1/04/2017 DATE IN	SUSPENSE	PRG ENGINEER	1/04/2017 LOGGED IN	SWD TYPE	pMAM1800432374 APP NO.

1802254795

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

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

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

-SWD-1713
-Green Ridge Disposal, LLC
370957

RECEIVED OCD
2018 JAN -5 P 2:55

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify ____________________

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☒ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

Well
-Ojo Chiso SWD #1
30-025-44372
Pool
-SWD; Devonian-Silurian
97869

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Eddie W. Seay	[signature]	Agent for GRD	12/30/17
Print or Type Name	Signature	Title	Date

seay04@leaco.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

PURPOSE: _____Secondary Recovery _____Pressure Maintenance ____X__Disposal _____Storage
Application qualifies for administrative approval? ____X__Yes _____No

II. OPERATOR: Grama Ridge Dosposal, LLC

ADDRESS: Box 1105 Eunice, NM 88231

CONTACT PARTY: Tommy Pearson PHONE: 575-370-3162

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. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

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

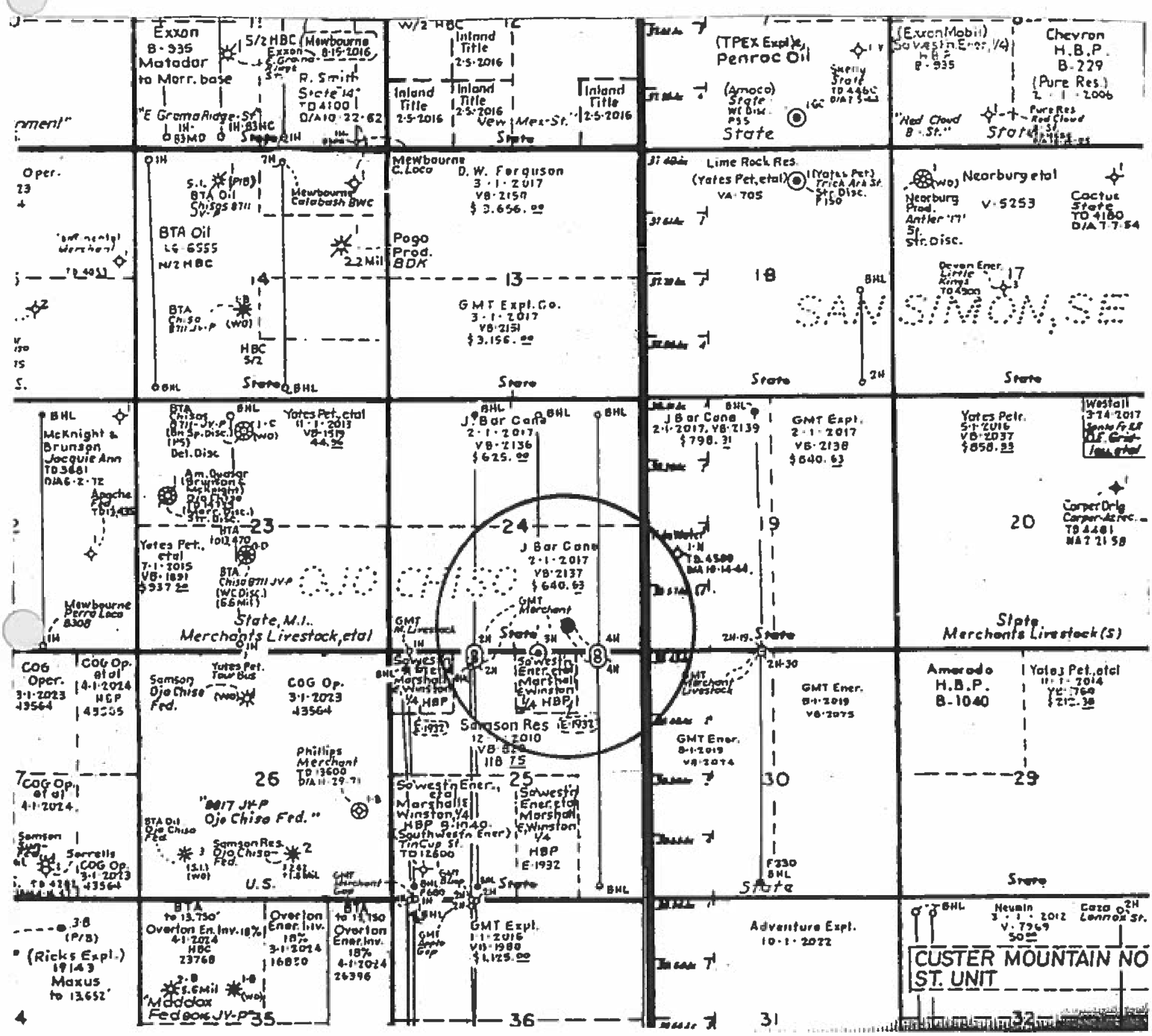
NAME: Tommy Pearson TITLE: Owner - Operator

SIGNATURE: Tommy Pearson DATE: 12/22/17

E-MAIL ADDRESS: tommy@merchantlivestock.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: new drill

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



Exxon
B-935
Matador
to Morr. base
5/2 HBC
Mewbourne
8-15-2016
R. Smith
State 14
TD 4100
D/A 10-22-62
W/2 HBC
Inland
Title
2-5-2016
New Mex-St.
State
(TPEX Expl.)
Penroc Oil
(Amoco)
State
(ExxonMobil)
So'westn Ener. 1/4
Chevron
H.B.P.
B-229
(Pure Res.)
Red Cloud
State
Mewbourne
D. W. Ferguson
3-1-2017
VB-2150
$3,656.00
Lime Rock Res.
(Yates Pet, etal)
VA-705
Neorburg etal
V-5253
Cactus
State
TD 4180
D/A 7-7-54
BTA Oil
LG-6555
N/2 HBC
Mewbourne
Calabash BWC
Pogo
Prod.
BDK
2.2 Mil
14
13
GMT Expl. Co.
3-1-2017
VB-2151
$3,156.00
18
17
SAN SIMON, SE
HBC
5/2
State
BHL
McKnight &
Brunson
Jacquie Ann
Yates Pet., etal
11-1-2013
VB-1519
J Bar Cane
2-1-2017
VB-2136
$625.00
J Bar Cane
2-1-2017, VB-2139
$798.31
GMT Expl.
2-1-2017
VB-2138
$640.63
Yates Petr.
5-1-2016
VB-2037
$650.93
Westall
3-24-2017
Del. Disc.
23
24
19
20
Yates Pet.,
etal
7-1-2015
VB-1891
OJO CHISO
J Bar Cane
2-1-2017
VB-2137
$640.63
GMT
Merchant
Mewbourne
Perro Loco
State, M.I.
Merchants Livestock, etal
State
Merchants Livestock (S)
COG
Oper.
3-1-2023
43564
COG Op.
etal
4-1-2024
HBP
Samson
Ojo Chiso
Fed.
COG Op.
3-1-2023
43564
Sowestn Ener. etal
Marshall
E. Winston
1/4 HBP
E-1932
Samson Res
12-1-2010
VB-829
118.75
GMT Ener.
8-1-2019
VB-2075
GMT Ener.
8-1-2019
VB-2074
Amerada
H.B.P.
B-1040
Yates Pet., etal
11-1-2014
$212.38
Phillips
Merchant
TD 13600
26
25
30
29
Oja Chiso Fed.
Sowestn Ener.,
etal
Marshall &
Winston, 1/4
HBP 9-1940
(Southwestn Ener.)
TinCup St.
TD 12600
HBP
E-1932
Samson Res.
Ojo Chiso
Fed.
Serrells
COG Op.
3-1-2023
43564
U.S.
State
BTA
to 13,750'
Overton En. Inv. 18%
4-1-2024
HBC
23768
Overton
Ener. Inv.
18%
3-1-2024
16850
BTA
to 13,750
Overton
Ener. Inv.
18%
4-1-2024
26396
GMT Expl.
1-1-2016
VB-1980
$1,125.00
Adventure Expl.
10-1-2022
Newman
3-1-2012
V-7969
Caza
Lennox St.
CUSTER MOUNTAIN NO
ST. UNIT
(Ricks Expl.)
19143
Maxus
to 13,652'
Maddox
Fed.
35
36
31
32
4

ATTACHMENT TO APPLICATION C-108

Ojo Chiso #2 (API 30-025-)
Unit O, Sect. 24, Tws 22 S., Rng. 34 E.
Lea, NM

III. WELL DATA

A. 1) See injection well data sheets and attached schematics.
2) See injection well data sheets and attached schematics.
3) 4 ½" coated tubing.
4) 10 k nickel plated double grip retrievable.

