

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

PO Box 4289, Farmington, NM 87499

Operator

Address

San Juan 28-4 Unit

31M

F 32-28N-04W

Rio Arriba

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7459 API NO. 30-039-not assigned 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 Mesaverde - 72319		Basin Dakota - 71599
2. Top and Bottom of Pay Section (Perforations)	will be supplied upon completion		will be supplied upon completion
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	(Current) a. 703 psi (see attachment) (Original) b. 1384 psi (see attachment)		a. 1244 psi (see attachment) b. 3194 psi (see attachment)
6. Oil Gravity (API) or Gas BTU Content	BTU 1172		BTU 1011
7. Producing or Shut-In?	shut in		shut in
Production Marginal? (yes or no)	no		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 * If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:
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 ☐ 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 communized 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). Reference Order

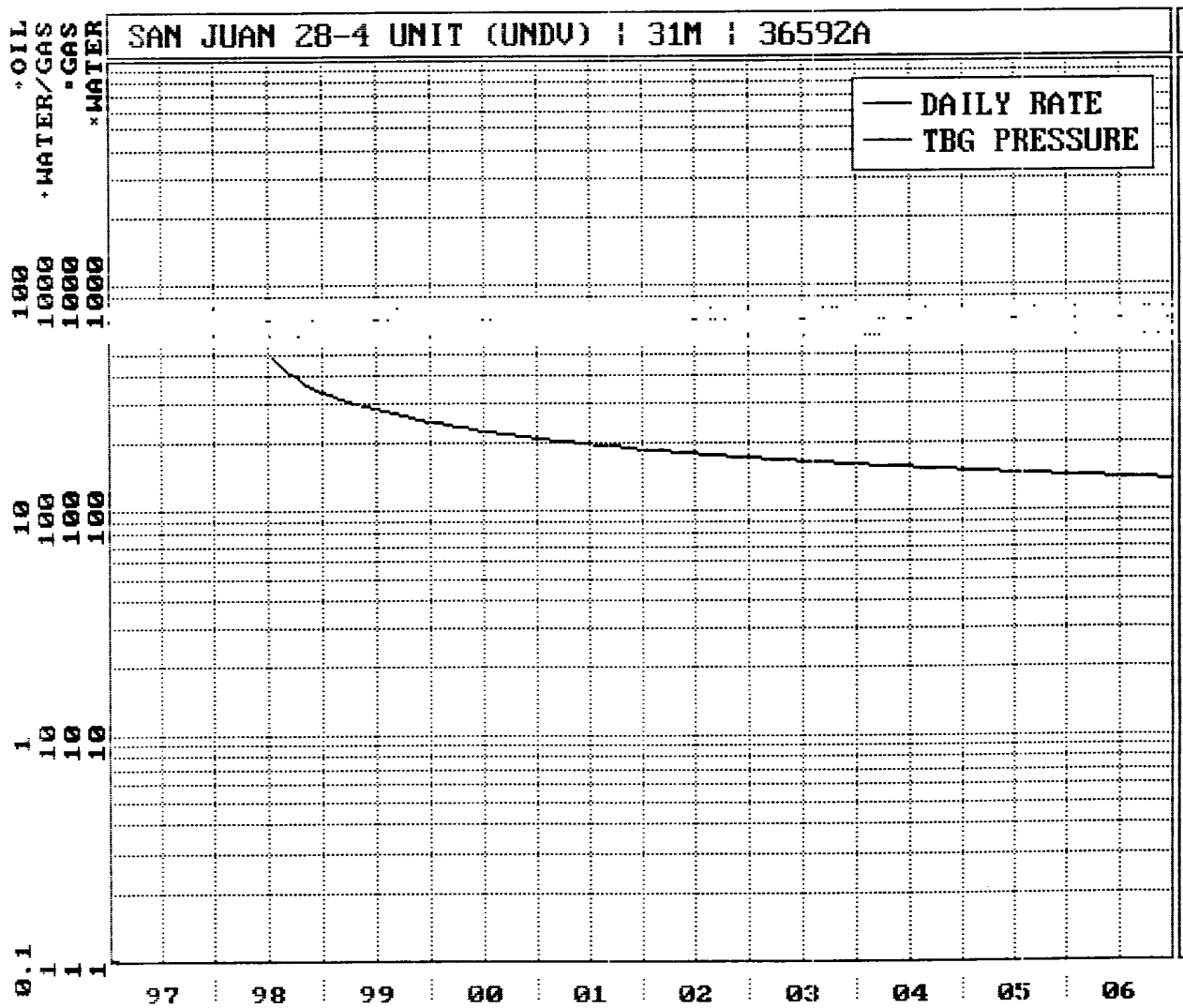
16. ATTACHMENTS:

- * 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.

