### **Ben Stone**

From:	Ernie Busch
То:	David Catanach
Cc:	Ben Stone
Subject:	RE: SG INTERESTS (SWD)
Date:	Friday, June 09, 1995 9:26AM
Priority:	High

IN ADDITION TO THE RECOMMENDATION I SENT TO YOU TWO DAYS AGO, I WOULD LIKE TO ADD THE NEED TO SPECIFY THAT THE PACKER BE SET WITHIN 100' OF THE TOP PERF. WE HAD A PROBLEM WITH ONE OTHER WELL WHERE THE OPERATOR WAS NOT INSTRUCTED TO DO THAT AND I THINK THAT IF WE COULD PUT IT IN THE ORDER IT WOULD ELIMINATE ANY MISUNDERSTANDINGS.

From: Ernie Busch To: David Catanach Cc: Ben Stone Subject: SG INTERESTS (SWD) Date: Wednesday, June 07, 1995 9:20AM Priority: High

WEST BISTI WATER DISPOSAL 26-13-16 #1 A-16-26N-13W RECOMMEND: APPROVAL OF THE MESAVERDE FOR PRODUCED WATER DISPOSAL, BUT NOT THE PICTURED CLIFFS. THE PICTURED CLIFFS HAS PRODUCTION POTENTIAL IN THIS AREA.

From:	Ernie Busch
To:	David Catanach
Cc:	Ben Stone
Subject:	SG INTERESTS (SWD)
Date:	Wednesday, June 07, 1995 9:20AM
Priority:	High

WEST BISTI WATER DISPOSAL 26-13-16 #1 A-16-26N-13W RECOMMEND: APPROVAL OF THE MESAVERDE FOR PRODUCED WATER DISPOSAL, BUT \* NOT THE SECOND THE PICTURED CLIFFS HAS PRODUCTION POTENTIAL IN THIS AREA.

# CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: <u>SC- INTERESTS</u> Well: <u>MEST BISTI MAT</u> Contact: <u>DERMIS REIMERS</u> Title: <u>EAG. MGR</u> PP	ER DISPOSAL No. 1
Contact: DENNIS REIMERS Title: ENG. MGR. PH	none: 303 563 4000
DATE IN 51595 RELEASE DATE 61-95 DATE OU	
Proposed Injection Application is for:WATERFLOOD Expansion	
Original Order: R Secondary Recovery Pressure SENSITIVE AREAS SALT WATER DISPOSAL	Maintenance
SENSITIVE AREAS X SALT WATER DISPOSAL	
WIPPCapitan ReefCommercial Operation	
Data is complete for proposed well(s)? Additional Data	
AREA of REVIEW WELLS	
C Total # of AOR # of Plugged Wells	
Tabulation Complete Schematics of P & A	's
Cement Tops Adequate AOR Repair Required	
INJECTION INFORMATION	
Injection Formation(s) MESAVERDE	
Source of Water CAL SEAM PRODUCER WATER AN	CA Compatible 4/5
PROOF OF NOTICE	
$\times$ Copy of Legal Notice $\times$ Information Printed C	Correctly
$\underline{\gamma}$ Correct Operators $\underline{\gamma}$ Copies of Certified M	lail Receipts
∧.O_ Objection Received Set to Hearing	Date
NOTES:	
APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL communication with contact person:	<u>465</u>
2nd Contact:	
Jrg Lonkect;TelephonedLetter Dete Neture of Discussion	

STATE OF NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION PO BOX 2088 SANTA FE, NM 87504-2088

ß Revised 7-1

### APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Application qu	Secondary Re ualifies for administrat	covery ive approval?	Pressure Maintenance YesNo	X Disposal		_ Storage
II.	OPERATOR:	SG Interests			<u></u>		<u> </u>
	ADDRESS:	P. O. Box 338	Ignacio, Colo	rado 811 <u>37</u>			
	CONTACT P	ARTY: <u>Dennis R.</u>	Reimers		PHONE:	(303)	<u>563-4</u> 000
III.	WELL DATA	A: Complete the data re sheets may be attach		e side of this form for each	well processed for inject	stion. A	dditional
IV.	Is this an expa If yes, give th	ansion of an existing p ne Division order numb	roject: Yes per authorizing the p	X No project			
V.				vo miles of any proposed is circle identifies the well's		≻half mi	le radius

- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
  - 1. Proposed average and maximum daily rate and volume of fluids to be injected;
  - 2. Whether the system is open or closed;
  - 3. Proposed average and maximum injection pressure;
  - 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
  - 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/1 or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
  - IX. Describe the proposed stimulation program, if any.
- \* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted.)
- \* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME:	Denn	is R. Rei	mers		_TITLE: _	Engineer	ing M	<u>lanager /</u>	Agent
SIGNAT	URE:	Dennis	-R.	Remen	 	DATE: _	May	<b>16.</b> 1995	)

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal. <u>N/A</u>

### III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
  - V (1) Lease name; Well No.; Location by Section, Township, and Range; and footage location within the section.
  - $_{\nu}$  (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
    - (3) A description of the tubing to be used including its size, lining material, and setting depth.
    - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
  - (1) The name of the injection formation and, if applicable, the field or pool name.
  - (2) The injection interval and whether it is perforated or open-hole.
  - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
  - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
  - (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

# SG INTERESTS PROPOSED WEST BISTI PRODUCED WATER DISPOSAL WELL

### Well Data

(As Related to Section III of the OCD Application Form)

- Lease : State Lease (mineral rights currently not leased)
   Well No.: West Bisti Water Disposal 26-13-16 #1
   Locaton: 800' FNL, 800' FEL of S16-T26N-R13W
- 2. Casing and Cementing Specifications

<u>Depth</u> 0-250'		<u>Casing &amp; Weight</u> 9 5/8" 36 lb/ft	<u>Cement Prog.</u> 157 ft <sup>3</sup> (100% excess) Class B yield=1.3 ft <sup>3</sup> /sx*
250-4200'	8 3/4"	7" 26 lb/ft	807 ft <sup>3</sup> (20% excess) Class B yield=1.3 ft <sup>3</sup> /sx*

- \* Due to cement yield variations the actual yield will be measured on the cement pumped. The cement volume will be calculated from the open hole caliper log with 20% excess applied.
- 3. New 3 1/2" 9.5 lb/ft of internally coated tubing will be used as the injection string.
- 4. An injection packer will be set just above the top of the Mesa Verde Sands at a depth of approximately 3200'.

### **Proposed Operation:**

(As Related to Section VII of the OCD Application Form)

1. The well will be drilled and completed to the Mesa Verde sands to dispose of produced water from SG Interests wells that are currently dewatering from the Fruitland coal seam. The volume of water to be injected is approximately 1500 BWPD

## SG Interests Proposed West Bisti <u>Produced Water Disposal We</u>ll

which will decline as the wells are dewatered. In two to three years the water production from wells intially tied in to this disposal well will be a minimum volume (less than 500 BWPD). The well will most likely be used to dispose of coal seam water from additional Fruitland wells that may be drilled in this area. In the event the Mesa Verde sands are not sufficiently permeable for water disposal, the Pictured Cliff sands will be open and injected into. Both the Mesa Verde and Pictured Cliffs are non hydrocarbon bearing in this area.

- 2. The disposal system will be completly enclosed. Water from each producing well will be pumped through a pipeline to the proposed disposal site, where it will be filtered before it is disposed of in the injection well. Produced water from some of the further extensions wells will be trucked to the disposal site.
- 3. A step rate injectivity test will be conducted on the new disposal well to determine the maximum injection pressure the water can be injected and be kept below the fracture gradient of the Mesa Verde. Typical wells in this area have seen a fracture gradient of approximately 0.64 psi/ft. At a projected depth of 4200 ft. this will result in a maximum injection pressure of approximately 880 psi. The average injection pressure should be lower than this but will be a function of the porosity and permeability present in the Mesa Verde formation. In the event the Pictured Cliffs formation is used as the disposal interval the maximum pressure will be kept below the fracture gradient. Work in this area has shown that at the shollower depths the frac gradient shows a large increase. Step rate tests have shown gradients averaging 1.5 psi/ft at the shollower depths. The actual fracture gradient will be measured and used as the basis for establishing the maximum injection pressure into the Pictured Cliffs formation.
- 4. Water analyis are included with the application showing the Fruitland coal seam water quality. There are no known compatibility issues associated with the mixing of coal seam water with the Mesa Verde or Pictured Cliffs formation waters.

5. In the area of investigation there are no available Mesa Verde or Pictured Cliffs water samples. Offsetting this area both of these intervals have proven to be non hydrocarbon productive. No known compatability problems are evidenced between the Fruitland produced water and native waters from the Mesa Verde and the Picture Cliffs.

