ح TYPE

PMAM1603456148

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



		ADMINISTRATIVE APPLICA	TION CHECKLIST	
1	THIS CHECKLIST IS MA	ANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS F WHICH REQUIRE PROCESSING AT THE DIVI		REGULATIONS
Appli	cation Acronym	81		
	[DHC-Down [PC-Po	[SWD-Salt Water Disposal] [IPI-injec	gling] [PLC-Pool/Lease Comming e] [OLM-Off-Lease Measurement ure Maintenance Expansion] tion Pressure Increase]	pling]]
	[EOR-Qual	lified Enhanced Oll Recovery Certification]	-	nse]
[1]	TYPE OF AP [A]	PLICATION - Check Those Which Apply f Location - Spacing Unit - Simultaneous De NSL NSP SD	for [A] $-5 \omega_0$ dication $-4 \omega_0$	Disposely Luc
	Check [B]	One Only for [B] or [C] Commingling - Storage - Measurement DHC CTB PLC P	we	11
	[C]	Injection - Disposal - Pressure Increase - Er	inancen car kecoverv	25-39735 2001 3: Jan Andres
	[D]	Other: Specify	ના માન	3: Jan Andres
[2]	NOTIFICAT	ION REQUIRED TO: - Check Those Which	n Apply, or □ Does Not Apply	
-	[A]	Working, Royalty or Overriding Royal	ty Interest Owners	
	[B]	Offset Operators, Leaseholders or Surf	ace Owner	
	[C]	Application is One Which Requires Pu	iblished Legal Notice	
	[D]	Notification and/or Concurrent Approv U.S. Bureau of Land Management - Commissioner of Public	Val by BLM or SLO	
	[E]	For all of the above, Proof of Notificat	•	or,
	[F]	The original AOP will be sent to th Waivers are Attached	e Engineering Bureau upon receipt.	
[3]		CURATE AND COMPLETE INFORMATATION INDICATED ABOVE.	TION REQUIRED TO PROCESS	ТНЕ ТҮРЕ
	val is <mark>accurate</mark> a	FION: I hereby certify that the information s and complete to the best of my knowledge. I a quired information and notifications are subm	also understand that no action will b	
	Note:	Statement must be completed by an individual with	managerial and/or supervisory capacity.	
Danny	J. Holcomb	WHOliomb	Agent for Llano Disposal, LLC	2/1/2016
Print	or Type Name	Signature	Title	Date
			danny@pwllc.net	

e-mail Address

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? X Yes No
II.	OPERATOR: Llano Disposal, LLC
	ADDRESS: PO Box 190, Lovington, New Mexico 88260
	CONTACT PARTY: Marvin Burrows PHONE: 575-361-8067
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 X_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. Suc data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schemati 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 dat 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 an belief.
	NAME: <u>Danny J. Holcomb</u> TITLE: <u>Agent for Llano Disposal, L.L.C.</u>
	SIGNATURE: DATE: 2/1/2016
*	E-MAIL ADDRESS: billy@pwllc.net 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:

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

Liano Disposal, L.L.C. Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL

Unit Letter 'D', Section 11, T175, R36E Lea County, New Mexico

Amended C108 Application for Authorization to Inject

The purpose of this application is seeking administrative approval for the conversion of the Screaming Eagle State #1 from an oil well to a commercial San Andres-Abo salt water disposal well.

Operator: Llano Disposal, L.L.C. OGRID: 370661 Address: P. O. Box 190, Lovington, NM 88260

Contact Party: Marvin Burrows 575-361-8067 email: burrowsmarvin@gmail.com

Please see Exhibit "A" for proposed well data.

IV.

This is not an expansion of an existing project.

Please see Exhibit "B" of lease map.

There is only one well within the 0.5 mile Area of Review. It is a P&A well and does penetrate the proposed disposal zone. Please see Exhibit "C" for offset well data and wellbore diagram.

- 1. Anticipated disposal volume 2,500 BWPD with a maximum of 10,000 BWPD.
- 2. System will be closed. It will include a central tank battery and pump. Water will be trucked in.
- 3. Anticipated disposal pressure: Minimum 0 (zero) psig, Maximum 1096 psig.
- 4. Disposed fluid will be trucked in from producing wells in the immediate area. Please see Exhibit "D" for disposed fluid analysis.
- 5. Please see Exhibit "D" for disposal zone fluid analysis.

VIII.

1777
Anticipated Depth (ft)
1917
3075
4400
4770
5480 - 8800
8690

The proposed well is not located within the Capitan Reef Area

Chacked Tubbs

www.pwllc.net

Page 1 of 2

Llano Disposal, L.L.C. Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL Unit Letter 'D', Section 11, T17S, R36E Lea County, New Mexico Amended C108 Application for Authorization to Inject

IX.

After laying down production tubing, we plan to squeeze 25 sacks of cement in the perfs at 4885'-4922', WOC, drill out cement at 4885' and mill over junk in hole at 5014' and tag composite BP at 5030', circulate hole clean and pressure test casing. If ok, we plan to drill out composite BP at 5030' and tag CIBP at 5200', circulate hole clean, squeeze 25 sacks of cement in the perfs at 5066' – 5113', WOC, drill out cement at 5066' and tag CIBP at 5200', circulate hole clean and pressure test casing. If ok, we plan to drill out CIBP at 5200' and tag cement plug #3 at 5480', circulate hole clean, squeeze 25 sacks of cement in the perfs at 5229'-5286', WOC, drill out cement at 5229', circulate hole clean and pressure test casing. If ok, we plan to drill out cement plugs #3, #2 and #1 in open hole to TD at 8800'. A pump-in test will be performed to establish initial injection rate. If needed an acid job will be pumped into the open hole interval. Finally, 2-7/8" injection tubing and packer will be run. Packer will be set a maximum of 100' above the 5-1/2" casing shoe.

X.

Any additional logs performed will be submitted after completion.

XI.

NM OSE records indicate there have been eleven fresh water wells within the 1 mile Area of Review. The latest recorded GO-Tech sample is from 1995. An additional sample from the nearest fresh water well was taken June 24, 2015. Both GO-Tech and recent sample results are included in Exhibit "E". The nearest water well is located approximately 2416' from the proposed SWD well.

XII.

Available geological and engineering data have been examined and no evidence of open faults or hydrological connection between the disposal zone and any underground sources of drinking water has been found.

XIII.

Please see Exhibit "F" for Proof of Notice. The original newspaper affidavit of publication and USPS noticee signature receipts will be submitted to the Engineering Bureau.

Danny J. Holcor	nb MAJolcomb
Agent for Llano	Disposal, LLC
Date: 10/20	/2016



Llano Disposal, L.L.C. Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL Unit Letter 'D', Section 11, T175, R36E Lea County, New Mexico

Current Well Data

Spud May 20, 2010 as an exploration well in the Abo formation.

13-3/8" 54# casing set at 400' in 17-1/2" hole, cemented with 325 sacks cement. Circulated 30 sacks cement to surface. Pressure tested to 1000 psi for 30 minutes, held ok.

8-5/8" 36# casing set at 3897' in 12-1/4" hole, cemented with 775 sacks cement. Circulated 101 sacks cement to surface. Pressure tested to 1000 psi for 30 minutes, held ok.

Drilled 7-7/8" hole to TD at 8800', ran logs. Spotted 50 sack cement plug #1 at 8800' (TD), pumped 75 sack cement plug #2 from 6698' – 6828' (confirmed by tagging), pumped 50 sack cement plug #3 at 5600'. Ran 5-1/2" 17# casing set at 5480' in 7-7/8" hole, cemented with 535 sacks cement. TOC at 3170' (confirmed by CBL). Pressure tested to 1000 psi for 30 minutes, held ok.

Perforated from 5229' – 5286', acidized, swabbed 2 days, no test. Set CIBP at 5200' with 25 sacks cement on top. Perforated from 5066' – 5113', acidized, swabbed 7 days, not test. Set composite BP at 5030'. Perforated from 4885' – 4922', acidized, swabbed 3 days. Fraced perfs, well flowed slight show. Ran pump and rods, put well on production. Well potential test 8/30/10: 15 BOPD, 156 BWPD, gas TSTM. By September 2012, production had declined to 0 BOPD and 18 BWPD. From the NMOCD production records, it appears the well was shut-in during February, 2013.

Estimated Formation Tops Rustler – 1917' Yates – 3075' Seven Rivers – 3388' Queen – 4014' Grayburg – 4400' San Andres – 4770' Glorieta – 6130' Drinkard – 7878' Abo – 8690'

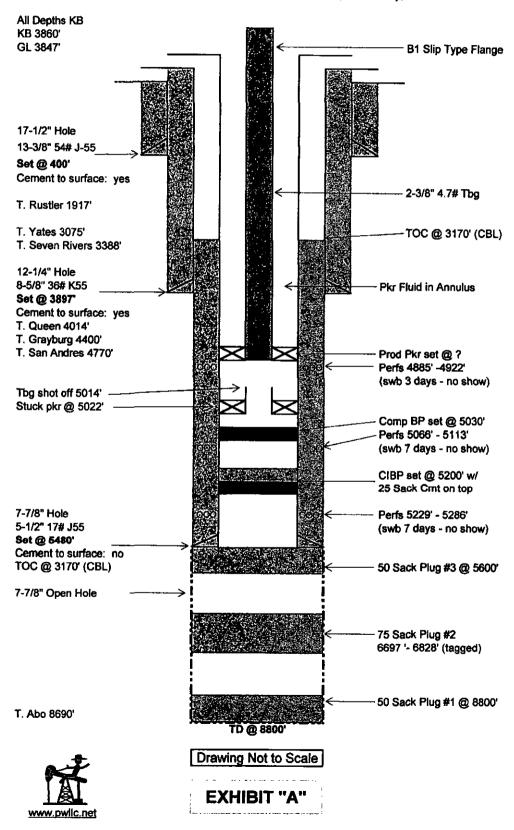


CURRENT WELLBORE

TA Well

Llano Disposal, LLC Screaming Eagle State #1 API # 30-025-39739

660' FNL x 660' FWL, UL 'D' Sec 11, T17S, R36E, Lea County, NM

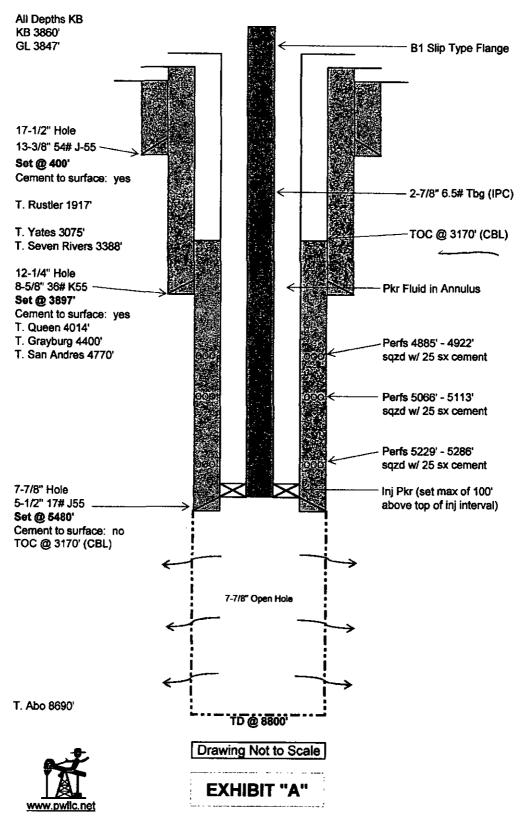


PROPOSED WELLBORE

Configured for SWD Service Llano Disposal, LLC

Screaming Eagle State #1 API # 30-025-39739

660' FNL x 660' FWL, UL 'D' Sec 11, T17S, R36E, Lea County, NM



Llano Disposal, LLC Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL Unit Letter 'D', Section 11, T17S, R36E Lea County, New Mexico

Screaming Eagle State SWD #1

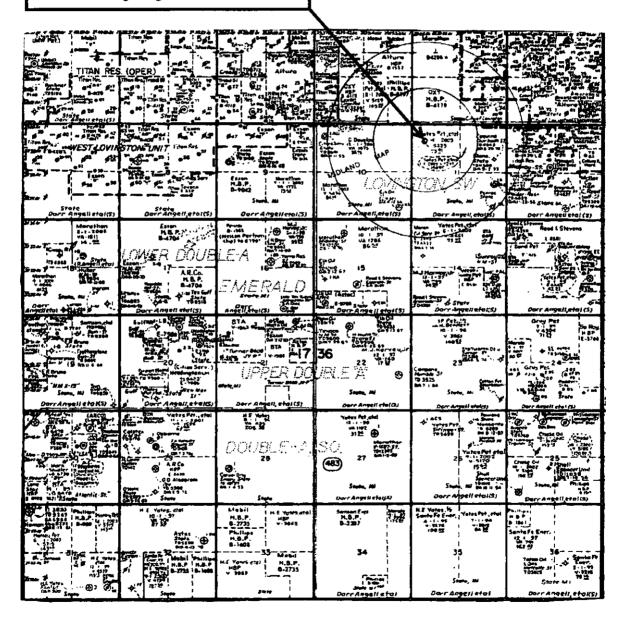
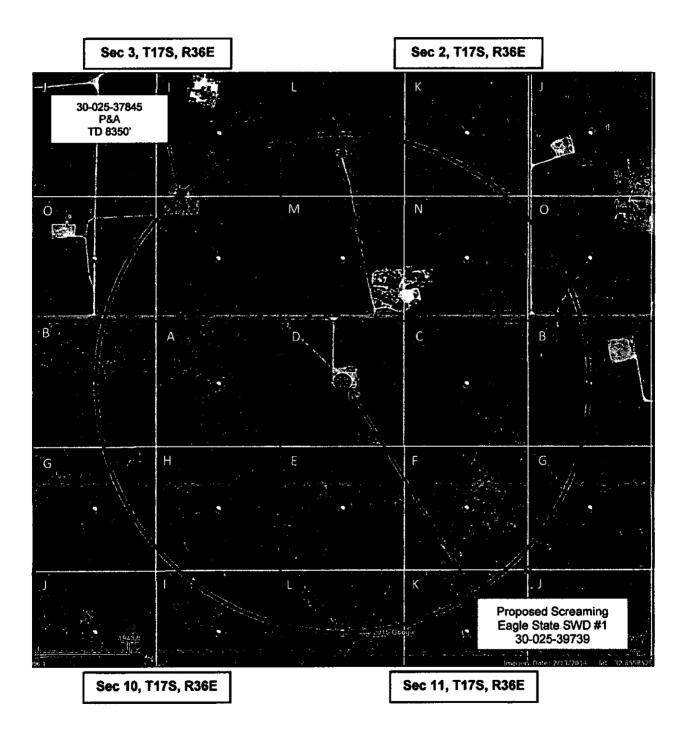


EXHIBIT "B"

Llano Disposal, LLC Screaming Eagle State SWD #1 API # 30-025-39739 0.5 Mile AOR





This location 660 FNL x 660 FWL, UL 'D', Section 11, T175, R36E, Lea County, NM Drawing Not to Scale

EXHIBIT "C"

Llano Disposal, LLC Screaming Eagle State SWD #1 API # 30-025-39739 0.5 Mile AOR

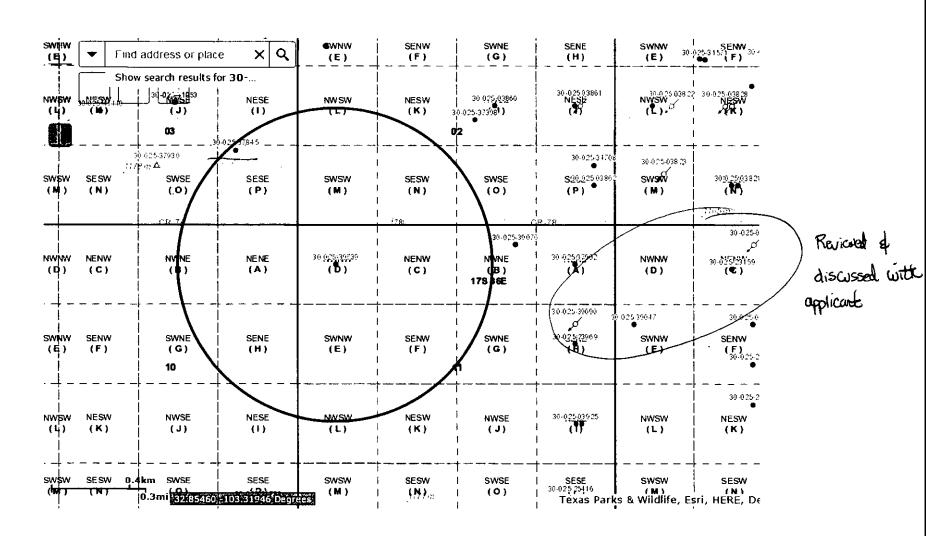


EXHIBIT "C"

Llano Disposal, LLC Screaming Eagle State SWD #1 API # 30-025-39739

Offset Wells within 0.5 Mile AOR

Exhibit "C"

One Well within the AOR Penetrates the Proposed Injection Zone

		Well	Well							Wellbore
UL, Sec, T, R	APi Well No.	Туре	Status	Spud Date	TVD	Formation	Perfs	TOC	Verified by	Diagram
P-3-175-26E	30-025-37845	Oil	P&A	4/30/2006	8350	Seven Rivers	3254-63', 3346-56'	Surface	Visual	Υ
						Paddock	6234-98', 6300-91', 6410-18'			
						Drinkard	7944-8226′			L

30-025-37845

This well was drilled to 8350' in 2006. 8-5/8" surface casing was landed at 1982', cemented with 950 sks of cement, 79 bbls of cement circulated to surface. 5-1/2" production casing was landed at 8350' (TD), cemented with 1750 sks of cement, 73 bbls of cement circulated to surface.

Initial completion was in the Drinkard formation through perfs at 7944' - 8226'. Potential test 6/23/06: 11 BOPD, 0 BWPD, 6 MCFD. Well produced for just a few days.

On 7/31/06, set CIBP @ 7850' w/ 20' of cement on top. Perforated Paddock formation at 6234 - 98', 6300 - 91', 6410 - 18', swab tested, no test. Set CIBP @ 6118' w/ 2 sks of cement on top. TA status approved on 9/8/06.

On 11/9/06, set CIBP @ 4650' w/ 2 sks of cement on top. Perforated Seven Rivers formation at 3346 – 56', acidized, swab tested, no test. Set CIBP @ 3320'. perforated Sever Rivers formation at 3254 - 63', acidized, swab tested, no test.

On 1/29/07, set CIBP @ 3167' w/2 sks of cement on top. TA status approved on 2/20/07.

On 10/31/07, well was P&A'd with plugs listed below:

Set 25 sack cement plug @ 3140 - 2883'

Set 25 sack cement plug @ 2110' - 1799', WOC 2.5 hours, tag TOC @ 1799'

Set 40 sack cement plug @ 408' - surface

See attached wellbore diagram.



