

DATE IN 2/4/00	SUSPENSE 2/24/00	ENGINEER DC XXXX	LOGGED WV	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2649

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
 [DD-Directional Drilling] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

FEB - 4 2000

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling
 _ NSL _ NSP _ DD _ SD

Check One Only for [B] and [C]

[B] Commingling - Storage - Measurement
 X DHC _ CTB _ PLC _ PC _ OLS _ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
 _ WFX _ PMX _ SWD _ IPI _ EOR _ PPR

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or _ Does Not Apply

[A] _ Working, Royalty or Overriding Royalty Interest Owners

[B] _ Offset Operators, Leaseholders or Surface Owner

[C] _ Application is One Which Requires Published Legal Notice

[D] X Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] _ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] _ Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Mary Corley
Print or Type Name

Mary Corley
Signature

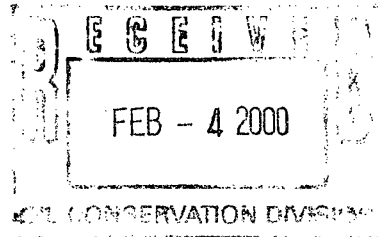
Sr. Business Analyst
Title

02/01/2000
Date

Amoco Exploration & Production
501 Westlake Park Blvd.
Post Office Box 3092
Houston, TX 77079

February 1, 2000

**Ms. Lori Wrotenbery, Director
New Mexico Oil Conservation Division
2040 S. Pacheco Street
P. O. Box 6429
Santa Fe, NM 87505**



OIL CONSERVATION DIV.
00 JAN 34 AM 11:11

**Application for Exception to Rule 303-A- Downhole Commingling
Hughes A No. 2E
Unit O Section 27-T29N-R8W
Blanco Mesaverde and Basin Dakota Pools
San Juan County, New Mexico**

Enclosed please find an administrative application form (C-107-A) and attachments for downhole commingling for the captioned well. All working, overriding and royalty interests are identical in both zones, therefore, no notification of this application is required to be submitted via certified mail.

We respectfully request that this application for downhole commingling be approved within 20 days after the receipt of the application as all ownership is common in the zones to be commingled, waste will not occur, and correlative rights will not be violated.

Should you have questions regarding this application, do not hesitate to call me at 281-366-4491.

Sincerely,

**Mary Corley
Enclosures**

**cc: Frank Chavez, Supervisor
NMOCD District III
1000 Rio Brazos Road
Aztec, NM 87410**

**Bureau of Land Management
1235 La Plata Hwy.
Farmington, NM 87401**

James Dean

Well File

PRODUCTION ALLOCATION RECOMMENDATION

Hughes A No. 2E

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

WORKING, OVERRIDING, and ROYALTY INTEREST OWNERS NOTIFICATION

Hughes A No. 2E

All of the working, overriding, and royalty interest are identical in both proposed commingled zones.

DISTRICT I
P.O. Box 1980, Hobbs NM 88241-1980

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107-A
New 3-12-96

OIL CONSERVATION DIVISION

APPROVAL PROCESS:

DISTRICT II
811 South First St., Artesia, NM 88210-2835

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

☒ Administrative ☐ Hearing

DISTRICT III
1000 Rio Brazos Rd. Aztec, NM 87410-1693

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE
☒ YES ☐ NO

Amoco Production Company

PO Box 3092 Houston, TX 77253-3092

Operator Hughes A	Well No. 2E	Address O 27-29N-08W	County San Juan
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OGRID NO. 000778	Property Code 000701	API NO. 30-045-25403	Spacing Unit Lease Types: (check 1 or more) Federal ☒ State ☐ (and/or) Fee
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The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Blanco Mesaverde 72319		Basin Dakota 71599
2. Top and Bottom of Pay Section (Perforations)	4868' - 5625' EST		7521' - 7741'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	a. (Current) 563 psig (est) b. (Original) 2489 psig (est)	a. b.	a. 884 psig b. 3352 psig
6. Oil Gravity (° API) or Gas BTU Content	1264 BTU		1242 BTU
7. Producing or Shut-In?	New zone		Producing
Production Marginal? (yes or no)	YES		YES
• If Shut-In, give data and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: Rates:	Date: Rates:	Date: Rates:
• If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	01/11/2000 Date: Rates: 48 MCFD 0 BCPD 0 BWPD
8. Fixed Percentage Allocation Formula -% for each zone	Oil: Gas % %:	Oil: Gas % %:	Oil: Gas % %:

