

DATE IN 4/16/04	SUSPENSE 5/6/04	ENGINEER WV	LOGGED IN	TYPE PWTJ	APP NO. 0413353464
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



DHC-3278

ADMINISTRATIVE APPLICATION CHECKLIST

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

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [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 - Simultaneous Dedication
☐ NSL ☐ NSP ☐ 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

[D] Other: Specify _____

RECEIVED

APR 16 2004

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

[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] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

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

Paul Thompson
Print or Type Name

Paul C. Thompson
Signature

Agent
Title

4/14/04
Date

PAUL@WALSHENG.NET
e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Road, Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A
Revised June 10, 2003

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

APPLICATION TYPE
☒ Single Well
☐ Establish Pre-Approved Pools
EXISTING WELLBORE
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

Manana Gas, Inc

c/o Walsh Engineering, 7415 E. Main St., Farmington, NM 87402

Operator

Crooked Seams #1

Address

P 14 T30N R12W

San Juan

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. 13931 Property Code API No. 30-045-32012 Lease Type: ☐ Federal ☒ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Basin Fruitland Coal ✓		UNDES Aztec Pictured Cliffs
Pool Code	71629 ✓		71280 ✓
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	1773' - 1798' Proposed		1819' - 1830' Proposed
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)			
Oil Gravity or Gas BTU (Degree API or Gas BTU)			
Producing, Shut-In or New Zone	New Zone		New Zone
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: Rates:	Date: Rates:	Date: Rates:
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 0 % 80 %	Oil Gas % %	Oil Gas 0 % 20 %

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 _____ No ☒
Yes ☒ No _____

Are all produced fluids from all commingled zones compatible with each other?

Yes ☒ No _____

Will commingling decrease the value of production?

Yes _____ No ☒

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 _____ No _____

NMOCD Reference Case No. applicable to this well: R-11363

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

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.
- Bottomhole pressure data.

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

SIGNATURE Paul C. Thompson TITLE Agent DATE 4/13/04

TYPE OR PRINT NAME Paul C. Thompson, P.E. TELEPHONE NO. (505) 327-4892

E-MAIL ADDRESS paul@walsheng.net

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

OIL CONSERVATION DIVISION

2040 Pacheco St.
Santa Fe, New Mexico 87505

DISTRICT I
O. Box 1980, Hobbs, NM 88240

DISTRICT I
O. Drawer DD, Artesia, NM 88210

DISTRICT I
100 Rio Brazos Rd., Aztec, NM 87410

WELL API NO.

30-045-32012

5. Indicate Type of Lease

STATE ☐

FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Crooked Seams

8. Well No.

#1

9. Pool name or Wildcat

Basin Fruitland Coal / Aztec Pictured Cliffs

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"
(FORM C-101) FOR SUCH PROPOSALS)

Type of Well:

OIL

GAS

WELL ☐

WELL ☒

OTHER

Name of Operator

Manana Gas Company

Address of Operator

c/o Walsh Engineering, 7415 East Main Street, Farmington, NM 87402

Well Location

Unit Letter P : 716' Feet From The South Line and 1225' Feet From The East Line

Section 14 Township 30N Range 12W NMPM County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

5529' GR 5534' KB

Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

1. NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

WELL OR ALTER CASING ☐

OTHER: Downhole Commingling ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG & ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

2. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent date, including estimated date of starting any proposed work).
SEE RULE 1103.

Manana Gas Company seeks administrative approval to down hole commingling the production from the Basin Fruitland Coal (71629) and Aztec Pictured Cliffs (71280) pools. These two pools were pre-approved in Division Order R-11363. The proposed PC perforations are from 1819' - 1830'. The proposed FTC perms are from 1773' to 1798'. Based on the calculated ultimate gross reserves from all of the existing PC and FTC wells in T30N and R12W, 20% of the production will be allocated to the Pictured Cliffs and 80% will be allocated to the Fruitland Coal. Commingling will not reduce the value of the total remaining production. Ownership in the two formations is not common. All of the interest owners have been notified of this application by certified mail. A copy of the notification letter and a list of the interest owners is attached.

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

SIGNATURE

Paul C. Thompson

TITLE Agent/Engineer

DATE

04/13/04

TYPE OR PRINT NAME

Paul C. Thompson

TELEPHONE NO. (505) 327-4892

(This space for State Use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

STRICT I
O. Box 1980, Hobbs, N.M. 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102

Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

STRICT II
O. Drawer DD, Artesia, N.M. 88211-0719

STRICT III
OO Rio Brazos Rd., Aztec, N.M. 87410

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, NM 87504-2088

STRICT IV
Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-32012	² Pool Code 71280	³ Pool Name AZTEC PICTURED CLIFFS
⁴ Property Code	⁵ Property Name CROOKED SEAMS	⁶ Well Number 1
⁷ GRID No. 13931	⁸ Operator Name MANANA GAS, INC.	⁹ Elevation 5529.31