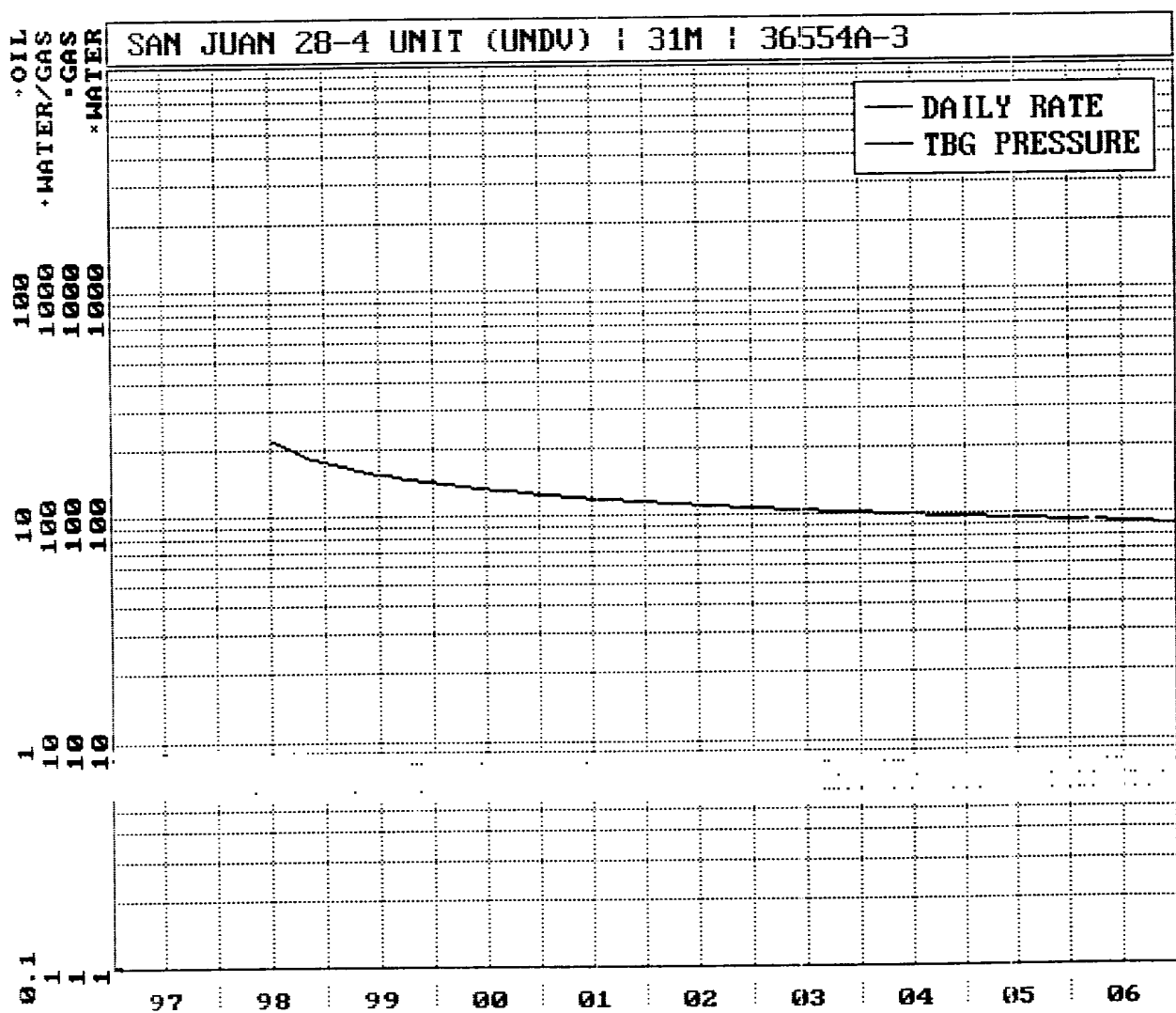
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Sean Woolverton TITLE: Reservoir Engineer DATE: 06-26-98TYPE OR PRINT NAME Sean Woolverton TELEPHONE NO. (505) 326-9700