B. 1) Injection formation is the Devonian/Silurian.
2) Injection interval open hole from 14480′ to 16030′.
3) This will be a new drill for SWD.
4) The next higher producing zone is the Wolfcamp at approximately 11200′.
The next lower producing zone is the Ordovician, Simpson, McKee and Ellenburger at approximately 17000′ if present.

IV. NO

V. MAP ATTACHED.

VI. LIST OF WELLS, wells listed in the AOR do not penetrate the proposed injection zone.

VII. Upon approval, Grama Ridge will begin construction on the location immediately, notify OCD and a rig will be moved in and well will be constructed as approved. The drilling and completion of well will take approximately 6 to 8 weeks. After drilling and completion, with all appropriate logs run, Grama Ridge will run 4 ½" IPC tubing and packer set within 100 ft. of upper most open hole section. OCD will be notified of MIT. The annulus will be loaded with anti-corrosive packer fluid and pressure monitoring devices. The facility will be closed system with all new tanks and pumps, and produced water piped in as Grama Ridge allows. A C-103 will be filed of all activities with the OCD along with logs. Operator will adhere to all OCD rules and regulations and comply with 19-15-29 NMAC and 19-15-30 NMAC, as required.

1) Plan to inject approximately 15,000 bpd of produced water from various operators.
2) Closed system.

3) Average injection pressure should be approximately 0# to 2890# or whatever limit OCD allows.
4) Produced water from various sources, Bone Springs, Wolfcamp, Delaware, etc. Water analytical attached.

VIII. The proposed disposal formations are Devonian and Silurian which consists of Dolomite and Carbonate and chert intervals interspersed with some tight limestone intervals.

The fresh water formation in the area is the Alluvium which ranges in thickness from 60′ to 70′ and the Santa Rosa between 400-600′. State Engineers records show no water wells within the AOR of the proposed SWD.

Failed to identify Reef

IX. ACID AS NEEDED TO CLEAN AND OPEN THE FORMATION.

X. ALL LOGS RUN ON THE WELL WILL BE FILED WITH OCD.

XI. (SEE ATTACHMENT) NO WATER WELLS WITHIN THE AOR OF PROPOSED SWD.

XII. I, Eddie W. Seay, have examined all available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zones and any underground source of drinking water pertaining to this well.

XIII. ATTACHED.

Side 1

INJECTION WELL DATA SHEET

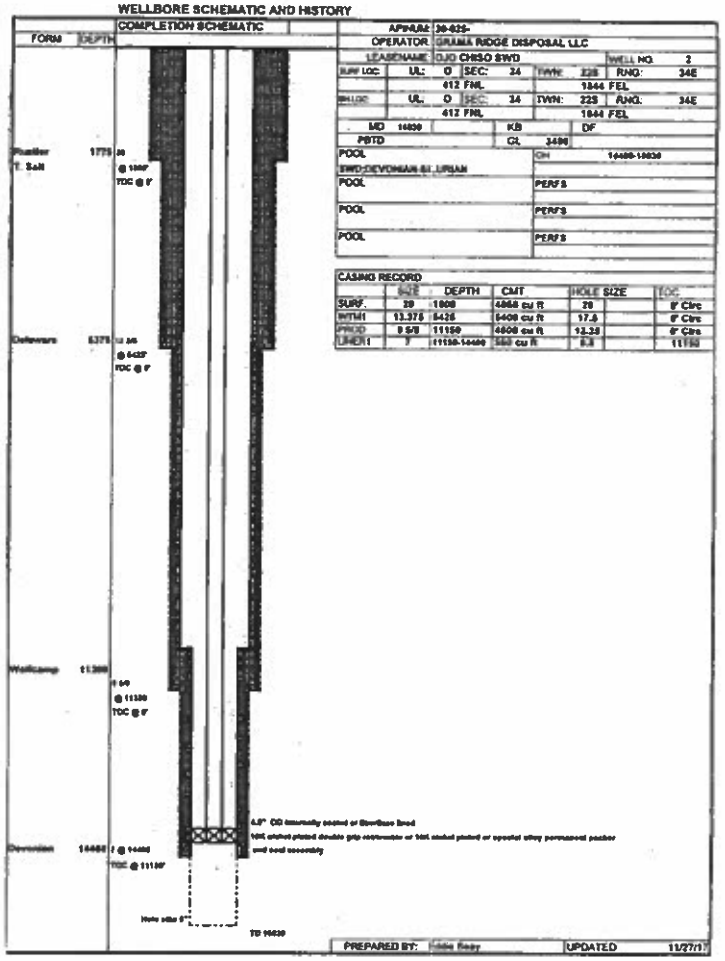
OPERATOR: Grama Ridge Disposal LLC

WELL NAME & NUMBER: Dio Chiso #2

WELL LOCATION: 412/S 1844/E O 24 22 34E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 26 Casing Size: 20

Cemented with: _____ sx. *or* 4050 ft³

Top of Cement: Surface Method Determined: Circ

Intermediate Casing

Hole Size: 17.5 Casing Size: 13.375

Cemented with: _____ sx. *or* 5400 ft³

Top of Cement: Surface Method Determined: Circ

Production Casing

Hole Size: 12.25 Casing Size: 9 5/8

Cemented with: _____ sx. *or* 4600 ft³

Top of Cement: Surface Method Determined: Circ

Total Depth: 16030

7in liner 11150 - 14480
550 cuft / & top of liner 11150

Injection Interval

14480 feet to 16030

(Perforated or Open Hole, indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 4½ Lining Material: internally coated

Type of Packer: 10K nickel plated, double grip retrievable type

Packer Setting Depth: Approx 14420'

Other Type of Tubing/Casing Seal (if applicable): NONE

Additional Data

1. Is this a new well drilled for injection? X Yes ____ No

   If no, for what purpose was the well originally drilled? ____

2. Name of the Injection Formation: Devonian / Silurian

3. Name of Field or Pool (if applicable): Devonian SWD

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NO

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   the Wolfcamp is at approx 11200

   the Ordovician is at approx 17000± ft

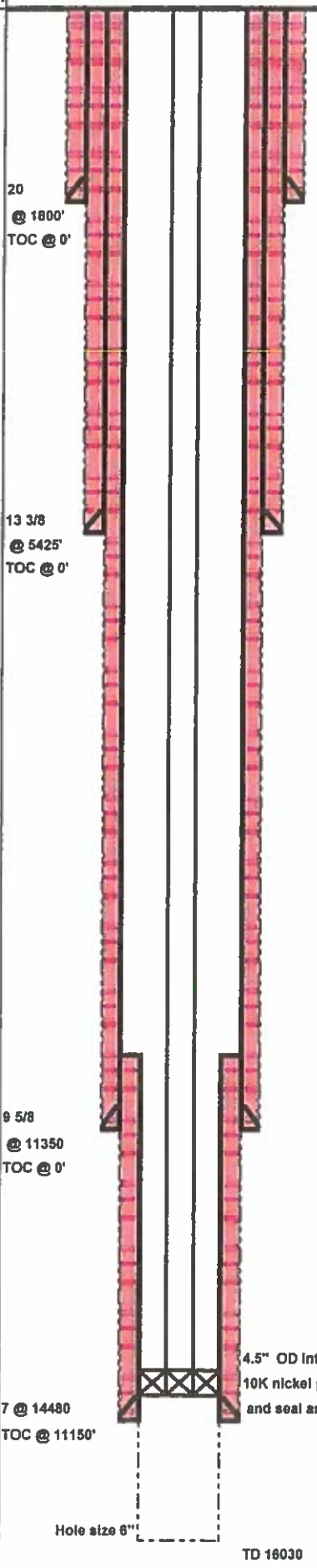
   present.

