# CASE NO.

7148

## APPIICATION, Transcripts, Small Exhibits,

ETC.



BRUCE KING

### March 10, 1981

POST OFFICE BOX 2088 BTATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-2434

Mr. Kenneth Bateman White, Koch, Kelly & McCarthy Attorneys at Law P. O. Box 787 Santa Fe, New Mexico

Applicant:

CASE NO.

ORDER NO.

Twin Montana Oil Company

7148

R-6617

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Re:

Pours very truly, JOE D. RAMEY Director

#### JDR/fd

Copy of order also sent to:

Hobbs OCD	x
Artesia OCD	X
Aztec OCD	

Other

#### STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT DIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 7148 Order No. R-6617

APPLICATION OF TWIN MONTANA OIL Company for a non-standard oil Proration Unit, Lea County, New Mexico.

#### ORDER OF THE DIVISION

#### BY THE DIVISION:

This cause came on for hearing at 9 a.m. on February 25, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of March, 1981, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Twin Montana Oil Company, seeks approval of an 80-acre non-standard oil proration unit comprising the S/2 NE/4 of Section 3, Township 9 South, Range 35 East, NMPM, to be dedicated to its Webb Federal Well No. 1, located in Unit G of said Section 3.

(3) That the entire non-standard proration unit may reasonably be presumed productive of oil from the Vada-Pennsylvanian Pool and that the entire non-standard oil proration unit can be efficiently and economically drained and developed by the aforesaid well.

(4) Thet approval of the subject application will afford the applicant the opportunity to produce his just and equitable share of the oil in the Vada-Pennsylvanian Pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will -2-Case No. 7148 Order No. R-6617

otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an 80-acre-non-standard oil proration unit in the Vada-Pennsylvanian Pool comprising the S/2 NE/4 of Section 3, Township 9 South, Range 35 East, NMPM, Lea County, New Mexico, is hereby established for Twin Montana Oil Company and dedicated to its Webb Federal Well No. 1, located in Unit G of said Section 3.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION JOE D. RAHEY, Director

dr/

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Pege STATE OF NEW MEXICO 1 ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION 2 STATE LAND OFFICE BLDG. SANTA FE, NEW MEXICO 3 25 February 1981 4 EXAMINER HEARING IN THE MATTER OF: Application of Twin Montana Oil Com- ) 7 pany for a non-standard oil proration) CASE 7148 8 unit, Lea County, New Mexico. ). ١ 9 10 BEFORE: Daniel S. Nutter 11 12 TRANSCRIPT OF HEARING 13 14 APPEARANCES 15 16 Ernest L. Padilla, Esq. For the Oil Conservation Legal Counsel to the Division 17 Division: State Land Office Bldg. Santa Fe, New Mexico 87501 18 19 Ken Bateman, Esq. 20 WHITE, KOCH, KELLY, & MCCARTHY For the Applicant: 220 Otero Street 21 Santa Fe, New Moxico 87501 22 23 24 25

1	2	
2	INDEX	
* *		
4	HARRY TOM HUNNIWELL	• • • •
5	Direct Examination by Mr. Bateman 4	
Ć	Cross Examination by Mr. Nutter 12	
10		
11		
12	EXHIBITS	
) 13		
14	Applicant Exhibit One, Plat 5	
19	Applicant Exhibit Two, Structure Map 5	
10	Applicant Exhibit Three, Cross Section 7	
1. <b>1</b> .	Applicant Exhibit Four, Cross Section 7	
18	Applicant Exhibit Five, Log 8	
19	Applicant Exhibit Six, Scout Ticket 8	
20	Applicant Exhibit Seven, Map 9	
2	Applicant Exhibit Eight, Calculation 10	
2.		an a
2.		
24		
2		

I	3
1	MR. NUTTER: We'll call next Case Number
2	
3	7148. MR. PADILLA: Application of Twin
4	
5	Montana Oil Company for a nonstandard oil proration unit,
6	Lea County, New Mexico.
7	MR. BATEMAN: Mr. Examiner, I'm Ken
8	Bateman of White, Koch, Kelly, and McCarthy, and I have one
. 9	witness. I request that he be sworn, please.
10	
11	(Witness sworn.)
12	HARRY TOM HUNNIWELL
13	
14	being called as a witness and being duly sworn upon his oath.
15	testified as follows, to-wit:
10	
1	DIRECT EXAMINATION
1	BY MR, BATEMAN:
1	9 Q. Sir, would you state your full name and
2	0 place of residence and employment, for the record, please?
2	A. My name is Harry Tom Hunniwell. I'm
2	employed by Twin Montana, Incorporated, in Graham, Texas.
	23 Q Have you previously testified before the
	24 Commission?
	25 A. I have not.

· . . .

Q Would you state then for the record your educational background and work experience in the oil industry?

4

A. I have a Bachelor of Science degree in petroleum engineering and Bachelor of Science degree in geological engineering from Texas A & M University. I graduated in 1950 at which time I went to work for the Magnolia Petroleum Company, which is now the Mobil Oil Company. I worked for them for nine years.

When I left their employment I was District Engineer in Electra: Texas, at which time I went to work for what was then the Twin Mountain Oil Corporation in Graham, Texas, and it later became the Twin Montana, Incorporated.

And I've been employed as in charge of production and exploration ever since.

Q. You've had experience, then, both as a professional engineer, a petroleum engineer, and as a geologist?

A. That's right. I am registered in professional engineering in the State of Texas.

MR. BATEMAN: I offer Mr. Hunniwell as an expert in this case.

MR. NUTTER: Mr. Hunniwell is qualified.

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1	5				
2	Q. Mr. Hunniwell, you are familiar with the				
3	well in question in this application?				
4	A. Yes, sir.				
5	Q. Woold you refer now to what's been				
6	marked Exhibits One and Two and explain the exhibits and also				
7	state what Twin Montana is requesting by its application?				
¥	A. On Exhibit One, which is a land map which				
. 9	shows Section 3 of Township 9 North, 35 East, which is loca-				
10	ted in Lea County, New Mexico, right on the county line,				
11	Roosevelt County, it shows the well which shows up on this				
12	map as the old Coquina No. 1 Webb Federal. This well was				
13	drilled in 1971. The other wells in this section were drilled				
14	in '69 to '71, all of which have been plugged except this				
15	well.				
16	In 1978 Coquina experienced difficulty				
17	with the subject well by dropping the tubing in the well,				
18	which resulted in a fishing job and they could not clean it				
19	up.				
20	Later they sold this well to a Mr. John				
21	Bissett and Twin Montana bought the well from Mr. Bissett.				
22	When they assigned the acreage to Mr. Bissett they only as-				
23	signed the south half of the northeast quarter. The whole				
24	northeast quarter had originally been communitized to form				
25	160-acre unit. The north half of this 160 acres is owned				

A call a constant of the second second second	a construction of the second	
	1	6
	2	by Coquina and Cactus Drilling Company, and they were contacted
	3	to see what the problem was here, and the man who Coguina
	4	was the operator, and the man who made this assignment left
• • • •	5	Coquina and they did not care to do anything else.
	6	So after investigation it was shown
	7	we were shown definitely that this well is not draining but
		considerably less acreage. Therefor, to protect correlative
	9	rights and prevent waste, 160-acre unit was not is not
	10	required.
	11	The Yates Petroleum Company owns the
	12	property to the south; Amoco property to the west. These
<b>)</b>	13	people were Yates was contacted relative to this thing
r	14	and naturally they had no objections. Coquina had originally
	15	farmed out this property from Amoco, and their Federal lease
	16	encompassed the east half of the northwest quarter, also,
τ	17	so that this whole section is Federal land.
· . 3 	18	Q. Mr. Hunniwell, is there any significant
	19	difference in the royalty interests in the south half and
:	20	the north half of the northeast quarter?
	21	A. No, sir.
	22	Q. There are also marked on Exhibit One
	23	A-A' and B-B'. Would you are
	24	A. These represent cross sections to show
)	25	that the Bough C formation is continuous throughout this

7 1 2 area. 3 Q. Would you continue then with Exhibits 4 Three and Four, which I believe are --5 A. Let me get Two here, which is a structure 6 map of this area ---7 Excuse me. Q. .**g**. -- on top of the Bough C. It is actually 9 prepared by a commercial mapping company, GeoData. I have checked it for its accuracy. 10 It shows Section 3 and the fact that 11 the Bough C formation in this particular section is a mono-12 cline, which is dipping to the southwest, with some sort of 13 a little structure also appearing to the southwest. To the 14 southeast, I'll get correct, to the southeast. 15 All right, sir, now will you refer to 16 Q. Exhibits Three and Four? 17 All right. 18 A. 19 Which are the cross sections. Q. 20 Exhibit Four -- Three is cross section Δ. A-A', which is marked on Exhibit One and shows the dipping 21 of the Bough C formation to the west -- to the east, 22 23 The logs that were run on this are gamma 24 ray neutron logs and neutron logs have been found to be 25 quantitative and not qualitative.

