Form 3160-5 (April 2004)

#### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OM B No 1004-0137 Expires: March 31, 2007

JUL 2 7 2011 5. Lease Serial No.

SUNDRY NOTICES AND F	NMLC 032952A				
Do not use this form for proposal abandoned well. Use Form 3160 -	6. If Indian, Allottee or Tribe Name				
SUBMIT IN TRIPLICATE- Other in	nstructions on reverse side.	7. If Unit or CA/Agreement, Name and/or No.			
1. Type of Well ☐ ☐ Gas Well ☐ ☐ Othe	er	8. Well Name and No.			
2. Name of Operator Range Operating New Mexico, LLC		See Attached List  9. API Well No.			
Ba Address	3b. Phone No. (include area code)	See Attached List			
100 Throckmorton St., Ste. 1200, Fort Worth, TX 76102	817-869-4216	10. Field and Pool, or Exploratory Area  Loving; Brushy Canyon East			
4. Location of Well (Footage, Sec., T., R., M., or Survey Description	ony	11. County or Parish, State			
See Attached List		Eddy			
12. CHECK APPROPRIATE BOX(ES)	TO INDICATE NATURE OF NOTICE, R	EPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION				
✓ Notice of Intent  Acidize  Alter Casing  Coaign Repair	Deepen Production (Statement of Statement of	art/Resume)			
Subsequent Report Casing Repair	Plug and Abandon Temporarily Ab				
Final Abandonment Notice Convert to Injection	Plug Back Water Disposal	produced water.			
following completion of the involved operations. If the operates the street ing has been completed. Final Abandonment Notices shat determined that the site is ready for final inspection.)  See attachments which include a well list and n	all be filed only after all requirements, including reclam	in a new interval, a Form 3100-4 shall be filed office nation, have been completed, and the operator has			
14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)  Paula Hale	Title Sr. Reg. Sp.				
Signature	Date	07/18/2011			
THIS SPACE FO	OR FEDERAL OR STATE OFFICE	USE			
Approved by	PETROLEUM EXSI	MESR Date 3UL 2 7 201			
Conditions of approval, if any, are attached. Approval of this not certify that the applicant holds legal or equitable title to those rig which would entitle the applicant to conduct operations thereon	ghts in the subject lease Office	Kz			

NMLC 032592A NMLC 032592A	30-025-37516 Trant 30-025-38208 Trant		Sec. e-I-T25S-R37E	Justis, Tubb-Drinka	ard	County Lea Lea Lea Lea
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# Range Operating New Mexico, LLC Tarantula 3 Lease Changes in Method of Produced Water Disposal

1. Name of formation(s) producing water on the lease:

Blinebry, Tubb and Drinkard

2. Amount of water produced from all formation in bbls/day:

The lease averages 280 bwpd.

- 3. Water Analysis included in Sundry packet.
- 4. How water is stored on lease:

3-500 bbl fiberglass tanks

5. How water is moved to the disposal facility:

3" poly flowline

6. Primary disposal facility:

Rice Operating Company (19174)
Justis SWD System, Well B-12, SWD
API #30-025-24761
Sec. 12, T25S, R37E
880' FNL & 2310' FEL
Lea County, New Mexico

7. Copy of Underground Injection Control Permit included in Sundry packet.



Catalyst Oilfield Services 11999 E Hwy 158 Gardendale, TX 79758 (432) 563-0727 Fax: (432) 224-1038

## Water Analysis Report

Customer:	Range Resources Company		Sample #	5269
Area:	Loving		Analysis ID #:	7418
Lease:	Tarantula			
Location:	Battery	0		
Sample Point.				

Sampling Date:	6/17/2011	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	6/22/2011	Chloride:	70659.4	1993.04	Sodium:	42220.0	1836.47
Analyst:	Catalyst	Bicarbonate:	536.0	8.78	Magnesium:	1429.4	117.59
TDS (mg/l or g/m3):	116866.4	Carbonate:			Calcium:	624.8	31.18
	1.081	Sulfate:	400.0	8.33	Potassium:	851.6	21.78
Density (g/cm3):	1.001				Strontium:	145.2	3.31
					Barium:	0.0	0.
Hydrogen Sulfide	68				Iron:	0.0	0.
Carbon Dioxide:	240			i	Manganese:	0.000	0.
Comments:		pH at time of samplir	ng.	7.5			
		pH at time of analysi	s				
pH used in Calculati		tion:	7.5				
		Temperature @ lab conditions (F):		75	Conductivity (mid	•	167200 .0598

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl											
Calcite Temp CaCO				Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>			
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0.70	23.76	-1.53	0.00	-1.54	0 00	-0.40	0.00	0.00	0.00	
100	0.67	27.82	-1.59	0.00	-1.54	0.00	-0 42	0 00	0.00	0.00	
120	0.66	32.82	-1.64	0 00	-1 51	0 00	-0 43	0 00	0.00	0.00	
140	0.66	38.14	-1.68	0.00	-1.46	0.00	-0 44	0 00	0.00	0 00	• ;
160	0.67	44.39	-1.71	0 00	-1 38	0 00	-0 43	0 00	0.00	0.00	
180	0.69	51 58	-1.74	0 00	-1 30	0 00	-0 42	0 00	0.00	0 00	,
200	0 72	59.40	-1 76	0.00	-1 20	0.00	-0.41	0.00	0 00	, 0.00	
220	0.77	67.52	-1 78	0.00	-1.09	0.00	-0.39	0.00	0 00	0.00	

Order No. SWD-179

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set in a packer located at approximately 4200 feet.

#### 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.

That the casing-tubing annulus 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.

That water disposed of into this well will be by gravity flow, and in no event shall injection pressures exceed 850 pounds per square inch.

That the operator shall notify the supervisor of the Commission's Hobbs District Office before injection is commenced through said well.

That the operator shall immediately notify the supervisor of the Commission's Hobbs District Office of the failure of the tubing, casing, or packer in said well or the leakage of water from or around said well and shall take such steps as may be timely or necessary to correct such failure or leakage.

#### PROVIDED FURTHER:

That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection

of correlative rights; upon failure of applicant to comply with any requirement of this order after notice and hearing, the Commission may terminate the authority hereby granted in the interest of conservation. That applicant shall submit monthly reports of the disposal operation in accordance with Rule

Schlumberger BlueView .

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