## **Geo-Engineering**

Box 1417/200 Court St., Socorro, N.M. 87801 ● (505) 835-0377

JAMES W. LAW
Petroleum Engineer
Box 2966, Santa Fe, N.M. 87504
Ph. 982-0472

JAMES R. WOODS
Geological Engineer

October 29, 1984

Oil Conservation Division P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Gilbert Quintana

Re: Chaco Wash Waterflood Expansion McKinley County, New Mexico

Dear Gilbert:

Enclosed please find Geo Engineering, Inc's. application for expansion of the Chaco Wash-Meseverde Waterflood. Geo Engineering has completed the necessary workovers to isolate our upper pay zone from the lower pay zone and is presently injecting KCL water into the field. Presently we are experiencing difficulty with silt problems in our injection wells and can not obtain the desired volumns of injected water. The few new injection wells we propose to drill should enable Geo Engineering, Inc., to achieve to 1000 BPD needed to make this a viable economic project.

If any further information is needed for this application, please contact me at this office.

Sincerely,

JIM LAW

Petroleum Engineer

Encl: OCD Aztec

Part V: Map enclosures, location map of injection well with 1/2

mile radius, map of wells located within two miles of project, and map of lease ownership for two mile radius

surrounding project.

Part VI : Previously submitted (WFX-525).

Part VIII : (1) Average and maximum daily water injection rate will be 1,000 BPD.

(2) Open system.

(3) Maximum injection pressure 65 psi, average injection

pressure 60 psi.

(4) Water source is Hospah Gallup Sand at 2500' to 2900'. Source well is located in Unit P, Sec. 20, T20N, R9W. Water analysis is attached. Water will be compatible with the receiving formation after the addition of KCL.

Part VII : Previously submitted.

Part IX : Proposed stimulation - None.

Parts X & XI: Previously submitted.

Part XII: Not applicable.

Part XIII: Surface Owners

State of New Mexico N.M. State Land Office

P. O. Box 1148

Santa Fe, New Mexico 87504

Attn: Ray Graham

Eastern Navajo Land Commission

P. O. Box 948

Crownpoint, New Mexico 87313

Attn: Jerry Elwood

BLM

Federal Bldg. U.S. Post Office Santa Fe, New Mexico 87501

Attn: Oil and Gas Section

Lease Hold Operators

Mr. Phillip McKee

P. O. Box 45

McIntosh, New MExico 87032

## Affidavit of Publication

COUNTY	OF McKINLEY						
	Ruby Walt	er			being d	uly swon	n upoi
oath, depo	ses and says:						
Independe McKinley affiant ma sworn to. lished in	ent, a newspaper County, New Mex akes this affidavit b That the publicat said newspaper du s published in the n	published kico, and pased upor ion, a copring the princip the parting the part	in and in the Conperson of who person and the conperson and the co	having City of C al know nich is h nd time	a general Gallup, th ledge of t ereto atta of public	circulaterein: the facts wation and	ion ii at thi hereii s pub d said
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LEGAL NOTICE

Geo Engineering Inc P.O. Box 2008 Santa Fe, New Mexico 87504-2365 Contact Party J.W. Law, Telephone (505) 983-9472

This company intends to expand its waterflood operation in section 21, 22, 27, & 28, Township 39 north, Range 9 west, McKinley County, New Mexico. Water injection will be into six additional wells completed in the Mewefee formation at approximately 300 300 feet deep. Average injection rate per well is estimated to be 30 bbls. per day, Maximum Surface injection pressure will be 60 psi. Interested Parties must file objections or requests for hearing with the oil conservation division, P.O. Box 2008, Santa Fe, New Mexico 37301 within 15 days.

logal #10839 Published in the Gallup Independent Saturday July 14, 16, 1994

## **Geo-Engineering**

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JAMES W. LAW
Petroleum Engineer
Box 2966, Santa Fe, N.M. 87504
Ph. 982-0472

JAMES R. WOODS Geological Engineer

### 2456 337 833 RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL

(See Reverse)	
Sent to BLM BL	M
Street and No. FEO.BLDG. US PO	
P.O., State and ZIP Code SANTA FE, NM 87	501
Postage	\$ 54
Certified Fee	75
Spacial Delivery Fee	
Restricted Delivery Fee	
Seturn Receipt Showing to whom and Date Delivered	60
Return Receipt Showing to whom, Cate, and Address of Delivery	
TOTAL Postage and Fees	\$189
Postmark for Date 1000	

