

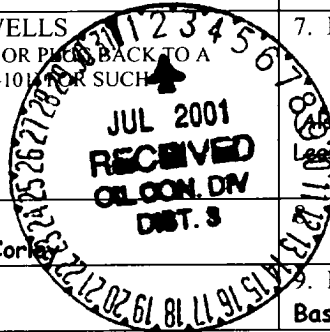
Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised March 25, 1999

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PICK BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-09383
1. Type of Well: Oil Well ☐ Gas Well ☒ Other		5. Indicate Type of Lease STATE FEE
2. Name of Operator Amoco Production Company Attn: Mary Corley		6. State Oil & Gas Lease No.
3. Address of Operator P.O. Box 3092 Houston, TX 77253		7. Lease Name or Unit Agreement Name: Ludwick LS Also filed on BLM Form 3160-5 Federal Lease SF - 078194)
4. Well Location Unit Letter A 990 feet from the North line and 950 feet from the East line Section 19 Township 30N Range 10W NMPM San Juan County		8. Well No. 15
10. Elevation (Show whether DR, RKB, RT, GR, etc.) 6340'		9. Pool name or Wildcat Basin Dakota & Blanco Mesaverde



11. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data	
NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐ TEMPORARILY ABANDON ☐ CHANGE PLANS ☐ PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐ OTHER: Complete Mesaverde & Downhole Commingle ☒	SUBSEQUENT REPORT OF: REMEDIAL WORK ☐ ALTERING CASING ☐ COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐ CASING TEST AND CEMENT JOB ☐ OTHER: ☐

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompilation.

Amoco Production Company request permission to complete the subject well into the Blanco Mesaverde and commingle production downhole with the existing Basin Dakota Pool as per the attached procedure.

The Basin Dakota (71599) & the Blanco Mesaverde (72319) Pools are Pre-Approved for Downhole Commingling per NMOCD Order R - 11363. The working, overriding, and royalty interest owners in the proposed commingled pools are identical, therefore, no notification of this application need be submitted via certified mail (return receipt).

Production is proposed to be allocated based on the subtraction method using the projected future decline for production from the Dakota. That production shall serve as a base for production subtracted from the total production for the commingled well. The balance of the production will be attributed to the Mesaverde. Attached is the future production decline estimates for the Dakota.

Commingling Production Downhole in the subject well from the proposed pools with not reduce the value of the total remaining production.

DHC 457 AZ

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Mary Corley TITLE Sr. Regulatory Analyst DATE 06/27/2001
Type or print name Mary Corley Telephone No. 281-366-4491

(This space for State use)

APPROVED BY STEVEN N. HAYDEN TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 3 DATE JUL - 2 2001
Conditions of approval, if any:

District I

1625 N. French Dr., Hobbs, NM 88240

District II

811 South First, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources DepartmentOIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505Form C-102
Revised August 15, 2000Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

¹ API Number 30-045-09383		² Pool Code 72319	³ Pool Name Blanco Mesaverde
⁴ Property Code 000811	⁵ Property Name Ludwick LS		⁶ Well Number 15
⁷ OGRID No. 000778	⁸ Operator Name Amoco Production Company		⁹ Elevation 6340'

¹⁰ Surface Location

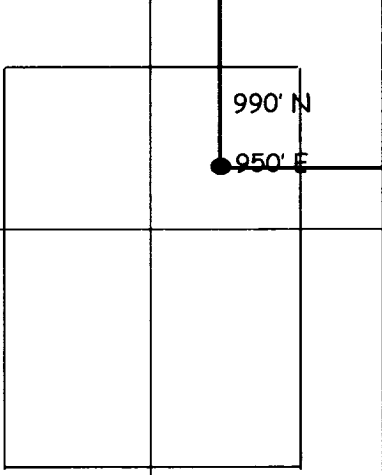
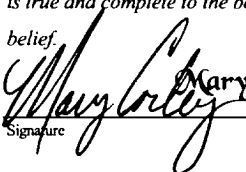
UL or lot no. Unit A	Section 19	Township 30N	Range 10W	Lot Idn	Feet from the 990'	North/South line North	Feet from the 950'	East/West line East	County San Juan
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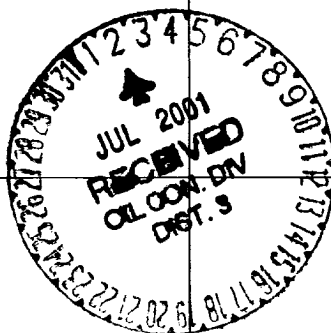
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹² Dedicated Acres 310.56	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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