Wells within 1/2 mile of proposed SWD. These wells do not penatrate proposed disposal interval.

API	Operator/Welname	#	Type/Status		Sec	Twn	Rng	U/L			Dir	MD	TVD	GL
	Proposed SWD													
	GRAMA RIDGE DISPOSAL LLC			SURF	24	22S	34E	O	412 S	1844 E				
30-025-	OJO CHISO	#002	SWD	BH	24	22S	34E	O	412 S	1844 E	V	16030	16030	
30-025-40934	CENTENNIAL RESOURCE PRODUCTION, LLC		Oil	SURF	24	22S	34E	M	20 S	380 W				
	MERCHANT LIVESTOCK 24 STATE COM	#001H	Active	BH	24	22S	34E	D	4889 S	356 W	H	15892	11176	3466
30-025-41348	GMT EXPLORATION COMPANY LLC		Oil	SURF	24	22S	34E	O	41 S	3020 W				
	MERCHANT LIVESTOCK 24 STATE COM	#003C	Cancelled Apd	BH								0	0	3478
30-025-41349	GMT EXPLORATION COMPANY LLC		Oil	SURF	24	22S	34E	P	44 S	4340 W				
	MERCHANT LIVESTOCK 24 STATE COM	#004C	Cancelled Apd	BH								0	0	3508

WELLBORE SCHEMATIC AND HISTORY

FORM	DEPTH
Rustler	1775
T. Salt	
Delaware	5375
Wolfcamp	11200
Devonian	14460



COMPLETION SCHEMATIC

APINUM:	30-025-
OPERATOR:	GRAMA RIDGE DISPOSAL LLC
LEASENAME:	OJO CHISO SWD
WELL NO.	2

SURF LOC:	UL:	O	SEC:	24	TWN:	22S	RNG: 34E
	412 FNL				1844 FEL		
BH LOC:	UL:	O	SEC:	24	TWN:	22S	RNG: 34E
	412 FNL				1844 FEL		

MD	16030	KB	DF
PBTD		GL	3490

POOL	OH 14480-16030
SWD;DEVONIAN-SILURIAN	
POOL	PERFS
POOL	PERFS
POOL	PERFS

CASING RECORD

	SIZE	DEPTH	CMT	HOLE SIZE		TOC
SURF.	20	1800	4050 cu ft	26		0' Circ
INTM1	13.375	5425	5400 cu ft	17.5		0' Circ
PROD	9 5/8	11150	4600 cu ft	12.25		0' Circ
LINER1	7	11150-14480	550 cu ft	8.5		11150

PREPARED BY: Eddie Seay | UPDATED 11/27/17

Water Sample Analysis

Pool	Location			Chlorides
	Section	Township	Range	
North Justis Montoya	2	25S	37E	45440
North Justis McKee	2	25S	37E	58220
North Justis Fusselman	2	25S	37E	68533
North Justis Ellenburger	2	25S	37E	34151
Fowler Blinebry	22	24S	37E	116085
Skaggs Grayburg	18	20S	38E	84845
Warren McKee	18	20S	38E	85910
Warren Abo	19	20S	39E	91600
DK Drinkard	30	20S	39E	106855
Littman San Andres	8	21S	38E	38695
East Hobbs grayburg	29	18S	39E	6461
Halfway Yates	16	20S	32E	14768
Arkansas Junction San Andres	12	18S	36E	7171
Pearl Queen	28	19S	35E	114310
Midway Abo	17	17S	37E	36494
Lovinton Abo	31	16S	37E	22933
Lovington San Andres	3	16S	37E	4899
Lovington Paddock	31	16S	37E	93720
Mesa Queen	17	16S	32E	172530
Kemnitz Wolfcamp	27	16S	34E	49345
Hume Queen	9	16S	34E	124960
Anderson Ranch Wolfcamp	2	16S	32E	11040
Anderson Ranch Devonian	11	16S	32E	25702
Anderson Ranch Unit	11	16S	32E	23766
Caudill Devonian	9	15S	36E	20874
Townsend Wolfcamp	6	16S	36E	38695
Dean Permo Penn	6	16S	37E	44730
Dean Devonian	35	15S	36E	19525
South Denton Wolfcamp	26	15S	37E	54315
South Denton Devonian	36	15S	37E	34080
Medicine Rock Devonian	15	15S	38E	39760
Little Lucky Lake Devonian	29	15S	30E	29288
Wantz Abo	26	21S	37E	132770
Crosby Devonian	18	25S	37E	58220
Scarborough Yates Seven Rivers	7	26S	37E	3443(Reef)
Teague Simpson	34	23S	37E	114665
Teague Ellenburger	34	23S	37E	120345
Rhodes Yates 7 Rivers	27	26S	37E	144485
House SA	11	20S	38E	93385
House Drinkard	12	20S	38E	49700
South Leonard Queen	24	26S	37E	115375
Elliot Abo	2	21S	38E	55380
Scharb Bone Springs	5	19S	35E	30601
EK Queen	13	18S	34E	41890
East EK Queen	22	18S	34E	179630
Maljamar Grayburg SA	22	17S	32E	46079
Maljamar Paddock	27	17S	32E	115375
Maljamar Devonian	22	17S	32E	25418

DISPOSAL ZONE

DEVONIAN

Lab ID			
API No.	3002508483	**Sample ID**	5733
Well Name	BELL LAKE UNIT 006	Sample No	
Location	ULSTR 06 23 S 34 E	**Lat / Long**	32.32821 -103.50663
	660 S 1980 E	**County**	Lea
Operator (when sampled)			
	Field BELL LAKE NORTH	Unit	O
Sample Date	Analysis Date		
	Sample Source HEATER/TREATER	Depth (if known)	
	Water Type		

ph	7	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	71078	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	42200	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	500
iron_mgL		sulfate_mgL	1000
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

SOURCE ZONE

WOLFCAMP

Lab ID			
API No	3001520138	**Sample ID**	5688
Well Name	MAHUN STATE 001	Sample No	
Location	ULSTR 16 22 S 22 E 1800 N 1980 W	**Lat / Long**	32.39340 -104.70979
		County	Eddy
Operator (when sampled)			
	Field ROCKY ARROYO		Unit F
Sample Date	5/17/1968	Analysis Date	
	Sample Sourc DST		Depth (if known)
	Water Typ		

ph	8.6	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	35495	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	19000	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	830
iron_mgL		sulfate_mgL	2500
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Eddie Seay Consulting 601 W. Illinois Hobbs NM, 88242	Project: CYPRESS 33 #2 Project Number: LAGUNA GRANDE Project Manager: Eddie Seay Fax To: (505) 392-6949	Reported: 21-Jan-16 16:25

CYPRESS 33 #2

H600050-01 (Wastewater)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	142		5.00	mg/L	1	5120206	AP	13-Jan-16	310.1	
Alkalinity, Carbonate	<0.00		0.00	mg/L	1	5120206	AP	13-Jan-16	310.1	
Chloride*	104000		4.00	mg/L	1	6010807	AP	12-Jan-16	4500-Cl-B	
Conductivity*	301000		1.00	uS/cm	1	6011307	AP	14-Jan-16	120.1	
pH*	6.56		0.100	pH Units	1	6011306	AP	14-Jan-16	9045	
Sulfate*	576		83.3	mg/L	8.33	6011202	AP	12-Jan-16	375.4	
TDS*	168000		5.00	mg/L	1	6011104	AP	12-Jan-16	160.1	
Alkalinity, Total*	116		4.00	mg/L	1	5120206	AP	13-Jan-16	310.1	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Calcium*	8530		5.00	mg/L	250	B601100	JLM	21-Jan-16	EPA200.7	
Magnesium*	1230		25.0	mg/L	250	B601100	JLM	21-Jan-16	EPA200.7	
Potassium*	833		250	mg/L	250	B601100	JLM	21-Jan-16	EPA200.7	
Sodium*	50300		250	mg/L	250	B601100	JLM	21-Jan-16	EPA200.7	

