

DATE IN 2/24/98	SUSPENSE 3/16/98	ENGINEER DC	LOGGED RW	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -

1851

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]

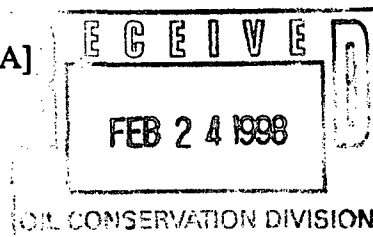
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

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

Check One Only for [B] and [C]

- [B] Commingling - Storage - Measurement
☒ 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] ☒ 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.

Peggy Bradfield
 Print or Type Name Signature

Regulatory/Compliance Administrator

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

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

☒ YES ☐ NO

Burlington Resources Oil & Gas Company

PO Box 4289, Farmington, NM 87499

Operator

Address

Harrington

6

K 31-27N-07W

Rio Arriba

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

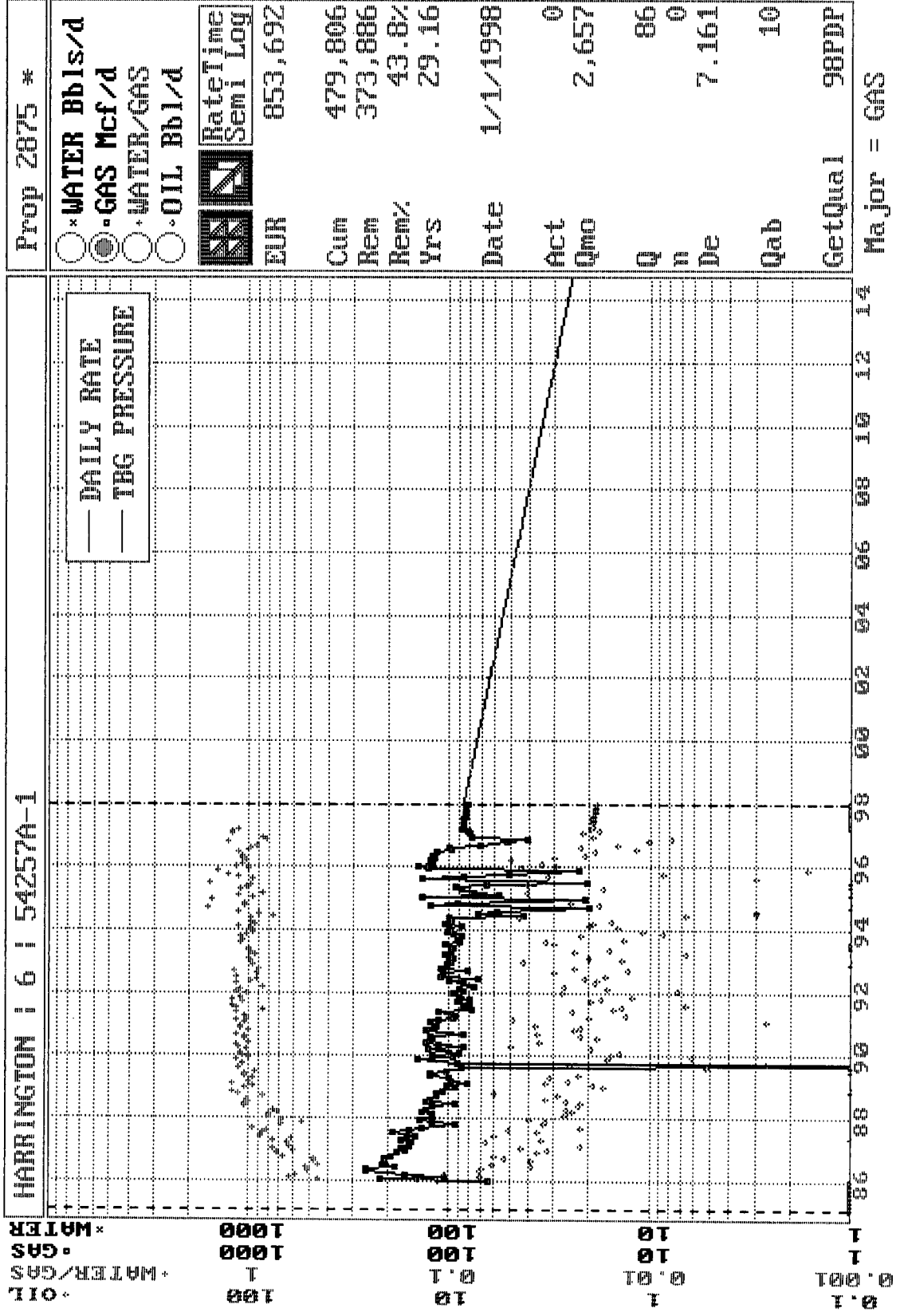
OGRID NO. 14538 Property Code 7094 API NO. 30-039-23871 Federal ☒ State (and/or) Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Chacra - 82329		Mesaverde - 72319
2. Top and Bottom of Pay Section (Perforations)	3053' - 3277'		4564'-4817', 4459'-4530'
3. Type of production (Oil or Gas)	gas		gas
4. Method of Production (Flowing or Artificial Lift)	flowing		flowing
5. Bottomhole Pressure	(Current) Est. a. 95	a.	a. 453
Oil Zones - Artificial Lift: Estimated Current	(Original) Est. b. 1098	b.	b. 1336
Gas & Oil - Flowing: Measured Current			
All Gas Zones: Estimated or Measured Original			
6. Oil Gravity (°API) or Gas BTU Content	BTU 1198		BTU 1315
7. Producing or Shut-In?	Not yet completed		producing
Production Marginal? (yes or no)	yes		yes
* If Shut-In and oil/gas/water rates of last production	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data			
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: n/a Rates: n/a	Date: Rates:	Date: n/a Rates: 64 MCF/D
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: % Gas: % will be supplied upon completion	Oil: % Gas: %	Oil: % Gas: % will be supplied upon completion

