

2006 SEP 18

Mr. Will Jones

New Mexico Oil Conservation Division-Engineering Bureau

1220 South Saint Francis Street

Santa Fe, NM 87505

--CERTIFIED MAIL, RETURN RECEIPT REQUESTED— 7005 2570 0001 3771 6142

Re: Application to Class 2, water disposal well, Frazzle SWD #1 San Juan County, NI

Dear Mr. Jones:

Enclosed, is Dugan Production Corp.'s application for disposal of produced water in the Frazzle SWD #1. In fulfilling the requirements of application, the following materials are provided herein:

- 1. Form C-108, Application for Authorization to Inject.
- 2. Tabular and schematic data on proposed injection well.
- 3. Lease and surface owner maps identifying all wells and leases within 2-miles of proposed injection well with a one-half mile radius circle drawn around the proposed injection well.
- 4. Data sheet of wells within 2-miles of proposed injection well, highlighting those wells inside one-half mile radius around the injection well.
- 5. Operations plan for proposed injection well.
- 6. Water Analysis of produced water to be disposed in proposed injection well (Fruitland
- 7. Required geologic, stimulation, logging and test data and fresh water data from nearby wells.
- 8. Signed statement of geologic and engineering data.
- 9. Proof of notice in the form of notification letters sent to offsetting operators and surface owners and a copy of the Affidavit of Publication of the notice as it appeared in the Farmington Daily Times. Signed and notarized copy will be sent once received.

If you have questions or need additional information, please contact me.

Very Sincerely.

Kurt Fegrelin

Attachments

cc: Mr. Charlie Perrin-New Mexico Oil Conservation Division, 1000 Rio Bravo Rd, Aztec, NM 87410 Mr. David Mankiewicz-Bureau of Land Management, 1235 La Plata Hwy, Farmington, NM 47401 Ms. Debbie Padilla-New Mexico State Land Office, PO Box 1148, Santa Fe, NM 87504-1148 Mr. James Miles-Federal Indian Minerals Office, 1235 La Plata Hwy, Farmington, NM 87401 Navajo Nation Minerals Dept., PO Box 1910, Window Rock, AZ 86515 Coleman Oil and Gas Co., Drawer 3337, Farmington, NM 87499-3337 Mr. Ty Stillman-EOG Resources Inc., 600 17th St., Suite 1100 N, Denver, CO 80202 Ms. Melissa Wittler-North American Petr. Corp., 1401 17th St., Suite 310, Denver, CO 80202 Mr. Rich Corcoran-Well Fleet Drlg. LLC, 2010 Afton Place, Farmington, NM 87401

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

FORM C-108 Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage Application qualifies for administrative approval? Yes No
II.	OPERATOR: Dugan Production Corp.
	ADDRESS:709 East Murray Drive, Farmington, New Mexico 87401
	CONTACT PARTY: Kurt Fagrelius PHONE: 505-325-1821
III.	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.
IV.	Is this an expansion of an existing project? Yes No If yes, give the Division order number authorizing the project:
V.	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.
VI.	Attach a tabulation of data on all wells of public record within the area of review which 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.
VII.	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.).
*VIII	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted)
*XI.	Attach a chemical analysis of fresh 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.
XII.	Applicants for disposal 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 sources of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
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: Kurt Fagrelius TITLE: V.P. Exploration
	NAME: Kurt Fagrelius SIGNATURE: N.P. Exploration DATE: 9/1/2006
*	E-MAIL ADDRESS: kfagrelius@duganproduction.com If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:
DIST	RIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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 must 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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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.

Dugan Production Corp.

Frazzle SWD #1

General Information

Dugan Production Corp. is hereby, making application for administrative approval to dispose of produced water by underground injection. The proposed disposal site is the Frazzle SWD #1 well, located 795' FNL & 2180' FWL, Sec. 30, Twn. 24N, Rng. 10W, San Juan Co., NM. Produced water will be injected into the Entrada Sandstone between 6625' and 6825'. The maximum injection pressure will be 1325 psi and the maximum injection rate will be 6,000 barrels of water daily.

The well will be a new drill for the purpose of salt water disposal. The permit to drill has been approved and plans are to begin drilling rig September or October of 2006. Upon approval of this application, an injection test will be conducted. If adequate rates are not found, it may be necessary to stimulate the proposed injection zone or perforate additional zones in the well.

Any change to the plans contained herein, will be approved by the New Mexico Oil Conservation Division prior to implementation.

Dugan Production Corp.

Frazzle SWD #1

Part III. Well Data

A. Tabular Information

1. Name:

Frazzle SWD #1

Location:

795' FNL & 2180' FWL Sec. 30, T24N, R10W San Juan Co., NM

2. Surface Casing:

8-5/8" 24#, J-55 set @ 360'. Cemented with 250-

cu.ft. Circulate cement to surface.

Hole size -12-1/4".

Production Casing: 5-1/2" 17#, N-80 and 15.5# J-55 set @ 6875'.

Cement in two stages with stage tool at 3620' using 630 cu.ft. in first stage and 800 cu.ft in the second stage. Circulate cement to surface on second stage.

Hole size - 7-7/8".

3. Injection Tubing: 2-7/8", EUE, 6.5#, plastic lined tubing.

4. Packer:

Baker Model AD-1 tension packer, plastic lined,

will be set at 6575' or 50' above the upper most

perforation.

B. Additional Information

- 1. Injection Interval: Entrada Sandstone.
- 2. The injection interval (Entrada 6625' 6825') will be perforated.
- 3. The well (Frazzle SWD #1) will be drilled for the purpose of injection.
- 4. Only the injection interval is to be perforated.
- 5. Fruitland Coal / Pictured Cliffs Sandstone Approx. 990', Gallup Sandstone Approx. 4425'.

INJECTION WELL DATA SHEET

dicate which)	Perforated of Open Hole; indicate which)	Perfora	Total Depth 6875'			
6825'		6625'				
	Injection Interval					
		Total Depth: 6875	Perforate 6625' - 6825'			
Method Determined: Will	Me:	Top of Cement: Surface	(()			
1430	SX. or	Cemented with: 650	5-1/2", 17# and 15.5# Casing Set 0 6875'. TOC Surface	1		-ambarawa -amppa
Casing Size: 5-1/2"	Cas	Hole Size: 7-7/8"	Baker Model AD-1 Tension Packer Set @ 6575'			
16	Production Casing					Allero managaria
Method Determined:	Me	Top of Cement:				er kan namatika di Bisa (Peng
	SX. Or	Cemented with:	<pre>Internal Plastic Coated 2-7/8", 6.4# EUE Tubing</pre>			or we say a second second
Casing Size:	Cas	Hole Size:				
			Stage Tool @ 3620'			
ng	Intermediate Casing					Posts angueris
Method Determined: Will		Top of Cement: Surface	360',			
	SX. OF	Cemented with: 180	8-5/8", 24# Casing	1		<u> </u>
Casing Size: 8-5/8"	Cas	Hole Size: 12-1/4"				
RUCTION DA	WELL CONSTRUCTION DATA Surface Casing		WELLBORE SCHEMATIC	WELLBORE		
24N TOWNSHIP	30 SECTION TO	C UNIT LETTER S	FNL and 2180' FWL OTAGE LOCATION	WELL LOCATION: 795'	7007	VELL
			Frazzle SWD #1	WELL NAME & NUMBER:	NAM	VELL
			Dugan Production Corp.		OPERATOR:	PERA