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☐ No
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No

11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☒ Yes ☐ No (If No, attach explanation)

12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No

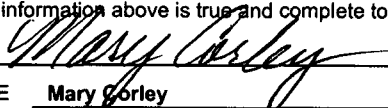
13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)

14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☐ Yes ☒ No NO FEDERAL OR STATE LANDS

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S) _____

16. ATTACHMENTS:
- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
 - * Production curve for each zone for at least one year. (If not available, attach explanation.)
 - * For zones with no production history, estimated production rates and supporting data.
 - * Data to support allocation method or formula. SEE ATTACHED
 - * Notification list of all offset operators.
 - * Notification list of working, overriding, and royalty interests for uncommon interest cases.
 - * Any additional statements, data, or documents required to support commingling.

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

SIGNATURE 	TITLE Sr. Business Analyst	DATE 02/01/2000
TYPE OR PRINT NAME Mary Corley	TELEPHONE NO. (281) 366-4491	

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised October 18, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco

Santa Fe, New Mexico 87505

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

311 South First., Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

2040 South Pacheco, Santa Fe, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-25403	Pool Code 71599 & 72319	Pool Name Basin Dakota & Blanco Mesaverde
Property Code 000701	Property Name Hughes A	Well Number 2E
OGRID No. 000778	Operator Name AMOCO PRODUCTION COMPANY	Elevation 6675' GR

Surface Location

UL or lot no. UNIT O	Section 27	Township 29N	Range 8W	Lot. Idn	Feet from the 1030'	North/South Line SOUTH	Feet from the 1720'	East/West Line EAST	County San Juan
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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
Dedicated Acreage: 320		Joint or Infill		Consolidation Code		Order No.			

**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 true and complete to the best of my knowledge and belief	
	Signature	<i>Mary Corley</i>
	Printed Name	MARY CORLEY
	Position	Sr. Business Analyst
	Date	02/01/2000
	SURVEY 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 knowledge and belief.	
	05/03/1982	
	Date of Survey	
	Signature & Seal of Professional Surveyor	
	Fred B. Kerr, Jr.	
	Certificate No.	3950

Hughes 1E Pressure Data

DK	0.08	PC	0.04
MV	0.07	FT	0.04
		CK	0.04

WELL NAME: **Hughes A 2E**

FORMATION: **DK**

SURFACE PRESS: **274**

PERFS TOP: **7521**

BOTTOM: **7741**

$$(7521 + 7741) / 2 = \underline{7631} \text{ Mid Perf}$$

$$7631 \times 0.08 = \underline{610}$$

$$610.48 + 274 = \underline{884} \text{ Bottom Hole Pressure}$$

Initial Bottom Hole Pressure= **3352** est.

WELL NAME: **Hughes C 2A**

FORMATION: **MV**

SURFACE PRESS: **210**

PERFS TOP: **4898**

BOTTOM: **6065**

$$(4898 + 6065) / 2 = \underline{5482} \text{ Mid Perf}$$

$$5481.5 \times 0.07 = \underline{384}$$

$$383.71 + 210 = \underline{594} \text{ Bottom Hole Pressure}$$

Initial Bottom Hole Pressure= **2626** est.