	1	8		
	2	The Exhibit Four, B-B', also shows that		
	3	the Bough C is dipping from north to south with the same type		
	4	of gamma ray neutron logs.		
	5	This also conforms to the structure map.		
	6	Q. All right, sir. Would you refer again		
	7	to Exhibit Five and tell the Examiner whether or not you've		
	8	determined the productive thickness in the Bough-C-in the		
···· · <u>-</u> -	9	well in question?		
1	19	A. Yes, sir. Exhibit Five is the enlarged		
. 1	11	section of the Coquina's Webb Federal No. 1 log, which can		
1	12	be more readily read, showing the subsea depth and the esti-		
1	13	mated productive thickness in this well.		
1	14	Q. And that is 26 feet, is that correct?		
. 1	15	A. Yes, sir, that is correct.		
· 1	16	Q. All right, Mr		
1	17	A. Also marked are the perforations.		
1	18	Q. Would you then refer to Exhibit Six and		
. 1	19	explain further the productive intervals in this well?		
2	20	A. All right. Exhibit Six is a copy of		
2	21	a scout ticket on the subject well, which shows the casing		
2	22	which was set, the 13-3/8ths, 385 feet with 350 sacks of		
2	23	cement; 8-5/8ths at 4040 foot with 500 sacks of cement;		
2	24	and 5-1/2 at 9840 with 400 sacks of cement.		
2	25	The well was perforated with 18 holes		

	-			
	1	9		
	2	from 9772 to 81 and with 18 holes from 9785 to 94.		
	3	Q. What has been the cumulative production		
	4	of this well?		
· ·	5	A. It has produced approximately 80,000		
	6	barrels of oil.		
	7	Q. And have you determined what the re-		
		maining production is expected to be?		
	9	A. The estimated the information that		
	10	we have, that we should be able to recover an additional		
warran M. Warran a c	11	10,000 barrels of oil out of this well.		
	12	Q Did you calculate the drainage area of		
	13	the well in question?		
	14	A. Yes, sir.		
	15	Q. Would you proceed then with Exhibit		
	16	Seven and explain that for the Commission?		
	17	A. Exhibit Seven is an enlarged map of		
	18	Section 3 and the surrounding sections, which is on a scale		
×	19	of one inch equal 1000, that shows the wells in the area and		
	20	in the little red block there the top figure is the net pay;		
	21	the next figure is the cumulative production; and the bottom		
	22	figure is the estimated drainage area.		
	23	For instance, on the Twin Montana's		
	24	Webb Federal, we show that we have 26 feet of net pay, 8488		
	25	barrels of cumulative production, with a drainage area of		

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10 2 25.5 acres to date. If you went to the 90,000 barrels of 3 ultimate recovery, it is estimated that this drainage area 4 would increase to approximately 28-1/2 acres and that the 5 drainage radius would be 629 feet. The drainage radius is 6 also shown for the Twin Montana Well at the present time to 7 8 be 594.6 feet. So based on your calculation the recover 9 of an additional 10,000 barrels would not expand the drainage 10 11 radius beyond the lease line? 12 That is correct. A. 13 Q. How did you calculate the drainage radius and the drainage area? 14 15 On Exhibit Eight, which is shown as A. sample calculations, the oil in place was calculated using 16 17 the average reservoir characteristics of the Bough C formation 18 as best it could be determined. It was that it had 12 per-19 cent porosity, 40 percent water saturation, and 1.15 formation 20 volume factor. 21 With this it was estimated that 485.7 22 barrels per acre foot were in place and estimated recovery 23 factor of 25 percent was employed, giving a drainage estimate a24 recovery of 121.4 barrels per acre foot. This, for the 25 particular well, converted into 8156.4 barrels per acre, which

1	11			
2	when that was divided into the cumulative recovery gave 25.5			
3	acres; using the radius of drainage, it came out to 594.6			
- <sup>1</sup>	feet for radius of dra	feet for radius of drainage.		
5	I	AR. NUTTER: That's as of today.		
6	A	That is as of to date.		
7	Q.	Is the formula on which this calculation		
8	was based a standard :	In the industry?		
. 9	, A	les, sir.		
10	Q.	And in your opinion will the grant of		
11	your application prevent waste and protect correlative rights			
12	and permit the recovery of additional oil?			
13	A. Yes, sir, it will definitely prevent			
14	waste because another well cannot at this particular loca-			
15	tion you can't afford to drill another well for 10,000 bar-			
16	rels, and from these calculations we'rc not draining any oil			
17	off of the offset lea	ses, and all of which are Federal land.		
18	<b>Q</b> .	Have you been advised that USGS will		
19	permit you to proceed with this production if you have an			
20	approved 80-acre vnit	?		
21	А.	Yes, sir, I have.		
22	Q. Were Exhibits One through Eight prepared			
23	by you or under your	direction?		
24	А.	They were.		
25		MR. BATEMAN: Mr. Examiner, I offer		

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2	Exhibits One through Eight, and have no further questions.		
3	MR. NUTTER: Applicant's Exhibits One		
4	through Eight will be admitted in evidence.		
5	а 		
6	CROSS EXAMINATION		
7	BY MR. NUTTER:		
8	Q. Mr. Hunniwell, I understand how you've-		
. 9	arrived at your 25-1/2 acres and 594.6 feet; however, I		
10	don't understand where you arrived at this additional 10,000		
11	barrels you expect to recover.		
12	A. This was strictly an estimate, sir. We		
13	what was giving Coquina their main problem was that they		
14	was trying to operate this well on gas and handle all this		
15	water and when we electrified it the well currently will		
16	produce approximately 10 barrels of oil and 100 barrels of		
. 17	water per day, and from this I estimated that we should be		
18	able to recover another 10,000 barrels if we can just keep		
19	the troubles down on the well.		
20	Q. Some of these cumulative recoveries of		
21	wells in the neighborhood have been over 200,000 barrels		
22	A. They sure have.		
23	Q Which would give this one only 90,000		
24	total cumulative.		
25	A. That's right. Now, as you will note,		

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		13
2	the recoveries from	various wells in the area vary greatly.
- 3	Q.	Now the one to the northwest, that
4	Coquina Federal 1-3	only made 91,000. Was it abandoned be-
5	cause of mechanical	problems like this one was?
)))) 6	A.	I don't think so. I think it was just
7	the low price of ci	l and high operating cost, resulted in
8	it	
. 9	Q.	As I recall, when this pool was being
10	produced to	
11	А.	Yes, sir.
12	Q.	its later life, they were lifting
13	huge volumes of wat	er in some of these wells.
14	А.	They sure are. In fact they'd come in,
15	it seemed like the	more water you could make initially, the
16	more oil it would m	ake.
17	Q.	Right, the water didn't cut the oil off
18	<b>A.</b>	No, sir.
19	Q.	it just made it more difficult to
20	produce, but you co	uld produce a lot of water and a lot of
21	oil.	
22	<u>.</u>	That is correct. If you can just handle
23	the water at a low	enough cost, apparently you can make the
24	oil.	
25	Q.	What is Twin Montana's plan for pro-

14 1 2 ducing the well? 3 We have on this well a large air balance A. pumping unit, a 640,000 unit with a 144-inch stroke on it, 4 5 and --What total volume can you lift with that 6 Q. 7 unit? 8 We can lift approximately 250 barrels Α. 9 of water -- total fluid a day with this. 10 That's not very much for the Vada Ω 11 Pennsylvanian, though. 12 A. No, it sure isn't, but the --13 Some of the wells produce 7 - 800 barrels ۵ 14 of water a day when they were being completed. 15 A. That is correct. When they were -- the 16 fluid levels in them were relatively high. Our fluid level 17 is not that high and we are having to pump from bottom. In 18 fact, the well actually pounds fluid. Now this is probably 19 partially due to some steel that's still in the bottom of 20 the hole as a result of the tubing being lost, but ---21 You never did get all that tubing out? Q. 22 Never did gct it all out, but we were À. 23 able to acidize the well and get it started coming back our 24 direction. 25 Well, where do you have to set your Q.

