DHC 8/4/97

MERRION
OIL & GAS

JUL 15 1997

1660

July 10, 1997

Mr. William LeMay, Director
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Re: Application for Administrative Approval
Downhole Commingling
Basin Fruitland Coal and WAW Pictured Cliffs Pool
Dietrich 28G-1
Section 28, T26N, R12W
San Juan County, New Mexico

Dear Mr. LeMay:

Merrion requests approval for downhole commingling of the Basin Fruitland Coal and the WAW Pictured Cliffs Pools in the subject wellbore. The following information is provided in support of this application.

I. Background

The Dietrich 28G-1 was completed in 1980 in the Pictured Cliffs formation. Through January, 1997, it has made a cumulative 195 MMCF. It is currently making approximately 20 MCFD and has remaining reserves of approximately 100 MMCF (see Exhibit 5).

Merrion wishes to complete the Fruitland Coal in the wellbore and commingle that production with the Pictured Cliffs (PC) zone. Exhibit 1 is the ownership plat showing the leases involved. Exhibit 2 shows the C-102 plat for the WAW with a 160 Spacing Unit encompassing the NE/4 of Section 28. Exhibit 3 shows the C-102 plat for the Basin Fruitland Coal with a 320 acre Spacing Unit in the E/2 of Section 28.

II. Justification

The following points are made in justification of the proposal.

1.) The Fruitland Coal production is marginal in the area (20 to 200 MCFD). Therefore, it would be difficult to justify drilling a new, stand alone Fruitland well.

2.) The well is equipped with 2 7/8" casing making it virtually impossible to dual complete.

3.) Exhibit 4, the Dietrich 28G-1 well log, shows that there is only six (6) feet between the existing PC perfs and the proposed Fruitland perfs. Therefore, these zones are likely to communicate outside the casing regardless of what we try to do inside the casing.

4.) If we were to recomplete this well to the Fruitland without commingling, we would have to abandon the PC and forego recovering the remaining reserves.

5.) If we were to recomplete the well to the Fruitland without commingling, we would have to set a bridge plug on top of the PC, leaving absolutely no rathole for the Fruitland zone. That would make it particularly difficult to efficiently pump water off of the Fruitland.

III. Allocation Methodolgy

The proposed allocation method will be to use the established decline trend to forecast PC production. Any production above and beyond that will be allocated to the Fruitland Coal.

Exhibit 5 shows the historical production from the well, which is declining at the rate of 5% per year. Exhibit 6 is a table showing the forecasted future gas production from the PC on a monthly basis. Again, Fruitland Coal production will be all production in excess of these numbers. All water will be allocated to the Fruitland Coal. Any liquid hydrocarbons, if any, will be allocated to the PC.

IV. Reservoir Fluid Compatibility

The gas compositions of PC and Fruitland gas are virtually identical, as are the water compositions (Exhibit 7). Therefore, the reservoir fluids are compatible.

V. Cross Flow Between Zones

The current reservoir pressure of the PC zone is estimated to be approximately 125 psi. The Fruitland is estimated to be approximately 225 psi. With a flowing line pressure of around 30 psi, cross flow between zones should not be a problem.

VI. Lease Ownership

Both leases involved are BIA leases at 17.5% royalty rates. Merrion owns 100% of the working interest. There are no overriding royalty owners in excess of the base royalty.

VII. Offset Ownership Notification

Exhibit 1 is a plat showing the offset ownership. All offset owners have been sent a copy of this application. Exhibit 8 is an affidavit to that effect.

VIII. Summary

Unless commingling is approved, either the Fruitland Coal will not be developed or the PC will be prematurely abandoned. Commingling the zones will maximize recoverable reserves and protect correlative rights. Therefore, we request your approval of this application.

Please call me with questions or if additional information is required.

