Form 3160•5 (August 1999)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004- 0135
Expires: November 30, 2000

	INDDV NOTICES AND	DEBORTS ON V	VELLO	5. Lease S		14-20-5390
,	JNDRY NOTICES ANI not use this form for prop			6. If Indian	, Allottee, or Tri	
/ aba	ndoned well. Use Form 310	60-3 (APD) for such pr	oposals.		,	
SHEMIT IN TERM	ICATE- Other Instru	estation out the revi	una sida	7. If Unit o	r CA. Agreemer	nt Designation
	10-11-00id #500	***************************************	(1)	4		
. Type of Well Oil Well X Gas Well	Other		IN 2003	8. Well Na	me and No.	· · · · · · · · · · · · · · · · · · ·
2. Name of Operator	Other		19.1 40.00		VV #4D	
COLEMAN OIL & GAS	INC			9. API We	KY #1R No.	
Ba. Address	, 110.	3b. Phone No. (inclus	de area code)	₹/	30-045-3	1165
O DRAWER 3337	Farmington NM 87499-33	₃₇ (505) 327	<u>7-0356 </u>	10. Field a	nd Pool, or Exp	•
4. Location of Well (Footage, Sec., T.,	, R., M., or Survey Description)	L'ALLEN TO THE STATE OF THE STA				uitland Coal
7051 51 11	AND 0001 EVA 0507	TION 40 TOOM D4	4344	1	or Parish, Stat	
	AND 830' FWL, SECT				AN COUNTY,	NM
12. CHECK APPROI	PRIATE BOX(S) TO IND	·		I, OR OI	HER DATA	
TYPE OF SUBMISSION			TYPE OF ACTION			
Notice of Intent	Acidize	Deepen	Production (Start/	Resume)	Water \$	Shut-off
	Altering Casing	Fracture Treat	Reclamation		Well Int	legrity
Subsequent Report	Casing Repair	New Construction	Recomplete		X Other	SEE BELOV
Subsequent Report				_	CALL OTHER	OLL BLLOT
	Change Plans	Plug and abandon	Temporarily Aban	don		
	l <u>—</u>	_				
3. Describe Proposed or Completed If the proposal is to deepen direct Attach the Bond under which the following completion of the involve testing has been completed. Final determined that the site is ready for the proposed in th	ionally or recomplete horizontall work will performed or provide the ed operations. If the operation re Il Abandonment Notice shall be t	ly, give subsurface location ne Bond No. on file with the esults in a multiple complet	s and measured and true BLM/ BIA. Required sub ion or recompletion in a	e vertical dep osequent repo new interval,	ths or pertinent orts shall be file a Form 3160-4	markers and sands d within 30 days shall be filed once
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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 any department or agency of the United States any false, fictitiousor fraudulent statements or representations as to any matter within its jurisdiction.

Onshore Order No. 7 and Title 43 CFR 3162.5-1

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070 · Farmington, NM

The above noted lease/well disposes water without approval. Onshore Order No. 7 and Title 43 CFR 3162.5-1, requires the following information be submitted in order to process water disposal requests.

- 1. Name of formations producing water on the lease. BASIN FRUITLAND COAL 2. Amount of water produced from all formations in barrels per day. 130 bbls per day 3. Attach 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. TANK 4. How water is stored on the lease. TRUCK 5. How water is moved to the disposal facility.____ 6. Identify the Disposal Facility by: COLEMAN OIL & GAS, INC. Facility operators name. b. Name of facility or well name & number. COWSAROUND SWD SWD .c. Type of facility or well (WDW)(WIW) etc._ d. Location by 1/4 1/4 section 16 township 26N range 12W 7. Attach a copy of the State issued permit for the Disposal Facility.

Submit to this office, the above required information on a Sundry Notice 3160-5. Submit 1 original and 2 copies. (You may also complete this form and attach it to the Sundry Notice.)

BACK UP DISPOSAL S: ELM RIDGE - CBU CARSON

BASIN DISPOSAL



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

2003 APR 23 PM 1: 2

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

070 Farmington, NM

Lori Wrotenbery Director Oil Conservation Division

ADMINISTRATIVE ORDER SWD-764 (2nd Corrected)

APPLICATION OF PENDRAGON ENERGY PARTNERS FOR PRODUCED WATER DISPOSAL, SAN JUAN COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Pendragon Energy Partners made application to the New Mexico Oil Conservation Division on February 9, 2000, for permission to complete for produced water disposal its Cowsaround SWD Well No. 1 (API No. 30-045-30096) located 2220 feet from the South line and 1680 feet from the West line (Unit K) of Section 16, Township 26 North, Range 12 West, NMPM, San Juan 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 herein, is hereby authorized to complete its Cowsaround SWD Well No. 1 (API No. 30-045-30096) located 2220 feet from the South line and 1680 feet from the West line (Unit K) of Section 16, Township 26 North, Range 12 West, NMPM, San Juan County, New Mexico, in such a manner as to permit the injection of produced water for disposal purposes into the Mesaverde formation from approximately 2,000 feet to 3,882 feet through 2 7/8 inch plastic-lined tubing set in a packer located at approximately 1,908 feet.

Administrative Order SWD-764 (2nd Corrected) Pendragon Energy Partners April 1, 2002 Page 2

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.

Prior to commencing injection operations into the well, 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 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 400 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 Mesaverde 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 Aztec 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 Aztec 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 1st day of April, 2002.

LORI WROTENBERY, Director

LW/DRC

cc: Oil Conservation Division - Aztec

State Land Office - Oil and Gas Division

RECEIVED

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BJ Unichem Chemical Services

Analytical Laboratory Report for:

Coleman Oil

070 Farmington, UNCHEM Representative: Tony Snow

Production Water Analysis

Listed below please find water analysis report from: Rickys, 1R

Lab Test No:

2003109879

Sample Date:

03/04/2003

Specific Gravity:

1.026

TDS:

38774

pH:

6.56

Cations:	mg/L	as:
Calcium	274	(Ca ⁺⁺)
Magnesium	128	(Mg ⁺⁺)
Sodium	15821	(Na)
Iron	4.80	(Fe ⁺⁺)
Barium	2.14	(Ba)
Strontlum	25.38	(Sr)
Manganese	0.21	(Mn)
Anions:	mg/L	as:
Bicarbonate	854	(HCO³)
Sulfate	64	(SO ₄ ³)
Chloride	21600	(CÍ)
Gases:		
Carbon Dioxide	132	(CO ₂)
Hydrogen Sulfide	0	(H ₂ S)

Coleman Oil

Lab Test No: 2003109879



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

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	.7	116
Aragonite (CaCO3)	.593	186
Witherite (BaCO3)	.00164	-17.88
Strontianite (SrCO3)	.125	-2.36
Magnesite (MgCO3)	.356	411
Anhydrite (CaSO4)	.00734	-823.14
Gypsum (CaSO4*2H2O)	.00859	-825.02
Barite (BaSO4)	.942	076
Celestite (SrSO4)	.0109	-206.32
Silica (SiO2)	0	-53.78
Brucite (Mg(OH)2)	< 0.001	-1.15
Magnesium silicate	0	-119.25
Siderite (FeCO3)	23.17	.299
Halite (NaCl)	.00507	-182131
Thenardite (Na2SO4)	< 0.001	-66080
Iron sulfide (FeS)	0	0871

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.