¹⁰ Surface Location

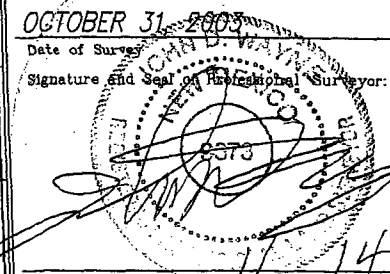
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	14	30N	12W		715.98	SOUTH	1224.88	EAST	SAN JUAN

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

¹² Dedicated Acres 160	¹³ Joint or Infill Y	¹⁴ Consolidation Code	¹⁵ Order No.
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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

SECTION 14	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief	
	Signature Paul C. Thompson	
	Printed Name PAUL C. THOMPSON	
	Title AGENT	
	Date 4/14/04	
	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.	
	Date of Survey OCTOBER 31, 2003	
	Signature and Seal of Professional Surveyor: 	
	Certificate Number N.M. PLS #9673	

RICT I
Box 1980, Hobbs, N.M. 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

RICT II
Drawer DD, Artesia, N.M. 88211-0719

RICT III
Rio Brazos Rd., Aztec, N.M. 87410

RICT IV
Box 2088, Santa Fe, NM 87504-2088

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number PD-045-32012		² Pool Code 15-71629		³ Pool Name Basin Fruitland Coal								
⁴ Property Code		⁵ Property Name CROOKED SEAMS						⁶ Well Number 1				
⁷ GRID No. 13931		⁸ Operator Name MANANA GAS, INC.						⁹ Elevation 5529.31				
¹⁰ Surface Location												
or lot no. P	Section 14	Township 30N	Range 12W	Lot Idn	Feet from the 715.98	North/South line SOUTH	Feet from the 1224.88	East/West line EAST	County SAN JUAN			
¹¹ Bottom Hole Location If Different From Surface												
or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County			
¹² Dedicated Acres 320										¹³ Joint or Infill Y	¹⁴ Consolidation Code	¹⁵ Order No.

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

SECTION 14

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. Thompson
Signature

PAUL C. THOMPSON
Printed Name

AGENT
Title

11/15/03
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.

OCTOBER 31, 2003
Date of Survey

JOHN D. WAYNE
Signature and Seal of Professional Surveyor

Certificate Number N.M. PLS #9673

Crooked Seams #1
Downhole Commingling Application

Allocation Formula

The Crooked Seams #1 is a new Aztec Pictured Cliffs and Basin Fruitland Coal well. Since the well has not yet been completed there is no pressure or test information available. However, there are several other downhole commingled Pictured Cliffs - Fruitland Coal wells in this township and these pools have been pre-approved for downhole commingling. For this reason it is reasonable to expect the bottom hole pressures to be similar and the wellbore fluids to be compatible. Neither zone is expected to make any appreciable amount of liquid hydrocarbons.

There are currently 51 Aztec Pictured Cliffs wells in this township. Using current economic parameters, the 51 wells should have ultimate gross reserves of 410,940 MCF/well. The 75 current Fruitland Coal wells in this township should have 1,629,300 MCF/well of ultimate gross reserves. Please refer to the attached rate-time plots and cash-flow forecasts that were used to calculate the ultimate gross reserves for each pool. Using the averages from all the wells in the two proposed commingled pools, Manana Gas, Inc., proposes to allocate 20% of the gas production to the Aztec Pictured Cliffs pool and the remaining 80% of the gas production to the Basin Fruitland Coal pool. In the unlikely event that the well produces some liquid hydrocarbons, then 100% of the liquids production will be allocated to the Pictured Cliffs.

Date: 4/12/2004

Time: 1:27 PM

Annual CashFlow Report

Project: C:\Program Files\IHS Energy\PowerTools v6.0\Projects\MananaDHC.MDB

Lease Name: 30-12 Pictured Cliffs Wells ()

Operator:

County, ST: ,

Field Name:

Location: 0-0-0

Date	Well Count	Gross Production		Net Production		Average Prices		Sales Total (\$)
		Oil (Bbl)	Gas (Mcf)	Oil (Bbl)	Gas (Mcf)	Oil (\$/Bbl)	Gas (\$/Mcf)	
12/2004	11	0	608,702	0	486,962	0.00	4.00	1,947,846
12/2005	11	0	832,874	0	666,299	0.00	4.00	2,665,196
12/2006	11	0	768,508	0	614,806	0.00	4.00	2,459,225
12/2007	11	0	653,232	0	522,585	0.00	4.00	2,090,342
12/2008	11	0	555,247	0	444,198	0.00	4.00	1,776,790
12/2009	11	0	471,960	0	377,568	0.00	4.00	1,510,272
12/2010	11	0	401,166	0	320,933	0.00	4.00	1,283,731
12/2011	11	0	340,991	0	272,793	0.00	4.00	1,091,171
12/2012	11	0	289,842	0	231,874	0.00	4.00	927,496
12/2013	11	0	246,366	0	197,093	0.00	4.00	788,371
12/2014	11	0	209,411	0	167,529	0.00	4.00	670,116
12/2015	11	0	177,999	0	142,400	0.00	4.00	569,598
12/2016	11	0	151,300	0	121,040	0.00	4.00	484,159
12/2017	11	0	128,605	0	102,884	0.00	4.00	411,535
12/2018	11	0	109,314	0	87,451	0.00	4.00	349,805
Remainder:		0	578,174	0	462,539	0.00	4.00	1,850,157
Grand Total:		0	6,523,691	0	5,218,953	0.00	4.00	20,875,810