OFFSET WELL

CP 3 STATE 1 Wellbore Schematic APIN NAC County LEA NM 30-025-37845 Texland Petroleum, Inc. Completion Date Spud Date Rio Rele Original KB Elevation (ft) Ground Flevetion (ft) 3,887.00 4/30/2006 5/20/2006 3,867.00 Main Hole 11/13/2007 7 38:21 AM ftKB (MD) Schematic - Actual 0 11 12 28 Des.KB, OD 5 1/2, Top (MD).0, Len 11 0 38 Des'CASING HEAD, OD.8 5/8, Top (MD):11, Len:1.2 408 Des:LTC CASING CUT JT, OD:5 1/2, Top (MD) 11, Len 16.8 1,799 Des:STC CUT JT, OD.8 5/8, Top (MD) 12, Len:26.2 1,938 3RD CMT PLUG, 0-408, 10/31/2007 1,939 1,983 Des:STC CASING, OD.8 5/8, Top (MD).38, Len 1,899.7 1,983 Des:FLOAT COLLAR, OD:8 5/8, Top (MD):1,938, Len 1.2 2.110 Des:STC SHOE JT, OD:8 5/8, Top (MD):1,939, Len 43.4 2,883 SURFACE, 0-1,983, 5/3/2006 3,140 Des TEXAS PATTERN SHOE, OD 8 5/8, Top (MD) 1,983, Len:0.7 3.167 2ND CMT PLUG, 1,799-2,110, 10/31/2007 3,170 1ST CMT PLUG, 2,883-3,140, 10/31/2007 3,254 CMT, 3,140-3,167, 1/29/2007 3 263 CIBP, 4 900, 3,167-3,170 3,320 3,254-3,263, 11/14/2006 3,324 3.346 ACID, 3,254-3,263, 11/15/2006 3,356 CIBP 4.900, 3,320-3,324, 4,630 3,346-3,356, 11/9/2006 4.650 ACID, 3,346-3,356, 11/10/2006 4 655 CMT FOR CIBP AT 4650, 4,630-4,650, 11/9/2006 6,100 CIBP. 4 900, 4,650-4,655 6,118 CMT FOR CIBP AT 6118, 6,100-6,118, 8/4/2006 6,122 CIBP, 4 900, 6,116-6,122 6.234 6.234-6.418, 8/1/2006 6.418 ACID, 6,234-6,418, 8/1/2006 7.830 CMT FOR CIBP AT 7850, 7,830-7,850, 7/31/2006 7,850 CIBP, 4 900, 7,850-7,855 7,855 7,909 Des:LTC CASING, OD 5 1/2, Top (MD):28, Len 7,881 5 Des DEPTH CONTROL COLLAR, OD 5 1/2, Top (MD) 7,909, 7.910 Len 1 1 7,944 7,944-8,326, 5/31/2006 ACID, 7,944-8,326, 6/1/2006 8,309 Des LTC CASING, OD 5 1/2, Top (MD).7,910, Len:398.8 8,310 Des.FLOAT COLLAR, OD.5 1/2, Top (MD) 8,309, Len:1.1 8,326 8,350 PBTD, 4.900, 8,350-8,356 Des.LTC CASING SHOE JT, OD:5 1/2, Top (MD) 8,310, Len 44 1 8,354 Casing cement, 0-8,356, 5/21/2006 Des:FLOAT SHOE, OD:5 1/2, Top (MD):8,354, Len:1.3 8,356 Page 1 Report generated on 11/13/2007 WellView^{p.}

OFFSET WELL

State of New Mexico

DISTRICT I

DISTRICT II

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505 Form C~102
Revised October 12, 2006
Submit to Appropriate District Office
State Lease — 4 Copies
For Lease — 3 Copies

DISTRICT III Santa Fe, New Mexico

1000 Rio Brazzo Rd., Artec, NM 87410

DISTRICT IV WELL LOCATION AND ACREAGE D

DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1830 S. St. FRANCIS DR., SAITEA FR, MN 87506 Pool Code Pool Name API Number 30-025-37845 Lovington Paddock Property Code Property Name Vell Number CP 3 STATE 35996 Operator Name Elevation OGRID No. TEXLAND PETROLEUM - HOBBS, LLC 3867 113315

Surface Location

UL or lot No.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	Rest/West line	County
Р	3	17-S	36-E		1229	SOUTH	1005	EAST	LEA

Bottom Hole Location If Different From Surface

	UL a	MT!	lot.	No.	•	Section	Townsh	ip	Range	Lot	ldn	Peat	from t	he	North/South line	Foot from the	East/West line	County
I	Ded	ica	led	Act	es i	Joint or	infili	Cos	eolidation (ode	Ore	ler No.						
		4	0				į					_						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OR A NON-STANDARD UNIT HAS E	EEN APPRUVED BY TH	E DIVISION
LOT 4	LOT 3 LOT 2	LOT 1	OPERATOR CERTIFICATION / berely cartily that the information
		1	herein is true and complete to the best of my knowledge and belief, and that this arganization either owns a working interest or unlessed mineral interest in the knod including the proposed bettem hale location or her a right to drill this well at this location permant to a contract with an owner of such mineral or working interest,
39.37_AC	39.42 AC 39.47 AC	39.52 AC	or to a volusiary pooling agreement or a compulsory pooling order heretafore entered by the division.
			Signature Date
	[1	Vickie Smith Printed Name
			SURVEYOR CERTIFICATION
	GEODETIC COORDINATES NAD 27 NME	, 	I hereby cartify that the wall location above on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same k
	Y=678062.2 N X=806080.6 E		true and current to the best of my belief.
	LAT.=32"51'36.38" N LONG.=103"20'11.63" W		Date Surveyed Elling MR
		1005	MARCH 30, 2006 Date Surveyord English Standard Seal of Solution Professional Surveyor
	<u> </u>	Texland et al B-8197	Book & Earn 4/6/06
	1	7	Certification 06.14.05575
			Application ESSING

Liano Disposal, L.L.C. Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL Unit Letter 'D', Section 11, T17S, R36E Lea County, New Mexico

Exhibit "D"

	Formation W	/ater	
API Number	Formation	<u>TDS</u>	<u>Chlorides</u>
30-025-03917	SA	52,590	28,200
30-025-03842	Abo	37,770	20,030
	Possible Dispos	ed Fluid	
API Number	<u>Formation</u>	<u>TDS</u>	<u>Chlorides</u>
30-025-03832	Paddock	245,670	152,400
30-025-03829	Penn	63,805	34,800
30-025-03836	GBG/SA	28,126	15,350
30-025-03842	Abo	37,770	20,030
30-025-03917	SA	52,590	28,200

Data obtained from GO-Tech.



Llano Disposal, LLC Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL Unit Letter 'D', Section 11, T17S, R36E Lea County, New Mexico



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned,

(quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub- Code basin	County		Q (-	: Tws	Rng	x	Y		Depth Water	Water Column
L 00380	L	LE	1	4 1	10	178	36E	654811	3636117' 🍑	90		
<u>L 01716</u>	L	LE	1	1 4	02	178	36E	656808	3637357* 🍣	145	50	95
L 01724	L	LE		2	03	17\$	36E	655492	3637835* 😜	146	80	66
L 01724 S	L	LE	3	4 2	03	178	36E	655593	3637539* 🍣	135	85	50
L 01724 S2	L	LΈ		1	02	178	36E	656298	3637848* 😜	140	128	12
L 01724 S3	L	LE	2	1 3	02	178	36E	656201	3637343* 😜	140	125	15
L 02413	L	LE		4 4	02	175	36E	657318	3636861* 😜	90	90	0
L 02426	L	LE ·		4 4	02	178	36E	657318	3636861* 😜	115	48	67
L 02480	L	LE		1 2	02	178	36E	656897	3638063* 🍪	130	58	72
L 02481	L	LE	4	4 2	02	178	36E	657405	3637566* 🚱	150	76	74
L 02984	L	LE		1 1	10	178	36E	654502	3636414* 🍪	125	45	80
L 03676	L	ĻĒ		4 2	02	178	36E	657306	3637667* 🏖	75	68	7
L 05879	L	LE	•	4 4	10	178	36E	655731	3635227* 😜	120	40	80
L 07042	L	LE	3 -	4 2	03	178	36E	655593	3637539* 😜	100	60	40
L 13272 POD1	L	LE	2 :	2 3	03	178	36E	674360	3637724 😜	185		

Average Depth to Water: 73 feet

Minimum Depth: 40 feet Maximum Depth: 128 feet

Record Count: 15

PLSS Search:

Section(s): 2, 3, 10, 11

Township: 17S

Range: 36E

Water wells within 1 mile AOR

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/2/15 5:01 PM

Page 1 of 1

WATER COLUMN/ AVERAGE **DEPTH TO WATER**

EXHIBIT 'E"

Llano Disposal, LLC Screaming Eagle State SWD #1 API # 30-025-39739 1 Mile AOR for Water Wells

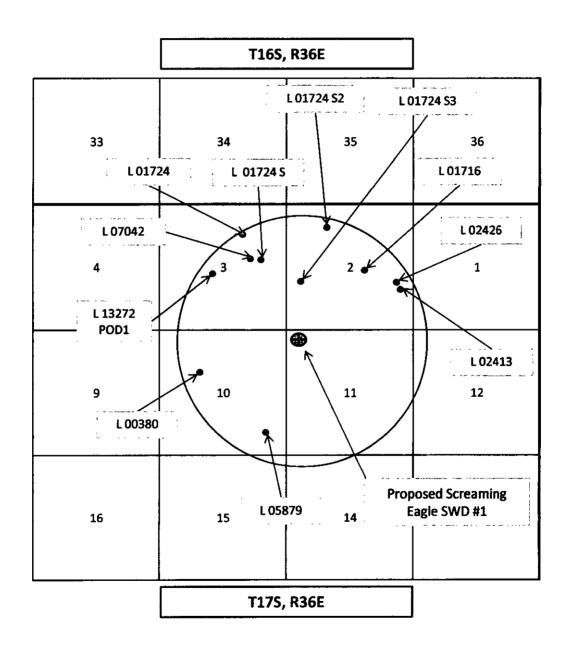




Exhibit "E"

Llano Disposal, L.L.C. Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL Unit Letter 'D', Section 11, T175, R36E Lea County, New Mexico

Exhibit "E"

Eleven Ground Water Wells Listed on the OSE Database Are Identified Within the 1 Mile AOR

POD Number		<u>Well</u>	<u>Water</u>	Sample			
	<u>Location</u>	<u>Depth</u>	<u>Depth</u>	<u>Date</u>	<u>TDS</u>	<u>Chlorides</u>	<u>Note</u>
L 01716	Sec 2, T17S, R36E	145	50	Unk			
L 01724 S2	Sec 2, T17S, R36E	140	128	Unk			
L 01724 S3	Sec 2, T17S, R36E	140	125	8/7/1964	Unk	65	1
L 01724 S3	Sec 2, T17S, R36E	140	125	6/24/2015	5	32	2
L 02413	Sec 2, T17S, R36E	90	90	Unk			
L 02426	Sec 2, T17S, R36E	115	48	Unk			
L 01724	Sec 3, T17S, R36E	146	80	Unk			
L 01724 S	Sec 3, T17S, R36E	135	85	Unk			·
L 07042	Sec 3, T17S, R36E	100	60	Unk			
L 13272 POD1	Sec 3, T17S, R36E	185	Unk	Unk			
L 00380	Sec 10, T17S, R36E	90	Unk	Unk			
L 05879	Sec 10, T17S, R36E	120	40	8/30/1995	Unk	34	1

- 1 Historical test data obtained from GO-Tech database. L 01724 S3 is the nearest fresh water well to the proposed SWD well. It is located approximately 2416 feet from the proposed SWD well. This well's data is highlighted in yellow above.
- 2 Data from Cardinal Laboratories report dated 6/30/15.





Analytical Results For:

ELANO DISPOSAL, LLC 125 W. ST. ANNE HO005 HM, 88240

Project:

Project Number: NONE GIVEN

Reported: 30-Jun-14 12:02

Project Manager: MARIAN BURECHIS

Fax To: NONE

H401846-01 (Water)

Analyto	Rewit	MDT Limi	g (Liqus	Dilution	Saucia	Analyst	Analyzed	Method	Notes
		Cardi	nal Laborat	ories					
Inorganic Compounds									
Alkalinity, Blenrbonore	224	5.04	⊾وست (1	4052308	AF'	23-Jun-14	310.2	
Afkallmity, Carbonate	NO	0.0	e mga	±	4007303	\mathbf{AP}	21-June (4	310,1	
Chloride*	31,0	4.00	լ աերլ	7	4062003	HM	Wohne (4	45004(14)	
Conductivity*	495	1.00	l 28/cm	i	4062509	AP	25-Jus-14	120.1	
pH*	7.84	0.10) րեք Լեռաբա	ı	4062619	AP	19-3:2-14	150.7	
Sulfate*	73.3	10.0	no'l	1	4059464	AP	35-Jan-14	375.4	
TØ5*	348	5.00) ru√i.	1	4052006	AF.	23-500-14	160.3	
Alkalintty, Tuent*	t#4	4 ,01) եւթվ.	1	4052349	AF	23-Jun-14	210.1	
		Green An	alyticat Lab	oratories					
Intui Recoverable Metals by IC	P (E200.7)								
Calcinm±	89.2	1.00) mgt.	· ·	B406205	JGS	25-Jan-14	EPA200 7	
M#guesium"	17,0	1.00) mait.	1	13404205	1038	25 Jan 14	FPA200.7	
Patassiam*	2.45	1.00) mg·L	1	9485265	J43	25-Jun-14	EPA 300.0	
Sodium*	34.4	100	l myt,	;	B495205	JG5	25-Jun-14	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

PANY WITH CENTY AND ADDRESS COMMENTS AND ADDRESS AND A

Colong Lithing -

Celey D. Keene, Lab Director/Quality Manager

EXHIBIT "E"

Ground Water Samples Query

				Water Sa	mple Sear	rch				
				SECTIO	N 02		- 			
				Townshi		▼				
				Rang	e 36E	7	1			
				Formatio	n T		j			
				DAT	E]			
			CHLC	ORIDE (mg/			ł			
				Find	Export Da	ta				
		Water Sa	mples fo	or TOWN SH	IIP 17S RA	NGE 36E S	ECTION 02			
		Operation	# of sa	amples S	T R	Locatio	on (qtr/qtr)	Ī		
		select	1	02	17S 36	E 17S.36E	.02.411123			
			-							
	Water San	nples for To	wnship '	17 SRANGE	36E Secti	on 02 Loca	tion 17 S.36	E.02.4111	23	
Operation	SampleID	Lownship	Range	Section	Formation	Loc	ation	Date	Chlorides	
:										
select	7556	178	36E	02	UGALLALA	1/5.36E.	02.411123	8///1964	00	

EXHIBIT "E"

Ground Water Samples Query

	Water	Sam	pie Searci	1	
	SEC1	TION	10	▼ :	
	Town	nship	178	▼ !	
	Ra	ange	36E	▼ .	
	Form	ation			
		ATE			
	CHLORIDE (n	$\overline{}$			
	Find	Ex	port Data	_	
	nples for TOWN				
	nples for TOWN # of samples				CTION 10
		S	T R		(qtr/qtr)
Operation	# of samples	S	T R	Location	(qtr/qtr)
Operation	# of samples	S	T R	Location	(qtr/qtr)
Operation	# of samples	S	T R	Location	(qtr/qtr)
Operation	# of samples	S	T R	Location	(qtr/qtr)

Water Samples for Township 17 SRANGE 36E Section 10 Location 17 S.36E.10.111134

Operation	SampleID	Township	Range	Section	Formation	Location	Date	Chlorides
select	4428	17S	36E	10	OGALLALA	17S.36E.10.111134	8/30/1995	34

EXHIBIT "E"

Llano Disposal, LLC Screaming Eagle State SWD #1 API # 30-025-39739 0.5 Mile AOR

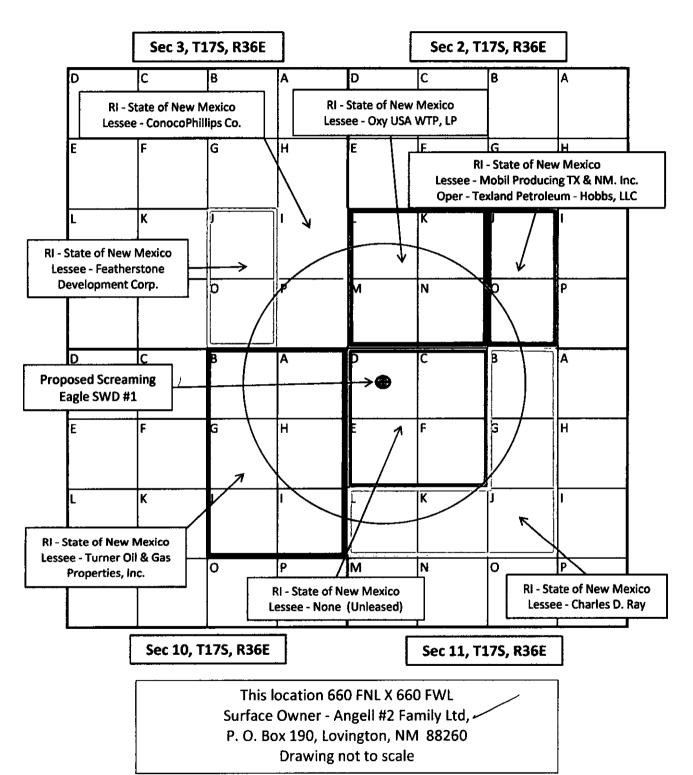




Exhibit "F"

Llano Disposal, LLC Screaming Eagle State SWD #1 API #30-025-39739

EXHIBIT 'F' - NOTIFICATION LIST

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
	Angell #2 Family Ltd,			
'	c/o Mr. Darr Angell	P. O. Box 190	Lovington, NM 88260	Surface Owner

Section 2, T17S, R36E, NMPM (ULs J, O)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
	State of New Mexico			
1	Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
2	Mobil Producing TX & NM, Inc.	P. O. Box 2305	Houston, TX 77252-2305	Lessee
3	Texland Petroleum - Hobbs, LLC	777 Main Street, Suite 3200	Ft Worth, TX 76102	Operator

Section 2, T17S, R36E, NMPM (ULs K, L, M, N)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
4	State of New Mexico		<u> </u>	
L'	Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
2	Oxy USA WTP, LP	P. O. Box 4294	Houston, TX 77210	Lessee

Section 3, T17S, R36E, NMPM (ULs I, P)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
\Box	State of New Mexico			
'	Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
2	ConocoPhillips Company	3401 E. 30th Street	Farmington, NM 87402	Lessee

Section 3, T17S, R36E, NMPM (ULs J, O)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
4	State of New Mexico			
'	Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
2	Featherstone Development Corp.	P. O. Box 429	Roswell, NM 88201	Lessee

Section 10, T17S, R36E, NMPM (ULs A, B, G, H, I, J)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
4	State of New Mexico			
1	Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
	Turner Oil & Gas Properties, Inc.			
2	c/o Allen Clark	3332 West Britton Rd, Suite 200	Oklahoma City, OK 73120	Lessee

Section 11, T17S, R36E, NMPM (ULs B, G, J, K, L)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
1 1	State of New Mexico Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
2	Charles D. Ray	P. O. Box 51608	Midland, TX 79710	Lessee

Llano Disposal, LLC Screaming Eagle State SWD #1 API #30-025-39739

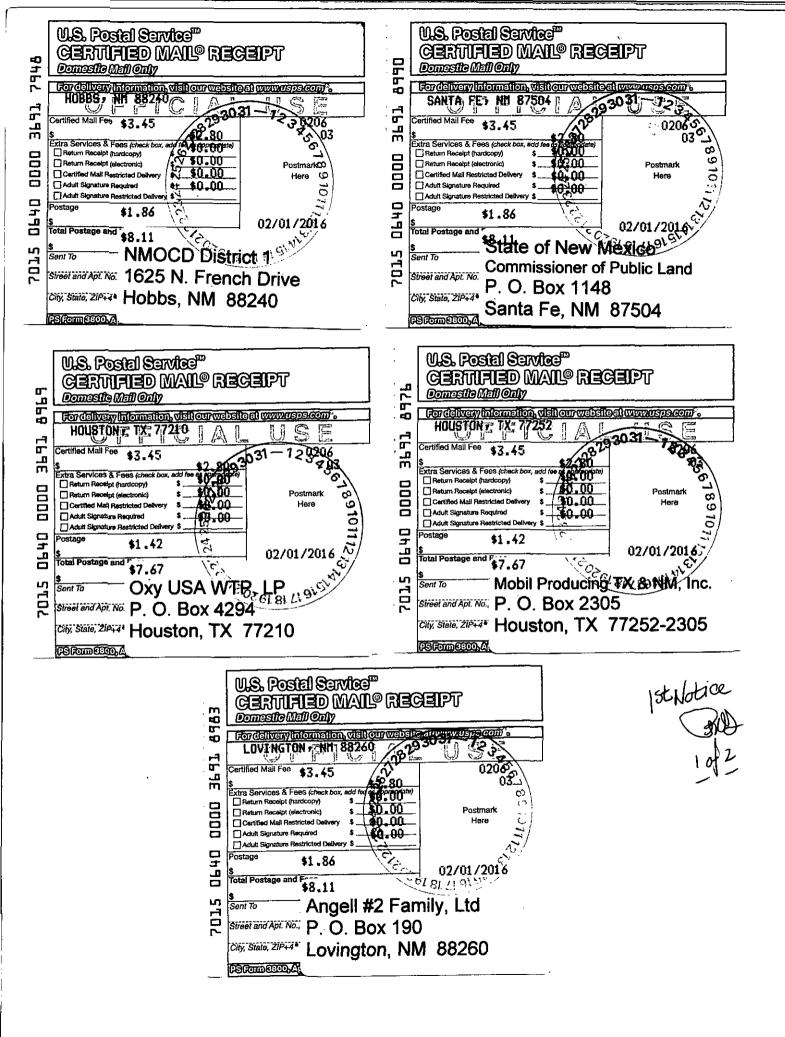
Section 11, T17S, R36E, NMPM (ULs C, D, E, F)

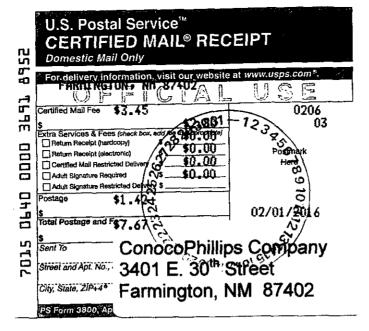
#	NAME	ADDRESS	CITY STATE ZIP	TYPE
\Box	State of New Mexico			
'	Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
	None - acreage unleased (see foot			
2	note #1)		1	Lessee

NMOCD Noticees

	#	NAME	ADDRESS	CITY STATE ZIP
Γ		State of New Mexico NMOCD Engineering Bureau	1220 South St. Francis Drive	Santa Fe, NM 87505
		State of New Mexico NMOCD District 1	1625 N. French Drive	Hobbs, NM 88240

^{#1} Information obtained from SLO land data records and confirmed by Mr. Ed Martin via email on 10/5/15.





1st blice









Affidavit of Publication

STATE OF NEW MEXICO **COUNTY OF LEA**

I. Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

> Beginning with the issue dated February 03, 2016 and ending with the issue dated February 03, 2016.

Sworn and subscribed to before me this 3rd day of February 2016.

Business Manager

My commission expires ... And the second January 29, 2019

(Seal)

OFFICIAL SEAL GUSSIE BLACK Notary Public State of New Mexico My Commission Expires 1-29-19

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGALS

LEGAL NOTICE February 3, 2016

Llano Disposal, L.L.C., P. O. Box 190, Lovington, NM 88260 has filed form C-108 (Application for Authorization to inject) with the New Mexico Oil Conservation Division Division seeking administrative approval to convert the Screaming Eagle State #1, API 30-025-39739, State #1, API 30-020-39/39, 660 FNL x 660 FNL, Unit Letter "D", Section 11, T17S, R36E, Lea County, New Mexico to a commercial salt water disposal well. The proposed disposal interval is proposed disposal interval is the San Andres formation through perforations between 4770' – 5950'. Disposal fluid would be produced water as defined by current NMOCD regulations from producing oil and gas wells in the area. Anticipated average disposal volume is 2,500 BWPD with a maximum anticipated volume of 10,000 BWPD. Anticipated disposal Anticipated disposal pressure is 0 (zero) psi with a maximum disposal pressure of 954 psi. The well is located approximately 6 miles south of Lovington, New Mexico.

All interested parties opposing the aforementioned must file aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Billy Prichard at 432-934-7680.

02107812

00169884

BILLY E./SHARON PRICHARD PUEBLO WEST LLC 125 GREENHOUSE VILLAGE DECATUR, TX 76234

Pueblo West Resources, LLC 125 Greathouse Village Decatur, Texas 76234 432-934-7680

February 1, 2016

on please find analysis 2016

Per the rules and regulations of the New Mexico Oil Conservation Division, please find enclosed a copy of NMOCD form C108.

