

DATE IN 3/17/99	SUSPENSE 4/6/99	ENGINEER DC	LOGGED BY MW	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



2267

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

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]

[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] or [C]

[B] Commingling - Storage - Measurement

☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

MAR 17 1999

[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] ☒ 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 - Certification

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 (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name

Signature

Title

Date

DISTRICT I

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

DISTRICT II

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

DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429Form C-107-A
New 3-12-96

APPROVAL PROCESS :

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

BURLINGTON RESOURCES OIL & GAS COMPANY
OperatorPO Box 4289, Farmington, NM 87499
Address

Turner Hughes

15

A, Sec. 3, T27N, R09W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7614 API NO. 30-045-0689200 Federal ☒ , State _____ (and/or) Fee _____

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Blanco Mesa Verde-72319		Basin Dakota-71599
2. Top and Bottom of Pay Section (Perforations)	4540'-4662'		6638'-6816'
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	(Current) a. 295 psia @ 4601'	a.	a. 656 psia @ 6727'
	(Original) b. 1070 psia @ 4601'	b.	b. 2744 psia @ 6727'
6. Oil Gravity (API) or Gas BTU Content	1272 Btu		1110 Btu
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In 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 data and oil/gas/water of recent test (within 60 days)	Date: 11/30/98 Rates: 49 MCFD, 0 BOD, 0 BOW	Date: Rates:	Date: 11/30/98 Rates: 46 MCFD, 0 BOD, 0 BOW
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: Gas: Will supply after commingling	Oil: Gas:	Oil: Gas: Will supply after commingling

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 ☐ No11. 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 ☐ No13. 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

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.
- * 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 Kevin L. Midkiff TITLE Operations Engineer DATE 03-15-99TYPE OR PRINT NAME Kevin L. Midkiff TELEPHONE NO. (505) 326-9700

Well Location and Acreage Dedication Plat

Section A.

Date October 16, 1963

Operator EL PASO NATURAL GAS COMPANY Lease TURNER HUGHES SF 078050
 Well No. 15 (MD) Unit Letter A Section 3 Township 27N Range 9W NMPM
 Located 1190 Feet From North Line, 800 Feet From East Line
 County San Juan G. L. Elevation 6192 Dedicated Acreage E/2 293.97 Acres
 Name of Producing Formation Mesa Verde - Dakota Pool Blanco Mesa Verde-Basin Dakota

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below?

Yes X No _____

2. If the answer to question one is "no", have the interests of all the owners been consolidated by communization agreement or otherwise? Yes _____ No _____. If answer is "yes", Type of Consolidation.

3. If the answer to question two is "no", list all the owners and their respective interests below:

OwnerLand Description

Section B.

This is to certify that the information in Section A above is true and complete to the best of my knowledge and belief.

El Paso Natural Gas Company
 (Operator)

ORIGINAL SIGNED E. S. OBERLY
 (Representative)

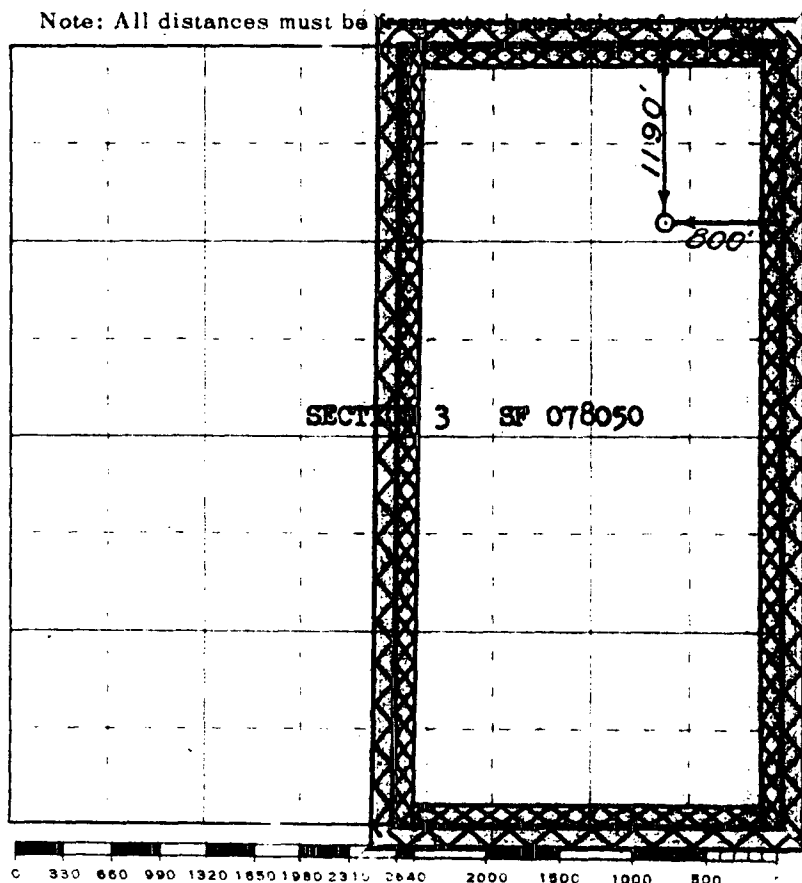
Box 990
 (Address)

