CAMPBELL, CARR, BERGE

& SHERIDAN, P.A.

LAWYERS

MICHAEL B. CAMPBELL WILLIAM F CARR BRADFORD C. BERGE MARK F SHERIDAN WILLIAM P. SLATTERY

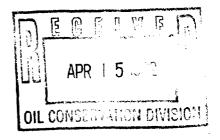
PATRICIA A. MATTHEWS MICHAEL H. FELDEWERT

JACK M. CAMPBELL OF COUNSEL

HAND-DELIVERED

JEFFERSON PLACE SUITE I - 110 NORTH GUADALUPE POST OFFICE BOX 2208 SANTA FE, NEW MEXICO 87504-2208 TELEPHONE (505) 988-4421 TELECOPIER (505) 983-6043

April 15, 1992



Mr. Michael E. Stogner Hearing Examiner Oil Conservation Division New Mexico Department of Energy, Minerals and Natural Resources State Land Office Building

Santa Fe, New Mexico 87501

Re: Oil Conservation Division Cases 10465 and 10466: Applications of Marbob Energy Corporation for Salt Water Disposal, Eddy County, New Mexico

Dear Mr. Stogner:

Enclosed are two copies of the recent water analysis performed by UNICHEM on the proposed disposal water to be injected into the Abo formation in the above-referenced cases. These analysis supplement the OCD Form C-108 for each of the subject disposal wells which were previously filed with the Division.

Very truly yours,

WILLIAM F. CARR WFC:mlh Enclosures

UNICHEM INTERNATIONAL P.O. BOX 1499 707 NORTH LEECH STREET HOBBS. NEW MEXICO 38240

Marbob Energy Corr	ρ.	Report Date:	March 31, 1992
Drawer 217		Lab In Date:	February 5, 1992
Artesia	, NM 99210	Sample Date:	February 5, 1992

Dear Robert Chase

Listed below p	lease find our water analy	sis report from Fost	ter Eddy , B	attery :
	Specific Gravity:		1.132	
	Total Dissolved Sol	ids:	185436	
	PH:		7.50	
	Ionic Strength:		3.298	
CATIONS:	0.1.	(0	mq/liter	
	Calcium:	(Ca++)	3200	
	Maqnesium:	(Mq++)	340	
	Sodium:	(Na+)	68544	
	Iron (Total)	(Fe++)	2.00	
	Barium	(Ba++)	2.30	
	Manganese:	(Mn++)	.02	
	Restivity:			
ANIONS:				
	Bicarbonate:	(HCO3-)	683	
	Carbonate:	(003)	0	
	Hydroxide:	(OH-)	0	
	Sulfate:	(\$04)	2669	
	Chloride:	(C1-)	110000	
GASES:				
	Carbon Dioxide:	(CO2)	*****	
	Oxygen:	(02)	*****	
	Hydrogen Sulfide:	(H2S)	*****	
SCALE INDEX (Po	sitive Value Indicates Sc	ale Tendency) * inc	licates tests were not ru	n.
	Temperature	CaCO3 SI	CaSO4 SI	
	86F 30.0C	1.62	-14.54	
	104F 40.0C	1.85		
	122F 50.0C	2,16		
	140F 60.0C	2.47		
	168F 70.0C	2,82	-13.88	
	176F 80.0C	3.22	-14.21	
	1701 50.00	22، ت	: + (

If you have any questions or require further information, please contact us.

Sincerely.

Sharon Wright Laboratory Technician

cc: John Bedingfield Marc Mitchell Johnny Grav Jr.

UNICHEM INTERNATIONAL P.O. BOX 1499 707 NORTH LEECH STREET HOBBS, NEW MEXICO 38240

Marbob Energy Co	pro.	Report Date:	March 31, 1992
Drawer 217		Lab In Date:	February 5, 1992
Artesia	. NM 88210	Sample Date:	February 5, 1992