### P 456 337 831 RECEIPT FOR CERTIFIED MAIL

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	1500 Teversoy	
	Sent to NAVAJO TR	BE
	Street and No. Po Box 948	
	P.O., State and ZIP Code	0
	SPOWNPOINT, NH	8/3/3
	Postage	\$
	Certified Fee	
	Special Delivery Fee	
	Restricted Delivery Fee	
	Return Receipt Showing to whom and Date Delivered	
	Return Receipt Showing to whom,	
22	Date, and Address of Delivery	
5. 198	TOTAL Postage and Fats	\$1.89
PS Form 3800, Feb. 1982	Postmark or Date Ov	

### P 456 337 830 RECEIPT FOR CERTIFIED MAIL

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(See Reverse) PHILLIPHENE Sent to Street and No. PO BOX 45 P.O., State and ZIP Code HS/NTOSH, NM 87032 Postage Certified Fee Special Delivery Fee Restricted Delivery Fee Return Receipt Showing to whom and Date Delivered Return Receipt Showing to whom, Date, and Address of Delivery Form 3800, Feb. 1982 and Fees Postmarkun

P 456 337 832
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)	STATE LIND OFFICE	Street and No.	NI	Certified Fee	Special Delivery Fee	Restricted Delivery Fee	Return Receipt Showing to whom and Date Delivered	Return Receipt Showing to whom, Date, and Address of Delivery	TOTAL Postage and Eees \$ / 89	l
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### OIL CONSERVATION DIVISION

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE. NEW MEXICO 87501 FORM C-108 Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT Secondary Recovery Pressure Maintenance Disposal Purnose: Application qualifies for administrative approval? ,es no Engineering, Inc Operator: (900 II. 87504-2966 2966, Santa Fe, N.M. Phone: 982-0472 Contact party: 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. **X** yes ect R-6538, WFX 525. IV. Is this an expansion of an existing project? If yes, give the Division order number authorizing the project ٧. 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. ٧I. 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 of calculation.
 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 5. 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 lithologic \*VIII. detail, 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. IX. Describe the proposed stimulation program, if any. Attach appropriate logging and test data on the well. (If well logs have been filed Χ. with the Division they need not be resubmitted.) Attach a chemical analysis of fresh water from two or more fresh water wells (if XI. available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken. Applicants for disposal wells must make an affirmative statement that they have XII. 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 form. XIII. 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: \_\_ Title Signature: Date:

expansion, WFX Order No. 525, March 29, 1984.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

of the earlier submittal. Recieved O.C.D. Santa Fe Feb. 29, 1984 For Flood

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance

Surf Size 10C 10C 10C 10C 10C 10le 10ta	OPERATORS MEETING INC	WELL NO. FOOTAGE LOCATION	Schematic										\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	CIBP0350	•			
Tabular Data  Tabular Data  Tace Casing  Teet determined by  Size  Teet determined by  Feet determined by  Size  Torated or open-hole, indicate which)  Torated or open-hole, indicate which)	State 2779	20 North	ular	Surface Casing	-	f	Hole size	Intermediate Casing	=	feet	Hole size	Long string	=	Surface feet		Total depth 535	Injection interval	301 indicate which)

Name of the injection formation MeneFee  Name of Field or Pool (if applicable) Chaco Wash - M  Is this a new well drilled for injection? // Yes \( \int \)  If no, for what purpose was the well originally drilled?  Has the well ever been perforated in any other zone(s)? and give plugging detail (sacks of cement or bridge plugging the depth to and name of any overlying and/or under this area. 520 Herefee	Baker - Loc Set (brand and model)  or describe any other casing-tubing seal).
of of his his of the give	r describe any other casing-tub her Data
Is this a new well drilled for injection? // Yes If no, for what purpose was the well originally dril Has the well ever been perforated in any other zone and give plugging detail (sacks of cement or bridge CIBP © 350 Feet to settegte oil zone five the depth to and name of any overlying and/or uthis area. 520 Hewse	of
If no, for what purpose was the well originally dril  Has the well ever been perforated in any other zone ( and give plugging detail (sacks of cement or bridge)  CIBP © 350 Feet to segregate oil zone  Give the depth to and name of any overlying and/or uthis area. 520 Mewsee	this
Has the well ever been perforated in any other zone and give plugging detail (sacks of cement or bridge CIBP@ 350 Feet to seyregete oil zone this area. 570' Mewage	If no, for what purpose was t
1	Has the well ever been perfor and give plugging detail (sac
	J.