. .

15 1 2 pump? 3 The pump is set approximately 50 foot A. 4 above the top of the perforations. 5 Q. So there's not much junk in the bottom 6 of the hole, then? No, sir. 7 A. 8 Q. Okay, now who owns the lease? Apparently 9 it was two leases at one time. 10 Yes, sir. Α. 11 Q. And in the north half of the northeast 12 quarter of Section 3. 13 Yes, sir. A. 14 Who owns those leases? Q. 15 A. Well, the best I can determine, that the east 40 is owned by Cactus Drilling Company, and that the 16 17 north 40 would be owned now by Coquina. 18 You mean the west 40. Q, 19 The west 40 would be owned by Coquina. A. 20 Q. And now you mentioned you talked to 21 Amoco and you talked to Yates about your proposal here. 22 Yes, sir. A. 23 Did you talk to Cactus and to Coquina? Q. 24 I talked to Coquina. I did not talk to A. 25 They're out of Dallas and -- but Coquina had no ob-Cactus,

1		16
2	jections but they didn't want to	join us.
3	Q. So your rout	te became the application for
4	a non-standard proration unit.	<ul> <li>A state of the sta</li></ul>
5	A. That is corr	réct, sir.
6	Q I see.	
7	MR. NUTTER:	Are there any further
8	guestions of Mr. Hunniwell? He	may be excused.
. 9	Do you have	anything further, Mr. Bate-
10	) man?	
11	MR. BATEMAN	: Nothing further, thank
12	2 you.	
13		Does anyone have anything
14	they wish to offer in Case Number	r 7148?
15	5 We'll take	the case under advisement.
16	α ματολογιατικό το μεταγραφικό το	4.
17	7 Hearing co	ncluded.)
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#### CERTIFICATE

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SALLY W. BOYD, C.S.F ki. 1 Box 193-B Santa Fe, New Mexico 17301 Phone (503) 455-7409 I, SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Bayd C.S.R.

I do hereby certily that the foregoing is a complete record of the proceedings in the fixed iner hearing of Case No. 7/48, heard by the on 7/25 19.8/

, Examiner Oil Conservation Division

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	<b>^</b> '		E OF NEW MEXICO D MINERALS DEPARTMENT	
	2	OIL CONS	SERVATION DIVISION LAND OFFICE- BLDG.	
	3	SANTA	FE, NEW MEXICO	
	4	25	February 1981	
	5		MINER HEARING	
	<u>8</u>	IN THE MATTER OF:		
	8	Application of Twi	n Montana Oil Com-) ndard oil proration) CASE New Mexico. ). 7148 )	
	10	BEFORE: Daniel S. Nutter		
	11	BEFORE: Daniel 5. Mutter	••• · · · · · · · · · · · · · · · · · ·	
		TRANSCR	IPT OF HEARING	
È,	14			
	15	АРРЕ	ARANCES	
	16			
	17	Division:	Ernest L. Padilla, Esq. Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico 87501	
	19		banca ic, new hexico of our	
	20 21	For the Applicant:	Ken Bateman, Esq. WHITE, KOCH, KELLY, & McCARTHY 220 Otero Street	Y
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	1		2	
	2	INDEX		· ·
	3			<b>i</b>
	4	HARRY TOM HUNNIWELL		•
- <b>1</b> .	5	Direct Examination by Mr. Bateman	4	
	6	Cross Examination by Mr. Nutter	1.2	
	<u> </u>		······································	· · · · · · · · · · · · · · · · · · ·
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··	7	MR. BATEMAN: Mr. Examiner, I'm Ken	******
····		Bateman of White, Koch, Kelly, and McCarthy and I have one	
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>	13	HARRY TOM HUNNIWELL	
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С.,	17	DIRECT EXAMINATION	
	18	BY MR. BATEMAN:	
	19	Q Sir, would you state your full name and	
	20	place of residence and employment, for the record, please?	
	21	A. My name is Harry Tom Hunniwell. I'm	
	22	employed by Twin Montana, Incorporated, in Graham, Texas.	
	23	Q Have you previously testified before the	
3	24	Commission?	
*	25	A. I have not.	
	-		

۱.,

1 2 n Would you state then for the record 3 your educational background and work experience in the oil 4 industry? 5 A. I have a Bachelor of Science degree in petroleum engineering and Bachelor of Science degree in 6 7 geological engineering from Texas A & M University. I graduated in 1950 at which time I went to work for the Magnolia 8 9 Petroleum Company, which is now the Mobil Gil Company. I 10 worked for them for nine years. 11 When I left their employment I was 12 District Engineer in Electra, Texas, at which time I went 13 to work for what was then the Twin Mountain Oil Corporation 14 in Graham, Texas, and it later became the Twin Montana, In-15 corporated. 16 And I've been employed as in charge of 17 production and exploration ever since. 18 <u>ņ</u> You've had experience, then, both as 19 a professional engineer, a petroleum engineer, and as a 20 geologist? 21 That's right. I am registered in pro-Α. 22 fessional engineering in the State of Texas. 23 MR. BATEMAN: I offer Mr. Hunniwell as 24 an expert in this case. 25 MR. NUTTER: Mr. Hunniwell is qualified.

1 2 Mr. Hunniwell, you are familiar with the Q. 3 well in question in this application? a ā. Tes, oir. 5 Would you refer now to what's been Q. 6 marked Exhibits One and Two and explain the exhibits and also 7 state what Twin Montana is requesting by its application? ö Ā. On Exhibit One, which is a land map which 9 shows Section 3 of Township 9 North, 35 East, which is loca-10 ted in Lea County, New Mexico, right on the county line, 11 Roosevelt County, it shows the well which shows up on this 12 map as the old Coquina No. 1 Webb Federal. This well was 13 drilled in 1971. The other wells in this section were drilled 14 in '69 to '71, all of which have been plugged except this 15 well. 16 In 1978 Coquina experienced difficulty 17 with the subject well by dropping the tubing in the well, 18 which resulted in a fishing job and they could not clean it 10 up. 20 Later they sold this well to a Mr. John 21 Bissett and Twin Montana bought the well from Mr. Bissett. 22 When they assigned the acreage to Mr. Bissett they only as-23 signed the south half of the northeast quarter. The whole 24 northeast quarter had originally been communitized to form 25 160-acre unit. The north half of this 160 acres is owned

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6	So after investigation it was shown
7	we were shown definitely that this well is not draining but
8	considerably less acreage. Therefor, to protect correlative
9	rights and prevent waste, 160-acre unit was not is not
10	required.
11	The Yates Petroleum Company owns the
12	property to the south; Amoco property to the west. These
13	people were Yates was contacted relative to this thing
14	and naturally they had no objections. Coquina had originally
15	farmed out this property from Amoco, and their Federal lease
16	encompassed the east half of the northwest guarter, also,
17	so that this whole section is Federal land.
18	0. Mr. Hunniwell, is there any significant
19	difference in the royalty interests in the south half and
20	the north half of the northeast guarter?
21	A. No, sir.
22	Q There are also marked on Exhibit One
23	A-A' and B-B'. Would you
24	A. These represent cross sections to show
25	that the Bough C formation is continuous throughout this

7 1 2 area. 3 Would you continue then with Exhibits Q. 4 Three and Four, which I believe are ---5 Let me get Two here, which is a structure A. 6 map of this area .... 7 Excuse me. n. 8 -- on top of the Bough C. It is actually 9 prepared by a commercial mapping company, GeoData. I have 10 checked it for its accuracy. 11 It shows Section 3 and the fact that 12 the Bough C formation in this particular section is a mono-13 cline, which is dipping to the southwest, with some sort of 14 a little structure also appearing to the southwest. To the 15 southeast, I'll get correct, to the southeast. 16 All right, sir, now will you refer to O. 17 Exhibits Three and Four? 18 All right. A. 19 Which are the cross sections. <u>Q</u>. 20 Exhibit Four --- Three is cross section A. 21 A-A', which is marked on Exhibit One and shows the dipping 22 of the Bough C formation to the west --- to the east. 23 The logs that were run on this are gamma 24 ray neutron logs and neutron logs have been found to be 25 quantitative and not qualitative.

