

DATE IN 2/11/98	SUSPENSE 3/3/98	ENGINEER DC	LOGGED MV	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1836

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]

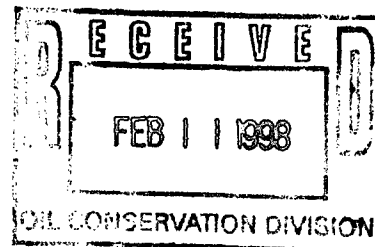
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[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

2/10/98
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

PO Box 4289, Farmington, NM 87499

Operator

Address

Hare

#16

H 3-29-10

San Juan, New Mexico

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7091 API NO. 30-045-08749 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)	4730' - 4765' : Current 4175' - 4765' : Proposed		6769' - 7004'
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. 546 psia (Original) b. 1389 psia	a. b.	Measured a. 804 psia b. 2437 psia
6. Oil Gravity (°API) or Gas BTU Content	1220		1201
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: N/A Rates:	Date: Rates:	Date: N/A Rates:
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: 1/98 Rates: 0.10 Bbls/d / 36 MCFD	Date: Rates:	Date: 1/98 Rates: 0.00 Bbls/d / 46 MCFD
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: Gas: will be supplied upon completion	Oil: % Gas: % will be supplied upon completion	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 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. NMOC 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 J. Midkiff TITLE Prod.Engineer DATE 01-29-98TYPE OR PRINT NAME Kevin Midkiff TELEPHONE NO. (505) 326-9700

N MEXICO OIL CONSERVATION COMMISS
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

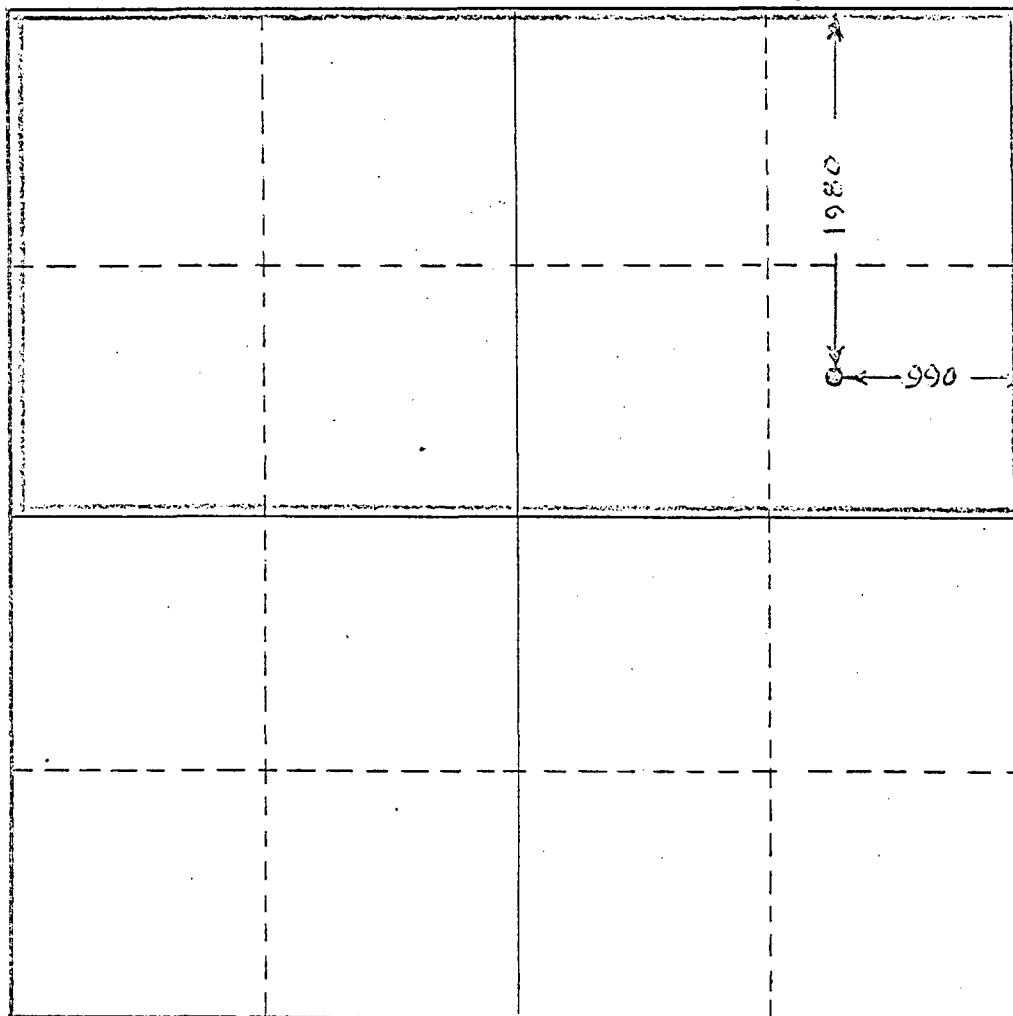
Operator Aztec Oil & Gas Company			Lease Hare		Well No. 16
Unit Letter H	Section 3	Township 29 North	Range 10 West	County San Juan	
Actual Footage Location of Well: 1980 feet from the North line and 990 feet from the East line					
Ground Level Elev. 5962 G1	Producing Formation Mesaverde		Pool Blanco Mesaverde		Dedicated Acreage: 323.04 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