Llano Disposal, LLC, P. O. Box 190, Lovington, NM 88260 has filed form C108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Screaming Eagle State #1, API 30-025-39739, 660 FNL x 660 FWL, Unit Letter "D", Section 11, T17S, R36E, Lea County, New Mexico to a commercial salt water disposal well. The proposed disposal interval would be the San Andres formation through perforations between 4770' – 5950'. Disposal fluid will be produced water as defined by current NMOCD regulations from producing oil and gas wells in the area. Anticipated average disposal volume is 2500 BWPD with a maximum anticipated volume of 10,000 BWPD. Anticipated disposal pressure is 0 (zero) psi with a maximum disposal pressure of 954 psi. The well is located approximately 6 miles south of Lovington, New Mexico.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Billy Prichard 432-934-7680.

Sincerely,

Danny J. Holcomb

Agent for Llano Disposal, LLC

OD Holombe

Email: danny@pwllc.net

Fax 940-627-5449



www.pwllc.net

Pueblo West Resources, LLC 6900 Spring Cherry Lane Amarillo, Texas 79124

November 3, 2016

New Mexico Oil Conservation Division Engineering Bureau 1220 South St. Francis Drive Santa Fe, New Mexico 87505 Attn: Mr. Phillip Goetze

Re: Documentation of Required Notices to Affected Parties
Llano Disposal, LLC
Screaming Eagle State SWD #1 (30-025-39739)
UL 'D', Sec 11, T17S, R36E, Lea County, New Mexico

Dear Mr. Goetze,

Pursuant to 19.15.26.8.B(2) NMAC, Llano Disposal, LLC is hereby providing proof of notice for the amended C108 application on the referenced well. Attached to this letter are signature receipts for 9 of the 10 notices and a review of the notice actions undertaken on the 10 notice.

The 10th notice was sent to Turner Oil and Gas Properties, Inc in Oklahoma City. Two certified letters were mailed to Turner and neither notice was ever received. On November 1, 2016, I personally contacted Turner Oil and Gas Properties, Inc by telephone and the receptionist (Erin) provided her email address for Llano's notice. I emailed her the notice documents on November 1, 2016 at 9:30 am. On November 3, 2016 at 10:48 am, I called Erin back and she confirmed receipt of the notice documents. Please accept this letter as affidavit of proper notice to Turner Oil and Gas Properties.



Pueblo West Resources, LLC 6900 Spring Cherry Lane Amarillo, Texas 79124

The original copy of the newspaper legal notice affidavit was mailed to you under separate cover. If you have any questions concerning these notice documents, please let me know.

Sincerely,

Danny J. Holcomb

Pueblo West Resources, LLC Agent for Llano Disposal, LLC

MHoliomb

Cell: 806-471-5628

Email: danny@pwllc.net

Attachments



Pueblo West Resources, LLC 125 Greathouse Village Decatur, Texas 76234

October 20, 2016

Turner Oil and Gas Properties, Inc. c/o Allen Clark 3232 W. Britton Road, Suite 200 Oklahoma City, OK 73120

Re: Screaming Eagle State #1 (API 30-025-39739), Section 11, T17S, R36E, Lea County, New Mexico

Per the rules and regulations of the New Mexico Oil Conservation Division, please find enclosed an <u>amendment</u> to the NMOCD form C108 originally filed in February, 2016 for the subject well.

Llano Disposal, LLC, P. O. Box 190, Lovington, NM 88260 hereby amends the form C108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Screaming Eagle State #1, API 30-025-39739, 660 FNL x 660 FWL, Unit Letter "D", Section 11, T17S, R36E, Lea County, New Mexico to a commercial salt water disposal well. The proposed amendments to this application are listed below:

	Original Proposal	Amended Proposal
Injection Formation	San Andres Formation	San Andres – Abo Formations
Injection Interval	4770' 5950'	5480' 8800'
Maximum Injection Pressure	954 psi	1096 psi
Completion Procedure	Run liner (5470'-5950') and add San Andres perfs (4770'-5950')	Cement squeeze existing San Andres perfs and drill out plugs in open hole interval
Disposal Zone Fluid Analysis	San Andres	San Andres and Abo

Based upon our recent review, there are <u>no other changes</u> to the application requirements noted below:

- Offset wells located within the Area of Review (AOR)
- Affected parties to be notified
- OSE fresh water wells within the AOR
- Water analysis of the proposed injected fluids
- No evidence of open faults or hydrological connection between the proposed disposal zone and any underground sources of drinking water

Pueblo West Resources, LLC 125 Greathouse Village Decatur, Texas 76234

Attached are amended documents reflecting the proposed modifications.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Danny Holcomb as noted below.

Sincerely,

Danny J. Holcomb

Pueblo West Resources, LLC

Agent for Llano Disposal, LLC

Email: danny@pwllc.net

WHolcomb

Cell: 806-471-5628

Attachments



www.pwllc.net

Liano Disposal, L.L.C. Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL

Unit Letter 'D', Section 11, T175, R36E Lea County, New Mexico

Amended C108 Application for Authorization to Inject

١.

The purpose of this application is seeking administrative approval for the conversion of the Screaming Eagle State #1 from an oil well to a commercial San Andres-Abo sait water disposal well.

11

Operator: Llano Disposal, L.L.C. OGRID: 370661 Address: P. O. Box 190, Lovington, NM 88260

Contact Party: Marvin Burrows 575-361-8067 email: <u>burrowsmarvin@gmail.com</u>

111

Please see Exhibit "A" for proposed well data.

IV.

This is not an expansion of an existing project.

V.

Please see Exhibit "B" of lease map.

VI.

There is only one well within the 0.5 mile Area of Review. It is a P&A well and does penetrate the proposed disposal zone. Please see Exhibit "C" for offset well data and wellbore diagram.

VII.

- 1. Anticipated disposal volume 2,500 BWPD with a maximum of 10,000 BWPD.
- 2. System will be closed. It will include a central tank battery and pump. Water will be trucked in.
- 3. Anticipated disposal pressure: Minimum 0 (zero) psig, Maximum 1096 psig.
- 4. Disposed fluid will be trucked in from producing wells in the immediate area. Please see Exhibit "D" for disposed fluid analysis.
- 5. Please see Exhibit "D" for disposal zone fluid analysis.

VIII.

Formation	Anticipated Depth (ft)	
T. Rustler	1917	
T. Yates	3075	
T. Grayburg	4400	
T. San Andres	4770	
Proposed disposal zone	5480 - 8800	
T. Abo	8690	

The proposed well is not located within the Capitan Reef Area.



www.pwilc.net Page 1 of 2

Llano Disposal, L.L.C. Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL Unit Letter 'D', Section 11, T17S, R36E Lea County, New Mexico Amended C108 Application for Authorization to Inject

IX.

After laying down production tubing, we plan to squeeze 25 sacks of cement in the perfs at 4885'-4922', WOC, drill out cement at 4885' and mill over junk in hole at 5014' and tag composite BP at 5030', circulate hole clean and pressure test casing. If ok, we plan to drill out composite BP at 5030' and tag CIBP at 5200', circulate hole clean, squeeze 25 sacks of cement in the perfs at 5066' – 5113', WOC, drill out cement at 5066' and tag CIBP at 5200', circulate hole clean and pressure test casing. If ok, we plan to drill out CIBP at 5200' and tag cement plug #3 at 5480', circulate hole clean, squeeze 25 sacks of cement in the perfs at 5229'-5286', WOC, drill out cement at 5229', circulate hole clean and pressure test casing. If ok, we plan to drill out cement plugs #3, #2 and #1 in open hole to TD at 8800'. A pump-in test will be performed to establish initial injection rate. If needed an acid job will be pumped into the open hole interval. Finally, 2-7/8" injection tubing and packer will be run. Packer will be set a maximum of 100' above the 5-1/2" casing shoe.

X.

Any additional logs performed will be submitted after completion.

XI.

NM OSE records indicate there have been eleven fresh water wells within the 1 mile Area of Review. The latest recorded GO-Tech sample is from 1995. An additional sample from the nearest fresh water well was taken June 24, 2015. Both GO-Tech and recent sample results are included in Exhibit "E". The nearest water well is located approximately 2416' from the proposed SWD well.

XII.

Available geological and engineering data have been examined and no evidence of open faults or hydrological connection between the disposal zone and any underground sources of drinking water has been found.

XIII.

Please see Exhibit "F" for Proof of Notice. The original newspaper affidavit of publication and USPS noticee signature receipts will be submitted to the Engineering Bureau.

Danny J.	Holcomb	WHolamb	
Agent for	r Llano Disposal, LLC	:	
Date:	10/20/2016		

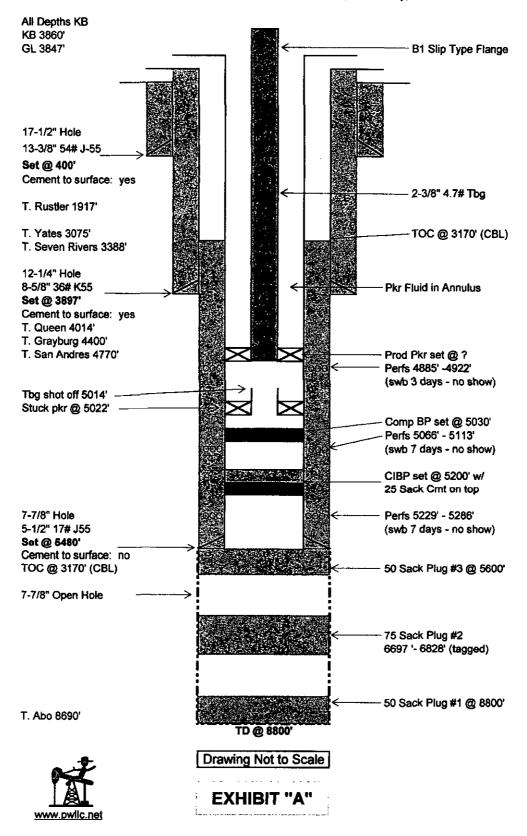


CURRENT WELLBORE

TA Well

Llano Disposal, LLC Screaming Eagle State #1 API # 30-025-39739

660' FNL x 660' FWL, UL 'D' Sec 11, T17S, R36E, Lea County, NM

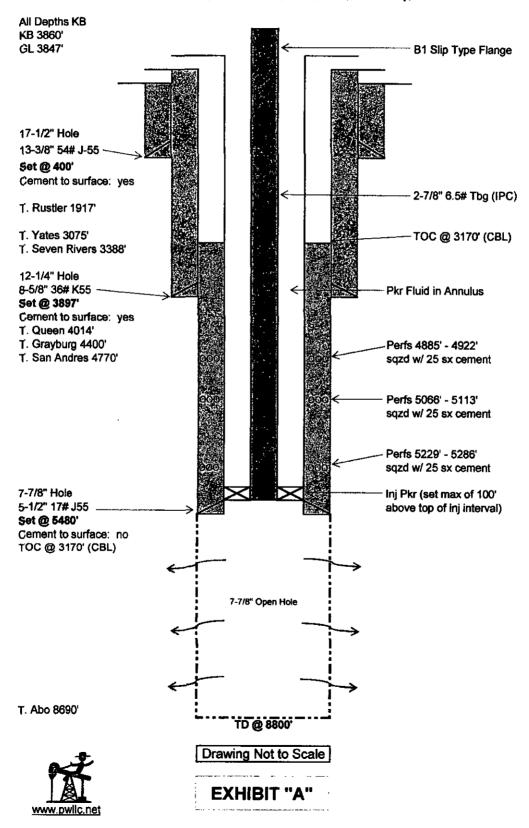


PROPOSED WELLBORE

Configured for SWD Service

Llano Disposal, LLC Screaming Eagle State #1 API # 30-025-39739

660' FNL x 660' FWL, UL 'D' Sec 11, T17S, R36E, Lea County, NM



Llano Disposal, L.L.C. Screaming Eagle State SWD #1 API # 30-025-39739 660 FNL x 660 FWL Unit Letter 'D', Section 11, T17S, R36E Lea County, New Mexico

Exhibit "D"

Formation Water							
API Number	<u>Formation</u>	<u>TDS</u>	<u>Chlorides</u>				
30-025-03917	SA	52,590	28,200				
30-025-03842	Abo	37,770	20,030				
Possible Disposed Fluid							
API Number	<u>Formation</u>	<u>TDS</u>	Chlorides				
30-025-03832	Paddock	245,670	152,400				
30-025-03829	Penn	63,805	34,800				
30-025-03836	GBG/SA	28,126	15,350				
30-025-03842	Abo	37,770	20,030				
30-025-03917	SA	52,590	28,200				

Data obtained from GO-Tech.





Danny Holcomb:

The following is in response to your October 24, 2016 request for delivery information on your Certified Mail™ item number 70121010000260895925. The delivery record shows that this item was delivered on October 24, 2016 at 7:50 am in SANTA FE, NM 87501. The scanned image of the recipient information is provided below.

Signature of Recipient:

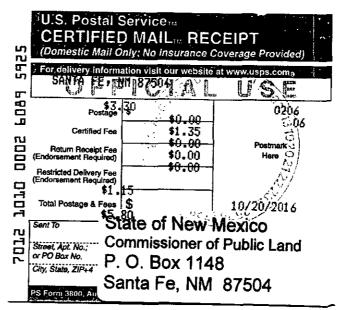
ad Sosiph Padiju

Address of Recipient:

1148

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.





Danny Holcomb:

The following is in response to your October 23, 2016 request for delivery information on your Certified Mail™ item number 70151730000222122520. The delivery record shows that this item was delivered on October 22, 2016 at 10:54 am in LOVINGTON, NM 88260. The scanned image of the recipient information is provided below.

Signature of Recipient:

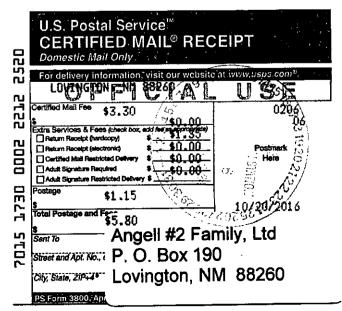
DSC

Address of Recipient:

189

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.





Danny Holcomb:

The following is in response to your October 24, 2016 request for delivery information on your Certified Mail™ item number 70151730000222122582. The delivery record shows that this item was delivered on October 24, 2016 at 9:01 am in MIDLAND, TX 79705. The scanned image of the recipient information is provided below.

Signature of Recipient:

Charles & Py

Address of Recipient:

51608

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal

representative.





Danny Holcomb:

The following is in response to your October 24, 2016 request for delivery information on your Certified Mail™ item number 70151730000222122568. The delivery record shows that this item was delivered on October 24, 2016 at 8:56 am in ROSWELL, NM 88201. The scanned image of the recipient information is provided below.

Signature of Recipient:

Thomasola

Address of Recipient:

Bax 429

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

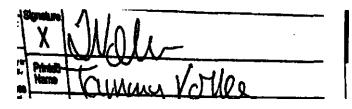




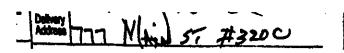
Danny Holcomb:

The following is in response to your October 24, 2016 request for delivery information on your Certified Mail™ item number 70151730000222122599. The delivery record shows that this item was delivered on October 24, 2016 at 4:02 pm in FORT WORTH, TX 76102. The scanned image of the recipient information is provided below.

Signature of Recipient:

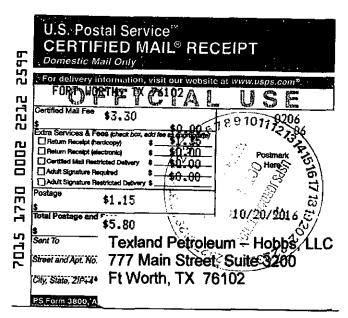


Address of Recipient:



Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.





Danny Holcomb:

The following is in response to your October 24, 2016 request for delivery information on your Certified Mail™ item number 70151730000222122551. The delivery record shows that this item was delivered on October 24, 2016 at 9:36 am in FARMINGTON, NM 87402. The scanned image of the recipient information is provided below.

Signature of Recipient:

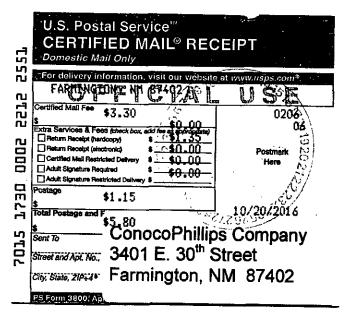
Lik Word

Address of Recipient:

" BOX "1257 (Piline)

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.





Danny Holcomb:

The following is in response to your October 25, 2016 request for delivery information on your Certified Mail™ item number 70151730000222122537. The delivery record shows that this item was delivered on October 25, 2016 at 6:24 am in HOUSTON, TX 77201. The scanned image of the recipient information is provided below.

Signature of Recipient:

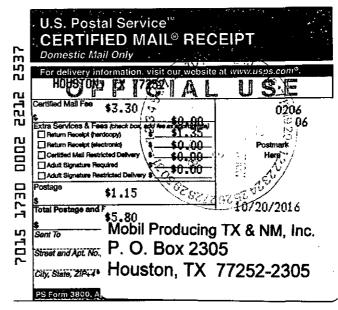


Address of Recipient:



Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

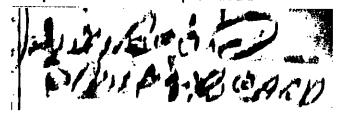




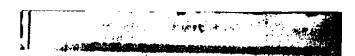
Danny Holcomb:

The following is in response to your October 27, 2016 request for delivery information on your Certified Mail™ item number 70151730000222122544. The delivery record shows that this item was delivered on October 27, 2016 at 4:55 am in HOUSTON, TX 77210. The scanned image of the recipient information is provided below.

Signature of Recipient:



Address of Recipient:



Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal

representative.





Danny Holcomb:

The following is in response to your October 24, 2016 request for delivery information on your Certified Mail™ item number 70151730000222122513. The delivery record shows that this item was delivered on October 24, 2016 at 10:24 am in HOBBS, NM 88240. The scanned image of the recipient information is provided below.

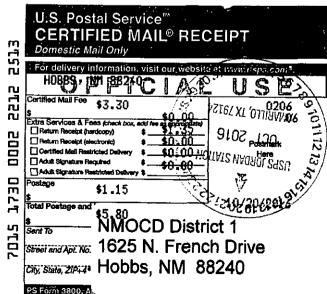
Signature of Recipient:

Address of Recipient:

1625NF164ch

Thank you for selecting the Postal Service for your mailing needs.

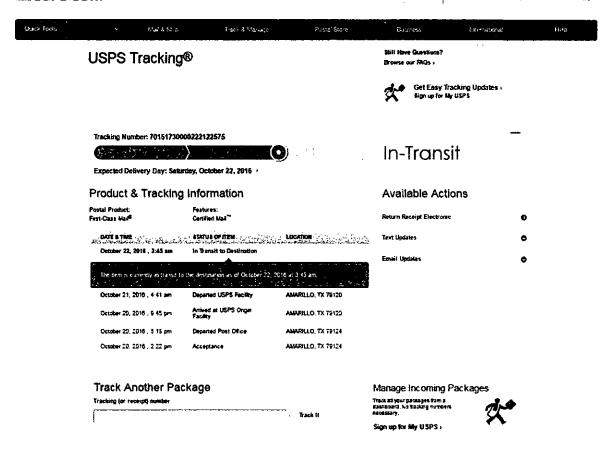
If you require additional assistance, please contact your local Post Office or postal representative.



Turner Oil and Gas Properties, Inc

Notice Documents

Q



BUSPS.COM

Maded 10/20/16
Maded 10/20/16
Maded 10/20/16
As of 11/3/16 not
Notice was not
received by
received by
deressee.

	[®] U.S. Postal Service™						
	CERTIFIED MAIL® RECEIPT						
2575	Domestic Mail Only						
5							
U	For delivery information, visit our website at www.usps.com®.						
п:	OKANONE OF TOKEN LUSE						
Ä	Certified Mail Fee \$3.30 /V 02PX						
2212	\$ /∾en en ∆ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \						
	Extra Services & Fees (check box, act rive a companie)						
낊	Day Sept (statement)						
2000	Certified Mail Restricted Delivery						
	Adult Signature Recuired Adult Signature Restricted Delivery 3 Rostrane						
	Postage						
Ē	1.15 x y y y						
1,730	Total Postage and 45 20						
	tumer Oil & Gas Properties, Inc.						
703.5	c/o Allen Clark						
~	Street and Apr. No. 3332 West Britton Rd, Suite 200						
	Chi; State, 2/A;4 Oklahoma City, OK 73120						
	PS Form 3800, A						
	1510111307077						

Q



mailed 10/25/16
mailed 10/25/16
mailed 10/25/16
notice was
not received by addressee.

	U.S. Postal Service [™] CERTIFIED MAIL [®] RECEIPT
7	Domestic Mail Only
2674	-For delivery information, visit our website at www.usps.com®
	OKI COM 12140 1 379 35 655
2212	Certified Mail Fee \$3.30 \$0.000 \$
'n	Extra Services & Fees (theck box, add fee at spring stee)
ΠŲ	☐ Return Receipt (hardcopy) \$ P1 • OQ (7 10(P5) 10(C)(C)(C)
000	Return Receipt (electronic)
=	[Autuit Strangture Beautine
	Adult Signature Restricted Delivery \$ \$0 a UL
m	\$1.15
1730	Postage \$1.15 Total Postage and \$5,80
	s * * * * * * * * * * * * * * * * * * *
7	c/o Allen Clark
7015	Street and Apr. No., 3232 W. Britton Rd, Suite 200
	City, State, 21/4-4" Oklahoma City, OK 73120
	RS Form 3800; A)

Print | Close Window

Subject: Notice of Amended Injection Authority Application - Screaming Eagle State SWD #1 (30-025-39739)

From: danny@pwlic.net

Date: Tue, Nov 01, 2016 9:30 am

To: erinn@turneroil.net

Attach: Screaming Eagle State SWD #1 Amended C108 Pkg - Turner Emailed 110116.pdf

Erin,

Thank you for taking my phone call this morning. Pueblo West is a consulting firm that assists operators with injection authority applications in New Mexico. Liano Disposal, LLC has applied to the NMOCD to permit an SWD well in Section 11, T17S, R36E, Lea County, New Mexico. The original C108 application was submitted in February, 2016. Through negotiations with the State, the application was recently amended which requires re-notice to the potential affected parties. Turner Oil and Gas Properties, Inc is identified as the lessee of record for State minerals in an offsetting section (Sec 10, T17S, R36E).