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
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 Jennifer Dobson TITLE Production Engineer DATE 02-23-98TYPE OR PRINT NAME Jennifer Dobson TELEPHONE NO. (505) 326-9700



* OIL
 + WATER/GAS
 * GAS
 * WATER

PARAGON 6 54257A-1

2025

[illegible]

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

Cum	0
Rem	703,000
Rem%	100.0%
Yrs	30.59

[illegible][illegible]

Q. 20. 402.909

Figure 6

[illegible]

3
11
6
10
10

97 98 99 00 01 02 03 04 05 06

**FLOWING AND STATIC BHP
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.761</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.58</u>
%CO2	<u>0.47</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>2</u>
DEPTH (FT)	<u>4941</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>124</u>
FLOWRATE (MCFPD)	<u>64</u>
SURFACE PRESSURE (PSIA)	<u>1132</u>
BOTTOMHOLE PRESSURE (PSIA)	1335.5

HARRINGTON 6 MV ORIGINAL

**FLOWING AND STATIC BHP
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.761
COND. OR MISC. (C/M)	C
%N2	0.58
%CO2	0.47
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	4941
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	124
FLOWRATE (MCFPD)	64
SURFACE PRESSURE (PSIA)	394
BOTTOMHOLE PRESSURE (PSIA)	452.9

HARRINGTON 6 MV CURRENT

Page No.: 1

Print Time: Thu Jan 08 13:29:07 1998 *MV*

Property ID: 2875

Property Name: HARRINGTON | 6 | 54257A-1

Table Name: K:\ARIES\RR98PDP\TEST.DBF

--DATE-- ---CUM GAS-- M SIWHP

-----Mcf-----Psi-----

10/28/85	0	1132.0	<i>original</i>
06/17/86	38511	657.0	
08/03/89	198327	552.0	
09/29/90	238956	518.0	
01/24/91	253982	450.0	
06/22/91	269064	462.0	
05/20/93	336932	300.0	
10/04/93	348954	394.0	<i>current</i>

OPR008M2 0076

0008 CHROMATOGRAPH GAS SAMPLE DETAIL

09:54:08.4 01/12/98

	MOL %	GPM (AT 14.73)
HYDROGEN	_____	
HELIUM	_____	
NITROGEN	___0.58	
OXYGEN	_____	
HYDROGEN SULFIDE	_____	
CARBON DIOXIDE	___0.47	
METHANE	___75.84	
ETHANE	___12.21	3.2662
PROPANE	___6.56	1.8079
ISO-BUTANE	___0.99	0.3238
N-BUTANE	___1.79	0.5644
ISO-PENTANE	___0.55	0.2012
N-PENTANE	___0.42	0.1521
HEXANE	_____	
HEXANE PLUS	___0.59	0.2574
HEPTANE PLUS	_____	
TOTALS	100.00	6.5730

