PADILLA & SNYDER

ATTORNEYS AT LAW
200 W. MARCY, SUITE 212
P.O. BOX 2523

ERNEST L. PADILLA
MARY JO SNYDER

SANTA FE, NEW MEXICO 87504-2523

FAX 988-7592 AREA CODE 505

(505) 988-7577

September 19, 1988

HAND-DELIVERED

Case 9497

Mr. William J. LeMay
Oil Conservation Division
Land Office Building
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Application of Corinne B. Grace for Salt Water Disposal; "Well No. 1, Eddy County, New Mexico Zat

Dear Mr. Lemay:

Enclosed please find the application of Corinne B. Grace for salt water disposal. We request that the application be approved administratively. Should you require anything further after your staff's review of the application, please do not hesitate to call upon us to supply that information to you.

1 1 1 5 . 10

Ernest L. Padilla

ELP:crk

RECEIVED

Enclosure as stated

SEP 19 1988

OIL CONSERVATION DIVISION

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OIL CONSERVATION DIVISION

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APPLICATION FOR AUTHORIZATION TO INJECT

Corinne B. Grace

Zac Federal, Well No. 1

1980' FWL & 660' FSL

Sec. 25, T.26S., R.30E., NMPM

Eddy County, New Mexico

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

POST OFFICE BOX 2008 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 67501

RECEIVED

FORM C-108 Revised 7-1-81

nication for adjustitude to their	IPPLI	CATION	FOR	AUTHORIZATION	TO	INJEC
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•	Purpose: Secondary Recovery Pressure Maintenance X Disposal Storage Application qualifies for administrative approved CONSTRUCTION DIVERNAL OF THE CONTROL O
	Address: P. O. Box 1418, Carlsbad, NM 88220
	Contact party: Doug Chandler Phone: 887-5581
•	Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
•	Is this an expansion of an existing project?
•	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
•	Attach a tabulation of data on all wells of public record within the area of review whi penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
	Attach data on the proposed operation, including:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and If injection is for disposal purposes into a zone not productive of oil or gas
	at or within one mile of the proposed well, attach a chemical analysis of
	the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
•	Attach appropriate geological data on the injection zone including appropriate lithological, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
	Describe the proposed stimulation program, if any.
•	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
•	Attach a chemical analysis of frosh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
	Applicants for disposed wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
	Applicants must complete the "Proof of Notice" section on the reverse side of this for
•	Certification
	I hereby certify that the information submitted with this application is true and corr to the best of my knowledge and belief.
	Name: Doug Chandler Title Agent
	Signature: New Mandler Date: 7-15-88

TABLE OF CONTENTS

- I. Purpose
- II. Operator
- III. Well Data
 - IV. Expansion of Existing Project?
 - V. Area Maps
 - VI. Tabulation of Well Data
- VII. Proposed Operation Data
- VIII. Geological Data
 - IX. Proposed Stimulation Program
 - X. Logging and Test Data
 - XI. Fresh Water Analysis
 - XII. Affirmative Statement
- XIII. Proof of Notice
 - XIV. Certification

Section I

Purpose

I. Purpose

- A. To inject disposal water from area wells into nonproductive Bell Canyon and Upper Cherry Canyon Formations. Operator may accept disposal water from other operators.
- B. This application qualifies for administrative approval.

Section II

Operator

II. Operator

Corinne B. Grace P. O. Box 1418 Carlsbad, New Mexico 88220

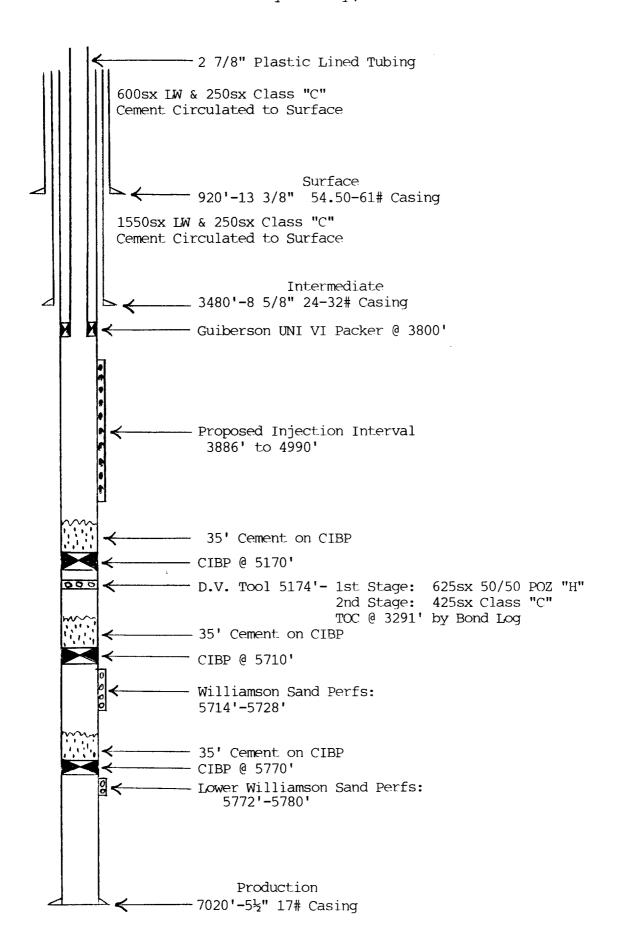
Contact Party: Doug Chandler Phone: (505) 887-5581

