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July 3, 1989

JUL - 6 1989

OIL CONSERVATION DIV.

Mr. Mike Stogner New Mexico Oil Conservation Division Post Office Box 2088 Santa Fe, New Mexico 87501

> Re: San Juan 32-5 Unit #108 Unorthodox Well Location

> > 2100' FNL, 100' FEL, Section 27, T32N, R6W

Rio Arriba County, New Mexico

Dear Mr. Stogner:

Meridian Oil has requested administrative approval for an unorthodox gas well location in the Basin Fruitland Coal Pool for the referenced well (see attached). On August 11, 1988, the well was moved from its original orthodox location of 885' FNL, 790' FEL of section 27 at the request of the Bureau of Reclamation due to the well's close proximity to Navajo Lake. Extremely rough terrain makes the present unorthodox location the only possible location in the northeast quarter of this section.

In recent conversations with members of the NMOCD staff, Meridian has been asked to evaluate the feasibility of drilling directionally from the unorthodox surface location to an orthodox bottom hole wellbore location. The economic evaluation of a vertical well versus a directional well indicates both to be viable projects. The directional well is obviously less economic due to the substantially increased capital expenditure to be incurred, approximately \$100,000.

The table below illustrates the decrease in economic parameters due to this additional expenditure.

Economic Summary

<u>Parameters</u>	Vertical Well Bottom Hole Location 2100' FNL, 100' FEL	Directional Well Bottom Hole Location 2100' FNL, 790' FEL	
Capital Expenditure (M\$)	396.291	496.891	
Net Present Value (M\$)	520.3	308.6	
Rate-of-Return (%)	30.3	20.95	

In addition, there is a high degree of operational risk associated with a directional well which cannot be addressed in monetary terms.

Mr. Mike Stogner New Mexico Oil Conservation Division July 3, 1989 Page Two

Re: San Juan 32-5 Unit #108 Unorthodox Well Location

, , ,

Meridian feels that without justification we would be negligent as a prudent operator, for El Paso Natural Gas Company, of the San Juan 32-5 Unit to unnecessarily commit to these expenditures and risks as well as the decrease in income.

We feel it is in the best interest of the San Juan 32-5 Unit owners to drill a vertical well at the proposed unorthodox location upon receiving your administrative approval. In light of the NMOCD's concern involving actual bottom hole location, Meridian agrees to run a continuous multi-shot directional survey from intermediate TD to the base of the surface casing. Upon completion of this survey, Meridian will immediately forward a copy of the results to your office.

Attached also is a waiver of objection to the unorthodox location from Northwest Pipeline Company, offset operator to the south of section 27.

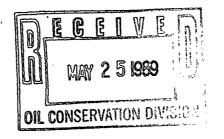
If you have any questions, please do not hesitate to call me. Thank you for your consideration in this matter.

Very truly yours,

S. W. Nance

SWN:PWB:1gg Attachments

xc: D. C. Walker
J. W. Caldwell



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E. Busch
5-126/89

August 12, 1988

Mr. William LeMay New Mexico Oil Conservation Division Post Office Box 2088 Santa Fe, New Mexico 87501

Dear Mr. LeMay:

This is a request for administrative approval for an unorthodox gas well location in the Undesignated Fruitland Pool.

Application was made to locate the El Paso Natural Gas Company's San Juan 32-5 Unit #108 at 885' from the north line and 770' from the east line of Section 27, T-32-N, R-5-W, Rio Arriba County, New Mexico on June 13, 1988. This location has been moved to 2100' from the North line and 100' from the East line of Section 27, T-32-N, R-5-W, Rio Arriba County, New Mexico at the request of the Bureau of Reclamation.

Extremely rough terrain in the form of steep cliffs makes it impossible to build an orthodox location in the northeast quarter of this section.

El Paso Natural Gas Company is the operator of the San Juan 32-5 Unit.

Plats showing the proposed well location and the terrain in Section 27, along with an ownership plat, are attached.

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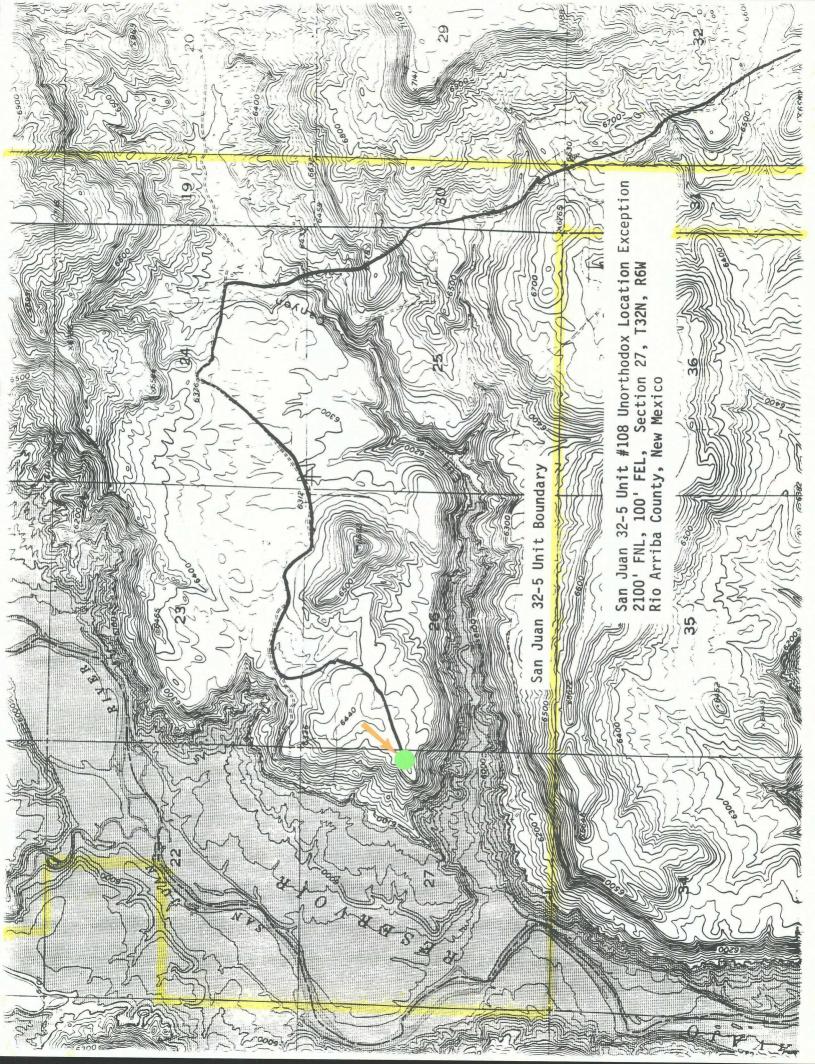
Sincerely yours,