Date	Operating Expenses (\$)	Taxes (\$)	Operating Income (\$)	Other Costs (\$)	Periodic Cash Flow (\$)	Cumulative Cash Flow (\$)	10% Cash Flow (\$)
12/2004	317,851	0	1,629,995	0	1,629,995	1,629,995	1,566,651
12/2005	434,437	0	2,230,759	0	2,230,759	3,860,755	1,972,688
12/2006	402,254	0	2,056,971	0	2,056,971	5,917,726	1,656,129
12/2007	344,616	0	1,745,726	0	1,745,726	7,663,452	1,277,763
12/2008	295,623	0	1,481,167	0	1,481,167	9,144,619	985,568
12/2009	253,980	0	1,256,292	0	1,256,292	10,400,911	759,944
12/2010	218,583	0	1,065,148	0	1,065,148	11,466,059	585,747
12/2011	188,496	0	902,676	0	902,676	12,368,735	451,274
12/2012	162,921	0	764,575	0	764,575	13,133,309	347,486
12/2013	141,183	0	647,188	0	647,188	13,780,497	267,398
12/2014	122,706	0	547,410	0	547,410	14,327,908	205,613
12/2015	107,000	0	462,599	0	462,599	14,790,506	157,962
12/2016	93,650	0	390,509	0	390,509	15,181,015	121,225
12/2017	82,302	0	329,232	0	329,232	15,510,247	92,913
12/2018	72,657	0	277,148	0	277,148	15,787,395	71,104
Remainder:	589,087	0	1,261,070	0	1,261,070	17,048,465	217,233
Grand Total:	3,827,345	0	17,048,465	0	17,048,465	17,048,465	10,736,698

Discount Present Worth:

0.00 %	17,048,465
10.00 %	10,736,698
20.00 %	7,907,364
30.00 %	6,319,918
40.00 %	5,306,101
50.00 %	4,602,768
60.00 %	4,086,085
70.00 %	3,690,264
80.00 %	3,377,156
90.00 %	3,123,129
100.00 %	2,912,770

Economic Dates:

Effective Date	04/2004
Calculated Limit	08/2035
Economic Life	377 Months
	31 Years 5 Months

Economics Information:

Net Payout Date:	04/2004
Rate of Return:	>100 %
Return on Investment:	0.00
Disc Return on Invest:	0.00
Initial Division of Interest:	

Economics Summary:

	Bbl Oil	Mcf Gas
Ultimate Gross	1,088	20,958,062
Historic Gross	1,088	14,234,527
Gross at Eff Date	1,088	14,434,371
Remaining Gross	0	6,523,691
Remaining Net	0	5,218,953

WI:	100.000000	Oil:	80.000000	ORI	0.000000
		Gas:	80.000000		0.000000
Reversion Date:	None	Injection:	0.000000		0.000000