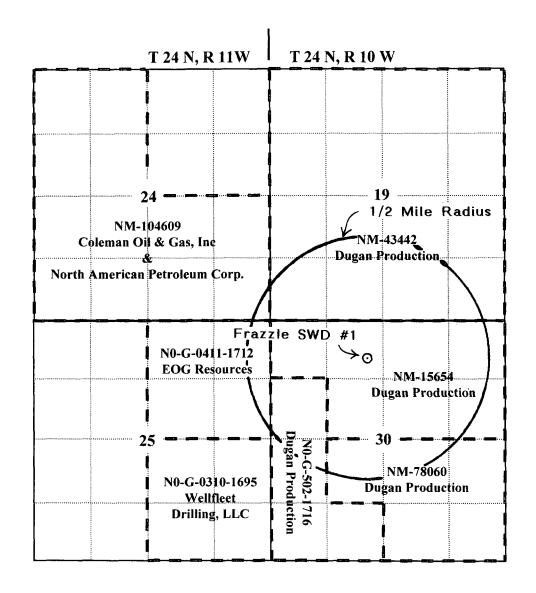
INJECTION WELL DATA SHEET

	5. (ı	4. I: I	 ~	?	. =	1. I		Other	Packe	Type	Tubin
	Sive the n	drilled	Has the we	Vame of F	Vame of th	f no, for w	s this a ne		Type of 7	r Setting	Type of Packer:	Tubing Size:
	Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Fruitland Coal 950', Gallup Ss, 4425'.	drilled for purpose of injection into Entrada Ss., no other zones will be perfic	Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. New well will be	Name of Field or Pool (if applicable):_	Name of the Injection Formation:	If no, for what purpose was the well originally drilled?	Is this a new well drilled for injection?		Other Type of Tubing/Casing Seal (if applicable):	Packer Setting Depth: 6575' (50' above uppermost perforation)	Baker Model AD-1 set	2-7/8"
	fany oil or Fruitle	of inject	orated in an detail, i.e. s	plicable):		the well or	injection?	16-	al (if applic	50' abov	AD-1 set	
	gas zones i	cion into	y other zor	Not Applicable	Entrada Sandstone	iginally dri		Additional Data	bable):	e uppermo	in tens	Linin
	underlying (950', Gal	Entrada	ne(s)? List a	licable	ndstone	lled?	×	<u>Data</u>		ost perfo	in tension (5-1/2")	Lining Material:
	or overl	Ss., n	all such g(s) use				Yes			ration	2")	
	ying the propose	o other zones	perforated New well v				No)		Plastic
	Ğ.	will be	vill be									
• •		perf'o	,	Į.	ſ	'			l			1

Va. Lease Owner Map

TOWNSHIP 24 NORTH, RANGE 10 WEST SAN JUAN COUNTY, NEW MEXICO

OFFSET OPERATOR/LESSEE



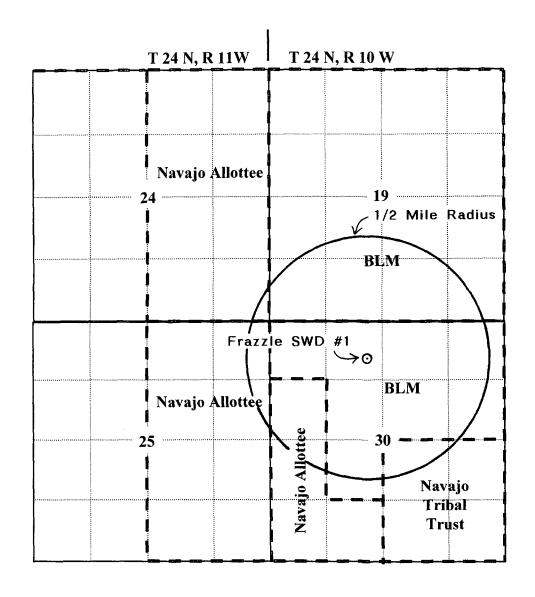
Dugan Production Corp.
Frazzle SWD #1
Sec. 30, T24N, R10W
795' FNL and 2180' FWL
San Juan County, New Mexico

Salt Water Disposal Application

.Vb. Surface Owner Map

TOWNSHIP 24 NORTH, RANGE 10 WEST SAN JUAN COUNTY, NEW MEXICO

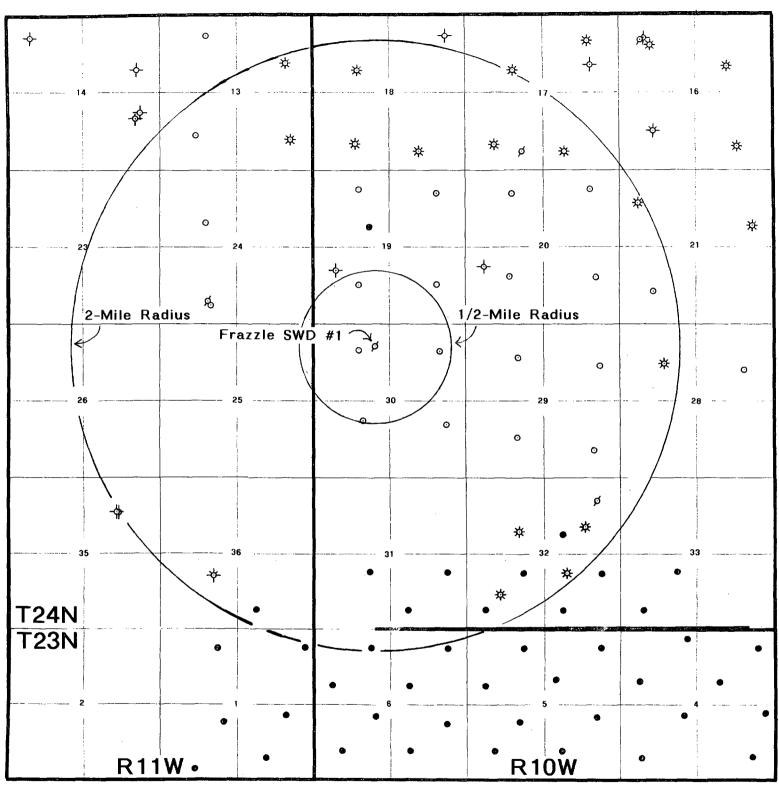
SURFACE OWNERSHIP



Dugan Production Corp.
Frazzle SWD #1
Sec. 30, T24N, R10W
795' FNL and 2180' FWL
San Juan County, New Mexico

Salt Water Disposal Application

Part Vc. Well Map



Dugan Production Corp. Frazzle SWD #1 Sec. 30, T24N, R10W 795' FNL and 2180' FWL San Juan County, New Mexico

Salt Water Disposal Application

Dugan Production Corp.

