

July 7, 1997

JUL - 9 1997

Engineering Department New Mexico Energy & Minerals Department Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505

RE: Form C-108 Application of Maralo, Inc. for Salt Water Disposal, Eddy County, New Mexico

Attention: Michael Stogner

Under the provisions of Rule 701 (B), enclosed please find Form C-108 application with attachments for authorization to inject into the Bubbling Springs Unit Federal, Well #1, API #30-015-20992, located 1980 feet from the North line and 1980 feet from the West line (Unit F) of Section 26, Township 20 South, Range 26 East, NMPM, Eddy County, New Mexico.

Sincerely,

Dorothea Logan

Regulatory Analyst

Enclosures/Attachments

cc: OCD/Artesia - application w/attachments BLM/Carlsbad - application w/attachments

OIL CONSERVATION DIVISION POST OFFICE BOX 2018 BTATE LAND OFFICE BUILDING BANTA FE, NEW MEXICO 87501

FORM C-108 Revised 7-1-81

MPICINAL

APPLICATION FOR A	AUTHORTZATION :	TD	INJECT
-------------------	-----------------	----	--------

I.	Purpose: L Applicati	Secondary Recovery Lon qualifies for administ	」Pressure Mainter trative approval?	nance ye:	XX Disposal Storage s
11.	Operator:	MARALO, INC.			
	Address:	P. O. BOX 832, MIDLAND, 1	TX 79702		
	Contact part	: RICHARD A. GILL, PETROLEI	JM ENGINEER	Phone:	(915) 684-7441
111.	Well data:	Complete the data require proposed for injection.	ed on the reverse Additional sheets	side of may be	this form for each well attached if necessary.
IV.	Is this an e	kpansion of an existing p the Division order number	oroject? yes	project	no t
٧.	injection we	that identifies all well ll with a one-half mile r circle identifies the wel	radius circle draw	n around	miles of any proposed d each proposed injection
VI.	penetrate the well's type,	ulation of data on all we e proposed injection zone construction, date drill of any plugged well illus	e. Such data shal led, location, dep	l includ	ord of completion, and
VII.	Attach data	on the proposed operation	, including:		
	2. Wheth 3. Propo 4. Source the 5. If in	or within one mile of th	c closed; injection pressur nalysis of injecti other than reinje purposes into a z ne proposed well, n water (may be me	e; on fluic cted pro one not attach a	d and compatibility with oduced water; and productive of oil or gas
111.	detail, geold bottom of all total dissolv	ogical name, thicknass, a . underground sources of red solids concentrations he as well as any such so	and depth. Give t drinking water (a s of 10,000 mg/l o	he geolo quifers r less)	containing waters with overlying the proposed
IX.	Describe the	proposed stimulation pro	gram, if any.		
х.		riate logging and test d sion they need not be re		(If wel	l logs have been filed
XI.	available and	nical analysis of fresh w I producing) within one m wells and dates samples w	ile of any inject		
XII.	examined avai	r disposal wells must ma lable geologic and engin hydrologic connection be nking water.	eering data and f	ind no e	evidence of open faults
III.	Applicants mu	st complete the "Proof o	f Notice" section	on the	reverse side of this form.
XIV.	Certification				· ·
		f my knowledge and belie	:f.		ication is true and correc
	Name:	DOROTHEA LOGAN	Tit	le REGU	JLATORY ANALYST
	Signature:	Durther	jan D	atc: <u>JUL</u>	Y 7, 1997

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
 - (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.
 - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items πust be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
 - (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant:
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico £7501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Application For Authorization To Inject
Maralo, Inc
Bubbling Springs Unit Federal, Well #1
UL C, Section 26-T20S-R26E
Eddy County, New Mexico

I. The purpose of completing this well is to make a disposal well for produced Cisco Canyon water into the Cisco Canyon formation.

Maralo, Inc. plans to convert this well to a water injection well in the Cisco Canyon formation.