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2 The Exhibit Four, B-B', also shows that 3 the Bough C is dipping from north to south with the same type 4 of gamma ray neutron logs. 5 This also conforms to the structure map. 6 All right, sir. Would you refer again Q. 7 to Exhibit Five and tell the Examiner whether or not you've 8 determined the productive thickness in the Bough C in the 9 well in question? 10 Yes, sir. Exhibit Five is the enlarged A. 11 section of the Coquina's Webb Federal No. 1 log, which can 12 be more readily read, showing the subsea depth and the esti-13 mated productive thickness in this well. 14 And that is 26 feet, is that correct? Q. 15 Yes, sir, that is correct. A. 16 All right, Mr. --Q. 17 Also marked are the perforations. A. 18 Would you then refer to Exhibit Six and O. 19 explain further the productive intervals in this well? 20 All right. Exhibit Six is a copy of Ā. 21 a scout ticket on the subject well, which shows the casing 22 which was set, the 13-3/8ths, 385 feet with 350 sacks of 23 cement; 8-5/8ths at 4040 foot with 500 sacks of cement; 24 and 5-1/2 at 9840 with 400 sacks of cement. 25 The well was perforated with 18 holes

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1	9
2	from 9772 to 81 and with 18 holes from 9785 to 94.
3	Q What has been the cumulative production
4	of this well?
5	A. It has produced approximately 80,000
6	barrels of oil.
7	And have you determined what the re-
8	maining production is expected to be?
. 9	A. The estimated the information that
10	we have, that we should be able to recover an additional
11	10,000 barrels of oil out of this well.
12	Q Did you calculate the drainage area of
13	the well in question?
14	A. Yes, sir.
15	Q Would you proceed then with Exhibit
16	Seven and explain that for the Commission?
17	A. Exhibit Seven is an enlarged map of
18	Section 3 and the surrounding sections, which is on a scale
19	of one inch equal 1000, that shows the wells in the area and
20	in the little red block there the top figure is the net pay;
21	the next figure is the cumulative production; and the bottom
22	figure is the estimated drainage area.
23	For instance, on the Twin Montana's
24	Webb Federal, we show that we have 26 feet of net pay. 8488
25	barrels of cumulative production, with a drainage area of

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25.5 acres to date.

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If you went to the 90 000 barrels of ultimate recovery, it is estimated that this drainage area would increase to approximately 28-1/2 acres and that the drainage radius would be 629 feet. The drainage radius is also shown for the Twin Montana Well at the present time to be 594.6 feet.

Q So based on your calculation the recovery of an additional 10,000 barrels would not expand the drainage radius beyond the lease line?

That is correct.

Q How did you calculate the drainage radius and the drainage area?

A On Exhibit Eight, which is shown as sample calculations, the oil in place was calculated using the average reservoir characteristics of the Bough C formation as best it could be determined. It was that it had 12 percent porosity, 40 percent water saturation, and 1.15 formation volume factor.

With this it was estimated that 485.7 barrels per acre foot were in place and estimated recovery factor of 25 percent was employed, giving a drainage estimated recovery of 121.4 barrels per acre foot. This for the particular well, converted into 8156.4 barrels per acre which

	1	11						
	2	when that was divided into the cumulative recovery gave 25.5						
	3	acres; using the radius of drainage; it came out to 594.6						
	4	feet for radius of drainage.						
	5	MR. NUTTER: That's as of today.						
	6	A. That is as of to date.						
• • • • ·	7.	Q Is the formula on which this calculation						
	8	was based a standard in the industry?						
	. 9	A. Yes, sir.						
-	10	0. And in your opinion will the grant of						
	11	your application prevent waste and protect correlative rights						
÷	12	and permit the recovery of additional oil?						
	13	A. Yes, sir, it will definitely prevent						
	14	waste because another well cannot at this particular loca-						
	15	tion you can't afford to drill another well for 10,000 bar-						
	16	rels, and from these calculations we're not draining any oil						
	17	off of the offset lesses, and all of which are Federal land.						
	18	Q. Have you been advised that USGS will						
	19	permit you to proceed with this production if you have an						
	20	approved 80-acre unit?						
	21	A. Yes, sir, I have.						
	22	Q Were Exhibits One through Eight prepared						
	23	by you or under your direction?						
	24	A. They were.						
	25	MR. BATEMAN: Mr. Examiner, I offer						

		12
	1	Exhibits One through Eight, and have no further questions.
	2	MR. NUTTER: Applicant's Exhibits One
	4	through Eight will be admitted in evidence.
	5	
	6	CROSS EXAMINATION
		BY MR. NUTTER:
• • • • • •	8	Q Mr. Hunniwell, I understand how you've
	9	arrived at your 25-1/2 acres and 594.6 feet; however, I
	10	don't understand where you arrived at this additional 10,000
	11	barrels you expect to recover.
	12	A. This was strictly an estimate, sir. We
	13	what was giving Coquina their main problem was that they
	14	was trying to operate this well on gas and handle all this
	15	water and when we electrified it the well currently will
	16	produce approximately 10 barrels of oil and 100 barrels of
	17	water per day, and from this I estimated that we should be
	18	able to recover another 10,000 barrels if we can just keep
	19	the troubles down on the well.
	20	Q. Some of these cumulative recoveries of
	21	wells in the neighborhood have been over 200,000 barrels
	22	A. They sure have.
	23	Q. Which would give this one only 90,000
	24	total cumulative.
	25	A. That's right. Now, as you will note,

	1	13	
	2	the recoveries from various wells in the area vary greatly.	
	3	Q. Now the one to the northwest, that	
<u> </u>	4	Coquina Federal 1-3 only made 91,000. Was it abandoned be-	
	5	cause of mechanical problems like this one was?	
	6.	A. I don't think so. I think it was just	
	7	the low price of oil and high operating cost, resulted in	
	8	it	
	9	Q. As I recall, when this pool was being	
	10	produced to	
	11	A. Yes, sir.	
	12	Q its later life, they were lifting	
	13	huge volumes of water in some of these wells.	
	14	A. They sure are. In fact they'd come in,	
	15	it seemed like the more water you could make initially, the	
	16	more oil it would make.	
•••	. 17	Q. Right, the water didn't cut the oil off	• •
	18	A. No, sir.	
	10	<u>n</u> it just made it more difficult to	
	20	produce, but you could produce a lot of water and a lot of	
	21	oil.	
	22	A. That is correct. If you can just handle	
	23	the water at a low enough cost, apparently you can make the	
	24	oil.	
	25	0. What is Twin Montana's plan for pro-	

1 14 2 ducing the well? 3 A. We have on this well a large air balance 4 pumping unit, a 640,000 unit with a 144-inch stroke on it, 5 and --6 What total volume can you lift with that Û. 7 unit? 8 A. . We can lift approximately 250 barrels 9 of water -- total fluid a day with this. 10 0. That's not very much for the Vada 11 Pennsylvanian, though. 12 A. No, it sure isn't, but the --13 Q. Some of the wells produce 7 - 800 barrels 14 of water a day when they were being completed. 15 That is correct. When they were -- the A. 16 fluid levels in them were relatively high. Our fluid level 17 is not that high and we are having to pump from bottom. In 18 fact, the well actually pounds fluid. Now this is probably 19 partially due to some steel that's still in the bottom of 20 the hole as a result of the tubing being lost, but ---21 Q. You never did get all that tubing out? 22 λ. Never did get it all out, but we were 23 able to acidize the well and get it started coming back our 24 direction. 25 Well, where do you have to set your Q.