Frazzle SWD #1

Part VI. Data on offset wells

A tabulation of data on all existing, offset wells (shown on the Well Map Part Vc.) that highlights those wells that fall within the ½-mile area of review is presented on Attachment VIa. No wells within the area of review penetrate the proposed injection zone.

Attachment Vla. Tabulation of Data on Offset Wells

Dugan Production Corp., Frazzle SWD #1, S.30, T24N, R10W

Attachment VIa. I abula	abulation of Data on Offset Wells						1 _	Jan I loude	701p.,	Y .	7
OPERATOR	ELL_NAME	WELL NO	TWN	RGE	SEC	٦	m	NS FIAGE EW	SIAIUS	POOL	110
COLEMAN O&G CO	JUNIPER SWD		24N	10W	16	0	880/N	730/W	86		4 L C C C C C C C C C C C C C C C C C C
COLEMAN O&G CO		11	24N	10W	16	0	975/N	1075/W	CC	BASIN FRUITAND COAL	6100
TENNECO OIL CO	MONUMENT	2	24N	10W	16	0	800/N	800/W	PA		0190
COLEMAN 0&G CO	JUNIPER 16	32	24N	10W	16	G	1750/N	1545/E	8	BASIN FRUITLAND COAL	1640
COLEMAN O&G CO			24N	10W	16	Z	1310/S	1200/W	<u>S</u>	BASIN FRUITLAND COAL	14/3
COLEMAN O&G CO	JUNIPER 16	44	24N	10W	16	ס	800/S	1200/E	6		1590
COLEMAN 0&G CO		41	24N	10W	17	Α	900/N	1140/E	60	BASIN FRUITLAND COAL	1550
LYNCO OIL CORP	MONUMENT	_	24N	10W	17	I	1650/N	990/E	PA		6100
COLEMAN 0&G CO	JUNIPER COM 17	14	24N	10W	17	<	900/S	1050/W	6		1345
COLEMAN 0&G CO	JUNIPER COM 17	22	24N	10W	17	П	1830/N	1655/W	8	BASIN FRUITLAND COAL	1425
COLEMAN O&G CO	JUNIPER SWD	4	24N	10W	17	z	660/S	2015/W	8	111	3939
COLEMAN O&G CO	JUNIPER COM 17	34	24N	10W	17	0	660/S	1900/E	CC	N TRUE	13/8
H L FANNIN JR	WOODARD		24N	10W	18	>	660/N	660/E	S PA	GALLUT	2003
COLEMAN O&G CO	JUNIPER COM 18	22	24N	10W	18	m	1890/N	15/0/W	86	FRUI LAND	1300
COLEMAN O&G CO	JUNIPER COM 18	24	24N	10W	18	2	950/S	1500/W	3 8	BASIN FRUITI AND COAL	1308
COLEMAN O&G CO	JUNIPER 17	34	24N	10W	ā	- c	000/0	1000/1	0 0		1850
BENSON MIN. GRP. INC	FEDERAL 19-24-10	2\	24N	WOL	3	> -	700/01	070/0	ב ה		1335
1:_	ZOE	91	24N	WOL	2 2	2 2	190/N	3/0/E			1270
· •		90-0	N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	400	10	- 0	4350/8	1600/W	ם דון ו	FRUIT AND CO	1200
		01-5	NVC	100	10	- r	1350/S	990/E	PE	FRUITLAND CO	1260
DUGAN PROD. CORP	TARGET	1	24N	10W	20	ᆔ	1980/N	1980/W	CO	BISTI LOWER GALLUP	4930
PROD.	BIFF	90-S	24N	10W	20	C	800/N	1600/W	PE	FRUITLAND C	1390
PROD.	BIFF	90	24N	10W	20	7	1650/S	1550/W	PE	LANUC	1325
PROD.	BIFF	91-S	24N	10W	20	_	1600/S	790/E		FRUIT AND C	1380
PROD.	BIFF	91	24N	10W	20	A	660/N	990/E	PE	SINTRUIT	1450
	CASE	1	24N	10W	20	_	1980/S	660/W	PA	GALLUP	4900
	JUNIPER 21	11	24N	10W	21	0	1125/N	660/W	C	FRUITI AND CO	1540
COLEMAN O&G CO	JUNIPER COM 21	44	24N	10W	21	ס	1100/S	1200/E		FRUITI AND CO	1500
0&G	JUNIPER 21	42	24N	10W	21	Ī	1900/N	660/E	36	TROI LAND CO	1365
0&G	COM	42	24N	10W	28	J	1600/N	950/E	3	ASIN FRUITI AND C	1345
0&G	JUNIPER COM 28	22	24N	10W	28	, T	13/5/N	1520/W	3 6	FROIT LAND C	1105
DUGAN PROD. CORP	HOMER COM	90	24N	10W	67.		1400/5	W/0081	ק ה חוד	FROI LAND CO	1337
DUGAN PROD. CORP	HOMER COM	91-S	24N	10W	67) T	960/5	900/E		DASIN EDITITION CON	1350
PROD. C	HOMER COM	90-S	24N	10W	.29	C	1150/N	AA/OGBL	7,1	FRUITANDO	1200

Wells within 1/2-mile area of review are shaded (grey). No wells within the area of review penetrate the proposed injection zone.