Sincerely,

George Sharpe

George F. Sharpe
Manager - Oil & Gas Investments

WAIVER

_____ hereby waives objection to this application.
Company

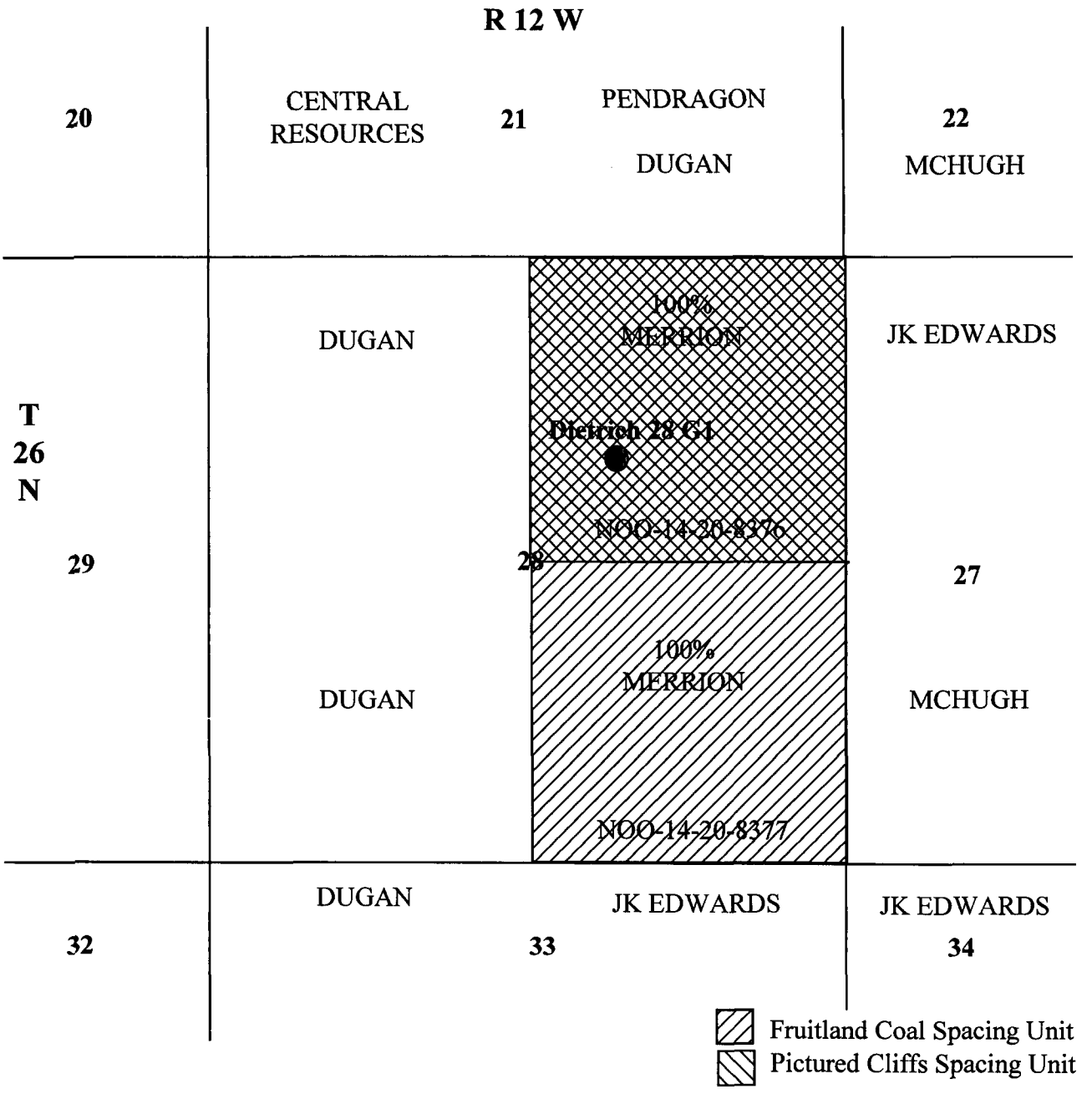
Name_____ Date_____

EXHIBITS

1.) Ownership Plat
2.) C-102 Plat - Pictured Cliffs
3.) C-102 Plat - Fruitland Coal
4.) Dietrich 28G-1 Density Log
5.) Dietrich 28G-1 Pictured Cliffs Historical Production
6.) Dietrich 28G-1 Pictured Cliffs Future Production
7.) Pictured Fruitland Water Analysis
8.) Affidavit of Notification

EXHIBIT 1

DIETRICH 28 G1
LEASE PLAT
OFFSET OWNERSHIP PLAT
T26N, R12W
San Juan County, NM



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	Lease	Well No.
DIETRICH EXPLORATION	28-G	1

Unit Letter	Section	Township	Range	County
G	28	26 NORTH	12 WEST	SAN JUAN

Actual Footage Location of Well:
1850 feet from the NORTH line and 1850 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6064	PICTURED CLIFFS	WAW PICTURED CLIFF-FRUITLAND	160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

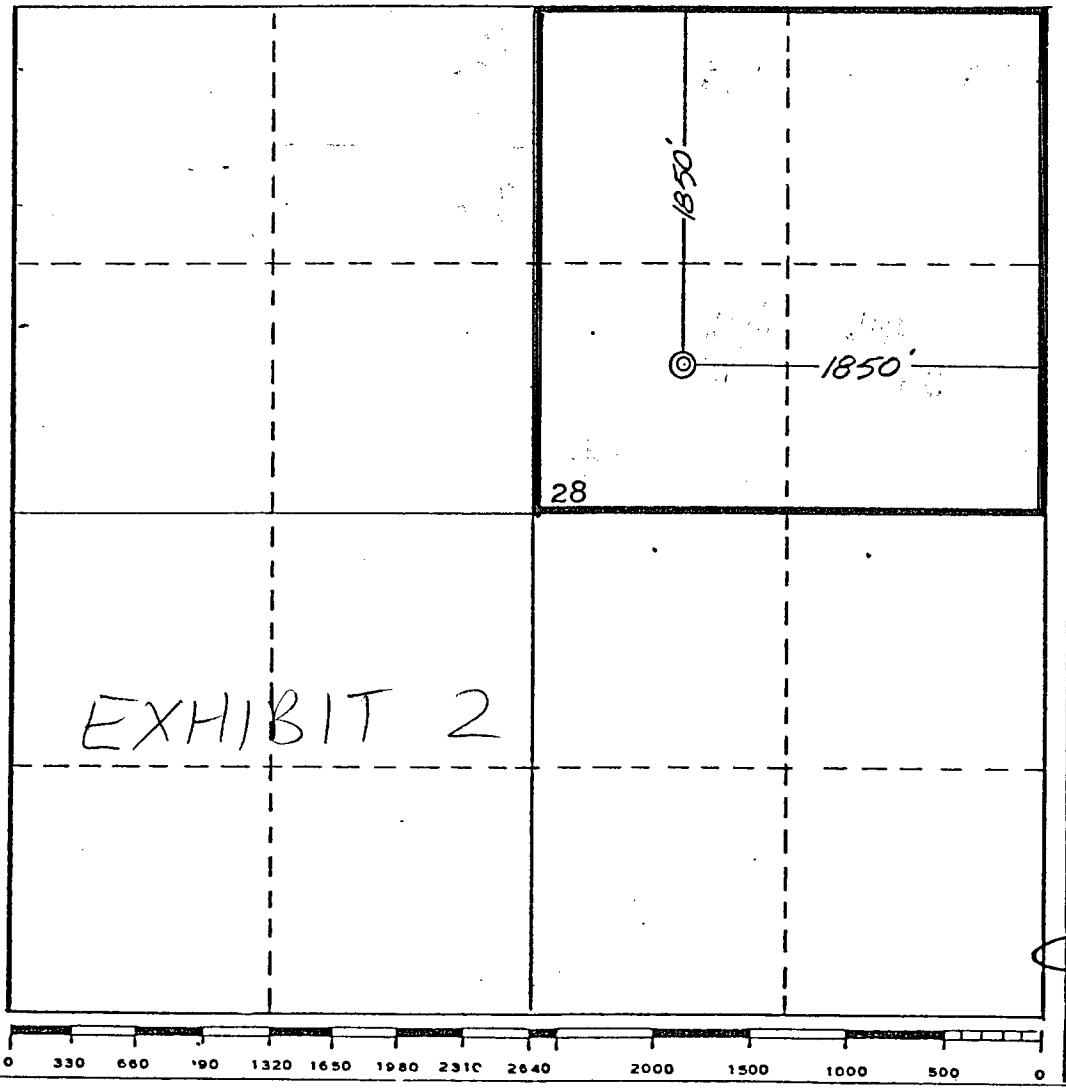
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.