Bone Springs Produced water

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

MORROW FORMATION

BOOTLEG 11 FED COM #2
30-025-37083

BJ Services

WATER ANALYSIS

Permian Region Laboratory
(915) 530-2667

Operator:	Latigo	Date:	8/21/2006
Well:	Bootleg #2	District:	Artesia
Formation:		Requested:	
Field:		Technician:	Bld Thompson
County:		Source:	
Depth:		PFS Test #:	
		M:Water Analysis	Customer:

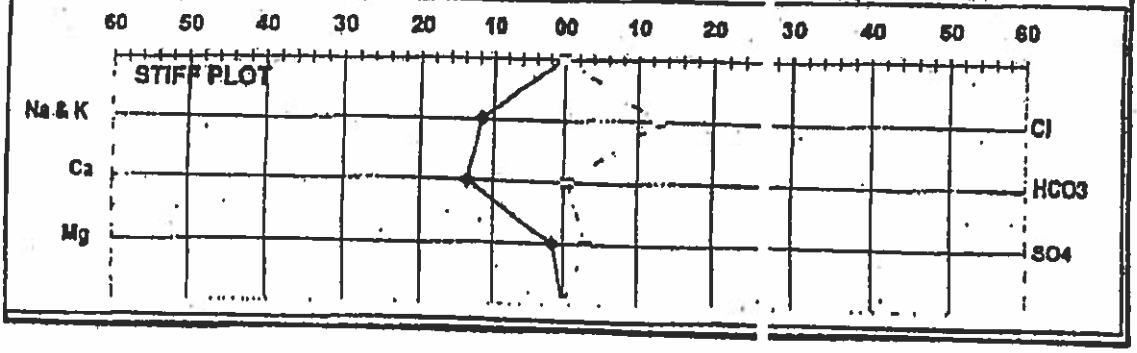
pH:	5.03	Temp (F):	73
Specific Gravity:	1.055	H2S:	

	mg/l	me/l	ppm
CATIONS			
Sodium (calc.)	28341	1232.8	26864
	2887	144.1	2737
Magnesium	194	16.0	184
Barium	< 25	—	—
Potassium	< 10	—	—
Iron	3	0.1	3
ANIONS			
Chloride	48000	1354.0	45498
Sulfate	1600	33.3	1517
Carbonate	< 1	—	—
Bicarbonate	342	5.6	324
Total Dissolved Solids(calc.)	81367		77125
Total Hardness as CaCO3	8010	160.1	7593

COMMENTS:

SCALE ANALYSIS:

CaCO3 Factor	986267.82	Calcium Carbonate Scale Probability	Possible
CaSO4 Factor	4619520	Calcium Sulfate Scale Probability:	Possible



DELAWARE FORMATION

COVINGTON A FED # 9
30-025-32036

PETROLITE

Petrolite Corporation
510 West Texas
Artesia, NM 88210-2041

TRETOLITE DIVISION

(505) 746-3588
Fax (505) 748-3580

Reply to:
P.O. Box FF
Artesia, NM
88211-7531

WATER ANALYSIS REPORT

Company : POGO PRODUCING
Address : MIDLAND, TX
Lease : COVINGTON "A"
Well : #9
Sample Pt. : WELLHEAD

Date : 3/17/94
Date Sampled : 3/16/94
Analysis No. : 632

	ANALYSIS		mg/L		* meq/L
1.	pH	5.7			
2.	H2S	NEG			
3.	Specific Gravity	1.160			
4.	Total Dissolved Solids		254252.3		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	122.0	HCO3	2.0
12.	Chloride	Cl	157833.0	Cl	4452.3
13.	Sulfate	SO4	75.0	SO4	1.6
14.	Calcium	Ca	19800.0	Ca	988.0
15.	Magnesium	Mg	3705.0	Mg	304.8
16.	Sodium (calculated)	Na	72717.3	Na	3163.0
17.	Iron	Fe	NR		
18.	Barium	Ba	NR		
19.	Strontium	Sr	NR		
20.	Total Hardness (CaCO3)		64700.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

988	*Ca <----- *HCO3	2
	/------->	
305	*Mg -----> *SO4	2
	<---------/	
3163	*Na -----> *Cl	4452

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	2.0	162
CaSO4	68.1	1.6	106
CaCl2	55.5	984.5	54628
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	304.8	14511
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	3163.0	184845

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

Petrolite Oilfield Chemicals Group

Respectfully submitted,
A. MILLER

ATOKA FORMATION

COVINGTON A FED #1
30-025-24947

Endura Products Corp.

P.O. Box 3394 Midland, Texas 79706
Phone (915) 684-4233 * Fax (915) 684-4277

WATER ANALYSIS

Date 8/19/95 Nutro Rep TERRY SOLANSKY Code W-0147
Sampling Point/Date WELL HEAD - 8/18/95 State NEW MEXICO
Company POGO PRODUCING County EDDY
Field Lease COVINGTON Well A-1

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na- (Calc.)	78,338	3,406
Total Hardness as Ca—	1,400	0
Calcium, Ca—	840	42
Magnesium, Mg—	341	28
Barium, Ba—	0	0
Iron (Total) Fe——	60	3

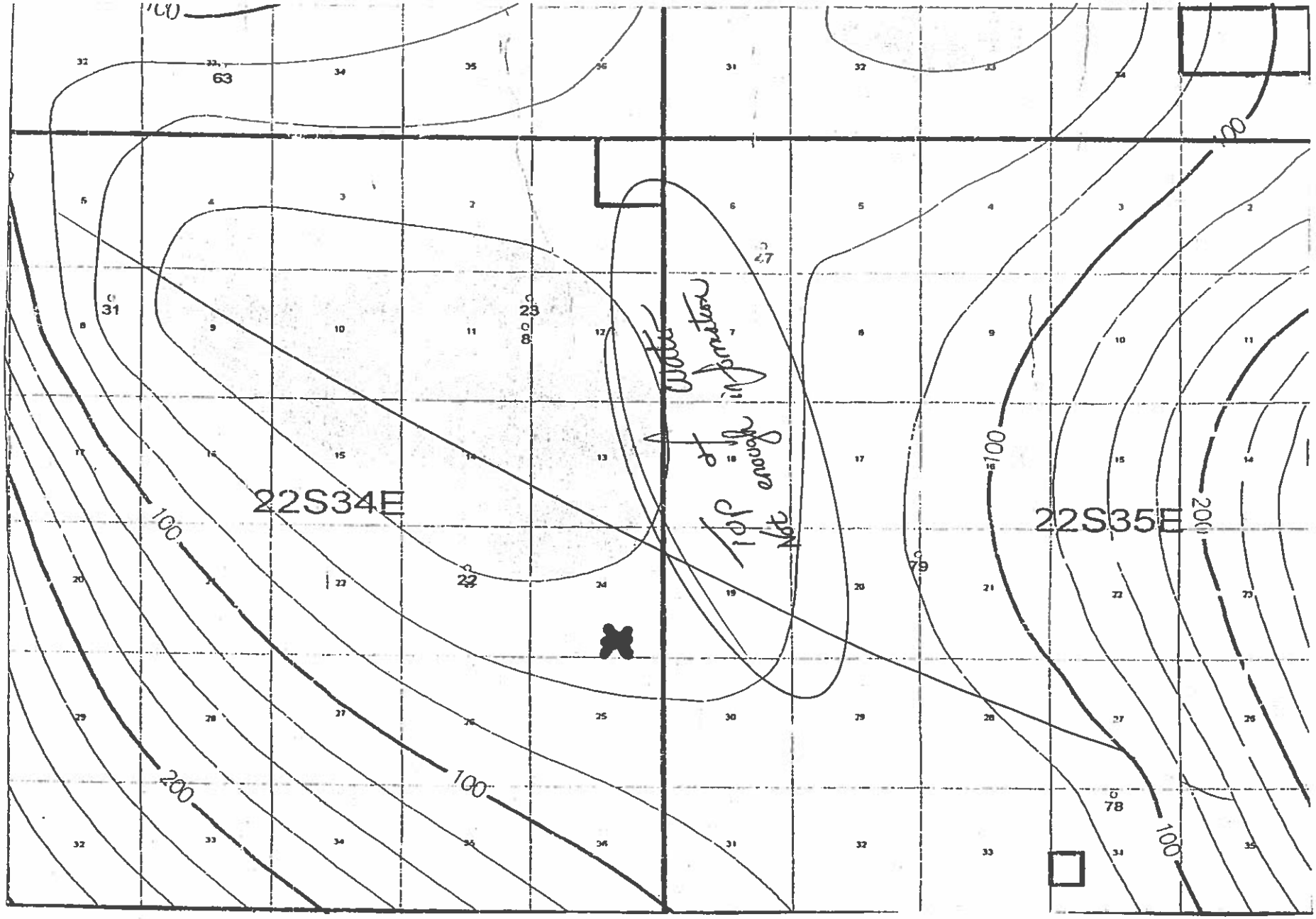
ANIONS		
Chlorides, Cl-	119,000	3,352
Sulfate, SO4-	4,200	88
Carbonate, CO3-	0	0
Bicarbonate, HCO3-	2,366	39
Sulfide, S--	0	0
Total Dissolved Solids (Calc.)	205,145	