Section III

Well Data

Zac Federal #1

1980' FWL & 660' FSL Sec. 25, T26S, R30E., NMPM Eddy County, New Mexico



III. Well Data

Α. 1. Corinne B. Grace - Operator Zac Federal Well No. 1 1980' FWL & 660' FSL Sec. 25, T.26S., R.30E., NMPM Eddy County, New Mexico 2. Casing Strings Surface: Hole Size: 17½" Casing Size: 13 3/8" Casing Weight: 54.50#-61.00# Setting Depth: 920' Cemented with 600sx LW + 250sx Class "C". Circulated Cement to Reserve. Intermediate: Hole Size: 11" b. Casing Size: 8 5/8" Casing Weight: 24-32# 3480' Setting Depth: Cemented with 1550sx T.L.W. and 250sx Class "C". Cement Top calculated at 300' with 35% wash out factor. Production: Hole Size: 7 7/8" C. Casing Size: 5½" Casing Weight: 17# Setting Depth: 7020' DV Tool Depth: 5174' Cemented 1st stage with 625sx class "H" 50/50 POZ. Cemented 2nd stage with 425sx class "C". Cement Top at 3291' determined by Cement Bond Log. 2 7/8" plastic lined to be set 3. Tubing: at 3800'+. Guiberson UNI VI retrievable to 4. Packer: be set at 3800'+. В. Formation: Bell Canyon and Upper Cherry Canyon 1. Pool: East Ross Draw Delaware Interval: 3886' to 4990' perforated. 2. Proposed Individual Intervals: 3886'-3892' 3904'-3928' 4026'-4040' 4084'-4110' 4140'-4150' 4158'-4168' 4320'-4340' 4354'-4376' 4424'-4444'

4474'-4518'

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4474'-4518'
4586'-4624'
4650'-4666'
4714'-4746'
4770'-4786'
4873'-4990'
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- 3. Well was drilled as Cherry Canyon Oil Producer.
- 4. Perforations at 5772'-5780': Set CIBP @ 5710' Cap with 35' Cement set CIBP @ 5170' cap with 35' cement.
- 5. Next Producing zone in area: Williamson Sand, top at 5700'.

RECEIVED Form 3160-4 Form approved. (November 1983) Budget Bureau No. 1004-0137 SUBMIT IN DUPLICATE. UNITED STATES (formerly 9-530) Expires August 31, 1985 DEPARTMENT OF THE INTERIOR OCT PROPERTY AND DESIGNATION AND SERIAL NO. **BUREAU OF LAND MANAGEMENT** CARLSBAD RESOUNCE 27650 WELL COMPLETION OR RECOMPLETION REPORT AMBELOGOUNTERS DIAR, ALLOTTER OR TRIBE HAME N/A In. TYPE OF WELL: WELL X 7. I'NIT AUREBMENT NAME b. TYPE OF COMPLETION: N/A 8. FARM OR LEASE NAME DEEP-BERVE. WORK WELL X Other 2. NAME OF OPERATOR Zac Federal 9. WELL NO. Corinne B. Grace 3. AUDRESS OF OPERATOR 10. FIELD AND POOL, OR WILDCAT Box 1410, Carlsbad, New Mexico 88220
WELL (Report location clearly and in accordance with any State requirement Und. East Ross Draw
11. BEC., T., R., M., OR BLOCK AND BURYET
OR AREA 1980' FWL & 660 FSL At top prod. Interval reported below Same At total depth Same Sec.25, T26S, R30E. 14. PERMIT NO. DATE INSUED 12. COUNTY OR PARISH 13. BTATE Eddy 4-14-87 MM 17. DATH COMPL. (Ready to prod.) 15. DATE SPUDDED 16. DATE T.D. REACHED 18. BLEVATIONS (DF, RKB, RT, OR, ETC.)* 19. BLEY. CABINGHEAD 6-9-87 7-22-37 9-14-87 3039 GR 3039 22. IF MULTIPLE COMPLED FOR INSERTIND ROTARY TOOLS 20. TOTAL DEPTH, MD A 21. PLUG, BACK T.D., MD & TYD CABLE TOOLS 7020 MD 6978 MD 24. PRODUCING INTERVAL(S), OF THIS COMPLETION-TOP, BOTTOM, NAME (MD AND TVD) 25. WAR DIRECTIONAL BURYBE MADE OCT 1 3 1987 5720-5791 Williamson Sand 335 No 26. TIPE ELECTRIC AND OTHER LOGS RUN 27 WAR WELL CORED CARLSBAD, NEW MEXICO CNL-DLL-MSFL No CASING RECORD (Report all strings set in well) 25. CABINO BIZE WEIGHT, LB./FT. DEPTH BET (MD) HOLE SIZE CEMENTING RECORD AMOUNT PULLED 250sx 13 3/8 54.50-61 920 17 1/2 600sx LW -0-250sx "C" 8 5/8 24 - 323480 12 1/4 1550 LW -0-" H " 17 7020 625 7/8 425 -0-LINER RECORD TUBING RECORD 30. SCREEN (MD) 1122 TOP (MD) BOTTOM (MD) BACKS CEMENTS DEPTH BET (MD) RIZE PACKER BOT (MD) 31. PERFORATION RECORD (Interval, size and number) ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) AMOUNT AND RIND OF MATERIAL USED 5716-5722 4500 gal Gel Fluid with 6000# 20/40 & 12/20 Sand 5716-5722 3 Holes 3" 83.* PRODUCTION WELL STATUS (Producing or shut-in) DATE PIRET PRODUCTION PRODUCTION METHOD (Flowing, gas lift, pumping-eize and type of pump) 25"x15"x24' 9-14-87 Producing Pumping Insert Pump PROD'N. FOR TEST PERIOD DATE OF TREE HOURS TESTED OIL-BBL. UAR-OIL BATIO GAR-MCF. WATER-BRL 24 9-28-87 140 111 1412 CALCULATED 24-HOUR RATE FLOW. TUBING PRESS. OIL GRAVITY-API (CORR.) CASING PRESSURE GAS--MCF. WATER-BELL 34. DIBPOSITION OF GAS (Bold, used for fuel, vented, etc.) TEST WITHBESED BY Fuel & Vented Doug Chandler 35, LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