John Alexander

Name: JOHN ALEXANDER

Position: AGENT

Company: DIETRICH EXPLORATION

Date: August 30, 1979

REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR STATE OF NEW MEXICO NO. 1463 JAMES P. LEESE

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: July 25, 1979

Registered Professional Engineer and/or Land Surveyor

James P. Leese

Certificate No. 1463

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 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

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-23747	71629	Basin Fruitland

[4] Property Code	[5] Property Name	[6] Well Number
	Dietrich Exploration 28 G	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
014634	Merrion Oil & Gas Corp.	6064

[10] Surface Location

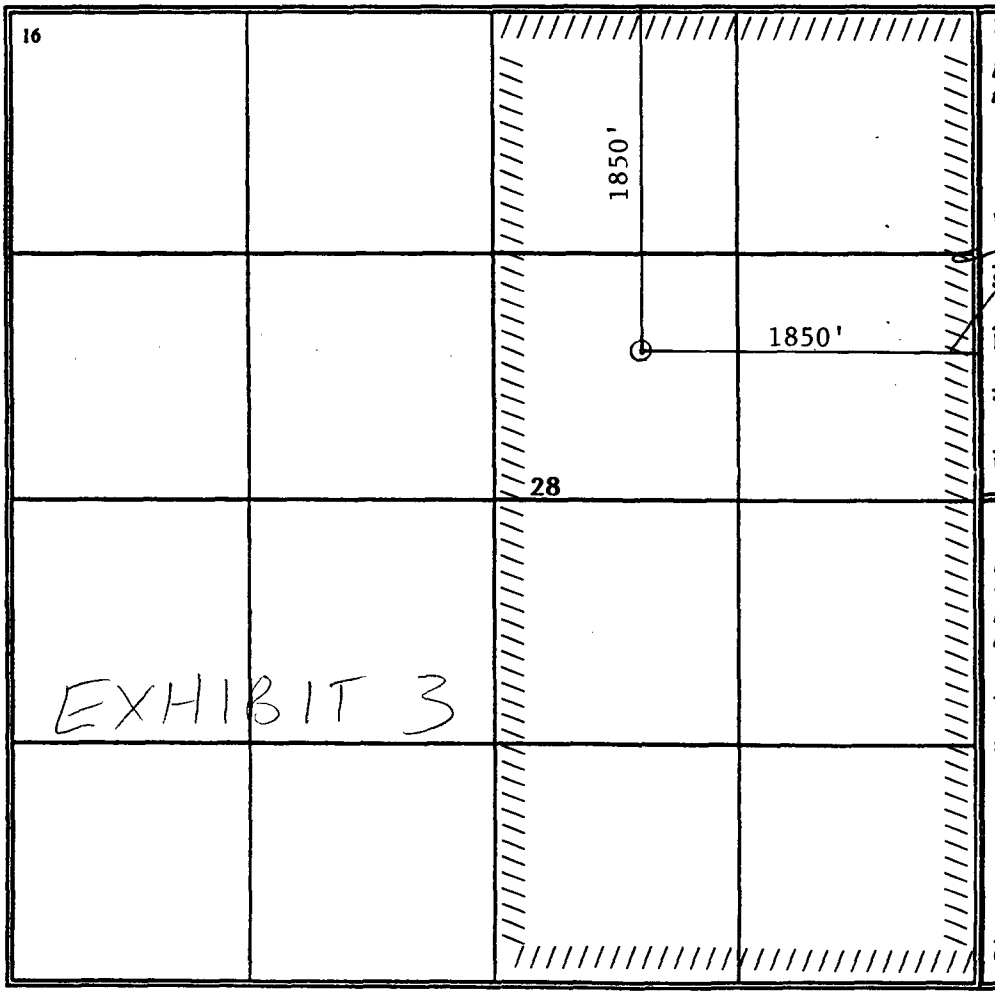
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	28	26N	12W	SWNE	1850	north	1850	east	San Juan

[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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			Communitization Agreement pending

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

Steven S. Dunn
Printed Name

Drlg & Prod Manager
Title

July 11, 1997
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.