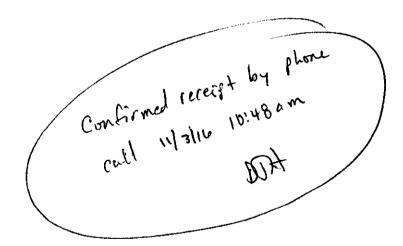
I've attempted to mail two certified letters to Turner with the attached information. According to the USPS tracking information, neither letter has been received by Turner. That was the reason for my phone call this morning. Thank you for providing your email address so that I could get this information to Turner. If you have any questions concerning this application, please contact me. Thank you,

Danny J. Holcomb Pueblo West, LLC Cell: 806-471-5628

Email: danny@pwllc.net

Copyright © 2003-2016. All rights reserved.

Email with attached Notice documents.



Affidavit of Publication

STATE OF NEW MEXICO COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

> Beginning with the issue dated October 23, 2016 and ending with the issue dated October 23, 2016.

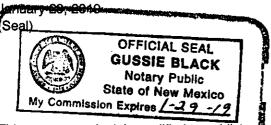
Publisher

Sworn and subscribed to before me this 23rd day of October 2016.

Muss 01

Business Manager

My commission expires



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGALS

LEGAL NOTICE October 23, 2016

Public Notice

Liano Disposal, LLC, P. O. Box 190, Lovington, NM 88260 has filed an amended form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Screaming Eagle State #1, API 30-025-39739, 560 FNL x 660 FWL, Unit Letter "D". Section 11, T17S, R36E, Lea County, New Mexico to a commercial salt water disposal well. The proposed disposal interval is the San Andres-Abo formations through open hole completion between 5480'—8800'. Disposal fluid would be produced water as defined by current NMOCD regulations from producing oil and gas wells in the area. Anticipated average disposal volume is 2,500 BWPD with a maximum anticipated volume of 10,000 BWPD. Anticipated disposal pressure of 1096 psi. The well is located approximately 6 miles south of Lovington, New Mexico.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Danny Holcomb at 808-471-5628.

02107812

00183061

BILLY E./SHARON PRICHARD PUEBLO WEST LLC 125 GREENHOUSE VILLAGE DECATUR, TX 76234

Pueblo West Resources, LLC 125 Greathouse Village Decatur, Texas 76234

October 28, 2016

Mr. Phillip Goetze c/o New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Original Affidavit of Publication for the C108 Application from Llano Disposal, LLC Screaming Eagle State SWD #1 (30-025-39739)

UL 'D', Sec 11, T17S, R36E, Lea County, New Mexico

Dear Mr. Goetze,

Attached is the original AOP received from the Hobbs News-Sun for the legal notice publication made on October 23, 2016 as part of the amended C108 application on the above referenced well.

Copies of all noticee' certified mail signature cards will be emailed to you when they are received. If you need any additional information, please let me know.

Sincerely,

Danny J. Holcomb

Agent for Llano Disposal, LLC

Email: danny@pwllc.net

WHolcomb

Cell: 806-471-5628

Attachment



www.pwllc.net

	02/02/	05/24/	6 05/25/11	6 02/04				
C-108 Review Checklist:	Received	10 of 16	Reply Date:	Suspended: 02/04/16	[Ver 16] MMSL?) .			
ORDER TYPE: WFX / PMX (SWD) N	lumber: <u>/655</u> Order	Date: If Z	8//6 Legacy Permits	s/Orders:	Lonniet.			
Well No Well Name(s): Screaming	ry Eagle State				_ cyfesun			
API: 30-0 <u>25 - 39739</u> Spud D	\bigcirc \cup	New or Old:	(UIC Class II	Primacy 03/07/1982)				
Footages 660 FNL/660 FWL Lot	or Unit D Sec II	_ Tsp 17	SRge_36E	County Lea				
General Location: Approximately 6 miles 3 o	+ LOVINATON Pool:	LOVINATION	1; Grandourg-Son	<u> And</u> Peo No.: <u>4058</u>	<u> </u>			
BLM 100K Map: Hobbs Operator: L	ano Disposal, LLC	OGRID	370661 Contac	D. Holcomb, Pue	eblo			
COMPLIANCE RULE 5.9: Total Wells: 2 Inact	4		. ~		1 /			
WELL FILE REVIEWED & Current Status:	y TA; no producti	on from	Larington GR/	SA. Dam. plugged	<u>l</u>			
WELL DIAGRAMS: NEW: Proposed Or RE-ENTER Planned Rehab Work to Well: Dillout existing	R: Before Conv. After C	ionv. (9 L	ogs in Imaging:	ne of Aloo; list	t (kd. 201			
Planned Rehab Work to Well: Dillout existing	deeper than and	doeser	-open hole con	nolotion	p = 5/610			
	Setting	777	Cement	Cement Top and				
Well Construction Details 10/20/18izes (in) Borehole / Pipe	Depths (ft)		Sx)or Cf	Determination Meti				
Planned _or Existing Surface 17/2 13 18	0 to 400	Stage Tool	325	Cir to surface				
Planned_or Existing Interm/Prod 12/4 85/8	0 to 3897	NA 4/A	17th 5 1 1/2 1	Cr. to Surface	2			
Planned_or Existing / Interm (Prod) 7 % /5 /2	0 to 5480	NA	535	3170'/Col				
Planned_or ExistingProd/Liner				[727 tie]				
Planned_or Existing _ Liner								
Planned or Existing OH PERF 7 % OH	5480 to 8800	Inj Length		/Operation Details:	,			
Injection Lithostratigraphic Units: Depths (ft)	Injection or Confining	Tops	Drilled TD 880	O PBTD 5030	'			
Adjacent Unit: Litho. Struc. Por.	Units Units	4400'		/ NEW PBTD				
Confining Unit: Litho. Struc. Por.	Caremonds.	4770		or NEW Perfs				
Proposed Inj Interval TOP: 5480	Son Andres GI/DK			in. Inter Coated?	5			
Proposed inj interval BOTTOM: 8800	Abo	BUIO"	Proposed Packer D	epth < 5380 ft				
Confining Unit: Litho. Struc. Por.	Also		Min. Packer Depth		it)			
Adjacent Unit: Litho. Struc. Por.			Proposed Max. Sur		osi			
AOR: Hydrologic and Geologic I	nformation		Admin. Inj. Press.	<i>0966</i> (0.2 psi p	er ft)			
POTASH: R-111-P NA Noticed? BLM Sec O	rd MWIPP NOticed?	Salt/Sal	ado T:B:	NW: Cliff House fm	= /			
FRESH WATER: Aquifer Lea Albura	(Possituation) Max Depth 450	Soid Sect	AFFIRM STATEME	NT By Qualified Perso	on (i)			
* , * , - ,	ıru adj NA / N			31.00				
Disposal Fluid: Formation Source(s) Abo & San				or Only () or Commerc				
Disposal Interval: Inject Rate (Avg/Max BWPD): 25	Analysis							
· · · · · · · · · · · · · · · · · · ·	,	_	· A COMO Porter	12 Mile Pedius Bool M	SA			
HC Potential: Producing Interval? 10 Formerly Producing? 12-Method: Logo DST/P&A/Other Hadrico 2-Mile Radius Pool Map Broken AOR Wells: 1/2-M Radius Map? 105 Well List? 105 Total No. Wells Penetrating Interval: Horizontals? 107 Method: 107 Method								
AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: Horizontals? Month Wells: No. Active Wells On which well(s)?								
Penetrating Wells: No. P&A Wells Num Repairs? on which well(s)? (SWD outside 1/2 Mule (AR)) Diagrams? Yes								
NOTICE: Newspaper Date 10/23/16 (2nd) ineral Owner NMSLO Surface Owner Rivoto Angli I am 14 N. Date 10/26/16 RULE 26.7(A): Identified Tracts? NES Affected Persons: NMSLO Conocomilios Featherstone, Mobil Revand N. Date 10/20/16								
Order Conditions: Issues: MSLO protest retracted with new interval/readvertised/additional info provided								
Add Order Cond: Survey within 2-years of Commencing injection,								
	^		readvertised/a	Iditional info p	rovided —			

Goetze, Phillip, EMNRD

From: Goetze, Phillip, EMNRD

Sent: Wednesday, October 19, 2016 3:24 PM

To: 'danny@pwllc.net'

Cc: Jones, William V, EMNRD

Subject: Llano Disposal, LLC - Screaming Eagle State No. 1 (30-025-39739): Notification

RE: Llano Disposal, LLC - Screaming Eagle State No. 1 (30-025-39739)

Danny:

I was completing the review of the application for the Screaming Eagle when I found a significant item that needs to be addressed. The original application described the proposed injection interval as the San Andres from 4770' to 5950'. Following the review by the NMSLO and input from Pueblo West on OCD's concern for the PM project, the new proposed injection interval is 5480' to 8800' and includes the Abo Formation. This constituted a major modification due to the addition of the interval from 5950' to 8800' (and additional unit – the Abo) that was not covered in the notification to the affected persons and advertised through general publication.

If Llano wishes to proceed with the application for approval of the new interval (5950' to 8800'), then a new round of notification must be completed. I would suggest that Llano prepare a simple package with the amended items (a cover letter stating the changes [interval footage, formations, MSIP], a current well diagram, and a new well diagram) instead of preparing and sending a new C-108 to all affected persons. I would also include in the cover letter a statement that there are no other changes based upon review – AOR wells/affected persons to be notified/water wells/etc. A copy of the package should be forwarded to Santa Fe to be included in the C-108. The newspaper publication would also reflect the changes (and I would suggest including the word amended in that also).

Other than this item, the application would be available on the closing of the 15th day. Call/e-mail with any questions. PRG

Phillip Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive, Santa Fe, NM 87505

Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



Goetze, Phillip, EMNRD

From: Holm, Anchor <aholm@slo.state.nm.us>

Sent: Thursday, October 6, 2016 3:18 PM

To: Goetze, Phillip, EMNRD; McMillan, Michael, EMNRD

Cc: danny@pwllc.net; Martin, Ed; Khalsa, Niranjan K.; Padilla, Patrick; Crosby, Faith

Subject: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) Proposed Alternate

Completion Plan

Attachments: LlanoDisposal- Screaming EagleSt.#1 - GIS+.docx; Screaming Eagle Wellbore Diagram

Alternate 093016.pdf

Phillip and Michael,

Danny Holcomb, consultant for Llano Disposal LLC, has provided some additional information to the State Land Office and the newly revised proposed SWD. Based upon the revised proposed SWD injection interval of <u>5,480' to 8,800'</u>, the New Mexico State Land Office believes that this depth interval will be protective of the State Trust Minerals. Therefore, the State Land Office withdraws our objection to the use of the proposed Screaming Eagle State #1 (30-025-39076) wellbore for this SWD project if the proposed disposal interval is changed to that cited above.

Respectfully,

nmstatelands.org

Anchor E. Holm

Geoscientist/Petroleum Engineering Specialist
Oil Gas & Minerals Division
505.827.5759

New Mexico State Land Office
310 Old Santa Fe Trail
P.O. Box 1148
Santa Fe, NM 87504-1148
aholm@slo.state.nm.us



CONFIDENTIALITY NOTICE - This e-mail transmission, including all documents, files, or previous e-mail messages attached hereto, may contain confidential and/or legally privileged information. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that you must not read this transmission and that any disclosure, copying, printing, distribution, or use of any of the information contained in and/or attached to this transmission is STRICTLY PROHIBITED. If you have received this transmission in error, please immediately notify the sender and delete the original transmission and its attachments without reading or saving in any manner. Thank you.

From: danny@pwllc.net [mailto:danny@pwllc.net]

Sent: Friday, September 30, 2016 2:06 PM

To: Martin, Ed <emartin@slo.state.nm.us>; Holm, Anchor <aholm@slo.state.nm.us> **Cc:** Marvin Burrows <burrowsmarvin@gmail.com>; Bill Prichard <burrowsmarvin@gmail.com</burrowsmarvin@gmail.com</burrowsmarvin@gmail.com</burrowsmarvin@gmail.com</burrowsmarvin@gmail.com</burrowsmarvin@gmail.com</burrowsmarvin@gmail.com</br/>

Subject: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) Proposed Alternate Completion Plan

Ed and Anchor,

The C-108 on this proposed SWD well was protested by you on February 5, 2016. We understand your concern with offset upper SA production in the Angell #2 well (30-025-39076) through GB-SA perfs

between 5384'-5430'. Llano is considering an alternate completion plan in a new C108 for this well and we wanted to reach out to you to discuss what your position would be on this proposed plan.

Attached are two documents:

- 1) a proposed wellbore diagram with the alternative completion plan
- 2) copy of GR-CNC log showing existing csg point and the highest porosity lobes (greater than 10%) above the csg point in red, and the highest porosity (greater than 10%) lobes below the csg point in blue.

The alternate plan includes drilling out all existing cement plugs in the well and setting an injection packer a maximum of 100' above the existing 5.5" casing shoe. The proposed injection interval would be from 5480' to 8800' (TD). This injection interval would be from the extreme lower San Andres - Abo formations. This configuration would have all the high porosity San Andres formation behind pipe. The remaining extremely lower San Andres formation shows to be mostly low porosity which should not impact offsetting upper SA production located up structure in the SA offset well 30-025-39076. We realize you want the injection interval to be below 5730', but we wanted to see if we could work with you to achieve your desired protection of the offset SA production without setting a liner in the well. If a liner is required, it would reduce the size of the injection tubing string which dramatically impacts injection capability.

See our comments on this well as a proposed SWD well in the email below to Phillip. Llano believes this area is ideally suited for an SWD due to reasons listed below. When we did the land work for this application, the State Trust Lands in the quarter section of this well were unleased. As you know, locating an SWD well there would provide income to the State Lands Trust where none is currently being made. Llano believe that can be done without risking SA production in the referenced offset well located outside the 0.5 mile AOR.

We ask that you please review this alternate proposal and let us know your position. By moving the injection interval below 5000', Phillip's issues #1 and #2 below should be resolved since the injection interval would be below the Lovington GB-SA Pool and the Lovington SA WF.

If you have any questions or need any clarification, please let us know. Thank you for considering this alternate plan.

Thank you, Danny J. Holcomb Pueblo West, LLC Cell: 806-471-5628

Email: danny@pwllc.net

----- Original Message ------

Subject: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Tue, May 24, 2016 2:45 pm

To: "danny@pwllc.net" <danny@pwllc.net>

Cc: Marvin Burrows < burrowsmarvin@gmail.com, "Jones, William V, EMNRD" < william V.Jones@state.nm.us, "Holm, Anchor E." < aholm@slo.state.nm.us,

"McMillan, Michael, EMNRD" < Michael. McMillan@state.nm.us > , "Lowe,

Leonard, EMNRD" < Leonard.Lowe@state.nm.us >

RE: Screaming Eagle State No. 1 (API 30-025-39739; Appl. No. pMAM1603456148); Application for Injection

Mr. Holcomb:

Per your request, Division has reviewed your application on behalf of Llano Disposal, LLC. However, the review has found issues that make administrative approval not possible. These items include the following:

- The location of the well is within a designated pool (Lovington; Grayburg-San Andres pool; Pool code: 40580) and includes a proposed injection interval containing the producing interval for this pool. The application does not offer a discussion of potential resources of the San Andres in this area and there has been no previous hearing for consideration of the conversion of a well for disposal in this pool.
- 2. The proximity of the proposed SWD well to existing EOR projects including the Lovington San Andres Waterflood Project (Order No. 9431; Case No. 10154) and Angell Lease Pressure Maintenance Pressure Project (Order No. R-13361; Case No.14571) with the same interval as the proposed disposal interval. No information is provided in the application as to potential impacts to correlative rights.
- 3. Concerns expressed by the State Land Office regarding this application and mineral interest of the State Trust lands. Their comments are provided in the attached e-mail.

If Llano Disposal wishes to purse approval of the application, they may proceed with taking the application to hearing. Please contact me, at your convenience, with any questions you may have regarding this application or the content of this communication. PRG

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505
Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: Holm, Anchor [mailto:aholm@slo.state.nm.us]

Sent: Friday, February 05, 2016 12:00 PM

To: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>

Cc: Martin, Ed <emartin@slo.state.nm.us>; Khalsa, Niranjan K.

<nkhalsa@slo.state.nm.us>; Warnell, Terry G. <twarnell@slo.state.nm.us>

Subject: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil

zone conversion to SWD

Phil,

After review of the C-108 for Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone conversion to SWD in same zone, the State Land Office is opposed to the proposed SWD interval of 4770'-5950'. Offset and in-wellbore production of oil and gas requires at least a 300' vertical buffer between oil production and SWD in our opinion. This would leave only a potential SWD interval from 5730' to 5938', which appears to not contain significant zones of injectivity.

SLO recommends that the applicant seriously consider changing its proposed SWD interval to the deeper Abo Reef in a manner similar to that of the Texland Petroleum-Hobbs, LLC - Texland 3 State #1 SWD (30-025-37930), which is completed open hole in the Abo Reef from 8450'-8710'. This Texland well is located about ½ mile to the WNW from the Screaming Eagle well, and is capable of disposing over 3000 BWPD as demonstrated in 2015. Attached is a map of offset wells and the State Land Trust Lands surrounding the Screaming Eagle well with annotations.

Respectfully yours,



Anchor E. Holm Geoscientist/Petroleum Engineering Specialist Oil Gas & Minerals Division 505.827.5759 New Mexico State Land Office 310 Old Santa Fe Trail P.O. Box 1148

Santa Fe, NM 87504-1148 aholm@slo.state.nm.us nmstatelands.org

CONFIDENTIALITY NOTICE - This e-mail transmission, including all documents, files, or previous e-mail messages attached hereto, may contain confidential and/or legally privileged information. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that you must not read this transmission and that any disclosure, copying, printing, distribution, or use of any of the information contained in and/or attached to this transmission is STRICTLY PROHIBITED. If you have received this transmission in error, please immediately notify the sender and delete the original transmission and its attachments without reading or saving in any manner. Thank you.

This email has been scanned by the Symantec Enformore information please visit http://www.syr	
This email has been scanned by the Symantec En For more information please visit http://www.syr	-
This email has been scanned by the Symantec En	

of more information pieuse visit intp www.symanteeeroug.com	For more information please visit http://www.symanteccloud.com	
---	--	--

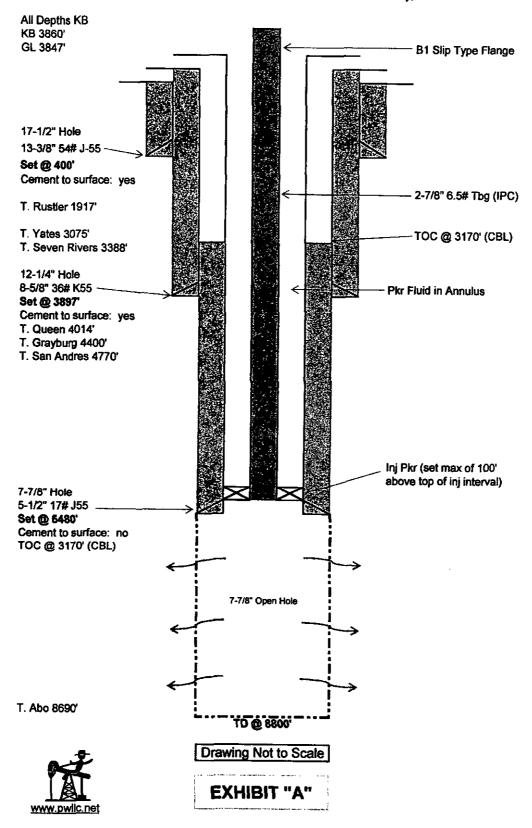
Llano Disposal, LLC- Screaming Eagle State #1 (30-025-39739) D-11-17S-36E, Lea E016780004 A014690009 B096860000 V097600000 A013200000 B077660012 B078450009 B073160002 E029360002 V097720000 B077660011 18030090001 B030090001 B042860001 B015530014 B023590004 B042860002 8015530014 B030090001 8041190013 B015530014 B023590004 B041190016 VB21190000 B081970001 B041190016 8030090001 B015530014 E003880004 V091590001 B014290005 VB25020000 B070160014 B070160013 V076580000 B014290008 ¥825050000 Y091590001 36000 E085810002 VB23020001

PROPOSED WELLBORE

Configured for SWD Service

Llano Disposal, LLC Screaming Eagle State #1 API # 30-025-39739

660' FNL x 660' FWL, UL 'D' Sec 11, T17S, R36E, Lea County, NM



Goetze, Phillip, EMNRD

From:

danny@pwllc.net

Sent:

Friday, October 7, 2016 9:25 AM

To:

Goetze, Phillip, EMNRD

Cc:

Marvin Burrows; Jones, William V, EMNRD

Subject:

RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil

zone conversion to SWD

Phillip,

Thank you for your reply. As you know, Llano has negotiated a resolution to the SLO protest of the SA SWD C108. Llano agreed to lower the injection interval to 5480' - 8800' in the extreme lower SA to the Abo formations. This resolved the SLO protest.

According to the pool code depths listed in the NMOCD files, the Lovington GB-SA Pool is listed at depths of 0-4999'. Llano's new injection interval now falls below this pool interval.

According to the WF project (R-9431) files, the new proposed injection interval on the Screaming Eagle State SWD #1 now falls below the approved injection interval listed in this order for all the WF wells.