Peggy Bradfield

encl.

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STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

Form C-102 Revised 10-1-7

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

Operator			_		Lease	_					Well No.
El Pas	so i	Natural	Gas		Sa	ın Juan	32-5	Uı	nit		108
Unit Letter	Sect		Township		Rom				SF-0790		
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EL PASO NATURAL GAS COMPANY

Well Name San Juan 32-5 Unit #108, Undesignated Fruitland

Footage---- 885' FNL, 770' FEL

APPLICATION FOR NON-STANDARD LOCATION

County <u>Rio</u>	Arriba S	tate <u>New Mexi</u>	.co Sect	ion 27 Towns	hip 32N	_ Range <u>6</u>
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*See Instructions on Reverse-Side=

OIL CONSERVATION DIVISION

. STATE OF NEW MEXICO

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P. O. BOX 2088

Form C-102

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ENERGY AND MINERALS DEPARTMENT SANTA FE, NEW MEXICO 87501 All distances must be from the outer boundaries of the Section. Operator 1.0000 Well No. El Paso Natural Gas San Juan 32-5 Unit 108 Unit Letter Section Township County (SF-079011A) 27 32 North 6 West Rio Arriba Actual Footage Location of Well: 2100 North 100 East feet from the line and feet from the line Ground Level Elev. Producing Formation Dedicated Acreage: 6416 Basin Fruitland Coal 320 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? unitization If answer is "yes," type of consolidation ___ X Yes If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of 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 Division. NOTE: reissued to show moved Note: Non-standard location due to terrain location 8-11-88 CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Name Regulatory Affairs El Paso Natural Gas Company 100 Date Surveyed 8-11-88 Registered Professional Engineer and/or Land Surveyor Neale C. Edwards Certificate No.

Well Name SANJUAN 32-5 UNIT #108	3
Location NE-27-32-6 2100'N 100's	£
Formation FC	
We, the undersigned, have inspected this location and	road.
Bureau of Reclamation Representative	8/22/88 Date
buleau of Reclamacion Representative	Date
U.S. Forest Service Representative	Date
Archaeologist Archaeologist Archaeologist	Date -
Bureau of Indian Affairs Representative Bureau of Land Management Representative AGREES TO THE FOOTAGE LOCATION OF THIS WELL.	Date 8/22/88 Date
Reason:	
Seed Mixture:	-
Equipment Color: Green	
Road and ROW (Same) or (Separate)	
Remarks: Stips will be on APD. SRS	

,·- -	SENDER: Complete items 1 and 2 when additions and 4. Put your address in the "RETURN TO" Space on the recard from being returned to you. The return receipt for delivered to and the date of delivery. For additional fee postmaster for fees and check box(es) for additional serving. 1. Show to whom delivered, date, and addressee's additional fees to the form of the	everse side. Failure to do this will prevent this as will provide you the name of the person sthe following services are available. Consult ce(s) requested.
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	5. Signature - Addressee	8. Addressee's Address (ONLY if requested and fee paid)
-:	6. Signature — Agent X	
. Š	7.: Date of Delivery 6-27-89	

June 27, 1989

Mr. William LeMay New Mexico Oil Conservation Division Post Office Box 2088 Santa Fe, New Mexico 87504

Dear Mr. LeMay:

This is a request for administrative approval for an unorthodox gas well location in the Basin Fruitland Coal Pool.

The El Paso Natural Gas Conpany San Juan 32-5 Unit #108 is located at 2100' from the North line and 100' from the East line of Section 27, T-32-N, R-6-W, Rio Arriba County, New Mexico.

Application was made on August 12, 1988 for this unorthodox location, on a 160 acre dedication. This application is only to amend the 160 dedication to show the 320 acre dedication.

A copy of this application is being submitted to all offset operators by certified mail with a request that they furnish your Santa Fe office with a Waiver of Objection, and return one copy to this office.

Plats showing the proposed well location and the terrain in Section 27, along with an ownership plat, are attached.

Sincerely yours,

Peggy Bradfield

encl.

WAIVER

Northwest Pipeline Corp hereby waives objection to El Paso Natural Gas application for an unorthodox location for their San Juan 32-5 Unit #108 as proposed above.