Dear Robert Chase

Listed below pl	ease find our water analy	sis report from Fren	, В	attery :
	Specific Gravity: Total Dissolved Sol PH: Ionic Strength:		1.035 48952 7.30 1.021	
CATIONS:	Maqnesium: Sodium: Iron (Total) Barium Manganese:	(Ca++) (Mq++) (Na+) (Fe++) (Ba++) (Mn++)	mg/liter 2000 2187 13117 278.00 2.50 .38	
	Restivity:			
ANIONS:	Bicarbonate: Carbonate: Hydroxide: Sulfate: Chloride:	(HCO3-) (CO3) (OH-) (SO4) (C1-)	1757 0 2891 27000	
GASES:				
	Carbon Dioxide: Oxygen: Hydrogen Sulfide:	(02) (H2S)	***** ***** *****	
	======================================			
	Temperature		CaSO4 SI	
	86F 30.0C 104F 40.0C 122F 50.0C 140F 60.0C 168F 70.0C	1.14 1.36 1.62 1.96 2.30	-9.04 -9.00 -7.54 -7.04 -6.11	
	4705 00 00	0.00	A A 4	

2.66

If you have any questions or require further information, please contact us.

80.0C

176F

Sincerely,

Sharon Wright Laboratory Technician

cc: John Bedingfield Marc Mitchell Johnny Gray Jr. -3.81

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT



OIL CONSERVATION DIVISION

DRUG FREE

BRUCE KING GOVERNOR

ANITA LOCKWOOD CABINET SECRETARY

May 7, 1992

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87504 (505) 827-5800

CAMBELL, CARR, BERGE & SHERIDAN Attorneys at Law P. O. Box 2208 Santa Fe, New Mexico 87504

RE: CASE NO. 10465 and CASE NO. 10466 ORDER NO. R-9666

Dear Sir:

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

Sincerely,

Herene

Florene Davidson OC Staff Specialist

FD/sl

cc: BLM Carlsbad Office

STATE OF NEW MEXICO



ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING GOVERNOR

ANITA LOCKWOOD CABINET SECRETARY April 29, 1993

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87504 (505) 827-5800

Marbob Energy Corporation P.O. Box 217 Artesia, NM 88211-0217

Attention: Raye Miller

RE: Turner "B" Well Nos. 65 and 69. Sections 20 and 29, Township 17 South, Range 31 East, NMPM, Cedar Lake-Abo Pool, Eddy County, New Mexico. Division Order No. R-9666.

Dear Mr. Miller:

Reference is made to your letter dated April 5, 1993 requesting a time extension to convert said wells into salt water disposal wells. Pursuant to the provisions of Decretory Paragraph No. (9) of Division Order No. R-9666, issued in Case No. 10465 and 10466 and dated May 6, 1992, Marbob Energy Corporation as applicant in both cases is hereby granted a one-time three-year extension to said Order No. R-9666.

Injection authority for each of the two subject wells shall terminate automatically on May 6, 1996 if the operator has not commenced injection operations into the affected well.

Sincerely, William J. LeMay Director WJL/MES/amg Oil Conservation Division - Aztec cc: US Bureau of Land Management - Carlsbad File: Scase No. 10465 Case No. 10466 David R. Catanach - OCD, Santa Fe



ML SONCEE. ON DIVISION REC: VED

'93 APR / AM 8 55

April 5, 1993

Mr. William J. LeMay, Director Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

RE: Order No. R-9666

Dear Mr. LeMay:

Marbob Energy Corporation respectfully request that the time limit of Order No. R-9666 be extended for an additional three year period to a date of May 6, 1996. This request is made since during our review of these wells for the hearing, we discovered that there might be some additional reserves that could be productive in the upper part of the formation. These wells have both been returned to production. I have enclosed a copy of both Sundries filed on the wells and a copy of the C-115 production report for February, 1993. Since currently there appear to be additional productive hydrocarbon reserves, we would request the extension in time to allow for conversion to saltwater disposal.

If you have any questions regarding this matter, please contact me. Thank you for your help.

