8/7/01

District I

State of New Mexico Energy, Minerals and Natural Resources Department Revised May 15, 2000

District II

811 South First Street, Artesia, NM 88210

District III

OIL CONSERVATION DIVISION

APPLICATION TYPE \_X\_Single Well Establish Pre-Approved Pools

District IV 2040 South Pacheco, Santa Fe. 18 01

2040 South Pacheco Santa Fe, New Mexico 87505

APPLICATION FOR DOWNHOLE COMMINGLING

**EXISTING WELLBORE** \_X\_Yes \_\_\_No

Coleman Oil and Gas Company	c/o Walsh E	Engineering, 7415 E. Main St, F	Farmington, NM 87402
Operator		Address	
Darcy Ann #1		M 26 T26N R12W	San Juan County, NM
Lease	Well No.	Unit Letter-Section-Towns	
OGRID No. <b>004838</b> Property C	ode_ <b>24807</b>	API No <b>30-045-29896</b>	Lease Type:FederalStateFee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZO	NE LOWER ZONE
Pool Name	Basin Fruitland Coal		WAW Fruitland Sand-PC
Pool Code	71629		87190
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	1222' – 1236'		1243 – 1248
Method of Production (Flowing or Artificial Lift)	Pumping		Pumping
Bottomhole Pressure (Note Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	NR		NR
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1002 (Est. from Offset)		1006
Producing, Shut-In or New Zone	Producing		Shut-in 6/01
Date 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: 7/11/01  Rates: 240 MCFD	Date:	Date: 5/01 Rates: 163 MCFD
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas	Oil Gas	Oil Gas

ADDITIONAL DATA					
Are all working, royalty and overriding royalty interests identical in all commingled zones? If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?		Yes Yes		No	
Are all produced fluids from all commingled zones compatible with each other?		Yes	_X	No	
Will commingling decrease the value of production?		Yes		NoX	<b>\</b>
If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application?		Yes	x	_No	
NMOCD Reference Case No. applicable to this well:	-				
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 working, royalty and overriding royalty interests for uncommon interest cases.					

### PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools List of all operators within the proposed Pre-Approved Pools Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.

Any additional statements, data or documents required to support commingling.

Bottomhole pressure data.

I hereby certify that the	information above is true and	d complete to the best of n	y knowledge and belief

•	mation above is true and complete to t	the best of my knowledge and	d belief.
SIGNATURE Paul C.	Though TITLE	Agent	DATE_7/16/01
TYPE OR PRINT NAME	Paul C. Thompson, P.E.	TELEPHONE NO. ( 505	5 ) 327-4892

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

District II PO Drawer DD, 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 Depart

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088 Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

\_\_\_ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

			WELL	LOCAT:	ON AND	AC	REAGE DED:	[CA]	TION PL	.AT			
'A	API Numbe	r		*Pool Cod 87190	е		MAN EDUTATI	NTD.	'Pool Nam		an or to		
¹Property	Codo			67190	*D===	erty	WAW FRUITLA	ועט	SAND - F	TCTURE		ell Number	
Property	code				DAR	-					WE	1 Number	•
'OGRID I	Na.	<del></del>			*Oper						•6	levation	
004838	3			COL	EMAN OI					i	•	6231	
L				:	<sup>10</sup> Surfac	ce L	ocation						
UL or lot no.	Section	Township	Range	Lot Idn	Feet from t		North/South line	Fe	et from the	East/We	est line	Coun	-
M	26	26N	12W		1005		SOUTH	ļ	920	WE	ST	SAN C	JUAN
			ottom		ocation				om Surf				
UL or lot no.	Section	Township	Range	Lot Ion	Feet from t	the	North/South line	Fe	et from the	East/We	est line	Coun	ty
12 Dedicated Acres	<u> </u>	13 Joint or Inf	ill <sup>94</sup> Cons	olidation Code	<sup>95</sup> Order No	<u> </u>		<u> </u>				<u> </u>	
160		N					•						
		<u> </u>	SSTONE	ח דח דעי	LE CUMDIT	=T TO	N UNTIL ALL	TNITI	EDECTC L		EN COM	USOL TO A	TED
NO ALLON	ADLE W	OR A	NON-ST	ANDARD	UNIT HAS	BE	EN APPROVED	BY	THE DIVI	SION	EN CO	NSULTUA	יבט
16			52	276.04					17 OPER	ATOR	CERT	FICAT	ION
				1					I hereby cent	tify that the plete to the	e information best of my	n contained he knowledge and	rein is belief
Ì		1				į							
}				1									
		1 .				į			<b>]</b>				
						1			17	,			
				<del></del> -		— <del>-  </del>			Signatur	<u> </u>	hom	2/	
				'					_	C Thor	npson		
				1		- 1			Printed				
		1		ı		i			Agent	:			
l.								_	Title 4/5/9	9			
00		1				i		00	Date				
·		<u> </u>	1	26 -		-			18 SURV	FYOR	CERTI	FICAT	TON
28		1		1		I L		28	I hereby cert was plotted or under my correct to th	ify that the	well locat:	ion shown on a	this plat
ហ៊								Ŋ	correct to th	supervision, ne best of m	and that the y belief.	same 15 true	e and
		1					•		ļ.				
						İ			DEC	EMBER	21	1998	,
									Date of	Survey		<u> </u>	
		<u>-</u>			<del></del>	†			Signature and	Seal of pr	Less Trable	1/2	
920'	<b>-</b> 0								DEC Date of	NEA NEL	MEX 6857		
	Ŧ	1				1				Z	6857	(o ) (o )	
	ĬΩ								لر ا				
	002	l t				1			€8 <del>5</del>		62	Later L	_
			52	277.36		}			Certific		DESCRIPTION OF	MAL	<u> </u>
<u> </u>		L				L				200		-	