** DATA AT 14.730 PSIG UNLESS NOTED **

MP NUMBER	95609
EFFECTIVE DATE	19961101

-- GASOLINE CONTENT (GPM) --	
26/70	GASOLINE _____
100%	PROPANE _____
EXCESS	BUTANES _____
TOTAL	

----- SPECIFIC GRAVITY -----	
CALCULATED	___0.7610
MEASURED	_____

SULPHUR GRAINS / 100 CU FT _____

03=MAIN SCREEN

24=HELP

PA1=TERMINATE

REQUESTED RECORD NOT FOUND (NEXT RECORD DISPLAYED)

OPR008M1 0076

0008 CHROMATOGRAPH TEST MAIN SCREEN

09:53:56.7 01/12/98

FUNCTION (A,C,D,I) I ** DATA AT TEST PRESSURE UNLESS NOTED **
MP NUMBER 95609 HARRINGTON 6
EFFECTIVE DATE 19961101
REGION CD 42 SAN JUAN
MP TYPE CODE 10 GAS METER - WELLHEAD SALES

SAMPLE TYPE CODE (GAS, LIQ, BTU) GAS ----- BTU/CF -----
SAMPLE DATE 19961004 --- (AT 14.73 PSIG) --
SAMPLE LINE PRESSURE (PSIG) WET 1292.137 DRY 1315.000
SAMPLE LINE TEMPERATURE (DEG F)
TEST DATE ----- BTU/CF -----
TEST PRESSURE (PSIG) 14.730 WET 1292.137 DRY 1315.000
TEST TEMPERATURE (DEG F) 60 VAPOR FACTOR
TEST LIFE (MONTHS) 6
TESTER SOURCE BA NUMBER 098795 EL PASO FIELD SERVICES
TEST PURPOSE CODE

03=DETAIL SCR 04=MP-NM BRWS 06=MP/DS LST 07=MP/WN LST
11=PREV SCR 12=MAIN MENU 20=NEXT REC
21=REFRESH SCR 22=PREV MENU 24=HELP PA1=TERMINATE

FDG055M4 0076

WELL PRODUCTION 8/8'S VOLUME

01/12/98 09:46:58

START OF DATA

DP NO: 54257A

DATE: 980110 (YYMMDD FORMAT)

HARRINGTON

6 SCROLL FORWARD BY DATE: _

S

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-			
L PRODUCED	ON	(BOPD	BOPM)	(MCFD	MCFM)	(BWPD	BWPM)	
-	01/10/98	24.0	1.44	14.40	71	671	0.00	0.00
-	01/09/98	24.0	1.44	12.96	73	600	0.00	0.00
-	01/08/98	24.0	1.44	11.52	93	527	0.00	0.00
-	01/07/98	24.0	1.44	10.08	66	434	0.00	0.00
-	01/06/98	24.0	1.44	8.64	64	368	0.00	0.00
-	01/05/98	24.0	1.44	7.20	61	304	0.00	0.00
-	01/04/98	24.0	1.44	5.76	47	243	0.00	0.00
-	01/03/98	24.0	1.44	4.32	83	196	0.00	0.00
-	01/02/98	24.0	1.44	2.88	46	113	0.00	0.00
-	01/01/98	24.0	1.44	1.44	67	67	0.00	0.00
-	12/31/97	24.0	1.44	44.64	78	1990	0.00	0.00

ENTER I UNDER SEL FOR MAINTENANCE

PF12=MAIN MENU	PF6=NRI	PF10=BROWSE MENU	PF11=INQ/UPDATE MENU
	ENTER=BACKWARDS		PF24=HELP

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-10
Revised February 21, 1985
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-039-23871	82329/72319	Otero Chacra/Blanco Mesaverde
Property Code	Property Name	Well Number
7094	HARRINGTON	6
OGRID No.	Operator Name	Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	6001