1		15
2	pump?	
3	Α.	The pump is set approximately 50 foot
4	above the top of the	perforations.
5	Q	So there's not much junk in the bottom
6	of the hole, then?	
7	<b>A.</b>	No, sir.
- 3	Q	Okay, now who owns the lease? Apparently
. 9	it was two leases at	one time.
10	Α.	Yes, sir.
11	Q.	And in the north half of the northeast
12	quarter of Section 3.	· · · · · · · · · · · · · · · · · · ·
13	A.	Yes, sir.
14	Q	Who owns those leases?
15	A.	Well, the best I can determine, that the
16	east 40 is owned by (	Cactus Drilling Company, and that the
. 17	north 40 would be own	ned now by Coquina.
18	Q.	You mean the west 40.
19	<b>A.</b>	The west 40 would be owned by Coquina.
20	Q	And now you mentioned you talked to
21	Amoco and you talked	to Yates about your proposal here.
22	<b>A.</b>	Yes, sir.
23	Q	Did you talk to Cactus and to Coguina?
24	А.	I talked to Coguina. I did not talk to
25	Cactus. They're out	of Dallas and but Coquina had no ob-

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	2	jections but they didn't want to join us.	
	3	Q. So your route became the application	on for
a	. 4	a non-standard proration unit.	
	5	A That is correct, sir.	
	6	Q. I sec.	
	7	MR. NUTTER: Are there any further	
		questions of Mr. Hunniwell? He may be excused.	
	. 9	Do you have anything further, Mr. I	Bate-
	10	man?	-
	11	MR. BATEMAN: Nothing further, than	ık
	12	you.	
$\mathbf{\hat{z}}$	13	MR. NUTTER: Does anyone have anyth	ning
	14	they wish to offer in Case Number 7148?	
	15	We'll take the case under advisement	nt.
	16		
	. 17	(Hearing conclud <sup>^</sup> d.)	
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SALLY W. BOYD, C.S.R

Kt. I Box 193-B nia Fe, New Mcxico 87501 Phone (505) 455-7409 I, SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that the foregoing Transcript of Hearing before the Oil Cons()vation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Bayd C.S.R.

I do her by certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No.  $\frac{1148}{1981}$ , heard by me on  $\frac{2425}{1981}$ .

, Examiner **Oll Conservation Division** 

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IN THE NATTER OF:       }         Application of Twin Montana Oil Com- pany for a non-standard Oil pro- ration unit, Lea County, New Mexico.       CASE 7148         BEFORE: Richard L. Stamets       7148         ID       DEFORE: Richard L. Stamets         ID       For the Oil Conservation Division:         Ernest L. Padilla, Esq. Division:       Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico 87501         For the Applicant:       For the Applicant:			an a an						
Application of Twin Montana Oil Com- pany for a non-standard oil pro- ration unit, Lea County, New Mexico. ) 7149 BEFORE: Richard L. Stamets BEFORE: Richard L. Stamets TRANSCRIPT OF HEARING A P P E A R A N C E S For the Oil Conservation Ernest L. Padilla, Esq. Division: Ernest L. Padilla, Esq. Division: State Land Office Bldg. Santa Fe, New Mexico 37501 For the Applicant: 21 23 24			-	IN THE MATTER OF:	:		) ) )		ي. محمد معرفي المراجع الم مراجع المراجع ا
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	,	2	MP. STAMETS: And call next Case 7148,		
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3 1 CERTIFICATE 2 3 I, SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that 4 the foregoing Transcript of Hearing before the Oil Conserva-5 4 tion Division was reported by me; that the said transcript 8 is a full, true, and correct record of the hearing, prepared 7 by me to the best of my ability. 8 9 Sally W. Bryd C.S.R. 1Ū SALLY W. BOYD, C.S.I kt. 1 box 193-B (505) 455-7409 11 12 13 I do hereby certify that the foregoing is a complete record of the proceedings in 14 15 heard by me on 19 16 Van Ø, an Examiner Oil Conservation Division 17 18 19 20 21 22 23 24 25

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	i	For the Oil Conservat.	ion Ernest L. Padill	a, Esq.	
	17	Division:	Legal Counsel to	o the Division	
	18		State Land Offic	e Bldg.	
			Santa Fe, New Me	XICO 87301	
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# CERTIFICATE

I, SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that A the foregoing Transcript of Hearing before the Oil Conserva-tion Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability. SALLY W. BOYD, C.S.R. Rt. 1 Box 193-B Santa Fe, New Mexico 87501 Phone (505) 455-7409 I do hereby conilly that the foregoing is d contract a new one the proceeding in u was increasing of Cusardo. heard by ma on\_ \_, Examiner Oil Conservation Division 

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# TWIN MONTAÑA INC.









. ... COUNTY LEA, NEW MEXICO\_\_\_\_ FIELD\_\_\_\_VADA (PENN) OPR COQUINA OIL CORP. WELL NO. -LSE UERR FEDERAL Loc Sec 3, T-9-S, R-35-E (G) 1980 FNL & FFL of Sec INIQUE-NO. \_\_\_\_\_\_\_ 30-025-23752 SPUD 4-14-71 \_\_\_\_\_ 9900'RT MAPS F. R 4-7-71 ELEV D. F. Cactus Drlg. LAHEE CLASS 4178'KB CTR -SPLS LOGS e A BD LOC 98401 TEST BASIS PBD w HRS CHK TD. <u>20</u> IP PROD INTERVAL 515 24 PAY ZONE 300 P 9772-94 Penn TREATMENT POT DATE внр TP CP A/4000 GTY GOR 6-17-71 43 404 5 1/2" @ 9840 w/400 13 3/8" @ 385 w/350 CSG 8 5/8" @ 4040 w/ 500 -1 VADA (PENN) COUNTY I.EA NEW MEXTCO \_\_\_\_ FIELD \_\_\_\_ 1----WELL: COQUINA OII, #1 WEBB FEDERAL. DATE WELL RECORD REACHED T. D. ELEV SPL (LOG) MARKERS Arhy (2278) DST #1 9755-9800 op 90" Rec 2240' 011 Selt(2305) Yates (2760) 660' O&GCXW, 60" ISTP 1197, FP 467-SA (4004) 1080, 120" FSIP 1197, HP 5112-5063 Glor (6462) DE 16/0772-81 Drink(6932) 18/9785-94 Abo (7755) A/4000 W1fc (9005) Penn (9770) BEFORE EXAMINER NUTTER (6-23-71) - CONSERVATION - DIVISION Ó EXHIBIT NO. mt. 7148 <del>ČASE</del> INO. THE SUBSTIRFACE LIRPAR

6.

# SAMPLE CALCULATION DRAINAGE AREA VADA PENN FIELD BOUGH C FORMATION LEA COUNTY, NEW MEXICO

OIL IN PLACE

0 = (7758) P(1-SW)EVE

O = OIL IN PLACE, STOCK TANK BARRELS PER ACRE OF RESERVOIR VOLUME

P = POROSITY, FRACTION OF ROCK VOLUME

SW = WATER SATURATION FRACTION OF PORE SPACE

FVF = VOLUME OF RESERVOIR OIL PER VOLUME OF STOCK TANK OIL. BBL/BBL

TWIN MONTANA INC, WEBB FEDERAL WELL

$$0 = (7758) (.12) (1-.40)$$
  
1.15

P = .12

SW = .40

FVF = 1.15

0 = 485.7 BBLS PER ACRE FOOT

ESTIMATED RECOVERY FACTOR (Rp) IN FRACTION OF OIL PLACE

Rp = 0.25

Rp = (0.25)(485.7)

= 121.4 BBLS PER ACRE FT.

