Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR HORBS BUREAU OF LAND MANAGEMENT

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

5 Lease Serial No.

SUNDRY	NOTICES AND REP	PORTS OF	N WELLS	S	NMNM99	9041
Do not use the	nis form for proposals t ell. Use Form 3160-3 (<i>i</i>	o drill or	to re-ente	er an	6. If Indian,	Mottee or Tribe Name
abandoneu W	en. Ose rom 5100-5 ()			sais.		
	IPLICATE- Other instr	ructions or	reverse	side.	7. If Unit or C	CA/Agreement, Name and/or No.
I. Type of Well Gas Well Other					8. Well Name	
2. Name of Operator Marbob Ene	rgy Corporation				Spruce G	oose Federal #1
3a. Address PO Box 227, Artesia, NM 882		3b. Phone No. 575-748-3		a code)	30-025-3	8445
4 Location of Well (Footage, Sec.,		3/3-/48-3	303	· · · · · · · · · · · · · · · · · · ·		Pool, or Exploratory Area ne Spring, North
330 FNL 430 FEL, Sec. 7-T19					11. County or	
,	,				Lea Co.,	NM /
12. CHECK AI	PPROPRIATE BOX(ES) TO	INDICATE	NATURE (OF NOTICE, RI	EPORT, OR (OTHER DATA
TYPE OF SUBMISSION			ТҮРЕ С	OF ACTION		
Notice of Intent	Acidize	Deepen		Production (Sta	rt/Resume)	Water Shut-Off
Subsequent Report	Alter Casing Casing Repair	Fracture Tro	_	Reclamation Recomplete	L. [Well Integrity Other
Final Abandonment Notice	Change Plans	Plug and Al	_	Temporarily Ab	andon	
	Convert to Injection	Plug Back	<u> </u>	✓ Water Disposal		
Attach the Bond under which the following completion of the invitesting has been completed. Fir determined that the site is ready Marbob Energy Corporate Attached please find the W	ion requests approval for disposal In	de the Bond No. results in a multi filed only after a	on file with I ple completio Il requirement ed water.	BLM/BIA. Require n or recompletion ir s, including reclama	d subsequent rep n a new interval, a atton, have been o	orts shall be filed within 30 days a Form 3160-4 shall be filed once completed, and the operator has
F 	CEIVED FEB 2 R 2008 BBS OCE)		DUDEAU	EB 26 A OF LAND M LSBAD FIELD	ANAGEMENT
14 Thereby certify that the foreg Name (Printed/Typed)	going is true and correct	1				
Diana J. Briggs	0		Title Produ	ction Analyst		
Signature \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Durn		Date	01	/23/2008	
	THIS SPACE FOR F	EDERAL	OR STA	TE OFFICE I	USE	
Approved by	V		Title	Geologis	t Date	APR 0 8 2008
Conditions of approval, if any, are at certify that the applicant holds legal which would entitle the applicant to	or equitable title to those rights in	oes not warrant the subject leas	or	9		·· u v 2 2008

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 anymatter 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.

SPRUCE GOOSE FEDERAL #1

	1. Name(s) of all formation(s) producing water on the lease. Bone Spring
4. How water is stored on the lease. 500 bbl figerglass tank 5. How water is moved to the disposal facility. Polyethylene pipeline 6. Identify the Disposal Facility by: A. Operators' Name Marbob Energy Corporation B. Well Name Lusk Deep Unit A C. Well type and well number SWD #16	2. Amount of water produced from all formations in barrels per day. 159 BPD
5. How water is moved to the disposal facility. Polyethylene pipeline 6. Identify the Disposal Facility by: A. Operators' Name Marbob Energy Corporation B. Well Name Lusk Deep Unit A C. Well type and well number SWD #16	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. Attached
6. Identify the Disposal Facility by: A. Operators' Name Marbob Energy Corporation B. Well Name Lusk Deep Unit A C. Well type and well number SWD #16	4. How water is stored on the lease. 500 bbl figerglass tank
A. Operators' Name Marbob Energy Corporation B. Well Name Lusk Deep Unit A C. Well type and well number SWD #16	5. How water is moved to the disposal facility. Polyethylene pipeline
	A. Operators' Name Marbob Energy Corporation B. Well Name Lusk Deep Unit A C. Well type and well number SWD #16

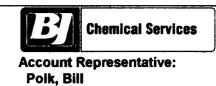
7. A copy of the Underground Injection Control Permit - issued for the injection well by the Environmental Protection Agency or New Mexico Oil Conservation Division where the State has achieved primacy.