$$20,958,062 / 51 = 410,940 \text{ MCF/WELL AVERAGE}$$

Rate/Time Graph

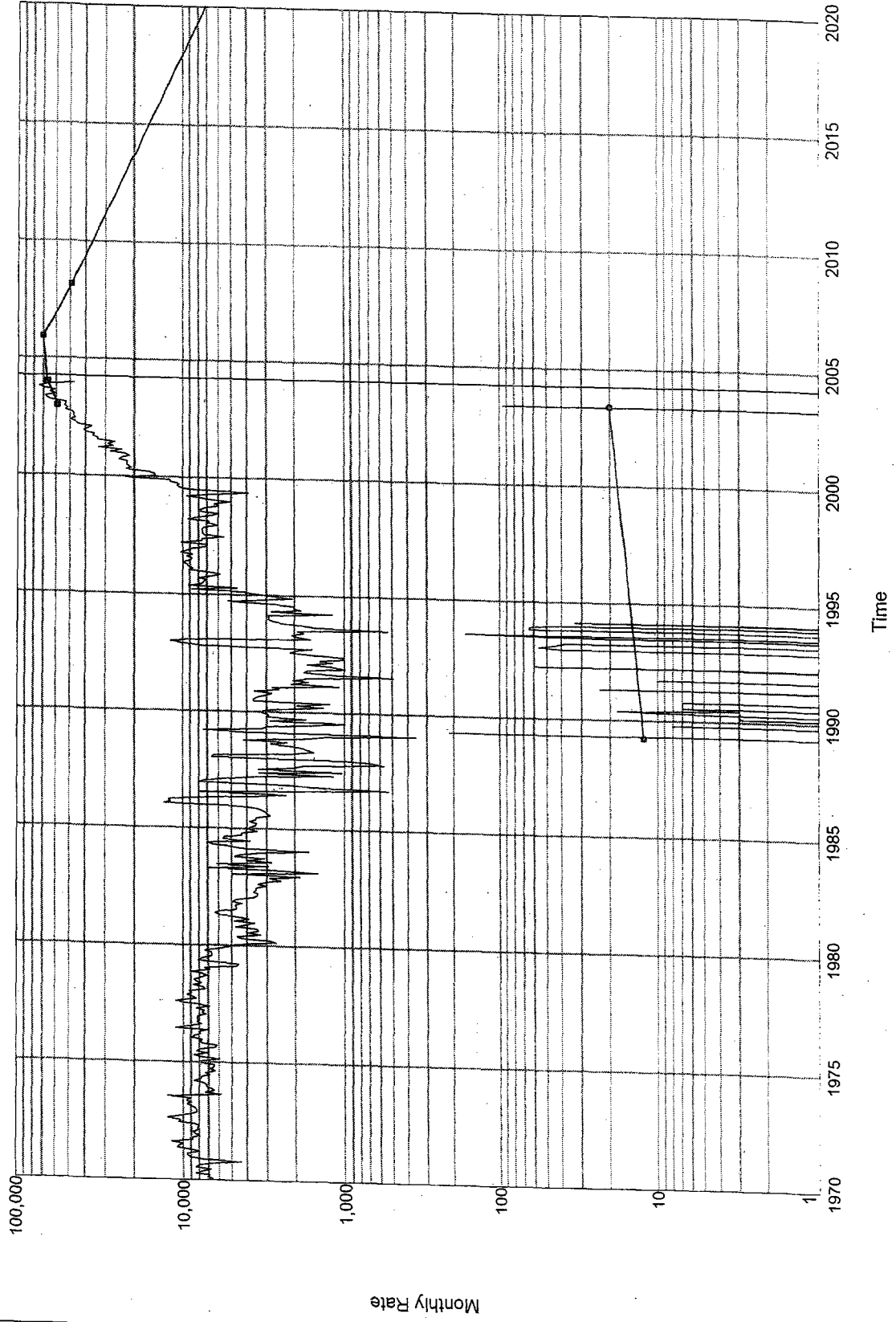
Project: C:\Program Files\IHS Energy\PowerTools v6.0\Projects\MananaDHC.MDB

Date: 4/12/2004
Time: 1:27 PM

Lease Name: 30-12 Pictured Cliffs Wells ()
County, ST: ,
Location: 0-0-0

Operator:
Field Name:

30-12 Pictured Cliffs Wells -



Date: 4/12/2004

Time: 1:17 PM

Annual CashFlow Report

Project: C:\Program Files\IHS Energy\PowerTools v6.0\Projects\MananaDHC.MDB

Lease Name: 30-12 Fruitland Coal ()

Operator:

County, ST: ,

Field Name:

Location: 0-0-0

Date	Well Count	Gross Production		Net Production		Average Prices		Sales Total (\$)
		Oil (Bbl)	Gas (Mcf)	Oil (Bbl)	Gas (Mcf)	Oil (\$/Bbl)	Gas (\$/Mcf)	
12/2004	54	0	8,678,613	0	6,942,891	0.00	4.00	27,771,563
12/2005	54	0	11,050,760	0	8,840,608	0.00	4.00	35,362,433
12/2006	54	0	9,933,216	0	7,946,573	0.00	4.00	31,786,291
12/2007	54	0	8,443,234	0	6,754,587	0.00	4.00	27,018,347
12/2008	54	0	7,176,749	0	5,741,399	0.00	4.00	22,965,595
12/2009	54	0	6,100,236	0	4,880,189	0.00	4.00	19,520,756
12/2010	54	0	5,185,201	0	4,148,161	0.00	4.00	16,592,643
12/2011	54	0	4,407,421	0	3,525,937	0.00	4.00	14,103,746
12/2012	54	0	3,746,308	0	2,997,046	0.00	4.00	11,988,184
12/2013	54	0	3,184,361	0	2,547,489	0.00	4.00	10,189,957
12/2014	54	0	2,706,707	0	2,165,366	0.00	4.00	8,661,463
12/2015	54	0	2,300,701	0	1,840,561	0.00	4.00	7,362,244
12/2016	54	0	1,955,596	0	1,564,477	0.00	4.00	6,257,907
12/2017	54	0	1,662,257	0	1,329,805	0.00	4.00	5,319,221
12/2018	54	0	1,412,918	0	1,130,334	0.00	4.00	4,521,338
Remainder:		0	7,965,284	0	6,372,227	0.00	4.00	25,488,910
Grand Total:		0	85,909,562	0	68,727,650	0.00	4.00	274,910,598