Paul C. Thompson Date: 6/28/89

xc: Northwest Pipeline Corp

EL PASO NATURAL GAS COMPANY

Well Name San Juan 32-5 Unit #108, Fruitland Coal

Footage--- 2100' FNL, 100' FEL

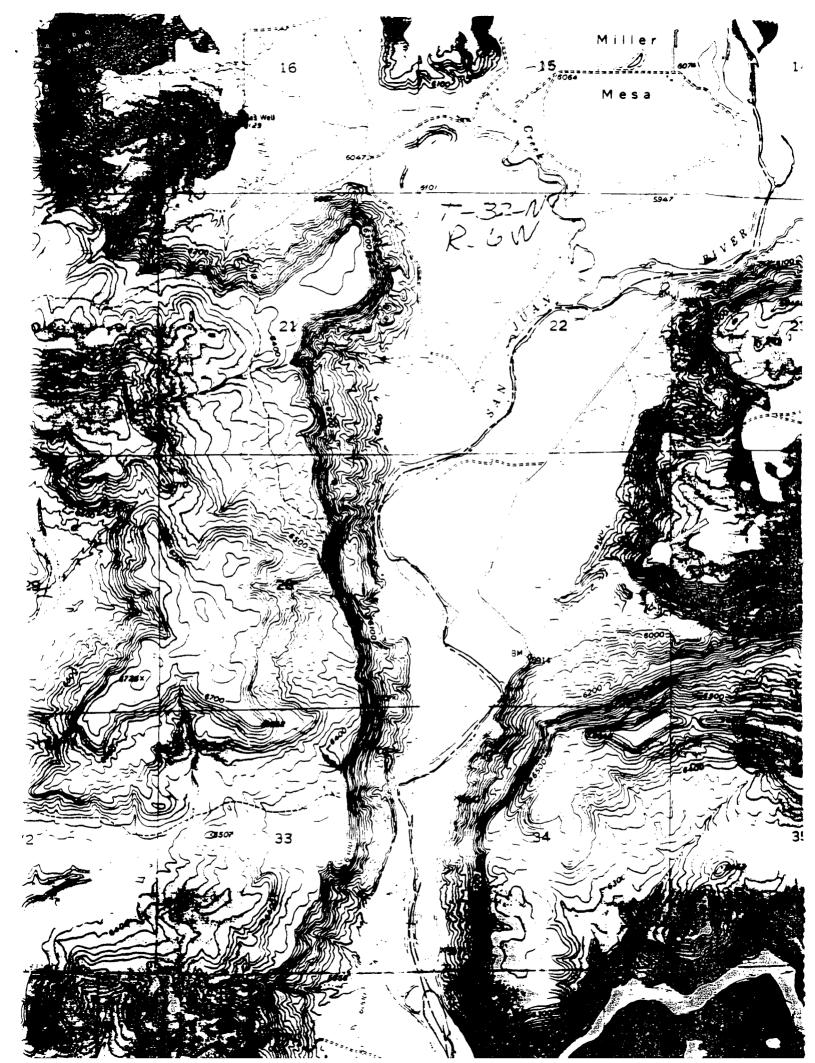
APPLICATION FOR NON-STANDARD LOCATION

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MARKS:(1) E1 Paso N	Natural Ca	us Company Sar	n Ivan 22 E Wait On water
(2) Northwest	Natural Ga	Corporation	n Juan 32-5 Unit Operator Rosa Unit Operator

Form C-102 Revised 10-

OIL CONSERVATION DIVISION
STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT SANTA FE, NEW MEXICO 87501

	All distances must be	from the outer boundaries of the Section.	
Operator El Paso	Natural Gas	San Juan 32-5 Unit	Well No. 108
Unit Letter Sec	Township 32 North	Range County (SF-()79011A)
Actual Footage Location		0 110 111	
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July 24, 1989



State of New Mexico Energy and Minerals Department Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501

Attn: Mr. William J. Lemay, Examiner

Re: Order No. NSL-2676

San Juan 32-5 Unit #108

Mr. Lemay:

Enclosed are the results of a directional survey conducted July 23, 1989, on the subject well. Multi-shot directional survey points were observed from the total depth to the base of the 9 5/8" surface casing. This was conducted to meet the requirements of Order No. NSL-2676 prior to initiating completion operations.

Sincerely,

S. B. Daves

Project Drilling Engineer

SBD/adw

xc: Aztec OCD

DEVIATION REPORT

El Paso Natural Gas Co., Post Office Box 4289, Farmington, NM 87499

Lease: San Juan 32-5 Unit #108

NE Sec. 27, T-32-N, R-6-W, Rio Arriba County, New Mexico

Pool: Basin Fruitland Coal

Multi-shot directional survey conducted July 23, 1989

Closure: Distance 25.95', Direction 284.17° (True North)

		Hole	True
Survey		Direction	Vertical
Depth (Ft.)	<u>Inclination</u>	(True North)	Depth (Ft.)
			201 00
394	0.00	0	394.00
447	0.15	271.5	447.00
540	0.30	177.5	540.00
633	0.30	178.5	632.99
725	0.30	142.5	724.99
818	0.45	239.5	817.99
911	0.45	246.5	910.98
1003	0.30	279.5	1002.97
1096	0.45	270.5	1095.97
1189	0.45	283.5	1188.96
1281	1.00	335.5	1280.95
1374	1.00	315.5	1373.93
1466	0.45	286.5	1465.92
1559	1.00	269.5	1558.91
1652	0.45	261.5	1651.90
1744	0.30	301.5	1743.89
1837	0.15	287.5	1836.89
1930	0.15	174.5	1929.89
2022	0.15	181.5	2021.89
2115	0.15	335.5	2114.89
2208	0.45	325.5	2207.89
2300	0.30	346.5	2299.88
2393	1.00	277.5	2392.87
2486	1.15	276.5	2485.85
2578	1.00	312.5	2577.84
2671	0.45	297.5	2670.83
2763	1.00	281.5	2762.81
2856	1.00	292.5	2855.80
2949	1.00	274.5	2948.79
3041	1.00	285.5	3040.77
3134	1.00	319.5	3133.76

I, the undersigned, certify that I, acting in my capacity as Petroleum Engineer on behalf of El Paso Natural Gas Company, am authorized by said Company to make this report; and that this report was prepared by me or under my supervision and directions and that the facts stated herein are true to the best of my knowledge and belief.

Subscribed and sworn to before me this 24th day of July, 1989.

Notary Public in and for San Juan County, New Mexico My commission expires September 21, 1992.



STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION AZTEC DISTRICT OFFICE

1000 DIO BRAZOS ROAD AZTEC, NEW MEXICO 87410 (505) 334-6178

BOX 2088 SANTA FE, NEW MEXICO 87501 DATE $8-18-88$	
RE: Proposed MC Proposed DHC Proposed MSL Proposed SWD Proposed WFX Proposed PMX	JUL 1 7 1989 OIL CONSERVATION DIV.
Gentlemen:	
I have examined the application dated	8-15-88
for the MERTOTAN OTL INC. 5.J. 32 Operator Lease a	nd Well No. Unit, S-T-R
and my recommendations are as follows:	
Approve	
Yours truly,	
Sugal.	

June 13, 1988

Mr. William LeMay New Mexico Oil Conservation Division Post Office Box 2088 Santa Fe, New Mexico 87501

Dear Mr. LeMay:

This is a request for administrative approval for an unorthodox gas well location in the Undesignated Fruitland Pool.

It is intended to locate the El Paso Natural Gas Company's San Juan 32-5 Unit #108 at 885' from the north line and 770' from the east line of Section 27, T-32-N, R-5-W, Rio Arriba County, New Mexico.

Extremely rough terrain in the form of steep cliffs makes it impossible to build an orthodox location in the northeast quarter of this section.

El Paso Natural Gas Company is the operator of the San Juan 32-5 Unit.

Plats showing the proposed well location and the terrain in Section 27, along with an ownership plat, are attached.

Sincerely yours,

Peggy Doak

encl.

•				IOR (Other ins		3. LE.	ME DESIGNATION	AND CONT.
	BURE	AU OF LAND MA	MAGEMEN	T		l SF	-079011A	
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						7. UM	T LORSEMBET N.	AMB
WHILE OF OPERATOR							1 Juan 3	
I Paso Natu	ıral Ga	s Company				ł		
ADDRESS OF OFERENCE		2 COMPANY				3. 73	1 Juan 3:	<u>2-5 Unit</u>
P.O. Box 43	289, Fa	rmington,	NM 8749			108		
LOCATION OF WELL IRE See also space 17 below At surface		2100'N.		Terre tedattement	1.	- 1	ELS AND POOL, O	=
1. 1411411		2100 11,	100 L			Ba	sin Frui	tland C
						Sec	. 27, T32	N RAW
						NMF	PM	
PERMIT NO.		6416 GL	BOW WEGLER DY.	. ET. CR. etc.)		- 1	Arriba	NM
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SECOND SE ACIDES		AGANGON*	-	1	OR ACIDIZING	- i	D DRIBBELLA BENEGORABA	
REPAIR WELL		CHANGE PLANS		(Other)				
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Attached is	a copy	of the Cl		C Jetalis, and five	Pertinent dat I and true res	es. inciudin icsi depthe	e estimated date for all markers	s and somes per
Attached is	a copy	of the Cl	02 show	ing the r	evised	ea including	dedicat	e of starting sead sodes per
SESTRIBE PROPUSED OR C	a copy	of the Cl	02 show	C Jetalis, and five	evised	ea including	e estimated date for all markers	e of starting s and some per