II. Operator: Maralo, Inc.
P. O. Box 832
Midland, TX 79702
Richard A. Gill (915) 684-7441
Petroleum Engineer

- III. Well Data: See Exhibit "A" and "A1"
 - IV. This is not an expansion of an existing project.
 - V. See attached map, Exhibit "B"
 - VI. There is one well within the area of review. See Exhibit "B1" and "B2"
- VII. 1. Estimated average rate is 2200 bbls/day. Estimated maximum rate is 3000 bbls/day.
 - 2. This will be a closed system.
 - Average injection pressure---unknown Maximum injection pressure--2000 psi.
 - 4. Sources of injected water would be produced water from the Cisco Canyon Formation. See Exhibit "C" water analysis.
 - 5. Water injection will be into a lower formation zone not proven productive. There is productive gas volume capability in the upper portion.
- VIII. 1. The proposed injection interval is a portion of the Cisco Canyon carbonate formation at a depth of 8372 8617'.

C-108 Application for Authorization to Inject Maralo Inc. Bubbling Springs Unit Federal, Well #1 Page 2

VIII. continued

- 2. Regional portions of the Tansil, Queen & Yates fresh water zones are known to a total 1100' depth. There are no fresh water zones underlying the formation.
- IX. The proposed disposal interval may be acidized with 15% HCL acid and a small frac treatment.
- X. Well Logs are filed at the Artesia OCD office.
- XI. There are no fresh water wells within one mile of the disposal well.
- XII. Maralo, Inc. has examined geologic and engineering data and has found that there is no evidence of faulting or other hydrologic communication between potential fresh water aquifers and the desired injection zone.

XIII. Proof of Notice

Certified application letter with attachments sent to the surface owner, Bureau of Land Management. There are no offset operators within one-half mile of the well location. (Exhibit "D")

See Exhibit "E" for Proof of Publication in the Artesia Daily Press.

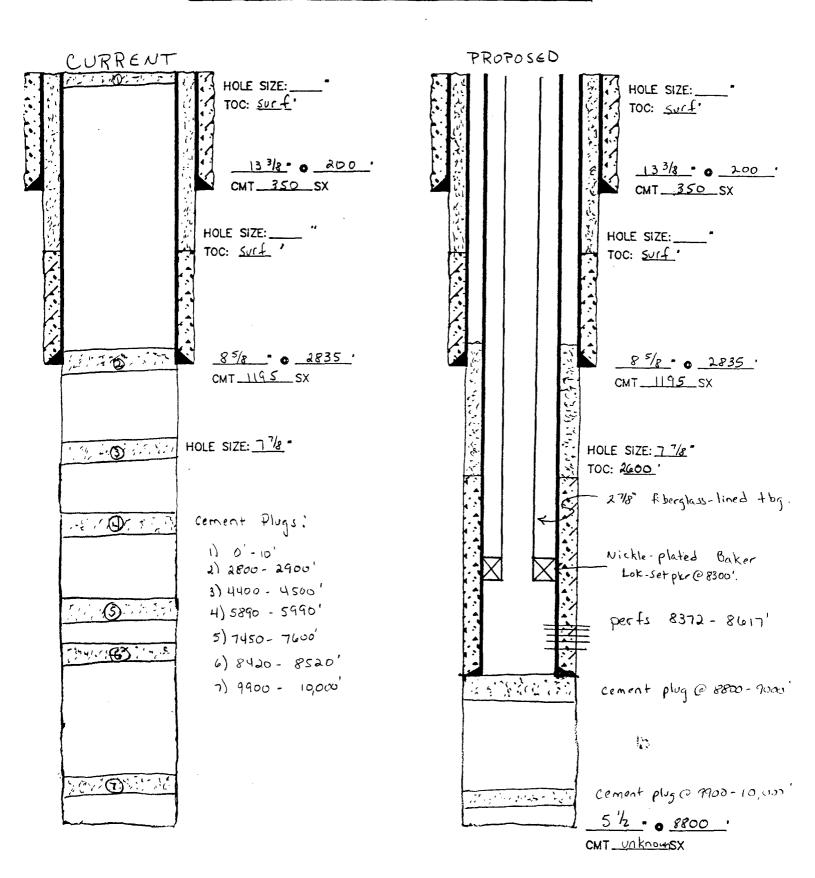
MARALO, INC. BUBBLING SPRINGS UNIT FED #1 F-26-T20S-R26E EDDY COUNTY, NEW MEXICO

