		PTGW
DATE I	N 4.26.12 505PEN	56 12 ENGINEER WUT LOGGED IN 4, 26:12 TYPE SWD APP NO. 1211740794
		ABOVE THIS LINE FOR DIVISION USE ONLY NEW MEXICO OIL CONSERVATION DIVISION - Engineering Bureau -
СНА	PARRAT 10 #1	1220 South St. Francis Drive, Santa Fe, NM 87505
		ADMINISTRATIVE APPLICATION CHECKLIST 33-015- 30229
1	THIS CHECKLIST IS M	ANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE
Appli	cation Acronym [NSL-Non-Stal [DHC-Dow [PC-Po [EOR-Qua	s: ndard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication] nhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling] ool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement] [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion] [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase] lified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]
[1]	TYPE OF AF [A]	'PLICATION - Check Those Which Apply for [A] Location - Spacing Unit - Simultaneous Dedication NSL NSP SD
	Check [B]	Cone Only for [B] or [C] Commingling - Storage - Measurement DHC CTB PLC PC OLS OLM
	[C]	Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
	[D]	Other: Specify
[2]	NOTIFICAT [A]	ION REQUIRED TO: - Check Those Which Apply, or Does Not Apply with the Tot 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, $\Rightarrow 0, 56$
	[F]	Waivers are Attached

[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.

Mike Pippin	Mitotecsin	Petroleum Engineer	April 24, 2012
Print or Type Name	Signature	Title	Date
		mike@pippinllc.com	
		e-mail Address	

LIME ROCK RESOURCES A, L.P. Mike Pippin PE 3104 N. Sullivan Avenue Farmington, NM 87401 505-327-4573 (phone) mike@pippinllc.com

April 24, 2012

Will Jones NMOCD 1220 South St. Francis Drive Santa Fe, NM 87505

RE: C-108, SWD APPLICATION <u>CHAPARRAL 10 #1</u>– API#: 30-015-30229 Unit Letter "F" Section 10 T25S R28E Eddy County, New Mexico

Dear Mr. Jones:

3

LIME ROCK RESOURCES A, L.P. as operator of the above-referenced well, is submitting this application to permit the referenced well for produced water disposal in the Brushy Canyon of the Delaware Mt. group. The State pool is Willow Lake Delaware SW (96855).

This well is currently open in the oil-producing interval, Cherry Canyon (4776'-94'), which will be squeezed with cement. The proposed disposal interval is in the none-productive Brushy Canyon at about 5050'-5860', which is also in the Delaware but below the Cherry Canyon. All wells in the area of review that penetrated the proposed disposal interval (7 wells) have good cement throughout.

Devon Energy is the surface owner and Lime Rock Resources A, L.P. is the (fee) royalty owner having recently purchased the (fee) royalty for Devon.

Attached is the necessary C-108 information, data, maps, and proof of notices for the application.

Should you have any questions, please contact me at 505-327-4573.

Very truly yours,

Mitotiopin

Mike Pippin

Petroleum Engineer

LIME ROCK RESOURCES A, L.P. Mike Pippin 3104 N. Sullivan Avenue Farmington, NM 87401 505-327-4573 (phone) mike@pippinllc.com

April 24, 2012

RE: C-108 Application for SWD Well CHAPARRAL 10 #1 SWD– API#: 30-015-30229 1980' FNL 1980' FWL, "F" Section 10 T25S R28E Eddy County, New Mexico

VIA CERTIFIED MAIL To all Interest Owners:

In accordance with the New Mexico Oil Conservation Division Rule 19.15.26 governing disposal wells, you are hereby notified that LIME ROCK RESOURCES A, L.P. as operator of the abovereferenced well, has submitted an application to permit the referenced well for produced water disposal in the Brushy Canyon Formation of the Delaware Mountain group.

This well is currently open in the oil-producing interval, Cherry Canyon (4776'-94'), which will be squeezed with cement prior to conversion to produced water disposal. The State pool is Willow Lake Delaware SW (96855). The proposed disposal interval is in the none-productive Brushy Canyon Formation. This formation comprises the lower section of the Delaware Mountain group and underlies the Cherry Canyon Formation. All wells in the area of review that penetrated the proposed disposal interval (7 wells) have good cement throughout.

The proposed injection interval in the Brushy Canyon will be at about 5050'-5860' although the exact location of the perfs has not been decided. The estimated total average disposal volume is 7200 bbls per day with a maximum injection pressure of 1800 psi (after a step rate test).

Interested parties must file objections or a request for hearing with the NMOCD, 1220 South St. Frances Drive, Santa Fe, NM 87505 within 15 days.

Should you have any questions or concerns, please contact me at 505-327-4573 and/or the NMOCD at 505-476-3467.

Sincerely, LIME ROCK RESOURCES A, L.P.