Farmington, New Mexico

NOTE: THIS PLAT IS REISSUED TO
 SHOW CORRECTED POOL
 DESIGNATION.

11 19 63

Note: All distances must be



Scale 4 inches equal 1 mile

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.

(Seal)

Date Surveyed SEPTEMBER 12, 1963

Farmington, New Mexico

Russell H. McNease
 Registered Professional Engineer and/or Land Surveyor

TURNER HUGHES 1 15 1 53637A-1 Dakota

Prop 143 *

• OIL
• OIL/GAS
• GAS
• WATER

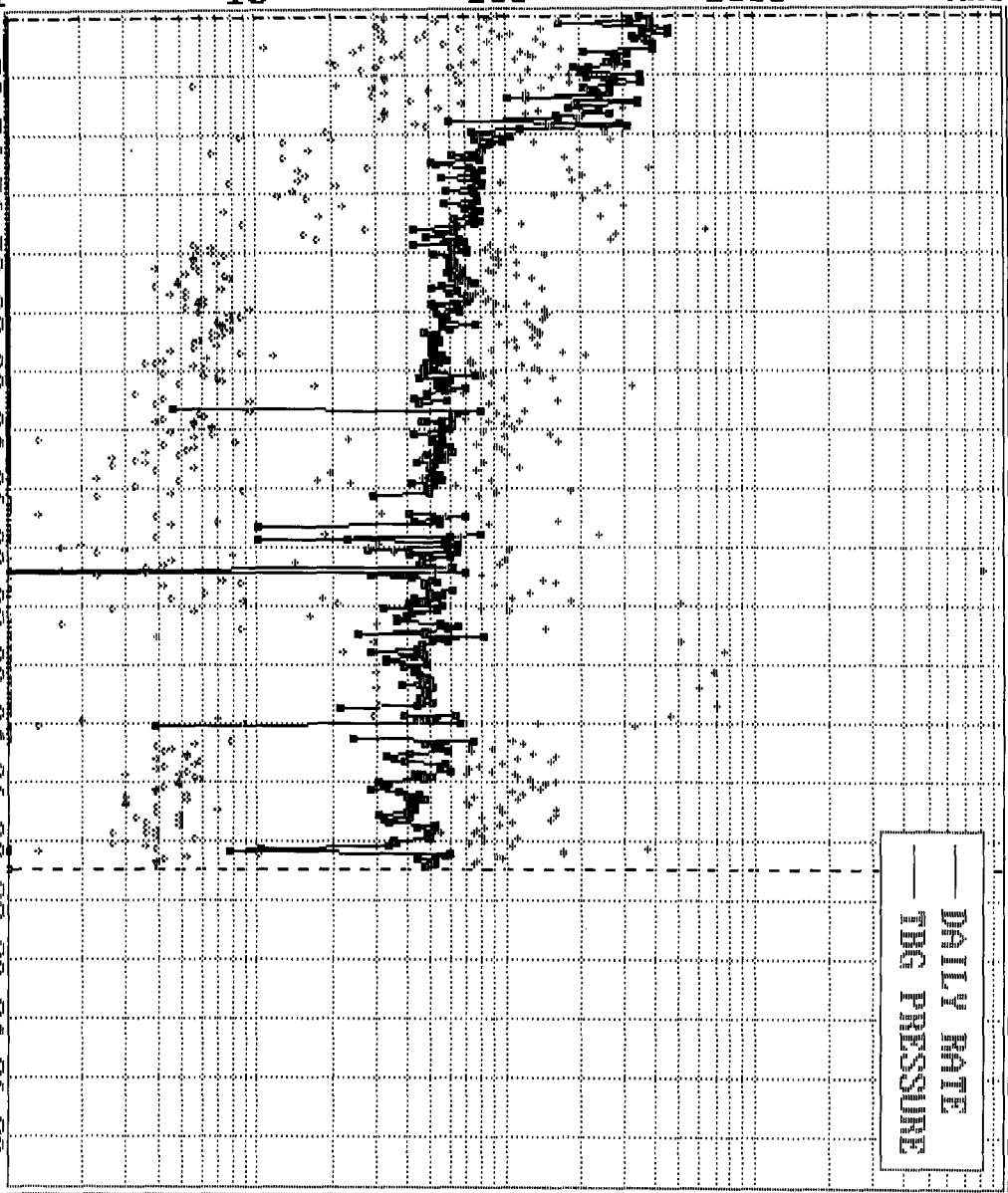
100
100
1000
1000

10
10
100
100

1
1
10
10

0.1
0.1
1
1

DAILY RATE
TDS PRESSURE

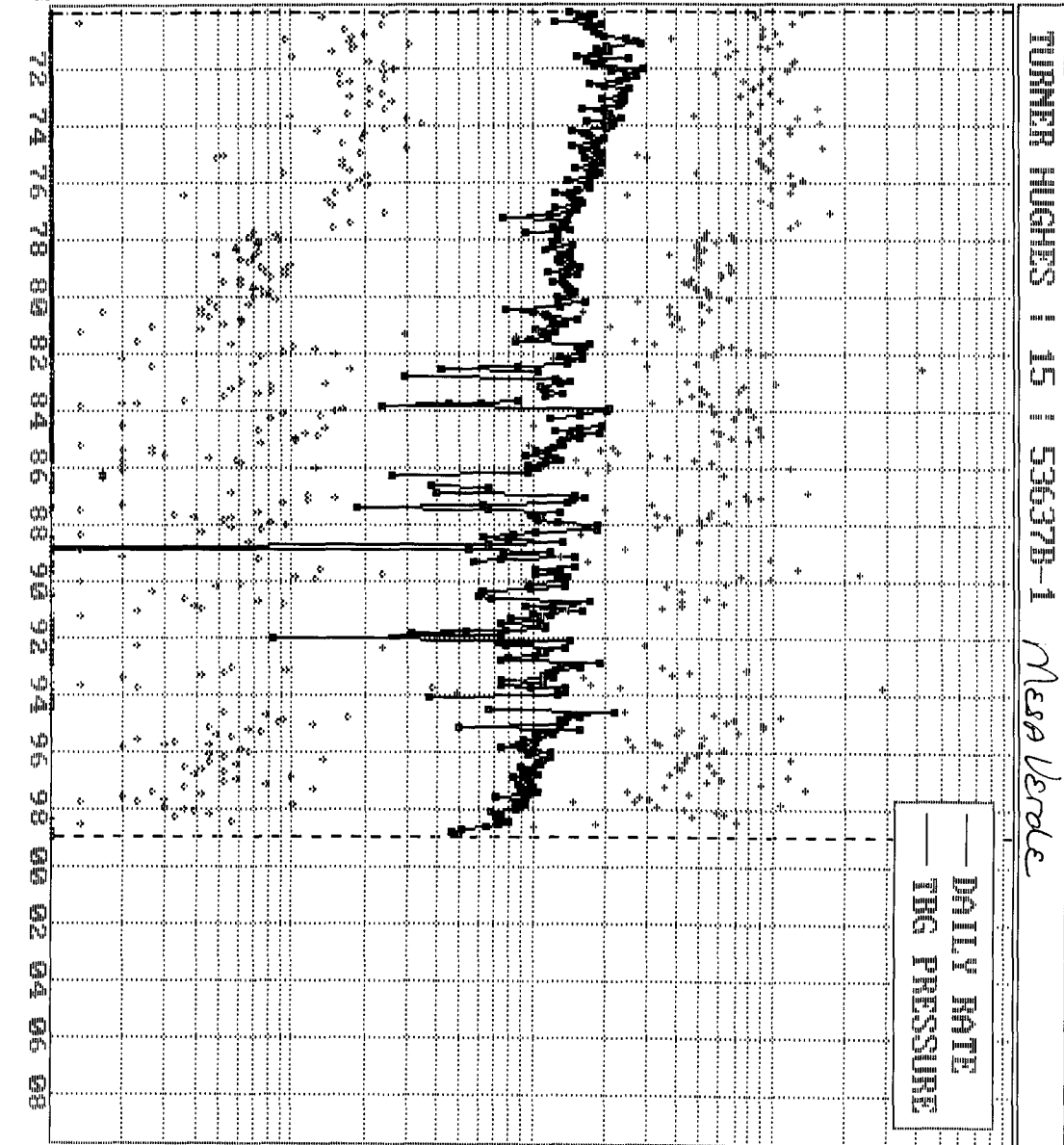


- ☐ • WATER Bbls/d
- ☒ • GAS Mcf/d
- ☐ • OIL/GAS Bbl/d
- ☐ • OIL Bbl/d

RateTime
Semi Log

Major = GAS

0.1 1 10 100 Mcf OIL
 0.01 0.1 1 10 OIL/GAS
 1 10 100 1000 GAS
 1 10 100 1000 WATER



Prop 144 *

☐ WATER Bbls/d