Date of Survey

Signature and Seal of Professional Surveyer:

Certificate Number

BIRDWELL

Density
Borehole Compensated

EXHIBIT 4

COMPANY DIETRICH EXPLORATION COMPANY INC.

WELL #28 G - 1

FIELD NIPP PICTURED CLIFFS

COUNTY SAN JUAN **STATE** N.M.

LOCATION: 1850' FNL & 1850' FEL

SEC. 28 **TWP.** 26N **RGE.** 12W

OTHER SERVICES: IES

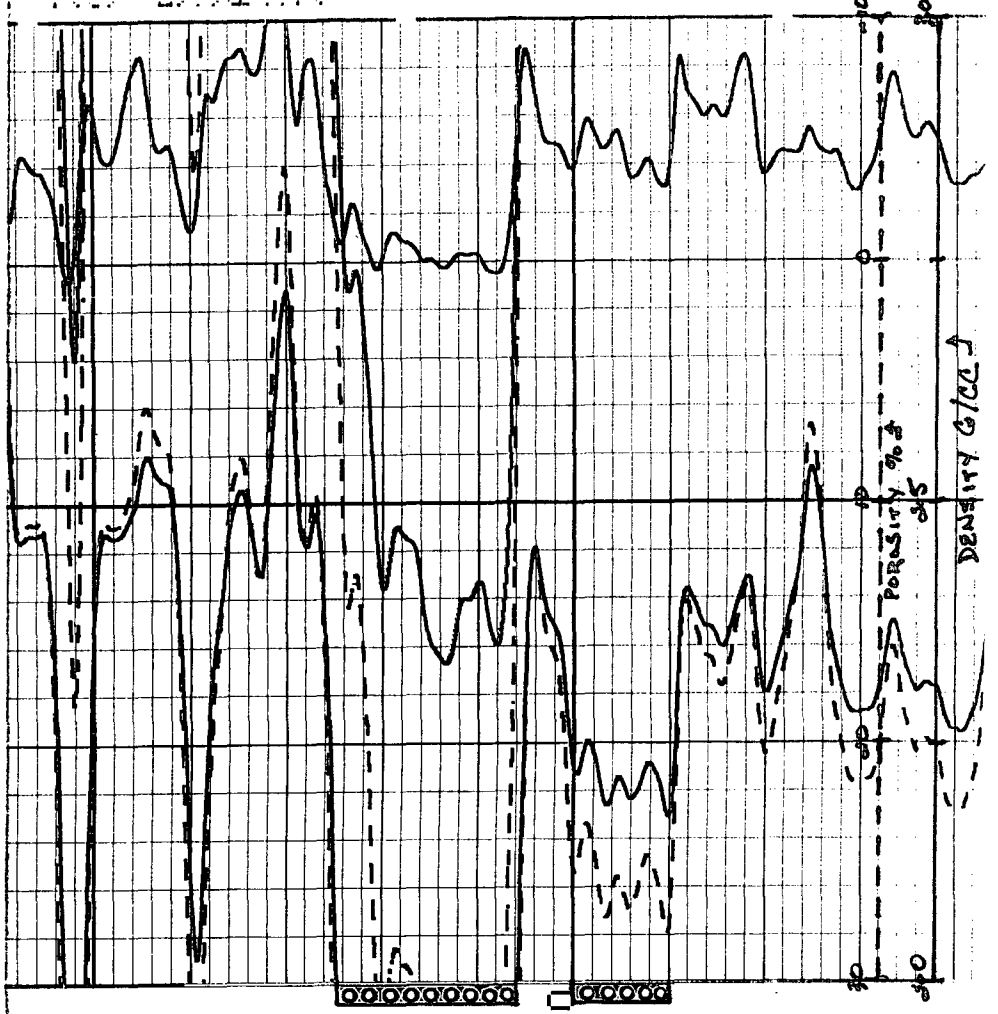
MANENT DATUM GROUND LEVEL **ELEV.** 6064

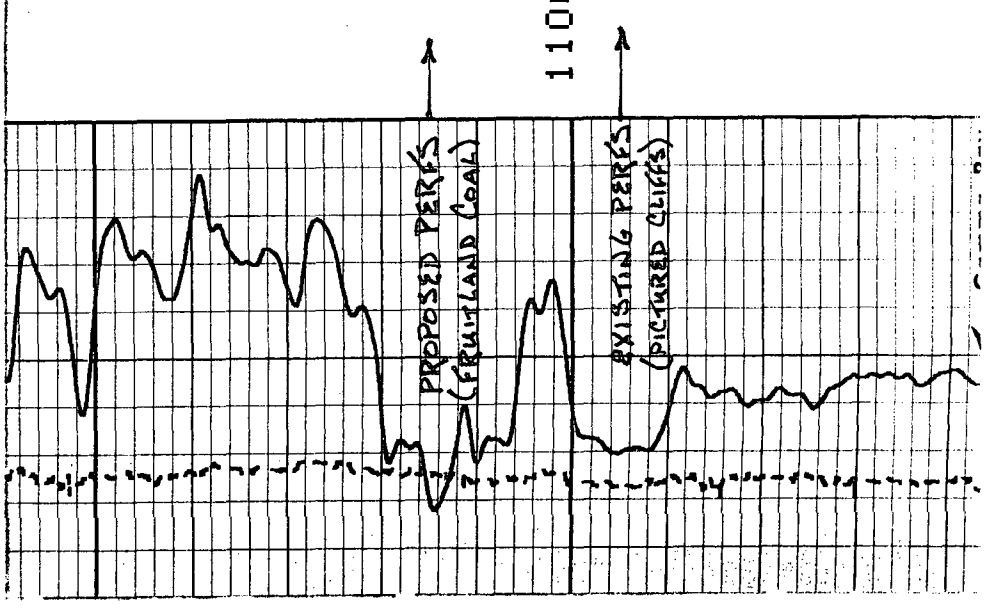
MEASURED FROM GL, 0 **FT. ABOVE PERM. DATUM**