According to the Pressure Maint Project (R-13361) files, the new proposed injection interval on the Screaming Eagle State SWD #1 now falls below the 4802'-5432' injection interval listed in this order.

Llano believes that lowering the proposed injection interval to 5480' - 8800' has resolved all issues both the NMOCD and NMSLO had listed in your original response.

Concerning your question about redirecting the review of this application to someone else. I think you misunderstood my question. Will had advised that you were spending much of your time then on a DMG issue heard at hearing. My question was simply asking if I needed to direct my inquiries on the status of the application to someone else. I was not asking that the application examination be directed to someone else. Sorry for the confusion.

Thank you,

Danny J. Holcomb Pueblo West, LLC Cell: 806-471-5628

Email: danny@pwllc.net

----- Original Message ------

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Fri, October 07, 2016 9:37 am

To: "danny@pwllc.net" <danny@pwllc.net>

Cc: Marvin Burrows < burrowsmarvin@gmail.com, "Jones, William V, EMNRD"

< William V. Jones@state.nm.us >

RE: Llano Disposal, LLC application: Screaming Eagle State #1 (30-025-39739)

Danny:

I have received Anchor's input regarding the proposed disposal well. I'll being putting the application on top (Tuesday's schedule) and will talk with Director (today) about the having the proposed disposal well in a declared pool. Typically,

these type of applications are recommended for hearing based on historical procedures and as is stipulated in the Division's process for review as detailed in the primacy agreement with the EPA.

With regards to your request to redirect the review of the application to someone else; if you can find someone on staff who is available and not behind, then I will gratefully welcome your recommendation and will offer it to the Director.

PRG

From: danny@pwllc.net [mailto:danny@pwllc.net]

Sent: Wednesday, August 24, 2016 11:41 AM

To: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>

Cc: Marvin Burrows < burrowsmarvin@gmail.com >

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone conversion to SWD

Phillip,

We never heard back from you concerning this matter. It has been 2.5 months now. We know you are busy, but you had offered to speak to the SLO and Mr. Catanach concerning the uniqueness of this administrative application. We appreciate your help with this matter.

If we should be directing our request for re-evaluation of our C108 administrative consideration to someone else, please advise.

Thank you,

Danny J. Holcomb

Pueblo West, LLC

Cell: 806-471-5628 Email: danny@pwllc.net

----- Original Message ------

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: <danny@pwllc.net>

Date: Wed, July 13, 2016 12:54 pm

To: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Cc: "Marvin Burrows" < <u>burrowsmarvin@gmail.com</u>>

Phillip,

We know you are probably very busy. We have not heard back from you concerning this matter. After receiving our response to your notice that the C108 application would have to go to hearing, you offered to discuss this matter with the SLO and Mr. Catanach. Have you been able to do that yet? Thanks in advance for your assistance with this matter.

Thank you,

Danny J. Holcomb Pueblo West, LLC Cell: 806-471-5628

Email: danny@pwllc.net

----- Original Message -----

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: < danny@pwllc.net>

Date: Mon, June 20, 2016 8:47 am

To: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Cc: "Marvin Burrows" < burrowsmarvin@gmail.com >

Phillip,

Have you had a chance to discuss this application with the SLO and Mr. Catanach yet?

Thank you,

Danny J. Holcomb Pueblo West, LLC Cell: 806-471-5628

Email: danny@pwllc.net

----- Original Message -----

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Fri, June 03, 2016 3:40 pm

To: "danny@pwllc.net" < danny@pwllc.net>

Cc: Marvin Burrows < burrowsmarvin@gmail.com >

Mr. Holcomb:

No, schedules have not permitted a discussion this week. I will be meeting with the SLO on Tuesday and may have the opportunity for discussion with the Director when he gets back from Artesia. PRG

And with regards

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive

Santa Fe, NM 87505 Direct: 505,476,3466

E-mail: phillip.goetze@state.nm.us



From: danny@pwllc.net [mailto:danny@pwllc.net]

Sent: Friday, June 03, 2016 7:32 AM

To: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>

Cc: Marvin Burrows < burrowsmarvin@gmail.com>

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil

zone conversion to SWD

Phillip.

Have you been able to discuss this application with Mr. Catanach and the SLO for

reconsideration? Thank you,

Danny J. Holcomb

Pueblo West Resources

Cell: 806-471-5628 Email: danny@pwllc.net ----- Original Message ------

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Wed, May 25, 2016 3:35 pm

To: "danny@pwilc.net" < danny@pwilc.net >

Cc: Marvin Burrows < burrowsmarvin@gmail.com >, "Jones, William V,

EMNRD"

< <u>WilliamV.Jones@state.nm.us</u>>, "McMillan, Michael, EMNRD"

< Michael. McMillan@state.nm.us >

Mr. Holcomb:

Thank you for response to the items in the Division's e-mail and they will be considered relative to Division's decision. With regards to the administrative procedure, Llano has proposed injection into an interval that is still within an active pool. The application provided no geological or engineering information for an evaluation of potential impacts to correlative rights while your response provides a very accurate summary. Finally, the practice of hearings for proposed new injection in older active pools with no previous injection has been customary, as found in the numerous orders written by Director Catanach during his term as an examiner and technical reviewer of C-108 applications. I will present this matter to him for consideration. I will also forward your information to NMSLO and will discuss it with them tomorrow. PRG

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: danny@pwllc.net [mailto:danny@pwllc.net]

Sent: Wednesday, May 25, 2016 1:53 PM

To: Goetze, Phillip, EMNRD < Phillip, Goetze@state.nm.us>

Cc: Marvin Burrows <burrowsmarvin@gmail.com>

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739)

proposed oil zone conversion to SWD

Phillip,

Thank you for the information. Llano desires to better understand the reasons for the rejection of administrative approval. Please see the comments/questions below in the same order as your email:

1. The Screaming Eagle State #1 is located off structure and downslope from the two Units within the Lovington; Grayburg-San Andres Pool. As a matter of fact, the middle-lower San Andres in the Screaming Eagle #1 was not found to be productive of oil/gas during original completion activities in 2010. The original operator perforated and tested the SA as noted below:

5229' - 5286' - swabbed for 2 days with no show 5066' - 5113' - swabbed for 7 days with no show 4885' - 4922' - swabbed for 3 days with no show, then fracture stimulated these perfs, C105 indicates 15 BOPD, 156 BWPD. By mid 2012, well was making less than 1 BO per month and was shut in

The AOR for the subject well does not now contain or has it ever contained any producing San Andres wells within this portion of the Lovington: Grayburg-San Andres Pool. In fact, the 160 acres of State minerals in the NW/4 surrounding the subject well remains unleased since the primary term expired on the previous operator's lease. Llano believes this area is well suited as a candidate for a San Andres SWD well.

2. The WF Project and PMX Project you reference are well outside the AOR of the subject well. As stated above, the subject well is located off structure and downslope from the wells in the referenced WF project. The nearest active well in this WF Project is 0.9 miles away to the northeast from the subject well. A review of the injection wells authorized within this WF project indicate a range of injection depths from 4515' - 5147' compared to our proposed injection depths from 4770' - 5950'. The OCD already allows the operator of the PMX project discussed in the next paragraph to inject produced water into the San Andres at 4802' - 5232' at a maximum allowable pressure of 2700 psi. The PMX injector is located about 0.5 miles from the edge of the WF Project, while the Screaming Eagle State SWD #1 well is located about twice that distance away from the WF Project and would be limited to less than half the maximum pressure of the PMX injector. Llano believes there are no issues with correlative rights with the WF project wells due to their distance away, their being higher on structure and the assumption that they have not experienced any negative affects from the nearby PMX Project. Using a simple radial flow equation, the subject SWD well would never impact the WF Project wells within the estimated 40 year life of the proposed SWD well.

Concerning the PMX Project you reference, the OCD has approved the operator to inject produced water into 30-025-39690 through perforations at 4802' - 5232' with a maximum allowable pressure of 2700 psi. All the wells within this PMX are on 40 acre proration units. With the proposed Screaming Eagle State SWD #1 well being over 0.56 miles away from any wells within the PMX, Llano does not believe that the proposed SWD operation would negatively impact the PMX Project. Again, to negatively impact wells within the PMX Project, it would require many more years of injection at the proposed SWD well than the estimated 40 year life of the SWD well.

3. We have reviewed the SLO concerns provided. We assume that the SLO concerns were the primary reason for the administrative approval rejection. Is that correct? If we work with the SLO to address their

concerns, would this application move back into the administrative approval process? Please advise.

Thank you for your time and consideration of this additional information provided. Please advise your comments or any questions.

Thank you,

Danny J. Holcomb Pueblo West Resources

Cell: 806-471-5628 Email: danny@pwllc.net

----- Original Message ------

Subject: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Tue, May 24, 2016 2:45 pm

To: "danny@pwllc.net" <danny@pwllc.net>

Cc: Marvin Burrows < burrowsmarvin@gmail.com >, "Jones,

William V, EMNRD"

< William V. Jones@state.nm.us > , "Holm, Anchor E."

<a href="mailto:,

"McMillan, Michael, EMNRD" < Michael.McMillan@state.nm.us > ,

"Lowe,

Leonard, EMNRD" < Leonard.Lowe@state.nm.us >

RE: Screaming Eagle State No. 1 (API 30-025-39739; Appl. No. pMAM1603456148); Application for Injection

Mr. Holcomb:

Per your request, Division has reviewed your application on behalf of Llano Disposal, LLC. However, the review has found issues that make administrative approval not possible. These items include the following:

The location of the well is within a designated pool (Lovington; Grayburg-San Andres pool; Pool code: 40580) and includes a proposed injection interval containing the producing interval for this pool. The application does not offer a discussion of potential resources of the San Andres in this area and there has been no previous hearing for consideration of the conversion of a well for disposal in this pool.

The proximity of the proposed SWD well to existing EOR projects including the Lovington San Andres Waterflood Project (Order No. 9431; Case No. 10154) and Angell Lease Pressure Maintenance Pressure Project (Order No. R-13361; Case No.14571) with the same interval as the proposed disposal interval. No information is provided in the application as to potential impacts to correlative rights.

Concerns expressed by the State Land Office regarding this application and mineral interest of the State Trust lands. Their comments are provided in the attached e-mail.

If Llano Disposal wishes to purse approval of the application, they may proceed with taking the application to hearing. Please contact me, at your convenience, with any questions you may have regarding this application or the content of this communication. PRG

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources
Department

1220 South St. Francis Drive Santa Fe, NM 87505 Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: Holm, Anchor [mailto:aholm@slo.state.nm.us]

Sent: Friday, February 05, 2016 12:00 PM

<<u>nkhalsa@slo.state.nm.us</u>>; Warnell, Terry G.

<twarnell@slo.state.nm.us>

Subject: Llano Disposal, LLC - Screaming Eagle State #1 (30-

025-39739) proposed oil zone conversion to SWD

Phil,

After review of the C-108 for Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone conversion to SWD in same zone, the State Land Office is opposed to the proposed SWD interval of 4770'-5950'. Offset and in-wellbore production of oil and gas requires at least a 300' vertical buffer between oil production and SWD in our opinion. This would leave only a potential SWD interval from 5730' to 5938', which appears to not contain significant zones of injectivity.

SLO recommends that the applicant seriously consider changing its proposed SWD interval to the deeper Abo Reef in a manner similar to that of the Texland Petroleum-Hobbs, LLC – Texland 3 State #1 SWD (30-025-37930), which is completed open hole in the Abo Reef from 8450'-8710'. This Texland well is located about ½ mile to the WNW from the Screaming Eagle well, and is capable of disposing over 3000 BWPD as demonstrated in 2015. Attached is a map of offset wells and the State Land Trust Lands surrounding the Screaming Eagle well with annotations.

Respectfully yours,



Anchor E. Holm

Geoscientist/Petroleum Engineering Specialist
Oil Gas & Minerals Division
505.827.5759

New Mexico State Land Office
310 Old Santa Fe Trail
P.O. Box 1148

Santa Fe, NM 87504-1148 <u>aholm@slo.state.nm.us</u> nmstatelands.org

CONFIDENTIALITY NOTICE - This e-mail transmission, including all documents, files, or previous e-mail messages attached hereto, may contain confidential and/or legally privileged information. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that you must not read this transmission and that any disclosure, copying, printing, distribution, or use of any of the information contained in and/or attached to this transmission is STRICTLY PROHIBITED. If you have received this transmission in error, please immediately notify the sender and delete the original transmission and its attachments without reading or saving in any manner. Thank you.

This email has been scanned by the Symantec Email Security.cloud service. For more information please visit http://www.symanteccloud.com

Goetze, Phillip, EMNRD

From:

danny@pwllc.net

Sent:

Wednesday, August 24, 2016 11:41 AM

To:

Goetze, Phillip, EMNRD

Cc:

Marvin Burrows

Subject:

RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil

zone conversion to SWD

Phillip,

We never heard back from you concerning this matter. It has been 2.5 months now. We know you are busy, but you had offered to speak to the SLO and Mr. Catanach concerning the uniqueness of this administrative application. We appreciate your help with this matter.

If we should be directing our request for re-evaluation of our C108 administrative consideration to someone else, please advise.

Thank you,

Danny J. Holcomb
Pueblo West, LLC
Cell: 806-471-5628
Email: danny@pwllc.net

----- Original Message -----

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: <danny@pwllc.net>

Date: Wed, July 13, 2016 12:54 pm

To: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Cc: "Marvin Burrows" <burrowsmarvin@gmail.com>

Phillip.

We know you are probably very busy. We have not heard back from you concerning this matter. After receiving our response to your notice that the C108 application would have to go to hearing, you offered to discuss this matter with the SLO and Mr. Catanach. Have you been able to do that yet? Thanks in advance for your assistance with this matter.

Thank you,

Danny J. Holcomb Pueblo West, LLC Cell: 806-471-5628 Email: danny@pwllc.net

----- Original Message ------

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: <danny@pwllc.net>

Date: Mon, June 20, 2016 8:47 am

To: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Cc: "Marvin Burrows" <burrowsmarvin@gmail.com>

Phillip,

Have you had a chance to discuss this application with the SLO and Mr. Catanach yet?

Thank you,

Danny J. Holcomb

Pueblo West, LLC Cell: 806-471-5628 Email: danny@pwllc.net

----- Original Message ------

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Fri, June 03, 2016 3:40 pm

To: "danny@pwllc.net" <danny@pwllc.net>

Cc: Marvin Burrows <burrowsmarvin@gmail.com>

Mr. Holcomb:

No, schedules have not permitted a discussion this week. I will be meeting with the SLO on Tuesday and may have the opportunity for discussion with the Director when he gets back from Artesia. PRG

And with regards

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive

Santa Fe, NM 87505 Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: danny@pwllc.net [mailto:danny@pwllc.net]

Sent: Friday, June 03, 2016 7:32 AM

To: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>

Cc: Marvin Burrows < burrowsmarvin@gmail.com >

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil

zone conversion to SWD

Phillip,

Have you been able to discuss this application with Mr. Catanach and the SLO for reconsideration?

Thank you,

Danny J. Holcomb

Pueblo West Resources

Cell: 806-471-5628

Email: danny@pwllc.net

----- Original Message ------

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Wed, May 25, 2016 3:35 pm

To: "danny@pwllc.net" <danny@pwllc.net>

Cc: Marvin Burrows < burrowsmarvin@gmail.com >, "Jones, William V,

EMNRD"

< <u>WilliamV.Jones@state.nm.us</u>>, "McMillan, Michael, EMNRD"

<Michael.McMillan@state.nm.us>

Mr. Holcomb:

Thank you for response to the items in the Division's e-mail and they will be considered relative to Division's decision. With regards to the administrative procedure, Llano has proposed injection into an interval that is still within an active pool. The application provided no geological or engineering information for an evaluation of potential impacts to correlative rights while your response provides a very accurate summary. Finally, the practice of hearings for proposed new injection in older active pools with no previous injection has been customary, as found in the numerous orders written by Director Catanach during his term as an examiner and technical reviewer of C-108 applications. I will present this matter to him for consideration. I will also forward your information to NMSLO and will discuss it with them tomorrow. PRG

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: danny@pwllc.net [mailto:danny@pwllc.net]

Sent: Wednesday, May 25, 2016 1:53 PM

To: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>

Cc: Marvin Burrows < burrowsmarvin@gmail.com >

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739)

proposed oil zone conversion to SWD

Phillip,

Thank you for the information. Llano desires to better understand the reasons for the rejection of administrative approval. Please see the comments/questions below in the same order as your email:

1. The Screaming Eagle State #1 is located off structure and downslope from the two Units within the Lovington; Grayburg-San Andres Pool. As a matter of fact, the middle-lower San Andres in the Screaming Eagle #1 was not found to be productive of oil/gas during original completion activities in 2010. The original operator perforated and tested the SA as noted below:

5229' - 5286' - swabbed for 2 days with no show 5066' - 5113' - swabbed for 7 days with no show 4885' - 4922' - swabbed for 3 days with no show, then fracture stimulated these perfs, C105 indicates 15 BOPD, 156 BWPD. By mid 2012, well was making less than 1 BO per month and was shut in

The AOR for the subject well does not now contain or has it ever contained any producing San Andres wells within this portion of the Lovington: Grayburg-San Andres Pool. In fact, the 160 acres of State minerals in the NW/4 surrounding the subject well remains unleased since the primary term expired on the previous operator's lease. Llano believes this area is well suited as a candidate for a San Andres SWD well.

2. The WF Project and PMX Project you reference are well outside the AOR of the subject well. As stated above, the subject well is located off structure and downslope from the wells in the referenced WF project. The nearest active well in this WF Project is 0.9 miles away to the northeast from the subject well. A review of the injection wells authorized within this WF project indicate a range of injection depths from 4515' - 5147' compared to our proposed injection depths from 4770' - 5950'. The OCD already allows the operator of the PMX project discussed in the next paragraph to inject produced water into the San Andres at 4802' - 5232' at a maximum allowable pressure of 2700 psi. The PMX injector is located about 0.5 miles from the edge of the WF Project, while the Screaming Eagle State SWD #1 well is located about twice that distance away from the WF Project and would be limited to less than half the maximum pressure of the PMX injector. Llano believes there are no issues with correlative rights with the WF project wells due to their distance away, their being higher on structure and the assumption that they have not experienced any negative affects from the nearby PMX Project. Using a simple radial flow equation, the subject SWD well would never impact the WF Project wells within the estimated 40 year life of the proposed SWD well.

Concerning the PMX Project you reference, the OCD has approved the operator to inject produced water into 30-025-39690 through perforations at 4802' - 5232' with a maximum allowable pressure of 2700 psi. All the wells within this PMX are on 40 acre proration units. With the proposed Screaming Eagle State SWD #1 well being over 0.56 miles away from any wells within the PMX, Llano does not believe that the proposed SWD operation would negatively impact the PMX Project. Again, to negatively impact wells within the PMX Project, it would require many more years of injection at the proposed SWD well than the estimated 40 year life of the SWD well.

3. We have reviewed the SLO concerns provided. We assume that the SLO concerns were the primary reason for the administrative approval rejection. Is that correct? If we work with the SLO to address their concerns, would this application move back into the administrative approval process? Please advise.

Thank you for your time and consideration of this additional information provided. Please advise your comments or any questions.

Thank you,

Danny J. Holcomb

Pueblo West Resources

Cell: 806-471-5628 Email: danny@pwllc.net

----- Original Message ------

Subject: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Tue, May 24, 2016 2:45 pm

To: "danny@pwllc.net" <danny@pwllc.net>

Cc: Marvin Burrows < burrowsmarvin@gmail.com, "Jones,

William V. EMNRD"

< William V. Jones @state.nm.us > , "Holm, Anchor E."

aholm@slo.state.nm.us>,

"McMillan, Michael, EMNRD" < Michael.McMillan@state.nm.us,

"Lowe,

Leonard, EMNRD" < Leonard.Lowe@state.nm.us >

RE: Screaming Eagle State No. 1 (API 30-025-39739; Appl. No. pMAM1603456148); Application for Injection

Mr. Holcomb:

Per your request, Division has reviewed your application on behalf of Llano Disposal, LLC. However, the review has found issues that make administrative approval not possible. These items include the following:

The location of the well is within a designated pool (Lovington; Grayburg-San Andres pool; Pool code: 40580) and includes a proposed injection interval containing the producing interval for this pool. The application does not offer a discussion of potential resources of the San Andres in this area and there has been no previous hearing for consideration of the conversion of a well for disposal in this pool.

The proximity of the proposed SWD well to existing EOR projects including the Lovington San Andres Waterflood Project (Order No. 9431; Case No. 10154) and Angell Lease Pressure Maintenance Pressure Project (Order No. R-13361; Case No.14571) with the same interval as the proposed disposal interval. No information is provided in the application as to potential impacts to correlative rights.

Concerns expressed by the State Land Office regarding this application and mineral interest of the State Trust lands. Their comments are provided in the attached e-mail.

If Llano Disposal wishes to purse approval of the application, they may proceed with taking the application to hearing. Please contact me, at your convenience, with any questions you may have regarding this application or the content of this communication. PRG

Phillip R. Goetze, PG

Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources
Department

1220 South St. Francis Drive Santa Fe, NM 87505 Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: Holm, Anchor [mailto:aholm@slo.state.nm.us]

Sent: Friday, February 05, 2016 12:00 PM

To: Goetze, Phillip, EMNRD < Phillip,Goetze@state.nm.us> Cc: Martin, Ed <emartin@slo.state.nm.us>; Khalsa, Niranjan K.

<nkhalsa@slo.state.nm.us>; Warnell, Terry G.

<twarnell@slo.state.nm.us>

Subject: Llano Disposal, LLC - Screaming Eagle State #1 (30-

025-39739) proposed oil zone conversion to SWD

Phil,

After review of the C-108 for Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone conversion to SWD in same zone, the State Land Office is opposed to the proposed SWD interval of 4770'-5950'. Offset and in-wellbore production of oil and gas requires at least a 300' vertical buffer between oil production and SWD in our opinion. This would leave only a potential SWD interval from 5730' to 5938', which appears to not contain significant zones of injectivity.