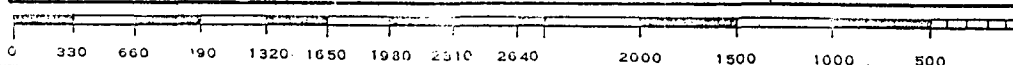
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name *John P. Johnson*
Position
District Superintendent
Company
Aztec Oil & Gas
Date
September 1, 1971

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.

August 16, 1962
Date Surveyed
E. Echohawk
Registered Professional Engineer
and/or Land Surveyor

Certificate No.



NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator <i>Astec Oil and Gas Company</i>			Lease <i>Hare</i>		Well No. <i>#16</i>
Unit Letter <i>H</i>	Section <i>3</i>	Township <i>29 North</i>	Range <i>10 West</i>	County <i>San Juan</i>	
Actual Footage Location of Well: <i>1180</i> 1980 feet from the <i>North</i> line and <i>990</i> feet from the <i>East</i> line					
Ground Level Elev: <i>5257 Gr</i>	Producing Formation <i>Dakota</i>		Pool <i>Basin Dakota</i>	Dedicated Acreage: <i>323.04</i> <i>N</i> <i>296.11</i> Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

CERTIFICATION

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

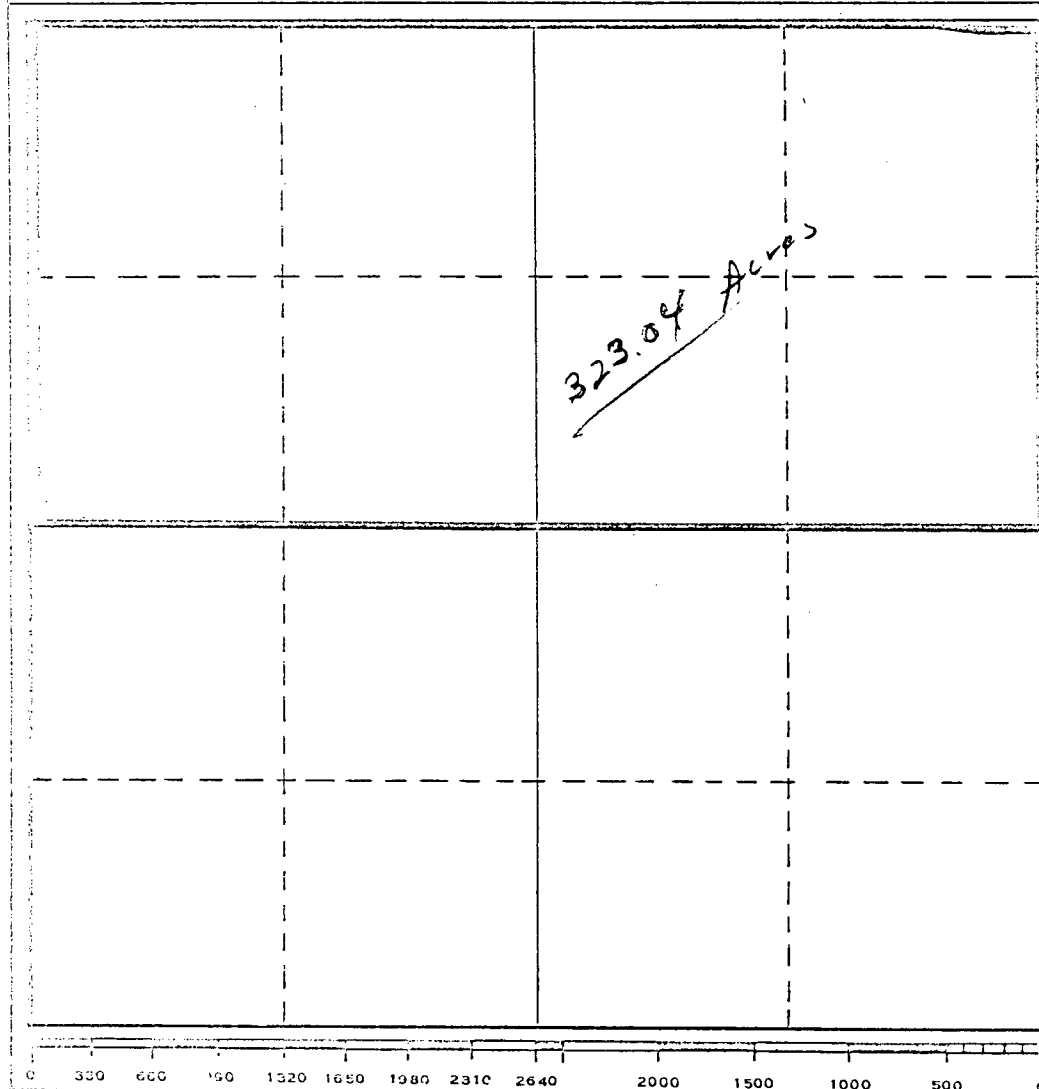
Name
Joe C. Salmon
Position
District Superintendent
Company
Astec Oil and Gas Company
Date
October 6, 1969