TITLE

Miller

SIGNED 1221

Agent

DATE 10-5-87

RECEIVED.	Delaware	Salt	D:: 6 +] D.T.	FORMATION	SUMMARY OF PC drill-stem, tests, recoveries):
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	6899	3415	1591	MOTTOM	terval tested, cur
And the second s	Sand - Shale	- Anhydrit	Sand - Shale - Redbed	DESCRIPTION, CONTENTS, ETC.	SUMMARY OF PORCUS ZONES: (Snow all important Zones of potents) and contents described and shut-in pressures, and drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):
	Manzanita Limestone	Salt Delaware	NAKE		38.
	4770	1591 3608	MEAS, DEPTH	71.	GEOLOGIC MARKERS
	4761	1589 3598	TRUE VERT. DEPTH	TOP	·

Form 3160-5 (November 1983)	UNITED	STATES	SUBMIT IN TRIPLICA	TE. B	udget Bureau No. : xpires August 31,	1004-0135
(Formerly 9-331)	DEPARTMENT O	FTHE INTERI	OR verse alde) TERLION'S COPY	5. LEA	BE DESIGNATION AND	
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4. LOCATION OF WELL (R See also space 17 belo At surface	eport location clearly and i	n accordance with any	State requirements.		ELD AND POOL, OR WI	
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14. PERMIT NO.	15. BLEV/	TIONS (Show whether DF	, RT, GR, etc.)	Sec.	25, T265,	R30E
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*See Instructions on Reverse Side

Section IV

Expansion of Existing Project (Not-Applicable)

Section V

Area Maps

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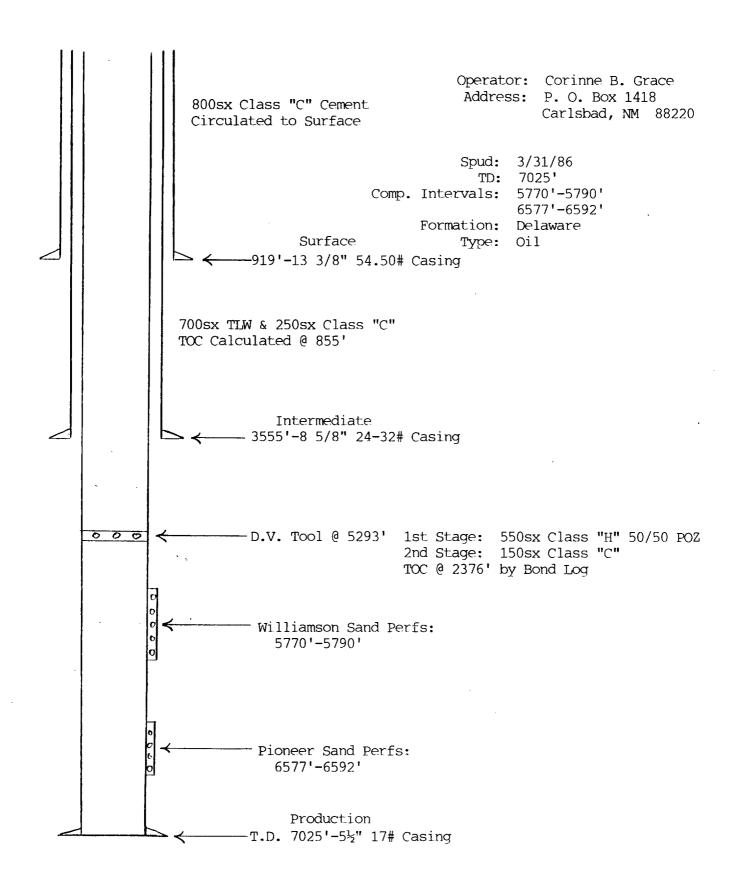
LOVING County

Section VI

Tabulation of Well Data

Grace "CG" Federal #1

1980' FEL & 2310' FSL Sec. 25, T26S, R30E NMPM Eddy County, New Mexico



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Form 3160-4 (November 1983) (formerly 9-330)	DEPAR BU	TMEN		STA TH	TES E INT		it in Z	structi	TE* ther in- ions on e side)	5. LEA	Expires sr prs M-27	Bureau Augus	u No. 1004 st 31, 1985 on and seri	IAL NO.
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6-5-87