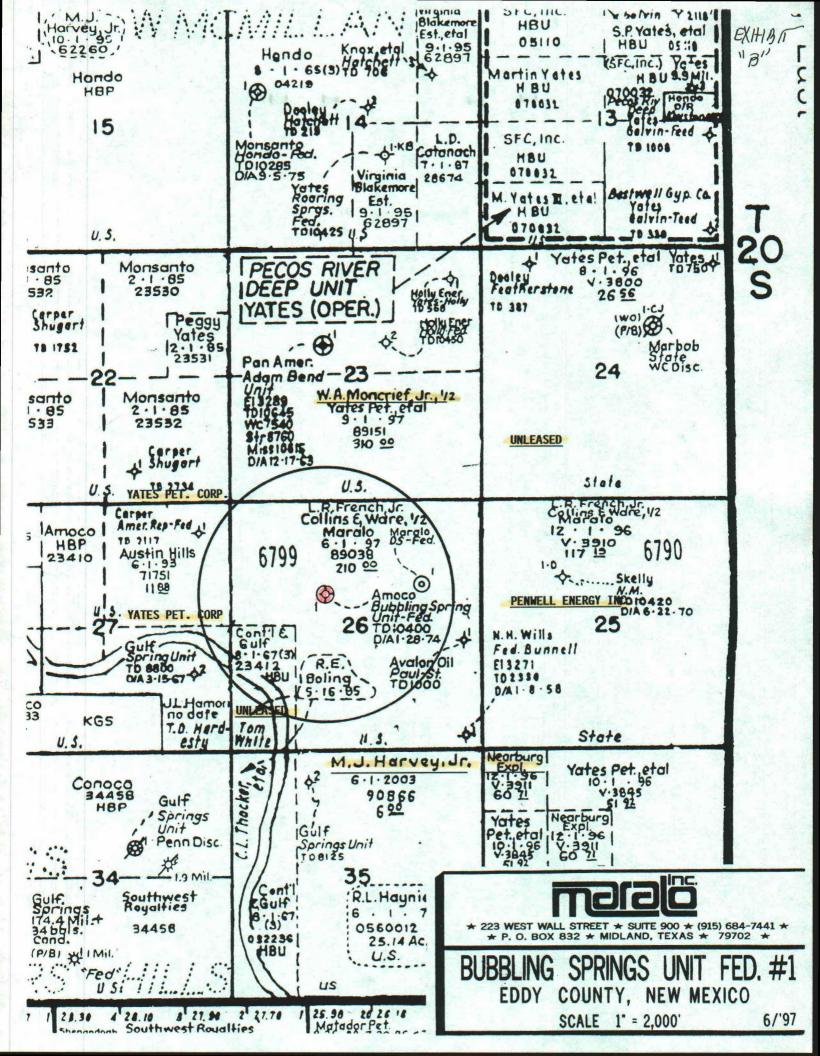
Exhibit "A"

III. Well Data

- A. 1. Lease Name/Location:
 Bubbling Springs Unit Federal, Well #1
 F-26-T20S-R26E
 1980' FNL & 1980' FWL
 API # 30-015-20992
 - 2. Casing Strings:
 Present Well Condition:
 13-3/8" @ 200' w/350 sxs cement
 8-5/8" @ 2835' w/1195 sxs cement
 - 3. Proposed Well Condition:
 Casing same as above.
 2-7/8" 6.5# K-55 duo-line plastic coated injection tubing @ 8300'.
 Cement plug @ 8800 9000'
 - 4. Propose to use Baker nickel-plated Loc-Set packer set at +/- 8300'.
- B. 1. Injection Formation: Cisco Canyon Field/Pool: SWD Cisco Canyon
 - 2. Injection Interval will be through perforations at a depth of 8372 8617'.
 - 3. Well was spud in November, 1973 and plugged and abandoned in January, 1974. It will be a Cisco Canyon injection well when work is completed.
 - 4. See attached schematic for additional well data. Exhibit Al
 - 5. Within the area of the well, the next higher oil zone is the Bone Spring and next lower zone is the Strawn.