AVERAGE THICKNESS OF WEBB FEDERAL NO. 1 DRAINAGE AREA = 26 FEET

Rp = (121.4)(26) = 3156.4 BBLS PER ACRE

DRAINAGE AREA = CUMMULATIVE PRODUCTION/RECOVERY IN BBLS PER ACRE

= 80,488/3156.4

= 25.5 ACRES

RADIUS OF DRAINAGE =  $\frac{(25.5 \text{ ACRES})(43560 \text{ SQ FT/ACRE})}{3.1416}^{\frac{1}{2}}$ 

= 594.6 FT.

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OIL CO	NSERVATION DIVISION
Applicant	EXHIBIT NO. 8
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# SAMPLE CALCULATION DRAINAGE AREA VADA PENN FIELD BOUGH C FORMATION LEA COUNTY, NEW MEXICO

OIL IN PLACE

0 = (7758) P(1-SW)

O = OIL IN PLACE, STOCK TANK BARRELS PER ACRE OF RESERVOIR VOLUME

P = POROSITY, FRACTION OF ROCK VOLUME

SW = WATER SATURATION FRACTION OF PORE SPACE

FVF = VOLUME OF RESERVOIR OIL PER VOLUME OF STOCK TANK OIL. BBL/BBL

TWIN MONTANA INC, WEBB FEDERAL WELL

$$0 = \frac{(7758) (.12) (1-.40)}{1.15}$$

P = .12

SW = .40

FVF = 1.15

0 = 485.7 BBLS PER ACRE FOOT

ESTIMATED RECOVERY FACTOR (Rp) IN FRACTION OF OIL PLACE

Rp = 0.25

7

Rp = (0.25)(485.7)

= 121.4 BBLS PER ACRE FT.

AVERAGE THICKNESS OF WEBB FEDERAL NO. 1 DRAINAGE AREA = 26 FEET

Rp = (121.4)(26) = 3156.4 BBLS PER ACRE

DRAINAGE AREA = CUMMULATIVE PRODUCTION/RECOVERY IN BBLS PER ACRE

= 80,488/3156.4

= 25.5 ACRES

RADIUS OF DRAINAGE =  $\frac{(25.5 \text{ ACRES})(43560 \text{ SQ FT/ACRE})}{3.1416}$ 

= 594.6 FT.

BEFORE EXAMINER NUTTER OIL CONSERVATION DIVISION Applican'T EXHIBIT NO. 8. CASE NO. 7148

Docket No. 7-81

Dockets Nos. 8-81 and 9-81 are tentatively set for March 11 and 25, 1981. Applications for hearing must be filed at least 22 days in advance of hearing date. DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 25, 1981 9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stauets, Alternate Examiner: Application of Carl A. Schellinger for a unit agreement, Chaves County, New Mexico. Application of Carl A. Schellinger for a unit agreement, Unaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Campbell Station Unit Area, comprising 3.841 acres more or loss of State Loss is Tomobies 9 or 10 for the State of Tomobies 9 appricant, in the above-styled cause, seeks approval for the campueri station only a 3,841 acres, more or less, of State lands in Townships 8 and 9 South, Range 27 East. CASE 7157: Application of Grynberg & Associates for a unit agreement, Chaves County, New Mexico, Application of orynoers a associates for a unit agreement, thaves County, New Mexico. Applicant, in the above-styled tause, seeks approval for the Silman Lake Unit Area, comprising pricant, in the above-styled cause; seeks approval for the Silman Lake Unit Area, comprising 1743-seres, more or less, of State and fee lands in Townships 9 and 10 South, Ranges 26 and 27 of CASE 7158: Application of Consolidated Oil & Gas, Inc. for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Greenhorn and Dakota production in the wellbore of its Navajo Well No. 2-E located in Unit C of Section 11, Town-ship 25 North, Range 10 West CASE 7159: Application of Harlan Drilling Company for an unorthodox gas well location. San Juan County, New Application of Marian Urilling Lompany for an Unorthodox gas well incation, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 2370 feet from the North line and 1528 feet from the Nest line of Section 31, Township 10 North Parce 11 Nest Fulcher Vite-Pictured Cliffe Pack the NUM of said costion 31 to be dedito be arilled 2370 lect from the North line and 1328 feet from the West line of Section 31, Township 29 North, Range 11 West, Fulcher Kutz-Pictured Cliffs Pool, the NW/4 of said Section 31 to be dedi-CASE 7160: cated to the well. Application of Twin Montana Oil Company for a non-standard oil proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an 80-acre Vada-Pennsylvanian oil proration unit comprising the S/2 NE/4 of Section 3, Township 9 South, Range 35 East, to be dedi-cated to its Webb Federal Well No. 1 located in Unit C of said Section 3. (Continued from February 11, 1981, Examiner Hearing) CASE 7148: (Continued from January 28, 1981, Examiner Hearing) Application of Petro Lewis Corporation for downhole commingling, Lea County, New Mexico. Application of retro Lewis Corporation for downnole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Blinebry and Drinkard production in the wellbore of its L. G. Warlick "B" Well No. 2 located in Unit G of Sec-tion 19 Tourship 21 South Paper 37 Fact CASE 7051: tion 19, Township 21 South, Range 37 East. (Continued from February 11, 1981, Examiner Hearing) Application of Yates Petroleum Corporation for compulsory pooling and an unorthodox location, Eddy Application of fales retroiteum corporation for computery pooling and an unorthodox focation, County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation inderlying the N/2 of Section 26, Township 21 South, Range 26 First to be dedicated to a wall to be drilled at an uporthodox location 660 foot from the North CASE 7140: interests in the Morrow formation inderlying the N/2 of Section 26, Township 21 South, Range 26 East, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North line and 1650 feet from the East line of said Section 26. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision designation of applicant as operator of the well and of drilling and completing said well and the allocation of the cost thereor as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well. Application of John H. Hendrix Corporation for the extension of the vertical limits of the Langlie (Continued from February 11, 1981, Examiner Hearing) Application of John H. Hendrix Corporation for the extension of the vertical limits of the Langlie Mattix Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the vertical limits of the Jalmat Pool and the upward extension of the vertical limits of the Langlie Mattix Pool to a denth of 3362 feet subsurface underlying Unit C of Section 10 Termshi CASE 7149: of the vertical limits of the Jaimat rool and the upward extension of the vertical limits of the Langlie Nattix Pool to a depth of 3362 feet, subsurface, underlying Unit O of Section 19, Township Application of John Yuronka for four compulsory poolings, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Langlie Mattix Pool underlying the four 40-acre proration units comprising the SW/4 of Section 31, Township 22 South, Range 37 East, to be dedicated to wells to be drilled at standard locations thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the CASE 7161: Application of John Yuronka for four compulsory poolings, Lea County, New Mexico. 22 South, Kange 37 tast, to be dedicated to wells to be drilled at standard locations thereon. Al to be considered will be the cos. of drilling and completing said wells and the allocation of the to be considered will be the cos. of drilling and completing sald wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells, and a charge for risk involved in drilling said wells cost thereof as well as actual operating costs and thatges for sopervision, desa as operator of the wells, and a charge for risk involved in drilling said wells.

Page 2 of 3

Examiner Hearing - Wednesday - February 25, 1981

Docket No. 7-81

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CASE 7162: Application of McCulloch Oil & Gas Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the McKee formation underlying the E/2 of Section 25, Township 20 South, Range 38 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7163: Application of ARCO Oil and Gas Company for the extension of the vertical limits of the Langlie Nater Pool, Les County, New Mexicos. Applicant, in the above-styled cause, seeks the contraction of the vertical limits of the Jalmat Pool and the upward extension of the vertical limits of the Langlie Mattix Pool by 165 feet underlying the NE/4 SE/4 of Section 35, Township 23 South, Range 36 East.