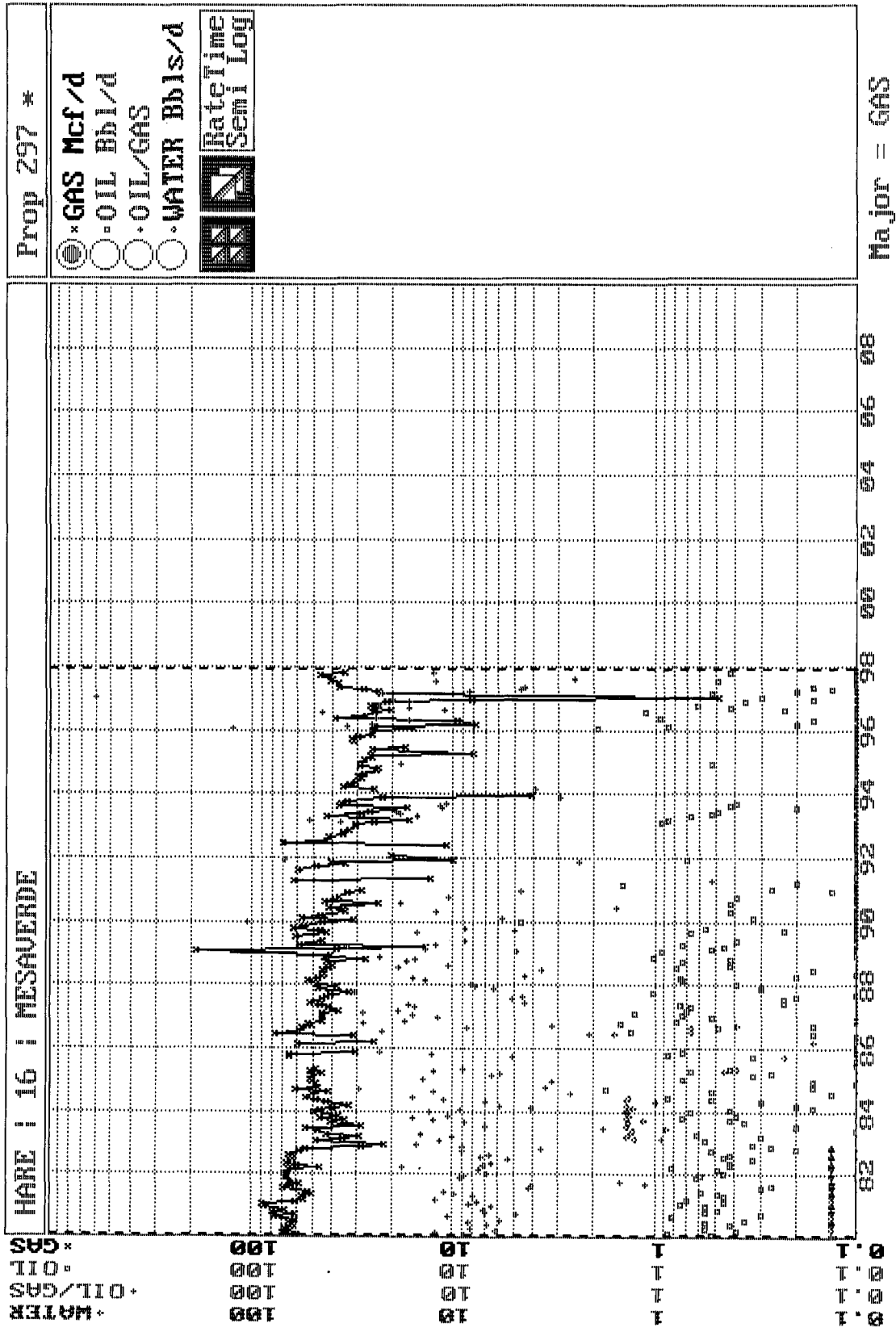
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