Attachment VIa. Tabulation of Data on Offset Wells

Dugan Production Corp., Frazzle SWD #1, S.30, T24N, R10W

ATORR	1 Y	MANCOS	PA	1443/E	1214/N	В	35	11W	24N	14	STRAT TEST	0&G
Well Name Well Name Well Name Well Name Well Name Sec Ut FTAGE NS FTAGE ENV STATUS POOL	S.	STRAT TEST MANCO	PA	1478/E	1214/N	В	35	11W	24N	ń	STRA	NORTHSTAR O&G CORP
WORDERATOR		MESAV	PE	1715/W	700/S	Z	24	11W	24N	_	WEST SWD	EMAN O&G
Weell Name	JAL	FRUITLAND C	PΕ	1810/W	670/S	Z	24	11W	24N	24	WEST COM	0&G
OPERATOR	AL	FRUITLAND C	PΕ	1605/W	1850/N	F	24	11W	24N	22	WEST COM	EMAN O&G
WELL NAME WELL NO TIVIN ROE SEC UI FTAGE EN FTAGE EN STATUS POOL	IFFS	D3;PICTURED CL	PA	850/E	1790/S		14	11W	24N	2	GROVER	NNECO OIL
CORP HOMER COM 91 24N 10W 29 1400N 600F FRAZZIE COM 91 24N 10W 29 1400N 600F FRAZZIE COM 91 24N 10W 30 A 990N 900F PE BASIN FRUITIAND CORP FRAZZIE COM 90 24N 10W 30 C 795N 2960W PE BASIN FRUITIAND CORP FRAZZIE COM 90 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITIAND CORP FRAZZIE COM 90 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITIAND CORP FRAZZIE COM 91 24N 10W 30 K 1995/S 660/F PE BASIN FRUITIAND CORP FRAZZIE COM 91 24N 10W 31 K 1995/S 660/F PE BASIN FRUITIAND CORP GOLD MEDAL 5 24N 10W 31 K 1995/S 1815/W PE BASIN FRUITIAND CORP MARY LOU 91 24N 10W 32 A 800/N 800/F CO SOUTH BISTI GALL CORP MARY LOU 91 24N 10W 32 A 800/N 1980/F CO SOUTH BISTI GALL CORP MARY LOU 91 24N 10W 32 H 1700/N 1200/F CO BASIN FRUITIAND CORP MARY LOU 91 24N 10W 32 H 1700/N 1200/F CO SOUTH BISTI GALL CORP MARY LOU 95 24N 10W 32 K 1980/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 95 24N 10W 32 K 1980/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 96 24N 10W 32 K 1980/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 96 24N 10W 32 K 1980/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 96 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 96 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 96 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 96 24N 10W 37 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 96 24N 10W 37 M 660/S 1980/W CO SOUTH BISTI GALL CORP		D3;GALL	PA	660/E	1980/S	1	14	11W	24N	_	LEGOS	LIPS PETRO. C
WELL NAME WELL NAME WELL NAME WELL NO TWN RGE SEC U FTAGE EW STATUS POOL		D3;	PΑ	790/E	1850/N	Н	14	11W	24N	1	YIT	PROD.
CORP HOMER COM		D3;	PΑ	790/W	790/N	D	14	11W	24N	>	THE GROUC	PROD.
CORP HOMER COM MELL NAME WELL NO TWN RGE SEC UI FTAGE RW FTAGE RW STATUS POOL CORP HOMER COM 91 24N 10W 20 H 1450/N 660/E PE BASIN FRUITLAND 600/F PRAZZIE COM 91 24N 10W 30 C 900/N 1600/W PE BASIN FRUITLAND 600/F PRAZZIE COM 90-S 24N 10W 30 C 900/N 1600/W PE BASIN FRUITLAND 600/F PRAZZIE COM 91-S 24N 10W 30 H 1865/S 660/F PE BASIN FRUITLAND 600/F PARAZZIE COM 91-S 24N 10W 31 H 1980/S 660/F PE BASIN FRUITLAND 600/F FRAZZIE COM 91-S 24N 10W 31 H 1980/S 660/F PE BASIN FRUITLAND 600/F FRAZZIE COM 91-S 24N 10W 31 H 1980/S 660/F PE BASIN FRUITLAND 600/F FRAZZIE COM 91-S 24N 10W 31 H 1980/S 660/F PE BASIN FRUITLAND 600/F FRAZZIE COM 91-S 24N 10W 31 H 1980/S 660/F PE BASIN FRUITLAND 600/F FRAZZIE COM 91-S 24N 10W 31 H 1980/S 660/F PE BASIN FRUITLAND 600/F FRAZZIE COM 91-S 24N 10W 32 H 1980/F CO SOUTH BISTI GALL 600/F MARY LOU 91-S 24N 10W 32 H 1700/N 1980/F CO SOUTH BISTI GALL 600/F MARY LOU 90-S 24N 10W 32 H 1700/F FRAZZIE COM 90-S 24N 10W 32 H 1700/F 180-S 180-F 180-F 180-F 180-F 180-F 180-F 180-F	ΆL	IN FRUITLAND CO	PE	1600/W	665/N	C	13	11W	24N	21	R WEST COM 1	0&G
CORP HOMER COM WELL NAME WELL NO TAVN ROE SEC UL FTAGE EN STAGE EW STAGE COIL PE BASIN FRUITLAND CORP FRAZZIE COM 90.** 24N 10W 30 C 795/N 280/W PE BASIN FRUITLAND CORP FRAZZIE COM 90.** 24N 10W 30 C 795/N 280/W PE BASIN FRUITLAND CORP FRAZZIE COM 91.** 24N 10W 30 K 1995/S 660/E CO SOUTH BISTIGALI CORP FRAZZIE COM 91.** 24N 10W 31 I 1980/S 660/E CO SOUTH BISTIGALI CORP FRAZZIE COM 91.** 24N 10W 32 A 800/N 90/E CO SOUTH BISTIGALI CO	2	FRUITLAND CC	문	1250/W	1200/S	Z	13	11W	24N	14	WEST COM	LEMAN 0&G
CORP FRAZZILE COM 91 24N 10W 30 A 990/N 900/N 90-S 24N 10W 30 A 990/N 900/N 90-S 24N 10W 30 A 990/N 900/N PE BASIN FRUITLAND CORP FRAZZILE COM 91-S 24N 10W 30 C 990/N 1800/W PE BASIN FRUITLAND CORP FRAZZILE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZILE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZILE COM 91-S 24N 10W 31 K 1980/S 660/E CO SOUTH BISTI GALL CORP GOLD MEDAL 5 24N 10W 31 K 1980/S 1980/W CO SOUTH BISTI GALL CORP GOLD MEDAL 5 24N 10W 32 A 800/N 800/E CO SOUTH BISTI GALL CORP MARY LOU 91S 24N 10W 32 F 1980/N 1980/E CO SOUTH BISTI GALL CORP MARY LOU 91S 24N 10W 32 F 1980/N 1980/E CO SOUTH BISTI GALL CORP MARY LOU 91S 24N 10W 32 H 1700/N 1200/E CO SOUTH BISTI GALL CORP MARY LOU 90S 24N 10W 32 H 1700/N 1200/E CO SOUTH BISTI GALL CORP MARY LOU 90S 24N 10W 32 K 1980/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 90S 24N 10W 32 K 1980/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 90S 24N 10W 32 K 1980/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 90S 24N 10W 32 K 1980/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 90 64N 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 90 64N 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 6 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 6 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 6 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 6 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 6 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI GALL CORP MARY LOU 6 24N 10W 32 M 660/S 1980/W CO SOUTH BISTI G	₽	FRUITLAND CC	8	750/E	1050/S	Р	13	11W	24N	44	WEST COM	LEMAN 0&G
TOR WELL NAME WELL NO TWN RGE SEC UL FTAGE NS FTAGE EW STATUS POOL CORP HOMER COM 91 24N 10W 30 A 990/N PE BASIN FRUITLAND CORP FRAZZLE COM 90.S 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND CORP FRAZZLE COM 90.S 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30 H 1865/N 660/E CO SOUTH BIST GALL CORP FRAZZLE COM 91-S 24N 10W 31 K 1980/S 660/E CO SOUTH BIST GALL	12	FRUITLAND CO	င္ပ	900/E	1550/N	I	13	11W	24N	42	WEST COM	LEMAN O&G