WELL NAME: **Hughes C 3**

FORMATION: **MV**

SURFACE PRESS: **182**

PERFS TOP: **4584**

BOTTOM: **5432**

$$(4584 + 5432) / 2 = \underline{5008} \text{ Mid Perf}$$

$$5008 \times 0.07 = \underline{351}$$

$$350.56 + 182 = \underline{533} \text{ Bottom Hole Pressure}$$

Initial Bottom Hole Pressure= **2352** est.

WELL NAME: **Hughes 1E**

FORMATION: **MV**

$$\text{Initial Bottom Hole Pressure: } (2626 + 2352) / 2 = \underline{2489}$$

$$\text{Bottom Hole Pressure: } (594 + 533) / 2 = \underline{563} \text{ est.}$$

$$\text{Hughes C 2A + Hughes C 3 BBLs } (308 + 215) / 2 = \underline{262} \text{ est. annual production}$$

$$\text{Hughes C 2A + Hughes C 3 MCF } (63537 + 56023) / 2 = \underline{59780} \text{ est. annual production}$$

ALLOCATION: SUBTRACTION METHOD

Hughes A 2E

Future Production Decline Estimate

Month	Gas Volume
Jan-2000	48
Feb-2000	48
Mar-2000	48
Apr-2000	47
May-2000	47
Jun-2000	47
Jul-2000	47
Aug-2000	46
Sep-2000	46
Oct-2000	46
Nov-2000	46
Dec-2000	45
Jan-2001	45
Feb-2001	45
Mar-2001	45
Apr-2001	45
May-2001	44
Jun-2001	44
Jul-2001	44
Aug-2001	44
Sep-2001	43
Oct-2001	43
Nov-2001	43
Dec-2001	43
Jan-2002	43
Feb-2002	42
Mar-2002	42
Apr-2002	42
May-2002	42
Jun-2002	42
Jul-2002	41
Aug-2002	41
Sep-2002	41
Oct-2002	41
Nov-2002	40
Dec-2002	40

Month	Gas Volume
Jan-2003	40
Feb-2003	40
Mar-2003	40
Apr-2003	39
May-2003	39
Jun-2003	39
Jul-2003	39
Aug-2003	39
Sep-2003	38
Oct-2003	38
Nov-2003	38
Dec-2003	38
Jan-2004	38
Feb-2004	38
Mar-2004	37
Apr-2004	37
May-2004	37
Jun-2004	37
Jul-2004	37
Aug-2004	36
Sep-2004	36
Oct-2004	36
Nov-2004	36
Dec-2004	36
Jan-2005	36
Feb-2005	35
Mar-2005	35
Apr-2005	35
May-2005	35
Jun-2005	35
Jul-2005	34
Aug-2005	34
Sep-2005	34
Oct-2005	34
Nov-2005	34
Dec-2005	34

Month	Gas Volume
Jan-2006	33
Feb-2006	33
Mar-2006	33
Apr-2006	33
May-2006	33
Jun-2006	33
Jul-2006	32
Aug-2006	32
Sep-2006	32
Oct-2006	32
Nov-2006	32
Dec-2006	32
Jan-2007	32
Feb-2007	31
Mar-2007	31
Apr-2007	31
May-2007	31
Jun-2007	31
Jul-2007	31
Aug-2007	30
Sep-2007	30
Oct-2007	30
Nov-2007	30
Dec-2007	30
Jan-2008	30
Feb-2008	30
Mar-2008	29
Apr-2008	29
May-2008	29
Jun-2008	29
Jul-2008	29
Aug-2008	29
Sep-2008	28
Oct-2008	28
Nov-2008	28
Dec-2008	28

Month	Gas Volume
Jan-2009	28
Feb-2009	28
Mar-2009	28
Apr-2009	28
May-2009	27
Jun-2009	27
Jul-2009	27
Aug-2009	27
Sep-2009	27
Oct-2009	27
Nov-2009	27
Dec-2009	26
Jan-2010	26
Feb-2010	26
Mar-2010	26
Apr-2010	26
May-2010	26
Jun-2010	26
Jul-2010	26
Aug-2010	25
Sep-2010	25
Oct-2010	25
Nov-2010	25
Dec-2010	25
Jan-2011	25
Feb-2011	25
Mar-2011	25
Apr-2011	24
May-2011	24
Jun-2011	24
Jul-2011	24
Aug-2011	24
Sep-2011	24
Oct-2011	24
Nov-2011	24
Dec-2011	23