DATE ___

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FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.		TOP	Ð
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Cherry Canyon	4576	5048	Sand & Limestone			
Abby	5160	5176	Sand & Shale			
Williamson	5768	5831	Sand & Shale			
Ату	5868	5902	Sand & Shale			
Brushy Canyon	6029				, t	
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Corinne G					-	٠		2		-	1		
P. O. Box	1418. C	ar1st	oad.	New I	Mexic	o 8892	0	AC		10. FIELD A	D POOL	. OR WILDCAT	
4. LOCATION OF WELL	(Report location	clearly	and in a	ccordance	with any	State requir	ement	190 114	377	Ross			
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At top prod. Inter	rval reported belo	₩									į		
At total depth										25-269	3-30	E NMPM	
				14. PE	RMIT NO.	:		ISSUED		12. COUNTY PARISH	4	13. STATE	
15. DATE SPUDDED	16. DATE T.D. RE	ACHED	17. DATE	COMPL. (Ready to	prod.) 18		31-86		Eddy		NM ELEV. CABINGHEAD	
3-31-86	8-5-86	Ì	1-	-31-8	7			3061		,,		GR	
20. TOTAL DEPTH, MD &	TVD 21. PLUG	, BACK T.D	., MD & 1	rvo 22.	. IF MULT HOW MA	IPLE COMPL.		23. INTE		ROTARY TOO	LS	CABLE TOOLS	
7025 24. PRODUCING INTERV	AL(S), OF THIS C	COMPLETIO	DN-TOP.	BOTTOM.	NAME (M	D AND TVD)*	<u> </u>		>	X	1 25	. WAS DIRECTIONAL	
5770-82 D				•	,		,					SURVEY MADE	
			•									No	
26. TIPE BLECTRIC AN		UN .									27. W	AS WILL CORED	
CNL-GR	DLL-GR		CASI	NG RECO	RD (Repo	ert all strings	set in	well)				NO	
CASING SIZE	WEIGHT, LB./F	T. DI	EPTH 8E1			E SIZE			ENTIN	3 RECORD		AMOUNT PULLED	
13 3/8	54.50		919		17	13				Circulat		0	
8 5/8	24-32		3555		11	7.70			o S	urface (<u>`sg</u>	0	
5 1/2	17	—	7025	2		7/8	<u> </u>	0sx				0	
29.	1	LINER R	ECORD	* · · · · · · · · · · · · · · · · · · ·	<u> </u>			30.	-	TUBING REC	ORD		
8121	TOP (MB)	BOTTOM	(MD)	SACKS CI	EMENT*	SCREEN (M	D)	SIZE		DEPTH SET (1	(D)	PACKER BBT (MD)	
					<u> </u>			2 7/8	<u> </u>	5759	·		,
31. PERFORATION RECO	RD (Interval, siz	e and nu	mber)		<u> </u>	82.	ĀC	ID, SHOT.	FRAC	TURE, CEMEN	T SQU	EEZE, ETC.	
						DEPTH INT				MOUNT AND RE			
5770-82	.50 2	SPF	2	20 Ho	les	5770-	82	,				Frac 20,000	gals
									<u>Gel</u>	1 - 159,0	00# :	20/40 Sand	
									ļ				
33. •						CTION			·				
DATE FIRST PRODUCTION	· ·				as lift, pu	mping—size	and t	ype of pun	np)	ah:	ut-in)	a (Producing or	
1-31-87	HOURS TESTED	пр 2½" снов	X2"X2	PROD'	N. FOR	OIL-BBL.		GA8NG	CF.	WATER-BE		Cing	
2-20-87	24	W	0	TEST	PERIOD	117		211	i	324		1808	
FLOW. TUBING PRESS.	CASING PRESSUR	E CALC	ULATED OUR RATE	011,	BBI. ACC	EPTED F	ΰk			RBBL.	OIL 0	RAVITY-API (CORR.)	
34. DISPOSITION OF GA	8 (Bold, used for	luel, veri	ed. etc 1							TEST WITH			
Fuel and	_	,,	, 0,0,1			FEB 2	4 1	987		Steve			
35. LIST OF ATTACHM	A VEHLEU			·	 					i steve	<u>= 117</u>	JIIS	•
Well tes	st chart.					In						19 M. Assi	
36. I hereby certify	tnat the foregoin	g and att	ached in	formation	a incontrol	le Delected 250 eT	4€ ₩	MEXIC	EQ.	m all available	records	1 14 14 15	
SIGNED S	lly Im	lles	····	TI	TLB	Agent	· 	· 		DAT	E	2-23-87	_
1	*/\$	Indiana	lone c-	٦ ٥	(A	ا المساملات	D_4=	D		11-1	;	1 12 31 11	-

"(See Instructions and Spaces for Additional Data on Reverse Side)

·	TOP	TRUE VERT. DEPTH					<u>.</u> •	.					1	1		1,				,	: •	1	•	
GEOLOGIC MARKERS	TC	MEAS, DEPTH																				j	······································	
38. GEOL		NAME											1	*** *** ***			11.	•				(a) (b) (c) (c) (c) (d)		
SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and dildill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);	DESCRIPTION, CONTENTS, ETC.	יר ב מי	Sand & Limestone	Sand & Shale	Sand & Shale	Sand & Shale		Sand & Shale	Sand & Shale									•				FFR 2 6-1987		
rval tested, cr	BOTTOM	3714	5048	5176	5831	5902		6610	6850										•		1	• • •	z en	
cluding depth into	TOP	3692	4576	5160	5768	5868		6574	67	() () () () () () () () () () () () () (134	1016								-			i i i	
drill-stem, tests, increases):	FORMATION	Ruenov	Cherry Canyon	Abby	Williamson	Amy	Brushy Canyon	Pioneer 3	DWM	tski p	n Og (186				·			•	,	.]				. •

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POR drill-stem, tests, in recoveries):	OUS ZONES: (SI cluding depth in	how all important terval tested, cus	SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):	38, GEOI	GEOLOGIC MARKERS	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.		TOP	ď(
Ramsey	3692	3714	Sand	NAME	MEAS, DEPTH	TRUE VERT. DEPTH
Cherry Canyon	4576	5048	Sand & Limestone	Delaware	3656	
Abby	5160	5176	Sand & Shale			
Williamson	5768	5831	Sand & Shale			
Amy	5868	5902	Sand & Shale			
Brushy Canyon	.6509					
Pioneer	6574	6610	Sand & Shale		100 A	
MWJ	56795 etc	6850	Sand & Shale			
Castle	6897	6940	Sand		nd Mari	
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The second secon