### Geological Description - Picture Cliffs Formation:

(As Related to Section VIII of the OCD Application Form)

The proposed target interval for disposing of the produced water is the Mesa Verde sands. The formations in this area with their estimated tops are as follows: (Depths are measured from ground level to the top of each formation) Est. ground level = 6230'.

Kirtland	260'
Fruitland	960'
Pictured Cliffs	1350'
Mesa Verde Sands	2100'
Total Depth	4200'

As the attached map shows there are a number of wells drilled in the immediate vicinity but not within a half mile radius of the proposed well. The Mesa Verde and Picture Cliff sands have not been hydrocarbon productive in this area. The completions have all been abondoned as unproductive wells. With these offsets there is very good geological control on determining the depth and producing capability of these formations. Even though the plugged and abandoned wells illustrate the unproductiveness of this area, the proposed injection well will be tested in the disposal interval before water injection is initiated. This will consist of perforating the well and swabbing it to recover the native fluids. The uniform clean sandstones will provide a good isolated permeable interval for water disposal. There are no wells in the project area supplying underground drinking water. Very shallow sands within the Ojo Alamo or top of the Kirtland (100 to 300') are possibly intervals containing fresh water.

# SG Interests Proposed West Bisti <u>Produced Water Disposal We</u>ll

### <u>Proposed Stimulation Program:</u>

(As Related to Section IX of the OCD Application Form)

After the well is drilled and cased through the Mesa Verde sands, perforations will be picked from open hole logs. The perforations will be broken down with acid, before the interval is hydraulically fractured. Good formation barriers exist both above and below the Mesa Verde sands to contain the fracture treatment. The frac will be designed to place approximately 250,000 lbs of proppant. The induced fracture will allow water to be disposed into the Mesa Verde sands under matrix pressures.

### Logging and Testing Program:

(As Related to Section X of the OCD Application Form)

The openhole logging program will consist of a porosity log (FDC/CNL) and a microresistivity log. Both of these logs will include a gamma ray log. After the well is cased and cemented a cement bond log will be obtained from PBTD to surface. In the event a poor cement bond is observed, or cement was not adequately circulated behind pipe, remedial cement work will be initiated according to OCD approved procedures. All open and cased hole logs will be submitted to the OCD.

After the well has been perforated in the Mesa Verde, the well will be produced to ensure there is no commercial productivity. This test will include swabbing of the perforations in an attempt to establish flow from this interval. As previously mentioned, the Mesa Verde and Picture Cliffs formations have not been productive in the wells in this area.

### Potential Fresh Water Zones

(As Related to Section XI of the OCD Application Form)

There are no fresh water wells within a one mile radius of the proposed disposal well.

## SG Interests **Proposed West Bisti** Produced Water Disposal Well

### <u>Affirmative</u> Statement

(As Related to Section XII of the OCD Application Form)