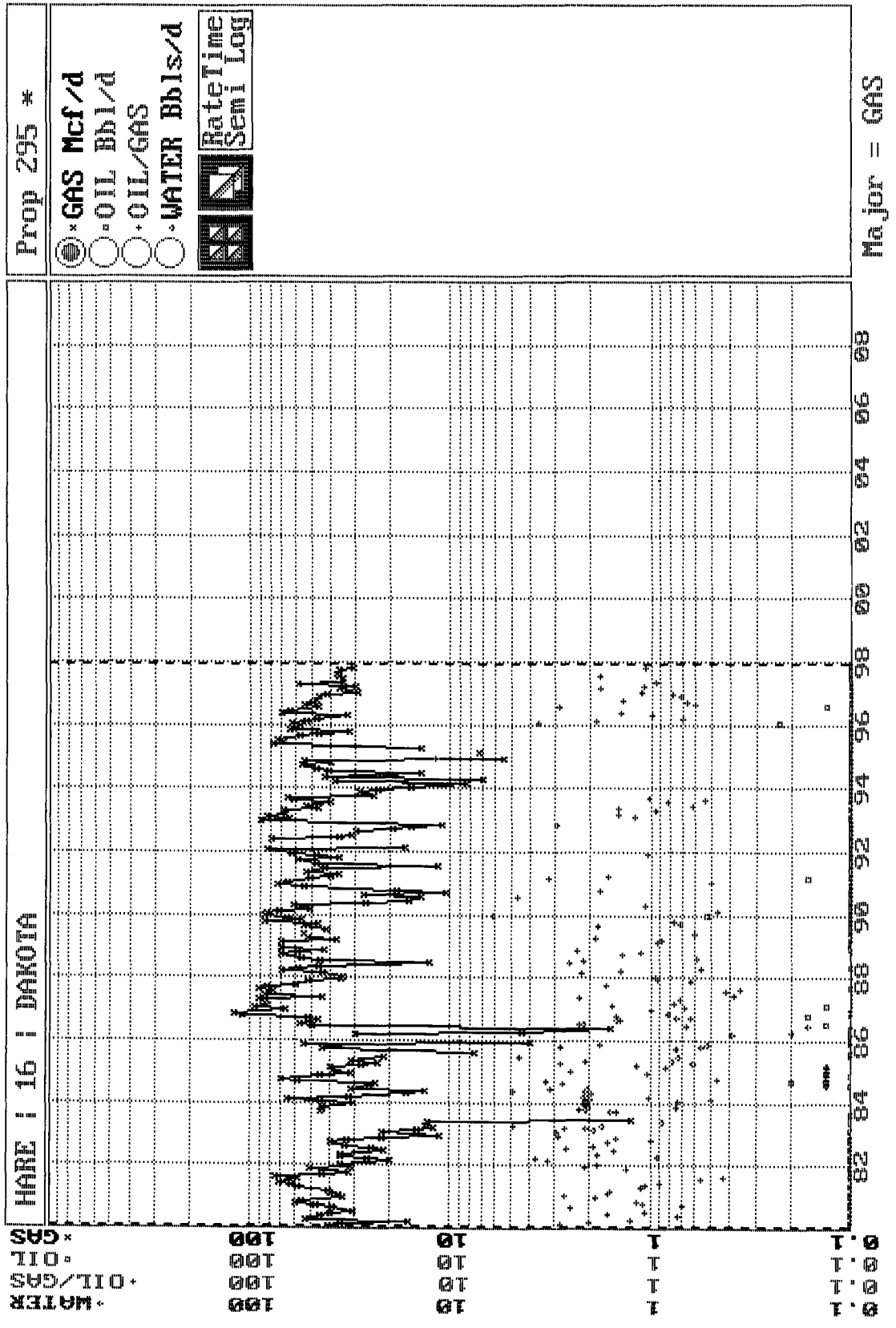
Date Surveyed _____

Registered Professional Engineer and/or Land Surveyor

Certificate No. _____







Hare #16
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	0.714	GAS GRAVITY	0.720
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.37	%N2	0.27
%CO2	0.59	%CO2	1.83
%H2S	0	%H2S	0
DIAMETER (IN)	4.5	DIAMETER (IN)	2.375
DEPTH (FT)	4470	DEPTH (FT)	6887
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	118	BOTTOMHOLE TEMPERATURE (DEG F)	149
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	484	SURFACE PRESSURE (PSIA)	667
BOTTOMHOLE PRESSURE (PSIA)	545.7	BOTTOMHOLE PRESSURE (PSIA)	804.0
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.714	GAS GRAVITY	0.720
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.37	%N2	0.27
%CO2	0.59	%CO2	1.83
%H2S	0	%H2S	0
DIAMETER (IN)	4.5	DIAMETER (IN)	2.375
DEPTH (FT)	4470	DEPTH (FT)	6887
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	118	BOTTOMHOLE TEMPERATURE (DEG F)	149
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1209	SURFACE PRESSURE (PSIA)	1957
BOTTOMHOLE PRESSURE (PSIA)	1388.8	BOTTOMHOLE PRESSURE (PSIA)	2437.0

Bottomhole Pressure From Cum Gas

Hare #16

Sec. 3, T29N, R10W

Unit Ltr. H

Mesaverde Zone

Date	Cum Gas (Mcf)	SIWHP (PSI)	Comments
4/30/80	0	1209 *	Original Reservoir Pressure
10/31/97	483992	484	Current Reservoir Pressure estimated from P/Z data

* Note: Original reservoir pressure taken from Hare #15M, located in Sec. 3, T29N, R10W, Unit Ltr. O.