CASE 7164: Application of ARCO Oil and Gas Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled class, state on order pooling all minoral interests in the Devonian and Ellenburger formations, Custer Field, underlying the N/2 of Section 6, Township 25 South, Range 37 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be comsidered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7165: Application of ARCO Oil and Gas Company for compulsory pooling, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Langley-Ellenburger Pool underlying the N/2 of Section 33, Township 22 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cest thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7166: Application of Inexco Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Chosa Draw Unit Area, comprising 2,560 acres, more or less, of Federal and State lands in Townships 25 and 26 South, Range 25 East.

CASE 7167: Application of Inexco Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Made Well Anticline Unit Area, comprising 39,238 acres, more or less, of State, Federal, and fee lands in Townships 12, 13, and 14 South, Ranges 21 and 22 East.

CASE 7168: Application of Cavalcade Oil Corporation for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221 to permit disposal of produced brine into an unlined surface pit located in Unit K or L of Section 33, Township 18 South, Range 30 East.

CASE 7129: (Continued from February 11, 1981, Examiner Hearing)

Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the N/2 of Section 20, Township 20 North, Range 8 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7169: Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the S/2 of Section 22, Township 28 North, Range 8 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7170: Application of Threshold Development Company for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the Atoka and Morrow formations for its Conoco 10A State Well No. 1Y in Unit F of Section 10, Township 19 South, Range 29 East. Page 3 of 3 Examiner Hearing - Wednesday - February 25, 1981 Docket No. 7-81

CASE 7171: Application of Zia Emergy Inc. for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 120-acre non-standard proration unit in the Fumont Cas Pool comprising the SW/4 SE/4 of Section 27, and the N/2 NE/4 of Section 34, Townthe Fumont Cas Pool comprising the SW/4 SE/4 of Section 27, and the N/2 NE/4 of Section 34, Townthe South, Range 36 East, to be dedicated to its Elliott "A" State Well No. 1 located 660 feet from the South line and 1980 feet from the East line of said Section 27.

CASE 7172: Application of Caulkins Oil Company for two unorthodox gas well locations, Rio Arriba County, New Nexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of the following two wells on its Breech A Lease to be recompleted in the Chacra, Mesaverde, and Dakota formations: No. 157 located 1980 feet from the North line and 660 feet from the West line of Section 10 and No. 629 located 660 feet from the North line and 760 feet from the West line of Section 9, both in Township 26 North, Range 6 West.

CASE 7173: Application of V-F Petroleum Inc. for an unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 330 feet from the North line and 1150 feet from the Fast line of Section 5, Township 16 South, Range 38 East, South Denton-Devonian Pool, the NE/4 NE/4 of said Section 5 to be dedicated to the well.

CASE 7174: Application of Jake L. Hamon for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the South and West lines of Section 36, Township 23 South, Range 26 East, South Carlsbad-Norrow Gas Pool, the S/2 of said Section 36 to be decicated to the well.

CASE 7175: Application of Conoco Inc. for compulsory pooling and a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcampdedicated to a well to be drilled at a standard location and dually completed in the Devonian and Ellenburger formations. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.



FEB 0 5 1981

Oil Conservation Division Energy and Minerals Department State Capitol Building Santa Fe, NM 87503

RE: Case No. 7148, Application of Twin Montana Oil Company

Gentlemen:

At the direction of Twin Montana Oil Company, I respectfully request continuation of Case No. 7148 from the scheduled hearing date of February 11, 1981 to the next regularly scheduled hearing set for February 25, 1981.

Sincerely, Kenneth Bateman

KB:dka

CC: Mr. Joe Joyer

L. C. White Summer S. Koch William Booker Kelly John F. McCarthy, Jr. Kenneth Bateman Benjamin Phillips C. Emery Cuddy, Jr. Larry C. White Forrest S. Smith Daniel H. Friedman John N. Patterson Paula Tackett

220 Otero St., P.O. Box 787, Santa Fe, N.M. 87501 (505) 982-4374

Attorneys and Counselors at Law

Dockets Nos. 7-81 and 8-81 are tentatively set for February 25 and March 11, 1981. Applications for hearing must be filed at least 22 days in advance of hearing date.

## DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 11, 1981

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for March, 1981, from fifteen protected pools in Lea, Eddy, and Chaves Counties, New Mexico.

- (2) Consideration of the allowable production of gas for March, 1981, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.
- (3) Consideration of purchaser's nominations for the one year period beginning April 1, 1981, for both of the above areas.

CASE 7146: Application of Amoco Production Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Perro Grande Unit Area, comprising 3524 acres, more or less, of State and Federal lands in Townships 25 and 26 South, Range 35 East.

#### CASE 7135: (Continued and Readvertised)

Application of Celeste C. Grynberg for a unit agreement, Eddy County. New Mexico. Applicant, in the above-styled cause, seeks approval for the South Cottonwood Draw Unit Area, comprising 3,195 acres, more or less, of State lands in Township 16 South, Range 24 East.

CASE 7147: Application of Yates Petroleum Corporation for an unorthodox gas well location and simultaneous dedication, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be drilled 1650 feet from the South line and 660 feet from the East line of Section 35, Township 18 South, Range 25 East, the S/2 of said Section 35 to be dedicated to said well and to applicant's "JX" Well No. 2 located in Unit N.

## CASE 7140: (Continued from January 28, 1981, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the N/2 of Section 26, Township 21 South, Range 26 Sect, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North line and 1650 feet from the East line of said Section 26. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 4063: (Reopened and Readvertised)

In the matter of Case Nc. 4063 being reopened on the motion of the Oil Conservation Division to consider the abolishment of the special rules and regulations for the Four Mile Draw-Morrow Gas Pool, Eddy County, New Maxico, as promulgated by Order No. R-3698. In the absence of objection said rules will be rescinded.

CASE 7148: Application of Twin Montana Oil Company for a non-standard oil proration unit. Lee County, New Mexico. Applicant, in the above-styled cause, seeks approval of an 80-acre Vada-Pennsylvanian oil proration unit comprising the S/2 NE/4 of Section 3, Township 9 South, Range 35 East, to be dedicated to its Webb Federal Well No. 1 located in Unit G of said Section 3.

CASE 7149: Application of John H. Rendrix Corporation for the extension of the vertical limits of the Langlie Mattix Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the vertical limits of the Jalmat Pool and the upward extension of the vertical limits of the Langlie Mattix Pool to a depth of 3362 feet, subsurface, underlying Unit 0 of Section 19, Township 23 South, Panze 37 East.

CASE 7150: Application of Cavalcade Oil Corporation for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221 to permit disposal of produced brine into an unlined surface pit located in Unit K or L of Section 33, Township 18 South, Range 30 East.

#### Page 2 of 3 Examiner Hearing - Wednesday - February 11, 1981

Docket No. 5-81

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CASE 7151: Application of C & E Operators, Inc. for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Mesaverde formation underlying the N/2 of Section 9, Township 30 North, Range 11 West, to be dedicated to a well to be drilled at a standard location in the NE/4 and a well to be drilled at a previously approved unorthodox location in the NW/4 of said Section 9. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells, and a charge for risk involved in drilling said wells.

CASE 7152: Application of C & E Operators, Inc. for compulsory pooling and a non-standard proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Mesaverde formation underlying a 158.54-acre non-standard gas proration unit comprising the SW/4 of Section 9, Township 30 North, Range II West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7153: Application of C & E Operators, Inc. for compulsory pooling and a non-standard proration unit. San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Mesaverde formation underlying a 158.54-acre non-standard gas proration unit comprising the SW/4 of Section 8, Township 30 North, Range 11 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7129: (Continued from January 28, 1981, Examiner Hearing)

Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the N/2 of Section 28, Township 28 North, Range 8 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

#### CASE 6670: (Continued from January 14, 1981, Examiner Hearing)

In the matter of Case 6670 being reopened and pursuant to the provisions of Order No. R-6183 which order promulgated temporary special rules and regulations for the Red Hills-Devonian Gas Pool in Lea County, New Mexico, including a provision for 640-acre spacing units. Operators in said pool may appear and show cause why the pool should not be developed on 320-acre spacing units.