Hughes A 2E

Future Production Decline Estimate

Month	Gas Volume
Jan-2012	23
Feb-2012	23
Mar-2012	23
Apr-2012	23
May-2012	23
Jun-2012	23
Jul-2012	23
Aug-2012	23
Sep-2012	22
Oct-2012	22
Nov-2012	22
Dec-2012	22
Jan-2013	22
Feb-2013	22
Mar-2013	22
Apr-2013	22
May-2013	22
Jun-2013	21
Jul-2013	21
Aug-2013	21
Sep-2013	21
Oct-2013	21
Nov-2013	21
Dec-2013	21
Jan-2014	21
Feb-2014	21
Mar-2014	20
Apr-2014	20
May-2014	20
Jun-2014	20
Jul-2014	20
Aug-2014	20
Sep-2014	20
Oct-2014	20
Nov-2014	20
Dec-2014	20

Month	Gas Volume
Jan-2015	19
Feb-2015	19
Mar-2015	19
Apr-2015	19
May-2015	19
Jun-2015	19
Jul-2015	19
Aug-2015	19
Sep-2015	19
Oct-2015	19
Nov-2015	19
Dec-2015	18
Jan-2016	18
Feb-2016	18
Mar-2016	18
Apr-2016	18
May-2016	18
Jun-2016	18
Jul-2016	18
Aug-2016	18
Sep-2016	18
Oct-2016	18
Nov-2016	17
Dec-2016	17
Jan-2017	17
Feb-2017	17
Mar-2017	17
Apr-2017	17
May-2017	17
Jun-2017	17
Jul-2017	17
Aug-2017	17
Sep-2017	17
Oct-2017	17
Nov-2017	16
Dec-2017	16

Month	Gas Volume
Jan-2018	16
Feb-2018	16
Mar-2018	16
Apr-2018	16
May-2018	16
Jun-2018	16
Jul-2018	16
Aug-2018	16
Sep-2018	16
Oct-2018	16
Nov-2018	15
Dec-2018	15
Jan-2019	15
Feb-2019	15
Mar-2019	15
Apr-2019	15
May-2019	15
Jun-2019	15
Jul-2019	15
Aug-2019	15
Sep-2019	15
Oct-2019	15
Nov-2019	15
Dec-2019	14
Jan-2020	14
Feb-2020	14
Mar-2020	14
Apr-2020	14
May-2020	14
Jun-2020	14
Jul-2020	14
Aug-2020	14
Sep-2020	14
Oct-2020	14
Nov-2020	14
Dec-2020	14

Month	Gas Volume
Jan-2021	14
Feb-2021	14
Mar-2021	13
Apr-2021	13
May-2021	13
Jun-2021	13
Jul-2021	13
Aug-2021	13
Sep-2021	13
Oct-2021	13
Nov-2021	13
Dec-2021	13
Jan-2022	13
Feb-2022	13
Mar-2022	13
Apr-2022	13
May-2022	13
Jun-2022	12
Jul-2022	12
Aug-2022	12
Sep-2022	12
Oct-2022	12
Nov-2022	12
Dec-2022	12
Jan-2023	12
Feb-2023	12
Mar-2023	12
Apr-2023	12
May-2023	12
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Sep-2023	12
Oct-2023	12
Nov-2023	11
Dec-2023	11