SLO recommends that the applicant seriously consider changing its proposed SWD interval to the deeper Abo Reef in a manner similar to that of the Texland Petroleum-Hobbs, LLC – Texland 3 State #1 SWD (30-025-37930), which is completed open hole in the Abo Reef from 8450'-8710'. This Texland well is located about ½ mile to the WNW from the Screaming Eagle well, and is capable of disposing over 3000 BWPD as demonstrated in 2015. Attached is a map of offset wells and the State Land Trust Lands surrounding the Screaming Eagle well with annotations.

Respectfully yours,



Anchor E. Holm

Geoscientist/Petroleum Engineering Specialist

505.827.5759
New Mexico State Land Office
310 Old Santa Fe Trail
P.O. Box 1148
Santa Fe, NM 87504-1148
aholm@slo.state.nm.us
nmstatelands.org

Oil Gas & Minerals Division

CONFIDENTIALITY NOTICE - This e-mail transmission, including all documents, files, or previous e-mail messages attached hereto, may contain confidential and/or legally privileged information. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that you must not read this transmission and that any disclosure, copying, printing, distribution, or use of any of the information contained in and/or attached to this transmission is STRICTLY PROHIBITED. If you have received this transmission in error, please immediately notify the sender and delete the original transmission and its attachments without reading or saving in any manner. Thank you.

This email has been scanned by the Symantec Email Security.cloud service. For more information please visit http://www.symanteccloud.com

Goetze, Phillip, EMNRD

From:

Goetze, Phillip, EMNRD

Sent:

Wednesday, May 25, 2016 2:36 PM

To:

danny@pwllc.net

Cc:

Marvin Burrows; Jones, William V, EMNRD; McMillan, Michael, EMNRD

Subject:

RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil

zone conversion to SWD

Mr. Holcomb:

Thank you for response to the items in the Division's e-mail and they will be considered relative to Division's decision. With regards to the administrative procedure, Llano has proposed injection into an interval that is still within an active pool. The application provided no geological or engineering information for an evaluation of potential impacts to correlative rights while your response provides a very accurate summary. Finally, the practice of hearings for proposed new injection in older active pools with no previous injection has been customary, as found in the numerous orders written by Director Catanach during his term as an examiner and technical reviewer of C-108 applications. I will present this matter to him for consideration. I will also forward your information to NMSLO and will discuss it with them tomorrow. PRG

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive

Santa Fe, NM 87505 Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: danny@pwllc.net [mailto:danny@pwllc.net]

Sent: Wednesday, May 25, 2016 1:53 PM

To: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>

Cc: Marvin Burrows <burrowsmarvin@gmail.com>

Subject: RE: FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone conversion to SWD

Phillip,

Thank you for the information. Llano desires to better understand the reasons for the rejection of administrative approval. Please see the comments/questions below in the same order as your email:

1. The Screaming Eagle State #1 is located off structure and downslope from the two Units within the Lovington; Grayburg-San Andres Pool. As a matter of fact, the middle-lower San Andres in the Screaming Eagle #1 was not found to be productive of oil/gas during original completion activities in 2010. The original operator perforated and tested the SA as noted below:

5229' - 5286' - swabbed for 2 days with no show

5066' - 5113' - swabbed for 7 days with no show

4885' - 4922' - swabbed for 3 days with no show, then fracture stimulated these perfs, C105 indicates 15 BOPD, 156 BWPD. By mid 2012, well was making less than 1 BO per month and was shut in

The AOR for the subject well does not now contain or has it ever contained any producing San Andres wells within this portion of the Lovington: Grayburg-San Andres Pool. In fact, the 160 acres of State minerals in the NW/4 surrounding the subject well remains unleased since the primary term expired on the previous operator's lease. Llano believes this area is well suited as a candidate for a San Andres SWD well.

2. The WF Project and PMX Project you reference are well outside the AOR of the subject well. As stated above, the subject well is located off structure and downslope from the wells in the referenced WF project. The nearest active well in this WF Project is 0.9 miles away to the northeast from the subject well. A review of the injection wells authorized within this WF project indicate a range of injection depths from 4515' - 5147' compared to our proposed injection depths from 4770' - 5950'. The OCD already allows the operator of the PMX project discussed in the next paragraph to inject produced water into the San Andres at 4802' - 5232' at a maximum allowable pressure of 2700 psi. The PMX injector is located about 0.5 miles from the edge of the WF Project, while the Screaming Eagle State SWD #1 well is located about twice that distance away from the WF Project and would be limited to less than half the maximum pressure of the PMX injector. Llano believes there are no issues with correlative rights with the WF project wells due to their distance away, their being higher on structure and the assumption that they have not experienced any negative affects from the nearby PMX Project. Using a simple radial flow equation, the subject SWD well would never impact the WF Project wells within the estimated 40 year life of the proposed SWD well.

Concerning the PMX Project you reference, the OCD has approved the operator to inject produced water into 30-025-39690 through perforations at 4802' - 5232' with a maximum allowable pressure of 2700 psi. All the wells within this PMX are on 40 acre proration units. With the proposed Screaming Eagle State SWD #1 well being over 0.56 miles away from any wells within the PMX, Llano does not believe that the proposed SWD operation would negatively impact the PMX Project. Again, to negatively impact wells within the PMX Project, it would require many more years of injection at the proposed SWD well than the estimated 40 year life of the SWD well.

3. We have reviewed the SLO concerns provided. We assume that the SLO concerns were the primary reason for the administrative approval rejection. Is that correct? If we work with the SLO to address their concerns, would this application move back into the administrative approval process? Please advise.

Thank you for your time and consideration of this additional information provided. Please advise your comments or any questions.

Thank you,

Danny J. Holcomb

Pueblo West Resources

Cell: 806-471-5628 Email: <u>danny@pwllc.net</u>

----- Original Message ------

Subject: FW: Llano Disposal, LLC - Screaming Eagle State #1

(30-025-39739) proposed oil zone conversion to SWD

From: "Goetze, Phillip, EMNRD" < Phillip.Goetze@state.nm.us>

Date: Tue, May 24, 2016 2:45 pm

To: "danny@pwllc.net" < danny@pwllc.net>

Cc: Marvin Burrows < burrowsmarvin@gmail.com, "Jones, William V, EMNRD" < williamV.Jones@state.nm.us, "Holm, Anchor E." < aholm@slo.state.nm.us,

"McMillan, Michael, EMNRD" < Michael.McMillan@state.nm.us >, "Lowe,

Leonard, EMNRD" < Leonard.Lowe@state.nm.us>

RE: Screaming Eagle State No. 1 (API 30-025-39739; Appl. No. pMAM1603456148); Application for Injection

Mr. Holcomb:

Per your request, Division has reviewed your application on behalf of Llano Disposal, LLC. However, the review has found issues that make administrative approval not possible. These items include the following:

- The location of the well is within a designated pool (Lovington; Grayburg-San Andres pool; Pool code: 40580) and includes a proposed injection interval containing the producing interval for this pool. The application does not offer a discussion of potential resources of the San Andres in this area and there has been no previous hearing for consideration of the conversion of a well for disposal in this pool.
- 2. The proximity of the proposed SWD well to existing EOR projects including the Lovington San Andres Waterflood Project (Order No. 9431; Case No. 10154) and Angell Lease Pressure Maintenance Pressure Project (Order No. R-13361; Case No.14571) with the same interval as the proposed disposal interval. No information is provided in the application as to potential impacts to correlative rights.
- Concerns expressed by the State Land Office regarding this application and mineral interest of the State Trust lands. Their comments are provided in the attached e-mail.

If Llano Disposal wishes to purse approval of the application, they may proceed with taking the application to hearing. Please contact me, at your convenience, with any questions you may have regarding this application or the content of this communication. PRG

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505
Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: Holm, Anchor [mailto:aholm@slo.state.nm.us]

Sent: Friday, February 05, 2016 12:00 PM

To: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>

Cc: Martin, Ed <emartin@slo.state.nm.us>; Khalsa, Niranjan K.

<<u>nkhalsa@slo.state.nm.us</u>>; Warnell, Terry G. <<u>twarnell@slo.state.nm.us</u>> **Subject:** Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739)

proposed oil zone conversion to SWD

Phil,

After review of the C-108 for Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone conversion to SWD in same zone, the State Land Office is opposed to the proposed SWD interval of 4770'-5950'. Offset and in-wellbore production of oil and gas requires at least a 300' vertical buffer between oil production and SWD in our opinion. This would leave only a potential SWD interval from 5730' to 5938', which appears to not contain significant zones of injectivity.

SLO recommends that the applicant seriously consider changing its proposed SWD interval to the deeper Abo Reef in a manner similar to that of the Texland Petroleum-Hobbs, LLC – Texland 3 State #1 SWD (30-025-37930), which is completed open hole in the Abo Reef from 8450'-8710'. This Texland well is located about ½ mile to the WNW from the Screaming Eagle well, and is capable of disposing over 3000 BWPD as demonstrated in 2015. Attached is a map of offset wells and the State Land Trust Lands surrounding the Screaming Eagle well with annotations.

Respectfully yours,



Anchor E. Holm

Geoscientist/Petroleum Engineering Specialist Oil Gas & Minerals Division 505.827.5759 New Mexico State Land Office 310 Old Santa Fe Trail P.O. Box 1148

Santa Fe, NM 87504-1148 aholm@slo.state.nm.us nmstatelands.org

CONFIDENTIALITY NOTICE - This e-mail transmission, including all documents, files, or previous e-mail messages attached hereto, may contain confidential and/or legally privileged information. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that you must not read this transmission and that any disclosure, copying, printing, distribution, or use of any of the information contained in and/or attached to this transmission is STRICTLY PROHIBITED. If you have received this transmission in error, please immediately notify the sender and delete the original transmission and its attachments without reading or saving in any manner. Thank you.

This email has been scanned by the Symantec Email Security.cloud service. For more information please visit http://www.symanteccloud.com

Goetze, Phillip, EMNRD

From:

Goetze, Phillip, EMNRD

Sent:

Tuesday, May 24, 2016 1:45 PM

To:

danny@pwllc.net

Cc:

Marvin Burrows; Jones, William V, EMNRD; Holm, Anchor E. (aholm@slo.state.nm.us);

McMillan, Michael, EMNRD; Lowe, Leonard, EMNRD

Subject:

FW: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone

conversion to SWD

Attachments:

LlanoDisposal- Screaming EagleSt.#1 - GIS+.docx

RE: Screaming Eagle State No. 1 (API 30-025-39739; Appl. No. pMAM1603456148); Application for Injection

Mr. Holcomb:

Per your request, Division has reviewed your application on behalf of Llano Disposal, LLC. However, the review has found issues that make administrative approval not possible. These items include the following:

- 1. The location of the well is within a designated pool (Lovington; Grayburg-San Andres pool; Pool code: 40580) and includes a proposed injection interval containing the producing interval for this pool. The application does not offer a discussion of potential resources of the San Andres in this area and there has been no previous hearing for consideration of the conversion of a well for disposal in this pool.
- 2. The proximity of the proposed SWD well to existing EOR projects including the Lovington San Andres Waterflood Project (Order No. 9431; Case No. 10154) and Angell Lease Pressure Maintenance Pressure Project (Order No. R-13361; Case No.14571) with the same interval as the proposed disposal interval. No information is provided in the application as to potential impacts to correlative rights.
- 3. Concerns expressed by the State Land Office regarding this application and mineral interest of the State Trust lands. Their comments are provided in the attached e-mail.

If Llano Disposal wishes to purse approval of the application, they may proceed with taking the application to hearing. Please contact me, at your convenience, with any questions you may have regarding this application or the content of this communication. PRG

Phillip R. Goetze, PG
Engineering Bureau
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Direct: 505.476.3466

E-mail: phillip.goetze@state.nm.us



From: Holm, Anchor [mailto:aholm@slo.state.nm.us]

Sent: Friday, February 05, 2016 12:00 PM

To: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>

Cc: Martin, Ed <emartin@slo.state.nm.us>; Khalsa, Niranjan K. <nkhalsa@slo.state.nm.us>; Warnell, Terry G. <twarnell@slo.state.nm.us>

Subject: Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone conversion to SWD

Phil.

After review of the C-108 for Llano Disposal, LLC - Screaming Eagle State #1 (30-025-39739) proposed oil zone conversion to SWD in same zone, the State Land Office is opposed to the proposed SWD interval of 4770'-5950'. Offset and in-wellbore production of oil and gas requires at least a 300' vertical buffer between oil production and SWD in our opinion. This would leave only a potential SWD interval from 5730' to 5938', which appears to not contain significant zones of injectivity.

SLO recommends that the applicant seriously consider changing its proposed SWD interval to the deeper Abo Reef in a manner similar to that of the Texland Petroleum-Hobbs, LLC - Texland 3 State #1 SWD (30-025-37930), which is completed open hole in the Abo Reef from 8450'-8710'. This Texland well is located about ½ mile to the WNW from the Screaming Eagle well, and is capable of disposing over 3000 BWPD as demonstrated in 2015. Attached is a map of offset wells and the State Land Trust Lands surrounding the Screaming Eagle well with annotations.

Respectfully yours,

nmstatelands.org

Anchor E. Holm Geoscientist/Petroleum Engineering Specialist Oil Gas & Minerals Division 505.827.5759 **New Mexico State Land Office** 310 Old Santa Fe Trail P.O. Box 1148 Santa Fe, NM 87504-1148 aholm@slo.state.nm.us

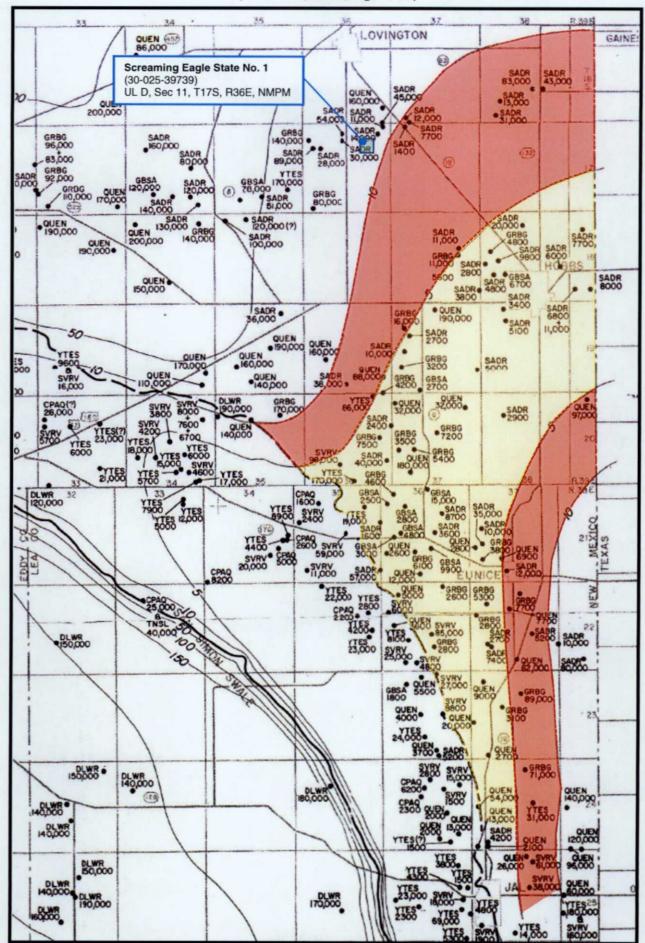




CONFIDENTIALITY NOTICE - This e-mail transmission, including all documents, files, or previous e-mail messages attached hereto, may contain confidential and/or legally privileged information. If you are not the intended recipient, or a person responsible for delivering it to the intended recipient, you are hereby notified that you must not read this transmission and that any disclosure, copying, printing, distribution, or use of any of the information contained in and/or attached to this transmission is STRICTLY PROHIBITED. If you have received this transmission in error, please immediately notify the sender and delete the original transmission and its attachments without reading or saving in any manner. Thank you.

This email has been scanned by the Symantec Email Security.cloud service. For more information please visit http://www.symanteccloud.com

Chloride Concentration of Hobbs Outflow [from Capitan Reef Aquifer to San Andres Formation]
(after Hiss, 1975; Figure 26)



San Andres Pools

			R 36 E	معطانات		Marine II		Lease M Bl operation
3 6	3 1	3 2	3 3	3 4	A 5	3.6	8.1	
								No. AMERICA
	6	5		3	LC/INGTON/GRAY	J J III J 78URG-BAN ANDRE	S 1	0
	(SEE UPPE	R & LOWER SAN AI	NDRES)					avination
1 2	7	8	9	1 0		1 8	7	ovination Son Andres Unit Water Unit Water
								Unit Was
								Vied
1 3	1 8	1 7	16	1 5	14	1 a	1 8	410)
			LOVINGTON;SAI	ANDRES, SW			MIDWAY SAN	T 17 S
2 4	1 9	2 0	2 1	2 2	2 3	2.4	1 9	
					SPENCER SAN	ANDRES		
	8.0	2 9	2 8	2 7	2 6	2 5	3 0	
	3 1		2.2	2.4	2.5			
	3 1	3 2	3 3	3 4	3 5	3 6	3 1	
FBURG-SAN	ANDRES							
		5		3	2		6	

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

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

CASE NO. 10154 ORDER NO. R-9431

APPLICATION OF GREENHILL PETROLEUM CORPORATION FOR WATERFLOOD EXPANSION, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on November 14, 1990, and January 10, 1991 at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 7th day of February, 1991, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Greenhill Petroleum Corporation, seeks authority to expand its Lovington San Andres Unit Waterflood Project, Lovington-San Andres Pool, by converting the 18 wells shown on Exhibit "A" attached hereto located in Townships 16 and 17 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico, to injection wells in the San Andres formation.

CASE NO. 10154 Order No. R-9431 Page -2-

(3) The Lovington San Andres Unit Waterflood Project, approved by Division Order No. R-2278 on July 12, 1962, currently comprises the following described acreage in Lea County, New Mexico:

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 25: S/2 SE/4 Section 35: S/2 SE/4

Section 36: E/2, E/2 NW/4 and SW/4

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM

Section 31: Lots 1, 2, 3, 4, SE/4 NW/4, E/2 SW/4, SW/4

NE/4, and SE/4

Section 32: W/2 SW/4

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Section 1: Lots 1, 2, 3, 4, S/2 N/2, SE/4, N/2 SW/4,

and SE/4 SW/4

Section 2: Lots 1, 2, S/2 NE/4, and N/2 SE/4

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM

Section 5: Lot 4

Section 6: Lots 1, 2, 3, 4, 5, 6 and SE/4 NW/4

- (4) The applicant assumed operation of the subject waterflood project in December, 1891.
- (5) The wells in the project area are in an advanced state of depletion and should be classified as "stripper" wells.

- (6) The proposed expansion of the Lovington-San Andres Unit Waterflood Project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.
- (7) The applicant should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.
- (8) No surface injection pressure limitation was imposed on the project by said Order No. R-2278, and the evidence indicates that the former operator had been injecting water in project wells at pressures of up to 1,900 psi at the surface.
- (9) The injection wells or pressurization system should be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 0.2 psi per foot of depth to the top injection perforation, or in the case of open hole completions, the casing shoe, all as shown on Exhibit "A".
- (10) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.
- (11) There are 14 wells shown on Exhibit "B" attached hereto, which are located within the "area of review" which are not completed or cemented in such a manner which will assure that their wellbores will not serve as a conduit for movement of injected fluid out of the injection interval.
- (12) Prior to initiating injection within one-half mile of any of the wells shown on Exhibit "B", the applicant should be required to perform remedial cement operations on said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid to the satisfaction of the supervisor of the Hobbs district office of the Division.

- (13) There are 11 wells shown on Exhibit "C" attached hereto, which are located within the "area of review" which may not be completed or cemented in such a manner which will assure that their wellbores will not serve as a conduit for movement of injected fluid out of the injection interval.
- (14) Prior to initiating injection within one-half mile of any of the wells shown on Exhibit "C", the applicant should be required to demonstrate by cement bond log or other acceptable means that these wellbores will not serve as a conduit for migration of injected fluid out of the injection interval.
- (15) If any of the wells shown on Exhibit "C" are found inadequate to confine the injected fluid to the injection interval the applicant should be required, prior to initiating injection within one-half mile of any of these wells, to perform remedial cement operations on said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid to the satisfaction of the supervisor of the Hobbs district office of the Division.
- (16) There are five wells, shown on Exhibit "D" attached hereto, which are located within the "area of review" which may not be plugged in such a manner which will assure that their wellbores will not serve as a conduit for movement of injected fluid out of the injection interval.
- (17) Prior to initiating injection operations within one-half mile of any of the wells shown on Exhibit "D", the applicant should be required to re-plug said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid to the satisfaction of the supervisor of the Hobbs district office of the Division.
- (18) Prior to commencing injection operations into the proposed injection wells, the casing in each well should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

- (19) The operator should give advance notification to the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure tests, and of the conductance of any remedial cement or plugging operations in order that the same may be witnessed.
- (20) The application should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

- (1) The applicant, Greenhill Petroleum Corporation, is hereby authorized to expand its Lovington San Andres Unit Waterflood Project, Lovington-San Andres Pool, Lea County, New Mexico, by the injection of water into the San Andres formation through the 18 injection wells shown on Exhibit "A" attached hereto.
- (2) Prior to initiating injection within one-half mile of any of the wells shown on Exhibit "B", the applicant shall perform remedial cement operations on said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid to the satisfaction of the supervisor of the Hobbs district office of the Division.
- (3) Prior to initiating injection within one-half mile of any of the wells shown on Exhibit "C", the applicant shall demonstrate by cement bond log or other acceptable means that these wellbores will not serve as a conduit for migration of injected fluid out of the injection interval.
- (4) If any of the wells shown on Exhibit "C" are found inadequate to confine the injected fluid to the injection interval the applicant shall, prior to initiating injection within one-half mile of any of these wells, perform remedial cement operations on said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid to the satisfaction of the supervisor of the Hobbs district office of the Division.