San Juan 28-4 Unit #31M
Expected Production Curve
Blanco Mesaverde



San Juan 28-4 Unit #31M
Expected Production Curve
Basin Dakota



SJ 28-4 Unit #31M

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	0.689	GAS GRAVITY	0.596
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.36	%N2	0.2
%CO2	1.02	%CO2	1.82
%H2S	0	%H2S	0
DIAMETER (IN)	2	DIAMETER (IN)	2.375
DEPTH (FT)	6101	DEPTH (FT)	8238
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	137	BOTTOMHOLE TEMPERATURE (DEG F)	198
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	601	SURFACE PRESSURE (PSIA)	1043
BOTTOMHOLE PRESSURE (PSIA)	703.4	BOTTOMHOLE PRESSURE (PSIA)	1244.1
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.689	GAS GRAVITY	0.596
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.36	%N2	0.2
%CO2	1.02	%CO2	1.82
%H2S	0	%H2S	0
DIAMETER (IN)	2	DIAMETER (IN)	2.375
DEPTH (FT)	6101	DEPTH (FT)	8238
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	137	BOTTOMHOLE TEMPERATURE (DEG F)	198
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1164	SURFACE PRESSURE (PSIA)	2657
BOTTOMHOLE PRESSURE (PSIA)	1383.9	BOTTOMHOLE PRESSURE (PSIA)	3193.9

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Print Time: Thu Feb 12 10:13:40 1998

Property ID: 3907

Property Name: SAN JUAN 28-4 UNIT | 9 | 49871A-1

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

--DATE-- M SIWHP

Ps1

San Juan 28-4 Unit #31m

Mesaverde Offset

09/18/56	1164.0	-original
07/22/58	859.0	
10/22/59	907.0	
09/22/60	761.0	
06/13/61	688.0	
07/31/62	741.0	
01/07/63	733.0	
11/23/64	664.0	
01/26/65	661.0	
08/01/66	662.0	
08/04/67	695.0	
05/10/68	681.0	
10/17/69	652.0	
06/09/70	649.0	
05/03/71	627.0	
05/30/72	596.0	
08/07/74	660.0	
06/25/76	658.0	
08/02/78	690.0	
07/01/80	689.0	
05/20/82	725.0	
06/21/84	757.0	
10/21/86	841.0	
09/17/89	932.0	
02/18/91	782.0	
08/20/91	794.0	
05/31/93	601.0	-current

Page No.: 1
Print Time: Thu Feb 12 10:12:08 1998
Property ID: 1755
Property Name: SAN JUAN 28-4 UNIT | 31 | 51708A-1
Table Name: K:\ARIES\RR98PDP\TEST.DBF

--DATE-- M SIWHP
:Psi:

San Juan 28-4 Unit #31m
Dakota Offset

02/14/68	2657.0	-original
08/14/68	2057.0	
05/09/69	1774.0	
06/09/70	1877.0	
05/03/71	1426.0	
10/04/72	1502.0	
05/16/73	1333.0	
02/01/74	1321.0	
06/23/75	1191.0	
07/06/77	1141.0	
05/01/79	1229.0	
11/04/81	1234.0	
09/22/83	1196.0	
11/06/85	1264.0	
05/18/88	1346.0	
05/29/90	1043.0	-current