				CI8P@350											Schematic	WELL NO. FOOTAGE LOCATION		GEO Engineering, Inc	-
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indicate which) feet				determined by Returns	Cemented with 40 cubic feet w			determined by	Cemented withsx			et determined by	Cemented withsx.		Data	TOWNSHIP			

5.			. 3.	2.	•	0+1	(01		Tub
Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Kyo' Kou-Fee	Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) **ReyFs 520-528*, CIBP @ 350' to secenced on any other zone(s)? List all such perforated intervals	If no, for what purpose was the well originally drilled? Oil Well	Is this a new well drilled for injection? 🖊 Yes 🐰 No	Name of Field or Pool (if applicable) Chaco Wash - N.V.	Name of the injection formation MeweFee	Other Data	(or describe any other casing-tubing seal).	(brand and model) packer at 275 feet	Tubing size 23/8 lined with Plostic set in a

				<b>b</b> :. • .:				Schematic	WELL NO. FÖÖTAGE LOCATION	K L	Goo Engine esing. In
190 feet to open-hole,	Injection interval	1100 Surface 6/4	Long string		Intermediate Casing Size NONE "	TOC f	Size NONE "	Tab	SECTION	LEASE	91. LE 1779
310  e, indicate which)		feet determined by Returns	Cemented with _	feet determined by	Cemented with	feet determined by	Cemented with _	Tabular Data	TOWNSIIIP		
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					M			<b>D</b>	- Δ						Schemalic	 41 400 FSL 165 FW L	Geo Engineering, Inc.
Gerforated or open-hole.	Injection interval	Total depth 350	Hole size 6/2	INC Surface	Size 4 1/2 "	Long string	Hole size	100	Size NONE "	Intermediate Casing	Hole size	10Cf	Size NONE "	Surface Casing	<u>lab</u>	SECTION	Samta Fe Pacif
e indicate which)			"	et determined by _	Cemented with			eet determined by	Cemented with _			eet determined by	Cemented with		Tabular Data	20 North	6
feet				Returns	90 83				(8)				5 X .			RANGE	

Tut	Tubing size	23/8	lined with	Pastic (material)	set in a	æ
	Baker	Baker - Lock Set			<i>315</i> feet	
(or	describe	describe any other casing-tubi	.ng-tubing seal).			
0 t.i	Other Data					
•	Name of	Name of the injection formation	ormation Menefee	Fee		
2.	Name of	Field or Pool (	if applicable) $C$	Name of Field or Pool (if applicable) Chaco Wash - Meseucrale	verale	
δ.	Is this	a new well drilled for	led for injection? 🚿	₩ Yes / No		
	lf no, f	If no, for what purpose	wa s	the well originally drilled?		.
	Has the and give	well ever been plugging detai	perforated in any o 1 (sacks of cement	other zone(s)? List al or bridge plug(s) used	Has the well ever been perforated in any other zone(s)? List all such perforated interval and give plugging detail (sacks of cement or bridge plug(s) used) 16	val
5.	Give the this are	Give the depth to and name of this area. 500 , Menefe		ng and/or underlying oi	any overlying and/or underlying oil or gas zones (pools) in	ni

OPERATOR 75FSL 165FWL	Santa Fe Pac LEASE	Pacific 20 North	9 West
Schemalic		Tabular Data	
	Surface Casing		
	Size NONE	" Cemented with	Sx.
<b>P</b> Y	100	feet determined by	
<b>8</b>	Hole size		
	Intermediate Casing	<u>.</u>	
	Size NONE	" Cemented with	3 × •
	100	feet determined by	
	Hole size		
4	Long string		
M	Size 41/2	" Cemented with	90 sx.
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	llole size	61/2	
Δ	Total depth	350	
	Injection interval		
	(perforated or ope	feet to 340	) reet

•	•			2.	•	13.0	(0)			Tut	
Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) this area. 500 / Menefee	and give plugging detail (sacks of cement or bridge plug(s) used) 16	If no, for what purpose was the well originally drilled?	3. Is this a new well drilled for injection? 🗶 Yes 💯 No	2. Name of Field or Pool (if applicable) Chaco Wash - Meseverche	1. Name of the injection formation Menefee	Other Data	(or describe any other casing-tubing seal).	(brand and model)	Raker - Lock Set packer at 3/5 feet	set in	
s (pools) in	ated interval								feet		

