1		· · · · · ·				
RECEIVED	-7	UNBRG				
Form 3160-5 ort 0.7 2010 UNI	TED STATES	ERIOR EMENT		FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31,1993 5. Lease Designation and Serial No.		
HOBDOOD SENAND OF L				NMLC-029406B		
Do not use this form for proposals to dri Use "APPLICATION FO	Il or to deepen d	or reentry to a different res	ervoir.	6. If Indian, Allottee or Tribe Name		
SUBMIT	IN TRIPLICAT	E		7. If Unit or CA, Agreement Designation		
I Type of Well	/			-		
2. Name of Operator	<u></u>			8. Well Name and No. Pintail Federal #1		
Mack Energy Corporation				9. API Well No.		
3. Address and Telephone No. P.O. Box 960 Artesia, NM 88211-0960		(575) 748-1288		30-025-39527 10. Field and Pool, or Exploratory Area		
4. Location of Well (Footage, Sec., T. R., M. or Survey De	scription)			Maljamar; Yeso, West		
1650 FSL & 231	0 FWL Sec. 8 T1'	7S R32E /		11. County or Parish, State		
		,		Lea, NM		
12. CHECK APPROPRIATE BOX(s) TO INDICAT	E NATURE OF NOTICE,	REPOF	RT, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF A	ACTION			
Notice of Intent		Abandonment		Change of Plans		
Subsequent Report		Recompletion Plugging Back		New Construction		
		Casing Repair		Water Shut-Off		
Final Abandonment Notice	X	Altering Casing Other Onshore Orde	Conversion to Injection Dispose Water			
				(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)		
13 Describe Proposed or Completed Operations (Clearly state all give subsurface locations and measured and true vertice			e of starting	any proposed work. If well is directionally drilled,		
Name (s) of formation (s) producing water on	the lease	Maljamar; Yeso, West	 			
Amount of water produced from each formatic		400	ACC	EPTED FOR RECORD		
A water analysis of produced water from each lease the total dissolved solids, ph, and concen						
chlorides and sulfates.		Attached	ļ	OCT 2 2 2010		
How water is stored on lease		Fiberglass Tank		/s/ JD Whitlock Jr		
How water is moved t disposal facility Operator's name, well name and location, by 1.	(1.1/4 - anotion	pipeline		REAU OF LAND MANAGEMENT		
township, and range, of the disposal facility. If	· · ·	COG Operating LLC	CARLSBAD FIELD OFFICE			
facility is an approved disposal system, the ope the name of the disposal system should suffice		Pronghorn SWD NE/4 NW/4 Sec. 20 T17S F	2325			
Disposal Permit SEE ATTACH		SWD-536	<u> </u>			
CONDITIONS		VAL				
14. I hereby certify that the foregoing is true and correct Signed Juny W. Sherroll	Title	Production Clerk	<u> </u>	Date 10/14/10		
(This space for Federal or State office use)			<u>_</u>	1,		
Approved by Conditions of approval, if any:	Title	··· .				
	····		ľ	PETROLEUM ENGINEER		
Title 18 U.S.C. Section 1001, makes it a crime for any person k or representations as to any matter within its jurisdiction.	nowingly and willfully t	o make to any department or agency of t	the United S	itates any false, fictitious or fraudulent statements		
	•See Instru	ction on Reverse Side		~		





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

Water Analysis Report

Customer:	Mack Energy Corporation		Sample #:	2507
Area:	Artesia		Analysis ID #:	4880
Lease:	PINTAIL			
Location:	1	0		
Sample Point:	Wellhead			
1				

Sampling Date:	8/25/2010	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	8/27/2010	Chloride:	67569.6	1905.89	Sodium:	40740.0	1772.09
Analyst:	Catalyst	Bicarbonate:	395.3	6.48	Magnesium:	903.4	74.32
TDS (mg/l or g/m3):	115399.5	Carbonate:			Calcium:	2349.0	117.22
Density (g/cm3):	1.078	Sulfate:	3000.0	62.46	Potassium:	375.8	9.61
					Strontium:	48.3	1.1
					Barium:	0.0	0.
Hydrogen Sulfide:	67				lron:	18.1	0.65
Carbon Dioxide:	35				Manganese:	0.000	0.
Comments:		pH at time of sampling: pH at time of analysis:		7			
		pH used in Calculation: Temperature @ lab conditions (F):		7			
				75	Conductivity (micro-ohms/cm): Resistivity (ohm meter):		148629 .0673

Values Calculated at the Given Conditions - Amounts of Scale in Ib/1000 bbl										
emp CaCO ₃		Gypsum CaSO ₄ *2H ₂ 0		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.63	25.04	-0.12	0.00	-0.14	0.00	-0.05	0.00	0.00	0.00
100	0.70	30.05	-0.18	0.00	-0.13	0.00	-0.07	0.00	0.00	0.00
120	0.77	35.37	-0.23	0.00	-0.09	0.00	-0.08	0.00	0.00	0.00
140	0.83	41.00	-0.26	0.00	-0.04	0.00	-0.08	0.00	0.00	0.00
160	0.89	46.63	-0.29	0.00	0.04	83.25	-0.08	0.00	0.00	0.00
180	0.95	52.89	-0.31	0.00	0.13	259.46	-0.06	0.00	0.00	0.00
200	1.01	58.84	-0.32	0.00	0.24	435.05	-0.05	0.00	0.00	0.00
220	1.08	64.79	-0.33	0.00	0.35	600.31	-0.03	0.00	0.00	0.00

BUREAU OF LAND MANAGEMENT Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220 575-234-5972

Disposal of Produced Water From Federal Wells Conditions of Approval

Approval of the produced water disposal methodology is subject to the following conditions of approval:

- 1. This agency shall be notified of any change in your method or location of disposal.
- 2. Compliance with all provisions of Onshore Order No. 7.
- 3. This agency shall be notified of any spill or discharge as required by NTL-3A.
- 4. This agency reserves the right to modify or rescind approval whenever it determines continued use of the approved method may adversely affect the surface or subsurface environments.
- 5. All above ground structures on the lease shall be painted Shale Green (5Y 4/2), or as per approved APD stipulations. This is to be done within 90 days, if you have not already done so.
- 6. Any on-lease open top storage tanks shall be covered with a protective cover to prevent entry by birds and other wildlife.
- 7. This approval should not constitute the granting of any right-of-way or construction rights not granted by the lease instrument.
- 8. If water is transported via a pipeline that extends beyond the lease boundary, then you need to submit within 30 days an application for right-of-way approval to the Realty Section in this office if you have not already done so.
- 9. Disposal at any other site will require prior approval.
- 10. Subject to like approval by NMOCD.

9/30/2010

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