17.55 17.57 17.61 17.63 17.65 17.67 17.69 17.71 17.73 17.75 17.77 17.79 17.81 17.83 17.85 17.87 17.89 17.91 17.93 17.95 17.97 17.99 18.01 18.03 18.05 18.07 18.09 18.11 18.13 18.15 18.17 18.19 18.21 18.23 18.25 18.27 18.29 18.31 18.33 18.35 18.37 18.39 18.41 18.43 18.45 18.47 18.49 18.51 18.53 18.55 18.57 18.59 18.61 18.63 18.65 18.67 18.69 18.71 18.73 18.75 18.77 18.79 18.81 18.83 18.85 18.87 18.89 18.91 18.93 18.95 18.97 18.99 19.01 19.03 19.05 19.07 19.09 19.11 19.13 19.15 19.17 19.19 19.21 19.23 19.25 19.27 19.29 19.31 19.33 19.35 19.37 19.39 19.41 19.43 19.45 19.47 19.49 19.51 19.53 19.55 19.57 19.59 19.61 19.63 19.65 19.67 19.69 19.71 19.73 19.75 19.77 19.79 19.81 19.83 19.85 19.87 19.89 19.91 19.93 19.95 19.97 19.99 20.01 20.03 20.05 20.07 20.09 20.11 20.13 20.15 20.17 20.19 20.21 20.23 20.25 20.27 20.29 20.31 20.33 20.35 20.37 20.39 20.41 20.43 20.45 20.47 20.49 20.51 20.53 20.55 20.57 20.59 20.61 20.63 20.65 20.67 20.69 20.71 20.73 20.75 20.77 20.79 20.81 20.83 20.85 20.87 20.89 20.91 20.93 20.95 20.97 20.99 21.01 21.03 21.05 21.07 21.09 21.11 21.13 21.15 21.17 21.19 21.21 21.23 21.25 21.27 21.29 21.31 21.33 21.35 21.37 21.39 21.41 21.43 21.45 21.47 21.49 21.51 21.53 21.55 21.57 21.59 21.61 21.63 21.65 21.67 21.69 21.71 21.73 21.75 21.77 21.79 21.81 21.83 21.85 21.87 21.89 21.91 21.93 21.95 21.97 21.99 22.01 22.03 22.05 22.07 22.09 22.11 22.13 22.15 22.17 22.19 22.21 22.23 22.25 22.27 22.29 22.31 22.33 22.35 22.37 22.39 22.41 22.43 22.45 22.47 22.49 22.51 22.53 22.55 22.57 22.59 22.61 22.63 22.65 22.67 22.69 22.71 22.73 22.75 22.77 22.79 22.81 22.83 22.85 22.87 22.89 22.91 22.93 22.95 22.97 22.99 23.01 23.03 23.05 23.07 23.09 23.11 23.13 23.15 23.17 23.19 23.21 23.23 23.25 23.27 23.29 23.31 23.33 23.35 23.37 23.39 23.41 23.43 23.45 23.47 23.49 23.51 23.53 23.55 23.57 23.59 23.61 23.63 23.65 23.67 23.69 23.71 23.73 23.75 23.77 23.79 23.81 23.83 23.85 23.87 23.89 23.91 23.93 23.95 23.97 23.99 24.01 24.03 24.05 24.07 24.09 24.11 24.13 24.15 24.17 24.19 24.21 24.23 24.25 24.27 24.29 24.31 24.33 24.35 24.37 24.39 24.41 24.43 24.45 24.47 24.49 24.51 24.53 24.55 24.57 24.59 24.61 24.63 24.65 24.67 24.69 24.71 24.73 24.75 24.77 24.79 24.81 24.83 24.85 24.87 24.89 24.91 24.93 24.95 24.97 24.99 25.01 25.03 25.05 25.07 25.09 25.11 25.13 25.15 25.17 25.19 25.21 25.23 25.25 25.27 25.29 25.31 25.33 25.35 25.37 25.39 25.41 25.43 25.45 25.47 25.49 25.51 25.53 25.55 25.57 25.59 25.61 25.63 25.65 25.67 25.69 25.71 25.73 25.75 25.77 25.79 25.81 25.83 25.85 25.87 25.89 25.91 25.93 25.95 25.97 25.99 26.01 26.03 26.05 26.07 26.09 26.11 26.13 26.15 26.17 26.19 26.21 26.23 26.25 26.27 26.29 26.31 26.33 26.35 26.37 26.39 26.41 26.43 26.45 26.47 26.49 26.51 26.53 26.55 26.57 26.59 26.61 26.63 26.65 26.67 26.69 26.71 26.73 26.75 26.77 26.79 26.81 26.83 26.85 26.87 26.89 26.91 26.93 26.95 26.97 26.99 27.01 27.03 27.05 27.07 27.09 27.11 27.13 27.15 27.17 27.19 27.21 27.23 27.25 27.27 27.29 27.31 27.33 27.35 27.37 27.39 27.41 27.43 27.45 27.47 27.49 27.51 27.53 27.55 27.57 27.59 27.61 27.63 27.65 27.67 27.69 27.71 27.73 27.75 27.77 27.79 27.81 27.83 27.85 27.87 27.89 27.91 27.93 27.95 27.97 27.99 28.01 28.03 28.05 28.07 28.09 28.11 28.13 28.15 28.17 28.19 28.21 28.23 28.25 28.27 28.29 28.31 28.33 28.35 28.37 28.39 28.41 28.43 28.45 28.47 28.49 28.51 28.53 28.55 28.57 28.59 28.61 28.63 28.65 28.67 28.69 28.71 28.73 28.75 28.77 28.79 28.81 28.83 28.85 28.87 28.89 28.91 28.93 28.95 28.97 28.99 29.01 29.03 29.05 29.07 29.09 29.11 29.13 29.15 29.17 29.19 29.21 29.23 29.25 29.27 29.29 29.31 29.33 29.35 29.37 29.39 29.41 29.43 29.45 29.47 29.49 29.51 29.53 29.55 29.57 29.59 29.61 29.63 29.65 29.67 29.69 29.71 29.73 29.75 29.77 29.79 29.81 29.83 29.85 29.87 29.89 29.91 29.93 29.95 29.97 29.99 30.01 30.03 30.05 30.07 30.09 30.11 30.13 30.15 30.17 30.19 30.21 30.23 30.25 30.27 30.29 30.31 30.33 30.35 30.37 30.39 30.41 30.43 30.45 30.47 30.49 30.51 30.53 30.55 30.57 30.59 30.61 30.63 30.65 30.67 30.69 30.71 30.73 30.75 30.77 30.79 30.81 30.83 30.85 30.87 30.89 30.91 30.93 30.95 30.97 30.99 31.01 31.03 31.05 31.07 31.09 31.11 31.13 31.15 31