*See Instructions on Reverse Side

STATE OF NEW MEXICO

1320 1650

1960 2310

26 40

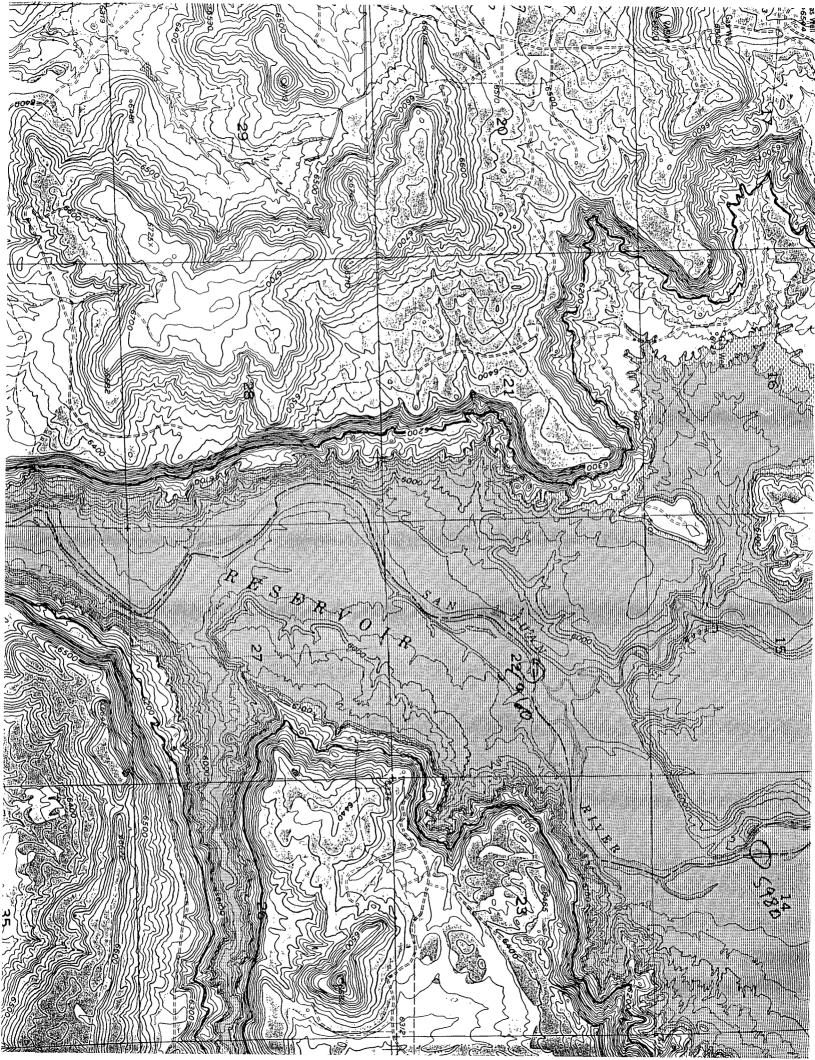
OIL CONSERVATION DIVISION P O BOX 2088 SANTA FE, NEW MEXICO 87501

Form C-102

685*T*

ENERGY AND MINERALS DEPARTMENT Revised 10-1 All distances must be from the outer boundaries of the Section. Operator Well No. El Paso Natural Gas San Juan 32-5 Unit 108 County (SF-079011A) Unit Letter Section Township 6 West 32 North Rio A**rr**iba Actual Footage Location of Wells 2100 100 North East feet from the feet from the line Ground Level Elev. Producing Formation Dedicated Acreage: 6416' Fruitland Coal Basin 320 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 work interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been cons dated by communitization, unitization, force-pooling. etc? unitization 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 No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitizati forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Divis NOTE: reissued to show mov Note: Non-standard location due to terrain location 8-11-88 CERTIFICATION Meridian Oil Inc Shu Juan 32-5 Un I hereby certify that the information of Well No. 151 tained herein is true and complete to 840 ENG - 735 FEL Sport: 6/20/6. Dua Blance Mayken Busin Daketa Completie Regulatory Affairs El Paso Natural Gas frepose Company 12-22-88 Loc Top Coot 100 3667 Meridian Dil Inc. San Juan 32-5 Unit Date Surveyed 865 FSL-1045 FEL Sport: 5/26/62 Dual Blanco Mesaver Registered Projessional Engineer and/or Land Surveyor Basin Pakers Completion Neale C. Edwards Certificate No.

1000





JUL - 2 1989

June 30, 1989

OIL CONSERVATION DIV. SANTA FE

New Mexico Oil Conservation Division P.O. Box 2088
Santa Fe, NM 87504-2088

Attn: Mike Stogner

Re: San Juan 32-5 Unit #108

Unorthodox Location Approval

Dear Mike:

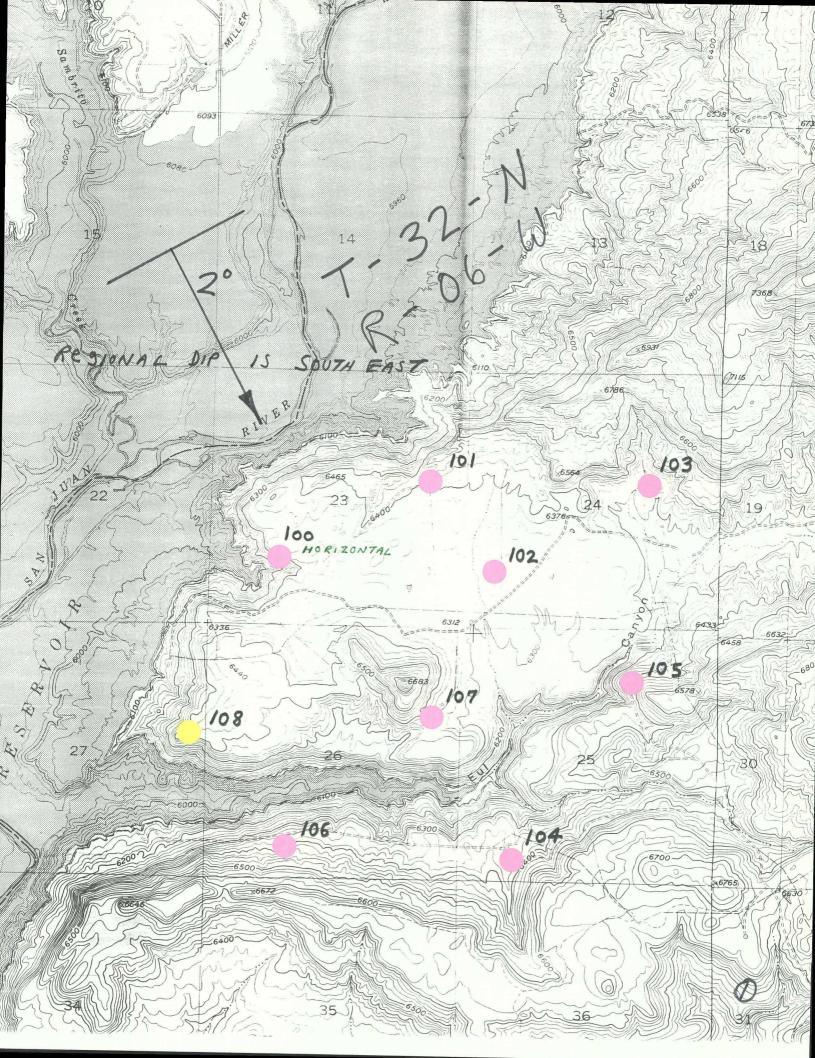
In reference to our conversation June 30, 1989, attached please find a vicinity map showing the subject well and existing Fruitland Coal wells in the San Juan 32-5 Unit (Reference Page 1). Information obtained from drilling the San Juan 32-5 Unit #100 Horizontal Fruitland Coal well indicates the regional dip to be 2° in a southeasterly direction. In addition, the multi-shot survey on this well from kick off point to surface (Reference Page 2) indicates the drill bit had a tendency to walk up dip in a northwesterly direction.

Pages three and four are tabulations of deviation reports on existing Fruitland Coal wells in the San Juan 32-5 Unit. The deviation reports are inclination only and do not include azimuth. However, the worst case scenario assuming deviation azimuth was consistently in the same direction indicates the bottom hole location of the wells would fall within a 27' to 42' radius of the surface location.