☒ GAS Mcf/d
☐ OIL/GAS Bbl/d
☐ OIL Bbl/d

☒ RateTime
☒ Semi Log

Major = GAS

Page No.: 1
Print Time: Wed Feb 03 12:56:27 1999
Property ID: 2311
Property Name: TURNER HUGHES | 15 | 53637A-1 D/K
Table Name: K:\ARIES\RR99PDP\TEST.DBF

<u>--DATE--</u>	<u>---CUM GAS--</u>	<u>M SIWHP</u>
	<u>Mcf</u>	<u>Psi</u>

12/09/63	0	2199.0
02/01/64	0	2198.0
05/15/64	74000	1946.0
02/19/65	298000	1623.0
03/02/66	620000	1268.0
03/13/67	783000	1351.0
03/07/68	1048000	1042.0
04/01/69	1351817	741.0
10/15/70	1612198	641.0
07/30/71	1701896	615.0
08/09/72	1802994	532.0
09/13/73	1890381	479.0
04/04/75	1943679	610.0
06/28/77	1999097	600.0
09/01/88	2207918	642.0
11/30/98	2343981	535

Based on Pressure is Cum GAS Curve

Page No.: 2

Print Time: Wed Feb 03 12:56:27 1999

Property ID: 5108

Property Name: TURNER HUGHES | 15 | 53637B-1 mV

Table Name: K:\ARIES\RR99PDP\TEST.DBF

--DATE--	---CUM GAS--	M SIWHP
	Mcf	Psi

12/19/63	0	916.0
02/10/64	0	915.0
09/28/64	39000	804.0
02/19/65	80000	739.0
03/02/66	181000	662.0
03/13/67	285000	631.0
03/07/68	364000	612.0
04/01/69	440179	585.0
10/15/70	547269	557.0
07/30/71	606829	511.0
08/09/72	695428	437.0
09/13/73	783152	401.0
04/17/74	824709	382.0
04/14/76	953810	357.0
05/24/78	1054202	367.0
06/09/80	1158057	353.0
06/09/82	1253846	319.0
08/01/84	1332637	350.0
12/09/85	1394886	330.0
09/09/86	1407994	376.0
06/07/89	1506210	382.0
01/24/91	1572112	322.0
06/14/91	1586871	334.0
03/29/93	1650696	304.0

11/31/98	1842994	247.0
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Based on Pressure vs Cum GAS Curve

Turner Hughes #15
Bottom Hole Pressures
Flowing and Static BHP
Cullender and Smith Method
Version 1.0 3/13/94