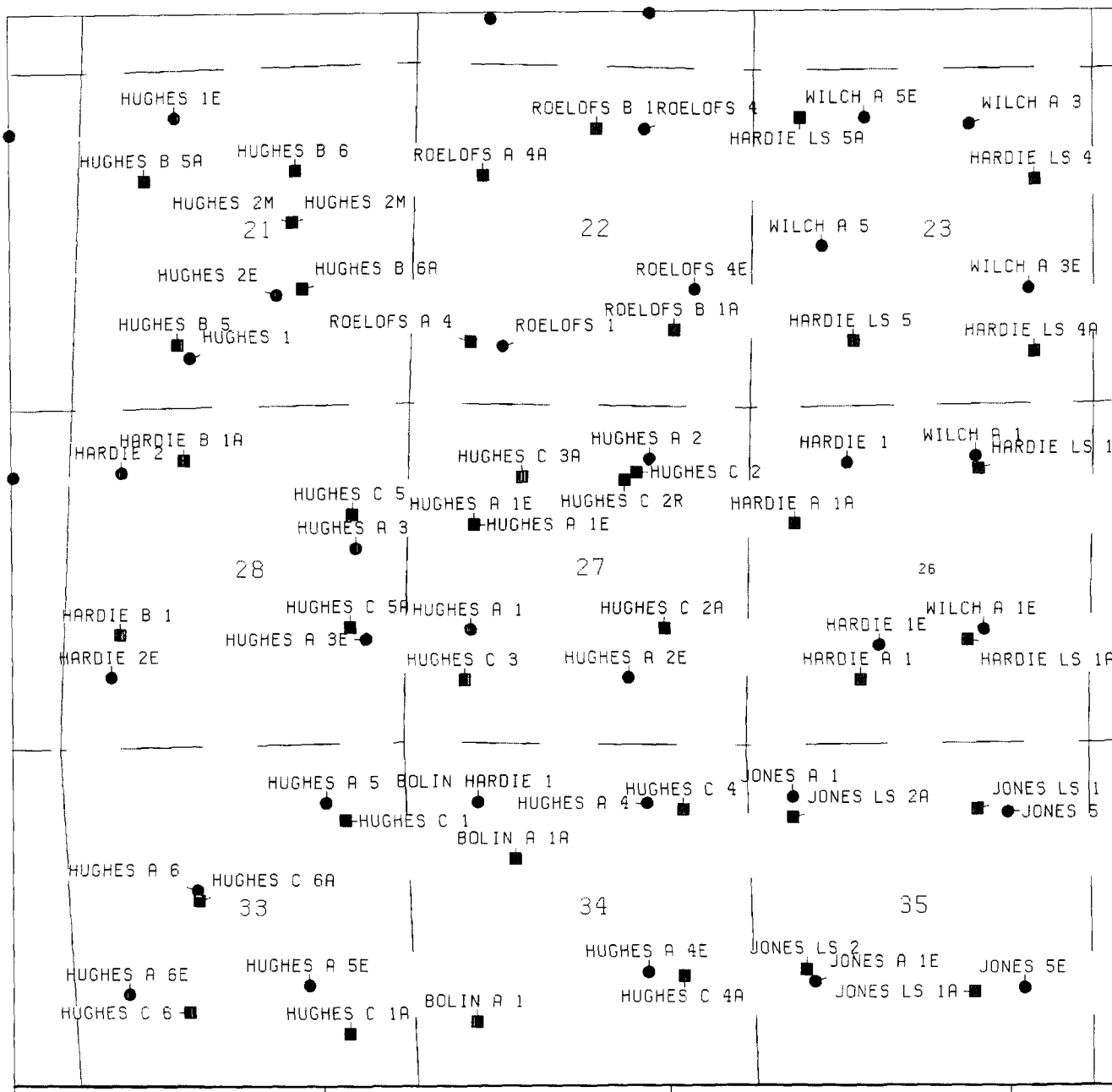
Hughes A 2E Future Production Decline Estimate