OTHER PROPERTIES

pH*	6.800
Specific Gravity, 60°/60 F	1.109
TURBIDITY	100

SCALING INDICIES

TEMP, F	CA CO3	CASO4*2H2O	CA SO4	BA SO4
80	0.9037	-0.4808	-0.7533	-29.3552
120	1.3079	-0.4920	-0.5840	-29.5395
160	1.9281	-0.5147	-0.4340	-29.7651



Groundwater Map

Analytical Report
Lab Order 1609370
Date Reported: 9/15/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Grama Ridge Disposal
Project: Water Well CP 00598
Lab ID: 1609370-001

Client Sample ID: WW CP 00598
Collection Date: 9/6/2016 9:50:00 AM
Matrix: AQUEOUS **Received Date:** 9/8/2016 11:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LGT
Fluoride	2.6	0.10		mg/L	1	9/8/2016 4:01:44 PM
Chloride	490	25	*	mg/L	50	9/15/2016 5:14:01 AM
Nitrogen, Nitrite (As N)	ND	0.10	H	mg/L	1	9/8/2016 4:01:44 PM
Bromide	3.8	0.10		mg/L	1	9/8/2016 4:01:44 PM
Nitrogen, Nitrate (As N)	33	2.0	*H	mg/L	20	9/8/2016 4:38:57 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/8/2016 4:01:44 PM
Sulfate	620	10	*	mg/L	20	9/8/2016 4:38:57 PM

Livestock well / 110' TD

Not in AOR
Is closest water well

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00593 POD1		CP	LE	4	4	06	22S	35E		650422	3587591*	62		
CP 00594 POD1		CP	LE	2	1	34	22S	35E		654553	3580819*	98		
CP 00595 POD1		CP	LE	2	2	20	22S	35E		652089	3584000*	96		
CP 00753		CP	LE	2	2	14	22S	35E		656891	3585687*	215	185	30

Average Depth to Water: 185 feet
Minimum Depth: 185 feet
Maximum Depth: 185 feet

Record Count: 4

Basin/County Search:

County: Lea

PLSS Search:

Township: 22S **Range:** 35E

*UTM location was derived from PLSS - see Help

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, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00380		CP	LE		4	2	11	22S	34E	647245	3586739*	45	30	15
CP 00596 POD1		CP	LE		4	2	11	22S	34E	647245	3586739*	50		
CP 00597 POD1		CP	LE		2	2	08	22S	34E	642410	3587074*	35		
CP 00598 POD1		CP	LE		4	1	23	22S	34E	646480	3583511*	70		
CP 00599 POD1		CP	LE		1	1	12	22S	34E	647642	3587147*	62	50	12
CP 00604		CP	LE	1	4	4	01	22S	34E	648743	3587666*	135		
CP 00622		CP	LE	3	4	2	14	22S	34E	647164	3585030*			
CP 00704		CP	LE		2	4	22	22S	34E	645681	3583097*	600		
CP 00744		CP	LE		1	2	09	22S	34E	643618	3587091*	460		
CP 00751		CP	LE		4	2	11	22S	34E	647245	3586739*		45	
CP 00865 POD1		CP	LE	2	2	3	20	22S	34E	641845	3583118	885	605	280
CP 00933		CP	LE	1	1	1	12	22S	34E	647541	3587246*	60		
CP 00934		CP	LE	2	1	2	01	22S	34E	648682	3588822	60	42	18
CP 00944 POD1		CP	LE		3	1	03	22S	34E	644531	3588351	109	70	39
CP 01362 POD1		CP	LE	3	4	4	18	22S	34E	640809	3584182	1032	613	419
CP 01455 POD1		CP	LE	4	1	4	18	22S	34E	640574	3584515	1033	615	418

Average Depth to Water: 258 feet
Minimum Depth: 30 feet
Maximum Depth: 615 feet

Record Count: 16

Basin/County Search:

County: Lea

PLSS Search:

Township: 22S Range: 34E

*UTM location was derived from PLSS - see Help

8/14/17 11:52 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

GRAMA RIDGE DISPOSAL, LLC

RE: Ojo Chiso #2 (API 30-025-)
Unit O, Sect. 24, T. 22 S., R. 34 E.

Dear Sir:

In accordance with the Rules and Regulations of the Oil Conservation Division of the State of New Mexico, you are being provided a copy of the C-108, Application for Authorization to Inject into the above captioned well to be drilled.

Any questions about the permit can be directed to Eddie W. Seay, (575)392-2236. Any objections or request for hearing must be filed with the Oil Conservation Division within fifteen (15) days from the date received. The OCD address is 1220 S. Saint Francis Drive, Santa Fe, NM 87504, (505)476-3440.

Thank you,

Eddie W. Seay

Eddie W. Seay, Agent
Eddie Seay Consulting
601 W. Illinois
Hobbs, NM 88242
(575)392-2236
seay04@leaco.net

OFFSET OPERATORS AND MINERALS

LANDOWNER - SURFACE
Merchant Livestock, et al
P.O. Box 1105
Eunice, NM 88231

MINERAL OWNER AND OFFSET SURFACE
State of NM-State Land Office
310 Old Santa Fe Trail
Box 1148
Santa Fe, NM 87504-1148