If you have any questions or require additional information, please contact our office. Your cooperation is appreciated.

1. D. Falconi

xc: D. C. Walker Well File



170LT1-5401 Date: 11/14/1988 Time: 12:29:36 PAG Filename: "SJAUNMSH.SRY" Description: "LATERAL TE-89DEG "
Target Coordinates: 4.7 S 0.0 E Target T 2 2962.000 Target Coordinates: Using Minimum Curvature Method. SAN JUAN 32-5 UNIT # 100 TRUE 5 MEASURED DRIFT DRIFT COURSE VERTCAL VERTCAL RECTANGULAR DOGLEG LENGTH DEPTH SECTION --- COORDINATES -SEVERITY DEPTH ANGLE DIRECTION (feet) (feet) (feet) (dea) (feet) (feet) DG/100FT (deg) 0.0 0 360.000 0.0 0.0 N 0.0 E 0.0 0.00 0.0 0.00 1 748.0 1.00 328.000 748.0 748.0 -5.5 5.5 N 3.5 W 0.13 2 811.0 0.75 360.000 63.0 811.0 -6.4 6.4 N 3.8 W 0.86 3 873.0 62.0 872.9 -7.4 7.4 N 3.8 W 0.47 1.00 350.000 63.0 935.9 4 1.00 356.000 -8.4 8.4 N 4.0 W 0.17 936.0 9.4 N -9.4 5 998.0 1.00 33.000 62.0 997.9 3.7 W 1.02 13.000 63.0 1060.9 -10.410.4 N 3.3 W 6 1061.0 1.00 0.55 7 1123.0 0.75 2.000 62.0 1122.9 -11.411.4 N 3.2 W 0.48 1186.0 -12.3 8 1.00 9.000 63.0 1185.9 12.3 N 3.1 W 0.43 9 -13.3 13.3 N 2.7 W 1248.0 1.00 28.000 62.0 1247.9 0.53 2.1 W 0.40 10 1311.0 1.25 28.000 63.0 1310.9 -14.414.4 N 1372.9 1.7 W 0.50 1373.0 1.25 13.000 62.0 -15.715.7 N 11 1.2 W 0.48 17.0 N 12 1436.0 1.25 27.000 63.0 1435.9 -17.062.0 13 1498.0 1.25 10.000 1497.8 -18.218.2 N ୍.୫ W 0.60 14 1.50 5.000 63.0 1560.8 -19.719.7 N 0.6 W 0.44 1561.0 1623.0 1.25 62.0 1622.8 -21.2 21.2 N 0.6 W 0.70 15 350.000 -22.5 22.5 N 1.0 W 0.28 16 1686.0 1.25 342.000 63.0 1685.8 17 1748.0 1.50 331.000 62.0 1747.8 -23.923.9 N 1.6 W 0.58 25.4 N -25.42.2 W 18 1811.0 1.50 347.000 63.0 1810.7 0.66 26.9 N 2.7 W 19 1873.0 1.50 331.000 62.0 1872.7 -26.90.60

63.0

62.0

62.0

62.0

62.0

1935.7

1997.7

2122.6

2247.6

2309.6

63.0 2060.7

63.0 2185.6

63.0 2372.6

-28.5

-30.0

-31.2

-32.5

-33.8

-35.0

-36.3

-37.9

28.5 N

30.0 N

31.2 N

32.5 N

33.8 N

35.0 N

36.3 N

37.9 N

3.6 W

4.5 W

5.6 W

6.6 W

7.6 W

8.7 W

9.3 W

9.7 W

0.4

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Q.Q:

0.0

0.0

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1.75

1.50

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1.50

20

21

22

23

24

25

26

27

1936.0

1998.0

2061.0

2123.0

2186.0

2248.0

2310.0

2373.0

1.75 346.000

1.50 320.000

331.000

323.000

321.000

321.000

320,000

350.000

⁻⁻⁻ Final Closure Direction: 345.701

⁻⁻⁻ Final Closure Distance: 39.137 feet

	D. Falce			06/29/89	T
	32-5 Unit True Vert		Azimuth	Rectan Coordi	
Depth	Depth	Degrees	Degrees	North	East
========		=======================================	=======		
0.00	0.00	0.00	90.00	0.00	0.00
515.00 1021.00	514.99 1020.94	0.75 0.75	90.00	0.00	3.37
1522.00	1521.91	0.75	90.00 90.00	0.00 0.00	9.99 15.46
	2049.88	0.75	90.00	0.00	21.22
	2549.84	0.75	90.00	0.00	27.76
2985.00		1.00	90.00	0.00	34.41
	_				
	J. D. Falce			06/29/89	
	32-5 Unit		Azimuth	Rectan Coordi	
Depth	True Vert Depth	Degrees	Degrees	North	East
	======================================	========	Degrees	HOL CII	=======
0.00	0.00	0.00	90.00	0.00	0.00
222.00	222.00	0.25	90.00	0.00	0.48
814.00	813.99	0.50	90.00	0.00	4.36
1493.00	1492.93	1.00	90.00	0.00	13.25
2081.00		1.00	90.00	0.00	23.51
2574.00	2573.76	1.00	90.00	0.00	32.12 38.95
2965.00	2964.70	1.00	90.00	0.00	36.95
MWD By: 3	J. D. Falc	oni		06/29/89	
_	32-5 Unit			Rectar	gular
Measured	True Vert	**	Azimuth	Coordi	.nates
Depth	Depth	Degrees	Degrees	North	East
0.00	0.00	0.00	90.00	0.00	0.00
243.00	242.99	0.00	90.00	0.00	1.59
745.00	744.95	0.75	90.00	0.00	8.16
1247.00	1246.92	0.50	90.00	0.00	13.64
1558.00	1557.90	0.75	90.00	0.00	17.03
2055.00	2054.86	0.75	90.00	0.00	23.54
2550.00	2549.82	0.75	90.00	0.00	30.01
2922.00	2921.77	1.00	90.00	0.00	35.70
MID Dec.	T D 77-1-			0.5 (0.0 (0.0	
_	J. D. Falc 32-5 Unit			06/29/89	onila»
	True Vert	**	Azimuth	Rectar Coordi	
Depth	Depth	Degrees	Degrees	North	East
=======================================			=======================================		
0.00	0.00	0.00	90.00	0.00	0.00
410.00	409.99	0.75	90.00	0.00	2.68

