OCD-ARTHNIA

Form 3160-5 (April 2004)	UNITED STATES DEPARTMENT OF THE BUREAU OF LAND MAN	INTERIOR ALIC 18 20	FORM APPROVED OM B No 1004-0137 Expires March 31, 2007  5 Lease Serial No
SUNDR	Y NOTICES AND REF	PORTS ON WELLS	NMNM96219
	this form for proposals t well. Use Form 3160-3 (/		6 If Indian, Allottee or Fribe Name
SUBMIT IN T	RIPLICATE- Other instr	ructions on reverse side	7 If Unit or CA/Agreement Name and/or No
1 Type of Well Oil Well	8 Well Name and No.		
2 Name of Operator Marbob E	nergy Corporation		Millenium 34 Federal #1  9 API Well No
3a Address PO Box 227, Artesia, NM 8		3b. Phone No (include area code) 575-748-3303	30-015-31833 10 Field and Pool, or Exploratory Area
4 Location of Well (Footage, Sec	C, T, R, M., or Survey Description)		GRBG Jackson; SR-Q-GRBG-SA
990 FSL 990 FWL, Sec. 34-7	Γ17S-R29E, Unit M		11 County or Parish, State
			Eddy Co., NM
12. CHECK	APPROPRIATE BOX(ES) TO	INDICATE NATURE OF NOTICE	E, REPORT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTIO	N .
If the proposal is to deepen d Attach the Bond under which following completion of the testing has been completed determined that the site is rea MARBOB ENERGY CO ATTACHED, PLEASE	irectionally or recomplete horizontall in the work will be performed or provinvolved operations. If the operation Final Abandonment Notices shall be day for final inspection.)  ORPORATION REQUESTS AF	Fracture Treat Reclamate New Construction Recomple Plug and Abandon Temporar Plug Back Water Distriction and measured de the Bond No on file with BLM/BIA I results in a multiple completion or recomplified only after all requirements, including	other Other  Oth
		RI-Nows	APPROVED  AUG 1 4 2009  JAMES A. AMOS SUPERVISOR-EPS
14 I hereby certify that the fo Name (Printed/Typed)	regoing is true and correct	1	
Jeannie Sillas	······································	Title Production Anal	lyst

4:550:6 Date 06/25/2009 THIS SPACE FOR FEDERAL OR STATE OFFICE USE Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease Title Date Office which would entitle the applicant to conduct operations thereon.

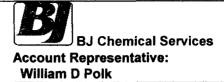
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

	The following information is needed before your disposal of produced water can be approved, per Onshore Oil & Gas Order #7.
·	You may attach this information to your Sundry Notice (3160-5). Submit all required information as per this attachment, submit a Sundry Notice(3160-5), one original and five copies to this office within the required time.
1.	Name(s) of all formation(s) producing water on the lease. GRBG JACKSON; SR-Q-GRBG-SA
2.	Amount of water produced from all formations in barrels per day. 87
3.	A CURRENT water analysis of produced water from all zones showing at least the total dissolved solids, ph, and the concentrations of chlorides and sulfates.
4.	How water is stored on the lease 300 BBL FIBERGLASS TANK
5.	How water is moved to the disposal facility. POLYETHYLENE PIPELINE
	Identify the Disposal Facility by:  A. Operators' Name MARBOB ENERGY CORPORATION  B. Well Name ARCO 34 FEDERAL  C. Well type and well number SWD #1  D. Location by quarter/quarter, section, township, and range 1817 FNL 1055 FEL,  SEC.34-T17S-R29E, UNIT H
'.	A copy of the Underground Injection Control Permit - issued for the injection well by the Environmental Protection Agency or New Mexico Oil Conservation Division where the State has achieved primacy.

ATTACHED PERMIT # SWD-868

## Analytical Laboratory Report for:

### **MARBOB ENERGY CORPORATION**



## **Production Water Analysis**

Listed below please find water analysis report from: MILLENNIUM "34" FED COM, 1

Lab Test No:

2008118233

Sample Date:

04/24/2008

Specific Gravity: 1.114

TDS:

175006

pH:

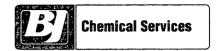
6.55

Cations:	mg/L	as:	
Calcium	3283	(Ca <sup>↔</sup> )	
Magnesium	483	(Mg <sup>++</sup> )	
Sodium	58084	(Na <sup>+</sup> )	
Iron	82.64	(Fe <sup>++</sup> )	
Potassium	645.6	(K <sup>†</sup> )	
Barium	0.42	(Ba <sup>++</sup> )	
Strontium	44.82	(Sr <sup>**</sup> )	
Manganese	0.56	(Mn )	
Anions:	mg/L	as:	
Bicarbonate	732	(HCO <sub>3</sub> )	
Sulfate	3650	(SO <sub>4</sub> ")	
Chloride	108000	(CI)	
Gases:		,	
Carbon Dioxide	150	(CO <sub>2</sub> )	
Hydrogen Sulfide	51	(H <sub>2</sub> S)	

## MARBOB ENERGY CORPORATION

Lab Test No: 2008118233

# DownHole SAT<sup>™</sup> Scale Prediction @ 100 deg. F



Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	3.92	.0867
Aragonite (CaCO3)	3.32	.0814
Witherite (BaCO3)	< 0.001	-27.84
Strontianite (SrCO3)	.0422	-3.43
Magnesite (MgCO3)	.773	0289
Anhydrite (CaSO4)	1.06	33.96
Gypsum (CaSO4*2H2O)	1.21	116.36
Barite (BaSO4)	1.85	.114
Celestite (SrSO4)	.192	-118.61
Silica (SiO2)	i o	-42.07
Brucite (Mg(OH)2)	< 0.001	479
Magnesium silicate	0	-108.75
Siderite (FeCO3)	82.79	.133
Halite (NaCl)	.117	-111082
Thenardite (Na2SO4)	< 0.001	-84928
Iron sulfide (FeS)	213.47	6.5

### Interpretation of DHSat Results:

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The scale is logarithmic, i.e. a Saturation Index of 3 is 10 times more saturated than a value of 2.

The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

JAN 08 2003

Lori Wrotenbery
Director
Oil Conservation Division

ADMINISTRATIVE ORDER SWD-868

APPLICATION OF MARBOB ENERGY CORPORATION FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO.

## ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Marbob Energy Corporation made application to the New Mexico Oil Conservation Division on December 19, 2002, for permission to re-enter and complete for produced water disposal its Arco 34 Federal Com Well No. 1 (API No. 30-015-31290) located 1817 feet from the North line and 1055 feet from the East line (Unit H) of Section 34, Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico.

### THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;
- (2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and
- (4) No objections have been received within the waiting period prescribed by said rule.

### IT IS THEREFORE ORDERED THAT:

Marbob Energy Corporation is hereby authorized to re-enter and complete its Arco 34 Federal Com Well No. 1 (API No. 30-015-31290) located 1817 feet from the North line and 1055 feet from the East line (Unit H) of Section 34, Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico, in such a manner as to permit the injection of produced water for disposal purposes into the Canyon formation from a depth of 9364 feet to 9500 feet through 2 7/8 inch plastic-lined tubing set with a packer located at approximately 9300 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.

As preparation for injection, the well bore shall be cleaned out, existing Wolfcamp perforations squeezed with cement, and the casing pressure tested to the satisfaction of the inspector from the Artesia District Office.

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.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 1872 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the injection formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Artesia District Office of the Division of the date and time of the installation of disposal equipment and of any mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Artesia District Office of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on this 3rd day of January 2003.

LORI WROTENBERY, Director

LW/wvjj

cc: Oil Conservation Division – Artesia

Bureau of Land Management - Carlsbad