Month	Gas Volume
Jan-2024	11
Feb-2024	11
Mar-2024	11
Apr-2024	11
May-2024	11
Jun-2024	11
Jul-2024	11
Aug-2024	11
Sep-2024	11
Oct-2024	11
Nov-2024	11
Dec-2024	11
Jan-2025	11
Feb-2025	11
Mar-2025	11
Apr-2025	11
May-2025	10
Jun-2025	10
Jul-2025	10
Aug-2025	10
Sep-2025	10
Oct-2025	10
Nov-2025	10
Dec-2025	10
Jan-2026	10
Feb-2026	10
Mar-2026	10
Apr-2026	10
May-2026	10
Jun-2026	10
Jul-2026	10
Aug-2026	10
Sep-2026	10
Oct-2026	10
Nov-2026	10
Dec-2026	10

Month	Gas Volume
Jan-2027	9
Feb-2027	9
Mar-2027	9
Apr-2027	9
May-2027	9
Jun-2027	9
Jul-2027	9
Aug-2027	9
Sep-2027	9
Oct-2027	9
Nov-2027	9
Dec-2027	9
Jan-2028	9
Feb-2028	9
Mar-2028	9
Apr-2028	9
May-2028	9
Jun-2028	9
Jul-2028	9
Aug-2028	9
Sep-2028	9
Oct-2028	9
Nov-2028	8
Dec-2028	8
Jan-2029	8
Feb-2029	8
Mar-2029	8
Apr-2029	8
May-2029	8
Jun-2029	8
Jul-2029	8
Aug-2029	8
Sep-2029	8
Oct-2029	8
Nov-2029	8
Dec-2029	8

Month	Gas Volume
Jan-2030	8
Feb-2030	8
Mar-2030	8
Apr-2030	8
May-2030	8
Jun-2030	8
Jul-2030	8
Aug-2030	8
Sep-2030	8
Oct-2030	8
Nov-2030	7
Dec-2030	7
Jan-2031	7
Feb-2031	7
Mar-2031	7
Apr-2031	7
May-2031	7
Jun-2031	7
Jul-2031	7
Aug-2031	7
Sep-2031	7
Oct-2031	7
Nov-2031	7
Dec-2031	7
Jan-2032	7
Feb-2032	7
Mar-2032	7
Apr-2032	7
May-2032	7
Jun-2032	7
Jul-2032	7
Aug-2032	7
Sep-2032	7
Oct-2032	7
Nov-2032	7
Dec-2032	7

Month	Gas Volume
Jan-2033	7
Feb-2033	7
Mar-2033	7
Apr-2033	6
May-2033	6
Jun-2033	6
Jul-2033	6
Aug-2033	6
Sep-2033	6
Oct-2033	6
Nov-2033	6
Dec-2033	6
Jan-2034	6
Feb-2034	6
Mar-2034	6
Apr-2034	6
May-2034	6
Jun-2034	6
Jul-2034	6
Aug-2034	6
Sep-2034	6
Oct-2034	6
Nov-2034	6
Dec-2034	6
Jan-2035	6
Feb-2035	6
Mar-2035	6
Apr-2035	6
May-2035	6
Jun-2035	6
Jul-2035	6
Aug-2035	6
Sep-2035	6
Oct-2035	6
Nov-2035	6
Dec-2035	6



■ Mesaverde
● Dakota

AMOCO PRODUCTION COMPANY
HOUSTON, TX

WESTERN GAS BUSINESS UNIT

MESAVERDE & DAKOTA WELLS
T29N R8W SEC. 27
[REF. HUGHES A 2E]

SCALE 1"=2500'