TOR		I BISTI GALL	8	810/W	660/S	M	33	10W	24N	4	D	PROD. C
TOR		BISTI GALL	င္ပ	1980/W	1980/S	~	33	10W	24N	2	D	PROD.
TOOR		BISTI GAL	CO	1980/E	660/S	0	32	10W	24N	4	_	PROD. C
TOR		GAL	6	660/W	660/S	×	32	10W	24N	6	٦/	PROD. C
TOR	4	LAND	CO	1200/W	1200/S	Μ	32	10W	24N	90		PROD. C
TORP		GALL	8	1980/W	1980/S	ス	32	10W	24N	5		PROD.
TOR		LAND	CO	1850/E	1955/S	L	32	10W	24N	90S	-	PROD.
CORP HOMER COM WELL NAME WELL NO TWN RGE SEC UL FTAGE NS FTAGE EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZLE COM 90.S 24N 10W 30 A 990/N 900/E PE BASIN FRUITLAND CORP FRAZZLE COM 90.S 24N 10W 30 C 900/N 1600/W PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 31 I 1985/S 660/E PE BASIN FRUITLAND CORP GOLD MEDAL 5 24N 10W		SOUTH BISTI GALLUP	CO	660/E	1980/S	1	32	10W	24N	သ		PROD.
CORP HOMER COM 91 24N 10W 29 H 1450N 660/E EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450N 660/E PE BASIN FRUITLAND CORP FRAZZIE COM 91 24N 10W 30 A 990N 900/E PE BASIN FRUITLAND CORP FRAZZIE COM 90-S 24N 10W 30 C 795/N 18150W PE BASIN FRUITLAND CORP FRAZZIE COM 90-S 24N 10W 30 K 1995/S 18150W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30 K 1995/S 1815W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30 K 1995/S 1815W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 31 K 1980/S 1980/E CO SOUTH BISTI GALL	4	BASIN FRUITLAND COA	S	1200/E	1700/N	Н	32	10W	24N	91		PROD.
NTOR WELL NAME WELL NO TWN RGE SEC UL FTAGE NS EW STATUS POOL COORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND COORP FRAZZLE COM 90.S 24N 10W 30 A 990/N 1600/N PE BASIN FRUITLAND COORP FRAZZLE COM 90.S 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND COORP FRAZZLE COM 90 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND COORP FRAZZLE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND COORP FRAZZLE COM 91-S 24N 10W 30 K 1995/S 660/E PE BASIN FRUITLAND COORP FRAZZLE COM 91-S 24N 10W		SOUTH BISTI GALLUP	S	1980/E	1980/N	G	32	10W	24N	2		_
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LTOR WELL NAME WELL NO TWN RGE SEC UL FTAGE NS FTAGE EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZIE COM 91 24N 10W 30 A 990/N 900/E PE BASIN FRUITLAND CORP FRAZZIE COM 90-S 24N 10W 30 C 990/N 1600/W PE BASIN FRUITLAND CORP FRAZZIE COM 90-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30 K 1980/S 660/E PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 3		SOUTH BISTI GALLUP	ZA	800/E	800/N	Α	32	10W	24N	1	1	_
LTOR WELL NAME WELL NO TWN RGE SEC UL FTAGE NS FTAGE EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZIE COM 91 24N 10W 30 A 990/N 900/E PE BASIN FRUITLAND CORP FRAZZIE COM 90.S 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND CORP FRAZZIE COM 90 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 31<		SWD MESAVERDE	CO	800/E	800/N	Α	32	10W	24N	1		. !
TOR WELL NAME WELL NO TWN RGE SEC UL FTAGE NS FTAGE EW STÂTUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZLE COM 91 24N 10W 30 A 990/N 1600/M PE BASIN FRUITLAND CORP FRAZZLE COM 90-S 24N 10W 30 C 795/N 2180/M PE BASIN FRUITLAND CORP FRAZZLE COM 90 24N 10W 30 K 1995/S 1815/M PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30 K 1995/S 1815/M PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30 K 1995/S 1815/M PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30		SOUTH BISTI GALLUP	CO	1980/E	660/S	0	31	10W	24N	5	GOLD MEDAL	. 1
LTOR WELL NAME WELL NO TWN RGE SEC UL FTAGE NS FTAGE EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450N 660/E PE BASIN FRUITLAND CORP FRAZZIE COM 91 24N 10W 30 A 990/N 90/E PE BASIN FRUITLAND CORP FRAZZIE COM 90-S 24N 10W 30 C 90/N 1600/W PE BASIN FRUITLAND CORP FRAZZIE COM 1 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZIE COM 91-S 24N 10W 30		SOUTH BISTI GALLUP	CO	1980/W	1980/S	Х	31	10W	24N	9	GOLD MEDAL	. 1
TOR WELL_NAME WELL_NO TWN RGE SEC UL FTAGE_NS FTAGE_EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZLE COM 91 24N 10W 30 A 990/N 900/E PE BASIN FRUITLAND CORP FRAZZLE COM 90-S 24N 10W 30 C 990/N 1600/W PE BASIN FRUITLAND CORP FRAZZLE COM 90-S 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND CORP FRAZZLE COM 90-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND CORP FRAZZLE COM 91-S 24N 10W 30 K 1995/S 1815/W PE BASIN FRUITLAND		SOUTH BISTI GALLUP	CO	660/E	1980/S	1	31	10W	24N	ယ	GOLD MEDAL	
ITOR WELL_NAME WELL_NO TWN RGE SEC UL FTAGE_NS FTAGE_EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZLE COM 91 24N 10W 30 A 990/N 900/E PE BASIN FRUITLAND CORP FRAZZLE COM 90-S 24N 10W 30 C 990/N 1600/W PE BASIN FRUITLAND CORP FRAZZLE COM 1 24N 10W 30 C 795/N 2180/N PE BASIN FRUITLAND CORP FRAZZLE COM 9 24N 10W 30 C 795/N 2180/N PE BASIN FRUITLAND CORP FRAZZLE COM 9 24N 10W 30 C 795/N 2180/N PE BASIN FRUITLAND	1	BASIN FRUITLAND COA	PΕ	660/E	1865/S	Н	30	10W	24N	91-S		. 1
ITOR WELL_NAME WELL_NO TWN RGE SEC UL FTAGE_NS FTAGE_EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZIE COM 91 24N 10W 30 A 990/N 1600/W PE BASIN FRUITLAND CORP FRAZZIE COM 90-S 24N 10W 30 C 900/N 1600/W PE BASIN FRUITLAND CORP FRAZZIE SWD 90-S 24N 10W 30 C 795/N 2180/W PE BASIN FRUITLAND		BASIN FRUITLAND CO.	PE	1815/W	1995/S	K	30	10W	24N		Z IE	4
TOR WELL NAME WELL'NO TWN RGE SEC UL FTAGE NS FTAGE EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZLE COM 91 24N 10W 30 A 990/N 900/E PE BASIN FRUITLAND CORP FRAZZLE COM 90-S 24N 10W 30 C 900/N 1600/M PE BASIN FRUITLAND			PE	2180/W	795/N	C	30	10W	24N		FRAZZIE SWD	
ATOR WELL_NAME WELL_NO TWN RGE SEC UL FTAGE_NS FTAGE_EW STATUS POOL CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND CORP FRAZZLE COM 91 24N 10W 30 A 990/N 900/E PE BASIN FRUITLAND			=PE	1600/W	900/N	0	30	10W	24N	S-06	FRAZZLE COM	
OPERATOR WELL NAME WELL NO TWN RGE SEC UL FTAGE NS FTAGE EW STATUS POOL PROD. CORP HOMER COM 91 24N 10W 29 H 1450/N 660/E PE BASIN FRUITLAND	AL	SIN FRUITLAND	PE	900/E	990/N	A	30	10W	24N		RAZZLE	22.00
RATOR WELL_NAME WELL_NO TWN RGE SEC UL FTAGE_NS FTAGE_EW STATUS		N FRUITLAND	PΕ	660/E	1450/N	エ	29	10W	24N	91	HOMER COM	PROD.
		13. 11. 17	 	FTAGE_	14/4	JUL	SEC	RGE	TWN	19980		OPERATOR