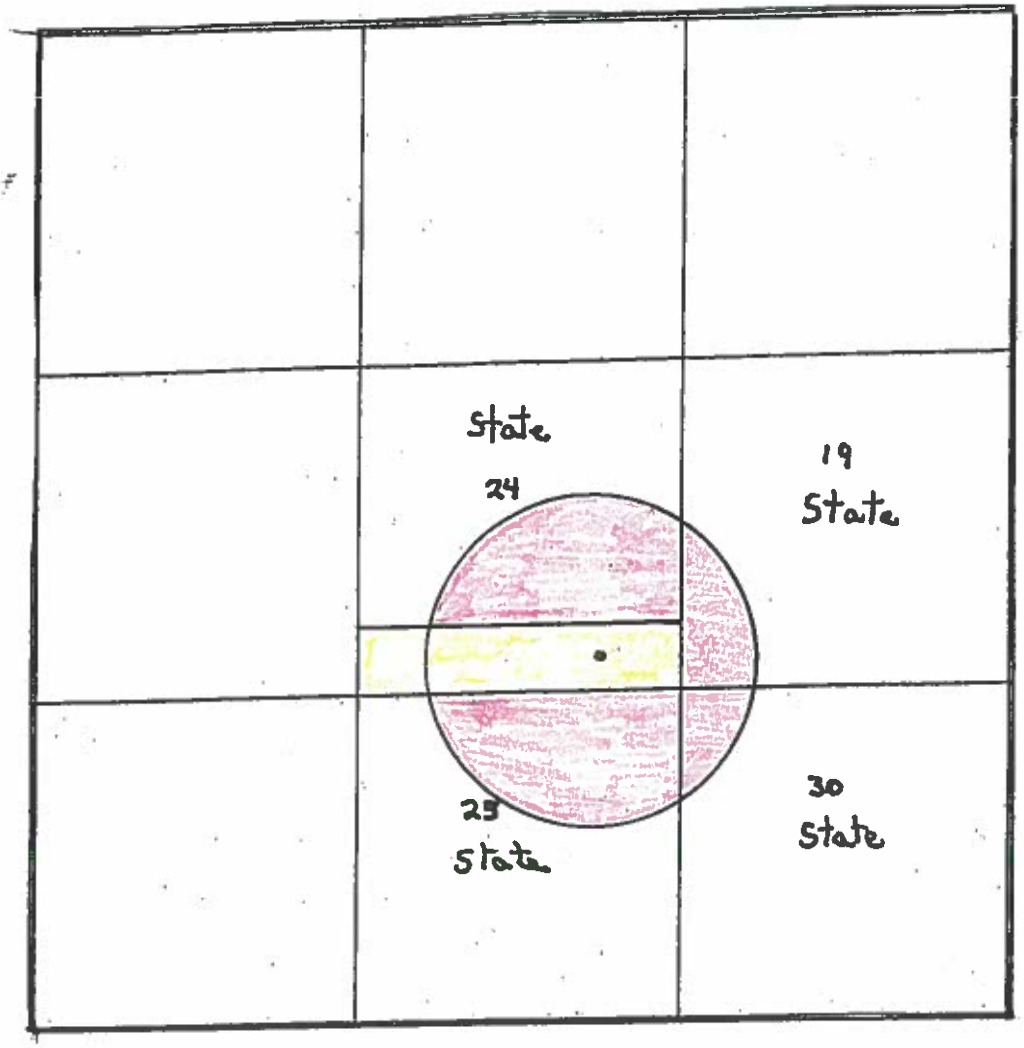
OFFSET OPERATORS
NO PRODUCING WELLS IN AOR FOR PROPOSED SWD

MINERAL LEASEES
Centennial Resources Production, LLC
1001 17th Street, Suite 1800
Denver, CO 80202

GMT Exploration Company, LLC
1560 Broadway, Ste. 2000
Denver, CO 80202

One Energy Partners Operating, LLC
2929 Allen Parkway
Houston, TX 77019

Surface and Mineral



- Merchant Livestock Co - surface
  State of NM Minerals

- State of NM. Surface + Mineral

Section 25 = GMT, Centinnial, One Energy
Section 19 = GMT
Section 30 = GMT
Section 24 = GMT, Centinnial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Merchant Livestock, et al
Street and Apt. No., or PO Box No.
P.O. Box 1105
City, State, ZIP+4®
Eunice, NM 88231
PS Form 3800, April 2015 PSN 7530-02-000-9047
See Reverse for Instructions
USPS
HOBBS, NM 88240
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Adult Signature Restricted Delivery $
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Total Postage and Fees
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One Energy Partners Operating, LLC
Street and Apt. No., or PO Box No.
2929 Allen Parkway
City, State, ZIP+4®
Houston, TX 77019
PS Form 3800, April 2015 PSN 7530-02-000-9047
See Reverse for Instructions
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Total Postage and Fees
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GMT Exploration Company, LLC
Street and Apt. No., or PO Box No.
1560 Broadway, Suite 2000
City, State, ZIP+4®
Denver, CO 80202
PS Form 3800, April 2015 PSN 7530-02-000-9047
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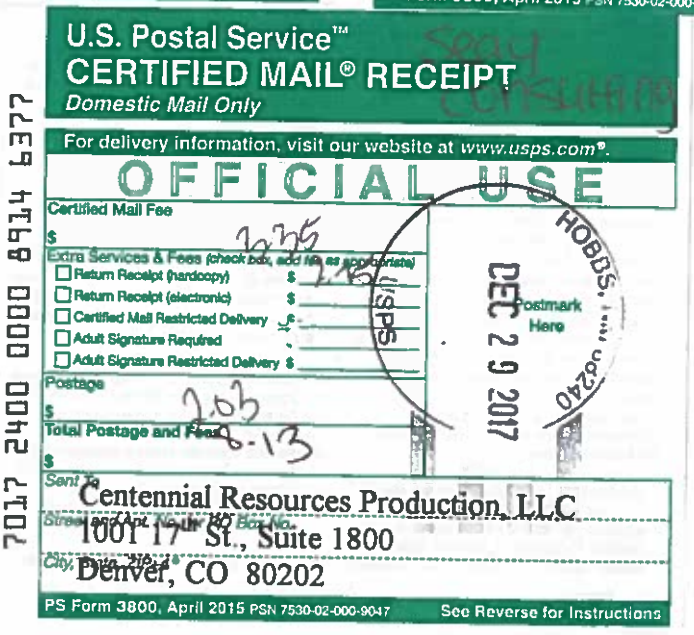
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Postage
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Centennial Resources Production, LLC
Street and Apt. No., or PO Box No.
1001 17th St., Suite 1800
City, State, ZIP+4®
Denver, CO 80202
PS Form 3800, April 2015 PSN 7530-02-000-9047
See Reverse for Instructions
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HOBBS, NM 88240
DEC 29 2017
Postmark Here
7017 2400 0000 8914 6377

LEGAL NOTICE

Pursuant to the rules and regulations of the Oil Conservation Division of the State of New Mexico, Grama Ridge Disposal, LLC, Box 1105, Eunice, NM 88231, is filing a C-108 Application for Salt Water Disposal. This will be a newly drilled well for commercial SWD. The well being applied for is the Ojo Chiso #2, API to be assigned, located in Unit O, Section 24, Township 22 South, Range 34 East, (412/S 1844/E, Lea Co., NM. The injection formations are the Devonian and Silurian from 14480′ to 16030′ below surface. Expected maximum injection rate is 15,000 bpd., and the expected maximum injection pressure is 2890 psi or what the OCD allows. Any questions about the application can be directed to Eddie W. Seay, (575)392-2236, or any objection or request for hearing must be directed to the Oil Conservation Division, (505)476-3440, 1220 South Saint Francis Drive, Santa Fe, NM 87504, within fifteen (15) days.

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that she is Advertising Manager of THE LOVINGTON LEADER, a thrice a week newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled Legal Notice was published in a regular and entire issue of THE LOVINGTON LEADER and not in any supplement thereof, for one (1) day(s), beginning with the issue of December 28, 2017 and ending with the issue of December 28 , 2017.

And that the cost of publishing said notice is the sum of $ 29.05 which sum has been (Paid) as Court Costs.

Joyce Clemens

Joyce Clemens, Advertising Manager
Subscribed and sworn to before me this 29th day of December , 2017.

Gina Fort

Gina Fort
Notary Public, Lea County, New Mexico
My Commission Expires June 30, 2018

OFFICIAL SEAL
GINA FORT
Notary Public
State of New Mexico
My Comm. Expires 6/30/18

LEGAL NOTICE

Pursuant to the rules and regulations of the Oil Conservation Division of the State of New Mexico, Grama Ridge Disposal, LLC, Box 1105, Eunice, NM 88231, is filing a C-108 Application for Salt Water Disposal. This will be a newly drilled well for commercial SWD. The well being applied for is the Ojo Chiso #2, API to be assigned, located in Unit O, Section 24, Township 22 South, Range 34 East, (412/S 1844/E, Lea Co., NM. The injection formations are the Devonian and Silurian from 14480' to 16030' below surface. Expected maximum injection rate is 15,000 bpd., and the expected maximum injection pressure is 2890 psi or what the OCD allows. Any questions about the application can be directed to Eddie W. Seay, (575) 392-2236, or any objection or request for hearing must be directed to the Oil Conservation Division, (505) 476-3440, 1220 South Saint Francis Drive, Santa Fe, NM 87504, within fifteen (15) days.