CASE NO. 10154 Order No. R-9431 Page -6-

- (5) Prior to initiating injection operations within one-half mile of any of the wells shown on Exhibit "D", the applicant shall re-plug said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid to the satisfaction of the supervisor of the Hobbs district office of the Division.
- (6) The applicant shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.
- (7) Injection into the proposed injection wells shall be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation or casing shoe; the casing-tubing annulus in each well shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.
- (8) The injection wells or pressurization system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 0.2 psi per foot of depth to the top injection perforation, or in the case of open hole completions, the casing shoe, all as shown on Exhibit "A".
- (9) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.
- (10) Prior to commencing injection operations into the proposed injection wells, the casing in each well shall be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

CASE NO. 10154 Order No. R-9431 Page -7-

- (11) The operator shall give advance notification to the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure tests, and of the conductance of any remedial cement or plugging operations in order that the same may be witnessed.
- (12) The applicant shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in any of the injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such steps as may be timely and necessary to correct such failure or leakage.
- (13) The applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.
- (14) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

WILLIAM J. LEMAY, Director

SEAL

EXHIBIT "A" GREENHILL PETROLEUM CORPORATION LOVINGTON SAN ANDRES UNIT CASE NO. 10154 ORDER NO. R-9431

Well Number	Location	Unit	S-T-R	Injection Perforations	Packer Depth	Tubing Size	Injection Pressure
3	660' FNL - 1980' FEL	В	36-16S-36E	4618 - 5090	4598	2 3/8"	924
5	660' FNL - 600' FEL	A	36-16S-36E	4625 - 5130_	4605	2 3/8"	925
10	1980' FNL - 1980' FEL	G	36-16S-36E	4600 - 5110	4580	2 3/8"	920
12	1980' FSL - 1980' FWL	K	36-16S-36E	4580 - 5055_	4560	2 3/8"	916
13	1760' FSL - 440' FEL	I	36-16S-36E	4518 - 5068	4495	2 3/8"	904
25	660' FSL - 1980' FEL	0	36-16S-36E	4515 - 5090_	4495	2 3/8"	903
57	660' FSL - 660' FWL	М	36-16S-36E	4640 - 5144_	4620	2 3/8"	928
7	1980' FNL - 1980' FEL	G	31-16S-37E	4620 - 4990	4530	2 3/8"	924
15	1650' FSL - 1650' FWL	К	31-16S- 37E	4531 - 5110_	4510	2 3/8"	906
17	1980' FSL - 990' FEL	I	31-16S-37E	4623 - 5090_	4603	2 3/8"	925
58	2310' FNL - 990' FWL	Е	31-16S-37E	4570 - 5070_	4550	2 3/8"	914
31	660' FNL - 1980' FWL	С	1-17S-36E)	4541 - 5125	4499	2 3/8"	908
43	1980' FNL - 660' FWL	E	1-17S-36E \$	4546 - 5030_	4536	2 3/8"	909
40	1980' FNL - 660' FEL	н	1-17S-36E	4579 - 4950_	4519	2 3/8"	916
45	1980' FNL - 1980' FEL	G	2-17S-36E)	4577 - 5147	4527	2 3/8"	915
37	330' FNL - 990' FEL	A	6-17S-37E	4560 - 5030	4510	2 3/8"	912
35	339' FNL - 1890' FWL	С	6-17S-37E	4570 - 5040_	4520	2 3/8"	914
39	1985' FNL - 616' FWL	E	6-17S-37E	4522 - 4975	4570	2.3/8"	904

EXHIBIT "B" CASE NO. 10154 ORDER NO. R-9431

Operator	Lease	Well No.	Location	Sec-Twp-Rge
Greenhill Petroleum Corp.	Lovington Paddock Ut.	7	330' FSL - 330' FEL	25-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	13	880' FNL - 330' FWL	36-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	29	2130' FSL - 2130' FWL	36-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	41	810' FSL - 2130' FWL	36-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	57	1980' FNL - 695' FEL	06-17-37
Texaco Producing Inc.	State P	3	800' FSL - 330' FWL	32-16-37
Amerada Hess	State L "A"	8	560' FNL - 660' FEL	01-17-36
Amerada Hess	State L "A"	9	660' FNL - 1880'FEL	01-17-36
Amerada Hess	State L "A"	10	1650' FNL - 660' FEL	01-17-36
Amerada Hess	State L "A"	11	1650' FNL - 1980' FEL	01-17-36
Amerada Hess	State L "A"	12	2310' FSL - 2310' FWL	01-17-36
Penroc	State "E" TR 18	17	1650' FNL - 2310' FWL	01-17-36
Penroc	State "E" TR 18	19	1650' FNL - 990' FWL	01-17-36
Penroc	State AE	1	330' FSL - 990' FWL	36-16-36

EXHIBIT "C" CASE NO. 10154 ORDER NO. R-9431

Operator	Lease	Well No.	Location	Sec-Twp-Rge
Greenhili Petroleum Corp.	Lovington Paddock Ut.	18	2310' FNL - 330' FEL	35-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	32	1750' FSL - 1650' FEL	36-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	39	810' FSL - 660' FEL	36-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	40	810' FSL - 1980' FEL	36-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	10	660' FNL - 2440' FEL	31-16-37
Greenhill Petroleum Corp.	Lovington Paddock Ut.	33	1650' FSL - 430' FEL	36-16-36
Greenhill Petroleum Corp.	Lovington Paddock Ut.	67	2310' FSL - 660' FWL	06-17-37
Texaco Producing Inc.	State P	4	1650' FNL - 990' FWL	32-16-37
Texaco Producing Inc.	State O	10	3080' FNL - 440' FWL	31-16-37
Texaco Producing Inc.	State P	2	1980' FSL - 380' FWL	32-16-37
Texaco Producing Inc.	C. S. Caylor	4	2179' FNL - 2173' FEL	06-17-37

EXHIBIT "D" CASE NO. 10154 ORDER NO. R-9431

INADEQUATELY PLUGGED AND ABANDONED WELLS

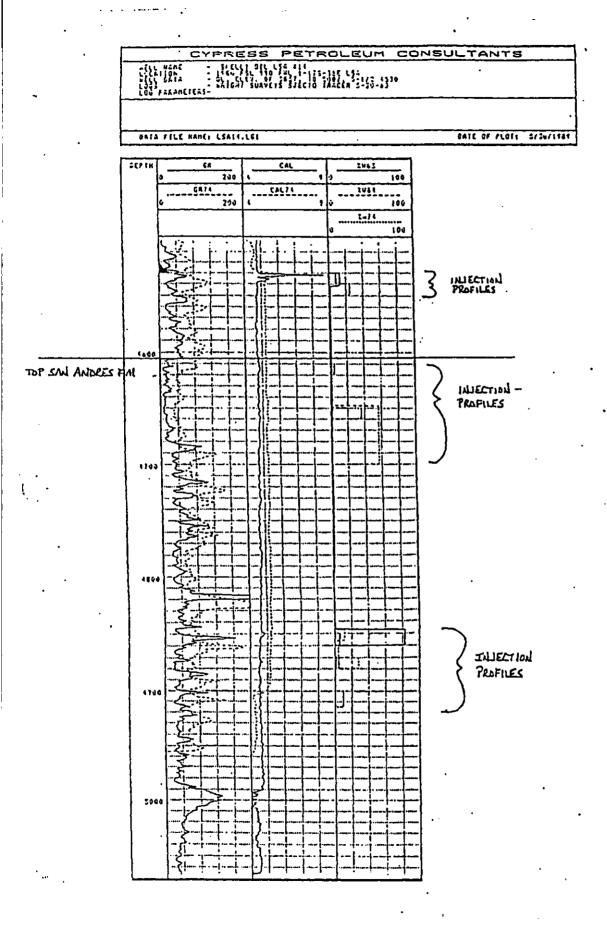
Operator	Lease	Well No.	Location	Sec-Twp-Rge
Tidewater Associated Oil Co.	H.T. Monteith	1	1650' FSL - 2335' FWL	25-16-36
Cities Service	State AE	2	3630' FNL - 4290' FEL	36-16-36
Getty Oil Co.	State "M"	3	1650' FSL - 1650' FEL	36-16-36
Getty Oil Co.	State "P"	5	330' FSL - 330' FWL	32-16-37
Magnolia Petroleum Co.	State "R"	3	660' FNL - 660' FEL	02-17-36

EXHIBIT "A" DIVISION ORDER NO. WFX-632 LOVINGTON SAN ANDRES UNIT WATERFLOOD PROJECT APPROVED INJECTION WELLS

ott

Well Number	Location	Unit	S-T-R	Injection Perforations or Openhole Interval	Packer Depth	Tubing Size	Injection Pressure
LSAU No. 8	2130' FNL & 1980' FWL	F	31-16S-37E	4610' to 4978'	4510'	2 3/8"	922 PSIG
LSAU No. 11	1980' FNL & 1980' FWL	F	36-16S-36E	4575' to 5130' OH	4475'	2 3/8"	915 PSIG
LSAU No. 20	660' FSL & 660' FEL	P	31-16S-37E	4580' to 4945' OH	4480'	2 3/8"	916 PSIG
LSAU No. 23	660' FSL & 900' FWL	M	31-16S-37E	4530' to 5081' OH	4430'	2 3/8"	906 PSIG
LSAU No. 38	1650'_FNL & 1980' FWL	F	6-17S-36E	4590' to 4945' OH	4490'	2 3/8"	918 PSIG
LSAU No. 42	1980' FNL & 1980' FWL	F	1-17S-36E	4536' to 4938' OH	4436'	2 3/8"	907 PSIG
							<u> </u>

All in Lea County, New Mexico



STATE OF NEW MEXICO



ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



GRUCE KING GOVERNOR

ANITA LOCKWOOD CABINET SECRETARY

March 16, 1993

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE. NEW MEXICO 97504 (505) 827-5800

Greenhill Petroleum Corporation 11490 Westheimer Road, Suite 200 Houston, TX 77077-6841

Attention: Michael J. Newport

RE: Injection Pressure Increase, Five Wells in the Lovington San Andres Unit Waterflood Project. Lea County, New Mexico

Dear Mr. Newport:

Reference is made to your request dated March 3, 1993 to increase the surface injection pressure on five wells in the Lovington San Andres Waterflood Project. This request is based on step rate tests conducted on these wells between February 2 and 5, 1993. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

Well and Location	Maximum Injection Surface Pressure
LSAU No. 8 2310' FNL - 1980' FWL Unit F, Section 31, Township 16 South, Range 37 East	1750 PSIG
LSAU No. 12 1980' FSL - 1980' FWL Unit K, Section 36, Township 16 South, Range 36 East	1925 PSIG
LSAU No. 31 660' FNL - 1980' FWL Unit C, Section 1, Township 17 South, Range 36 East	2150 PSI G

Injection Pressure Increase Greenhill Petroleum Corporation March 16, 1993 Page 2

Well and Location	Maximum Injection Surface Pressure	
LSAU No. 33 660' FNL - 660' FEL Unit A, Section 1, Township 17 South, Range 36 East	2193 PSIG	
LSAU No. 40 1980' FNL - 660' FEL Unit H, Section 1, Township 17 South, Range 36 East	1750 PSIG	
All wells located in Lea County, New Mexico.		

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

William J. LeMay

Director

WJL/BES/amg

cc: Oil Conservation Division - Hobbs

David Catanach File: WFX-615 WFX-632

Case No. 10154





ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING GOVERNOR

ANITALOCKWOOD CABINET SECRETARY

September 11, 1992

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

Greenhill Petroleum Corporation 11490 Westheimer Road, Suite 200 Houston, Texas 77077-6841

Michael J. Newport

RE:

Injection Pressure Increase

Lovington San Andres Unit

8 Wells

Lea County, New Mexico

Dear Sir:

Reference is made to your request dated August 25, 1992, to increase the surface injection pressure on 8 wells in the Lovington San Andres Unit. This request is based on a step rate tests conducted on these wells from July 28 to August 3, 1992. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

WELL AND LOCATION	MAXIMUM INJECTION SURFACE PRESSURE
Lovington San Andres Unit No. 11 1980' FNL & 1980' FWL "F" 31-16S-36E	1480 PSIG
Lovington San Andres Unit No. 13 1760' FSL & 440' FEL "I" 36-16S-36E	2200 PSIG
Lovington San Andres Unit No. 20 660' FSL & 660' FEL "P" 31-16S-37E	1980 PSIG

30-025-03895 West Lavington Unit IPI-18012300181G No.28

WFX-622

Open hole 4718-5160' 944-0.2

WELL AND LOCATION	MAXIMUM INJECTION SURFACE PRESSURE
Lovington San Andres Unit No. 23 660' FSL & 990' FWL "M" 31-16S-37E	2150 PSIG
Lovington San Andres Unit No. 26 660' FSL & 1980' FWL "N" 36-16S-36E	1925 PSIG
Lovington San Andres Unit No. 35 339' FNL & 1980' FWL "C" 6-17S-37E	2200 PSIG
Lovington San Andres Unit No. 37 330' FNL & 990' FEL "A" 6-17S-37E	1911 PSIG
Lovington San Andres Unit No. 38 1650' FNL & 1980' FWL "F" 6-17S-37E	2200 PSIG

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

William J. LeMay

Director

WJL/DC/jc

cc: Oil Conservation Division - Hobbs File: WFX-632

David Catanach

State of New Mexico ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT Santa Fe, New Mexico 87505



OIL CONSERVATION DIVISON



R-2278

February 2, 1995

Greenhill Petroleum Corporation 11490 Westheimer Road, Suite 200 Houston, Texas 77077-6841

Attn: David M. Tilley

REInjection Pressure Increase

Lovington San Andres Unit Waterflood Project

Lea County, New Mexico

Dear Mr. Tilley:

Reference is made to your request dated December 27, 1994, to increase the surface injection pressure on seven wells within the Lovington San Andres Unit Waterflood Project. This request is based on step rate tests conducted on these wells December 12 - 15, 1994. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on six of these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

Maximum Injection Surface Pressure
1970 PSIG
1930 PSIG
2000 PSIG
1740 PSIG 4905

VILLAGRA BUILDING - 408 Galleteo

Forestry and Resources Conservation Division P.O. Box 1948 87504-1948 827-5830

Park and Recreation Division P.O. Box 1147 87504-1147 827-7465

2040 South Pec

Office of the Secretary 827-5950

Administrative Services 827-5925

rgy Conservation & Management 827-5900

> Mining and Minerals 827-5970

Oil Conservation 827 7131

1993

Well and Location	Maximum Injection Surface Pressure	
LSAU No. 15 Unit K, Section 31, Township 16 South, Range 37 East	1740 PSIG	
LSAU No. 58 Unit E, Section 31, Township 16 South, Range 37 East	1940 PSIG	
wells located in Lea County, New Mexico.		

It was noted that the step rate test conducted on the LSAU No. 21 was initiated at a surface pressure of 1641 psi. This pressure is considerably higher than the current maximum injection pressure authorized for this well (914 psi). The Division generally requires that the starting pressure for these tests be lower than the currently authorized pressure. Please rerun this test according to this procedure and re-submit for approval.

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

William J. LeMand Director

WJL/DC/kv

cc: Oil Conservation Division - Hobbs

R. Brown
D. Catanach
File: WFX-615

WFX-632

Case File 10154

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

BRUCE KING GOVERNOR

OIL CONSERVATION DIVISION

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

R-9431
R-9431
Roperty 21-740
Louiston Son Andres
TVO-5000

CORRECTED ADMINISTRATIVE ORDER NO. WFX-632

APPLICATION OF GREENHILL PETROLEUM CORPORATION TO EXPAND ITS WATERFLOOD PROJECT IN THE LOVINGTON GRAYBURG SAN ANDRES POOL IN LEA COUNTY, NEW MEXICO

ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-2278, Greenhill Petroleum Corporation has made application to the Division on March 20, 1992, for permission to expand its Lovington San Andres Unit Waterflood Project in the Lovington Grayburg San Andres Pool in Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been filed in due form.
- Satisfactory information has been provided that all offset operators have been duly notified of the application.
- No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection well is eligible for conversion to injection under the terms of Rule 701.
- The proposed expansion of the above referenced Waterflood Project will not cause waste nor impair correlative rights.
 - (6) The application should be approved.

Not Collabrotad

Administrative Order WFX-632 Greenhill Petroleum Corporation April 27, 1992 Page 2

IT IS THEREFORE ORDERED THAT:

The applicant, Greenhill Petroleum Corporation, be and the same is hereby authorized to inject water into the San Andres formation at approximately 4530 feet to approximately 5130 feet through 2 3/8 inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations or openhouse interval in the wells shown on Exhibit "A" attached hereto for purposes of secondary recovery to wit.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the wells the casing in each well shall pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus in each well shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no more than .2 psi/ft. of depth to the uppermost perforation and shown on Exhibit "A".

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the San Andres formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

Administrative Order WFX-632 Greenhill Petroleum Corporation April 27, 1992 Page 3

The subject wells shall be governed by all provisions of Division Order No. R-2278, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

DONE at Santa Fe, New Mexico, on this 27th day of April, 1992.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