Sincerely,

Ray Miller

Raye Miller Land Department

RM/mm Enclosures

PERATOR: MARBOB ENE	MARBOB ENERGY CORPORATION	P.O. DRAWER	ER 217	ARTESIA	NW	88210	2/93 PA	PAGE 4
COL NAME (UNDERLINE)		INJECTION T	TOTAL LIQUIDS PE	PROD	DISPOSITION OF GAS	DISPOS	DISPOSITION OF OIL	
EASE NAME PT# WELL NO UNIT	T SEC-TWN-RNO WELL	INJECT. VOL PRES	ACTL BBLS BBLS WATER PROD PROD	GAS PROD DAYS (MCF) PROD SOLD	D TRN OTHER CDE	OIL UN BELS HAND TO (BEG) TRANS	TRN OTHER CDE	HAND (END)
ECTION 1 - JIL (CONTINU EDAR LAKE ABO RESERVOIR	(CONTINUED) ESERVDIR		CON	(CONTINUED)				
URNER B 00150529900 #65 00150545300 #69 :<<<< LEASE TOTAL >>	N 20 17S 31E P B 29 17S 31E P >>>>> 17S 31E P		532 4732 765 2072 1297 6804	4039 28 6697 28 10736 10736	CON	17 1169	NRC	145
HISUM-DEVONIAN-RESERVOIR	<u>BYOIR</u>							
7600 #4 8800 #7 ASE TOTAL	J 13 11S 27E J 13 11S 27E >>>>> 0	σ σ σ 3 2	345 17923 2930 23898 3275 41821	0 0 28 0 28 0	0	483 3227	AMO	531
HISUM_SAN_ANDRES_BESERVOIB	SERVOIR							
.TATE CF 3 00050027600 #8 :<<<< LEASE TOTAL >>	J <u>13 115 27E p</u> >>>>> 0	P	57 0 57 0	0 82 0	0	57 0	0	114
TATUS CODE •••FLOWING	THER" GAS	DISPOSITION CODE	OTHER	" OIL DISPOSITION CODE IRCULATING DIL	I HEREBY CER TRUE AND COM	CERTIFY THAT THE I COMPLETE TO THE BE	E INFORMATION GI BEST OF MY KNOW	CN GIVEN IS
ા 🤆 🗂 ખે	GAS LIFT	F ESTIMATED)	SSEDEMEN	EDEMENTATION (BSEW) XPLANATION ATTACHED		SHONDA S. NELSON (NAME)	ERK	<u>05-748-3303</u>
••••TEMP ABANDONED ••••INJECTION ••••DISCONTINUED	•••	EXPLANATION AT ACHED REPRESSURE MAINTENANCE			Alanda			/24/93
	VUSED ON LEASI SSHRINKAGE					(SIGNATURE)		(DATE)

	-	÷		JANO8 1993
Form 3160-5 (June 1990)	DEPARTMEN	r of the interior	IN DIVISION	FORM APPROVED Budget Bureau No. 1004–0135 Expires: March 31, 1993
	BUREAU OF I	AND MANAGEMENT		5. Lease Designation and Serial No.
	SUNDRY NOTICES	AND REPORTS ON WELLS	nm 8 55	LC-029395(B)
Do not use	this form for proposals to dri	I or to deepen or reentry to a di PERMIT-" for such proposals		6. If Indian, Allottee or Tribe Name
	SUBMIT	IN TRIPLICATE		7. If Unit or CA, Agreement Designation
1. Type of Well Oil Well			-	8. Well Name and No.
2. Name of Operat				Turner B #65
Marbob En	ergy Corporation		ŀ	9. API Well No.
3. Address and Te				30-015-05299
P. O. Dra	wer 217, Artesia, NM	88210 505-748-3303	3 .	10. Field and Pool, or Exploratory Area
4. Location of We	ll (Footage, Sec., T., R., M., or Survey De	scription)		Cedar Lake Abo
330	FSL 1980 FWL, Unit N		F	11. County or Parish, State
	20-T17S-R31E			
		· · · · · · · · · · · · · · · · · · ·		Eddy
12. CH	ECK APPROPRIATE BOX() TO INDICATE NATURE OF	NOTICE, REPOR	T, OR OTHER DATA
TY	PE OF SUBMISSION		TYPE OF ACTION	
X	Notice of Intent	<u> </u>		
L	Notice of Intent	Abandonment Recompletion		L Change of Plans New Construction
	Subsequent Report	Plugging Back		Non-Routine Fracturing
	Subsequent Report			Water Shut-Off
	Final Abandonment Notice	Altering Casing		Conversion to Injection
		X Other Perf uppe	er Abo	Dispose Water
				(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
		pertinent details, and give pertinent dates, includi al depths for all markers and zones pertinent to t		
	Marbob Energy Corp	pration proposes the fol	lowing work:	
		s & bit, drl out CIBP @ 6 8' & acd, put well on pro		? @ 7105',
				The second se
	Johnny Gray receiv with work 12/16/92	ed verbal approval from a	Shannon Shaw to	o proceed
Signed	hat the foregoing is transport correct	TitleProduction Clo	erk	
Approved by	r Felder or State office up approval, if any:	PETROFEUM EN	IGNEEP	Date 1-6-93
	3			