EXHIBIT "AI"





WELLBORE SKETCH AND WELL HISTORY

ELEV.:	К В _ <i>3:</i>	309 *,_	13	' ABOVE	<u>GL</u>	FIELD:_	k WELL N Mc Mill DN: 1783	lan	COUN	ΓY: <u></u> Ες	124	ST	:. <i>UM</i>			
									T-20-							
[HOLE SIZE	: 17 1/2 "	DATE:_(130/97					BY:_				
				TOC: SUC-	t.				CASIN	IG RE	CORD					
									SURF	ACE C	ASING					
					<u> </u>	_'	C	D.D.	WT/F	T G	RADE	SE	T AT			
	-			СМТ <u>40</u>	20SX		13 3		54.5		J <i>55</i>		ile '			
) ·							95	18	<u>عاد</u>		K55	78	00'			
				LE SIZE: 13	<u>2 </u>			1	PRODU	CTION	CASING	3				
			ТО	C: <u>sucf</u> '			5 1	1/2	17		180	10,	588			
	4			a El-					•	rubino	· · · · · · · · · · · · · · · · · · ·					
	7		_		<u> 2880 </u> ,		NO. JTS.	O.D.	THD.	TYPE	WT.	GDE.	SET AT			
			0	MT_900	SX		253	27/8	IIID.	1116	****	GDE.	8125			
							WELL HISTORY:									
			HOLE	SIZE: 77/8			2/13/45	De	rf 10.	ر - عا22	, 790'					
			1	7160	- ,		10/6/95)Af	10,291-	10,798					
		· ·	?				4/15/9-	-	3 P 19							
			y Pkr	- 6 8125			4/22/97		mp 38				Phyl			
		5°					4123:0-	1 Per	1 3314	9321'			 			
		====	701	fs 6 8182	2 - 2191				003 g c			 .				
		3	\ \ \ \ \		. 0111		5119/9-		- CIBP		,	35'	<u>cmi.</u>			
		,					eta de		D now							
		ŝ					5/23/9		+ 818							
	.3	Ŷ,							2500 0			F E				
			CI	४१७ १२50'	+ 35' cmt.					J						
			P	ection 93ml-	- 9321											
	}.															
•			PKr.	@ 10,150' 21	plug + 35' cmt											
		= = =	# PP	cfs 10,226	- 10,314											
			5	12 0 1	0,588'				-			<u></u>				
			CMT_	1120 SX	(
							-									
																