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					M			- 7	F - A						Schematic		WELL NO SOOKNE, 165 FWE		Seo Engineering
(perforated or open-hole	Injection interval	Total depth 350	Hole size 6/2	100 Surface	Size 41/2 "	Long string	Hole size	001	Size NONE "	Intermediate Casing	Hole size	100	Size NONE "	Surface Casing	Tabu	300	Q7	:	Santa Re Pacific
e, indicate which) feet		0,		feet determined by Reforms	Cemented with 90			feet determined by	Cemented with			feet determined by	Cemented with		ular Data		20 North 9 west		
				CNS	gx.				s×.				s×.				est		

Tubing size 23/8 lined with Plaske set in a (material)  **Roker - Lock set*   (material)  **Roker - Lock set*   packer at 3/0   feet*    (or describe any other casing-tubing seal).  **Other Data**  1. Name of the injection formation   MeneFee*    2. Name of Field or Pool (if applicable)   Chaco Wash - Mesevere*    3. Is this a new well drilled for injection?   West   No    If no, for what purpose was the well originally drilled?    4. Has the well ever been perforated in any other zone(s)? List all such perforated interval and give plugging detail (sacks of cement or bridge plug(s) used)   No    5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.   Soo   MeneFee*	Size   23/8"
	r gas z

### CHACO WASH WATER SUPPLY

Alkalinity as HCO3	347
Chlorides as Cl	233
Sulfates as SO <sub>4</sub>	675
Hardness as CcCO <sub>3</sub>	36
Calcium as Ca	10
Magnesium as Mg	3
Iron as Fe	0.34
₽ PH	8.2
月 PH Specific Gravity	1.001
Total Dissolved Solids	1440

With the exception of  $_{\mbox{\footnotesize{p}}\mbox{\footnotesize{H}}}$  and specific gravity, all results are expressed at mg/L.

Hydrogen Sulfide: Not detectable ( $\bigcirc$ 0.5 mg/L)

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

115	114	113	112	111	110	109	108	107	106	105	104	103	Identification Number
#3 Santa Fe RR or SFP #103	#2 Santa Fe RR	#2 Santa Fe RR or	#1 Santa Fe RR	SFP #104 #5 Santa Fe RR	#4 Santa Fe RR or	#3 Santa Fe Pacific	#18 Santa Fe Pacific	#1 Santa Fe	#8 Santa Fe	#4 Santa Fe	#1 Santa Fe	#3 Santa Fe	Well Name
(165FNL 2145FWL) SE-SE-SE 21-20N-9W (165N/S 165W/E)	(363FSL 163FEL) SE-SW 21-20N-9W	(330FSL 2310FWL) SE-SE-SE 21-20N-9W	(990N/S 330W/E) SE-SE-SW 21-20N-9W	(165FSL 565 FEL) NE-SE-SE 21-20N-9W	(165°SL 1615 °WL) SE-SE-SE 21-20N-9W	(1/3F3L 1303FEL) SW-SE-SW 21-20N-9W	(10373L 9037EL) SW-SE-SW 21-20N-9W	(495N/S 660W/E) SE-SE 21-20N-9W	(660N/S 330W/E) SE-SE 21-20N-9W	E-SE-SE 21-20N-9W	SW-SW-W 21-20N-9W	SW-SE-SE 21-20N-9W	Location
11- 8-68	6- 5-69	10- 1-69	10- 9-69	10-31-61	10- 1-68	10- 1-69	10-19-75	4- 3-75	1-11-62	11- 6-61	11- 7-35	6-25-44	Completion Date
340	563	340	565	360	340	539	1,583	502 PB:316	325	330	540	354	Total Depth
5-1/2 (	None	5-1/2 @	None	2-3/8 (c) 5-1/2 (c)		None	10	4-1/2	6-5/8 (		2		Casing 8
@ 323W/15 @ 330		@ 310W/25		@ 360W/10	308W/25		orted	@ 306W/25	@ 320\/\10	@ 320W/10	e 60 e 315	315	& Setting Depth
=	=	=	:	=	=	=	=	=	=	=	=	011	Well Type
A/A T/A	P&A	A/J.	4-/-6/ P&A 5 17 71	P&A	T/B	P&A 71	P&A 10-22-75	T/A	P&A	P&A 4-7-67	A/T	T/A	Status