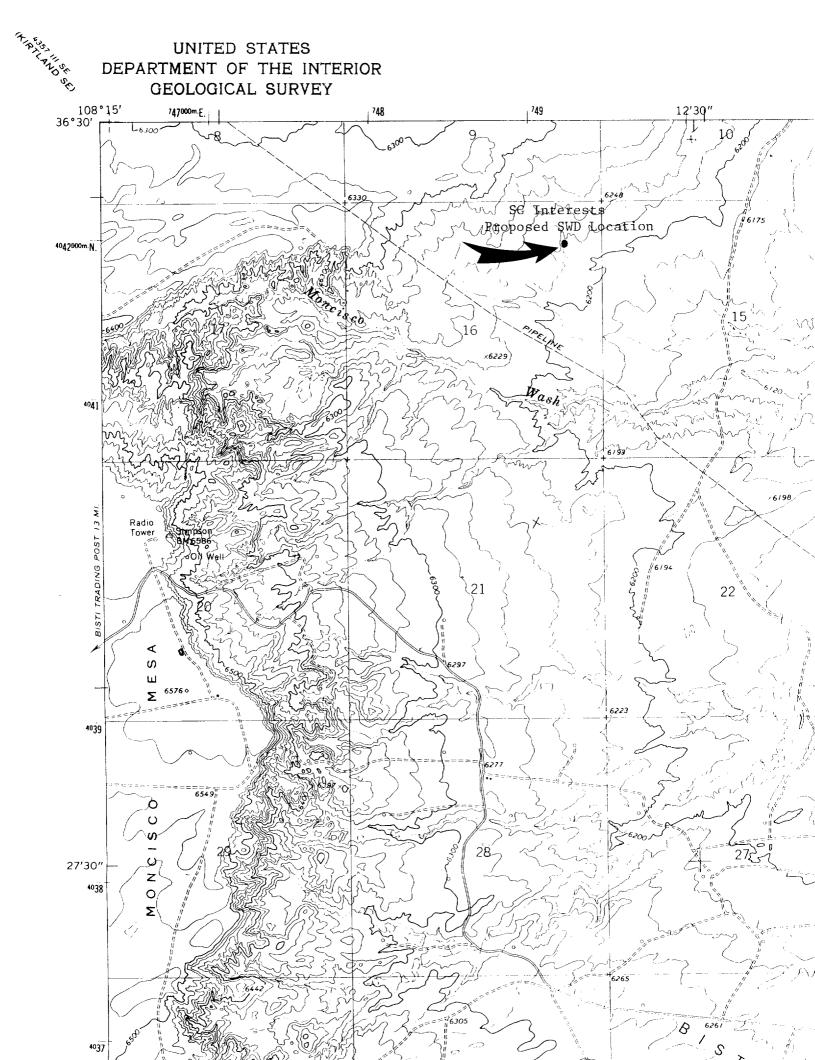
Certification: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route: that I am familar with the conditions which currently exist: that the statements made in the application are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by SG Interests, and it contractors and subcontractors in conformity with this application and the terms and conditions under which it is approved.

ennin R. Reimin March 7, 1995-Date

Dennis R. Reimers Authorized Agent for SG Interests, Inc.

				13W		
		Birks #1	Kirby ∱ P&∆	Merrion	Maralex	#1
		•	PC	× O	Frt	
		Frt.		Maralex		
7		8		9 • 9#1	1 0	11
				Frt. I		
			Ricks #2	1	P&A - PC Merrion	
			Ert.		• Maralex	
				SG Int.	10#2	
		SG Int.	_	1	Frt.	
SG Int.		17#1 •		Prop. SWD Well	<b>D</b> ugan	
18#1 •		Frt.	• •		, 🖓 P&A	
Frt.			•			
18		7	<b>~</b>	9	• 15	14
26N				1	······	26N
				Ding	Derisori • A P&A	
				Gallup		
		Dugan			Dugan	
			S. Union	21#1 •	¢ €	
		-	Y P&A	ЧЧ.	 Э	
	~	00 III.		4	c	C
19	N	L#0Z • 0 Z	Z		ح i ح	ν
		Frt.			2000 2000 2000	
	אם INI.	1		-		
	• 20#2	Dugan		Bayless	P&A	
	Frt.	→ P&A		ት P&A	Gailup	
		Gallup		PC		
				13W		
		-		-	-	

# SG INTERSTS WEST BISTI DISPOSAL WELL



st-It <sup>™</sup> brand fax transmittal memo 7671 # of pages MARA EX co. HAII bu apt. ax # Fax #	ENERGY SERVI LABORATORY TERN AREA DRY ANALYSIS		
To: <u>S&amp;G</u>		Date: 06	-16-94
MARLEX			
Submitted by:		Date Rec.	06-15-9
Well No. <u>GALLEGOS FED 26-</u>	<u>11-17 #1</u> Location:		
Sample Markings WATER	TANK		·····
Specific Gravity	1,020		
Specific Gravity pH	1.020	-	
-			
рн	7.27	-  	er Liter
pH Resisitivity	7.27	-  Milligrams p M	er Liter H
pH Resisitivity Iron(Fe)	7.27 .293 @ 75 <sup>0</sup> 2		
pH Resisitivity Iron(Fe) Potassium(K)	7.27 .293 @ 75 <sup>0</sup> 2 250	- n	<b>FR</b>
pH Resisitivity Iron(Fe) Potassium(K) Sodium(Na)	7.27 .293 @ 75 <sup>0</sup>       	- H	FF
pH Resisitivity Iron(Fe) Potassium(K) Sodium(Na) Calcium(Ca)	7.27 .293 @ 75 <sup>0</sup>       	- Pi	22 91
pH Resisitivity Iron(Fe) Potassium(K) Sodium(Na) Calcium(Ca) Magnesium(Mg) Chlorides(Cl)	7.27 .293 $\notin$ 75° .250 .10322 .1104 .526	- H - H - H	99 14 14 14
pH Resisitivity Iron(Fe) Potassium(K) Sodium(Na) Calcium(Ca) Magnesium(Mg) Chlorides(Cl) Sulfates(SO <sub>4</sub> )	7.27 .293 @ $75^{\circ}$ 2 250 10322 1104 526 19027	- H - H - H	14 17 19
pH Resisitivity Iron(Fe) Potassium(K) Sodium(Na) Calcium(Ca) Magnesium(Mg) Chlorides(Cl)	7.27 .293 $\notin$ 75° .250 .10322 .1104 .526 .19027 .0	- H - H - H - H - H - H	88 14 17 17 19 19 19