Win State #1

1980' FWL & 660' FNL Sec. 36, T26S, R30E NMPM Eddy County, New Mexico

16 3/4" Open Hole from Surface to 201'

Plugged from TD to Surface with 380sx Class "C"

Operator: Corinne B. Grace Address: P. O.Box 1418

Carlsbad, New Mexico 88220

Spud: 6/27/87

TD: 201' Cable Tool

P&A: 4/15/88

ENERGY AND MINERALS D HO. OF CO-IES RECEIVED DISTRIBUTION SANTA FE FILE U.S.O.S. LAND OFFICE OPERATOR IO. TYPE OF WELL b. TYPE OF WELL b. TYPE OF COMPLETION MEW X WORK WELL X OVER 2. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141 4. Location of Well	OIL WELL	SAN	CONSERVA P. O. BO NTA FE, NEW TION OR RECO	X 2088 V MEXICO 8 DMPLETION	87501	5. State V-5 D LOG 7. Unit / N/A 8. Farm	Agreement Name
DISTRIBUTION SANTA FE FILE U.S.O.S. LAND OFFICE OPERATOR IG. TYPE OF COMPLETION MENTE 2. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141	OIL WELL [SAN LL COMPLE	P. O. BO NTA FE, NEW TION OR RECO	X 2088 V MEXICO 8 DMPLETION DYHER	87501 REPORT ANI	5. State V-5 D LOG 7. Unit / N/A 8. Farm	Oll & Gas Lease No. 81 Agreement Name
SANTA FE FILE U.S.O.S. LAND OFFICE OPERATOR IG. TYPE OF WELL b. TYPE OF COMPLETION MEMORY WELL Z. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141	OIL WELL [LL COMPLE	TION OR RECO	OMPLETION OTHER	REPORT ANI	5. State V-5 D LOG 7. Unit / N/A 8. Farm	Oll & Gas Lease No. 81 Agreement Name
U.S.G.S. LAND OFFICE OPENATOR IG. TYPE OF COMPLETION MEMORY WORK Z. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141	OIL WELL [LL COMPLE	TION OR RECO	OMPLETION OTHER	REPORT ANI	7. Unit / N/A 8. Farm	81 Agreement Name
LAND OFFICE OPERATOR 1a. TYPE OF WELL b. TYPE OF COMPLETION MEW X WORK OVER 2. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141	OIL WELL [GAS	DRY X	OTHER		7. Unit / N/A 8. Farm	•
DPENATOR 1a. TYPE OF WELL b. TYPE OF COMPLETION WELL X WORK 2. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141	weill beepen				Р&А	N/A 8. Farm	•
b. TYPE OF COMPLETION MEW X WORK 2. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141	weill beepen				Р&А	N/A 8. Farm	•
Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141	weill beepen				Р & Д	8. Farm	
Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141	deepen[Р & Д	1	or Lease Name
2. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 14]	ace	PLUG BACK	DIFF. RESVR.	OTHER	Р&А	l wi	
2. Name of Operator Corinne B. Gr 3. Address of Operator P. O. box 141					- ~ 11	"	n State
3. Address of Operator P. O. box 14]			•			9. Well N	١٥.
P. O. box 141	.8, Carls						1
	.8, Carls					10. Field	d and Pool, or Wildcat
4. Location of Well		sbad, New	Mexico {	88220		East	Ross Draw Dela
UNIT LETTERC	LOCATED 198	<u>30</u> FEET FF	IOM THE West	LINE AND _	660 FE	ET FROM	
•					HHKH	12. Coun	(((((((((((((((((((((((((((((((((((((((
THE North LINE OF SEC.	36 TWP	. 265 RGE	. 30E HMPM	MILLIA	TIXIIII	Edd	- (((((())))
15, Date Spudded 16.					•	.B, KI, GK, etc.)	19. Elev. Cashinghead
6/27/87 20, Total Depth	2/13/88 21, Plug E	P&A		le Compl., How	3025 GR	, Rotary Tools	, Cable Tools
201 '	1		Many	re Compr., How	Drilled B		
201 24. Producing Interval(s), of	this completion	o Surf.	. Name			<u> </u>	1 0-201 25. Was Directional Surve
z i, i i z z z z z z z z z z z z z z z z				·			Made
None		,		,			No
26. Type Electric and Other	Logs Run					27	7. Was Well Cored
None					•		No
28.		CAS	ING RECORD (Rep	ort all strings s	iet in well)		
CASING SIZE	WEIGHT LB./F	T. DEPTH	SET HOL	LE SIZE	CEMENT	ING RECORD	AMOUNT PULLED
None							
						· · · · · · · · · · · · · · · · · · ·	
							
29.		ER RECORD			30.	TUBING R	
SIZE	тор	воттом	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
			·			<u> </u>	
31. Perforation Record (Inter	nul size and m	umber)		32. A	CID SHOT ERA	CTURE, CEMENT	SOLIFEZE ETC
31. Perioration Mecora finite	vai, size and n		•	<u> </u>			KIND MATERIAL USED
None				DEPTHIN	TIERVAL	AMOUNI AND	KIND MATERIAL USED
	•	4					
						· · · · · · · · · · · · · · · · · · ·	
							Marketon (1997) - 1997 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1
·			PROD	UCTION			
33.				ing - Size and	type pump)	Well Sto	utus (Prod. or Shut-in)
	Producti	on Method (Flow	ing, gas tift, pump	- · · · · · · · · · · · · · · · · · · ·			
Date First Production							
Date First Production	Producti ura Tested	on Method (Flow	Prod'n. For Test Period	Oil - Bbi.	Gas - MCF	Water — Bbl.	Gas-Oil Ratio
Date First Production Date of Test Hou	urs Tested	Choke Size	Prod'n. For Test Period	Oil Bbl.	<u> </u>		
Date First Production Date of Test Hou			Prod'n. For Test Period		<u> </u>		Gas - Oil Ratio Oil Gravity - API (Corr.)
Date First Production Date of Test Hou Flow Tubing Press. Ca.	urs Tested	Choke Size Calculated 24- Hour Rate	Prod'n. For Test Period	Oil Bbl.	<u> </u>	r – Bbl.	Oil Gravity - API (Corr.)
Date First Production Date of Test Hou Flow Tubing Press. Ca.	urs Tested	Choke Size Calculated 24- Hour Rate	Prod'n. For Test Period	Oil Bbl.	<u> </u>		Oil Gravity - API (Corr.)
	urs Tested	Choke Size Calculated 24- Hour Rate	Prod'n. For Test Period	Oil Bbl.	<u> </u>	r – Bbl.	Oil Gravity — API (Corr.)
Date First Production Date of Test House Flow Tubing Press. Ca. 34. Disposition of Gas (Sold	urs Tested	Choke Size Calculated 24- Hour Rate	Prod'n. For Test Period	Oil Bbl.	<u> </u>	r – Bbl.	Oil Gravity — API (Corr.)
Date First Production Date of Test House Flow Tubing Press. Ca. 34. Disposition of Gas (Sold	ns Tested sing Pressure , used for fuel,	Calculated 24-Hour Rate	Prod'n. For Test Period Oil — Bbl.	Gas – MC	F Water	Test Witnesse	Oil Gravity — API <i>(Corr.)</i> d By

Section VII

Proposed Operation Data

VII. Proposed Operation Data

- 1. Injection Rate
 - a. Average Daily: 1500 Bbls. per day.
 - b. Maximum Daily: 7500 Bbls. per day.
- 2. System will be closed.
- 3. Injection Pressure
 - a. Average: Unknown
 - b. Maximum: 888#
- 4. Injection fluids will be disposal water from area wells.
- 5. Disposal zone formation water is very similar to all produced Delaware waters. (See Attached water analyses.)

HALLIBURTON DIVISION LABORATORY

HALLIBURION SERVICES

MIDLAND DIVISION ARTESIA, NEW MEXICO 88210

LABORATORY WATER ANALYSIS

No. W200, W201, & W202-87

To . Corinne Grace		Date_	October 19, 1987		
P. O. Box 1418 Carlsbad, NM	38220	This report is the property of Halliburton Campany and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval allowards of laboratory managements it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.			
Submitted by Danny Ha	rvey		October 19, 1987		
Well No.	Depth 5700	+ Formatic	on Delaware		
County Eddy	Field Sec. 25,	265, 30E Source	Heater Treater		
	C. G. Fed. #1	Zac Fed. #1	·		
Resistivity	0.048 @ 72°	0.048 @ 72°			
Specific Gravity	1.21	1.21			
pH	6.3	6.1	-		
Colcium (Co;	38,212	37,720	*MPL		
Magnesium (Mg)	6,269	5,970			
Chlorides (CI)	191,000	192,000			
Sullates (SO ₄)	Ni1	Ni1			
Bicarbonales (HCO ₃)	32	68	_		
Soluble Iron (Fe)	Moderate	Moderate			
••••••		·			

Remarks:			*Milligrams per liter		
DECEUVE N	No Chis	Chamber ully submitted,			
Analyst: Rocky Chambe	<u>ers - Special Oper</u> a	tor HALLIBURI	ON COMPANY		

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Hall-burton shall not be Hable for any less or damagn, whether it has been or emission, resulting from such report or its use.

HALLIBURTON DIVISION LABORATC .

HALLIBURTON BERVICES MIDLAND DIVISION HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-929

To BBC, Inc.		Date 8-4-83	
105 E. Marland Hobbs, New Mexico		or disclosed without first securing the surress written approval	
Submitted by		Date Rec. 8-4-83	
Well No. Not Designat	ed Depth	Formation As Marked	
County	Field	Source	
	Cherry Canyon	Bell Canyon	
Resistivity	0.049 @ 74°F.	0.070 @ 74°F.	
Specific Gravity	1,181	1.086	
pH	5.4	6.9	
Calcium (Ca)	23,700		
Magnesium (Mg)	6,240	1,500	
Chlorides (CI)	169,000	76,000	
Sulfates (SO ₄)	310	1,640	
Bicarbonates (HCO ₃)	75	145	
Soluble Iron (Fe)	5 .	Nil	
Sodium, Na (Calc.)	70,766	38,122	
Total Dissolved Solids (Calc.)		125,407	
Remarks:		*Milligrams per liter	
-	Respec	ifully submitted,	
Analyst: Brewer		- HALLIBURTON COMPANY	
CC:	By W. Z. Blewer		

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

HALLIBURTON DIVISION LABORATO

HALLIBURTON SERVICES MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY	WATER	ANALYSIS	No	W83-928
LABORATORI	AAWICK	AINALI 313	140	1103-32

BBC, Inc.		Date	8-4-83
103 5. Marland Hobbs, New Mexic	! O	it nor any part thereof or disclosed without fir of laboratory managen course of regular busin	erty of Halliburton Company and neither f nor a copy thereof is to be published est securing the express written approval nent; it may however, be used in the ess operations by any person or concern receiving such report from Halliburton
mitted by		Date Re	c8-4-83
ell No. Not Design	ated Depth	Formatic	on. As Marked
unty	Field	Source_	
	Brushy Canyon	Wolfcamp	
istivity	0.048 @ 74°F.	0.089 @ 74°F.	-
ecific Gravity	1.209	1.057	
<u> </u>	5,3	6.0	
lcium (Ca)	32,200	1,800	*MPL
gnesium (Mg)	5,760	840	
orides (Cl)	197,000	48,000	
fates (SO ₄)	160	185	
arbonates (HCO ₃)	95	230	
uble Iron (Fe)		5	
lium, Na (Calc.)	•	27,657	
al Dissolved Solids (Calc.)	315,282	78,717	
narks:			*Milligrams per liter
<i>,</i> -	Respect	ully submitted,	
ılyst: Brewer		. HALLIBURT	ON COMPANY
.,		By W. 2.	Beautel
		ву	HEMIST

NOTICE

Section VIII

Geological Data

HARRY L. GUNN Consulting Geologist

TELEPHONE 505/748-9012

813 S. FOURTH ARTESIA, N.M. 88210

GRACE OIL COMPANY CARLSBAD, NEW MEXICO

TO WHOM IT MAY CONCERN

FORM C-108 Oil Conservation Division, Energy and Minerals Department, State of New Mexico

VIII. The planned injection interval (3,886' to 4,990') for the proposed disposal well, the Grace Oil Co., Zac Federal #1, 660' FSL and 1980 FNL, Sec 25, T-26-S, R-30-E, Ross Draw East Field, Eddy County, New Mexico will be in the Bell Canyon and Cherry Canyon Sand Formations of the Delaware Mountain Group.

These Delaware sands are composed of very fine to fine grained quartz sands. Core examination from the Grace Oil Company No. 1 Ginger Federal, at 4,078' to 4,108' confirmed the grain size and revealed the presence of a few thin shale laminations.

The highly porous sands 19% to 25% selected for water disposal, have very little carbonate cementing material with slight varying amounts of clay and feldspar content. The sands with the higher porosity are usually more permeable. These sand intervals should be well suited for disposal water as they are isolated from other porous sands by shaly limes and shales. There is no known oil or gas production nearby from this intervals.

The overall thickness of these sands is about 1380 feet, with the selected interval covering 1120 feet.

These sands lie below 2,000' of anhydrite and salt of the Castile Formation.

XII. There are no open faults in evidence throughout the Delaware Sands in this area, nor are there any possible geologic connections to any source of drinking water.

There is no palatable water below the injection interval, all these waters will be either salty or brackish sulfur water.

Sincerely,

Ample

Harry L. Gunn

Section IX

Proposed Stimulation Program

- IX. Proposed Stimulation Program
 A. Acidize sands with 10,000 gallons 15% acid.

Section X

Logging Data

X. Logging Data: Well logs on file with Division. Submitted 10-5-87 with Well Completion Report.

Section XI

Fresh Water

XI. Fresh Water: There is one (1) fresh water well within one (1) mile of proposed injection well. It was drilled 5/2/88. Total depth is 440'. It is located approximately 1750' FEL & 380' FSL, Sec. 24, T26S, R30E, Eddy County, New Mexico.

Section XII

Affirmative Statement

HARRY L. GUNN Consulting Geologist

TELEPHONE 505/748-9012

813 S. FOURTH ARTESIA, N.M. 88210

GRACE OIL COMPANY CARLSBAD, NEW MEXICO

TO WHOM IT MAY CONCERN

FORM C-108 Oil Conservation Division, Energy and Minerals Department, State of New Mexico

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There is no palatable water below the injection interval, all these waters will be either salty or brackish sulfur water.

Sincereta

Harry L. Gunn

Section XIII

Proof of Notice

XIII. Proof of Notice

- A. Certified Mail
 - 1. Surface Owner
 - a. Bureau of Land Management P. O. Box 1778 Carlsbad, New Mexico 88220
 - 2. Operators within $\frac{1}{2}$ mile of proposed injection well.
 - a. Mobil Producing Texas & New Mexico, Inc. P. O. Box 633 Midland, Texas 79702
 - b. Amoco Production Company Houston Region
 501 Westlake Park Blvd.
 P. O. Box 3092
 Houston, Texas 77253
 - c. Ralph E. Williamson
 P. O. Box 994
 Midland, Texas 79702
 - d. J.C. Williamson
 P. O. Box 16
 Midland, Texas 79702
 - e. Yates Petroleum Corporation 105 South 4th Artesia, New Mexico 88210
 - f. ARCO Oil and Gas Company Box 1610 Midland, Texas 79702
 - g. Chevron U.S.A., Inc.
 Box 1150
 Midland, Texas 79702

HAL GENTTRED ROT TRIBDER BOT PROVINCE DIAMETER BET TOO DAME BET TOO See Reverser

£09	ARCO Oil and Gas	Company_
. 16.	Box 1610	
U.S.G P.O. 165 E06	Midland, Texas 7	9702
3.0	Postage	185
	Certified Fee	85
	Special Celivery Fee	
	Restricted Delivery Fee	
	Return Records SBA	
PS Form 3600, June 1945	Peturn Old Shing Thinm Date: Inc. Coding the Delivani	
Jun	TOTA Formation Fues 3	270
,003	Pesimar SPO	
orro 3		
PS F.		

F 484 859 292

SECTION FOR CONTINUED (ALL MASSESSMENT FOR THE SECTION OF THE SECT

Yates Petroleum Corp.

Yates Petroleum Corp.

105 South 4th

PO. State and ZIP Code
Artesia, New Mexico 88210

Postage

Centred fee

Special Delivery fee

Restricted South Andread Set of the Andread Set

RECEIPT FOR CERTIFIED MAIL
NO MISURANCE SOVERAGE PROVIDED
ACT THE PROFIT HAS A CONTROL OF A CONT

3 56 0	Chevron U.S.A., Inc.
0, 15:	Box 1150
U.S.G.P.O. 153 56 ô	P.C. State and ZiP Code Midland, Texas 79702
. 5	Postage 5/85
	Certified Fee 85
	Special Delivery Fee
	Restricted Delivery Fee
S.	Return Receipt chowing to whom and Date Celivered
401 s	Daie, and Address of Discontinuous
PS Form 3800, June 1985	TOTAL TOTAL SIGNED IS IN INC. IN INC. INC. INC. INC. INC. INC
3000,	Postmitik ci 0.1988
E Jo	SPO
PS F	

DECEIPT FOR CERTIFIED MAIL
NO INSUPANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
Site Flaversei

3.3	Mr. J.C. Williamson
U.S.G.P.O. 163 U0u	Street and No. P-O- Box 16
.G.P.(Midland, Texas 79702
U.S	Postage \$/\$5
	Cartified Fee \$\mathbb{S}5
	Soecial Delivery Fee
	Restricted Delivery Fee
	Return Receipt snowing to whom and Served
សេងទំ	Return Serson Date.
PS Form 3800, June 1585	TOTA Pristage print Pleas Z 170
1800,	Posimers 2900
orm 3	· SPO
pS F(

RECEIPT FOR CEPTIFIED MAIL
LO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

506	Mr. Ralph E. Williamson
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September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Bureau of Land Management P. O. Box 1778 Carlsbad, New Mexico 88220

Re: Zac Federal No. 1 Well

Section 25, T26S, R30E, N.M.P.M.,

Eddy County, New Mexico

Dear Sir:

Enclosed, please find a copy of our Application of Corinne Grace for a Salt Water Disposal Well, Eddy County, New Mexico, together with a copy of the Form C-108.

Should you have any questions concerning the Application you may contact the undersigned at this office.

The intended purpose of the injection well, located 660 feet from the south line and 1980 feet from the west line of Section 25, Township 26 South, Range 30 East, N.M.P.M., is for the disposal of disposal water in the Bell Canyon and Upper Cherry Canyon formations, with a planned injection interval of 3886 feet to 4990 feet. The expected maximum injection rate is 7500 barrels per day, with the maximum injection pressure to be 888 PSIG.

Surface owners or offset operators must file any objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501, within 15 days from the date hereof.

Sincerely,

Doug Chandler Agent

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mobil Producing Texas & New Mexico, Inc. P. O. Box 633 Midland, Texas 79702

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September 5, 1988

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RETURN RECEIPT REQUESTED

Amoco Production Company Houston Region 501 Westlake Park Blvd. P. O. Box 3092 Houston, Texas 77253

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Mr. Ralph E. Williamson F. O. Box 994 Midland, Texas 79702

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Doug Chandler Agent

September 5, 1988

CERTIFIED MAIL
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Mr. J.C. Williamson P. O. Box 16 Midland, Texas 79702

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Sincerely,

Doug Chandler Agent

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Yates Petroleum Corporation 105 South 4th Artesia, New Mexico 88210

Re: Zac Federal No. 1 Well

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Doug Chandler Agent

September 5, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Chevron U.S.A., Inc. Box 1150 Midland, Texas 79702

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Doug Chandler Agent

September 5, 1988

CERTIFIED MAIL
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ARCO Oil and Gas Company Box 1610 Midland, Texas 79702

Re: Zac Federal No. 1 Well

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Sincerely,

Doug Chandler Agent

B. Legal Notice

- 1. Date of Publication:
- 2. Name and Address of Publication:

Artesia Daily Press 503 West Main Street Artesia, New Mexico 88210

Affidavit of Publication

No. 12488

Gary D. Scott being duly sworn, says: That he is the Publisher of The Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for days the State of New Mexico for consecutive weeks on the same day as follows: First Publication September 14, 1988 Second Publication Fourth Publication
Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for
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the State of New Mexico for
First Publication September 14, 1988 Second Publication Third Publication
Second Publication
Third Publication
Fourth Publication
and that payment therefore in the amount of
has been made.
Jan Sall
Subscribed and sworn to before me this14th day
ofSeptember , 19 88
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B. A. B.

My Commission expires September 23, 1991

Copy of Publication

LEGAL NOTICE

Canyon formations (perforations at 3886'-4990') at a maximum rate of 7500 barrels per day, with maximum injection pressure of 888 PSI. Any questions concerning this project may be directed to Doug Chandler, Grace Oil Company. P.O. Box 1418, Carlsbad, New Mexico, 88220, phone number (505) 887-5581. Interested parties must file objections or request for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501, within 15 days, Published in the Artesia Daily, Artesia N.M. September 14,

Legal 12488

1988.

Section XIV

Certification

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Doug Chandler Title: Agent

Signature: Noug Sardle Date: 9-15-88