934.00

1523.00

2016.00

2509.00

3050.00

933.94

1522.89

2015.85

2508.81

3049.76

0.75

0.75

0.75

0.75

0.75

90.00

90.00

90.00

90.00

90.00

0.00

0.00

0.00

0.00

0.00

9.54

17.25

23.71

30.16

37.24

San Juan	J. D. Falco 32-5 Unit True Vert	#105	Azimuth	06/29/89 Rectar Coordi	-
Depth	Depth	Degrees	Degrees	North	East
0.00	0.00	0.00	90.00	0.00	0.00
498.00	497.97	1.00	90.00	0.00	4.35
994.00	993.92	0.75	90.00	0.00	11.92
1522.00	1521.87	0.75	90.00	0.00	18.83
2051.00	2050.83	0.75	90.00	0.00	25.76
2553.00	2552.78	0.75	90.00	0.00	32.33
3025.00	3024.73	1.00	90.00	0.00	39.53

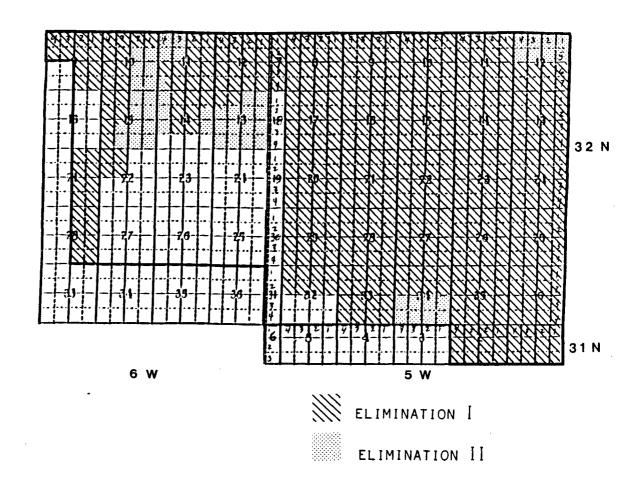
San Juan	. D. Falco 32-5 Unit True Vert Depth	#106	Azimuth Degrees		ngular inates East
0.00	0.00	0.00	90.00	0.00	0.00
415.00	414.99	0.50	90.00	0.00	1.81
934.00	933.96	0.75	90.00	0.00	7.47
1245.00	1244.94	0.75	90.00	0.00	11.54
1704.00	1703.90	0.75	90.00	0.00	17.55
2417.00	2416.79	1.25	90.00	0.00	29.99
3040.00	3039.67	1.00	90.00	0.00	42.23

San Juan	7. D. Falc 32-5 Unit True Vert Depth	#107	Azimuth Degrees		ngular inates East
=======				========	
0.00	0.00	0.00	90.00	0.00	0.00
231.00	231.00	0.50	90.00	0.00	1.01
720.00	719.98	0.50	90.00	0.00	5.28
1210.00	1209.96	0.50	90.00	0.00	9.55
1764.00	1763.94	0.50	90.00	0.00	14.39
1961.00	1960.93	0.75	90.00	0.00	16.53
2477.00	2476.90	0.50	90.00	0.00	22.16
2995.00	2994.86	0.75	90.00	0.00	27.81

SAN JUAN 32-5

RIO ARRIBA & SAN JUAN COUNTIES NEW MEXICO

No. 14-08-001-534 EFFECTIVE 3-30-53





petroleum engineering and government regulation consultants

UNIT NAME: SAN JUAN 32-5 UNIT AREA

CONTRACT NUMBER: 14-08-001-534

APPROVAL DATE: 3-30-53 EFFECTIVE DATE: 3-30-53

ACREAGE TOTAL: 25,955.42 (20,371.09 FED.; 960.00 STATE;

4,624.33 FEE)

EXPLORATORY

UNITIZED FORMATION: ALL

AUTOMATIC ELIMINATION DATE: 7-9-64: NEW ACREAGE: 7,566.70

9-1-77: NEW ACREAGE: 5,180.84

(3,260.84 FED; 640.00 STATE; 1,280.00 FEE)

OPERATOR: EL PASO NATURAL GAS COMPANY

PARTICIPATING AREAS

Name: DAKOTA INITIAL Well Name: #2-26

Location: NE/4 26-32N-6W

Effective Date: 8-22-60

Legal Description: W/2 sec. 25; E/2 sec. 26, T.32N., R.6W.

Acres added: 640.00 Total Acres: 640.00

Name: DAKOTA 1ST REVISION

Well Name: #2-25

Location: NE/4 25-32N-6W

Effective Date: 11-1-60

Legal Description: Lots 1,2 sec. 30, T.32N., R.5W.; E/2 sec.

25, T.32N., R.6W.

Acres added: 407.81 Total Acres: 1047.81

Name: DAKOTA 2ND REVISION

Well Name: #1-23,1-24

Location: 23,24-32N-6W Effective Date: 12-1-60

Legal Description: S/2 sec. 23; S/2 sec. 24; NW/4 sec. 26,

T.32N., R.6W.

