UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Expires: March 31, 1993 5. Lease Designation and Serial No. SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. SF - 078194 6. If Indian, Allottee or Tribe Name Use "APPLICATION FOR PERMIT - " for such proposals 7. If Unit or CA, Agreement Designation 1. Type of Well Well Well Other 8. Well Name and No. 2. Name of Operator **LUDWICK LS # 5** Amoco Production Company Nancy I. Whitaker 9. API Well No. 3. Address and Telephone No. 3004509029 P.O. Box 800, Denver, Colorado 80201 (303) 830-5039 10. Field and Pool, or Exploratory Area 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Aztec Fruitland Sand North Extension 11. County or Perish, State 1500 FNL 1600FWL Sec. 31 T 30N R 10W UNIT F SAN JUAN **NEW MEXICO** CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 12 TYPE OF SUBMISSION TYPE OF ACTION Change of Plans Notice of Intent Recompletion **New Construction** Plugging Back Non-Routine Frecturing Subsequent Report Casing Repair Water Shut-Off Conversion to Injection Final Abandonment Notice RECOMPLETION 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.) Amoco Production Company requests permission to recomplete the above well to the Fruitland Sand and to isolate the Aztec Picture Cliffs with a CIBP according to the attached procedures. For technical questions please call: Mike Kutas 303-830-5159 OM, GOM. DIN STAFF ASSISTANT 11-25-1996 Date APPROVED Approved by Conditions of approval, if any: NOV 27 1996

(3)

* See Instructions on Reverse Side NMOCD

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

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FORM APPROVED

Budget Bureau No. 1004-0135

SJOET Well Work Procedure

Version: 1

Name: Ludwick LS #5
Date: June 11, 1996
Budget: Recompletion
Work Type: Recompletion

Objectives:

Recomplete the well into the Fruitland sand interval (2330'-2345')

1. TOOH and LD 1 1/4" production tubing SA 2601'.

2. Set 3 1/2" CIBP @ 2550' and isolate PC.

3. Perforate and stimulate Fruitland sand (2335'-2345') w/ 2 JSPF.

4. Cleanout well.

5. Land 1 1/4" production tubing @ 2335'-2340'.

Pertinent Information:

Location: Unit F Sec 31-30N-10W

County: San Juan State: New Mexico Lease: SF-078194

Flac (well) No: 978674

Horizon: FRT

API #: 30-045-09029 Engineer: G.M. Kutas

Phone: W - (303) 830-5159 H - (303) 840-3700

P - (303) 840-3700 P - (303) 553-6334

Economic Information:

APC WI: 100%

Estimated Cost: \$87,600.

Payout: 3.2 years

FRT Pre-Production: 0 MCFD FRT Post-Production: 160 MCFD

Estimated Formation Tops:

Nacimento:

Ojo Alamo:

Kirtland Shale: Fruitland: 2185'

Pictured Cliffs: 2570' Lewis Shale:

Cliff House: Menefee: Point Lookout:

Mancos Shale:

Gallup: Graneros:

Dakota:

Morrison:

PBTD: 2656' TD: 2656'

Bradenhead Test Information:

Test Date: 8/24/93 Tbg: 156 psi Int: 000 psi Csg: 156 psi BH: 000 psi

Time	BH	INT	CSG
′5 min	0	0	0
10 min	0	0	Ō
<u>15 min</u>	00	0	Ō,

Ludwick LS #5 Orig. Comp. 3/55 Page 2 of 2

- 1. Check Anchors. MIRUSU. Nipple down WH. Nipple up BOP.
- 2. Set tubing plug w/ WL.
- 3. Tag PBTD and TOOH w/ 1 1/4" tubing .
- 4. Run bit and scraper to 2656'.
- 5. Run 3 1/2" gauge ring to 2550'.
- 6. PU x TIH x 1 1/4" tbg x 3 1/2" CIBP.
- 7. Set CIBP @ 2550'. Spot 5 sx class B cement on top of CIBP.
- 8. TOOH w/ tbg and WOC.
- 9. TIH w/ pkr and set @ 2350'. Pressure test casing to 500 psi. Run GR/CCL/CBL to determine if cement exists across the Fruitland Sand interval @ 2330'-2345'. Tie into Gearhart GR /Neutron log dated 10-4-85 for depth control. If csg pressure test fails, run tbg x pkr and isolate leak. Cement squeeze will be based on location and extent of leak. D/O cmt to PBTD.
- 10. TIH with perforating gun with packoff, 180 degrees phasing using 2.5 HSE ported guns (11 GM, 0.4 EHD, 10.6 PEN). Perf 2335'-2345' w/ 2 jspf.
- 11. TOOH w/ perf gun.
- 12. Nipple down BOP. Nipple up WH and frac valve.
- 13. Frac well according to frac schedule A.
- 14. Flow well back immediately on a 1/4" choke for 4 hours, then flowback on a 1/2" choke until pressure subsides.
- 15. Nipple down WH. Nipple up BOP.
- 16. TIH x 1 1/4" tbg x SN x 1/2' mule shoe. C/O to PBTD (est 2461'). Raise and set tbg @ 2335'-2340'.
- 17. Flow well to insure productivity.
- 18. SI well, RDMOSU.
- 19. Return well to production.

If problems are encountered, please contact:

G.M. Kutas W - (303) 830-5159

Ludwick LS #5
API# 30-045-09029
Unit F Sec 31-30N-10W
Pictured Cliffs San Juan County, NM Pictured Cliffs: formation tops: Fruitland: perfs: 2586'-2618' w/ 2 jspf 2185° 2570° 1 1/4" 2.4# J-55 @ 2601' SN 1 jt off bttm 3 1/2" 9.2# J-55 @ 2652' TOC: 1700' TS 5 1/2" 15.5# J-55 @2554'. TOC: 1700' TS 9 5/8" 25.4# spiral weld @ 133' cement circ

TD: 2656'

District I PO Box 1980, Hobbs, NM 88241-1980 District II 811 South First, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV

State of New Mexico Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505

Form C-102 Revised October 18, 1994 Instructions on back Submit to Appropriate District Office

RECEIVEL State Lease - 4 Copies Fee Lease - 3 Copies

2040 South Pacheco, Santa Fe, NM 87505 AMENDED REPORT WELL LOCATION AND ACREAGE DEDICATION PLAT API Number Pool Code Poul Name 3004509029 71240 Aztec Fruitland Sand North Extension ⁴ Property Code Property Name Well Number Ludwick OCRID No. Operator Name ' Fievation 000778 Amoco Production Company 6145 Surface Location · UL er lot me. Section Township Range Lot Ida Feet from the North/South line Feet from the East/West line \mathbf{F} Couply 31 30N 10W 1500 North 1600 West San Juan Bottom Hole Location If Different From Surface UL or lot so. Township Range Lot Idn Feet from the North/South line Feet from the East/West line Couply 12 18 1 2 12 Dedicated Acres "Joint or Infill 14 Consolidation Code | 16 Order No. 149.41 NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION. OPERATOR CERTIFICATION I hereby certify that the information contained herein is irue and complete to the best of my knowledge and belief 16001 Nancy I. Whitaker Printed Name Staff Assistant **I**1-25-96 Date SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. November 17, 1954 oil con. div. Date of Survey and a supplied of the straight and Signature and Scal of Professional Surveyer: C. O. Walker Plat Re-issued to show corrected acreage Hedication Certificate Number per new survey 2-11-74