Page No.: 1
Print Time: Tue Dec 30 11:12:22 1997
Property ID: 295
Property Name: HARE | 16 | DAKOTA
Table Name: S:\ARIES\1ROS\TEST.DBF

<u>--DATE--</u>	<u>---CUM_GAS--</u>	<u>M SIWHP</u>	
	Mcf	Psi	
05/18/62	0	1957.0	ORIGINAL
07/17/69	0	825.0	
05/02/73	467415	628.0	
09/26/73	477414	628.0	
08/02/75	539949	570.0	
05/17/77	592928	578.0	
05/16/79	642223	558.0	
09/16/81	683585	736.0	
05/02/83	699693	919.0	
12/03/85	728621	980.0	
08/17/88	783143	922.0	
03/21/90	814490	825.0	
10/31/97	928203	667.0	CURRENT Estimated From P/z

Package Preparation Volume Data

DPNo: 27241

HARE

16

Form: DK

Supt: 60 KEN RAYBON

FF: 338 JOHNNY ELLIS

MS: 327 MIKE MCKINNEY

Pipeline: WFS

Plunger: No

Dual: Yes

Compressor: No

Ownership (No Trust)			Prior Year			Current Year		
	Gas	Oil			Days			Days
				MCF/M	BOPM	On	MCF/M	BOPM
								On
GWl:	25.0000%	25.0000%	Jan	1,966	7.0	31	905	1.0
GNI:	21.0000%	21.0000%	Feb	1,633	3.0	29	1,129	2.0
			Mar	1,446	1.0	31	932	1.0
			Apr	1,031	1.0	30	1,793	0.0
			May	2,171	3.0	31	1,079	1.0
			Jun	1,969	0.0	30	1,064	0.0
			Jul	1,415	4.0	31	1,135	2.0
			Aug	1,669	1.0	26.8	1,162	0.0
			Sept	1,533	1.0	30	1,115	0.0
			Oct	1,473	2.0	31	966	1.0
			Nov	1,422	1.0	30	0	0.0
			Dec	1,287	1.0	31	0	0.0
			Total	19,015	25.0		11,280	8.0

Volumes (Days On)	MCFD	BOPD
7 Day Avg	28	0.0
30 Day Avg	46	0.0
60 Day Avg	38	0.0
3 Mo Avg	36	0.0
6 Mo Avg	39	0.0
12 MoAvg		

Volumes (Days in Month)	MCFD	BOPD
30 Day Avg	46	0.0
60 Day Avg	38	0.0
3 Mo Avg	36	0.0
6 Mo Avg	38	0.0
12 Mo Avg		

Print Form

Exit Volumes Data

Package Preparation Volume Data

DPNo: 27252

HARE

16

Form: MV

Supt: 60 KEN RAYBON

FF: 338 JOHNNY ELLIS

MS: 327 MIKE MCKINNEY

Pipeline: WFS

Plunger: No

Dual: Yes

Compressor: No

Ownership (No Trust)			Prior Year			Current Year		
	Gas	Oil			Days			Days
	GWI:	25.0000%		MCF/M	BOPM	On	MCF/M	BOPM
	GNI:	21.0000%						On
Volumes (Days On)	MCFD	BOPD	Jan	488	59.0	31	15	9.0
7 Day Avg	48	0.7	Feb	779	26.0	29	714	16.0
30 Day Avg	36	0.1	Mar	240	6.0	31	728	6.0
60 Day Avg	35	0.3	Apr	303	5.0	30	872	4.0
3 Mo Avg	41	0.2	May	1,206	29.0	31	1,150	5.0
6 Mo Avg	29	0.2	Jun	839	0.0	30	1,155	0.0
12 MoAvg			Jul	766	34.0	31	1,264	15.0
			Aug	635	7.0	25.1	1,232	3.0
			Sept	790	13.0	30	1,440	0.0
			Oct	813	19.0	31	1,067	13.0
			Nov	674	11.0	30	0	0.0
			Dec	251	5.0	31	0	0.0
			Total	7,784	214.0		9,637	71.0
Volumes (Days in Month)	MCFD	BOPD						
30 Day Avg	36	0.1						
60 Day Avg	35	0.3						
3 Mo Avg	40	0.2						
6 Mo Avg	29	0.2						
12 Mo Avg								