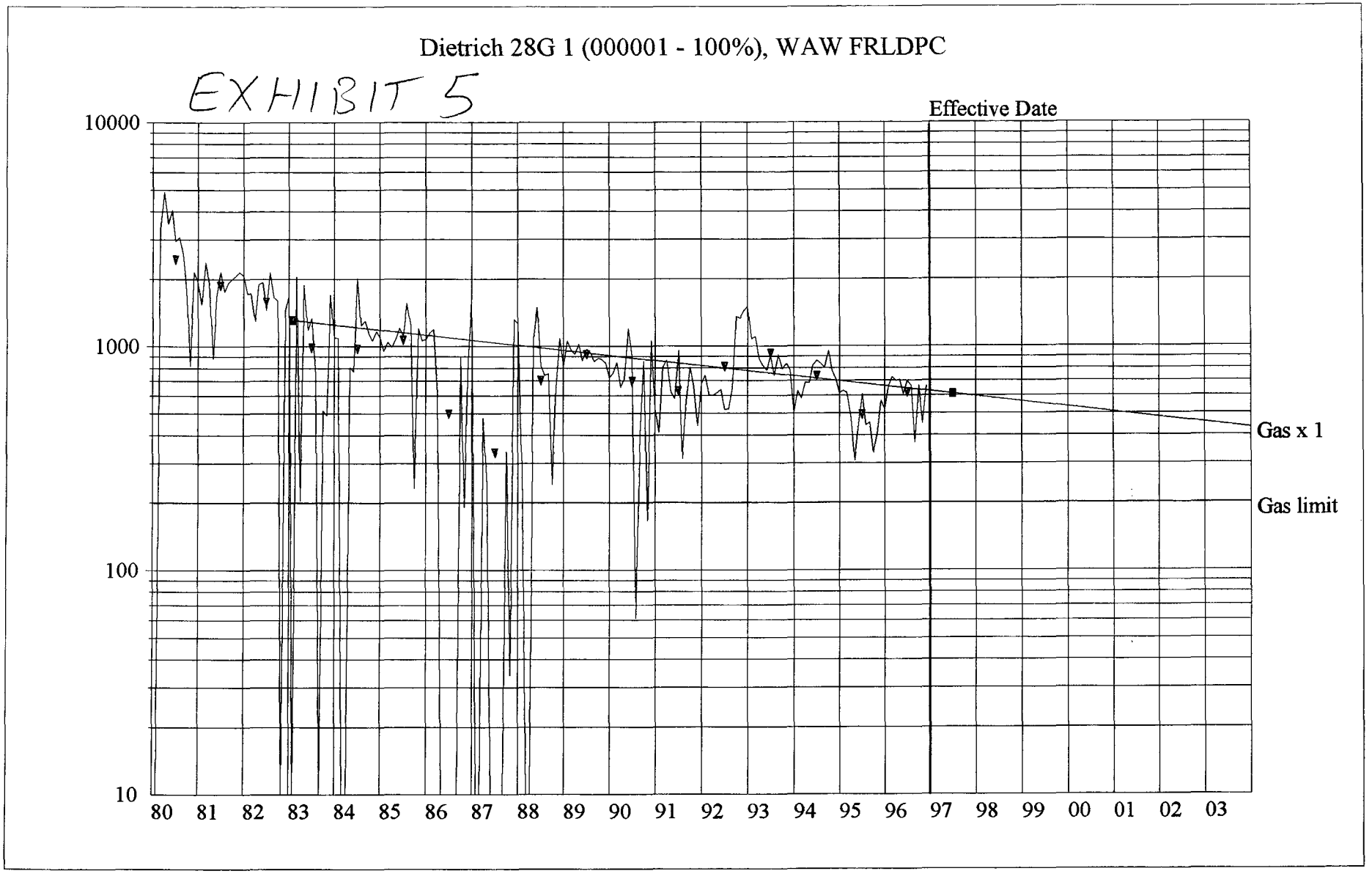
LING MEASURED FROM GROUND LEVEL

ELEV. K.B. 6069
D.F. --
G.L. 6064

E	10-22-79			
NO.	ONE			
H—DRILLER	1200			
H—LOGGER	1196			
LOG INTER.	1195			
LOG INTER.	104			
NG—DRILLER	7" @ 108'	@	@	@
NG—LOGGER	104			
SIZE	5 1/2"			
FLUID IN HOLE	FRESH			
ID LEVEL	MUD			
NS. VISC.	N/A N/A			
FLUID LOSS	N/A 9.6 ml	ml	ml	ml
CE OF SAMPLE	MUD PIT			
@MEAS.TEMP.	1.3 @ 62 °F	@ °F	@ °F	@ °F
@MEAS.TEMP.	1.3 @ 62 °F	@ °F	@ °F	@ °F
@MEAS.TEMP.	1.3 @ 62 °F	@ °F	@ °F	@ °F
URCE Rmf. Rmc	FILTER PRESS			
@ B.H.T.	1.6 @ 79 °F	@ °F	@ °F	@ °F
SINCE CIRC.	1 HOUR			
REC. TEMP.	79 °F	°F	°F	°F