TD.	10 640	' PBD: 6	1215								 					

(October 1990)	<u> </u>	ŪN	אודרס	STA	TES	ຣບ	BMIT I	N DUPLIC	Er A	TOR'S	MB NO.	1004-0137			
	DEPAF						OR	struct rever:	tion se side)			mber 31, 1991 IUN AND BERIAL NO.			
	B1	UKEAU	OF LA	אט אאויי	AGEME	NI -				NM-89038					
WELL CO	MPLETION	4 OR	RECO	MPLET	ION	REPOR	1A T	ND LOC	3*	6. IF INDIAN	, ALLOT	TTEE OR TRIBE NAME			
1a. TYPE OF WE	w	ELL	WELL E			Other	1			7. UNIT ACRI	EEMENT	NAME			
E TYPE OF COI	WORK C D	eer-	rupa [nie						8 FARMO	DIFA	SE NAME, WELL NO.			
2. NAME OF OPERA	OVER L E	<u> </u>	BACK L	nes	VR.	Other		3 *		D. S. "26"					
MARALO, INC.										9. API WELL	NO.				
3. ADDRESS AND					/015	684-74	. <u>.</u> ೧೧	MEIN	-NT	30-015-282		, OR WILDCAT			
P. O. BOX 83				accordance		<u>*</u>		11(1)	-111	WILDCAT (N					
	1783' FNL &		7	مرح المراقع			•	•			R., M., C	DE BLOCK AND BURVEY			
	terval reported b			1. 4.7. 1	٠,							R26E, UNIT H			
At total depth	1783' FNL &	1259' F	EL 💉							3EC. 20, 1	203,	RZOL, ONLI II			
-	1783' FNL &	1259' 🤅	EL)	14. PE	RUIT NO.	•	TATE	I ISSUED		12. COUNTY OF	DR	13. STATE			
15. DATE SPUDDED	16. DATE T.D.	REACHED	17. DAT	E COMPL.	(Ready t	o prod.)	18. ELI	EVATIONS (DI	F. RKB, R	EDDY	19. #	LEV. CASINGHEAD			
12/22/94	01/28/9	5	0	2/23/95	•			3296	GR ,	INTITI	1				
20. TOTAL DEPTH, MD	4 TVD 21. PL		T.D., MD 4	TV0 22	HOW M	TIPLE COM	PL.,	23. 1976 DRIA	FEG AL	0-10,588	196	CABLE TOOLS			
10,588°	RVAL(8), OF THE	10,541		BOTTOM.	NAME (I	MD AND TV	D) *	<u> </u>	>	0-10,300		. WAS DIRECTIONAL			
10,286 - 10,							•					YES			
6. TYPE ELECTRIC			10 5411	TO TOC	0 7160	11				1	27. ₩	AS WELL CORED			
CNL/LDT/AIT	GR/CCL/CB	LFKUM										NO			
CASING SIZE/GRADE	WEIGHT, LE	/FT.	DEPTH SE			ort all etr	ings set		MENT, CEM	ENTING RECORD	<u> </u>	AMOUNT PULLED			
13-3/8	54.5#		34	0'	17-	-1/2"	40	O SXS CL.	. "C" -	- SURF.					
9-5/8"	36#		280	0'	1										
5-1/2*	17#		1058	8'		-7/8 "	_ 112	0 SXS 50/	/50 PO	Z MIX - 716	D. 10	<u> </u>			
29.	······································	LINER	RECORD				<u></u>	30.	7	UBING RECO)RD				
EIZE	TOP (MD)	BOTTO	м (мр)	SACKS CE	MENT*	BCREEN	(MD)	SIZE		DEPTH SET (MD)		PACKER SET (MD)			
								2-7/8	_	10,152'		10,152			
1. PERFORATION RE	cord (Interval, e	ize and t	number)			1 32.		CID. SHOT.	FRACT	URE, CEMEN	r squ	EEZE, ETC.			
10,286 - 10,	20A! (TOTAL :	22 UN E	FC1			DEPTH	INTERV	AL (MD)	AM	OUNT AND KIN	D OF 1	CATERIAL USED			
10,200 - 10,	230 (10IAL	CE INCL	_3,					[
						<u> </u>				·····		<u> </u>			
13.•						DUCTION									
O2/23/95	TON PROD	FLOWI		lowing, go	ee lift, p	umping—e	ize and	type of pum	(p)		ا ستہ ہ	s (<i>Producing or</i> PRODUCING			
ATE OF TEST	HOURS TESTED		OKE SIZE	PROD'S	. FOR	OIL-B8	L.	GAS-NC	`F.	WATER—BBI		GAS-OIL RATIO			
02/24/95	24 HRS. CAL	c. 1	14/64"	TEST	PERIOD		-	2,8	12	-					
LOW. TURING PRESS. 3292	CASING PRESSU		LCULATED -HOUR RATE	C117—1			s—мсг. 2,812		WATER-	-RBC.		RAVITY-API (CORE.) N/A			
4. DISPOSITION OF					A	CGEPT	ED F	n A	10	TEST WITH		Ī			
SOLD - GAS C		1F 06 \	Z8/95		1	A non	1	4 4	MA	PHILLIP S	——— WT 114				
DEVIATION REPO		TURE SU	RVEY, LO	OGS (2)		www		1995	uck						
6. I hereby certify					is comp	lete and c	orrect	as determine	d from	all available	records				
SIGNED D	nother	Laga	en_	T I	rle RE	GULTORY	ANALY	STV MEX	ico	DAT	e Jun e	28, 1995			
	.*/\$.	a Instru	ictions of	nd Socre	es for A	ddition	al Dat	a on Reve	C: J	۸)					

Constitution of the second sec			garing and an analysis of the second analysis of the second analysis of the second and an analys	Autoria Porti Autoria						•			• :	j.		÷:	FO
	nur		25). 25).	:	:5.												FORMATION
	10380	10034 10328	9695	8942	8225	8045	7422	6480	5975 5075	3930	3215	2425	1860	1130	243	-0-	TOP
	10588	10328	10034	9372	8942	8191	8045	7422	5825	4475	3930	3215	2425	1860	336	243	воттом
	LINE & SHALE	SAND & SHALE	LINE & SHALE & SAND		מבונס כי שינוים	DOLO & SHALE	-	LINE & SHALE		LIME & CHERT		DOLO & LINE		ANHY & CAND	ANHY & SALT	Qα	DESCRIPTION, CONTENTS, ETC.
								BARNETT	MORROW	ATOKA	CISCO	HOLFCAMP	SPRING	BONE	1ST BONE SPRING SS		Z A MK
								10,436	10,114'	9622	9040	/636	7300	6026	5340	MEAS, DEPTH	
							•	(-7127	(-6805)	(-6313'	(-473)	(-4325	(-3991	(-2717'	(-2031')	VERT. DEPTH	TOP

Martin Water Laboratories, Inc.

P. O. BOX 1468 MONAHANS, TEXAS 79756 PH. 943-3234 OR 563-1040

709 W. INDIANA MIDLAND, TEXAS 79701 PHONE 683-4521

RESULT OF WATER ANALYSES

	L	ABORATORY NO										
TO: Mr. Phillip Smith	S	SAMPLE RECEIVED 6-12-97										
P.O. Box 832, Midland, TX 7970	<u>2</u> R	RESULTS REPORTED	6-13-97									
COMPANY Maralo, Inc.		ne ak Endam	.1 #1									
	Wildcat	ASE DS 26 Federa	11 1/1									
7.11												
SECTION BLOCK SURVEY	COUNTYE	ady STATE	NM NM									
SOURCE OF SAMPLE AND DATE TAKEN:	06											
NO.1 Recovered water - taken f												
NO.2 Recovered water - taken f	<u>rom DS 26 Fede</u>	ral #1. 6-12-9	7									
NO. 3												
NO. 4												
REMARKS:	Cisco Can	von										
CHEN	NO. 1	NO. 2	NO. 3	NO. 4								
Casaidia Organita et 60° E	1.0135		110. 3	140. 4								
Specific Gravity at 60° F. pH When Sampled	1.0133	1.0128										
pH When Received	. 7.72	7.76	* .									
Bicarbonate as HCO ₃	982	982										
Supersaturation as CaCO ₃	702	902										
Undersaturation as CaCO ₁												
Total Hardness as CaCO ₃	2,020	1,900										
Calcium as Ca	612	596										
Magnesium as Mg	119	100										
Sodium and/or Potassium	3,070	2,941										
Suifate as SO ₄	2,099	2,099										
Chloride as CI	4,047	3,763										
Iron as Fe	0.26	0.52										
Barium as Ba	U.2 0	V. 24										
Turbidity, Electric												
Color as Pt												
Total Solids, Calculated	10,930	10,481										
Temperature °F.	=3,330	101										
Carbon Dioxide, Calculated												
Dissolved Oxygen,												
Hydrogen Sulfide	292	265										
Resistivity, ohms/m at 77° F.	0.620	0.650										
Suspended Oil												
Filtrable Solids as mg/l												
Volume Fittered, ml												
	Results Reported As Milligr											
Additional Determinations And Remarks In compart	ing the above	with our record	s in this a	rea, we find								
both waters are similar to what	we would exp	ect from Canyon	or Cisco w	ater. The								
similarity to our records would	l indicate bot	<u>h waters are co</u>	mposed of a	t least								
nearly all Cisco Canyon.												
		* *********										
<u> </u>			Jan	, ac.								

Form No. 3

Waylan C. Martin, M.A

EXHIBIT "D"

BUBBLING SPRINGS UNIT FEDERAL WELL #1 UL F, SEC 26, T-20-S, R-26-E EDDY COUNTY, NEW MEXICO

OFFSET OPERATOR NOTIFICATION:

PENWELL ENERGY INC. 600 N. MARIENFELD ST. STE 1100 MIDLAND, TX 79701

W. A. MONCRIEF, JR. OPERATOR 119 N. COLORADO, STE 400 MIDLAND, TX 79701

NEARBURG PRODUCING COMPANY 3300 N. "A" ST. BLDG 2, STE 120 MIDLAND, TX 79705 M. J. HARVEY JR. P. O. BOX 12705 DALLAS, TX 75225-0705

YATES PETROLEUM CORP. 105 S. FOURTH ST. ARTESIA, NM 88210

SURFACE OWNER:

BUREAU OF LAND MANAGEMENT CARLSBAD RESOURCE AREA 620 EAST GREENE STREET CARLSBAD, NEW MEXICO 88220-6292

Affidavit of Publication

15878 No. STATE OF NEW MEXICO. County of Eddy: _____being duly Gary D. Scott sworn, says: That he is the <u>Publisher</u> 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 days" the state of New Mexico for 7 consecutive weeks on the same day as follows: First Publication June 6, 1997 Second Publication____ Third Publication Fourth Publication Subscribed and sworn to before me this

My Commission expires September 23, 1999

Copy of Publication

well. The proposed well, the Bubbling Springs Unit Federal, Well #1 is located 1980' and 1980' FWL of Section Township 20 South, Range East, Eddy County, New Mexico, will be used for water inje Disposal the Cisco Canyon formation will be injected into the Cisco Canyon formation at a depth of 8372 - 8617 feet with a maximum pressure of 2000 psi and maximum rate of BWPD. All interested parties opposing

All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, P.O. Box 6429, Santa Fe. New Mustee.

Additional delegation and delegations of continuous land and land

Logal 15878

LEGAL NOTICE

Maralo, Inc., EO. Box 832.
Midland, Tricus 79/12, il diffice.
Form C-108 (Application for Authorization to Laject) with the New Meridian Cill Conservation Box Maralo Cill Conservation Box Maralo Cill Conservation approved



July 7, 1997

CERTIFIED MAIL - RETURN RECEIPT

Bureau of Land Management Carlsbad Resource Area Headquarters 620 E. Green Street Carlsbad, New Mexico 882290-6292

RE: NM-89038

Bubbling Springs Unit Federal #1

API #30-015-20992

(F) Sec. 26, T20S, R26E 1980' FNL & 1980' FWL Eddy County, New Mexico

Dear Sir:

In accordance with Item XIV (Proof of Notice) Side 2, on the enclosed Revised Form C-108 (New Mexico OCD Application for Authority to Inject), Maralo Inc. hereby furnishes certified notice to the surface owner of the above well.

Should you have any questions, please feel free to contact me or Richard Gill, Petroleum Engineer, at (915) 684-7441.

Sincerely,

Donather Logan

Dorothea Logan

Regulatory Analyst

Enclosure: C-108 with all attachments

Cc: Oil Conservation Division

Santa Fe, New Mexico

Oil Conservation Division, District II

Artesia, New Mexico