DRAWN M. J. RITZ

DATE 1-FEB-2000

DRAWING

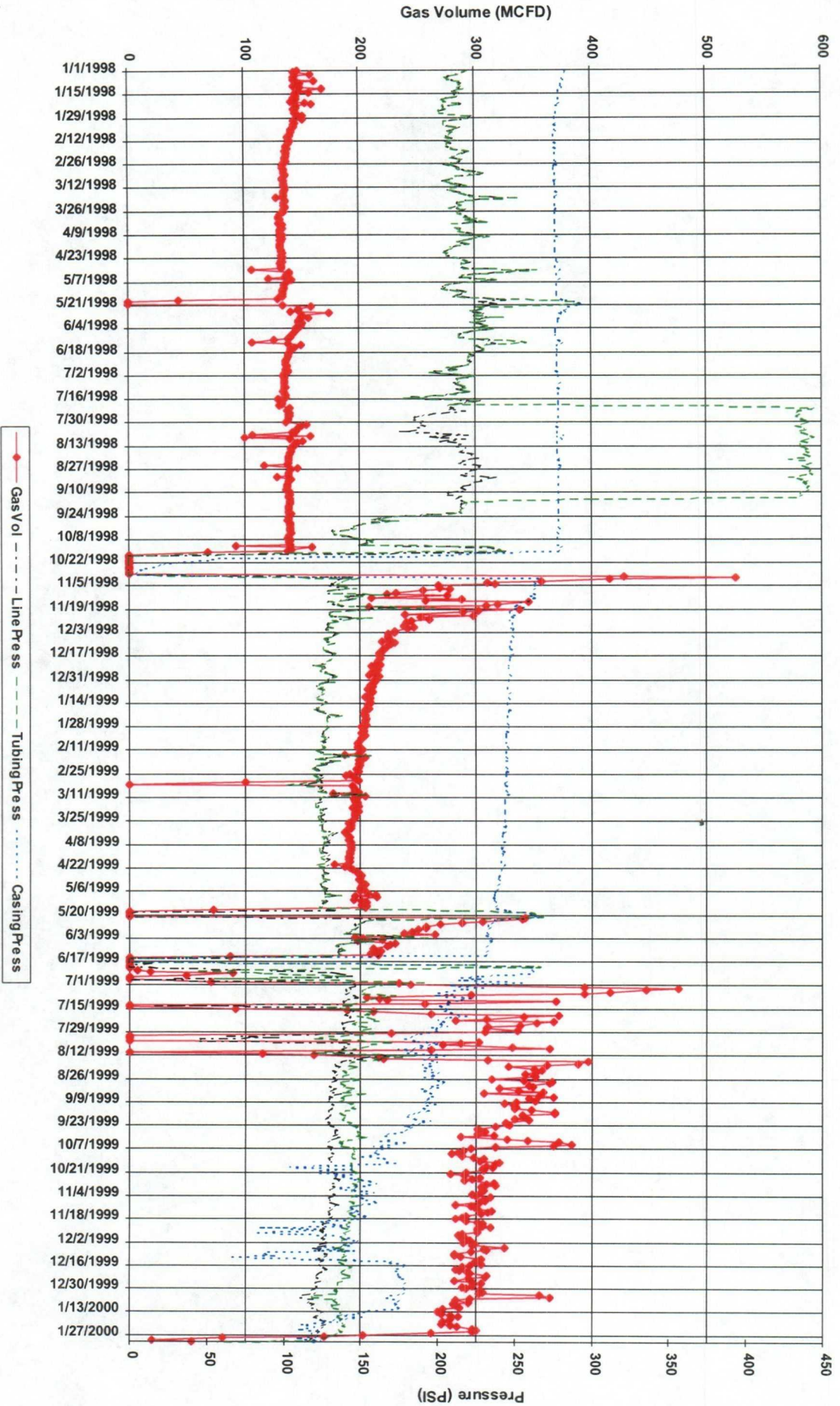
Wellname: HUGHES C 003-MV

Flacwell: 97860501

API: 300450776400

Amoco - OI/DB/Synergy Data

Daily Well Production



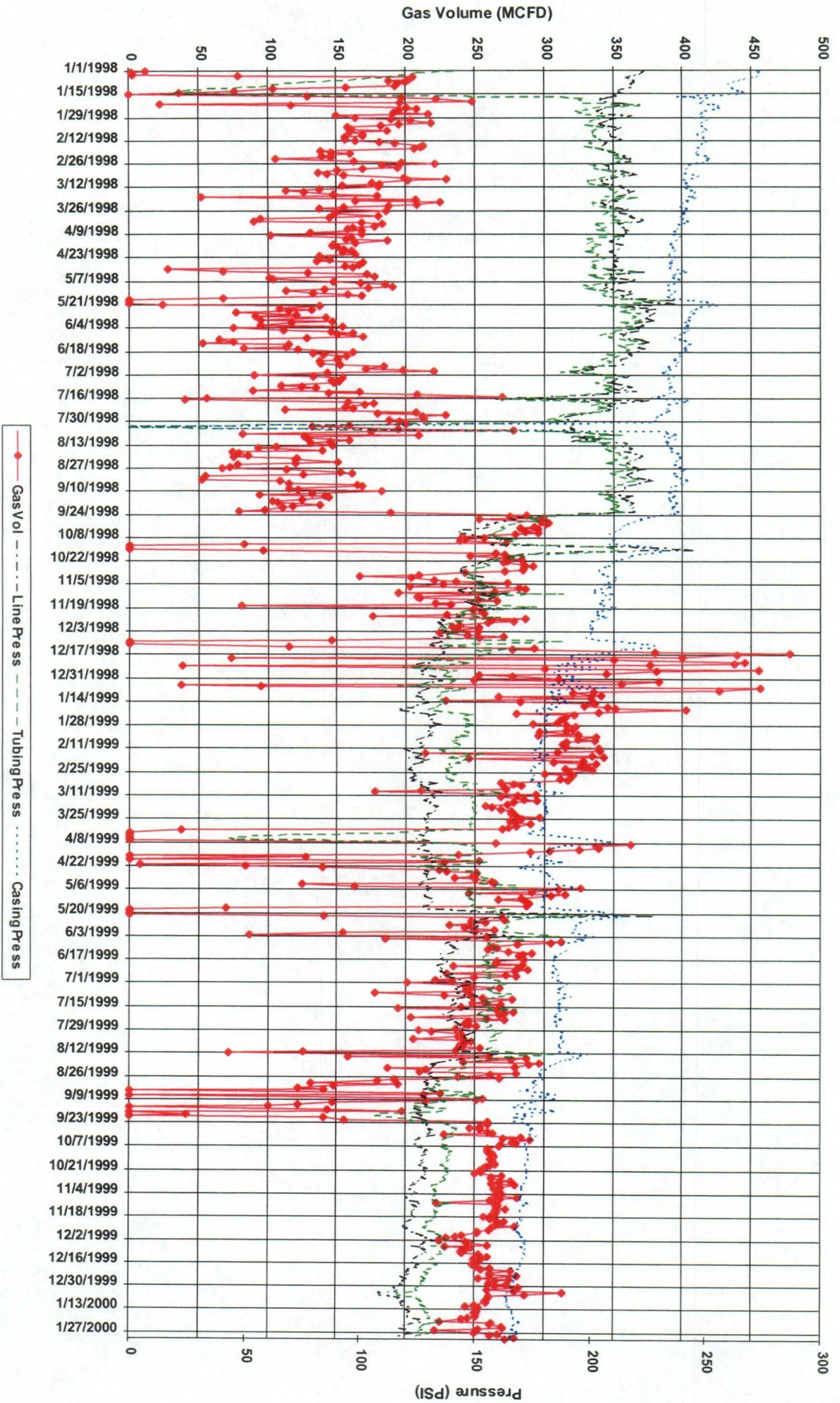
Wellname: HUGHES C 002A-MV

Facwell: 97939401

API: 300452272200

Amoco - OIDB/Synergy Data

Daily Well Production



Wellname: HUGHES A 002E-DK

Flacwell: 97978801

API: 300452540300

Amoco - OIDB/Synergy Data

Daily Well Production