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

130	129		128		127	126		125		124		123		122		121			120		119		118		117		116	Number
#14 Scanlon	#12 Santa Fe		#9 Santa FE	SFP #106	#6 Santa Fe or	#1 Santa Fe		SFPRR #2		SFP #113		SFP #101		SFP #7		SFP #3			SFP #1		SFP #1		#17 Scannion		#1-1 Santa Fe RR		#10 Santa Fe RR	well Name
(495N/S 165E/W) SW-SW-SW 22-20N-9W	SW-SW-SW 22-20N-9W	(165N/S 165E/W)	SW-SW-SW 22-20N-9W	(160N/S 165E/W)	SW-SW 22~20N-9W	SW-SW-SW 22-20N-9W	(1650s 330W)	SW-NW-SW 21-20N-9W	(165S 965E)	SE-SE-SE 21-20N-9W	(565S 565E)	SE-SE-SE 21-20N-9W	(165S 660E)	S-SE-SE 21-20N-9W	(330E 330S)	SE-SE-SE 21-20N-9W	(990E 330S)		SW-SE-SE 21-20N-9W	(565S 565E)	SE-SE-SE 21-20N-9W	(990N/S 660W/E)	SE-SE 21-20N-9W	(360FSL 360FEL)	SE-SE 21-20N-9W	(2310S/N 990W/E	SW-SE-NE 21-20N-9W	POCACTOIL
7-29-63	3-15-63		7-20-62		11-18-68	7-17-36		11- 1-60		4- 1-75		10-26-68		1-16-62		9- 1-61	•		5-25-60		10-26-68		3-31-68		7-19-68		8-16-62	Date
342	360		343		349	550		405		500 (316)		340		333		320			450		340		350(a)		340		350	Depth
2-7/8	4	2	5-1/2			8-1/4			2-3/8	4-1/2	2-3/8	5-1/2	2	4-1/2	4	5-1/2				8	5-1/2				5-1/2		5-1/2	String
@ 342W/10	@ 326W/10	@ <b>330</b>	@ 308W/10	@ 335	@ 338W/25	@ 65			@ 306	@ 306W/10	@ 330	@ 326W/20	@ 312	@ 318W/10	@ 314W/10	@ 295W/10				@ 330	@ 326W/20			@ 322	@ 316W/25		@ 310W/10	String Depth
2	=		=	: =	: =	: 2		Ξ		=		3		=		=			=		2		=		=		011	Type
4-7-67 P&A 9-24-66	P&A	4-7-67	P&A	T/A	A/A	A/T	4-7-67	P&A		T/A		T/A	4-7-67	P&Λ	4-17-67	P&A		4-7-67	P&A		T/A	3-31-66	P&A		T/A	4-7-67	P&A	Contraction



146	145	144	143	142	141	140	139	138	137	136	135	134	133	132	131	Identification Number
#54 Jaco State	#13 Santa Fe	#11 Santa Fe Pacific RR	SFP #12	#3 OH Well	#2 OH Well	#1 OH Well	#9 Santa Fe Pacific RR	#7 Santa Fe Pacific RR	#5 Santa Fe Pacific RR	SFP #117	SFP #6	#4 Santa Fe Pacific or SFP #116	#2 Santa Fe Pacific or SFP #104	#1-SFP Mesa	#18 Scanlon	Well Name
(660FNL 660FWL)	NW-NW 27-20N-9W	NW-NW-NW 27-20N-9W (165S/N 165E/W)	SW-SE-NW 27-20N-9W (2310N 1650W)	NE-NW 27-20N-9W (495S/N 2475E/W)	NE-NW 27-20N-9W (495S/N 2145E/W)	NE-NE-NW 27-20N-9W (165S/N 2145E/W)	NW-SE-NW 27-20N-9W (1815FNL 1650FWL)	NW-NW-NW 27-20N-9W (495FNL 495FWL)	(160FNL 170FWL)	SW-SE-SW 22-20N-9W (330S 1650W)	SE-NW-SW 22-20N-9W (1650S 990W)				NW-SW-SW 22-20N-9W (825N/S 165E/W)	Location
4-18-72	9-10-62	8-17-62		11-20-67	11-20-67	11-20-67	12- 1-68	10- 1-69	12- 3-68	9-30-75		4-25-75	4- 3-/5	5-19-75	7-28-63	Completion Date
3,910	375	343	620	520	520	523	520	370	352	458	260	480	485	532	360	Total Depth
7 @	5-1/2 @	5-1/2 (		2-3/8 (		2-3/8 @		2-3/8 @	2-3/8 @				2-3/8 @			Casing &
90W/10	317W/10	@ 350W/10		6 500W/15	500W/15			375W/8			•		463 463			Setting &Depth
011	011	011	011	011	011	011	011	011	110	011	011	011	011	21.	011	Well Type
P&A 8-15-72	P&A 4-7-67	P&A 1966	12-19-72	P&A 11-7-74	P&A 11-7-74	P&A 11-7-74	P&A 6-10-73	P&A 9-28-73	9-28-73	T/A	4-7-67	1/A	1/A	9-15-75	P&A 9-23-66	Status