10 Surface Location

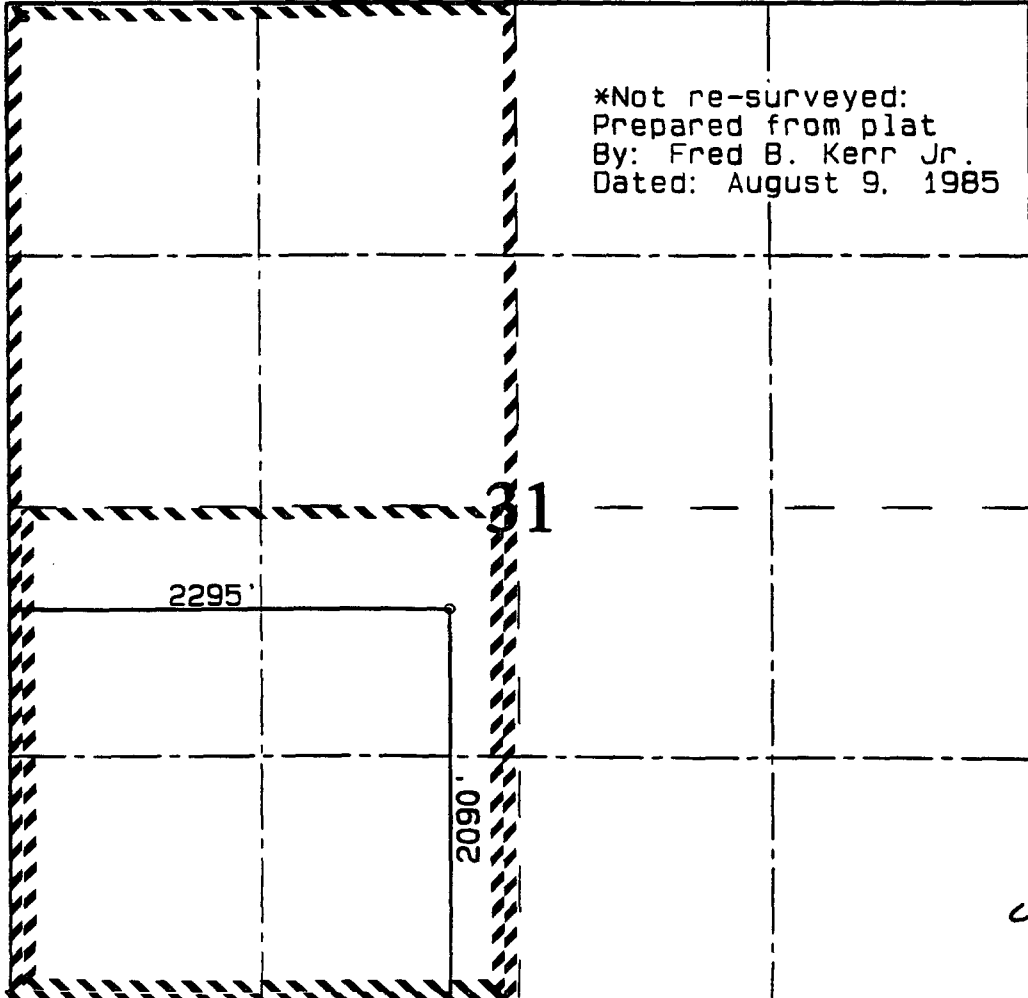
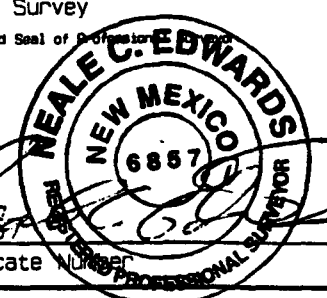
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	31	27N	7W		2090	South	2295	West	RIO ARriba

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
Cha- 161 MV-W/321.60			

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

	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature <u>Peggy Bradfield</u> Printed Name <u>Regulatory Administrator</u> Title <u>2-12-98</u> 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. <u>JANUARY 29, 1998</u> Date of Survey Signature and Seal of Professional Surveyor  Certificate Number

FDG055M4 0076

WELL PRODUCTION 8/8'S VOLUME

01/12/98 09:47:09

DP NO: 54257A

DATE: 971230 (YYMMDD FORMAT)

HARRINGTON

6 SCROLL FORWARD BY DATE: _

S

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-
L PRODUCED	ON	(BOPD	BOPM)	(MCFD MCFM)	(BWPD BWPM)
12/30/97	24.0	1.44	43.20	52 1912	0.00 0.00
12/29/97	24.0	1.44	41.76	37 1860	0.00 0.00
12/28/97	24.0	1.44	40.32	48 1823	0.00 0.00
12/27/97	24.0	1.44	38.88	84 1775	0.00 0.00
12/26/97	24.0	1.44	37.44	30 1691	0.00 0.00
12/25/97	24.0	1.44	36.00	48 1661	0.00 0.00
12/24/97	24.0	1.44	34.56	107 1613	0.00 0.00
12/23/97	24.0	1.44	33.12	108 1506	0.00 0.00
12/22/97	24.0	1.44	31.68	97 1398	0.00 0.00
12/21/97	24.0	1.44	30.24	97 1301	0.00 0.00
12/20/97	24.0	1.44	28.80	80 1204	0.00 0.00