¹⁶ 	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Printed Name Mary Corley Sr. Regulatory Analyst Title 06/14/2001 Date	
		¹⁸ 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. 05/13/1960 Date of Survey Signature and Seal of Professional Surveyor: James P Leese 1463 Certificate Number



Ludwick LS #15 Recompletion Procedure

Procedure:

1. Check anchors. MIRU workover rig.
2. Check and record tubing, casing, and bradenhead pressures.
3. Blow down well.
4. Nipple down WH. NU BOPs.
5. Tag for fill and tally OH with 2-3/8" production tubing currently set at 7347'.
6. TIH with bit and scraper for 5-1/2" casing to 5500'.
7. TIH with tubing-set CIBP. Set CIBP at 5500'.
8. RU WL. Run CBL over MV interval (4900' - 5500') to ensure zonal isolation across the MV.
9. Pressure test casing to 1500 psi
10. RIH with 3-1/8" casing guns. Perforate Menefee/Point Lookout formation.
5079', 5090', 5105', 5150', 5168', 5170', 5176', 5185', 5190', 5195', 5200', 5205', 5210', 5215',
5220', 5265', 5302', 5310', 5358', 5370', 5375', 5405'
11. RU frac equipment and install wellhead isolation tool. Use 2% KCL-N2 foam in fracture stimulation.
12. Spearhead 500 gal 15% HCL, establish injection rate, and proceed with fracture stimulation according to Schlumberger schedule.
13. Flowback frac immediately.
14. TIH with tubing and bit. Cleanout fill and drill bridge plug set at 5500'. Cleanout fill to PBDT at 7476'. Blow well dry at PBDT.
15. Land 2-3/8" production tubing at 7350'.
16. ND BOP's. NU WH. Test well for air. Return well to production and downhole commingle MV and DK production.

Ludwick LS #15

Sec 19, T30N R10W

API: 30-045-09383

GL: 6340'

History:

Completed in 6/60

est. TOC unknown

10-3/4" 40#, H40 ST&C @ 179'
200 sxs cmt

est. TOC @ 2400' (temp surv)

7-5/8" 26.4#, J55 ST&C @ 3050'
100 sxs cmt

TOC unknown

4 Sqz holes @ 5375'
- Sqz'd w/ 300 sxs cmt

DK Completion

7234' - 7516' w/ 80m#s sand

DK Completion

7258' - 7445' 4 spf (SQZ'D w/ 300 sxs)

4 Sqz holes @ 7300'
- Sqz'd w/ 50 sxs cmt

Tubing: 2-3/8" 4.7#, J55 @ 7347'

5-1/2" 17#, J55 ST&C 7484'
200 sxs cmt

PBTD: 7476'

Notes:

- 1) Mud used from 4400' - TD. Major losses
- 2) Major cmt problems across DK. Likely no cement across MV.
- 3) 4 cores cut across DK from 7234' - 7516'

updated: 5/7/01 jad

Ludwick LS #15
Future Production Decline Estimate Dakota
(Monthly Factor .315%)

Month	Gas Volume
Jan-2000	85
Feb-2000	73
Mar-2000	85
Apr-2000	67
May-2000	78
Jun-2000	69
Jul-2000	69
Aug-2000	66
Sep-2000	72
Oct-2000	89
Nov-2000	88
Dec-2000	67
Jan-2001	60
Feb-2001	41
Mar-2001	103
Apr-2001	53
May-2001	50
Jun-2001	50
Jul-2001	50
Aug-2001	50
Sep-2001	49
Oct-2001	49
Nov-2001	49
Dec-2001	49
Jan-2002	49
Feb-2002	49
Mar-2002	49
Apr-2002	49
May-2002	48
Jun-2002	48
Jul-2002	48
Aug-2002	48
Sep-2002	48
Oct-2002	48
Nov-2002	48
Dec-2002	48

$\ln(Q_f/Q_i) = -dt$
 $Q_i = 66 \text{ MCFD } (08/2000)$
 $Q_f = 60 \text{ MCFD } (01/2001)$
 $t = 5 \text{ months } (.41666 \text{ yrs})$
 $d = 0.32 \text{ annual decline}$
 $0.027 \text{ monthly decline } (0.32/12)$