Wells within 1/2-mile area of review are shaded (grey). No wells within the area of review penetrate the proposed injection zone.

Attachment Via. Tabulation of Data on Offset Wells

Dugan Production Corp., Frazzle SWD #1, S.30, T24N, R10W

DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	DUGAN PROD. CORP	.	DUGAN PROD. CORP	.	DUGAN PROD. CORP	OPERATOR									
FLO JO	FLO JO	FLO JO	FLO JO	FLO JO	FLO JO	CALGARY	CHAMP	SQUAW VALLEY	MARATHON	MONTREAL	SQUAW VALLEY	LAKE PLACID	MONTREAL	MARATHON	ROAD RUNNER	ROAD RUNNER	WELL NAME														
5	7	6	4	2		7	8	6	5	2	4	3	88	6	8	7	5	4	2	-1	ω	2	2	2	1	1	1	1		90	WELL NO
23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	23N	24N	24N	TWN
11W	11W	11W	11W	11W	11W	10W	10W	10W	10W	10W	10W	11W	11W	RGE																	
						6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	36	36	SEC
0 7	<u>×</u>	х 	- 2	C 6	A 6	0	Z		_	G 1	E 1		A 6	0	≥	× -1	- 2		ш		0	S			X 2	- 2	C	Α 6	0	Х 	JU
725/S	330/S	1990/S	2225/S	660/N	660/N	990/S	990/S	2205/S	1980/S	1980/N	1980/N	660/N	660/N	990/S	990/S	1980/S	2150/S	1740/N	1980/N	660/N	660/N	810/S	1830/N	1830/N	2310/S	2310/S	330/N	630/N	660/S	1850/S	FTAGE_NS
1650/E	1190/W	2230/W	975/E	1980/W	330/E	1980/E	990/W	2205/W	660/E	1980/E	660/W	1980/W	660/E	1980/E	900/W	1830/W	800/E	2235/E	660/W	1980/W	660/E	730/W	1830/E	660/W	2210/W	330/E	2310/W	550/E	1980/E	1850/W	FTAGE_EW
CO	CO	CO	င္ပ	င	CO	CO	CO	CO	CO	င္ပ	CO	င္ပ	CO	CO	CO	CO	00	CO	CO	CO	CO	CO	TΑ	STATUS							
SOUTH BISTI GALLUP	S BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP	SOUTH BISTI GALLUP		SOUTH BISTI GALLUP	BASIN FRUITLAND COAL	SPOOL				
4570	4630	4650	4625	4646	4670	4655	4590	4620	4660	4670	4625	4660	4715	4630	4670	4655	4641	4715	4708	4720	4755	4640	1820	4705	4760	4800	4800	4825	4700	1030	TD

Dugan Production Corp.

Frazzle SWD #1

Part VII. Operations Plan

- 1. Average Injection Rate: 5,000 bwpd with a maximum of 6,000 bwpd.
- 2. The system will be closed.
- 3. Average Injection Pressure: 1100 psi and the maximum will be 1325 psi.
- 4. The source of injected water will be produced water from Fruitland Coal wells in the area (T24N and T23N, R10W). Attachment VII-4a., VII-4b. and VII-4c. are analyses of the Fruitland Coal water in the immediate area The water to be injected is compatible with the water in the disposal zone.
- 5. Injection is for disposal purposes into a zone (Entrada Sandstone) that is not productive of oil or gas within one mile of the proposed injection well. An analysis of the disposal zone water is in not available.

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CATION / ANION ANALYSIS

Client:	Dugan Production	Project #:	06094-003
Sample ID:	Elmo Com #90	Date Reported:	09-06-06
Laboratory Number:	38357 Sec.11, T24N, R11W	Date Sampled:	09-05-06
Chain of Custody:	1424	Date Received:	09-05-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	09-06-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		:
оН	7.13	s.u.		
Conductivity @ 25° C	20,370	umhos/cm		
Total Dissolved Solids @ 180C	12,600	mg/L		
Fotal Dissolved Solids (Calc)	13,020	mg/L		
SAR	115	ratio		
Total Alkalinity as CaCO3	730	mg/L		
Total Hardness as CaCO3	353	mg/L		
Bicarbonate as HCO3	730	mg/L	11.96	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.1	mg/L	0.00	meg/L
Nitrite Nitrogen	0.002	mg/L	0.00	meq/L
Chloride	7,480	mg/L	211.01	meq/L
Fluoride	0.42	mg/L	0.02	meg/L
Phosphate	1.40	mg/L	0.04	meq/L
Sulfate	<0.1	mg/L	0.00	meq/L
iron	1.30	mg/L	0.05	meq/L
Calcium	106	mg/L	5.27	meq/L
Magnesium	21.8	mg/L	1.79	meq/L
Potassium	19.2	High Committee C	0.49	nieq/L
Sodium	4,950	mg/L	215.33	meq/L
Cations			222.88	meq/L
Anions			223.04	meq/L
Cation/Anion Difference			0.07%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

(Analyst

Review P. Polinia

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CATION / ANION ANALYSIS

Client:	Dugan Production	Project #:	06094-003
Sample ID:	Mary Lou Com #91	Date Reported:	09-06-06
Laboratory Number:	38358 Sec.32, T24N, R10)W Date Sampled:	09-05-06
Chain of Custody:	1424	Date Received:	09-05-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	09-06-06
Condition:	Cool & Intact		

	Analytical			
Parameter	Result	Units		
рН	7.08	s.u.		
Conducti v ity @ 25° C	20,900	umhos/cm		
Total Dissolved Solids @ 180C	13,550	mg/L		
Total Dissolved Solids (Calc)	13,330	mg/L		
SAR	117	ratio		
Total Alkalinity as CaCO3	700	mg/L		
Total Hardness as CaCO3	355	mg/L		
Bicarbonate as HCO3	700	mg/L	11.47	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.6	mg/L	0.01	meq/L
Nitrite Nitrogen	0.011	mg/L	0.00	meq/L
Chloride	7,680	mg/L	216.65	meq/L
Fluoride	0.77	mg/L	0.04	meq/L
Phosphate	2.60	mg/L	0.08	meq/L
Sulfate	<0.1	mg/L	0.00	meq/L
Iron	15.0	mg/L	0.54	meq/L
Calcium	98.9	mg/L	4.93	meq/L
Magnesium	26.4	mg/L	2.17	meq/L
Potassium	25.4	m^2/!	0.65	meq/l
Sodium	5,070	mg/L	220.55	meq/L
Cations			228.30	meq/L
Anions			228.26	meq/L
Cation/Anion Difference			0.02%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