ENTER I UNDER SEL FOR MAINTENANCE

PF6=NRI PF10=BROWSE MENU PF11=INQ/UPDATE MENU
 PF12=MAIN MENU ENTER=BACKWARDS PF24=HELP

01/08/98 LAND WELL REPORT PRELIMINARY LWR210NL
INQUIRY COMPANY OWNERSHIP <WELLSTAT>
WELL: 54257A HARRINGTON 6
=====

OWNER	PROD	INTEREST %	I-TYPE	TRUST	EVENT	AUTH	INIT	REVISED
-----	----	-----	-----	-----	-----	-----	----	-----
21 BROG	ALL	85.000000	NWI		CUR	DOW		
21 BROG	ALL	100.000000	GWI		CUR	DOW		

TOTAL COMPANY NET/GROSS REVENUE INTEREST: NET: OIL 85.000000 GAS 85.000000
GROSS: OIL 100.000000 GAS 100.000000
** NO OWNERSHIP REMARKS ** BLOCK POSTING:

=====

PF17=PRIOR PF18=REASON PF20=TOP PF21=RMKS PF11=BACK PF12=MENU PF24=HELP

**FLOWING AND STATIC BHP
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.735
COND. OR MISC. (C/M)	C
%N2	0.58
%CO2	0.37
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	3161
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	146
FLOWRATE (MCFPD)	130
SURFACE PRESSURE (PSIA)	1000
BOTTOMHOLE PRESSURE (PSIA)	1098.4

Offset well

HARRINGTON 9 CHACRA (ORIGINAL)

**FLOWING AND STATIC BHP
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.735
COND. OR MISC. (C/M)	C
%N2	0.58
%CO2	0.37
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	3161
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	146
FLOWRATE (MCFPD)	130
SURFACE PRESSURE (PSIA)	86
BOTTOMHOLE PRESSURE (PSIA)	94.5

of Pset well

HARRINGTON 9 CHACRA (CURRENT)

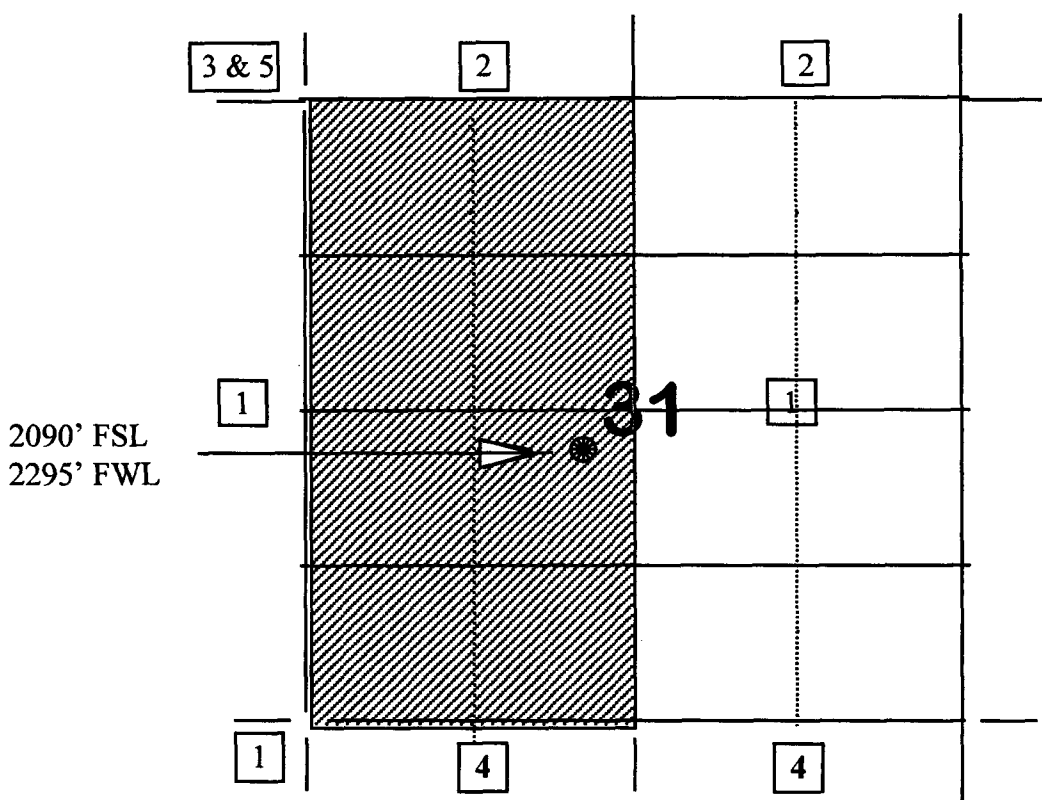
BURLINGTON RESOURCES OIL AND GAS COMPANY