Dietrich 28G 1 (000001 - 100%)
WAW FRLDPC
RD
San Juan, NM

[3004523748]

28G 26N 12W

	Oil (bbl)	Gas (mcf)	Water (bbl)
Cumulative:	0	194,904	0
Remaining:	0	96,864	0
Ultimate:	0	291,768	0

EXHIBIT 6

DIETRICH 28G-1 COMMINGLING APPLICATION

FUTURE PICTURED CLIFFS PRODUCTION

DATE	GAS MCF/MO	CUM RESERVES MCF
Aug-97	608	608
Sep-97	605	1,213
Oct-97	603	1,816
Nov-97	600	2,417
Dec-97	598	3,015
Jan-98	595	3,610
Feb-98	593	4,203
Mar-98	591	4,794
Apr-98	588	5,382
May-98	586	5,967
Jun-98	583	6,551
Jul-98	581	7,131
Aug-98	578	7,710
Sep-98	576	8,286
Oct-98	574	8,859
Nov-98	571	9,430
Dec-98	569	9,999
Jan-99	566	10,566
Feb-99	564	11,130
Mar-99	562	11,691
Apr-99	559	12,251
May-99	557	12,808
Jun-99	555	13,363
Jul-99	552	13,915
Aug-99	550	14,465
Sep-99	548	15,013
Oct-99	546	15,559
Nov-99	543	16,102
Dec-99	541	16,643
Jan-00	539	17,182
Feb-00	537	17,718
Mar-00	534	18,253
Apr-00	532	18,785
May-00	530	19,315
Jun-00	528	19,842
Jul-00	525	20,368
Aug-00	523	20,891
Sep-00	521	21,412
Oct-00	519	21,931
Nov-00	517	22,448
Dec-00	515	22,963
Jan-01	513	23,475
Feb-01	510	23,985
Mar-01	508	24,494
Apr-01	506	25,000
May-01	504	25,504
Jun-01	502	26,006

EXHIBIT 6

DIETRICH 28G-1 COMMINGLING APPLICATION

FUTURE PICTURED CLIFFS PRODUCTION

DATE	GAS MCF/MO	CUM RESERVES MCF
Jul-01	500	26,506
Aug-01	498	27,004
Sep-01	496	27,499
Oct-01	494	27,993
Nov-01	492	28,484
Dec-01	490	28,974
Jan-02	488	29,462
Feb-02	485	29,947
Mar-02	483	30,431
Apr-02	481	30,912
May-02	479	31,391
Jun-02	477	31,869
Jul-02	475	32,344
Aug-02	474	32,818
Sep-02	472	33,289
Oct-02	470	33,759
Nov-02	468	34,227
Dec-02	466	34,692
Jan-03	464	35,156
Feb-03	462	35,618
Mar-03	460	36,078
Apr-03	458	36,536
May-03	456	36,992
Jun-03	454	37,446
Jul-03	452	37,898
Aug-03	450	38,349
Sep-03	449	38,797
Oct-03	447	39,244
Nov-03	445	39,689
Dec-03	443	40,132
Jan-04	441	40,573
Feb-04	439	41,012
Mar-04	437	41,449
Apr-04	436	41,885
May-04	434	42,319
Jun-04	432	42,751
Jul-04	430	43,181
Aug-04	428	43,610
Sep-04	427	44,036
Oct-04	425	44,461
Nov-04	423	44,884
Dec-04	421	45,306
Jan-05	420	45,725
Feb-05	418	46,143
Mar-05	416	46,559
Apr-05	414	46,974
May-05	413	47,386

EXHIBIT 6

DIETRICH 28G-1 COMMINGLING APPLICATION

FUTURE PICTURED CLIFFS PRODUCTION

DATE	GAS MCF/MO	CUM RESERVES MCF
Jun-05	411	47,797
Jul-05	409	48,206
Aug-05	408	48,614
Sep-05	406	49,020
Oct-05	404	49,424
Nov-05	402	49,827
Dec-05	401	50,227
Jan-06	399	50,626
Feb-06	397	51,024
Mar-06	396	51,420
Apr-06	394	51,814
May-06	393	52,206
Jun-06	391	52,597
Jul-06	389	52,987
Aug-06	388	53,374
Sep-06	386	53,760
Oct-06	384	54,145
Nov-06	383	54,528
Dec-06	381	54,909
Jan-07	380	55,289
Feb-07	378	55,667
Mar-07	377	56,043
Apr-07	375	56,418
May-07	373	56,792
Jun-07	372	57,163
Jul-07	370	57,534
Aug-07	369	57,902
Sep-07	367	58,270
Oct-07	366	58,635
Nov-07	364	59,000
Dec-07	363	59,362
Jan-08	361	59,723
Feb-08	360	60,083
Mar-08	358	60,441
Apr-08	357	60,798
May-08	355	61,153
Jun-08	354	61,507
Jul-08	352	61,859
Aug-08	351	62,210
Sep-08	349	62,559
Oct-08	348	62,907
Nov-08	346	63,253
Dec-08	345	63,598
Jan-09	344	63,942
Feb-09	342	64,284
Mar-09	341	64,625
Apr-09	339	64,964