Published in the Lovington Leader December 28, 2017.

January 9, 2018

RECEIVED OCD

2018 JAN 11 P 3:17

NMOCD
ATTN: Michael McMillan
1220 South St. Francis
Santa Fe, NM 87505

RE: Grama Ridge Disposal, LLC
Ojo Chiso #2
412/S 1844/E Unit O, Sec. 24, Tws. 22S, Rng. 34E

Supplement to C-108 Application as requested.

XII. I, Eddie W. Seay have examined all available geologic and engineering data associated with this well and find no evidence of open faults or any other hydrologic connection between the disposal zones and any underground source of drinking water.

Eddie W. Seay
601 W. Illinois
Hobbs, NM 88242
575-392-2236
seay04@leaco.net

FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V16.2]

DATE RECORD: First Rec: 1/04/2017 Admin Complete: 1/04/2017 or Suspended: ______ Add. Request/Reply: ______

ORDER TYPE: WFX / PMX / SWD (circled) Number: ______ Order Date: ______ Legacy Permits/Orders: ______

Well No. #2 Well Name(s): Ojo Chiso SWD #

API : 30-0 25-44372 Spud Date: TBD New or Old (EPA): N (*UIC Class II Primacy 03/07/1982*)

Footages 412 FSL / 1844 FEL Lot ___ or Unit O Sec 24 Tsp 22S Rge 34E County Lea

General Location: 22 miles SW/Eunice Pool: SWD; Devonian-Silurian Pool No.: 97869

BLM 100K Map: JAL Operator: Greenwide Disposal, LLC OGRID: 372097 Contact: Eddie Seay, Agent

COMPLIANCE RULE 5.9: Total Wells: 2 Inactive: 0 Fincl Assur: OK Compl. Order? N/A IS 5.9 OK? Y Date: [illegible]

WELL FILE REVIEWED ✓ Current Status: Proposed

WELL DIAGRAMS: NEW: Proposed ✓ or **RE-ENTER:** Before Conv. ○ After Conv. ○ Logs in Imaging: N/A

Planned Rehab Work to Well: ______

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned __ or Existing __ Surface	26"/20"	1800'		~~[illegible]~~	Surface/Visual
Planned __ or Existing __ Interm/Prod	17½"/13⅜"	5425		~~[illegible]~~ 2415	Surface/Visual
Planned __ or Existing __ Interm/Prod	12¼"/9⅝"	11350		1994 ~~4600~~	Surface/Visual
Planned __ or Existing __ Prod/Liner	8½"/7"	14480		550	~~TTS @ TC-B-?~~ Calc @ 8300
Planned __ or Existing __ Liner					
Planned __ or Existing __ OH / PERF	14480/16030		Inj Length		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		DV	14446
Confining Unit: Litho. Struc. Por.			
Proposed Inj Interval TOP:			14480
Proposed Inj Interval BOTTOM:			16030
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:

Drilled TD 16030 PBTD ______

NEW TD ______ NEW PBTD ______

NEW Open Hole ✓ or NEW Perfs ○

Tubing Size 4½ in. Inter Coated? Y

Proposed Packer Depth 14420 ft

Min. Packer Depth 14380 (100-ft limit)

Proposed Max. Surface Press. 2896 psi

Admin. Inj. Press. 2896 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P N/A Noticed? ___ BLM Sec Ord ○ WIPP ○ Noticed? ___ Salt/Salado T: 1610 B: 3650 **NW:** Cliff House fm ___

FRESH WATER: Aquifer ~~[illegible]~~ Quaternary Max Depth ~~[illegible]~~ 185 **HYDRO AFFIRM STATEMENT By Qualified Person** ✓

NMOSE Basin: Carlsbad **CAPITAN REEF:** thru ___ adj ___ NA ✓ **No. GW Wells in 1-Mile Radius?** 0 **FW Analysis?** Y

Disposal Fluid: Formation Source(s) Wolfcamp, Bone Spring, Delaware, Atoka, Morrow Analysis? Y On Lease ○ Operator Only ○ or Commercial ✓

Disposal Interval: Inject Rate (Avg/Max BWPD): 15K Protectable Waters? N/A Source: ______ System: Closed (circled) or Open

HC Potential: Producing Interval? ____ Formerly Producing? ____ Method: Logs/DST/P&A/Other ______ 2-Mi Radius Pool Map ○

AOR Wells: 1/2-M Radius Map and Well List? Y **No. Penetrating Wells:** 0 [AOR Horizontals: ______ AOR SWDs: ______]

Penetrating Wells: No. Active Wells 0 Num Repairs? ___ on which well(s)? ______ Diagrams? ______

Penetrating Wells: No. P&A Wells 0 Num Repairs? ___ on which well(s)? ______ Diagrams? ______

NOTICE: Newspaper Date Dec 24 Mineral Owner NMSLO Surface Owner NMSLO N. Date Dec 24

RULE 26.7(A): Identified Tracts? ______ Affected Persons: COG, GMT, OXY Energy N. Date Dec 24

Order Conditions: Issues: Run-A CBL ~~from~~ base of liner to ~~the surface~~ 500' Above 9-5/8" Int/Casing

Additonal COAs: ______

API Well Number Banner

Report Description

This report shows a Well's API Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

30025443720000

30 25 44372

OJO CHISO No.002

GRAMA RIDGE DISPOSAL, LLC

1/23/2018

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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2018 JAN 23 P 2:20

Form C-103
Revised July 18, 2013

WELL API NO.
30-025-44372

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Ojo Chiso SWD

1. Type of Well: Oil Well ☐ Gas Well ☒ Other SWD

8. Well Number 2

2. Name of Operator
Grama Ridge Disposal, LLC

9. OGRID Number 370997

3. Address of Operator
Box 1105 Eunice, NM 88231

10. Pool name or Wildcat Devonian

4. Well Location
Unit Letter O : 412 feet from the S line and 1844 feet from the E line
Section 24 Township 22 Range 34 NMPM County Lea

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☒			OTHER:			☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Sundry Notice: Please note change in name to Ojo Chiso SWD#2.

Grama Ridge will run CBL from base of liner to the surface to ensure good cement across the liner and to ensure that surface and intermediate casing are circulated to surface.

HOBBS OCD
JAN 23 2018
RECEIVED

Spud Date: Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Eddie W. Seay TITLE Agent DATE 1/23/18

Type or print name Eddie W. Seay E-mail address: seay04@leaco.net PHONE: 575-392-2236

For State Use Only

APPROVED BY: TITLE DATE 01/23/18
Conditions of Approval (if any):

Rena Seay

From: "McMillan, Michael, EMNRD" <Michael.McMillan@state.nm.us>
To: "Rena Seay" <seay04@leaco.net>
Cc: "Kautz, Paul, EMNRD" <paul.kautz@state.nm.us>
Sent: Tuesday, January 23, 2018 8:14 AM
Subject: RE: OjoChisoSWD Well No. 2

Eddie:
You will need to submit a C-103 Sundry notice for well name change to include SWD in the well name.
Also, the Engineering Bureau will require Grama Ridge to run a C-B-L from the base of the liner to the surface to ensure good cement acrros the liner, and ensure that the surface and intermediate casings are circulate to the surface
Mike

From: McMillan, Michael, EMNRD
Sent: Monday, January 22, 2018 3:40 PM
To: 'Rena Seay' <seay04@leaco.net>
Subject: RE: OjoChisoSWD Well No. 2

Eddie:
Can you provide the type of cement and or their respective yields.
I want to make sure that the cement is being circulated to surface in the surface and intermediate casings.
I also want to make sure there is enough overlap in the Liner/intermediate casing
Mike

From: McMillan, Michael, EMNRD
Sent: Tuesday, January 9, 2018 9:05 AM
To: 'Rena Seay' <seay04@leaco.net>
Subject: OjoChisoSWD Well No. 2

Eddie:
I need a signed statement that there is no connection between disposal interval and underground sources of drinking water.

