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Form 3160-5 (June 1990) RECEIVED UN DEPARTME DEC 2 3 2008 UREAU OF	ITED STATES NT OF THE INT LAND MANAC	TERIOR GEMENT		Budget Bur Expires 5 Lease Designat	I APPROVED eau No 1004-0135 March 31,1993 tion and Serial No
HOBBSOOD NOTICES Do not use this form for proposals to d Use "APPLICATION FO	AND REPOR rill or to deepen DR PERMIT—" f	IS ON WELLS or reentry to a different res or such proposals	ervoir.	6 If Indian, Allou	VM-97887 tee or Tribe Name
	T IN TRIPLICA	TE		7 If Unit or CA, A	Agreement Designation
I Type of Well Oll Gas Other Other				8 Well Name and	
2 Name of Operator COG Operating LLC			-	9 API Well No	k Federal
³ Address and Telephone No 550 W. Texas, Suite 1300, Midland, TX 7	9701 ′	(432)685-4372			38357 ? or Exploratory Area
4 Location of Well (Footage, Sec, T R, M or Survey De					
	4, Sec 5-T17S-R2	32E	-	11 County or Paris	tyburg San Andres Sh, State
12 CHECK APPROPRIATE BOX	(s) TO INDICA	TE NATURE OF NOTICE.	REPOR		a, NM R DATA
TYPE OF SUBMISSION		TYPE OF A			
Notice of Intent		Abandonment		Change of Pl	ans
Subsequent Report		Recompletion Plugging Back		New Constru	ction Fracturing
Final Abandonment Notice	Σ	Casing Repair Altering Casing Other Onshore Order	r 7	Water Shut-O	o Injection
13 Describe Proposed or Completed Operations (Clearly state al give subsurface locations and measured and true verti Name (s) of formation (s) producing water on	cal depths for all marke	ive pertinent dates, including estimated date rs and zones pertinent to this work)* Maljamar Grayburg San A		Completion or Recon iy proposed work If	npletion Report and Log form) well is directionally drilled
Amount of water produced from each formation	on in barrels per	138			
A water analysis of produced water from each	zone showing at			PPROV	/ED
lease the total dissolved solids, ph, and concer	tration of				
chlorides and sulfates.		Attached	┟──┟──	DEC 212	
How water is stored on lease		Fiberglass Tank			800
How water is moved t disposal facility		4" SDR 11 Polypipe		IAMES & ALL	
Operator's name, well name and location, by 1 township, and range, of the disposal facility. If facility is an approved disposal system, the ope the name of the disposal system should suffice	JAMES A. AMOS COG Operating SUPERVISOR-EPS Pronghorn SWD NE/4 NW/4 Sec 20-T17S-R32E				
Disposal Permit	·	SWD-536	-K52E		
		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	·		
14 I hereby centry that the foregoing is true and correct Signed Leven W. Sherred	7 Tutle	Production Clerk	~ `	Date	12/8/08
(This space for Federal or State office use) Approved by Conditions of approval, if any	Title		•	Date	
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	to make to any department or agency of the	ne United Stat	es any false, fictitio	us or fraudulent statement

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Water Analysis Report

Company:	Mack Energy Corporation		Sample #:	6872		
Area:	Artesia		Analysis ID #:	205		
Lease:	DUCK					
Location:	1	0				
Sample Point:	Wellhead					

·····							
Sampling Date:	1/25/07	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	2/6/07	Chloride:	134147.4	3783.81	Sodium:	46699.9	2031.33
Analyst:	Mitchell Labs	Bicarbonate:	62.8	1.03	Magnesium:	4074.8	335.21
TDS (mail or alm?)	213692.9	Carbonate:			Calcium:	28501.8	1422.25
TDS (mg/l or g/m3): Density (g/cm3, tonne/i		Sulfate:	200.0	4.16	Strontium:		
Anion/Cation Ratio:	no): 1.149 1	Phosphate.		1	Barium:		
Anion/Cation Ratio:	'	Borate:			Iron:	5.7	0.21
		Silicate:			Potassium:		
					Aluminum:		
Carbon Dioxide:	46	Hydrogen Sulfide:		102	Chromium:		
Oxygen:		pH at time of sampli	D <u>a</u> :	6.5	Copper:		
Comments:					Lead:		
		pH at time of analysi	is:		Manganese:	0.460	0.02
		pH used in Calcula	tion:	6.5	Nickel:		
		Temperature @ lab conditions (F):			Conductivity (mic Resistivity (ohm	215200 .0465	

Cond	itions	Values Calculated at the Given Conditions - Amounts of Scale in Ib/1000 bbl										
Temp Gauge Press.				Gypsum CaSO ₄ *2H ₂ 0		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO <u>4</u>		
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	0.32	2.00	-0.47	0.00	-0.45	0.00	0.00	0.00	0.00	0 00	
100	0	0.38	2.57	-0.53	0.00	-0.45	0.00	0.00	0.00	0.00	0.00	
120	0	0.45	3.14	-0.58	0.00	-0.41	0.00	0.00	0.00	0.00	0.00	
140	0	0.52	3.71	-0.62	0.00	-0.36	0.00	0.00	0.00	0.00	0.00	

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