BP and set @ 11,000'. Bleed down csg pressure.

37. MIRU (BJ Coiltech) Coiled Tubing Unit w/60K injector head & 1 ¾" 80K (min.) coiled tubing. RIH w/3 7/8" bit, 2 7/8" PDM & hydraulic disconnect on 1 3/4" 80 K coiled tubing. CO sand & DO Composite BPs @ 11,000',11,150',11,300', & 11,550' using a 70 quality nitrified foam system. POOH. RD MO CTU.

38. MI RU WL (Baker Atlas) and run Baker PRISM after frac log for evaluation. (Send copy of log to Larry Adams for review).

39. RU WL Equipment. PU & RIH w/ pump-off plug (pinned based on well conditions), 4' 2 3/8" tbg. sub & 5" pkr w/on-off gudgeon having 1.81" profile on WL. Set pkr @ approx. 11,000'. RD WL Equipment.

40. RIH w/2 7/8" tbg work string & POOH L/D.

41. Ensure NO csg pressure or pressure on 5 ½" – 7 5/8" annulus.

42. ND Frac Valve. ND 5 ½" WHE. NU BOPE. RU casing crew. POOH LD 5 ½" csg & TBSA. RD casing crew.

Estill AD Federal No. 1
Workover Procedure & Information
Lea County, New Mexico

43. PU & TIH w/on/off tool on 2 3/8" 8rd EUE N-80 tbg.

44. Latch on to gudgeon above pkr @ approx. 11,000' with on/off overshot. Tst csg/tbg annulus to 500 psi.

45. ND BOPE. NU WHE.

46. Swab down tbg to at least 10,500'. RU nitrogen unit & blow-off plug below pkr.

47. Notify Field Operations Group and place well on production.

48. Upon establishing flow rate, RDMO PU & Clean location.

49. Potential test Morrow intervals 10,042'-11,535' monitoring % CO2 and report to Larry Adams.

50. Run 4 point test.

Contact Names and Numbers

Larry Adams	Production Engineer, Midland	
	Office	(432) 687-7248
	Home	(432) 699-0963
	Cell	n/a
Scott Ingram	Geologist, Midland	
	Office	(432) 687-7212
	Home	(432) 699-5252
	Cell	
Wayne Minchew	Operations Supervisor, Carlsbad	
	Office	(505) 396-4414 x101
	Cellular	(505) 631-9119
	Home	n/a