By <u>TERESA</u>	WHITE
Title LAB	TECH

Location FARMINGTON

NOTICE:

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be lishle for any loss or damage whether due to act or omission resulting from such report or its use.

# LABORATORY ANALYSIS

To: <u>S&amp;G</u>	ан	Date: 06-16-94
MARLEX		
Submitted by:		Date Rec. 06-15-94
Well No. <u>GALLEGOS FED 26-12-07 #1</u>	Location:	
Sample MarkingsWELL HEAD		
• • •		

Specific Gravity	1.010		
рН	7.09		
Resisitivity	.416 @ 75 <sup>0</sup>		
Iron(Fe)	<10	Milligrams per Lite	8r
Potassium(K)	250	н .	H
Sodium(Na)	4798	P <b>1</b> 9	H
Calcium(Ca)	597	71 1	Ħ
Magnesium (Mg)	363	H	н
Chlorides(Cl)	9213	H i	Ħ
Sulfates (SO4)	0	<del>n</del> (	H
Carbonates ( $CO_3$ )	0	<b>6</b> 7 (	#
Bicarbonates(HCO3)	915	DE 1	**
Total Dissolved Solids	16136	<b>87</b>	11

ВУ	TERESA	WHITE	 
<b>fit</b> ]	Le <u>LAB</u>	TECH	 

Location\_FARMINGTON

# NOTICE:

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be lishle for any loss or damage whether due to act or omission resulting from such report or its use.

# LABORATORY ANALYSIS

To: <u>S&amp;G</u>	Date: 06-16-94	
MARLEX		
Submitted by:	Date Rec. 06-15-94	
Well No. <u>GALLEGOS FED 26-12-06 #2</u>	Location:	
Sample Markings WELL HEAD		

Specific Gravity	1.010		
рн	7.25		
Resisitivity	,505 € 75°		
Iron (Fe)	<10	Milligrams per Liter	
Potassium(K)	250	H H	
Sodium(Na)	4974	W II	
Calcium (Ca)	537	FT 61	
Magnesium(Mg)	581	¥7 ¥	
Chlorides (Cl)	10014	H 11	
$Sulfates(SO_4)$	0		
Carbonates ( $CO_3$ )	0	17 14	
Bicarbonates (HCO3)	915	br DF	
Total Dissolved Solids	17271		

ВУ_	TERESA WHITE	
Tit	le_LAB TECH	

Location FARMINGTON

NOTICE:

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be limble for any loss or damage whether due to act or omission resulting from such report or its use.

# LABORATORY ANALYSIS

To: <u>S&amp;G</u>	مىلىلىتى ورى ئىلىتى بىرى بىر	Date: 06-16-94
MARLEX		
Submitted by:		_ Date Rec06-15-94
Well No. <u>GALLEGOS FED 26</u>	-12-31 #1 Location:	
Sample Markings <u>WELL</u>	HEAD	
Specific Gravity	1.010	
Ħą	6,92	
Resisitivity	.505 @ 75 <sup>0</sup>	-
Iron(Fe)	3	Milligrams per Liter
Potassium(K)	250	17 IF
Sodium(Na)	2046	58 55
Calcium(Ca)	1075	52 5V

Magnesium (Mg)			
Chlorides(Cl)	6008	<b>\$1</b>	11
$Sulfates(SO_4)$	00	92	#1
Carbonates ( $CO_3$ )	0	88	**
Bicarbonates (HCO3)	1678	27	u
Total Dissolved Solids	11640	Ħ	H

601

BY TERESA WHITE

Title LAB TECH

Location FARMINGTON

W.