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

Identification Well Name Number

Location

Completion Date

Total Depth

Casing & Setting String & Depth

Well Status Type

166	165	164	163	162	161	160	159		158	157	156	155	ļ	154	ļ	153	152		151	150	149		148	147
#6 OH Well	#39 OH Well	#13 OH Well	#12 OH We11	#11 OH Well	#1 Santa Fe	#6 Ray	#1 Ray		#1 State	#1 State	#3 Santa Fe	#2 Santa Fe		#5 State		#4 State	#3 State	Mexico	#2 State of New	#2 State B	#O State		#17 Santa Fe Pacific	#8 Santa Fe RR
(350FNL 2310FWL) SE-NE-NW 28-20N-9W (825FNL 2145FWL)	(330FNL 330FEL) NE-NE-NW 28-20N-9	NE-NE-NE 28-20N-9W	NE-NE-NE 28-20N-9W	NE-NE-NE 28-20N-9W (495FNL 495FEL)	NW-SE-NW 28-20N-9W	NE-NW 28-20N-9W (303S/N 2240E/W)	NE-NE-NW 28-20N-9W (330S/N 2310E/W)	(495S/N 495E/W)	(970FNL 970FEL) NW-NW-NW 28-20N-9W	SW-NE-NE 28-20N-9W	NE-SW-NE 28-20N-9W	NW-SE-NE 28-20N-9W		NE-NE-NE 28-20N-9W	(1650FNL 1650FEL)	(990FNL 2310FEL)	SW-NW-NE 28-20N-9W	(165S/N 165W/E)	NE-NE-NE 28-20N-9W	SE-NW-NE 28-20N-9W	(330FNL 990FEL)	(495N/S 165E/W)	SW-SW 27-20N-9W	NE-NW 27-20N-9W
10-13-67	1-15-72	8-10-73	7-20-73	10- 6-68	7-19-37	10-12-68	11-24-59	)	10-19-62	4-10-76	8- 9-44	10-22-36	1	3-21-76		5-19-76	12-25-76		9-22-62	5-15-76	14-22-11	10 00 77	31563	11- 1-68
545	556 PB:538	360 PB:357	370 PB:363	355	453 -	505	900 PB: 333		1,208	520	354	340	1	563		598	773 PB:450		350	520	000 10.000		340	520
None R	4-1/2	$\frac{1}{4-1/2}$	4-1/2 2	None	1		7/1-C	1	2-3/8 4-1/2	4-1/2			!	None		2-3/8 None	4-1/2		5-1/2	4-1/2	,	2 1/2	4-1/2	None
None Reported		@ 360W/25	@ 370W/25 @ 363	•			# 04/W/80	= 1.011100	ଜ 330W/3		•					@ 300	@ 320W/10		@ 324W/10	@ 496W/25	G 100m/10	9 50307	@ 326W/10	
=	3	=	=		=	: :	=	=	=	=	: =	=		=		=	=		=	=		=	=	011
10-26-74 P&A 4-3-73	P&A 7/	P&A 10-26-74	P&A 10-26-74	P&A 10-26-74	T/A	10-12-66	4-7-67	1966	P&A	T/A	T/A	T/A	12-1-77	P&A	5-19-76	P&A	T/A	4-7-67	P&A	T/A		9-28-/3	P&A	P&A 6-10-71