EXHIBIT 6

DIETRICH 28G-1 COMMINGLING APPLICATION

FUTURE PICTURED CLIFFS PRODUCTION

DATE	GAS MCF/MO	CUM RESERVES MCF
May-09	338	65,302
Jun-09	336	65,638
Jul-09	335	65,973
Aug-09	334	66,307
Sep-09	332	66,639
Oct-09	331	66,970
Nov-09	330	67,300
Dec-09	328	67,628
Jan-10	327	67,955
Feb-10	325	68,280
Mar-10	324	68,604
Apr-10	323	68,927
May-10	321	69,248
Jun-10	320	69,568
Jul-10	319	69,887
Aug-10	317	70,204
Sep-10	316	70,520
Oct-10	315	70,835
Nov-10	313	71,149
Dec-10	312	71,461
Jan-11	311	71,772
Feb-11	310	72,081
Mar-11	308	72,389
Apr-11	307	72,696
May-11	306	73,002
Jun-11	304	73,306
Jul-11	303	73,610
Aug-11	302	73,912
Sep-11	301	74,212
Oct-11	299	74,512
Nov-11	298	74,810
Dec-11	297	75,107
Jan-12	296	75,402
Feb-12	294	75,697
Mar-12	293	75,990
Apr-12	292	76,282
May-12	291	76,573
Jun-12	290	76,862
Jul-12	288	77,151
Aug-12	287	77,438
Sep-12	286	77,724
Oct-12	285	78,009
Nov-12	284	78,292
Dec-12	282	78,575
Jan-13	281	78,856
Feb-13	280	79,136
Mar-13	279	79,415

EXHIBIT 6

DIETRICH 28G-1 COMMINGLING APPLICATION

FUTURE PICTURED CLIFFS PRODUCTION

DATE	GAS MCF/MO	CUM RESERVES MCF
Apr-13	278	79,693
May-13	277	79,969
Jun-13	275	80,245
Jul-13	274	80,519
Aug-13	273	80,792
Sep-13	272	81,064
Oct-13	271	81,335
Nov-13	270	81,605
Dec-13	269	81,874
Jan-14	268	82,141
Feb-14	266	82,408
Mar-14	265	82,673
Apr-14	264	82,937
May-14	263	83,200
Jun-14	262	83,462
Jul-14	261	83,723
Aug-14	260	83,983
Sep-14	259	84,242
Oct-14	258	84,500
Nov-14	257	84,756
Dec-14	256	85,012
Jan-15	254	85,266
Feb-15	253	85,520
Mar-15	252	85,772
Apr-15	251	86,023
May-15	250	86,274
Jun-15	249	86,523
Jul-15	248	86,771
Aug-15	247	87,018
Sep-15	246	87,265
Oct-15	245	87,510
Nov-15	244	87,754
Dec-15	243	87,997
Jan-16	242	88,239
Feb-16	241	88,480
Mar-16	240	88,720
Apr-16	239	88,959
May-16	238	89,197
Jun-16	237	89,434
Jul-16	236	89,670
Aug-16	235	89,906
Sep-16	234	90,140
Oct-16	233	90,373
Nov-16	232	90,605
Dec-16	231	90,836
Jan-17	230	91,067
Feb-17	229	91,296

EXHIBIT 6

DIETRICH 28G-1 COMMINGLING APPLICATION

FUTURE PICTURED CLIFFS PRODUCTION

DATE	GAS MCF/MO	CUM RESERVES MCF
Mar-17	228	91,524
Apr-17	227	91,752
May-17	226	91,978
Jun-17	226	92,204
Jul-17	225	92,428
Aug-17	224	92,652
Sep-17	223	92,875
Oct-17	222	93,096
Nov-17	221	93,317
Dec-17	220	93,537
Jan-18	219	93,756
Feb-18	218	93,974
Mar-18	217	94,192
Apr-18	216	94,408
May-18	215	94,623
Jun-18	215	94,838
Jul-18	214	95,052
Aug-18	213	95,264
Sep-18	212	95,476
Oct-18	211	95,687
Nov-18	210	95,897
Dec-18	209	96,106
Jan-19	208	96,315
Feb-19	207	96,522
Mar-19	207	96,729
Apr-19	206	96,935
May-19	205	97,140
Jun-19	204	97,344
Jul-19	203	97,547
Aug-19	202	97,749
Sep-19	202	97,951
Oct-19	201	98,151
Nov-19	200	98,351
Dec-19	199	98,550

ALYSIS NO. 51-34-91

FIELD RECEIPT NO. _____

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company		Sample No.	Date Sampled
Merrion Oil & Gas			02-13-91
Field	**Legal Description**	**County or Parish**	**State**
	Sec. 9 T26N, 12W	San Juan	NM
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
	Susco #3		Fruitland Coal	
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	2340	101.74
Calcium, Ca	60	3.00
Magnesium, Mg	22	1.80
Barium, Ba	—	—
Potassium, K^+	34	.87