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CATION / ANION ANALYSIS

Client:	Dugan Production	Project #:	06094-003
Sample ID:	Harry Monster #91S	Date Reported:	09-06-06
Laboratory Number:	38360 Sec.12, T24N, R11W	Date Sampled:	09-05-06
Chain of Custody:	1424	Date Received:	09-05-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	09-06-06
Condition:	Cool & Intact		

	Analytical	1124		
Parameter	Result	Units		
ρΗ	7.28	s.u.		
Conducti∨ity @ 25° C	20,460	umhos/cm		
Total Dissolved Solids @ 180C	13,330	mg/L		
Fotal Dissolved Solids (Calc)	13,080	mg/L		
SAR	113	ratio		
Fotal Alkalinity as CaCO3	760	mg/L		
Total Hardness as CaCO3	368	mg/L		
Bicarbonate as HCO3	760	mg/L	12.46	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.3	mg/L	0.00	meq/L
Nitrite Nitrogen	0.005	mg/L	0.00	meq/L
Chloride	7,500	mg/L	211.58	meq/L
Fluoride	0.53	mg/L	0.03	meq/L
Phosphate	2.20	mg/L	0.07	meq/L
Sulfate	<0.1	mg/L	0.00	meq/L
Iron	0.753	mg/L	0.03	meq/L
Calcium	106	mg/L	5.29	meq/L
Magnesium	25.2	mg/L	2.07	meq/L
Fotassium	18.1		0.47	- meq/l
Sodium	4,970	mg/L	216.20	meq/L
Cations			224.03	meq/L
Anions			224.13	meq/L
Cation/Anion Difference			0.05%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

Analyst Multine mulacles

Review C. Quantum

Dugan Production Corp.

FRAZZLE SWD #1

Part VIII. Geologic Data

The proposed injection interval is the Entrada Sandstone from approximately 6625 - 6825 feet. The only known source of stock water in the area is encountered in existing arroyos at a depth of approximately 35 - 50. The Ojo Alamo is approximately 50 - 100 feet below the surface, however, there are no known water wells producing from the Ojo Alamo in the area. There are no known drinking water sources below the Mesaverde interval. The expected formation tops in the well are as follows:

Ojo Alamo	50'		
Kirtland	165'	Skelly	4545'
Fruitland	690'	Greenhorn	5325'
Pictured Cliffs	990'	Graneros	5380'
Lewis	1095'	Dakota	5405'
Cliff House	1740'	Morrison	5685'
Menefee	2270'	Bluff	6239'
Point Lookout	3450'	Todilto	6610'
Mancos	3590'	Entrada	6625'
Gallup	4425'	Total Depth	6875'

Part IX. Stimulation Program

Following injection rate tests, it may be necessary to stimulate the Entrada Sandstone by acidizing or fracturing.

Part X. Logging and Test Data

All logs and test data for the injection well will be submitted to the New Mexico Oil Conservation Division in Aztec, NM

Part XI. Fresh Water Samples

A records search and field survey for existing water wells in the vicinity of the proposed disposal well were conducted. There are no shallow water wells were located within 2-miles of the proposed disposal well.

Dugan Production Corp.

Frazzle SWD #1

Part XII. Statement of Geologic and Engineering Data

I have examined all 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.

Kurt Fagrelius, Geologist

September 15, 2006

Date

Dugan Production Corp.

Frazzle SWD #1

Part XIII. Proof of Notice

Attached are proof's of notice that this application has been sent by certified mail, to the surface owner of the land which the injection well is to be located on and all leasehold operators within one-half mile of the well location. Also, proof of publication is enclosed showing the legal advertisement which was published in the Farmington Daily Times.

AFFIDAVIT OF PUBLICATION

Ad No. 53981

STATE OF NEW MEXICO County of San Juan:

ROBIN ALLISON, being duly sworn says: That she is the CLASSIFIED MANAGER of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication and appeared in the Internet at The Daily Times web site on the following day(s):

Wednesday, September 6, 2006.

And the cost of the publication is \$49.78.

ON 9/14/06 ROBIN ALLISON appeared before me, whom I know personally to be the person who signed the above document.

My Confinission Expires November 17/2908



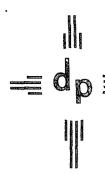
COPY OF PUBLICATION

NOTICE

Dugan Production Corp., P.O. Box 420, Farming ton, NM 87499 is making application for administrative approval to dispose of produced water by underground in jection. Contact person is Kurt Fagrelius, phone 505-325-1821. The proposed disposal site is the Frazzle SWD #1, located 795' fnt & 2180' fwl, Sec.

30, Twn. 24N, Rng. 10W, San, Juan Co. NM. Water will be injected into the Entrada Sand stone between 6625' and 6825' below the surface. Maximum injection pressure is 1325 psi. Maximum injection rate is 3,000 barrels of waterdaily. Any interested parties must file objection or requests for hearing with the Oil Conservation Division 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

Legal No. 53981 pub lished in The Daily Times, Farmington, New Mexico on Wednesday, September 06, 2006.



Ms. Melissa Wittler North American Petroleum Corp. 1401 17th St, Suite 310 Denver, CO 80202 **September 15, 2006**

-- CERTIFIED MAIL, RETURN RECEIPT REQUESTED-

7005 2570 0001 3771 6135

Re: Notice of Intent to Complete Salt Water Disposal Well

Dear Ms. Melissa Wittler:

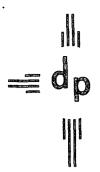
Dugan Production Corp. has filed an application for administrative approval to complete the Frazzle SWD #1 (Sec. 30, T24N, R10W, 795' FNL and 2180' FWL) as a salt water disposal well. Injection will be into the Entrada Sandstone between 6625' and 6825'. A copy of the application is attached.

As an offsetting operator (Sec. 24, T24N, R10W) North American Petroleum Corp. is being notified of this application. If you wish to object or request the matter for hearing you must contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely,

Kurt Fagreliús Geologist



September 15, 2006

The Navajo Nation Minerals Dept. P.O. Box 1910 Window Rock, AZ 86515

--CERTIFIED MAIL, RETURN RECEIPT REQUESTED—

7005 2570 0001 3771 6111

Re: Notice of Intent to Complete Salt Water Disposal Well

Dear Navajo Nation Minerals Dept.:

Dugan Production Corp. has filed an application for administrative approval to complete the Frazzle SWD #1 (Sec. 30, T24N, R10W, 795' FNL and 2180' FWL) as a salt water disposal well. Injection will be into the Entrada Sandstone between 6625' and 6825'. A copy of the application is attached.