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

	OPERATOR'S COPY	
(June 1990) DEPARTMEN	ED STATES I OF THE INTERIOR AND MANAGEMENT	FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993 5. Lease Designation and Serial No.
Do not use this form for proposals to dril	AND REPORTS ON WELLS Il or to deepen or reentry to a different reservoir. & PERMIT—" for such proposals	LC-029395B 6. If Indian, Allottee or Tribe Name
, SUBMIT	IN TRIPLICATE	7. If Unit or CA, Agreement Designation
I. Type of Well Image: Constraint of Cons	· · · · · · · · · · · · · · · · · · ·	8. Well Name and No. Turner B #69
Marbob Energy Corporation 3. Address and Telephone No.		9. API Well No. 30-015-05453
P. O. Drawer 217, Artesia, NM 4. Location of Well (Footage, Sec., T., R., M., or Survey De		10. Field and Pool, or Exploratory Area Cedar Lake Abo
380 FNL 2310 FEL, Unit B, Sec.		11. County or Parish, State Eddy, NM
12. CHECK APPROPRIATE BOX(B) TO INDICATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION	
 Notice of Intent Subsequent Report Final Abandonment Notice 	Abandonment Recompletion Plugging Back Casing Repair Altering Casing Other <u>Return well to prod</u> .	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Conversion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
give subsurface locations and measured and true vertic	l pertinent details, and give pertinent dates, including estimated date of startin al depths for all markers and zones pertinent to this work.)* 6975', CO to PBTD 7090', tstd perfs a on.	
· · ·	ACOSPTED FOR DELLA MAIL OF 1993 CARLSBAD, NEW MEXIC	RECEIVED
14. I hereby certify that the foregoing is the and correct Signed (This space for Federal or State office use) Approved by	Title Production Clerk	2/26/93
Conditions of approval, if any: Title 18 U.S.C. Section 1001, makes it a crime for any person or representations as to any matter within its jurisdiction.	h knowingly and willfully to make to any department or agency of the Unite	xd States any false, fictitious or fraudulent statement

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STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

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

APPLICATION OF MARBOBENERGYCORPORATION Case No. 10465 FOR SALT WATERDISPOSAL, EDDYCOUNTY, NEW MEXICO

APPLICATION OF MARBOBENERGYCORPORATION Case No. 10466 FOR SALT WATERDISPOSAL, EDDYCOUNTY, NEW MEXICO

Order No. R-9666

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on April 16, 1992, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this <u>6th</u> day of May, 1992, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) At the time of the hearing both Case Nos. 10465 and 10466 were consolidated for the purpose of testimony, and inasmuch as the subject for both cases involves the same area and both are dependent on the other, one order should therefore be issued in this matter.

(3) In Case No. 10465 the applicant, Marbob Energy Corporation, seeks authority to dispose of produced salt water into the Cedar Lake-Abo Pool through the perforated interval from approximately 6890 feet to 7480 feet in its Turner "B" Well No. 65 located 330 feet from the South line and 1980 feet from the West line (Unit N) of Section 20, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico.

(4) Similarly in Case No. 10466, the applicant, Marbob Energy Corporation, seeks authority to dispose of produced salt water into the Cedar Lake-Abo Pool through the perforated interval from approximately 6890 feet to 7230 feet in its Turner "B" Well No. 69 located 380 feet from the North line and 2310 feet from the East line (Unit B) of Section 29, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico.

(5) Both wells were drilled by Sinclair Oil and Gas Company in 1960 and completed and produced from the Cedar Lake-Abo Pool until 1971 when both wells were deemed uneconomical due to water encroachment and have since been carried as temporary abandonments.

(6) The Cedar Lake-Abo Pool is a small barrier type reef trending east-west. In 1963 a total of fourteen wells were producing from the pool, the driving mechanism for the pool was solution gas; however, due to water influx, the pool is virtually depleted at this time.

(7) Currently only one well is producing from the Cedar Lake-Abo Pool, that being the applicant's Fren Oil Company Well No. 19 located in Unit I of Section 19, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico.