Ħ

NOTICE:

M = m = m d m (M m)

This report is limited to the described tample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to not or omission resulting from such report or its use.

# LABORATORY ANALYSIS

To: <u>S&amp;G</u>	Date: 06-16-94
MARLEX	
Submitted by:	Date Rec. 06-15-94
Well No. <u>GALLEGOS FED 26-12-19 #1</u>	Location:
Sample Markings WATER TANK	

Specific Gravity	1.010	_
рĦ	7.43	<b></b>
Resisitivity	.464 @ 75 <sup>0</sup>	-
Iron (Fe)		Milligrams per Liter
Potassium(K)	250	12 YF
Sodium(Na)	3590	27 M
Calcium(Ca)	657	50 b0
Magnesium(Mg)	399	
Chlorides (Cl)	7120	\$8 \$K
Sulfates (SO4)	0	14 KI
Carbonates (CO3)	00	<b>17</b> 31
Bicarbonates ( $HCO_3$ )	1525	
Total Dissolved Solids	13633	\$\$ ¥\$

BY TERESA WHITE

Title LAB TECH

Location FARMINGTON



This report is limited to the described sample stated. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to set or omission resulting from such report or its use.



# The Western Company of North America

3250 South Side River Road Farmington, New Mexico 87401 Phone (505)327-6222

Fax (505)327-5766

# API WATER ANALYSIS

Company_MARALEX			Sample No	Date Sampled 6-18-93
Field	Legal Description	3	_County or Parish_S	State N.M.
Lease or Unit GALLEGO	<u>s Fed.</u> . Well <u>26-13-1</u>	Depth	Formation	Water B/D
Type of Water (Produce	d, Supply, ect.)	Sampling Point_	×	Sampled By
DISSOLVED SOL	IDS		OTHER PROPER	TIES
CATIONS Sodium,Na	mg/l me/l 6578 274		pH Specific Gravity, 60/60	F <u>1.015</u>
Calcium, Ca Magnesium, Mg Barium, Ba	<u>288</u> <u>14.4</u> <u>_140</u> <u>11.6</u>		Resistivity (ohm-meter) Total Hardness	
ANIONS Chloride, CI Sulfate, SO <sub>4</sub> Carbonate, CO <sub>3</sub> Bicarbonate, HCO <sub>3</sub> Hydroxide, OH	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Ca ++++++++	WATER PATTER	-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
			┽╋╈╪╡┇╪╪╋╂┇┶╦┥┥╪┇╻┍ ┹┺┝┹┝┺┺┙┙╵╕┇╻╵╵┙	

(+a

Ca

Ma III

10000

F- buller buller builter built

00

 $\underline{\circ}$ 

000

Total Disolved Solids (calc.) 18,606

Iron, Fe (total) Sulfide, as H2S

Remarks & Recommendations:

Please refer any questions to: Loren Diede-District Engineer Thank you. ١.

325-5512

LOGARTHMIC

1111

Ċ

infind control content

1993-06-23

\*\* TOTAL PAGE.002 \*\* 09:07 PAGE

1. militer

††∰∰so₄

ulutica

Analyst: Mite Mcheese

₩нссъ

### **AFFIDAVIT OF PUBLICATION**

No. 34480

STATE OF NEW MEXICO County of San Juan:

**ROBERT LOVETT** being duly sworn says: That he is the Classified Manager of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s):

Thursday, March 9, 1995

and the cost of publication was: \$25.93

int Int

On  $\frac{3/10/95}{10}$  ROBERT LOVETT appeared before me, whom I know personally to be the person who signed the above document.

My Commission Expires March 21, 1998.

### COPY OF PUBLICATION



SG Interests, Represented by

Maralex Resources, Inc. P.O. Box 338 Ignacio, Colorado 81137

Contact Person: Dennis Reimers (303)563-4000

Notice is given of SG Interests application for permitting the drilling of a produced water disposal well located as follows:

800' FNL, 800' FEL Sec. 16-T26N-R13w San Juan County, New Mexico

The well will serve as a produced water disposal well for the Fruitland coal seam water from nearby production wells. Produced water disposal into the Mesa Verde formation and possibly the Pictured Cliffs formation is requested. Anticipated injection rate of 1500 barrels of water per day is expected with a maximum injection pressure of 700 psi.

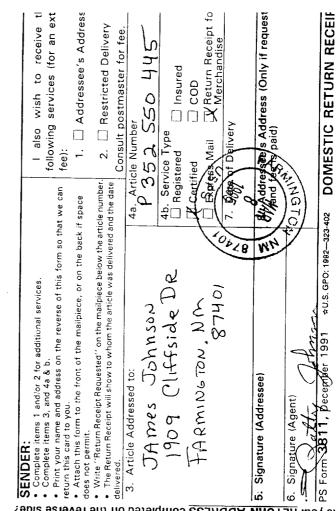
Interested parties must file objections or request for a hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87504-2088 within 15 days.

Legal No. 34480 published in The Daily Jimes, Farmington, New Mexico, Thursday, March 9, 1995.

ervice.				1	nok yua		15
<pre>1 also wish to receive the following services (for an extra fee):</pre>	I. □ Addressee s Address     Consult postmaster for fee.	4a. Article Number Р 352 <i>550 44 9</i>	wice Type	Expressive and X Return Receipt for Expressive Merchandise	8.1404 essee's Address (Only if requested and fee is paid)		DOMESTIC RETURN RECEIPT
SEIVUER: • Complete items 1 and or 2 for additional services. • Complete items 3, and 4a & b. • Print your name and address on the reverse of this form so that we can return this card to you.	<ul> <li>Attach this form to the front of the mailpiece, or on the back if space opes not permit.</li> <li>Write "Return Receipt Requested" on the mailpiece below the article number The Return Receipt will show to whom the article was delivered and the date calivered.</li> </ul>	4 <sup>a.</sup> P	Box 154/	BA NO ( CLEX C	104	Signature pegenti	PS. Form 3811, December 1991 *U.S. GPO: 1992-323-402 D

this form so that we can following services (for an extra ron the back if space 1. Addressee's Address e below the article number vas delivered and the date consult postmaster for fee. 2. Restricted Delivery consult postmaster for fee. 2. Restricted Delivery CAL P 144 G71 CS A4b. Service Type A4b. Service Type A4b. Service Type CONUL For the CON A4b. Service Type A4b. Service Typ DOMESTIC RETURN RECEIPT I also wish to receive the Write "Return Receipt Requested" on the mailpiece below the article number. The Return Receipt will show to whom the article was delivered and the date Print your name and address on the reverse of this form so that we can return this card to you. • Attach this form to the front of the mailpiece, or on the back if space ¢U.S. GPO: 1992-323-402 T.H. MEELVAIN O.1 + GAS 40548 Complete items 1 and/or 2 for additional services. Complete items 3, and 4a & b. Santa Fe, NM 87500 PS Form 3811, December 1991 5. Signature (Addressee) N SHIE XOS ζ 3. Article Addressed to: 6. Signature (Agent) does not permit. SENDER delivered.

Several Se I also wish to receive the following services (for an ext 🗌 Addressee's Addres: Attraction of the second of th DOMESTIC RETURN RECE Restricted Delivery Consult postmaster for fee. P 35 3 55 0 44 8 Date of Delivery 4a. Article Number 3 fee): - Contraction turn Receipt Requested\*\* on the mailplece below the article number. In Receipt will show to whom the article was delivered and the date name and address on the reverse of this form so that we can ard to you. is form to the front of the mailpiece, or on the back if space 4□ . ω &U.S. GPO: 1982-323-402 2 for additional services Wort L. Bayless Box 168 RMINGTON NM la hL8 3811, December 1991 items 1 and or 2 for items 3, and 4a & b. Iture (Addressee) e Addressed to: ā



ADDRESS completed on the reverse side? Is your RETURN

SENDER: SENDER: Complete items 1 and or 2 for additional s. Complete items 3, and 4a & b. Printyour name and address on the <i>revers</i> return this card to you. Attach this form to the front of the malpic accord permit. Write Return Receipt Requested" on the mi Write Return Receipt will show to whom the a delivered. 3. Article Addressed to: DUUVERSAL RESOUNCED BOX 11070 BOX 11070 SALT LAKE C177 SALT LAKE C177 SALT LAKE C177 SALT LAKE C177 SALT LAKE C177 SALT LAKE C177 SALT LAKE C177 Submature (Addressee) 6. Signature (Agent)	Is pour RETURN ADDRESS completed on the reverse side? SENDER: Complete items 3, and 4a & b. Complete items 3, and 4a & b. The Return Action of the front of the mailpiece, or on the back if space that your arrite and address on the reverse of this form so that we completed by the article num this card'to your. The Return Receipt will show to whom the article was delivered and the d delivered. 3. Article Addressed to: Control the form to the mailpiece below the article num the form the article was delivered and the d delivered. 3. Article Addressed to: Control the form to the article was delivered and the d delivered. 4a. 2. Signature (Addressee) PS Form 3811, December 1997 × U.S. GPO: 1982–323402
SENDER:       1 also wish to receive the 1 also wish to receive the complete terms 3, and 4a & b.         Print your name and address on the reverse of this form so that we can fract his time to be from to the from to the from to the from to the malipiece, or on the back if space       1 also wish to receive the following services (for an extra complete terms 3, and 4a & b.         Print your name and address on the reverse of this form so that we can free!:       1. addressee's Address for the malipiece below the article was delivered and the date consult postmaster for fee.       1. addressee's Address in the form so that we can fee!:         The Return Receipt will show to whom the article was delivered and the date consult postmaster for fee.       1. addressee's Address in the feeture feetile.         Article Addressed to:       Article Addressee in the consult postmaster for fee.       1. addressee's Address in the feetile.         3. Article Addressed to:       Article Addressee in the consult postmaster for fee.       1. addressee's Address in the feetile.         3. Article Addressee to:       Article Addressee in the consult postmaster for fee.       1. addressee's Address in the feetile.         3. Article Addressee in the Addressee's Address in the feetile number.       Article Addressee's Address in the feetile.       1. addressee's Address in the feetile.         3. Article Addressee in the article number.       D. LINCU (N ALL ALL ALL ALL ALL ALL ALL ALL ALL AL	SENDER:       1 also wish to receive the received address on the reverse of this form so that we can provide titems 3, and 4a & b.       1 also wish to receive to complete titems 3, and 4a & b.         First your name and address on the reverse of this form so that we can this card to var.       1 also wish to receive to the malpice, or on the back if space       1 also wish to receive to a this form so that we can the reverse of this form so that we can the reverse of this form to the front of the malpice.       1 also wish to receive to a the reverse of this form so that we can the reverse of this form to the front of the malpice.         Write "Return Receipt Requested" on the malpice.       1 also wish to receive to a the reverse of this form so that we can the return Receipt will show to whom the article was delivered and the date to the postmaster for the consult postmaster for the consult postmaster for the selevend.         3. Article Addressed to:       3. Article Addressed to:       1 also wish to receive Type         MILON Revi Receipt will show to whom the article was delivered and the date to the selevend.       2 also the reverse to the selevend to the consult postmaster for the selevend.         3. Article Addressed to:       0 NILON Revi Reve       1 also Wite To the consult postmaster for the reversed.         3. Article Addressed to:       0 NILON Revi Reverse Mail Metricle and the date to the postmaster for the postmaster.       0 also the consult postmaster for the reversed.         3. Article Addressed to:       0 NILON Reversed to the Work of the too too too too too too too too too to

APR 1 3 ISOT side? SENDER: I also wish to receive the Complete items 1 and/or 2 for additional services.
Complete items 3, and 4a & b. following services (for an extra for using Return Receipt Service. is your RETURN ADDRESS completed on the reverse · Print your name and address on the reverse of this form so that we can fee): return this card to you? Attach this form to the front of the mailpiece, de on the back if space 1. 🗌 Addressee's Address does not permit. · Write "Return Receipt Requested" on the mailpiece below the article number. 2. 
Restricted Delivery The Return Receipt will show to whom the article was delivered and the date Consult postmaster for fee. delivered. Jelivered. 3. Article Addressed to: Steven. DUNN 3100 Western AN FARMINGTON NM 4a. Article Number Ρ 352550 447 4b. Service Type Registered Insured COD Certified Return Receipt for Merchandise Express Mail 7. Date of Delivery 874 Thank you W BUTI 8. Addressee's Address (Only if requested 5. Signature (Addressee) and fee is paid) 6. Signature (Agent) PS Form 3811, December 1991 + +U.S. GPO: 1992-323-402 DOMESTIC RETURN RECEIPT <u>с</u>. . t Ö Steven 3100 We Farmington, NM MARAL Mestern Dunn Ignacio, CO 81137 TI P.O X-RESOURC  $\mathbf{u}$ Сп ГU Ave Box 338 55 50 8740 ---us not remail in this easy ~1 "State ul adulta tara"