Date	Operating Expenses (\$)	Taxes (\$)	Operating Income (\$)	Other Costs (\$)	Periodic Cash Flow (\$)	Cumulative Cash Flow (\$)	10% Cash Flow (\$)
12/2004	4,352,807	0	23,418,756	0	23,418,756	23,418,756	22,516,931
12/2005	5,543,380	0	29,819,053	0	29,819,053	53,237,809	26,385,907
12/2006	4,984,608	0	26,801,683	0	26,801,683	80,039,492	21,578,616
12/2007	4,239,617	0	22,778,731	0	22,778,731	102,818,223	16,672,411
12/2008	3,606,374	0	19,359,221	0	19,359,221	122,177,444	12,881,433
12/2009	3,068,118	0	16,452,638	0	16,452,638	138,630,082	9,952,203
12/2010	2,610,600	0	13,982,042	0	13,982,042	152,612,124	7,688,856
12/2011	2,221,710	0	11,882,036	0	11,882,036	164,494,160	5,940,041
12/2012	1,891,154	0	10,097,031	0	10,097,031	174,591,191	4,588,806
12/2013	1,610,181	0	8,579,776	0	8,579,776	183,170,967	3,544,781
12/2014	1,371,354	0	7,290,110	0	7,290,110	190,461,076	2,738,136
12/2015	1,168,351	0	6,193,893	0	6,193,893	196,654,969	2,114,912
12/2016	995,798	0	5,262,109	0	5,262,109	201,917,078	1,633,413
12/2017	849,128	0	4,470,093	0	4,470,093	206,387,171	1,261,422
12/2018	724,459	0	3,796,879	0	3,796,879	210,184,050	974,043
Remainder:	4,566,142	0	20,922,767	0	20,922,767	231,106,817	3,282,629
Grand Total:	43,803,781	0	231,106,817	0	231,106,817	231,106,817	143,754,540

Discount Present Worth:

0.00 %	231,106,817
10.00 %	143,754,540
20.00 %	106,055,566
30.00 %	85,070,002
40.00 %	71,689,869
50.00 %	62,405,637
60.00 %	55,579,046
70.00 %	50,342,871
80.00 %	46,195,150
90.00 %	42,825,219
100.00 %	40,030,519

Economic Dates:

Effective Date	04/2004
Calculated Limit	05/2051
Economic Life	566 Months
	47 Years 2 Months

Economics Information:

Net Payout Date:	04/2004
Rate of Return:	>100 %
Return on Investment:	0.00
Disc Return on Invest:	0.00
Initial Division of Interest:	

Economics Summary:

	Bbl Oil	Mcf Gas
Ultimate Gross	140	122,177,248
Historic Gross	140	33,297,776
Gross at Eff Date	140	36,267,686
Remaining Gross	0	85,909,562
Remaining Net	0	68,727,650

WI:	100.000000	Oil:	80.000000	ORI	0.000000
		Gas:	80.000000		0.000000
Reversion Date:	None	Injection:	0.000000		0.000000

$$122,177,248 / 75 = 1,629,300 \text{ MCF/WELL}$$

Rate/Time Graph

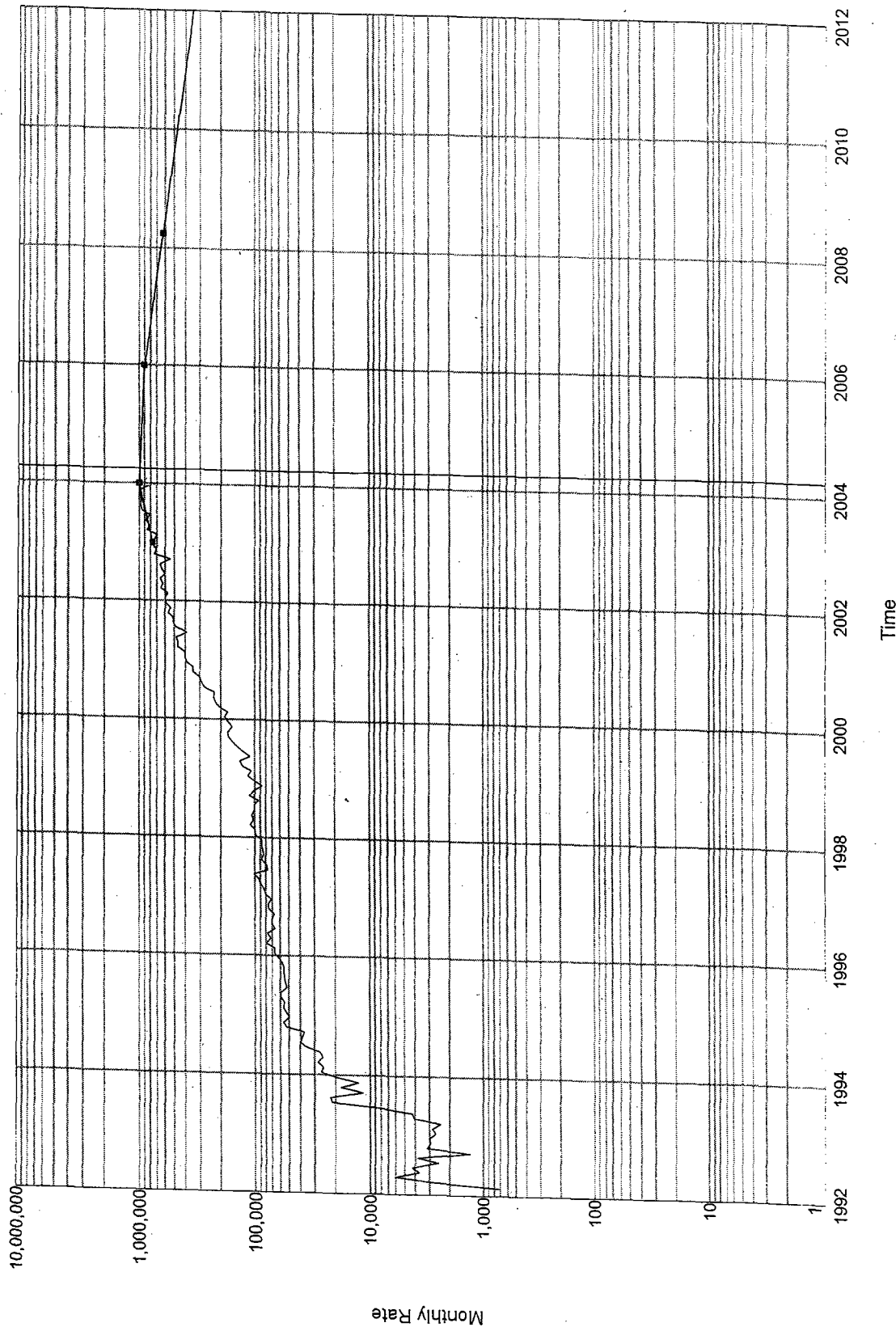
Project: C:\Program Files\IHS Energy\PowerTools v6.0\Projects\MananaDHC.MDB

Date: 4/12/2004
Time: 1:17 PM

Lease Name: 30-12 Fruitland Coal (I)
County, ST: ,
Location: 0-0-0

Operator:
Field Name:

30-12 Fruitland Coal -



Unknown Reservoir
Section 0
Unknown Field
30-12 Fruitland Coal

FRUITLAND COAL

FRUITLAND COAL & FRACTURED CLIFFS WELLS
IN T30N - R12W

Section 2

BASIN

MOSELEY (1)
MOSELEY (1G)

Section 3

BASIN

L C KELLY (13)
L C KELLY (14)
L C KELLY (8)
L C KELLY (9)

Section 4

BASIN

L C KELLY (15)
L C KELLY (7)

Section 5

BASIN

L C KELLY (11)
L C KELLY (16)

Section 6

BASIN

TEXAKOMA FEDERAL 6 (1)

Section 7

BASIN

FLOYD (6)
TEXAKOMA FEDERAL 7 (1)

Section 8

BASIN

FEDERAL 8 FC (1)
FEDERAL 8 FC (2)

Section 9

BASIN

MCKENZIE A (2)
MCKENZIE A (3)

Section 10

BASIN

BROWN (1G)
BROWN (1Y)

Section 11

BASIN

CHRISMAN GAS COM (2)
L C KELLY (6A)
LITTLE STINKER (1)
LITTLE STINKER (2)

Section 13

BASIN

CAPT H W SAWYER (1)
CAPT H W SAWYER (1S)

Section 15

BASIN

HANCOCK GAS COM (2)
HANCOCK GAS COM (3)
JOHNSON GAS COM D (2)
JOHNSON GAS COM D (3)

Section 17

BASIN

FLOYD (3)
FLOYD (7)
FLOYD (8)

Section 18

BASIN

FEDERAL 18 (1)

Section 19

BASIN

FOOTHILLS C (1)

TEXAKOMA FOOTHILLS D (1)

Section 20

BASIN

SAN JUAN FEDERAL (1)

SAN JUAN FEDERAL (2)

Section 21

BASIN

FARMINGTON LAKE (1)

FARMINGTON LAKE (2)

TEXAKOMA-AMOCO A (1)

Section 22

BASIN

OSBORN (1)

OSBORN (2)

Section 23

BASIN

CHUCKY (2)

CHUCKY (3)

Section 24

BASIN

JOSE JAQUEZ (1)

Section 25

BASIN

ROWLAND GAS COM A (1)

ROWLAND GAS COM A (2)

RUBY CORSCOT A (1)

RUBY CORSCOT A (2)

Section 26

BASIN

KATY COM (1)

KATY COM (2)

Section 27

BASIN

DUFF GAS COM C (2)

DUFF GAS COM C (4)

STEDJE GAS COM (2)

STEDJE GAS COM (2R)

STEDJE GAS COM (3)

Section 28

BASIN

GILBREATH (1)

MCCOY GAS COM D (2)

MCCOY GAS COM D (3)

Section 29

BASIN

BROWN (3)

JUHAN (1)

Section 30

BASIN

FEDERAL GAS COM E (2)

TEXAKOMA-FARMINGTON (1)

Section 31

BASIN

FEDERAL GAS COM H (2)

QUINE GAS COM (2)

Section 32

BASIN

SAMMONS (100)

SHIOTANI (8)

Section 33

BASIN

REDFERN (2)

SHIOTANI (7)

Section 34

BASIN

HUDSON (2)

Section 35

CARNAHAN COM (1)
CARNAHAN COM (1Y)
HUDSON J (3)

Section 36

BASIN

FC STATE COM (24)

NEW MEXICO COM N (100)

CTURED CLIFFS

/ 75 FRUITLAND COAL WALLS.