Corrected Volumes
 $60/66 = 0.90909$
 $.91 * .41666 = .37878$
 0.031565

Month	Gas Volume
Jan-2003	47
Feb-2003	47
Mar-2003	47
Apr-2003	47
May-2003	47
Jun-2003	47
Jul-2003	47
Aug-2003	47
Sep-2003	46
Oct-2003	46
Nov-2003	46
Dec-2003	46
Jan-2004	46
Feb-2004	46
Mar-2004	46
Apr-2004	46
May-2004	45
Jun-2004	45
Jul-2004	45
Aug-2004	45
Sep-2004	45
Oct-2004	45
Nov-2004	45
Dec-2004	45
Jan-2005	45
Feb-2005	44
Mar-2005	44
Apr-2005	44
May-2005	44
Jun-2005	44
Jul-2005	44
Aug-2005	44
Sep-2005	44
Oct-2005	43
Nov-2005	43
Dec-2005	43

Month	Gas Volume
Jan-2006	43
Feb-2006	43
Mar-2006	43
Apr-2006	43
May-2006	42
Jun-2006	42
Jul-2006	42
Aug-2006	42
Sep-2006	42
Oct-2006	42
Nov-2006	42
Dec-2006	41
Jan-2007	41
Feb-2007	41
Mar-2007	41
Apr-2007	41
May-2007	41
Jun-2007	41
Jul-2007	40
Aug-2007	40
Sep-2007	40
Oct-2007	40
Nov-2007	40
Dec-2007	40
Jan-2008	40
Feb-2008	40
Mar-2008	39
Apr-2008	39
May-2008	39
Jun-2008	39
Jul-2008	39
Aug-2008	39
Sep-2008	39
Oct-2008	38
Nov-2008	38
Dec-2008	38

Ludwick LS #15
Future Production Decline Estimate Dakota
(Monthly Factor .315%)

Month	Gas Volume
Jan-2009	38
Feb-2009	38
Mar-2009	38
Apr-2009	38
May-2009	38
Jun-2009	37
Jul-2009	37
Aug-2009	37
Sep-2009	37
Oct-2009	37
Nov-2009	37
Dec-2009	37
Jan-2010	36
Feb-2010	36
Mar-2010	36
Apr-2010	36
May-2010	36
Jun-2010	36
Jul-2010	36
Aug-2010	36
Sep-2010	36
Oct-2010	35
Nov-2010	35
Dec-2010	35
Jan-2011	35
Feb-2011	35
Mar-2011	35
Apr-2011	35
May-2011	35
Jun-2011	34
Jul-2011	34
Aug-2011	34
Sep-2011	34
Oct-2011	34
Nov-2011	34
Dec-2011	34

Month	Gas Volume
Jan-2012	34
Feb-2012	34
Mar-2012	33
Apr-2012	33
May-2012	33
Jun-2012	33
Jul-2012	33
Aug-2012	33
Sep-2012	33
Oct-2012	33
Nov-2012	33
Dec-2012	33
Jan-2013	32
Feb-2013	32
Mar-2013	32
Apr-2013	32
May-2013	32
Jun-2013	32
Jul-2013	32
Aug-2013	32
Sep-2013	32
Oct-2013	32
Nov-2013	31
Dec-2013	31
Jan-2014	31
Feb-2014	31
Mar-2014	31
Apr-2014	31
May-2014	31
Jun-2014	31
Jul-2014	31
Aug-2014	31
Sep-2014	31
Oct-2014	30
Nov-2014	30
Dec-2014	30

Month	Gas Volume
Jan-2015	30
Feb-2015	30
Mar-2015	30
Apr-2015	30
May-2015	30
Jun-2015	30
Jul-2015	30
Aug-2015	30
Sep-2015	29
Oct-2015	29
Nov-2015	29
Dec-2015	29
Jan-2016	29
Feb-2016	29
Mar-2016	29
Apr-2016	29
May-2016	29
Jun-2016	29
Jul-2016	29
Aug-2016	28
Sep-2016	28
Oct-2016	28
Nov-2016	28
Dec-2016	28
Jan-2017	28
Feb-2017	28
Mar-2017	28
Apr-2017	28
May-2017	28
Jun-2017	28
Jul-2017	28
Aug-2017	27
Sep-2017	27
Oct-2017	27
Nov-2017	27
Dec-2017	27

Month	Gas Volume
Jan-2018	27
Feb-2018	27
Mar-2018	27
Apr-2018	27
May-2018	26
Jun-2018	26
Jul-2018	26
Aug-2018	26
Sep-2018	26
Oct-2018	26
Nov-2018	26
Dec-2018	26
Jan-2019	25
Feb-2019	25
Mar-2019	25
Apr-2019	25
May-2019	25
Jun-2019	25
Jul-2019	25
Aug-2019	25
Sep-2019	24
Oct-2019	24
Nov-2019	24
Dec-2019	24
Jan-2020	24
Feb-2020	24
Mar-2020	24
Apr-2020	24
May-2020	23
Jun-2020	23
Jul-2020	23
Aug-2020	23
Sep-2020	23
Oct-2020	23
Nov-2020	23
Dec-2020	23

Ludwick LS #15
Future Production Decline Estimate Dakota
(Monthly Factor .315%)

Month	Gas Volume
Jan-2021	23
Feb-2021	22
Mar-2021	22
Apr-2021	22
May-2021	22
Jun-2021	22
Jul-2021	22
Aug-2021	22
Sep-2021	22
Oct-2021	22
Nov-2021	21
Dec-2021	21
Jan-2022	21
Feb-2022	21
Mar-2022	21
Apr-2022	21
May-2022	21
Jun-2022	21
Jul-2022	21
Aug-2022	21
Sep-2022	20
Oct-2022	20
Nov-2022	20
Dec-2022	20
Jan-2023	20
Feb-2023	20
Mar-2023	20
Apr-2023	20
May-2023	20
Jun-2023	20
Jul-2023	19
Aug-2023	19
Sep-2023	19
Oct-2023	19
Nov-2023	19
Dec-2023	19

Month	Gas Volume
Jan-2024	19
Feb-2024	19
Mar-2024	19
Apr-2024	19
May-2024	18
Jun-2024	18
Jul-2024	18
Aug-2024	18
Sep-2024	18
Oct-2024	18
Nov-2024	18
Dec-2024	18
Jan-2025	18
Feb-2025	18
Mar-2025	18
Apr-2025	17
May-2025	17
Jun-2025	17
Jul-2025	17
Aug-2025	17
Sep-2025	17
Oct-2025	17
Nov-2025	17
Dec-2025	17
Jan-2026	17
Feb-2026	17
Mar-2026	17
Apr-2026	16
May-2026	16
Jun-2026	16
Jul-2026	16
Aug-2026	16
Sep-2026	16
Oct-2026	16
Nov-2026	16
Dec-2026	16

Month	Gas Volume
Jan-2027	16
Feb-2027	16
Mar-2027	16
Apr-2027	15
May-2027	15
Jun-2027	15
Jul-2027	15
Aug-2027	15
Sep-2027	15
Oct-2027	15
Nov-2027	15
Dec-2027	15
Jan-2028	15
Feb-2028	15
Mar-2028	15
Apr-2028	15
May-2028	15
Jun-2028	14
Jul-2028	14
Aug-2028	14
Sep-2028	14
Oct-2028	14
Nov-2028	14
Dec-2028	14
Jan-2029	14
Feb-2029	14
Mar-2029	14
Apr-2029	14
May-2029	14
Jun-2029	14
Jul-2029	14
Aug-2029	13
Sep-2029	13
Oct-2029	13
Nov-2029	13
Dec-2029	13

Month	Gas Volume
Jan-2030	13
Feb-2030	13
Mar-2030	13
Apr-2030	13
May-2030	13
Jun-2030	13
Jul-2030	13
Aug-2030	13
Sep-2030	13
Oct-2030	12
Nov-2030	12
Dec-2030	12
Jan-2031	12
Feb-2031	12
Mar-2031	12
Apr-2031	12
May-2031	12
Jun-2031	12
Jul-2031	12
Aug-2031	12
Sep-2031	12
Oct-2031	12
Nov-2031	12
Dec-2031	12
Jan-2032	12
Feb-2032	12
Mar-2032	11
Apr-2032	11
May-2032	11
Jun-2032	11
Jul-2032	11
Aug-2032	11
Sep-2032	11
Oct-2032	11
Nov-2032	11
Dec-2032	11