WILLIAM J. LEMA

Director

SEAL

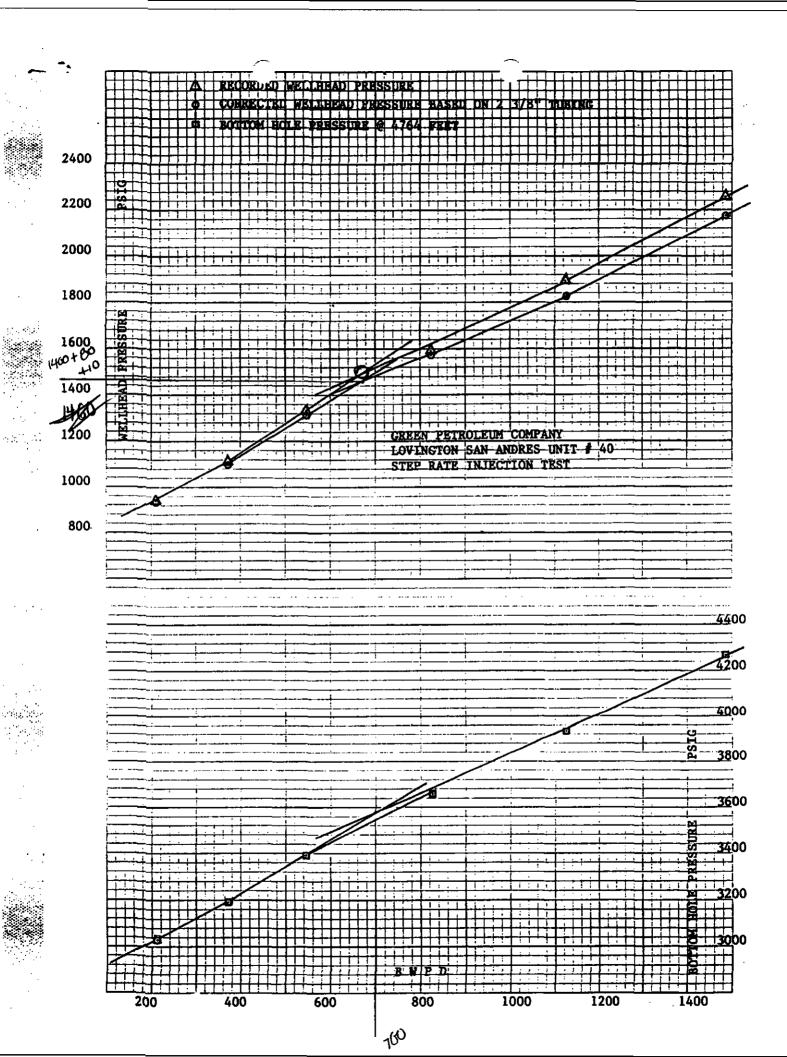
jc/

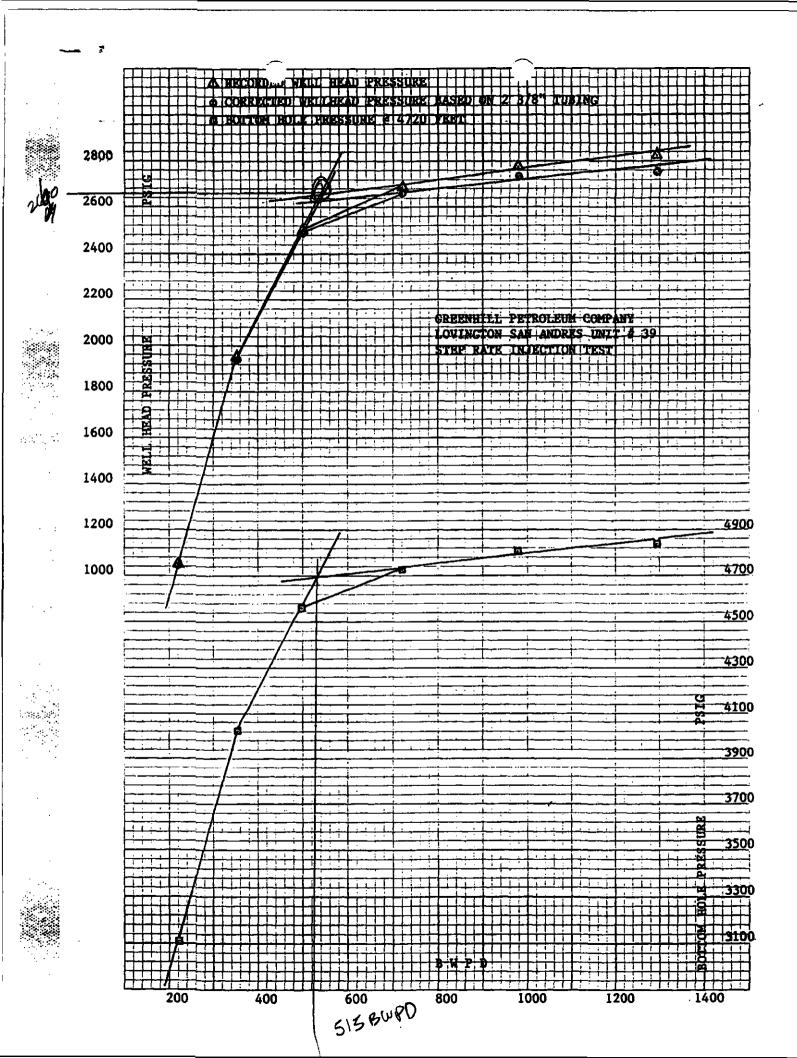
cc: Oil Conservation Division - Hobbs

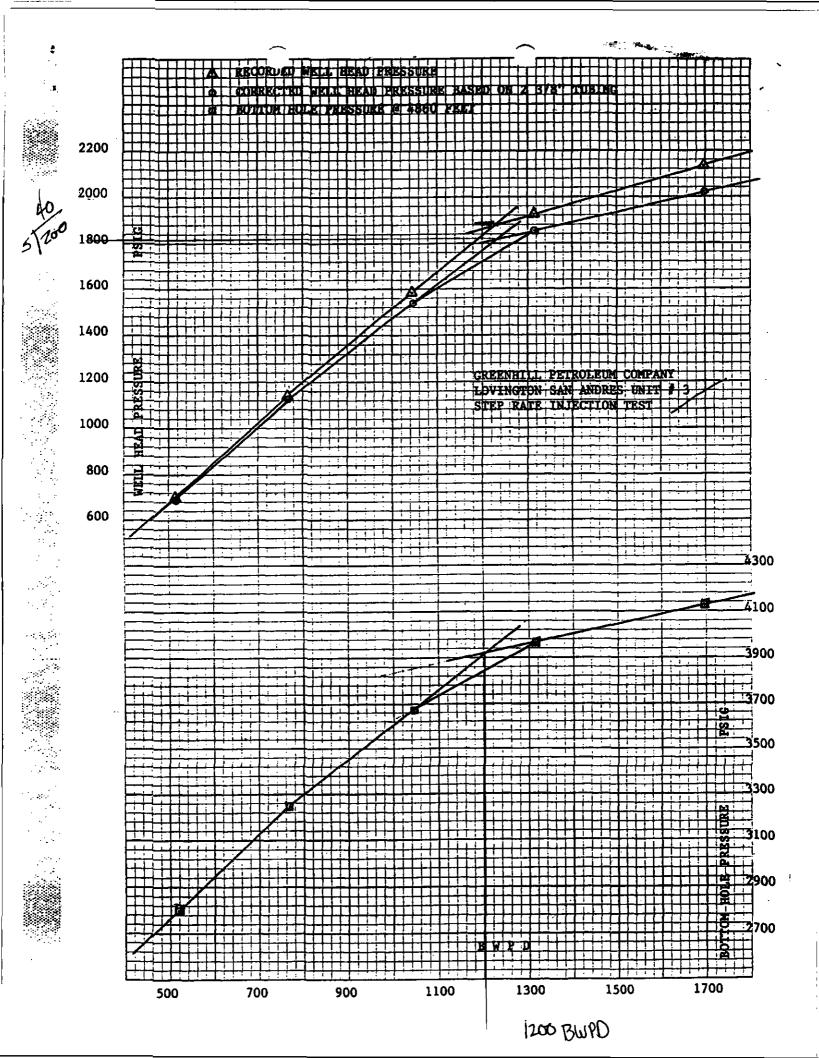
EXHIBIT "A" DIVISION ORDER NO. WFX-632 LOVINGTON SAN ANDRES UNIT WATERFLOOD PROJECT APPROVED INJECTION WELLS

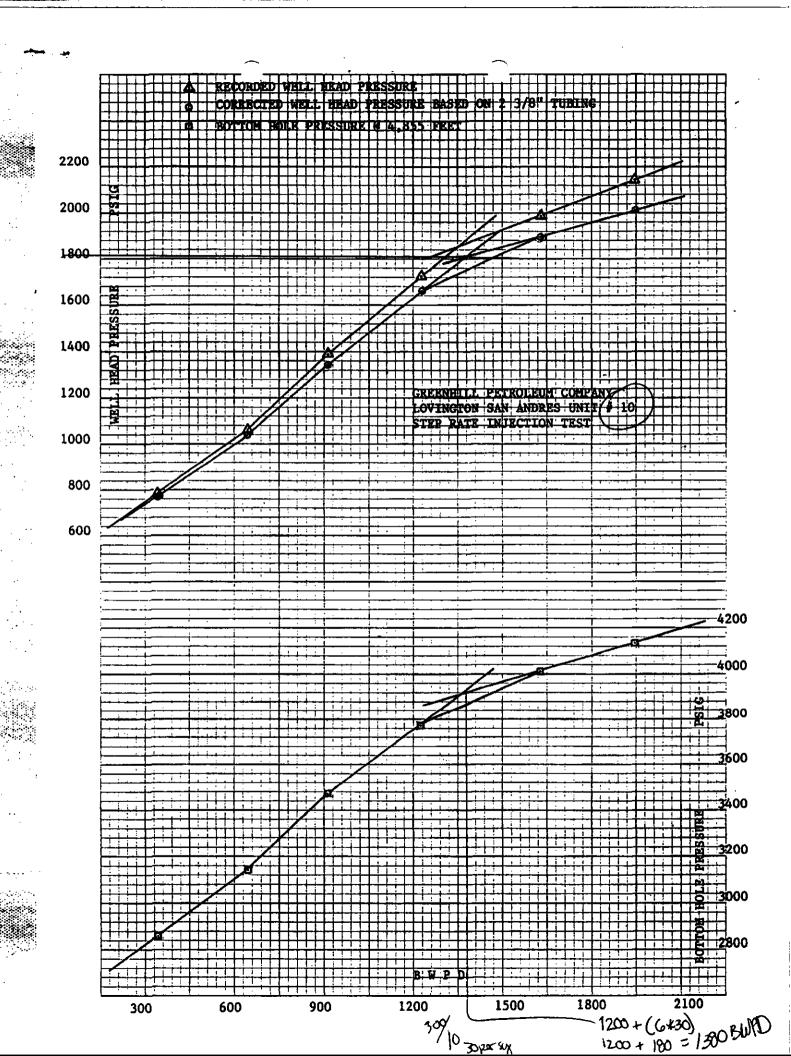
Well Number	Location	Unit	S-T-R	Injection Perforations or Openhole Interval	Packer Depth	Tubing Size	Injection Pressure	
LSAU No. 8	2130' FNL & 1980' FWL	F	31-16S-37E	4610' to 4978'	4510'	2 3/8"	922 PSIG	
LSAU No. 11	1980' FNL & 1980' FWL	F	36-16S-36E	4575' to 5130'	4475'	2 3/8"	915 PSIG	
LSAU No. 20	660' FSL & 660' FEL	P	31-16S-37E	4580' to 4945'	4480'	2 3/8"	916 PSIG	
LSAU No. 23	660' FSL & 900' FWL	М	31-16S-37E	4530' to 5081'	4430'	2 3/8"	906 PSIG	
LSAU No. 38	1650' FNL & 1980' FWL	F	6-17S-36E	4590' to 4945'	4490'	2 3/8"	918 PSIG_	
LSAU_No. 42	1980' FNL & 1980' FWL	F	1-17S-36E	4536' to 4938'	4436'	2 3/8"	907 PSIG	

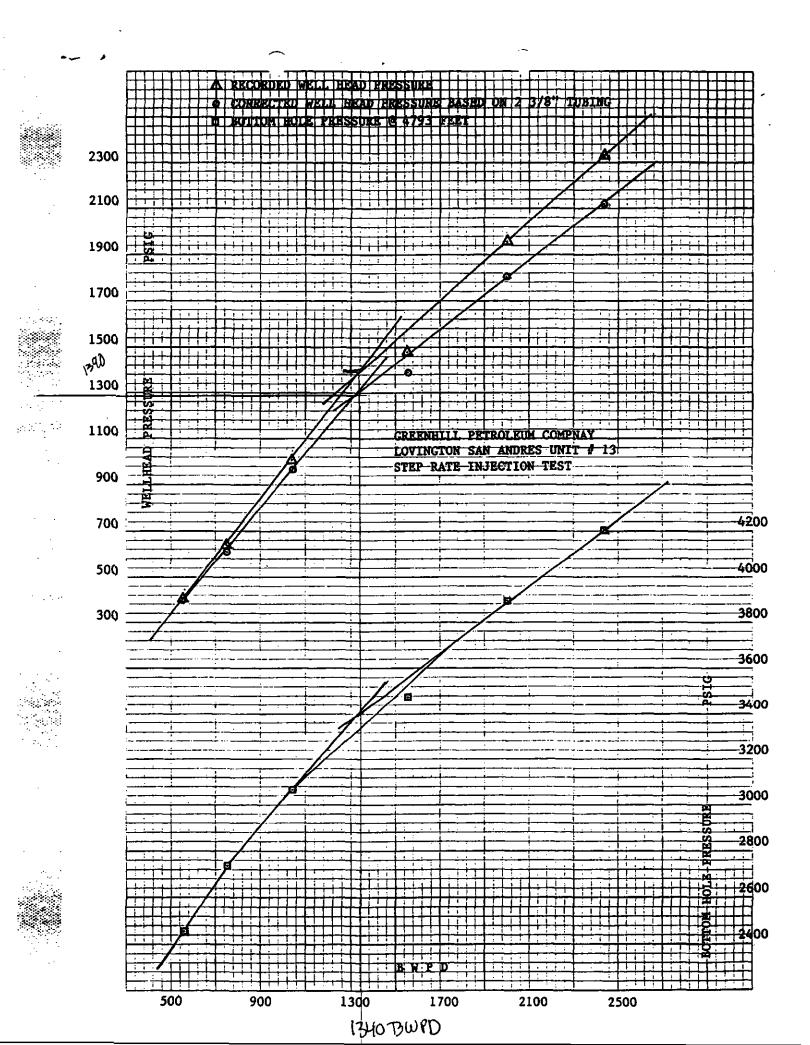
All in Lea County, New Mexico

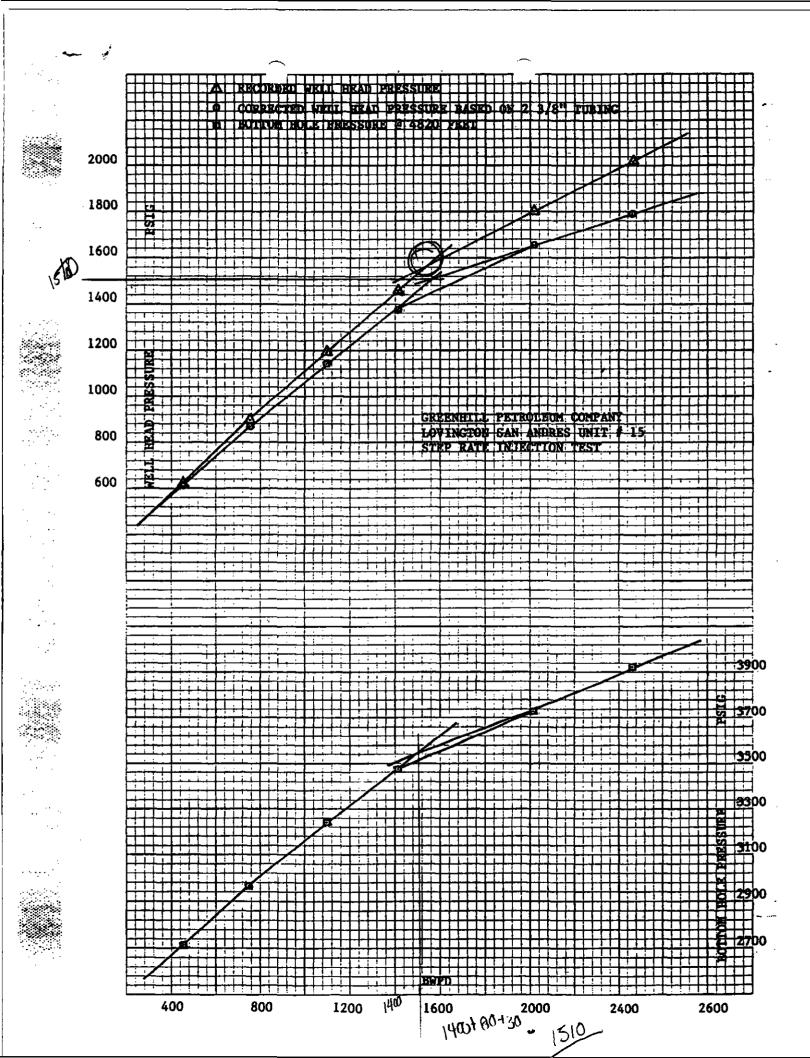












STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

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

APPLICATION OF BC OPERATING, INC. FOR AUTHORIZATION TO INJECT WATER FOR LEASE PRESSURE MAINTENANCE OPERATIONS AND DESIGNATION OF A PROJECT AREA, LEA COUNTY, NEW MEXICO

CASE NO. 14571 ORDER NO. R-13361

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on December 2, 2010, at Santa Fe, New Mexico before Examiner William V. Jones.

NOW, on this 11th day of March, 2011, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

- (1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.
- (2) BC Operating, Inc. ("BC Operating" or "applicant") seeks approval to implement pressure maintenance operations by injection of produced water into the San Andres formation within the Angell Lease containing 80 acres, more or less, of the following lands within Lea County, New Mexico:

Township 17 South, Range 36 East, NMPM

Section 11: E/2 NE/4

(3) The project would initially consist of one injection well and one producing well as follows:

30-025-39690 Angell Well No. 3 <u>Subject Well</u> Unit H 30-025-37902 Angell Well No. 1 Producer Unit A

- (4) The vertical extent of the proposed Pressure Maintenance Project underlying the Angell Lease Area is the productive interval within the San Andres formation. The San Andres formation top is at approximately 4740 feet and it extends to the Glorieta formation at approximately 6150 feet. Injection is proposed into the Angell Well No. 3 from 4802 to 5432 feet.
- (5) BC Operating presented exhibits and testimony from a professional engineer indicating the following:
 - (a) Vanguard Permian, LLC was not formally notified of this application, but is a business partner in the subject well and an operator of lands directly to the east.
 - (b) The offsetting lease operated by BC Operating is owned identically to the subject lease, the same owners in the same percentages.
 - (c) The Project Area should include the 80 acres consisting of the E/2 NE/4 of Section 11. These lands are under a common lease held by BC Operating.
 - (d) The San Andres formation in this area dips gently to the east. The San Andres is being waterflooded successfully in this area and has favorable reservoir and fluid characteristics for waterflooding. Re-injecting water into this reservoir downdip from the producing well is expected to improve oil recovery. Another benefit will be reduced water hauling costs from this lease, extending the life of the production well.
 - (e) The operator intends to only use the proposed injection well for reinjection of produced water. The source of this produced water is expected to be from the Angell B Well No. 2 and from the Angell Well No. 1.
 - (f) The fresh water aquifer in this area is the Ogallala reservoir and extends from 50 feet to 200 feet below surface.
 - (g) All wells within the ½ mile area of review are adequately cemented in order to isolate the injection to the intended injection interval. There are no faults or conduits which could transport injected waters out of the injection interval. Any fresh water sands will be protected from this injection operation, and fresh water will not be endangered.
- (6) This area is on the southwestern edge of the productive San Andres reservoir. Chevron Midcontinent, L.P. operates the Lovington San Andres Unit waterflood located directly northeast in offsetting Section 1. BC Operating operates a San Andres/Paddock downhole commingled producer in Unit B of Section 11 called the Angell B Well No. 2. Vanguard Permian, LLC controls offsetting acreage within Section 12 containing an unsuccessful San Andres/Paddock well located in Unit E of Section 12. The Angell Federal Well No. 3 or "subject well" was drilled in 2010 as an unsuccessful

San Andres well.

- (7) The subject well appears to be adequately cased and cemented, in order to confine injection to the proposed interval. Within the Area of Review, all five active wells and the one plugged well appear to be adequately cased, cemented, or plugged to prevent movement of injection fluids out of zone and to protect any underground sources of drinking water.
- (8) The proposed Angell Lease Pressure Maintenance Project is wholly contained within the Lovington-Grayburg-San Andres Pool (Pool Code 40580). Wells completed within this pool are governed by statewide rules, including those specific to oil well spacing and setbacks.
- (9) BC Operating, Inc. (OGRID 160825) is the operator of record of the wells located on this acreage. BC Operating is in compliance with Division Rule 5.9 and therefore eligible for approval of disposal and injection permits.
- (10) The applicant has notified affected parties of the intent to inject into the proposed injection well and has received no objections. No other parties appeared in this case or otherwise opposed this application.
- (11) The proposed Pressure Maintenance Project within this lease is feasible and should result in the recovery of additional oil and gas that would not otherwise be recovered.
- (12) The estimated additional costs of the proposed Pressure Maintenance operations will not exceed the estimated value of the additional oil and gas recovered plus a reasonable profit.
- (13) The Project Area should include the 80 acres consisting of the E/2 NE/4 of Section 11. The proposed project will prevent waste, protect correlative rights, and should be approved and called the Angell Lease Pressure Maintenance Project.
- (14) BC Operating should be approved to inject into the San Andres formation within the Angell Federal Well No. 3 from depths of 4802 to 5432 feet. Provisions should be made for the operator of the Angell Dease to apply administratively for additional or alternative injection wells as needed within this lease.

IT IS THEREFORE ORDERED THAT:

- (1) BC Operating, Inc. ("BC Operating") is <u>hereby authorized</u> to implement pressure maintenance operations within the Angell Lease by injection of produced water into the productive interval of the San Andres formation.
- (2) The Angell Lease acreage, all of which is approved as the "Project Area", consists of 80 acres, more or less, defined as follows:

Township 17 South, Range 36 East, NMPM, Lea County, New Mexico

Section 11: E/2 NE/4

- (3) BC Operating is approved to utilize the Angell Federal Well No. 3 (API No. 30-025-39690), located 1650 feet from the North line and 660 feet from the East line, Unit H, of Section 11, Township 17 South, Range 36 East, NMPM, Lea County, New Mexico, for injection of produced water (UIC Class II only) into the San Andres formation from 4802 feet to 5432 feet for purposes of pressure maintenance.
- (4) The Division Director may administratively authorize an alternative injection well or additional injection wells within this lease as provided in 19.15.26.8F. NMAC.
- (5) The <u>Angell Lease Pressure Maintenance Project</u> is hereby approved and shall initially consist of one injection well and one producing well, all contained in the 80-acre lease.
- (6) The operator of the Angell Lease shall be BC Operating, Inc. (OGRID 160825).
- (7) BC Operating shall take all steps necessary to ensure that the injected water enters only the permitted injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.
- (8) Injection into any approved injection well or wells within this project shall be accomplished through plastic-lined tubing installed in a packer located within 100 feet of the uppermost injection perforation. The casing-tubing annulus shall be filled with an inert fluid, and a gauge or approved leak-detection device shall be attached to the annulus in order to detect any leakage in the casing, tubing, or packer.
- (9) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute that will <u>limit the maximum surface</u> injection pressure to 960 psi.
- (10) The Division Director may administratively authorize a pressure limitation in excess of the above, upon a showing by the operator, supported by an approved Step Rate Test, that such higher pressure will not result in the fracturing of the injection formation or confining strata or damage to the reservoir.
- (11) The operator shall provide notice, 72 hours in advance, to the supervisor of the Division's district office of the date and time of the installation of injection equipment and of any mechanical integrity test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of injection to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules

26.13 and 7.24.

- (12) Without limitation on the duties of the operator as provided in Division Rules 30 and 29, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from or around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.
- (13) The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.
- (14) The Division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.
- (15) In accordance with Division Rule No 26.12.C., the disposal authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause. One year after injection into the Project Area has ceased or not been reported, the authority to inject will terminate *ipso facto*.
- (16) Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.
- (17) Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing (or without prior notice and hearing in case of emergency), terminate the injection authority granted herein.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

DANIEL SANCHEZ
Acting Director

Blinebry Pools

R 36 E

	3 1	3 6	3 5		3 4	+	3 3	3 2	3 1	3 6	3 5
	6	1	2		3		4	5	6	1	2
				11	-	++					
	W I	/INGTON;BLINEBR	Lo				NEBRY, WEST	LOVINGTON; BLIN			
						4					
	, 7	1 2	1 1	4	1 0	44	9	8	7	1 2	1 1
	1 8	1 3	1 4	-	1 5		1 6	1 7	1 8	1 3	4
									THEAST	IMIBLINEBRY, NOR	VACUI
T 17 5							17-36				
	1 9	2 4	2 3	+	2 2	++	2 1	2 0	1 9	2 4	
				+++		11					
	3 0	2 5	2 6		2 7		2 8	2 9	3 0	2 5	6
						44					
	++-			++	-	++					
	3 1	3 6	3 5	++	3 4		3 3	3 2	3 1	3 6	5
						11					
			Į Į į								
	6		2		3	+	4	5	6		2
				-		+					-

R 36 E

Abo Pools

	3 6	 3 1	\dashv	3 2		3 3	3	4	3 5		3 6			
			+		LOVINGTON;	ABO, SW		+		LOVINGTON	ABD			
													1	
	1	6		5		4		3			1		8	
<u> </u>			+							1				
	1 2	7		8		9	1 (1	1 1		1 2		7	
			44											
			\dashv	-				++						
	1 3	1 8		1 7		1 6	1 1		1 4				1 8	
											MIDWAY;A8	10		
						EME	RALD;ABO							
	7					17-3								T 17
	2 4	1 9	+	2 0		2 1	2 2	-	2 3		2 4		1 9	
			+							+				
4								1						
	2 5	 9.0		2 9		2 8	2 7		2 6		2 5		3 0	
	POU	D) SOL	JTH											
	3-6	3 1		3 2		3 3	3 4		3 5		3 6		3 1	
Entrarity			+											
	1	6	+	5		4	1 3		2		1		6	
			11											