~~Section 1~~

AZTEC

BOLACK F (2)

MAXWELL (1)

Section 2

AZTEC

UPTEGROVE (1)

UPTEGROVE (1R)

Section 3

AZTEC

CHUCKY (1)

L C KELLY (8)

Section 4

AZTEC

L C KELLY (7)

Section 5

AZTEC

L C KELLY (10)

L C KELLY (11)

L C KELLY (12)

Section 7

FULCHER KUTZ

FLOYD (2)

Section 9

SAN JUAN

BLANCO 30 12 (5)

BLANCO 30 12 D (11)

Section 12

AZTEC

FEE (12)

FEE (12A)

JENSEN (1)

Section 13

AZTEC

BLANCETT (2)

BLANCETT (2R)

Section 17

FULCHER KUTZ

FLOYD (3)

FLOYD (4)

Section 19

FULCHER KUTZ

FOOTHILLS (1)

FOOTHILLS (2)

Section 23

AZTEC

CHUCKY (2)

Section 24

AZTEC

BLANCETT (1)

Section 25

AZTEC

ROWLAND GAS COM A (1)

RUBY (1)

Section 26

AZTEC

KATY COM (1)

KATY COM (2)

Section 27

SMITH (1)

Section 28

FULCHER KUTZ

MCCARTY (1)

MONTANO (1)

MONTGOMERY (1)

PALMER (1)

Section 29

FULCHER KUTZ

BROWN (2)

COPP (1)

HOLDER (1)

JUHAN (1)

MCCARTY (1)

WAGGONER (1)

WYPER (2)

Section 30

FULCHER KUTZ

BROWN (1)

Section 32

FULCHER KUTZ

SAMMONS (1)

WAGGONER (2)

Section 33

FULCHER KUTZ

HARGIS (1)

HARGIS (2)

HUDSON E (1)

JULANDER (2)

Section 34

FULCHER KUTZ

HUDSON (1)

HUDSON (2)

JULANDER (1)

MCGRATH (2)

/ 51 PICTURED CLIFFS WELLS.

Crooked Seams
Interest owners

Merrion Oil and Gas
610 Reilly Ave.
Farmington NM 87401

McCulliss Resources
PO Box 3248
Littleton CO 80161

George Vaught Jr.
PO BOX 13557
Denver CO 80201

Manana Gas Inc
2520 Tramway Terrace Ct NE
Albuquerque NM 87122

Diverse Group III
PO Box 2059
San Antonio TX 78297

The Kohl Group
4801 Woodway Suite 330 W
Houston TX 77056

Teresa Hankins
3405 Rutson Dr.
Amarillo TX 79100

Mary Werner
8508 Curt Walters NE
Albuquerque NM 87122

ACN Investments
1901 Medi-Park PL 1015
Amarillo TX 79106

Walter Allison
3453 Gladstone Lane
Amarillo TX 79121

William Bass
RT 8 Box 24-5
Amarillo TX 79118

Jayne Cain Beezley
2103 Foothill Dr
Amarillo TX 79124

Ed Hartman
1002 Tramway Lane NE
Albuquerque NM 87122

Hartman Oil and Gas
2520 Tramway Terrace Ct NE
Albuquerque NM 87122

Douglas Hartman
PO BOX 928199
San Diego CA 92192

Phyllis Hartman
4105 Calle Mar De Ballenas
San Diego CA 92130

Harvard and Lemay Exploration
PO BOX 936
Roswell NM 88201

Barbara Kruse
29 Olive Rd
Sandia Park NM 87047

Debi Kruse
6810 Round Tree Dr
Anchorage AK 99507

Lamp Investments
PO Box 85
Bronte TX 76933

Sylvia Little
PO Box 1258
Farmington NM 87499

Sherry Rusk
Po Box 782463
San Antonio TX 78278

Jackie Kaiser
Po Box 13461
Albuquerque NM 87195

BP America Production
PO Box 277897
Atlanta GA 30384

Cynthia Calvin
747 Newport St
Denver CO 80220

Edward Calvin
2380 Forest St.
Denver CO 80207

Howard Henderson Living Trust
5809 N 24th Pl
Phoenix AZ 85016

Christine Buvens Living Trust
4435 Cottonwood Rd
Silver City NM 88061

Kenneth Allen Trust
PO Box 4140
Farmington NM 87499

Mable C Allen Trust
PO Box 4140
Farmington NM 87499

Lois May Barnes
HC 61 Box 182
Glenwood NM 88039

Earnest Cantwell
3125 Southern
Kingman AZ 86401

Casteel Living Trust
7635 East Mesa Drive
Cornville AZ 86325

Timothy Chapman
1007 East Mariposa St
Phoenix AZ 85014

Catherine Colberg
8314 Roma Ave NE
Albuquerque NM 87108

Virginia Collins
25 Rd 3275
Aztec NM 87410

Ned Dollar
PO Box 218
Flora Vista NM 87415

Edwina Foster
3502 Lark St
San Diego CA 92103

Eloise Foster
3502 Lark St
san Diego CA 92103

Dorothy Lea
1122 Wedgewood Dr
Gallitan TN 37066

Sharon Hastings Trust
PO Box 4140
Farmington NM 87499

Cecil Henry
263 Rd 3050
Aztec NM 87410

Raymond Hill
264 RD 3050
Aztec NM 87410

George & Verda Hines
1471 B Road
Delta CO 81416

Walter Hunt Estate
204 Road 3050
Aztec NM 87410

Catherine Israel
804 Mossman Ave
Aztec NM 87410

Joseph Israel
City Rd 2900 # 930
Aztec NM 87410

Kirk Israel
804 Mossman
Aztec NM 87401

Robert Kirk Israel
804 Mossman
Aztec NM 87410

Stanley Israel
2085 N Wedgewood Lane
Cedar City UT 884720

William Israel
925 CT RD 2900
Aztec NM 87410

Robert Ray Lewis
1680 Esther
Rogers AZ 72756

Leona Maddox
224 Las Mananitas
Santa Fe NM 87501

Helen Israel Minium
8 Dellwood Lane
Canyon TX 79015

FE Organ
1503 Alcove Court
Midland TX 79703

Pecos Valley Royalty Co
PO Box 51387
Midlan TX 79710

Richard Pepin
6 RD 333
Aztec NM 87410

Piper Investment
3565 Beechwood Court
Colorado Springs CO 80918

Barbara Rector
2802 Cimarron Blvd #243
Corpus Christi TX 78414

Robert Cody Rothlisberger
2308 Santiago
Farmington NM 87401

James Miller
PO Box 10
Flora Vista NM 87415

Margaret Israel McDaniel
349 Arnold Dr
Aztec NM 87410

MB Thomas
249 RD 3050
Aztec NM 87410

Eula Thompson
6138 e Avalon Dr
Scottsdale AZ 85251

Ichard Trumbull
2602 Fox Rd
Farmington NM 87401

Daniel Welk
150 Kelleen Dr
Vista CA 92083

Ellen Plapp
7112 Central
Lemon Grove CA 92045

Robbie Whinery
1314 O Avenue
National City CA 92050

Bruce Wilkes Estate
PO Box 226270
Dallas TX 75222

Woodbine Financial Corp
PO Box 52296
Tulsa OK 74152

Charles Victor Flint
4724 South Kalamath St
Englewood CO 80110

Tina Flint
3801 South Bannock St
Englewood CO 80110

Lisa Flint
4290 South Cherokee St
Englewood CO 80110

Kevin Flint
4760 S. Bannock St
Englewood CO 80110

Michael Flint
3801 1/2 S bannock St
Englewood CO 80110

Karoline Flint
3801 S Bannock St
Englewood CO 80110

Estate of Arthur Clyde Trulock
23 Rd 333
Aztec NM 87410

Weldon CM & John Julander
Trustees
PO Box 2773
Littleton CO 80161

Energen Resources
605 R. Arrington Jr. Blvd North
Birmingham AL 35203

Union Oil Co. Of California
PO Box 100547
Houston Tx 77212

**WALSH**

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping7415 East Main
Farmington, New Mexico 87402
(505) 327-4892 • Fax: (505) 327-9834CERTIFIED- RETURN RECEIPT*EXAMPLE*

April 14, 2004

Merrion Oil and Gas
610 Reilly Ave.
Farmington NM 87401Re: Downhole Commingling Application
Manana Gas, Inc.
Crooked Seams #1
Section 14, T30N R12W
San Juan County, NM
Aztec Pictured Cliffs/Basin Fruitland Coal

Dear Merrion Oil and Gas ,

Manana Gas, Inc. has applied to the New Mexico Oil Conservation Division for administrative approval to downhole commingle the gas production from the Aztec Pictured Cliffs and Basin Fruitland Coal pools in the Crooked Seams #1. Based on offset production, Manana proposes to allocate 20% of the gas production to the Pictured Cliffs and 80% to the Fruitland Coal. As an interest owner in one or both of these pools, you are being notified of this application pursuant to NMOCD rules.

If you desire to submit remarks concerning the application, please send them to the New Mexico Oil Conservation Division, 1220 S. St. Francis Drive, Santa Fe, New Mexico, within 20 days from the receipt of this notice. If you have no objection to the proposal, no action is required on your part.

Thank you for your consideration in this matter and if you have any questions, please do not hesitate to call upon me.

Sincerely,

Paul C. Thompson, P.E.