District. I 'RO Box 1980, Hobbs, NM 88241-1980 District II' PO Drawer DO, Artesia, NM 88211-0719

District III 1000 Rio Brazos Rd. Aztec, NM 87410

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

State of New Mexico Energy, Minerals & Natural Resources Departmen

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

Revised February 21, 1994 Instructions on back ubmit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

AMENDED REPORT

Form C-102

### FIGURE 3A

## WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number 30-045-29896	*Pool Code 71629	Pool Name of Pool	AND COAL
Property Code 24807		operty Name RCY ANN	*Well Number
OGRID No. 004838		erator Name IL & GAS, INC.	Elevation 6231
<u> </u>	10 Cupf:	oce Location	

					001 1000	_0001			
UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/Mest line	County
М	26	26N	12W		1005	SOUTH	920	WEST	SAN JUAN
		11 E	ottom	Hole L	ocation I	f Different	From Surf	ace	
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
			194.5						
<sup>12</sup> Dedicated Acres		<sup>13</sup> Joint or In	f111   ~ Con	solidation Code	<sup>25</sup> Order No.				
320		Y		C			·		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED.

	OR A NON-STAN	DARD UNIT HAS BE	EN APPROVED BY I	HE DIVISION
	527	6.04 <sup>*</sup>		17 OPERATOR CERTIFICATION  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief
,				
				Paul C. Thomps-
·	<u> </u>			Paul C. Thompson Printed Name Agent
O NMNM	104610		. 00	Title 6/5/00
0.0825 NO-G	9811-1309	6- — -	280.	18 SURVEYOR CERTIFICATION  I hereby certify that the idell location shown on this plat was plotted from field notes of actual surveys each by se of under my supervision, and that the same is true and correct to the best of my belief.
47			വ	
	<u> </u>		<u></u>	DECEMBER 21, 1998 Date of Survey Signature and Sept to Proceed and MEXICO
920'		- - - - -		W X MEXICO 00 (6 8 5 7 ) (6 8 5 7 )
. <u>900</u> 2,				
	527	7.36		Certificate Na Consession

# Rate/Time Graph

Project: C:\Program Files\IHS Energy\PowerTools v4.0\Projects\DarcyAnn.MDB

Operator: Field Name:

COLEMAN OIL & GAS INCORPORATED

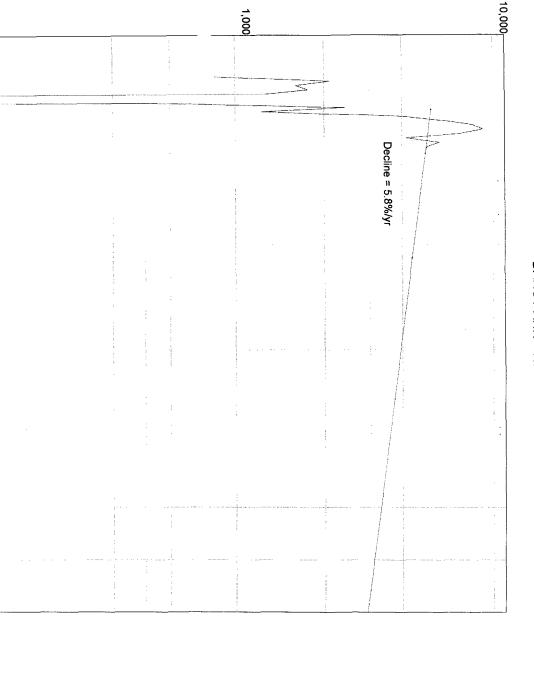
Time: 4:40 PM Date: 7/16/2001

Lease Name: County, ST:

Location:

DARCY ANN (1) SAN JUAN, NM 26 26N 12W NE SW SW





Monthly Rate

8 1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

Time

Gas Curve: Segment 1: 6/1/2000 - 4/1/2001

N Factor: Decline: 0.000000

End Rate: Start Rate: 5.8000 4,382 4,938 mcf

Segment 2: 4/1/2001 -

4/1/2003

N Factor: Decline: End Rate: Start Rate:

0.000000

5.8000

4,938

mcf

5,190 mcf

Water Curve:

Segment 1: 10/1/1999 - 3/1/2001 Start Rate: 1,574 bbl End Rate: Decline: 21.1282 1,124

N Factor:

0.000000

# Darcy Ann #1 Downhole Commingling Allocation Formula

Coleman Oil and Gas drilled the Darcy Ann #1 in August 1999. The well was completed in the WAW Fruitland Sand - Pictured Cliffs Pool in October of 1999 and was first delivered into El Paso Field Services gathering system that same month. After several months of low production due to frac-sand production and scale problems, the well finally started producing on a regular basis in mid-2000. Production from the well stabilized at approximately 4950 MCF/mo. and is declining at approximately 5.8 %/yr. (see attached production graph).

In June of 2001, Coleman Oil and Gas, set a bride plug on top of the Pictured Cliffs zone and recompleted the well in the Basin Fruitland Coal pool.

The two zones are very close to each other (total of 7 feet separation) and the reservoir pressures are expected to be similar. Therefore, cross flow will not be a factor. Both zones will produce water, but neither zone will produce any liquid hydro carbons. Since neither zone is fluid sensitive, the fluids from the two zones should be compatible.

Due to the lack of production data from the Fruitland Coal, Coleman Oil and Gas proposes to allocate the production according to the following method.

Calculate Pictured Cliffs rate at any time from the following:

 $Q_{PC} = Q_{PCi}$  \* e ^ (-Dt) where t is time in months since the commingling began and  $Q_{PCi}$  is 163 MCFD. The Pictured Cliffs decline (D) was calculated from the attached rate - time plot at 5.8%/yr. (0.00483/mo.).

The Fruitland Coal production can be calculated from the actual measured production for any month minus  $Q_{\text{PC}}$ .

Coleman Oil and Gas is the only working interest owner in the Darcy Ann #1. The working and net revenue interests are common in the two pools. This well is on a Navajo Allotted lease, so the BLM has also been notified.

EP FIELD SERVICESSAN JUAN Preparer Code: 837495894	Accounting/F	Accounting/Production Period 05/2001	od 05/2001		COLEMAN OIL Recipient	LEMAN OIL & GAS INC Recipient Code:	INC 0	,
Statement Title: Monthly Summary Statement Contact: JUAN DESAN (832)676-7958 Statement Type: Original	Reporting Basis	Jasis - MCF & 14,730	4.730		Report	Report Date/Time:	. 06/14/2001 07:38	1 07:38
Analysis Id: 99926 JEFF #1	Dev	Device: (No spec	equip)		i	GPA Version:	on: GPAEP97	
Effective Date Type Sample Date Dry BTU Wet BTU Gravity	• • • • • • • • • • • • • • • • • • •	1	1 1 1 1 1 1 1 1 1 1 1	)   	1 1 1 1 1 1 1			
05/01/2001 07:00 UNKNOWN 04/18/2001 1000 983 0.5720		1						
Methane Ethane Propane Butane	Iso Butane Butane	Iso Pentane Pentane	Neo Pentane		Heptane Octane	H2S C	CO2 Nitrogen	Total
Mole %- 97.50 0.60 0.00 GPM- 0.1605 0.0000	0.00 0.00 0.000	0.00 0.00	0.00	0.00 0.00	00.00	0.00	1.18 0.72	100.00 0.1605
Analysis Id: 99969 (DARCY ANN #1) FICTURED CLIFE		Device: (No spec equip)	equip)			GPA Versi	GPA Version: GPAEP97	
Effective Date Type Sample Date Dry BTU Wet BTU Gravity	; ; ; ; ; ; ; ; ;							
04/01/2001 07:00 UNKNOWN 03/21/2001 1006 988 0.5930							: : : : : : : : : : : : : : : : : : :	
Methane Ethane Propane butane	Sutane Butane	Pentane Pentane	Pentane		Reptane Octane	HZS	uz Nitrogen	10191
Mole %- 94.88 2.23 0.07 GPM- 0.5964 0.0193	0.01 0.02 0.0032 0.0065	0.00 0.01 0.0000 0.0037	0.000	0.001 0.00	00.00	0.00	2.53 0.24	100.00 0.6334
Analysis Id: 99970 EAGLES COM #1	Dev	Device: (No spec equip)	equip)	1		GPA Version:	on: GPAEP97	
Effective Date Type Sample Date Dry BTU Wet BTU Gravity								
05/01/2001 07:00 UNKNOWN 04/18/2001 1005 988 0.5730	Ç	Ç <u>u</u>	CON					
Methane Ethane Propane	Butane Butane	Pentane Pentane	Pentane	_	Heptane Octane	H2S C	CO2 Nitrogen	Total
Mole %- 97.20 1.05 0.00 GPM- 0.2808 0.0000	0.00 0.00	0.00 0.00 0.000 0.0000	0.000	0.00 0.00	00.00	0.00	1.07 0.68	100.00 0.2808



2030 AFTON PLACE FARMINGTON, N.M. 87401 (505) 325-8622

ANALYSIS NO.

CO210011 18200 - 10060

CUST. NO.

DFFSET TO CUSTOMER NAME

COLEMAN OIL AND GAS INC.

SOURCE **PRESSURE**  **SEPARATOR** 14 PSIG

WELL NAME **COUNTY/ STATE**  PEGASUS #1 🛩 **SAN JUAN** 

DARLY ANN #1

SAMPLE TEMP

NM

WELL/LEASE INFORMATION

60 DEG.F

LOCATION FIELD

WELL FLOWING

**FORMATION** CUST.STN.NO.

**BASIN FRUITLAND COAL** 

DATE SAMPLED **SAMPLED BY** 

5/29/01

FOREMAN/ENGR.

MIKE HANSON

**REMARKS** 

PAGE 04

ROD PUMP - GAS SOLD OFF CASING API NO. 30-045-30295

### **ANALYSIS**

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR *
NITROGEN	0.189	0.0000	0.00	0.0018
CO2	2.027	0.0000	0.00	0.0308
METHANE	96.175	0.0000	973.58	0.5327
ETHANE	1.609	0.4304	28.54	0.0167
PROPANE	0.000	0.0000	0.00	0.0000
L-BUTANE	0.000	0.0000	0.00	0.0000
N-BUTANE	0.000	0.0000	0.00	0.0000
I-PENTANE	0.000	0.0000	0.00	0.0000
N-PENTANE	0.000	0.0000	0.00	0.0000
HEXANE PLUS	0.000	0.0000	0.00	0.0000
TOTAL	100.000	0.4304	1,002,12	0.5821

14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY • Q

14,730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z)1.0021 BTU/CU.FT (DRY) CORRECTED FOR (1/Z) 1.004.2 BTU/CU.FT (WET) CORRECTED FOR (1/Z) 986.7 **REAL SPECIFIC GRAVITY** 0.5832

> ANALYSIS RUN AT 14,730 PSIA & 60 DEGREES F

DRY BTU @ 14.650 998.8 **CYLINDER #** WIB-5955 DRY BTU @ 14.696 1,001.9 CYLINDER PRESSURE **PSIG** 15 DRY BTU @ 14.730 1.004.2 DATE RUN DRY BTU @ 15.025 1,024.3 **ANALYSIS RUN BY GINA HANON** 

> 09:21 1002/18/90 202-356-2555