(8) There is presently an active salt water disposal well in Unit C of said Section 29; Marbob's Turner "B" Well No. 73, which is injecting Grayburg and San Andres produced waters into the Abo formation under authority of the Division by Order No. R-3378, dated February 12, 1968.

(9) The evidence presented indicates that the portion of the Cedar Lake-Abo Pool in Sections 20 and 29 can receive injected salt waters for disposal purposes without harm to any remaining hydrocarbon production from said pool.

(10) All operators of disposal wells are obligated to take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface via surrounding injection, production, and/or plugged and abandoned wells.

(11) The following described previously plugged and abandoned wells are located within the one-half mile "area of review" for the two proposed disposal wells:

Well Name and Number	Footage Location	P & A Date
Atlantic Richfield Company Turner "B" Well No. 58	1650' FNL - 660' FWL (Unit E)	October, 1971
Sinclair Oil & Gas Company Turner "B" Well No .75	330' FNL - 660' FWL (Unit D)	January, 1961
	nship 17 South, Range 31 County, New Mexico.	East, NMPM,

(12) Prior to commencement of injection into both the Turner "B" Well Nos. 65 and 69, the operator should demonstrate that the wells described in Finding Paragraph No. (11) above have either been re-plugged or have been previously plugged and abandoned in such a manner as to ensure that they do not provide an avenue of escape for fluid from the proposed injection zone and in accordance with a program that is satisfactory to the supervisor of the Division's Artesia District Office.

(13) Prior to commencing injection operations, the casing in the subject wells should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(14) Injection into said wells should be accomplished through 23/8-inch plastic lined tubing installed in a packer set at approximately 6800 feet; the casing-tubing annulus should be filled with an inert fluid; and a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(15) The injection wells or pressurization system should be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 140 psi.

(16) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Abo formation.

(17) The operator should give advance notification to the supervisor of the Artesia District Office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure tests, and of the conductance of any remedial cement and/or plugging operations in order that the same may be witnessed.

(18) Approval of the subject applications will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

(19) The injection authority granted herein should terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

IT IS THEREFORE ORDERED THAT:

(1) Marbob Energy Corporation, as applicant in both Division Case Nos. 10465 and 10466, is hereby authorized to utilize its Turner "B" Well No. 65 located 330 feet from the South line and 1980 feet from the West line (Unit N) of Section 20, and Turner "B" Well No. 69, located 380 feet from the North line and 2310 feet from the East line (Unit B) of Section 29, both in Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico, to dispose of produced salt water into the Cedar Lake-Abo Pool through the following perforated intervals:

Well No. 65	6890 feet to 7480 feet	
Well No. 69	6890 feet to 7230 feet.	

(2) The applicant shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production or plugged and abandoned wells.

IT IS FURTHER ORDERED THAT:

(3) Injection into the proposed injection wells shall be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 6800 feet; the casing/tubing annulus in each well shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak-detection device.

(4) The injection wells or pressurization system shall be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 140 psi.

<u>PROVIDED HOWEVER THAT</u>; injection into the Abo formation through said Turner "B" Well Nos. 65 and 69 *shall not commence* until the following described wells have either been re-plugged or have been previously plugged and abandoned in such a manner as to ensure that they do not provide an avenue of escape for fluid from the proposed injection zone and in accordance with a program that is satisfactory to the supervisor of the Division's Artesia District Office.

Well Name and Number	Footage Location	P & A Date
Atlantic Richfield Company Turner "B" Well No. 58	1650' FNL - 660' FWL (Unit E)	October, 1971
Sinclair Oil & Gas Company Turner "B" Well No. 75	330' FNL - 660' FWL (Unit D)	January, 1961
	nship 17 South, Range 31 I County, New Mexico.	East, NMPM,

(5) The Director of the Division may, upon proper application, authorize an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Abo formation.

(6) The operator shall give advance notification to the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure tests, and of the conductance of any remedial cement and plugging operations in order that the same may be witnessed.

(7) The operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing, casing or packer in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(8) The applicant shall conduct disposal operations and submit monthly reports in accordance with Rules 702, 703, 704, 705, 706, 708 and 1120 of the Division Rules and Regulations.

(9) The injection authority for each of the two subject wells granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the affected well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(10) 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 0 0 WILLIAM J. LEMA Director

SEAL