ANIONS		
Chloride, Cl	3609	101.81
Sulfate, SO_4	0	0
Carbonate, CO_3	0	0
Bicarbonate, HCO_3	342	5.60
Hydroxide, OH	0	0

Total Dissolved Solids (calc.) 6407

Iron, Fe (total) ~~H,HT~~ 0.0 ppm

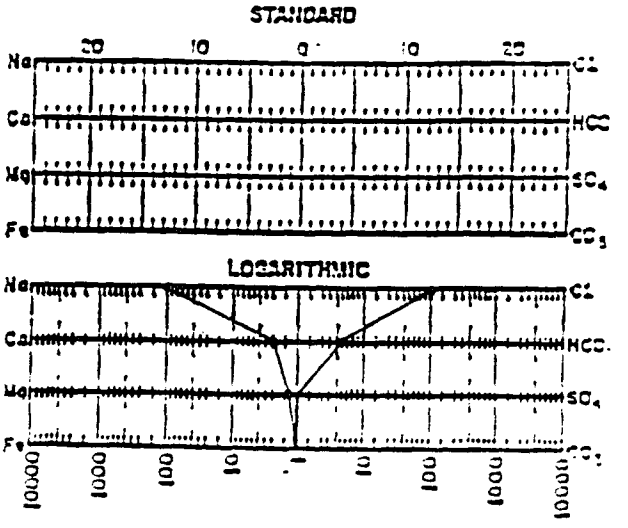
Sulfide, as H_2S neg

REMARKS & RECOMMENDATIONS:

OTHER PROPERTIES

pH	7.85
Specific Gravity, 60/60 F.	1.003
Resistivity (ohm-meters) 74 F.	.90
Total hardness	240

WATER PATTERNS — *me/l*



ANALYST: Lee

EXHIBIT 7

THE WESTERN COMPANY OF
NORTH AMERICA, FARMINGTON, NM
(505) 327-6222

Please refer any questions to: BRIAN AULT, District Engineer

Date 11/12/87

Analysis 54 36 87

Field Receipt ____

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company	Sample No.	Date Sampled
Merrion Oil & Gas		

Field	Legal Description	County or Parish	State
	NW/NW S.35 T27N R13W	San Juan	N.M

Lease or Unit	Well	Depth	Formation	Water, B/D
NM 33049 Li Roll	#4		Pictured Cliffs	

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By
produced	drip pot	T. Merilatt

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	2076	90.66
Calcium, Ca	47	1.17
Magnesium, Mg	16	.66
Barium, Ba		
Potassium, K	23	.64

ANIONS		
Chloride, Cl	3172	89.4
Sulfate, SO_4	50	.52
Carbonate, CO_3	0	0
Bicarbonate, HCO_3	196	3.21
Hydroxide, OH	0	0

Total Dissolved Solids (calc.) 5582

(meas.) ____

Iron, Fe (total) Fe+3 Fe++0

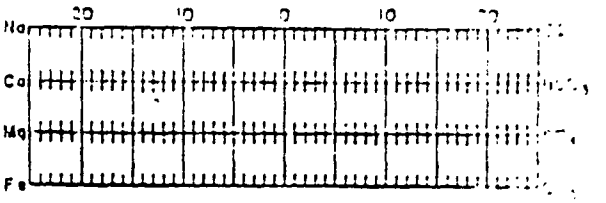
Sulfide, as H_2S non present

OTHER PROPERTIES

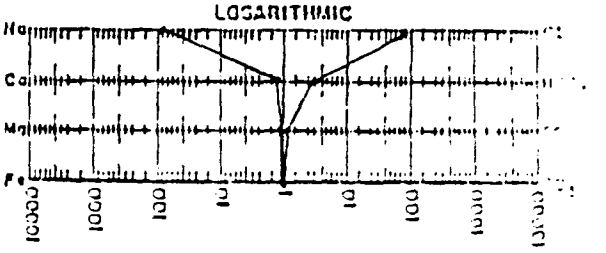
pH	6.59
Specific Gravity, 60/60 F.	1.004
Resistivity (ohm-meters) 59° F.	1.61
Total Hardness	140

WATER PATTERNS — me/l

STANDARD



LOGARITHMIC



REMARKS & RECOMMENDATIONS:

EXHIBIT 7

Analyst J. Dehart

Questions regarding this analysis may be directed to Clay Lewis, District Manager in the Farmington, NM District (505) 327-6222.

Exhibit 8

Affidavit of Notification

The following companies were sent certified copies of the application for downhole commingling of the Basin Fruitland Coal and the WAW Pictured Cliffs Pools in the Dietrich 28G-1.

1.) Central Resources
1775 Sherman, Suite 2600
Denver, CO 80203-4313

2.) Dugan Production Corp.
P.O. Box 420
Farmington, NM 87499

3.) J K Edwards Associates, Inc.
1401 17th Street, Suite 1400
Denver, CO 80202

4.) J P McHugh
650 S. Cherry Street, Suite 1225
Denver, CO 80222

5.) Pendragon Energy Partners, Inc.
621 17th Street, Suite 750
Denver, CO 80293

Signed George Sharpe Date 7-14-97
George F. Sharpe

ACKNOWLEDGMENT

STATE OF NEW MEXICO)
ss
COUNTY OF SAN JUAN)

The foregoing instrument was acknowledged before me this 14th day of July, 1997, by George F. Sharpe.

My commission expires:
June 27, 1998

Notary Public