Mesaverde		Dakota	
<u>MV-Current</u>		<u>DK-Current</u>	
GAS GRAVITY	0.77	GAS GRAVITY	0.717
COND. OR MISC. (C/M)	M	COND. OR MISC. (C/M)	M
%N2	0.57	%N2	0.58
%CO2	0.52	%CO2	1.33
%H2S	0	%H2S	0
DIAMETER (IN)	5.012	DIAMETER (IN)	4.052
DEPTH (FT)	4601	DEPTH (FT)	6727
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	113	BOTTOMHOLE TEMPERATURE (DEG F)	137
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	259	SURFACE PRESSURE (PSIA)	547
BOTTOMHOLE PRESSURE (PSIA)	294.8	BOTTOMHOLE PRESSURE (PSIA)	655.6
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.77	GAS GRAVITY	0.717
COND. OR MISC. (C/M)	M	COND. OR MISC. (C/M)	M
%N2	0.57	%N2	0.58
%CO2	0.52	%CO2	1.33
%H2S	0	%H2S	0
DIAMETER (IN)	5.012	DIAMETER (IN)	4.052
DEPTH (FT)	4601	DEPTH (FT)	6727
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	113	BOTTOMHOLE TEMPERATURE (DEG F)	137
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	916	SURFACE PRESSURE (PSIA)	2199
BOTTOMHOLE PRESSURE (PSIA)	1069.9	BOTTOMHOLE PRESSURE (PSIA)	2744.3

FARMINGTON

ANNUAL PRODUCTION FOR 53637A

PHS020M1

TURNER HUGHES 15

BASIN DAKOTA (PRORATED GAS) FIELD

DAKOTA ZONE

===== OIL CUM =====

===== GAS CUM =====

===== WATER CUM =====

PC DATE

BBLs

PC DATE

MCF

DATE

BBLs

02 6912

20721

01 6912

1503534

=====

YEAR	OIL	OIL CUM	GAS	GAS CUM	WATER	WATER CUM
1990	58	28702	16706	2244330	11	56
1991	158	28860	17113	2261443	13	69
1992	184	29044	16697	2278140	12	81
1993	191	29235	13658	2291798	9	90
1994	114	29349	11629	2303427	6	96
1995	179	29528	17110	2320537	12	108
1996	159	29687	14215	2334752	12	120
1997	149	29836	15912	2350664	12	132
1998	128	29964	13317	2363981	9	141

POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION

ENTER - CONTINUES ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF6 - RETURN TO WELL-INFO DISPLAY

PF9 - ANNUAL INJECTION DISPLAY

PF10 - HELP INFORMATION

00/00/00 00:00:00:0

D03 09/02/89

FARMINGTON

1998 MONTHLY PRODUCTION FOR 53637A

PHS030M1

TURNER HUGHES 15

BASIN DAKOTA (PRORATED GAS) FIELD

DAKOTA ZONE

DAYS =====				OIL =====			===== GAS =====							
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F	31	02	9		01	1092	31	1146	15.025		1	
2	2	F	28	02	8	50.8	01	1122	28	1146	15.025		1	
3	2	F	31	02	11		01	1028	31	1146	15.025		1	
4	2	F	30	02	12		01	319	30	1146	15.025			
5	2	F	31	02	4	50.0	01	237	31	1146	15.025			
6	2	F	30	02	31		01	1840	30	1146	15.025		1	
7	2	S	30	02	16	48.4	01	1730	30	1146	15.025		1	
8	2	F	22	02	13		01	1346	22	1145	15.025		1	
9	2	F	30	02	12		01	1575	30	1145	15.025		1	
10	2	F	31	02	12		01	1602	31	1145	15.025		1	
11	2	F					01	1426		1145	15.025		1	
12														

PF6 - RETURNS TO ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

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PRS 01/06/99

FARMINGTON

ANNUAL PRODUCTION FOR 53637B

PHS020M1

TURNER HUGHES 15

BLANCO MESAVERDE (PRORATED GAS FIELD MESAVERDE ZONE

===== OIL CUM ===== GAS CUM ===== WATER CUM =====

PC	DATE	BBLs	PC	DATE	MCF	DATE	BBLs
02	6912	2930	01	6912	495338		

YEAR	OIL	OIL CUM	GAS	GAS CUM	WATER	WATER CUM
1990	132	8700	38388	1567152	46	178
1991	11	8711	33901	1601053	41	219
1992	8	8719	37734	1638787	46	265
1993	213	8932	42407	1681194	53	318
1994	150	9082	31068	1712262	37	355
1995	191	9273	37221	1749483	46	401
1996	223	9496	37471	1786954	45	446
1997	175	9671	33612	1820566	42	488
1998	70	9741	22428	1842994	29	517

POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION

ENTER - CONTINUES ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF6 - RETURN TO WELL-INFO DISPLAY

PF9 - ANNUAL INJECTION DISPLAY

PF10 - HELP INFORMATION

00/00/00 00:00:00:0 D03 09/02/89

FARMINGTON

1998 MONTHLY PRODUCTION FOR 53637B

PHS030M1

TURNER HUGHES 15

BLANCO MESAVERDE (PRORATED GAS FIELD

MESAVERDE ZONE

DAYS =====					OIL =====			===== GAS =====						
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F	31	02	11		01	2586	31	1305	15.025		3	
2	2	F	28	02	12	62.1	01	2075	28	1305	15.025		3	
3	2	F	31	02	14		01	2260	31	1305	15.025		3	
4	2	F	30	02	10		01	2158	30	1305	15.025		3	
5	2	F	31	02			01	2276	31	1305	15.025		3	
6	2	F	30	02	17		01	2408	30	1305	15.025		3	
7	2	S	30	02	4		01	2201	30	1305	15.025		3	
8	2	F	16	02	2		01	1977	16	1305	15.025		2	
9	2	F	30	02			01	1558	30	1305	15.025		2	
10	2	F	31	02			01	1406	31	1305	15.025		2	
11	2	F					01	1523		1305	15.025		2	
12														

PF6 - RETURNS TO ANNUAL DISPLAY

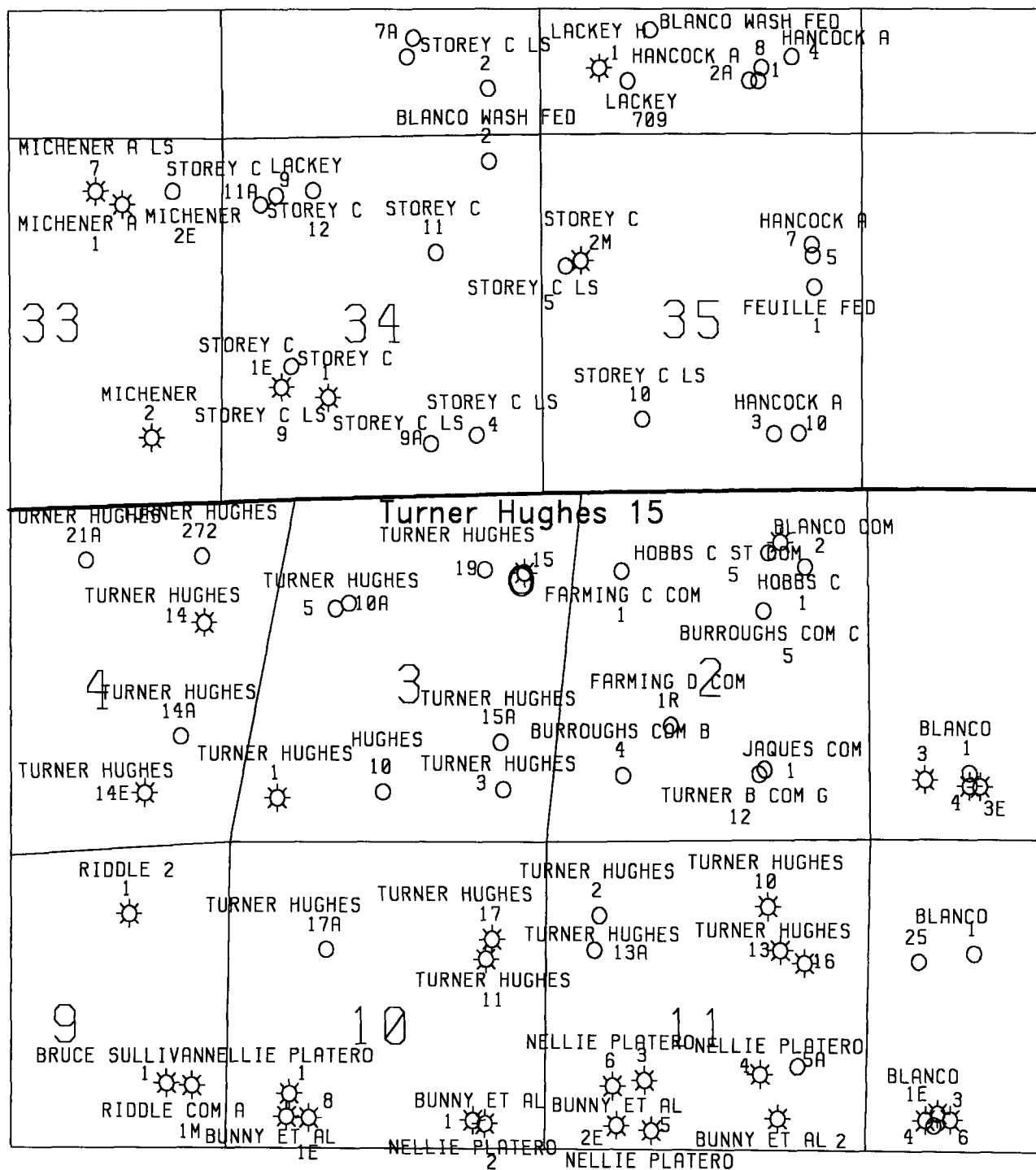
PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