Mike Pippin PE Petroleum Engineer

Enclosures

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage Application qualifies for administrative approval? X Yes No
II.	OPERATOR: LIME ROCK RESOURCES A, L.P.
	ADDRESS:1111 Bagby St. Houston, Texas 77002
	CONTACT PARTY: <u>Mike Pippin</u> PHONE: <u>505-327-4573</u>
111.	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?YesNo If yes, give the Division order number authorizing the project:
V.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
*VIII.	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
*X1.	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: <u>Mike Pippin</u> TITLE: <u>Petroleum Engineer</u>
	SIGNATURE: DATE: DATE: April 24, 2012
*	E-MAIL ADDRESS: <u>mike@pippinllc.com</u> 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:

Side 2

III. WELL DATA

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

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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



Side 1 INJEC	CTION WELL DATA SHI	EET		
OPERATOR:LIME ROCK RESOURCES A, L.P				
WELL NAME & NUMBER:Chaparral 10 State Com #1_	API # 30-15-30229_			
WELL LOCATION:1980 FNL 1980 FWL FOOTAGE LOCATION	F UNIT LETTER	10 SECTION	25S TOWNSHIP	28E RANGE
WELLBORE SCHEMATIC		<u>WELL CO</u> Surface O	DISTRUCTION DA	4 <i>TA</i>
	Hole Size:	17 ½"	Casing Size:	13 3/8"
	Cemented with:	650 sx.	or	ft ³
	Top of Cement:	Surface	Method Determir surface	ned: <u>returns to</u>
		Intermediat	te Casing	
	Hole Size:	12 ¼"	Casing Size:	9 5/8"
	Cemented with:	1000sx.	or	ft ³
	Top of Cement:	surface	Method Determir surface	ned: <u>returns to</u>
		Production	n Casing	
	Hole Size:	_8 ³ / ₄ "	Casing Size:	7"
	Cemented with:	775 sx.	or	ft ³
	Top of Cement:	4,708'	Method Determin	ed: temp. survey
	Total Depth:	10,715'		
		Injection	Interval	
	49	930'feet	to6150	,

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tu	bing Size:	3 1/2"	Lining Mater	ial:	Fiberglass
Тур	e of Packer:	Baker F-1 Permanent	Packer_(or similar)		
Pac	ker Setting De	pth:+/- 5,025	,		
Oth	er Type of Tul	oing/Casing Seal (if a	pplicable):CIBP wi	ith 20' of	cement on top
			Additional Data		
1.	Is this a new	well drilled for inject	ion?	Yes _	XNo
	If no, for wha	at purpose was the we	ell originally drilled?	Oil W	ell
2.	Name of the l	Injection Formation:	Brushy Canyon		
3.	Name of Field	d or Pool (if applicab	le):Willow Lak	e Delawa	are, SW96855
4.	Has the well of intervals and	ever been perforated give plugging detail, See Attached S	in any other zone(s)? L i.e. sacks of cement or j chematic	ist all suc plug(s) u	ch perforated sed
5.	Give the nam injection zone	e and depths of any o e in this area:	bil or gas zones underlyi See Attached	ng or ove	erlying the proposed
		<u> </u>			

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bw 01/04/12

MPANY					FIELD				WELL NAME			
JETTA OPERATING					WILLOW	LAKE S	W		CHAPARR	AL 10 S		¥1
					SIZE	WEIGHT	GRADE	THREAD	TYPE COMPLET	ON FLUID IN	LASING	
	STATE				9 5/8 SIZE	36-40 WEIGHT	J-K GRADE	THREAD		LOWER	MIDDLE	UPPER
EDDY NM			0	ASING	7	26	P110		TUBING WT. ON			
			т	UPPER	SIZE	WEIGHT	GRADE	THREAD	TYPE LATCH	LOWER	MIDDLE	UPPER
			B	MIDDLE	SIZE	WEIGHT	GRADE	THREAD	OPERATOR'S NA	ME	L	TICKET NO.
			N	LOWER	SIZE	WEIGHT	GRADE	THREAD		DATE		EL
			G		2 7/8	6.5	J	EUE	9	/3/2002		
			ITEM	DEPTH	LENGTH	JTS	ID	4.2.2/07.45	DE	SCRIPTION		
			А В	2 537 00			_	9 5/8* 36-	40#.I-K AV 10	00 SX		
			с	6,740.00				EST TOC				
			D	10,631.00	L			7" 26# P1	10 FLOAT CO	LLAR, DR	LLED	
			E	10,715.00				7" 26# P1	10 FLOAT SH	OE, DRILL	ED	<u></u>
		A	F	L	<u> </u>			CMT PLU	G 10,505-10,	765'	<u> </u>	
			н		<u> </u>			CMT PLU	IG 12.554'-12	554'		
			1					CMT PLU	G 13,174'-13,:	274'		
			J	13,275.00				PBTD 6 1	/8" OPEN HOI	E		
			<u> </u>		47.00			EL EVAT				
	- :		2	17.00	17.00	151		2 7/8" 6.5	# J55 EUE TB			
			3	4,760.00				TAC				
			4	4,763.00				SN				
		D.	<u>-</u>		<u> </u>							
) '	D			<u> </u>			PROD PE	RF 4784'-479	4'		
			7					CIR 5000				
			8					SQZ PER	F 5050' W/ 15	0 SX		
			9					CIR 6600				
			10		<u> </u>			SQZ PER	F 6700' W/ 73	0.5x		;·
3			а					1 1/2" pol	ish rod			
4			Ь					3 rod sub	\$			
	4	5	c		<u> </u>			6 1" rods				
		6	e					10 1" rods	oos			
	T a	Ċ.	f					1 1" sub				
		_	9					2 1/2**1 1	/2**16' rbhc-hi	ir pump		
		7 8	h	├				6'*1 1/2" ç	gas anchor			
		9						<u> </u>	·····			
		10						NOTE: W	ELL HAS HIS		BUILDING	PRESS
		-		<u>-</u>				ON SURF				
					h			NOTE: TO	SECTION 7 1/	SHOWS	NOCMT	
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	1	E										
6 1/8" OH								┼				
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Proposed Injector - Chaparral 10 State Com #1 (30-015-30229) Form C-108 Section VI - Offset Wells in the Area of Interest

Well name	APi #	Well type	Spud Date	Location	Depth, MD	Perforations/ Lateral	Casing Record	Operator
Willow A State #002	30-015-33399	Oil - Active	5/21/04	330 FSL, 2570 FEL O-03-255-28E	6425	5100-5650	9 5/8" 36# J-55 @ 824', 550 SX Circulated to surface on 9 5/8" 5 1/2" 17# J-55 @ 6,016', 1950 SX Circulated to surface on 5 1/2"	COG Operating LLC 550 W Texas Suite 1300 Midland, Texas 79701
Western Hawk State Com 1	30-015-33400	Oil - Active	6/4/04	380 FSL, 2370 FWL N-03-25S-28E	7216	5100-7100	9 5/8" 36# J-55 @ 811', 550 SX Circulated to surface on 9 5/8" 5 1/2" 17# J-55 @ 7209', 2000 SX Circulated to surface on 5 1/2"	COG Operating LLC 550 W Texas ✓ Suite 1300 Midland, Texas 79701
Redtailed Hawk 10 H #1	30-015-32773	Oil - Active	5/10/03 478e	780 FNL 2610 FWL C-10-255-28E	6865	5260-6220 0 fte	9 5/8" 36# @ 575', 269 SX Circulated to surface on 9 5/8" 7" 23# @ 5,175', 215 SX Circulated to surface on 7" 4 1/2" 11.6# N-80 Liner, 219 SX Top of liner @ 4,357, set @ 6,864' TOC=4,358' per reports	Lime Rock Resources 1111 Bagby St, Ste 4600 Houston, Texas 77002
Peregrin State #001	30-015-32312	Oil - Active	6/4/02	660 FNL 2460 FEL	6750	5360-6750 <i>O</i> H・	8 5/8" 32# @ 565', 350 SX Circulated to surface on 8 5/8" 5 1/2" 17# @ 5,360', 270 SX Calculated TOC=3,205'	Lime Rock Resources 1111 Bagby St, Ste 4600 Houston, Texas 77002
Falcon 10 #001	30-015-32571	Oil - Active	2/12/03	1793 FNL 2450 FEL G-10-255-28E 4860 ~ N	6675	5196-6675 O.H -	9 5/8" 36# @ 575', 300 SX Circulated to surface on 9 5/8" 5 1/2" 17# @ 5,196', 426 SX Circulated to surface on 5 1/2"	Lime Rock Resources 1111 Bagby St, Ste 4600 Houston, Texas 77002
Shrike 10H Com #001	30-015-32914	Oil - Active	12/31/99	1964 FSL 1189 FWI L-10-255-28E	7051	5220-6950 OH.	9 5/8" 36# J-55 @550', 270 SX Circulated to surface on 9 5/8" 7" 23# J-55 @ 5,175, 300 SX Calculated TOC=2,414'	Lime Rock Resources 1111 Bagby St, Ste 4600 Houston, Texas 77002

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There are no plugged wells in the area of review.

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III. WELL DATA

B (4) Existing Perforated Intervals

6700'	4 shots	Squeeze cement behind casing, 730 SX 🚧
5,050'	4 shots	Squeeze cement behind casing, 150 SX
4,776-4,780'	17 shots	Production perforations
4,784-4,794'	41 shots	Production perforations

Plugging Detail

End of 7" production casing at 10,715' TD well 13,275'

Plug 1	cement plug 13,174-13,275
Plug 2	cement plug 12,554-12,654
Plug 3	cement plug 11,712-11,812'
Plug 4	cement plug 10,546-10,768'

Proposed Plugs and Perforations

Squeeze the existing perfs 4,776-4,794' with 100 Sx neat cement Drill out SQ, PT, & set a CIBP with 20 ' of cement on top at +/- 6,650'. Perforate Brushy Canyon zone between 4930' to 6150' gross interval. The exact location of the perfs has not been decided.

B (5) - Hydrocarbon production above and below proposed disposal interval

The proposed disposal interval is the non-productive Brushy Canyon Formation which lies below the productive Cherry Canyon Formation (Willow Lake Delaware, SW 96855) and above the Bone Springs Formation.

The Bone Springs Formation is productive in certain sections in T25S, R 28E and is the shallowest formation potentially productive beneath the Brushy Canyon Formation.

The Cherry Canyon 6 Sandstone Reservoir currently producing in the Chaparral 10-1 is the deepest producing Formation within the ½ mile radius of investigation.

The Cherry Canyon 6 occurs between the TVD depths of 4758' and 4811' in the Chaparral 10-1 and is approximately 100' above the top of the Brushy Canyon Formation.

No Formation is producing below the Brushy Canyon Formation within the $^{1\!/}_{2}$ mile radius area of review. \checkmark

Proposed Injector - Chaparral 10 State Com #1 (30-015-30229) Form C-108 Section VII - Proposed Operation

- Proposed average daily injection rate:
 Proposed maximum daily injection rate:
 Proposed average daily injection volume:
 Proposed maximum daily injection volume:
 7,200 barrels per day
 Proposed maximum daily injection volume:
 8,640 barrels per day
- 2) The system will be a closed system.
- 3) Proposed average injection pressure:
 900 psig

 Proposed maximum injection pressure:
 1,800 psig
- The produced water source formation is the Willow Lake Delaware, SW 96855 and the non-productive receiving interval the Brushy Canyon are both formations in the Delaware Mountain group.
 No water compatibility issues are expected as a result of the proposed injection.
- A produced water analysis is attached.
 The proposed receiving interval is believed to have essentially the same analysis.

Pro-Kem, Inc. WATER ANALYSIS REPORT

630 Temp °F. 50

MPLE Dil Co. Lease Nell No Locatic Attentic	: LimeRock Resources : Redtail Hawk p.: 10 - 1A pn:Willow Lake Delaware, SW pn: S	96855	Date Sampled Date Analyzed Lab ID Numbe Salesperson : File Name : O e	: 28-October-2011 er: Oct2811.001- 3 ct2811.001		,
1	 Ph	5 100				
2	Specific Gravity 60/60 F	1 178				
2. २	CACO3 Saturation Index	@ 80F	0 653	Moderate		
0.		@140F	2 403	Sovera		
Die	esolved Gasses		2.455 MG/I	FO WT	*MEO/I	
4	Hydrogen Sulfide		<u>MO/L.</u>			
5	Carbon Dioxide		500			
6.	Dissolved Oxygen	Not	Determined			
0.	tiona		Determined			
7			20.006	1 20 1 -	000 90	n
7. 8	Magnesium (Ma++)		20,090	/ 20.1 -	207 Q/	5
0. 0	Sodium (Na+)	(Calculated)	70 169	/ 12.2 -	2 050 71	2
J.	Barium (Ba++)	(Calculated)	Determined	7 23.0 -	5,050.70	5
10. A			Determinen			
	llons Hudroved (OLL)		•	1 470 -	0.0	•
11.	Hydroxyl (OH-)		U	/ 1/.0 =	0.00	0
12.	Carbonate (CO3=)		U	/ 30.0 =	0.00	0
13.	Bicarbonate (HCU3-)		268	/ 61.1 =	4.3	4 0
14.	Sulfate (SO4=)		325	/ 48.8 =	5.61	5
15.	Chioride (CI-)		153,965	/ 35.5 =	4,337.04	4
16.	Total Dissolved Solids		248,457			
17.	Total Iron (Fe)		82.50	0 / 18.2 =	4.53	3
18.	Manganese (Mn++)	- Not	Determined			
19.	Total Hardness as CaCO3		65,148			
20.	Resistivity @ 75 F. (Calculated	d)	0.0	01 Ohm · meters		
	LOGARITHMIC WATER PA	TTERN	PRO		COMPOSIT	'ION
	*meg / L.		COMPOU	ND *meg/l X	FQ. WT.	= ma/l
Na			Ca(HCO3)	2 4.39	81.04	355
			CaSO4	6.66	68.07	453
Ca			CaCl2	988.75	55.50	54.876
			Ma(HCO3)	0.00	73.17	0
Mg		111111 SO4	MaSO4	0.00	60.19	0
Γ.			MaCl2	297.95	47.62	14.188
Fe	0000 1000 100 10 1 10		NaHCO3	0.00	84.00	0
	Calcium Sulfate Solubility	Profile	NaSO4	0.00	71.03	0
	690		NaCl	3.050.34	58.46	178.323
m	684			* milliequivalents	s per Liter	
g	672			- -	•	
,	660			<i>:</i>		
Ł	654					
	p42					

Tony Abernathy, Analyst

VIII - Geological Data

The proposed saltwater disposal zone, the non-productive Brushy Canyon Formation, is present between the vertical depths of 4930' and 6150'in the subject well. The Brushy Canyon consists primarily of interbedded sandstones and shales. The porosity of the sandstone intervals proposed for injection range from 10% – 20%, with an average porosity of approximately 14%. Permeabilities from sidewall cores taken from the Brushy Canyon Formation in the Chaparral 10-1 range from 1 md to 35 md for the sandstone intervals projected for saltwater disposal.

No sources of underground drinking water exist below the Brushy Canyon and the deepest potential sources of underground drinking water above the Brushy Canyon are less than 400' deep.

IX - Proposed Stimulation

The Proposed injection interval may be acidized with up to 20 gallons per foot with 7 ½% HCL acid. In necessary the interval may be fracture stimulated with up to 300,000 lbs. of 20/40 sand propant.

X - Logging and Test Data

Log sections were previously submitted to the Division and are available on the web site.

XI - Fresh Water Wells

There are no fresh water wells within one mile of the proposed SWD well.

XII - Proof of hydrologic separation between proposed disposal zone and overlying underground sources of drinking water

Electric log correlation and consequent geological subsurface mapping provide no evidence of faulting within the AOR. Additionally, nearby saltwater disposal wells are using the much shallower Bell Canyon Formation (Approximate subsurface depths of 2600' – 3800') for injection. The top of the Brushy Canyon Formation is approximately 4500' below the lowest possible source of underground drinking water and is separated from potential underground sources of drinking water by thousands of feet of interbedded shales and sandstones, anhydrite, limestone and salt.

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XIII - Proof of Notice is attached.

Affidavit of Publication
STATE OF NEW MEXICO
County of Eddy:
Danny Scott Nann Acit
being duly sworn, says that he is the Publisher
of the Artesia Daily Press, a daily newspaper of general
circulation, published in English at Artesia, said county
and state, and that the hereto attached
Legal Notice
was published in a regular and entire issue of the said
Artesia Daily Press, a daily newspaper duly qualified
for that purpose within the meaning of Chapter 167 of
the 1937 Session Laws of the state of New Mexico for
1 Consecutive weeks/days on the same
day as follows:
First Publication March 15, 2012
Second Publication
Third Publication
Fourth Publication
Fifth Publication
Subscribed and sworn to before me this
16th day of March 2012
OFFICIAL SEAL Latisha Romine NOTARY PUBLIC-STATE OF NEW MEXICO
May commission expires: 5//2/2015
Katisho Komine
Latisha Romine Notary Public, Eddy County, New Mexico

Copy of Publication:

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CERTIFIED MAIL, RECEIPT CERTIFIED MAIL RECEIPT 0299 No Insurance Coverage Pro m nestic Mail Only: No Insurance Coverage Provided -+ For delivery information visit our website at www.usps.com m Eor delivery information visit our website at www.usps.com MIDLAND TX 79701 S OKLAHDHA CITY OK 73154 🔔 S 0601. 8.... 0601 \$0.85 0401 \$0.65 0401 Postage \$ \$ Postage TAING TO ONNA 1000 **Certified Fee** \$2.95 **Certified Fee** \$2.95 1000 Return Receipt Fee (Endorsement Required) Ø, 12 M Return Receipt Fee (Endorsement Required) \$0.00 \$0.00 20 Restricted Delivery Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) ¢ \$0.00 570 \$0.00 04/24/2 25 \$3.80 Total Postage & Fees \$ \$3.60 Total Postage & Fees \$ Ē USPS -7 7011 Sent Te ZULL Street, Apt. No.; Pox No. 55 hAUM Sir Ñ, D 300 or PO Box No. City, State, ZIP City, State, ZIF 3154 7910 hisma R itu DK PS Form 3800. Aut U.S. Postal Service... U.S. Postal Service... GERMINED MAIL RECEIP GERITIEED MAIL, RECEIPT Ω, S (Domestic Mail Only, No Insurance Coverage) mestic Mail Only, No Insurance Coverage Provided PROVIDED ũ DED m For delivery information visit our website at www.usps.com For delivery information visit our website at www.usps.com MIDLAND TX 79707 \$ A 100 OKLAHOMA CITY OK 73102 /3 0601 2 NIMIL \$0.85 046 \$0.85 840DN 01 Postage \$ \$ Postage NZ 0 Certified Fee \$2,95 19 Pp Certifled Fee \$2.95 1000 1000 О 2.000 e, Return Receipt Fee (Endorsement Required) Ż in P Return Receipt Fee (Endorsement Required) 24 Here Piero \$0.00 \$0.00 εΩ 2012 Restricted Delivery Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) \$0.00 \$0.00 570 1.570 104 04/2422012 \$3.80 \$3.80 Total Postage & Fees \$ 04/2472012 Total Postage & Fees \$ -Ì Sent To Sent To TTOL Mod. Co-Hearburg TIDY Mergy Production WOM Thuducua WON Street, Apt. No. 3300 N. A. Street, Bldg 2. Street Ant No Brugdway 120 or PO Box No. à City, State, ZIP+ City, State, ZIF Midland TX 79707 100 CHU. OK home 73 U.S. Postal Service U.S. Postal Servicem GERMINED MAIL RECEIPT CERTIFIED MAIL RECEIPT ٦. estic Mail Only: No Insurance Co m ГU tic Mail Only: No Insurance Coverage P delivery information visit our website at www.usps.com m щ, For delivery information visit our website at www.usps.com FORT WORTH TX 76102 S A r-1 HOUSTON TX 77032 S E 0601 60 \$0.85 0401 s Postace 28517 Sasu \$0.85 \$ Postage \$2.95 Certified Fee *ZOZ* 71**97**5tm \$2.9 Certified Fee ğ Return Receipt Fee (Endorsement Required) 1000 \$0.00 Postria 74 Return Receipt Fee (Endorsement Required) \$0.000 Here **__** Η¥ Restricted Delivery Fee (Endorsement Required) \$0.00 APR 1570 Restricted Delivery Fee (Endorsement Required) \$0.00 NOION 570 CLICE Want \$3.80 \$ Total Postage & Fees \$3.80 04/24/2012 Total Postage & Fees \$ Sent To гÌ 7011 etta Sent To 7011 Street, Apt.No or PO Box Vo. Mengu Troduction Juston St Howton PKWY E.Ste 125 City, State, ZIP+ or PO Box No. 1610: City, State, Zil TX 1703 り Inclusional

District 1 . 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District 1V 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-102 Revised October 12, 2005 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

□ AMENDED REPORT

		W	<u>ELL LOC</u>	CATION	NAND ACI	REAGE DEDIC	CATION PLA	<u>T</u>		
30	API Numbe	er 29		² Pool Code 96855		,	° Pool Na Willow Lake Do	me elaware SW		
¹ Property 31001	Code		1	⁵ Property Name				Well Nu		
⁷ OGRID	No.			IIME	⁸ Operator				⁹ Elevation	
	55	<u> </u>		LINE	10 Curfood	Location	•		2920 UL	
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	LOCATION North/South line	Feet from the	East/West line	Compty	
F	10	25-S	28-E		1980	NORTH	1980	WEST	EDDY	
			¹¹ Bott	tom Hol	e Location	If Different Fro	m Surface	h <u></u>	· · · · 	
UL or lot no,	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
12 Dedicated Acro	es ¹³ Joint o	or Infill	Consolidation Co	ode ¹⁵ Ord	ler No.	_ _	<u></u>	L <u> </u>	L	
No allowable	will be as	signed to th	is comoletio	on until all	interests have	been consolidated	or a non-standa	rd unit has been	approved by the	
livision.										
];	980'		1980'	0			I hereby certi to the best of t owns a worki the proposed location purse interest, or to order heretoft Signature <u>Mike Pipp</u> Printed Nam	y that the information co ny knowledge and belief, ng interest or unleased mi bostom hole location or h uant to a contract with an a voluntary pooling agre ore entered by the division when the division	ntained herein is true and com, and that this organization eith ineral interest in the land inclu as a right to drill this well at th owner of such a mineral or we ement or a compulsory pooling n. 3/8/12 Date	
							¹⁸ SUR I hereby c plat was p made by n same is tr 4/16/98	VEYOR CE ertify that the well elotted from field n ne or under my sup ue and correct to t	RTIFICATION location shown on this otes of actual surveys pervision, and that the he best of my belief.	
							Date of Sur Signature a Roger M. R 12128 Certificate 1	vey ad Seal of Professiona obbins	l Surveyor:	



Chaparral 10 State Com 1 API # 30-015-30229

CHAPARRAL 10 SWD #1 WELL SECTION 3, 9, AND 10, T25S-R28E EDDY COUNTY, NM

Section 3 -Township 25S - Range 28E							
Working Interest Owners 1/2 mile radius: Injecting into the Brushy-Canyon Formation at 5,050' to 5860'							
M	A SWSW Drilling Title Opinion dated September 26, 2003, described as Lots 1-4; S2N2 and S2; all depths						
	COG Operating LLC						
	550 W. Texas, Suite #1300						
₹ N	SESW/ Drilling Title Opinion dated September 26, 2003, described as Lots 1-4; S2N2 and S2; all depths						
	COG Operating LLC						
	550 W. Texas, Suite #1300						
	Midland, 1X 79701						
O *	SWSE Drilling Title Opinion dated September 26, 2003, described as Lots 1-4, S2N2 and 52; all depths						
	COG Operating LLC						
	550 W. Texas, Suite #1300						
	[Midland, TX 79701						
	Section 9 - Township 255 - Kange 28E						
	Working Interest Owners 1/2 mile radius: Injecting into the Brushy-Canyon Formationat 5,050' to 5860'						
A.5	NENE Surface Owner as per Eddy County, New Mexico Assessors on line database						
	Devon Energy Production Company, LP						
	20 N Broadway Oklahoma City, OK 73102						
N H2	Surface Owner as per Eddy County New Mexico Assessors on Iline database						
(a	Devon Energy Production Company 1P						
20 N Broadway							
	Oklahoma City, OK 73102						
្ទ្យ	NESE Surface Owner as per Eddy County, New Mexico Assessors on line database						
	Devon Energy Production Company, LP						
	20 N Broadway						
	Okiahoma City, OK /3102						
	Section 10 - Township 255 - Range 28E						
Working Interest Owners 1/2 mile radius: Injecting into the Brushy-Canyon Formation at 5,050' to 5860'							
A	NENE Drilling, Title Opinion dated February, 7, 2005, described as N2NE; all depths						
<u>(1⁸ 707 1 1 1</u>	Southwestern Energy Production: (surface down to 4,989' below the surface), Lime Rock Resources A, L.P. as per Go-Tech						
	Devon Energy Production Company, L.P.: (below 4,989')						
B . 1	NWNE Drilling Title Opinion dated February,7, 2005; described as N2NE; all depths						
	Southwestern Energy Production: (surface down to 4,989' below the surface), Lime Rock Resources A, L.P. as per Go-Tech						
	Devon Energy Production Company, L.P.: (below 4,989')						
	NEANN Dulling Title Ontation dated May 16 7002 described as N2NW: all depths						
ي مو يغ د المو	Doven Enormy Production Company (curface 9, minerals and 50% working interast)						
	Carthurster Surger Company, Surger & Hinerois and 50% working increase						
]	Southwestern Energy Production Company: (50% working interest), Lime Kock Resources A, L.P. as per Go-Lech						
D	NWNW. Orilling Title Opinion dated May 16/2002; described as N2NW; all depths						
NALES'	Devon Energy Production Company: (surface & minerals and 50% working interest)						
	Southwestern Energy Production Company: (50% working interest). Lime Rack Resources A. L.P. as per Go-Tech						
	I Dordi Mesteri Elici By Liouver do morali da la mana anteresta da mana da mana da mana da mana da mana da mana						

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CHAPARRAL 10 SWD #1 WELL SECTION 3, 9, AND 10, T25S-R28E EDDY COUNTY, NM

E	SWNW Surface Owner as per Eddy County, New Mexico Assessors on-line database
	Devon Energy Production Company
	SENW As per co-lecu
	Lime Rock Resources A, L.P. (Chaparral 10 #1) (API 30-015-30229)
<u> </u>	
SG ≧	SWNE Drilling Title Opinion dated February 7, 2005, described as E2; all depths
	Southwestern Energy Production Company: (surface down to 100' below the stratiaraphic equivalent of the deepest formation producina).
1	lime Rock Resources A / P as per Go-Tech
	Deven Energy Production Company L B : /helow 100' helow the stratigraphic equivalent of the deepest formation producing)
6	
H	SENE Drilling Title Opinion dated February 7, 2005, described as E2; all depths
	Southwestern Energy Production Company: (surface down to 100' below the stratigraphic equivalent of the deepest formation producing),
	Lime Rock Resources A, L.P. as per Go-Tech
	Devon Energy Production Company, L.P.: (below 100' below the stratigraphic equivalent of the deepest formation producing)
ૢાઙ	NESE Drilling Title Opinion dated February 7, 2005, described as E2; all depths
	Devon Production Company, L.P.
	as per Go-Tech:
	Nearburg Producing Co.
	3300 N. A Street, Bldg 2, Suite 120
	Midland ,TX 79707
	NWSE Drilling Title Opinion dated February 7: 2005, described as E2; all depths
y . i	
	[Devon Production Company, L.P. [No evidence in Go-Tech]
25011279	
ζ.)K	NESW-3 Drilling Title Opinion dated May 28, 2003, described as E2 SW; all depths
	Jetta-X2, L.P.: (50% working interest) (operator data not available in Go-Tech)
	Southwestern Energy Production Company: (50% working interest), Lime Rock Resources A, L.P. as per Go-Tech
	(No evidence of producing well in Go-Tech)
<u>, 2 6</u>	
	Lime Rock Resources A, L.P. (Shrike 10H Com#1) (API 30-015-32914)
्रं 🏹 🤄	SWSW As per co-tech
	Chesapeake Operating, Inc.: (Willow Lake 10 State Com #1) (API 30-015-36585)
	P.O. Box 18496
	Oklahoma City ,OK 73154
N	SESW Drilling Title Opinion dated May 28, 2003, described as EZ SW; all depths
	Devon Energy Production Company, L.P.
	Southwestern Energy Production Company: (LRE Operating, LLC as per Go-Tech)
1	CNICCS Delline Title Oninian dated Cohrupny 7, 2005 decembed at E21 all deaths
	and the shine shine shine she as the standard strain as the shine she show the shine she show the shine she show the she she show the she she she she she she she she she s
	Devon Production Company, L.P.
	as per Go-Tech:
	Nearburg Producing Co.
	3300 N. A Street, Bldg 2, Suite 120
	Midland ,TX 79707

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Submit 3 Copies To Appropriate District	State of New Me	xico		Form C-103				
Office District I	Energy, Minerals and Natu	ral Resources	M	June 19, 2008				
1625 N. French Dr., Hobbs, NM 88240			WELL API NO.					
District II	OIL CONSERVATION	DIVISION	30-015-30229					
District III	rict III 1220 South St. Francis Dr		5. Indicate Type of Lease					
1000 Rio Brazos Rd., Aztec, NM 87410	Rio Brazos Rd., Aztec, NM 87410 Santa Fe NM 87505		SIAIE FI					
1220 S. St. Francis Dr., Santa Fe, NM		505	0. State Off & Gas Lease N	0.				
87505								
SUNDRY NOT	CES AND REPORTS ON WELLS		7. Lease Name or Unit Agr	eement Name				
DIFFERENT RESERVOIR. USE "APPLIC	CATION FOR PERMIT" (FORM C-101) FC	OG BACK TO A	CHAPARRAL 10					
PROPOSALS.)	OPOSALS.)							
1. Type of Well: Oil Well	Gas Well [] Other SWD							
2. Name of Operator			9. OGRID Number 25533	3				
Address of Operator			10 Pool name or Wildcat					
c/o Mike Pinnin LLC 3104 N Sull	livan Farmington NM 87401		Willow I ake Delaware SW	(96855)				
	ival, i amington, ivi 07401		Willow Lake Delaware SW	()0055)				
4. Well Location			<u>I,</u>					
Unit Letter F :	1980 feet from the NORTH	line and 1980	feet from the WEST	line				
Section 10	Township 25-S	Range 28-E	NMPM Eddy County					
	11. Elevation (Show whether DR,	RKB, RT, GR, etc.)	Jan Barris					
	2926' GL	,						
12. Check A NOTICE OF IN PERFORM REMEDIAL WORK TEMPORARILY ABANDON PULL OR ALTER CASING DOWNHOLE COMMINGLE	Appropriate Box to Indicate Na TENTION TO: PLUG AND ABANDON CHANGE PLANS MULTIPLE COMPL	ature of Notice, SUB REMEDIAL WORI COMMENCE DRI CASING/CEMENT	Report or Other Data SEQUENT REPORT (K	DF: IG CASING []]				
OTHER: Convert to SWD	\boxtimes	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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. 								
Lime Rock would like to convert this well to SWD as follows: MIRUSU. TOH w/rods, pump, & tbg. Set 7" CIBP @ ~6650' & dump 20' cmt on top. Set a 7" cmt ret @ ~4750' & SQ Cherry Canyon perfs 4776'-94' w/about 100 sx cmt. Drill cmt & CO to ~6400'. PT csg to ~1000 psi. Perf the Brushy Canyon @ about 5050'-5860' w/about 917 holes. Test injectivity. Stimulate perfs with acid as required. Land 7" plastic lined SWD pkr on 3-1/2" plastic lined SWD tbg @ about 5025'. Install pkr fluid in annulus. Conduct MIT test. Release workover rig. Initiate SWD. See attached wellbore diagrams.								
Lime Rock has submitted a C-108 SWD application to Santa Fe. No work will be initiated until the SWD application is approved.								
I hereby certify that the information above is true and complete to the best of my knowledge and belief.								
SIGNATURE Michofuppin								
Type or print name Mike Pippin	E-mail address:	mike@pippinll	c.com PHONE: 505-1	327-4573				
For State Use Only								
APPROVED BY:	TITLE		DATE	· · · · · · · · · · · · · · · · · · ·				
Conditions of Approval (if any):								

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Injection Permit Checklist (11/15/2010) 1332 SWD Permit Date WFX PMX 10 # HAPARA Well Name(s): (# Wells 98 New/Old: N: (UIC primacy March 7, 1982) API Num: 30-0 15-30229 5/101 Spud Date: 5 2 Rge 28E County EPD2 1980FNL 1980Fil 0 TspZ Footages Unit Sec General Location: LIME ROCK RESOURCE MIKE PIPPIN Operator: Contact 25 7335 RULE 5.9 Compliance (Wells) 4S 5.9 OK? OGRID (Finan Assur) PLUEER BAS 10 4776-Pro 012 Well File Reviewed Current Status: Planned Work to Well: After Conversion Elogs in Imaging File: **Diagrams: Before Conversion** Sizes Setting Stage Cement Determination Well Details: Method Hole.....Pipe Depths Tool Sx or Cf 123/8 2 New __Existing __Surface 9578 12 /4 80 SX New__Existing Interm 6216 3/4 11 8 6 New_Existing LongSt SED. New___Existing ___ Liner 107156 Đ New_Existing OpenHole AVE DEL **Depths/Formations:** Depths, Ft. Formation Tops? SECTION 506 ell ED 312 Formation(s) Above 5050 BA ection TOP Max. PSI Ŧ OpenHole Perfs 58I O Injection BOTTOM: 15 3 2-Packer Depth Tubing Size R. Bone S 200 6 Formation(s) Below Noticed? _____ Salado Top/Bot Saplian Reel? (Polash? toticed ? ClifeLlouses 1-DAHPE2 400 Wells? New Analysis? ____ Affirmative Statement _____ Fresh Water: Depths: Formation **Disposal Fluid** Analysis? Sources Production Potential/Testing: Disposal Interval: Analysis? 12 Surface Owner Denou Engran Notice: Newspaper Date Mineral Owner(s) CoG C RULE 26.7(A) Affected Persons: Producing in Interval? $N_{Wellbore}$ Diagrams? AOR: Maps? Well List? ..Active Wells) WhichWells? **Repairs?** P&A Wells **Repairs?** Which Wells? 0 01 200 6100 Issue Request Sent Reply:

4/24/2012/3:20 PM

SWD_Checklist.xls/ReviewersList