Acres added: 800.00 Total Acres: 1847.81

Name: DAKOTA 3RD REVISION

Well Name: #3-26

Location: NW/4 26-32N-6W

Effective Date: 6-1-61

Legal Description: SW/4 sec. 26, T.32N.,.R6W.

Acres added: 160.00 Total Acres: 2007.81

SAN JUAN 32-5 UNIT CONTINUED

Name: DAKOTA 4TH REVISION

Well Name: #2-23

Location: NE/4 23-32N-6W

Effective Date: 7-1-61

Legal Description: S/2S/2 sec. 14; N/2 sec. 23; NW/4 sec.

24, T.32N., R.6W.

Acres added: 640.00 Total Acres: 2647.81

Name: DAKOTA 5TH REVISION

Well Name: #1-27

Location: NE/4 27-32N-6W

Effective Date: 10-1-61

Legal Description: SE/4 sec. 22; ALL sec. 27, T.32N., R.6W.

Acres added: 800.00 Total Acres: 3447.81

Name: DAKOTA 6TH REVISION

Well Name: #1-22

Location: SE/4SE/4 22-32N-6W

Effective Date: 1-1-62

Legal Description: SW/4,NE/4 sec. 22, T.32N.,R.6W.

Acres added: 320.00 Total Acres: 3767.81

NON-COMMERCIAL WELLS:

#1-20 SW/4 20-32N-5W #1-31 NE/4 31-32N-5W

UNIT NAME: SAN JUAN 32-5 UNIT AREA

CONTRACT NUMBER: 14-08-001-534

APPROVAL DATE: 3-30-53 EFFECTIVE DATE: 3-30-53

ACREAGE TOTAL: 25,955.42 (20,371.09 FED.; 960.00 STATE;

4,624.33 FEE)

TYPE: EXPLORATORY

UNITIZED FORMATION: ALL

AUTOMATIC ELIMINATION DATE: 7-9-64: NEW ACREAGE: 7,566.70

9-1-77: NEW ACREAGE: 5,180.84

(3,260.84 FED; 640.00 STATE;

1,280.00 FEE)

OPERATOR: EL PASO NATURAL GAS COMPANY

PARTICIPATING AREAS

Name: FRUITLAND INITIAL

Well Name: #2

Location: SW/4 35-32N-5W

Effective Date: 11-21-53

Legal Description: W/2 sec. 35, T.32N., R.5W.

Acres added: 320.00 Total Acres: 320.00

TERMINATED 7-9-64

UNIT NAME: SAN JUAN 32-5 UNIT AREA

CONTRACT NUMBER: 14-08-001-534

APPROVAL DATE: 3-30-53 EFFECTIVE DATE: 3-30-53

ACREAGE TOTAL: 25,955.42 (20,371.09 FED.; 960.00 STATE;

4,624.33 FEE)

TYPE: EXPLORATORY

UNITIZED FORMATION: ALL

AUTOMATIC ELIMINATION DATE: 7-9-64: NEW ACREAGE: 7,566.70

9-1-77: NEW ACREAGE: 5,180.84

(3,260.84 FED;

640.00 STATE; 1,280.00 FEE)

OPERATOR: EL PASO NATURAL GAS COMPANY

PARTICIPATING AREAS

Name: MESAVERDE INITIAL

Well Name: #4-16

Location: 16-32N-6W Effective Date: 10-29-55

Legal Description: E/2 sec. 16, T.32N., R.6W.

Acres added: 320.00 Total Acres: 320.00

Name: MESAVERDE 1ST REVISION

Well Name: #1-26

Location:

Effective Date: 7-1-59

Legal Description: W/2 sec. 26, T.32N., R.6W.

Acres added: 320.00 Total Acres: 640.00

Name: MESAVERDE 2ND REVISION

Well Name: #1-32

Location: 32-32N-5W Effective Date: 9-1-59

Legal Description: S/2 sec. 32, T.32N., R.5W.

Acres added: 320.00 Total Acres: 960.00

Name: MESAVERDE 3RD REVISION

Well Name: #1-25

Location: 1-32N-6W Effective Date: 6-1-60

Legal Description: W/2 sec. 25; E/2 sec. 26, T.32N.,.R6W.

Acres added: 640.00 Total Acres: 1600.00

SAN JUAN 32-5 UNIT CONTINUED

Name: MESAVERDE 4TH REVISION

Well Name: #1-31

Location: 31-32N-5W Effective Date: 11-1-60

Legal Description: Lots 1-4 sec. 30; Lots 1-4 sec. 31,

T.32N., R.5W.; E/2 sec. 25, T.32N., R.6W.

Acres added: 665.59 Total Acres: 2265.59

Name: MESAVERDE 5TH REVISION

Well Name: #2-23

Location: 23-32N-6W Effective Date: 8-1-61

Legal Description: E/2 sec. 23, T.32N., R.6W.

Acres added: 320.00 Total Acres: 2585.59

Name: MESAVERDE 6TH REVISION

Well Name: #2-24

Location: 24-32N-6W Effective Date: 2-1-62

Legal Description: ALL sec. 24, T.32N., R.6W.

Acres added: 640.00 Total Acres: 3225.59

Name: MESAVERDE 7TH REVISION

Well Name: #2-27

Location: 27-32N-6W Effective Date: 9-1-62

Legal Description: E/2 sec. 27, T.32N., R.6W.

Acres added: 320.00 Total Acres: 3545.59

Name: MESAVERDE 8TH REVISION

Well Name: #1-19

Location: 19-32N-5W Effective Date: 12-1-62

Legal Description: Lots 1-4 sec. 18; Lots 1-4 sec. 19,

T.32N., R.5W.

Acres added: 355.25 Total Acres: 3900.84

NON-COMMERCIAL WELLS:

#1-20 SW/4 20-32N-5W