Harrington #6

OFFSET OPERATOR/OWNER PLAT

Mesaverde (W/2) / Chacra (SW/4) Formations Commingle Well

Township 27 North, Range 7 West



- | | |
|--------------------------------|--|
| 1) Burlington Resources | 4) Louis Dreyfus Natural Gas Corporation |
| 2) Conoco Inc. | 14000 Quail Springs Parkway |
| 10 Desta Drive, Suite 100W | Suite 600 |
| Midland, TX 79705-4500 | Oklahoma City, OK 73134 |
| 3) Western Oil & Minerals LTD. | 5) R.C. Resources Corporation |
| P.O. Drawer 1228 | 8340 Meadow Road, Suite #230 |
| Farmington, NM 87499 | Dallas, TX 75231 |

DATE: February 09, 1998
NAME: HARRINGTON 6
FMT: MESAVERDE
LOCATION
UNIT: K
SEC: 31
TWN: 27N
RNG: 07W

INA 8/79 Federal E 1A 14/333 (86) 0/2 INA 4/72 Federal E 1 0/818 (95) 0/6 11/77 Hammond 41R 99/842 (97) 0/6 Hammond 41 14/808 (77) 0/9 132/1071 (97) 0/7	[301]	2/59 San Juan 28-7 Unit 98 64/1070 (97) [29] 0/3
[36] 1/97 Brookhaven Com 7A 333/101 (97) 2/0	12/85 Harrington 7 72/356 (97) 2/11 [31] 12/85 Harrington 6 82/467 (97) 2/11 1/96 Harrington 9 144/110 (97) 3/2	[32] 6/68 Harvey A 3 54/746 (97) 1/10
4/86 Luthy A 4 117/551 (97) [1] 1/5	3/52 MKL 5 105/939 (97) 0/4 1/53 MKL 17 34/516 (97) 0/1 [6] 10/82 MKL 5A 81/419 (97) 1/3	7/81 Burns Federal 2 78/502 (97) 0/3 7/82 Miles Federal 1A 114/790 (97) 0/6 [5] 2/81 Burns Federal 1M 80/596 (97) 0/4 P&A 1/52 MKL 1 31/96 (91) 0/0 8/82 Miles Federal 1E 159/845 (97) 0/5

R-08-W

R-07-W

LEGEND
FIRST DELIVERY DATA
WELL NAME
MC/FD-CUM(MMCF)
BOPD-CUM(MBO)

DATE: February 09, 1998

NAME: HARRINGTON 6

FMT: CHACRA

LOCATION
UNIT: K
SEC: 31
TWN: 27N
RNG: 07W

8/79 * Federal E 4 16/334 (97) 0/0	12/77 * Hammond 91 36/471 (97) 0/0	8/85 * San Juan 28-7 Unit 269 488/539 (97) 0/0	4/74 * San Juan 28-7 Unit 177 63/626 (97) 0/0	INA 4/74 * San Juan 28-7 Unit 176 15/755 (91) 0/0	INA 8/75 * San Juan 28-7 Unit 213 5/333 (95) 0/0
4/72 * Federal E 1 6/543 (97) 0/0	[25]	[30]		[29]	
1/80 * Hammond 92 59/586 (97) 0/0					
[36]	1/97 * Brookhaven Com 7A 415/126 (97) 0/0	[31]	1/96 * Harrington 6 Harrington 9 144/110 (97) 0/0	[32]	
[1]		6/91 * Federal 6 #32 86/244 (97) 0/0		7/81 * Burns Federal 2 34/236 (97) 0/0	
				12/83 * Miles Federal 1A 46/360 (97) 0/0	
				12/83 * MKL 16R 51/440 (97) 0/0	

R-08-W

R-07-W

LEGEND
FIRST DELIVERY DATA
WELL NAME
MCF/D-CUM(MMCF)
BOPD-CUM(MBO)