Administrative Order SWD-1043 attached



Analytical Laboratory Report for:

MARBOB ENERGY CORPORATION



Production Water Analysis

Listed below please find water analysis report from: SPRUCE GOOSE FEDERAL, 1

Lab Test No:

2007155008

Sample Date:

11/21/2007

Specific Gravity: 1.117

TDS:

179658

pH:

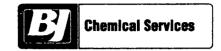
6.55

Cations:	mg/L	as:
Calcium	1860	(Ca [↔])
Magnesium	499	(Mg ⁺⁺)
Sodium	65500	(g (Na ⁺)
Iron	20.90	(Fe ⁺)
Potassium	1598.0	(K [*])
Barium	1.40	(Ba ⁺⁺)
Strontium	337.00	(Sr ⁺⁺)
Manganese	0.24	(Mn ⁺⁺)
Anions:	mg/L	as:
Bicarbonate	342	(HCO,)
Sulfate	500	(SO, ")
Chloride	109000	(CI)
Gases:		(0.)
Carbon Dioxide	120	(CO ₂)
Hydrogen Sulfide	17	(H,S)

MARBOB ENERGY CORPORATION

Lab Test No: 2007155008

DownHole SAT[™] Scale Prediction @ 100 deg. F



Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)		
Calcite (CaCO3)	1.24	.0118		
Aragonite (CaCO3)	1.05	.0029		
Witherite (BaCO3)	< 0.001	-27.83		
Strontianite (SrCO3)	.164	457		
Magnesite (MgCO3)	.465	0592		
Anhydrite (CaSO4)	.0955	-707.16		
Gypsum (CaSO4*2H2O)	.109	-709.07		
Barite (BaSO4)	.909	083		
Celestite (SrSÓ4)	.213	-212.26		
Silica (SiO2)	l o	-42.85		
Brucite (Mg(OH)2)	< 0.001	451		
Magnesium silicate	0	-111.01		
Siderite (FeCO3)	· 11.12	.0643		
Halite (NaCl)	.113	-114518		
Thenardite (Na2SO4)	< 0.001	-85272		
Iron sulfide (FeS)	18.3	1.57		

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) infinity to positive (precipitating) infinity. 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

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

ADMINISTRATIVE ORDER SWD-1043

APPLICATION OF MARBOB ENERGY CORPORATION FOR PRODUCED WATER DISPOSAL, LEA 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 for permission to utilize for produced water disposal its Delawarc Federal Well No. 16 (API No. 30-025-35053) located 785 feet from the South line and 660 feet from the West line of Section 18, Township 19 South, Range 32 East, NMPM, Lea 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:

The applicant is hereby authorized to utilize its Delaware Federal Well No. 16 (API No. 30-025-35053) located 785 feet from the South line and 660 feet from the West line of Section 18, Township 19 South, Range 32 East, NMPM, Lea County, New Mexico, in such manner as to permit the injection of produced water for disposal purposes into the Strawn formation through perforations from approximately 11,260 feet to 11,306 feet and through plastic-lined tubing set in a packer located within 100 feet of the top of the injection interval.

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.

After installing injection tubing, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

The wellhead injection pressure on the well shall be limited to **no more than 2,252 psi**. In addition, the injection well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface injection pressure to the maximum allowable pressure for this well.

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 Hobbs 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 Hobbs 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.

<u>PROVIDED FURTHER THAT</u>, 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 provide written notice of the date of commencement of injection to the Hobbs district office of the Division.

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 September 12, 2006.

MARK E. FESMIRE, P.E. Director

MEF/wvjj

cc: Oil Conservation Division – Hobbs

Bureau of Land Management – Carlsbad