<u>CASE 7154</u>: Application of Mobil Producing Texas and New Mexico, Inc. for designation of a tight formation, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the designation of the Mesaverde formation underlying portions of Townships 26 and 27 North, Ranges 2 and 3 West. containing 13,920 acres, more or less, as a tight formation pursuant to Section 107 of the Natural Gas Policy Act and 18 CFR Section 271.701-705.

CASE 7134: (Continued and Readvertised)

Application of Read & Stevens, Inc. for an unorthodox gas well location and two non-standard gas proration units, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of two 160-acre non-standard proration units in the Buffalo Valley-Pennsylvanian Gas Pool, the first being the NW/4 of Section 13, Township 15 South, Range 27 East, to be dedicated to its Langley "Com" Well No. 1 in Unit C, and the other being the NE/4 of said Section 13 to be dedicated to a well to be drilled at an unorthodox location 1315 feet from the North and East lines of the section.

## DOCKET: COMMISSION HEARING - WEDNESDAY - FEBRUARY 18, 1981

## OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205 STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 7155: Application of Southland Royalty Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 of Section 35, Township 18 South, Range 29 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling coid well.

## CASE 7057: (DE NOVO)

Application of Doyle Hartman for the extension of the vertical limits of the Langlie Mattix Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the Langlie Mattix Pool to the following wepths underlying the following 40-acre tracts in Township 24 South, Range 37 East: 55/4 55/4 of Section 30: 3364 feet; NE/4 SE/4 of Section 30: 3300 feet; and SE/4 SW/4 of Section 20: 3390 feet.

Hpon application of ARCO Oil and Gas Company this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 7156:

Application of Parabo, Inc. for amendment of Order No. R-5516, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5516 which authorized the disposal of produced salt water in unlined surface pits in Section 29, Township 21 South, Range 38 East. Applicant proposes modification of the Commission's requirements for the number, location, and depths of monitor wells, casing and perforating monitor wells, and a change in maximum depths of water permitted in the pits.



## January 9, 1981

Mr. Ernest Padilla Division Attorney Energy and Minerals Department Oil Conservation Division State Capitol Building Santa Fe, New Mexico 87503

Re: Application of Twin Montana Oil Company

Dear Ernie:

I enclose a copy of the original and one copy of the Application which I have prepared in connection with the nonstandard proration unit in Vada-Pennsylvanian Pool which You and I discussed some time ago.

I would appreciate it if you would have the application set for hearing at the earliest convenience.

Sincerely, KENNETH BATEMAN

KB:ksh Enclosure

cc: Mr. Joe Joyer



L. C. White Sumner S. Koch William Booker Kelly John F. McCarthy, Jr. Kenneth Bateman Benjamin Phillips

Cuse 7148

C. Emery Cuddy, Jr. Larry C. White Forrest S. Smith Daniel H. Friedman John N. Patterson Paula Tackett

220 Otero St., P.O. Box 787, Santa Fe, N.M. 87501 (505) 982-4374

Attorneys and Counselors at Law

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STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF:

Case 7148

Application of Twin Montana Oil Company, for a nonstandard proration unit, Lea County, New Mexico.

COMES NOW Twin Montana Oil Company, by its undersigned attorneys and for its application states:

1. It is the holder of the operating rights from the surface down to a depth of 9,940 feet insofar as United States Oil and Gas Lease NM 073791 (29-73791) covers the south half of the northeast quarter, Section 3, Township 9 South, Range 35 East, N.M.P.M., New Mexico.

2. A productive well, the Number One Wobb Federal was completed on the said property.

Unit Jed welder Fed # 7 Commun 3. The Number One Webb Federal was previously the subject of a communization agreement involving Lots 1 and 2 in the southeast quarter, northeast quarter, Section 3, Township 9 South, Range 35 East, N.M.P.M., Lea County, New Mexico containing 161.04 acres. Such communization agreement dated June 1, 1971 has been terminated due to non-production of the well.

4. The Applicant desires to recomplete the well, to dedicate a non-standard proration unit comprised of eighty (80) acres, which well will be otherwise subject to the special rules and regulations for the Vada-Pennsylvanian Pool.

5. The grant of this application will protect correlative rights, and will prevent economic waste.

WHEREFORE, the Applicant prays for the Department's Order approving a non-standard proration unit comprised of the south half northeast quarter of Section 3, Township 19 South, Range 35 East, N.M.P.M., New Mexico to future production from the Number One Webb Federal Well.

WHITE, KOCH, KELLY & MCCARTHY, P.A.

Attorneys for the Applicant P. O. Box 787 Santa Fe, NM 87501 STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF:

Application of Twin Montana Oil Company, for a nonstandard proration unit, Lea County, New Mexico. Case 7148

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COMES NOW Twin Montana Oil Company, by its undersigned attorneys and for its application states:

1. It is the holder of the operating rights from the surface down to a depth of 9,940 feet insofar as United States Oil and Gas Lease NM 073791 (29-73791) covers the south half of the northeast quarter, Section 3, Township 9 South, Range 35 East, N.M.P.M., New Mexico.

2. A productive well, the Number One Webb Federal was completed on the said property.

3. The Number One Webb Federal was previously the subject of a communization agreement involving Lots 1 and 2 in the southeast quarter, northeast quarter, Section 3, Township 9 South, Range 35 East, N.M.P.M., Lea County, New Mexico containing 161.04 acres. Such communization agreement dated June 1, 1971 has been terminated due to non-production of the well.

4. The Applicant desires to recomplete the well, to
dedicate a non-standard proration unit comprised of eighty
(80) acres, which well will be otherwise subject to the special
rules and regulations for the Vada-Pennsylvanian Pool.

5. The grant of this application will protect correlative rights, and will prevent economic waste.

WHEREFORE, the Applicant prays for the Department's Order approving a non-standard proration unit comprised of the south half northeast quarter of Section 3, Township 19 South, Range 35 East, N.M.P.M., New Mexico to future production from the Number One Webb Federal Well.

WHITE, KOCH, KELLY & MCCARTHY, P.A.

KENNETH BATEMAN

Attorneys for the Applicant P. O. Box 787 Santa Fe, NM 87501 STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 7148 Order No. R- 6617

APPLICATION OF TWIN MONTANA OIL COMPANY UIL FOR A NON-STANDARD/PRORATION UNIT,

LEA COUNTY, NEW MEXICO.

# ORDER OF THE DIVISION

BY THE DIVISION:

DRAFT

dr/

This cause came on for hearing at 9 a.m. on <u>February 25</u> 19<u>81</u>, at Santa Fe, New Mexico, before Examiner <u>Daniel S. Nutter</u> NOW, on this <u>day of</u>, 19<u>81</u>, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, <u>Twin Montana Oil Company</u> seeks approval of an <u>80</u> -acre non-standard gass proration unit comprising the <u>5/2 NE/4</u> of Section <u>3</u>, Township <u>9 South</u>, Range <u>35 East</u>, NMPM, to be dedicated to its <u>Webb Federal Well No. 1</u>, located in Unit <u>G</u> of said Section <u>3</u>.

(3) That the entire non-standard proration unit may reasonably be presumed productive of gas from the <u>Vada-Pennsylvanian Best</u>.
(3) That the entire non-standard gas provide the gas provide the efficiently and economically drained and developed by the aforesaid well.

(4) That approval of the subject application will afford the applicant the opportunity to produce his just and equitable oil share of the gass in the <u>Vada-Penneylvanian</u>
Gass Pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

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(1) That a n 80	acre	e non-standa	rd xgaas proration unit				
in the Vada-Pennsylv	anian Oil	Cas Po	col comprising the				
S/2 NE/4	of §	Section <u>3</u>	, Township <sup>9</sup> South				
	NMPM,	Lea	County, New Mexico,				
for Twin Montana DilCompany is hereby established and dedicated to its Webb Federal Well							
No. 1	^ , ]	located in U	nit <sup>G</sup> of said				
Section 3	•						

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary. DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.