Print Form

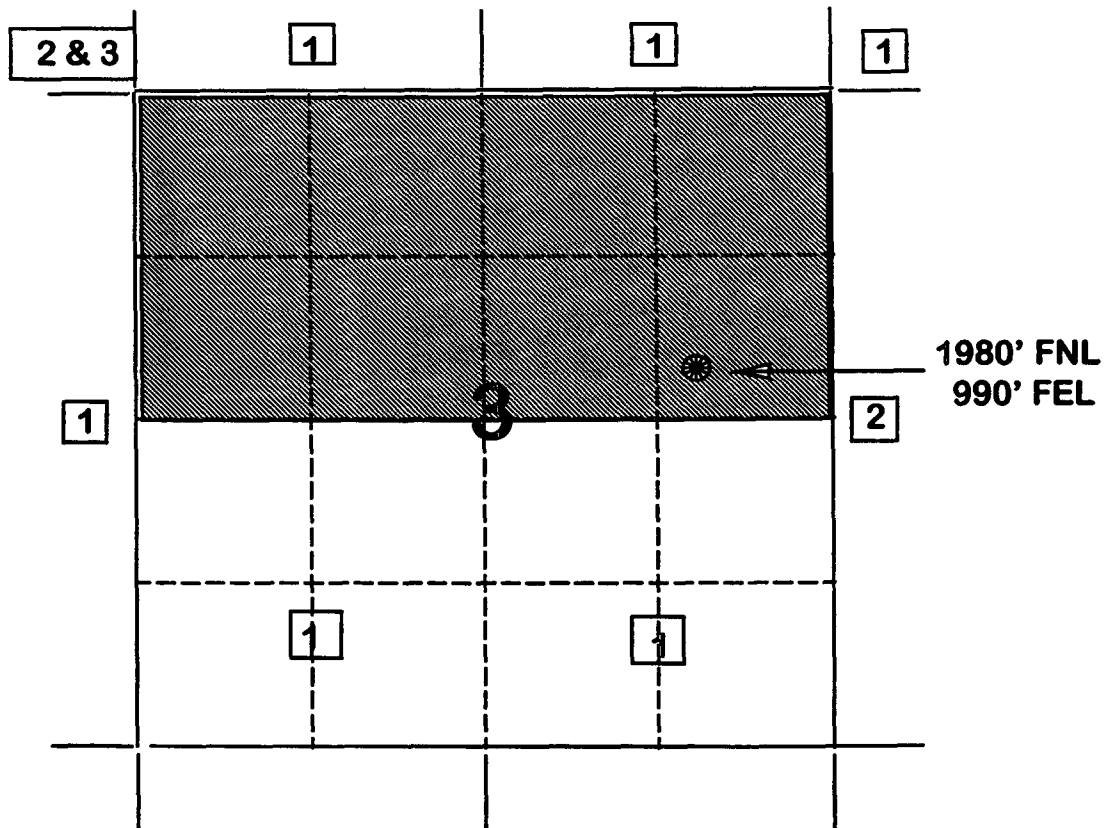
Exit Volumes Data

BURLINGTON RESOURCES OIL AND GAS COMPANY

Hare #16

Mesaverde / Dakota Formations Commingle Well

Township 29 North, Range 10 West



1) Burlington Resources
2) Amoco Production Company
c/o Bruce Zimney
P.O. Box 800
Denver, CO 80201

3) Conoco Inc.
10 Desta Drive, Suite 100W
Midland, TX 79705-4500