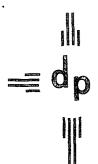
As a surface owner of offsetting land to the injection well the Navajo Nation Minerals Dept. is being notified of this application. If you wish to object or request the matter for hearing you must contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 13 days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely,

Kurt Fagrelius Geologist

Attachment



September 15, 2006

Mr. David Mankiewicz Bureau of Land Management 1235 La Plata Highway Farmington, NM 87401

--CERTIFIED MAIL, RETURN RECEIPT REQUESTED-

7005 2570 0001 3771 6067

Re: Notice of Intent to Complete Salt Water Disposal Well

Dear Mr. Mankiewicz:

Dugan Production Corp. has filed an application for administrative approval to complete the Frazzle SWD #1 (Sec. 30, T24N, R10W, 795' FNL and 2180' FWL) as a salt water disposal well. Injection will be into the Entrada Sandstone between 6625' and 6825'. A copy of the application is attached.

As a surface and oil and gas interest owner of offsetting land to the injection well the Bureau of Land Management is being notified of this application. If you wish to object or request the matter for hearing you must contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely,

Kurt Fagrelius Geologist

Attachment



Mr. Ty Stillman EOG Resources, Inc 600 17th St, Suite 1100 N Denver, CO 80202 September 15, 2006

--CERTIFIED MAIL, RETURN RECEIPT REQUESTED—

7005 2570 0001 3771 6104

Re: Notice of Intent to Complete Salt Water Disposal Well

Dear Mr. Ty Stillman:

Dugan Production Corp. has filed an application for administrative approval to complete the Frazzle SWD #1 (Sec. 30, T24N, R10W, 795' FNL and 2180' FWL) as a salt water disposal well. Injection will be into the Entrada Sandstone between 6625' and 6825'. A copy of the application is attached.

As an offsetting operator (Sec. 25, T24N, R10W) EOG Resources, Inc is being notified of this application. If you wish to object or request the matter for hearing you intust to contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely,

Kurt Fagrelius

Geologist



September 15, 2006

Mr. Charlie Perrin New Mexico Oil Conservation Division 1000 Rio Bravo Rd Aztec, New Mexico 87410

--CERTIFIED MAIL, RETURN RECEIPT REQUESTED— 7005 2570 0001 3771 6159

Re: Application to Class 2, water disposal well, Frazzle SWD #1 San Juan County, NM

Dear Mr. Charlie Perrin:

Enclosed, is Dugan Production Corp.'s application for disposal of produced water in the Frazzle SWD #1. In fulfilling the requirements of application, the following materials are provided herein:

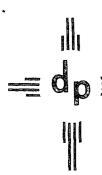
- 1. Form C-108, Application for Authorization to Inject.
- 2. Tabular and schematic data on proposed injection well.
- 3. Lease and surface owner maps identifying all wells and leases within 2-miles of proposed injection well with a one-half mile radius circle drawn around the proposed injection well.
- 4. Data sheet of wells within 2-miles of proposed injection well, highlighting those wells inside one-half mile radius around the injection well.
- 5. Operations plan for proposed injection well.
- 6. Water Analysis of produced water to be disposed in proposed injection well (Fruitland Coal).
- 7. Required geologic, stimulation, logging and test data and fresh water data from nearby wells
- 8. Signed statement of geologic and engineering data.
- 9. Proof of notice in the form of notification letters sent to offsetting operators and surface owners and a copy of the Affidavit of Publication of the notice as it appeared in the Farmington Daily Times. Signed and notarized copy will be sent once received.

If you have questions or need additional information, please contact me.

Very Sincerely,

Kurt Fagrelius

Attachments



Coleman Oil & Gas Company Drawer 3337 Farmington, NM 87499-3337 September 15, 2006

-- CERTIFIED MAIL, RETURN RECEIPT REQUESTED-

7005 2570 0001 3771 6098

Re: Notice of Intent to Complete Salt Water Disposal Well

Dear Coleman Oil & Gas Company:

Dugan Production Corp. has filed an application for administrative approval to complete the Frazzle SWD #1 (Sec. 30, T24N, R10W, 795' FNL and 2180' FWL) as a salt water disposal well. Injection will be into the Entrada Sandstone between 6625' and 6825'. A copy of the application is attached.

As an offsetting operator (Sec. 24, T24N, R10W) Coleman Oil & Gas Company is being notified of this application. If you wish to object or request the matter for hearing you must contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely,

Kurt Fagrelius Geologist

Kurt Fegrulia



Mr. Rich Corcoran Well Fleet Drilling, LLC 2010 Afton Place Farmington, NM 87401 September 15, 2006

-- CERTIFIED MAIL, RETURN RECEIPT REQUESTED-

7005 2570 0001 3771 6128

Re: Notice of Intent to Complete Salt Water Disposal Well

Dear Ms. Mr. Rich Corcoran:

Dugan Production Corp. has filed an application for administrative approval to complete the Frazzle SWD #1 (Sec. 30, T24N, R10W, 795' FNL and 2180' FWL) as a salt water disposal well. Injection will be into the Entrada Sandstone between 6625' and 6825'. A copy of the application is attached.

As an offsetting operator (Sec. 25, T24N, R10W) Well Fleet Drilling, LLC is being notified of this application. If you wish to object or request the matter for hearing you must contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely,

Kurt Fagrelius

Kurt Fagrelius

Geologist



Mr. James Miles Federal Indian Minerals Office 1235 La Plata Highway Farmington, New Mexico 87401 September 15, 2006

--CERTIFIED MAIL, RETURN RECEIPT REQUESTED-

7005 2570 0001 3771 6074

Re: Notice of Intent to Complete Salt Water Disposal Well

Dear Mr. Miles:

Dugan Production Corp. has filed an application for administrative approval to complete the Frazzle SWD #1 (Sec. 30, T24N, R10W, 795' FNL and 2180' FWL) as a salt water disposal well. Injection will be into the Entrada Sandstone between 6625' and 6825'. A copy of the application is attached.

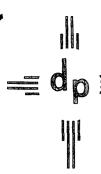
As a surface and oil and gas interest owner of offsetting land to the injection well the Federal Indian Minerals Office is being notified of this application. If you wish to object or request the matter for hearing you must contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely,

Kurt Fagrelius' Geologist

Attachment



September 15, 2006

Ms. Debbie Padilla New Mexico State Land Office – Surface Resources PO Box 1148 Santa Fe, New Mexico 87504-1148

-- CERTIFIED MAIL, RETURN RECEIPT REQUESTED-

7005 2570 0001 3771 6081

Re: Notice of Intent to Complete Salt Water Disposal Well

Dear Ms. Padilla:

Dugan Production Corp. has filed an application for administrative approval to complete the Frazzle SWD #1 (Sec. 30, T24N, R10W, 795' FNL and 2180' FWL) as a salt water disposal well. Injection will be into the Entrada Sandstone between 6625' and 6825'. A copy of the application is attached.

As a surface and oil and gas interest owner of offsetting land to the injection well (Sec. 32, T24N, R10W) the New Mexico State Land Office is being notified of this application. If you wish to object or request the matter for hearing you must contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.

If you have questions or need additional information concerning this application, please contact me.

Sincerely.

Kurt Fagrelius
Geologist
Attachment