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PRS 01/06/99



Turner Hughes 15
Sec 3, R27N, T9W
Mesa Verde/Dakota

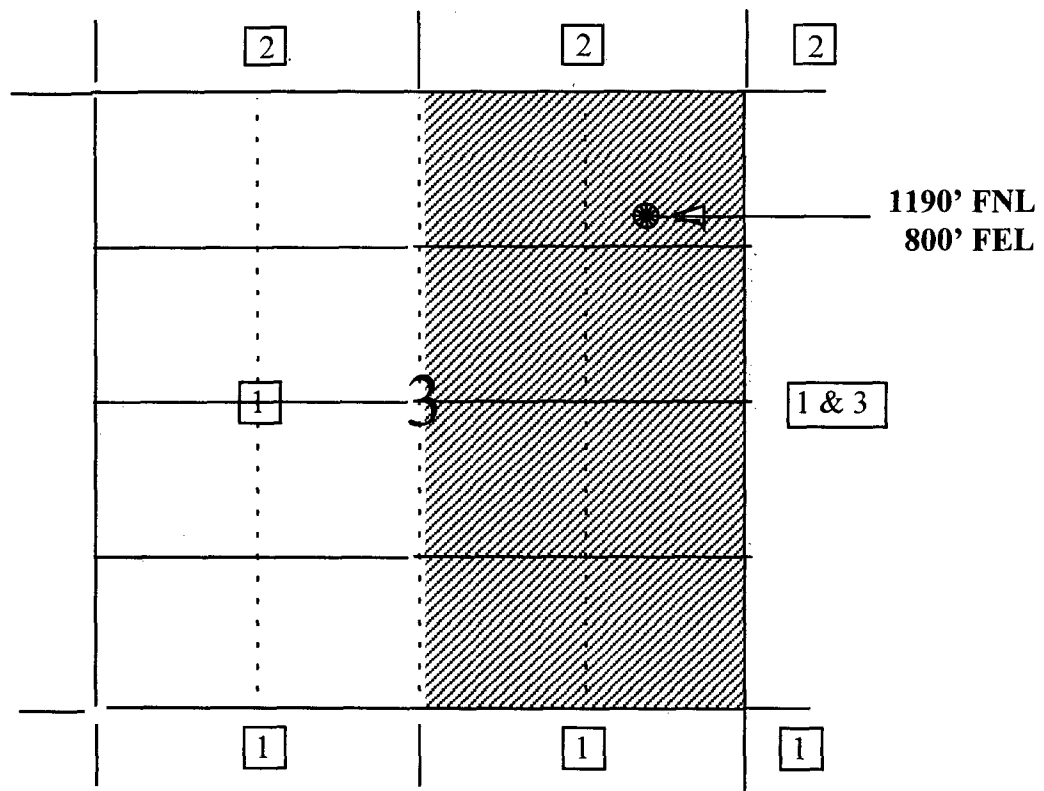
BURLINGTON RESOURCES OIL AND GAS COMPANY

Turner Hughes #15

**OFFSET OPERATOR \ OWNER PLAT
Downhole Commingle**

Mesaverde / Dakota Formations Well

Township 27 North, Range 9 West



- 1) Burlington Resources
- 2) Amoco Production Company
San Juan Operation Center
200 Amoco Court
Farmington, NM 87401

- 3) Four Star Oil & Gas Company
c/o Texaco Exploration & Production Inc.
ATTN: Rocky D. Holly
Post Office Box 2100
Denver, CO 80201