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

182	181	,	180	179	178	. !	177	176	175	1	174		173		172	1/1		170	169		168	167	Number
#8 Scan. Shep	#10 Scan.Shep.		#2 BS&H	#3 BS&II	#2 Scan.Shep		#1 Scan.Shep.	#3 Scan.Shep.	#5 Scan.Shep.	•	#18 Birdseye		New Mexico #1		Jaco State #104	#8 OH Well		#5 OH Well	#10 OH Well		#9 OH Well	#7 OH Well	Well Name
465FSL 660FEL 28-20N-9W	2310FNL 990FEL 28-20N-9W	28-20N-9W	165FSI, 2145FWI	165FSL 1815FWL 28-20N-9W	1650FSL 330FWL 28-20N-9W	28-20N-9W	990FEL 330FSL	330FEL 330FSL 28-20N-9W	330FEL 990FSL 28-20N-9W	28-20N-9W	165FSL 1365FEL	(165/N 2475/E)	NW-NW-NE 28-20N-9W	(1815/N 1485/E)	NE-SW-NE 28-20N-9W	N-NE-NW 28-20N-9W	(330N 2310W)	(495FNL 165FEL) NW-NW-NE 28-20N-9W	NE-NE-NE 28-20N-9W	(165FNL 165FEL)	NE-NE-NE 28-20N-9W	NW-NE-NW 28-20N-9W	Location
													9-1564		:	3- 2-68	) )	10- 7-67	10- 5-68		10- 3-68	10-21-67	Completion Date
325	350	i	550	540		i	545	316	360		1,583		550		491	916		525	365	ć	358	540	Total
4-1/2 @ 315								4-1/2 @ 314								2-3/8 @ 492W/50	,	2-3/8 @ 505W/50	4-1/2 @ 330W/20		None	None Reported	Casing Setting String Depth
=	=		=	=	=	!	=	=	3	ł	=		=		=	;	•	:	=		=	110	Type
P&A 4-67	P&A 4-67	4-72	P&A	P&A 4-72	P&A 4-67	4-67	P&A	P&A 4-67	P&A 4-67	10-75	P&A	1966	P&A		10-30-74	T/A	10-26-74	P&A	10-26-74	• / • •	T/A	P&A	Status

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

197	196	195	194	193	192	191	190	189	188	187	186	185	184	183	Identification Number
#12 Scan.Shep	#6 Scan.Shep	#6 Birdseye	#18 Osb.& Weir	#14 Osb.& Weir	#9 Scan.Shep.	#102 CPGS	#1 Birdseye	#3 Birdseye	#17 Osborn	#110 Birdseye	#1 CPGS	#1 BS&H	#4 Scan.Shep	#7 Scan.Shep	Well Name
165FWL 495FSL 28-20N-9W	1650FSL 990FWL 28-20N-9W	160FSL 165FWL 28~20N-9W	825FSL 1650FWL 28~20N-9W	20~20N-9W 445FWL 165FSL 28~20N-9W	165FWL 165FSL	28-20N-9W	28~20N-9W 565FSL 565FEL 28~20N-0U	165FSL 165FEL	990FSL 660FWL 28-20N-9W	28-20N-9W 360FSL 360FEL 28-20N-9W	165FSL 965FEL	330FSL 2310FWL	330FEL 660FSL 28~20N-9W	165FSL 660FEL 28~20N-9W	Location
		11-68	7-63	7-63	10-68					٠					Completion Date
360		349	360		360	340	340	340			500	500	330	333	Total Depth
		4-1/2 @ 338	2" @ 325								4-1/2 @ 306		4 @ 323	4-1/2/20 318/312	Casing Setting String & Depth
ŧ	=	=	=	=	=	:	=	=	=	=	=	:	=	110	Well Type
P&A 4-67	P&A 4-67	T/A	P&A 9-66	4-6/ P&A 9-66	P&A	T/A	T/A	T/A	P&A 3-66	4-75 T/A	4-/2 P&A	P&A	P&A 4-67	P&A 4-67	Status