Mike

Michael McMillan
1220 South St. Francis
Santa Fe, New Mexico
505-476-3448
Michael.mcmillan@state.nm.us

January 26, 2018

RECEIVED OCD
2018 JAN 31 P 1:16

NMOCD Engineering
ATTN: Michael McMillan
1220 South St. Francis Dr.
Santa Fe, NM 87505

RE: Ojo Chiso SWD #2
Cementing information

Mr. McMillan:

Find cement data for the above listed well as you requested in your 1/22/18 note.

Should you need anything further, please let me know.

Thanks,

Eddie W. Seay
Eddie Seay Consulting
601 W. Illinois
Hobbs, NM 88242
575-392-2236
seay04@leaco.net

Cement Callsheet

BASIC ENERGY SERVICES

Company	Gama Ridge	Service Point	Midland, TX 1721				
		Contact Person	Richard Stringer			Ph #	432-687-1994
Well Type		Contractor		County	Lea	State	TX
Lease	Ojo Chiso	Well #	2SWD	Sec		Twp		Range	
Directions:							

Job Type	Surface	Casing Size 20	Thread	Weight
Equipment		Tubing/Drill Pipe Size	Thread	Weight
		Hole Size 26	Packer	Bridge Plug
Terms:		Plug Container Yes	Squeeze Manifold	Field Bin

Set 20" Csg in 26" O.H. @ 1,800Ft

CEMENT DATA

	Weight PPG	Type	Additives
LEAD 1 CCT108	12.8	65/35/6 Class C Cement	6% Gel + 5% Salt + 1/4pps Celloflake + 2/10% C-41P
Sacks 1520	Excess 50%	Yield Ft³/sk 1.87	Water Gal/sk 10.14
TAIL 1 CCT100	Weight PPG 14.80	Type Cement, Class C	Additives 1% Calcl
Sacks 985	Excess 50%	Yield Ft³/sk 1.32	Water Gal/sk 6.31
LEAD 2	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
TAIL 2	Weight PPG		Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
Mouse/Rat	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
Plugs	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk

Float Equipment

Part #	Quantity	Description	# Used	# Returned
CC133	1	20" Top Rubber Cement Plug		

Misc. Chemicals

Ordered By		Phone	Fax	Date of Job	
Call Taken By	Richard Stringer	Phone 432-687-1994	Email	Time Ready	
Operator or Driver Called				Call Out Time	

Cement Callsheet

BASIC ENERGY SERVICES

Company	Gama Ridge			Service Point	Midland, TX 1721		
				Contact Person	Richard Stringer	Ph #	432-687-1994
Well Type		Contractor		County	Lea	State	NM
Lease	Ojo Chiso	Well #	2SWD	Sec		Twp		Range	
Directions:							

Job Type	Intermediate	Casing Size: 13 3/8	Thread	Weight
Equipment		Tubing/Drill Pipe Size	Thread	Weight
		Hole Size: 17 1/2	Packer	Bridge Plug
Terms:		Plug Container: Yes	Squeeze Manifold	Field Bin

Set 13 3/8" Csg in 17 1/2" O.H. @ 5,425Ft

CEMENT DATA

	Weight PPG	Type	Additives
LEAD 1 CCT104	11.8	50/50 POZ with Class C Cement	10% Gel + 5% Salt + 1/4pps Celloflake + 2/10% C-41P
Sacks: 2030	Excess: 45%	Yield Ft³/sk: 2.41	Water Gal/sk: 14.05
TAIL 1 CCT100	14.80	Cement, Class C	3/10% C-15
Sacks: 385	Excess: 35%	Yield Ft³/sk: 1.32	Water Gal/sk: 6.31
LEAD 2	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
TAIL 2	Weight PPG		Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
Mouse/Rat	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
Plugs	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk

Float Equipment

Part #	Quantity	Description	# Used	# Returned
CF109	1	Top Rubber Cement Plug, 13 3/8"		

Misc. Chemicals

Ordered By		Phone		Fax	Date of Job
Call Taken By	Richard Stringer	Phone	432-687-1994	Email	Time Ready
Operator or Driver Called					Call Out Time

Cement Callsheet

BASIC ENERGY SERVICES

Company	Gama Ridge		Service Point	Midland, TX 1721			
			Contact Person	Richard Stringer		Ph #	432-687-1994
Well Type		Contractor		County	Lea	State	NM
Lease	Ojo Chiso	Well #	2SWD	Sec	Twp	Range	
Directions:							

Job Type	2nd Intermediate	Casing Size: 9 5/8	Thread	Weight
Equipment		Tubing/Drill Pipe Size	Thread	Weight
		Hole Size: 12 1/4	Packer	Bridge Plug
Terms:		Plug Container: Yes	Squeeze Manifold	Field Bin

Set 9 5/8" Csg in 12 1/4" O.H. @ 11,350Ft

CEMENT DATA

	Weight PPG	Type	Additives
LEAD 1 CCT103	11.8	50/50 POZ with Class H Cement	10% Gel + 5% Salt + 1/4pps Celloflake + 2/10% C-41P + 4/10% C-20
Sacks: 1815	Excess	Yield Ft³/sk: 2.41	Water Gal/sk: 14.05
TAIL 1 CCT103	Weight PPG: 14.20	Type: 50/50 POZ with Class H Cement	Additives: 2% Gel + 5% Salt + 3/10% C-20 + 3/10% C-15
Sacks: 180	Excess: 35%	Yield Ft³/sk: 1.28	Water Gal/sk: 5.89
LEAD 2	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
TAIL 2	Weight PPG		Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
Mouse/Rat	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk
Plugs	Weight PPG	Type	Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk

Float Equipment

Part #	Quantity	Description	# Used	# Returned
CF106	1	Top Rubber Cement Plug, 9 5/8"		

Misc. Chemicals

Ordered By		Phone	Fax	Date of Job	
Call Taken By	Richard Stringer	Phone 432-687-1994	Email	Time Ready	
Operator or Driver Called				Call Out Time	

Cement Callsheet

BASIC ENERGY SERVICES

Company	Gama Ridge			Service Point	Midland, TX 1721		
				Contact Person	Richard Stringer	Ph #	432-687-1994
Well Type		Contractor		County	Lea	State	NM
Lease	Ojo Chiso	Well #	2SWD	Sec		Twp		Range	
Directions:							

Job Type	Liner	Casing Size: 7	Thread	Weight
Equipment		Tubing/Drill Pipe Size	Thread	Weight
		Hole Size: 8 1/2	Packer	Bridge Plug
Terms:		Plug Container: Yes	Squeeze Manifold	Field Bin

Set 7" Csg In 8 1/2" O.H. @ 14,480Ft

CEMENT DATA

LEAD 1	Weight PPG	Type		Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk	
TAIL 1	Weight PPG	Type		Additives
CCT103	14.20	50/50 POZ with Class H Cement		10% Gel + 5% Salt + 4/10% C-18 + 4/10% C-37 + 3/10% C-20
Sacks: 430	Excess	Yield Ft³/sk: 1.29	Water Gal/sk: 5.87	
LEAD 2	Weight PPG	Type		Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk	
TAIL 2	Weight PPG			Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk	
Mouse/Rat	Weight PPG	Type		Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk	
Plugs	Weight PPG	Type		Additives
Sacks	Excess	Yield Ft³/sk	Water Gal/sk	

Float Equipment

Part #	Quantity	Description		# Used	# Returned

Misc. Chemicals

Ordered By		Phone	Fax	Date of Job	
Call Taken By	Richard Stringer	Phone 432-687-1994	Email	Time Ready	
Operator or Driver Called				Call Out Time	