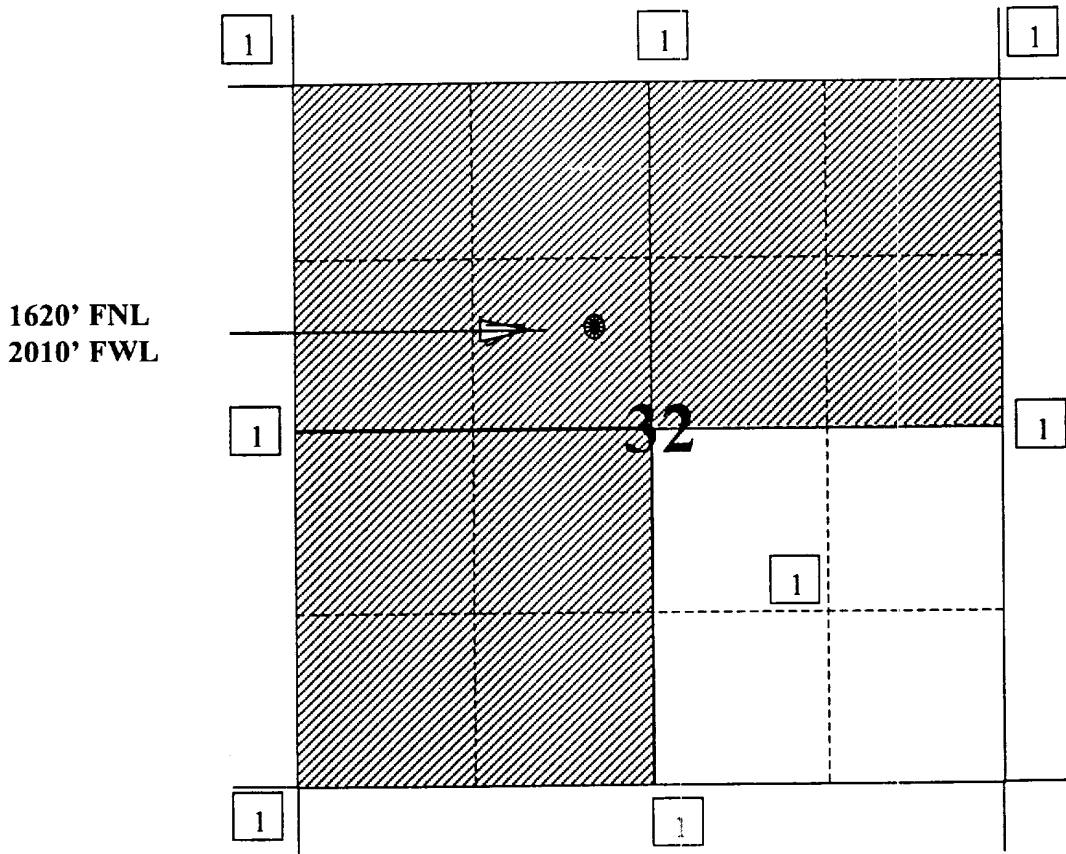
BURLINGTON RESOURCES OIL AND GAS COMPANY

San Juan 28-4 Unit #31M

OFFSET OPERATOR/OWNER PLAT

Mesaverde (N/2) / Dakota (W/2) Formations Commingle Well

Township 28 North, Range 4 West



1) Burlington Resources