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

212	211	210	209	208	207	206	205	204	203	202	201	200	199	198	Identification Number
#25 Red Mtn.	в-1 CPGS	#6 CPGS	#28 Red Mtn.	#3 CPGS	#26 Red Mtn.	#7 Birdseye	#9 Birdseye	#8 Birdseye	#5 Birdseye	#11 Birdseye	#11 Scan.Shep	#13 Scan.Shep	#2 CPGS	#1 CPGS	Well Name
350FNL 2260FEL 28-20N-9W	28-20N-9W	330FNL 990 FEL	20-20N-9W 620FNL 1965FEL 28-20N-9W	26-20N-9W 990FNL 2310FEL	620FNL 1965FEL	495FNL 495FWL 28-20N-9W	1815FNL 1650FWL 28-20N-9W	330 FLN 1650FWL 28-20N-9W	160FNL 170FWL	20-20N-9W 495FNL 165FWL 28-20N-9W	20-20N-9W 165FNL 165FWL	165FNL 495FWL	20-20N-9W 990FSL 1980FWL 28-20N-9W	895FSL 2505FEL	Location
3-82		3-80	2-82		2-82	10-69							4-75		Completion Date
540		565	537	773	537	370	438	535	352		348	370	484	532	Total Depth
		3-1/2 @ 503		4-1/2 @ 320									4-1/2 @ 495	4-1/2 @ 507	Casing Setting string Depth
=	=	=	=	=	=	=	=	=	=	=	. =	=	=	011	Well Type
T/A	T/A	T/A	T/A	T/A	T/A	P&A 9-73	P&A 6-71	P&A 6-71	P&A	4-67 P&A 10-73	P&A	PåA	T/A	T/A	Status

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

							,	
Identification Number	Well Name	Location	Completion Date	Total Depth	Casing String	Setting Depth	Well Type	Status
213	#23 Red Mtn.	660FNL 2635FEL	8-81	547			011	T/A
		28-20N-9W						
214	#24 Red Mtn.	660FNL 2310FEL	8-81	545	4-1/2	@ 506	=	T/A
		28-20N-9W	: >	: f I		! !	:	
215	#9 CPGS	330FNL 1650FEL 28-20N-9W	10-81	525	4-1/2	e 520	=	T/A
216	#8 CPGS	707FNL 1273FEL	10-81	543	4-1/2	e 540	=	T/A
		28-20N-9W						
217	#7 Red Mtn.	660FNL 990FEL	10-81	555	4-1/2	@ 555	=	T/A
•		28-20N-9W						
218	#5 Red Mtn.	660FNL 660FEL	11-80	545			=	T/A
		28-20N-9W						
219	#1 BURSCAN	165FNL 2145FWL	11-67	550	2-3/8	e 505	=	T/A
		28-20N-9W						
220	#27 Red Mtn.	940FNL 1965FEL	3-82	540			=	T/A
		28-20N-9W						
221	#2 BURSCAN	495FNL 2145FWL	11-67	520	2-3/8	@ 500	=	PδA
		28-20N-9W						11-78
222	#32 BURSCAN	350FNL 2310FWL	1-72	556	4-1/2	@ 500	=	T/A
		28-20N-9W	•					
223	#13 Red Mtn.	660FNL 1650FEL	3-82	565	4-1/2	@ 560	=	T/A
		28-20N-9W						
224	#11 Red Mtn.	330FNL 660FEL	10/81	564	4-1/2	@ 540	=	T/A
		28-20N-9W						
225	#12 Red Mtn.	990FNL 660FEL	10/81	545	4-1/2	@ 542	=	T/A
		28-20N-9W						
226	#10 Red Mtn.	4 /FNL 136 /FEL	19/01	545	4-1/2	@ 538	=	T/A
		28-20N-9W						

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

235	234	233	232	231	230	229	228	227	Identification Number
#116 Santa Fe	#114 Santa Fe	#110 Santa Fe	#106 Santa Fe	#104 Santa Fe	#103 Santa Fe	#102 Santa Fe	#22 Red Mtn.	#20 Red Mtn.	Well Name
889.S 1650/W 21-22-9 W 6- 3-75	990/S 1980/W 21-22N-9W 4- 3-75	360/S 360/E 21-21N-9W 7-19-68	160/S 165W 21-22N-9W 11-18-68	165/S 565/E " "	165/S 165E " "	565/S 165E 21-20N-9W	990FNL 2635FEL 28-20N-9W	990FNL 1315FEL	Location
W 6- 3-75	9W 4- 3-75	W 7-19-68	11-18-68	11- 1-68	11- 8-68	6-21-71	10-81	10-81	Completion Date
475	484	340	349	340	340	340	542	597	Total Depth
None	4-1/2 (	5-1/2 (	4-1/2 (	5-1/2 (	5-1/2 (	5-1/2 (	4-1/2	4-1/2	Casing String
	@ 459	@ 316	@ 338	@ 308	@ 323	@ 310	e 503	e 543	Setting Depth
	Dry Hole P&A	=	=	=	=	=	=	011	Well Type
	e P&A	=	2	:	=	=	T/A	T/A	Status

# LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

# LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE