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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Frands Drive, Santa Fe, NM 87505



<u>jamesbruc@aol.com</u>

e-mail Address

ADMINISTRATIVE APPLICATION CHECKLIST THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE **Application Acronyme:** [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication] [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement] [PC-Poc! Commingling] [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion] [SWD-Selt Water Disposal] [iPI-Injection Pressure increase] [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response [1] TYPE OF APPLICATION - Check Those Which Apply for [A] Location - Spacing Unit - Simultaneous Dedication [A] ☐ NSP ☐ SD NSL Check One Only for [B] or [C] Commingling - Storage - Measurement ☐ CTB ☐ PLC ☐ PC Injection - Disposal - Pressure Increase - Enhanced Oil Recovery [C] SWD 🔲 IPI 🔲 EOR 🔲 PPR ☐ WFX ☐ PMX ☐ [D] Other: Specify [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply Working, Royalty or Overriding Royalty Interest Owners [A] Offset Operators, Leaseholders or Surface Owner B Application is One Which Requires Published Legal Notice [C] D Notification and/or Concurrent Approval by BLM or SLO U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office For all of the above, Proof of Notification or Publication is Attached, and/or, E Waivers are Attached [F] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE [3] OF APPLICATION INDICATED ABOVE. **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative. approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division. Note: Statement must be completed by an individual with managerial and/or supervisory capacity. James Bruce Attorney for Applicant Title Date Print or Type Name Signature

JAMES BRUCE ATTORNEY AT LAW

RECEIVED 2007 DEC 11 PM 2 07

POST OFFICE BOX 1056 SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213 SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone) (505) 660-6612 (Cell) (505) 982-2151 (Fax)

jamesbruc@aol.com

December 11, 2007

William V. Jones Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Resubmittal of administrative SWD application/Bold Energy LP

Antelope Ridge Unit Well No. 6/SW1/4NE1/4 §3-24S-34E

Dear Mr. Jones:

Bold Energy LP previously submitted to the Division an application for administrative approval of a salt water disposal well (copy of application attached as Exhibit A). However, due to an objection by the Madera Trust, the surface owner, the matter was set for hearing (Case No. 14039, set for hearing on December 13th). The Madera Trust has now withdrawn its objection (see Exhibit B).

Attached as Exhibit C is a land plat of the area of review. In addition to surface owner, the administrative application was also mailed to the BLM (the mineral owner/lessor) and Chesapeake Exploration, L.L.C. (the other working interest owner in the Antelope Ridge Unit). I am obtaining the green card showing the BLM's receipt of notice, and I will submit that later. Attached as Exhibit D is Chesapeake's waiver of objection to the application.

In reviewing Exhibit C and the Division's well records, the application was not originally provided to Cimarex Energy Co. and Asher Enterprises Ltd. Co., the operators in §2-24S-34E. However, those companies have waived objection to the application (Exhibits E and F). Therefore, there is no objection to the application.

As a result, Bold Energy LP requests that this matter be approved administratively.

Very truly yours.

Attorney for Bold Energy LP

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

FORM C-108 Revised June 10, 2003

EXHIBIT ____

APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage Application qualifies for administrative approval? Yes No
П.	OPERATOR: Bold Energy, LP
	ADDRESS: 415 W Wall Street Suite 500 Midland Texas 79701
	CONTACT PARTY: Shannon L. Klier, Operations Engineering Mgr. PHONE: (432) 686-1100
Ш.	WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project? Yes No If yes, give the Division order number authorizing the project:
V.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
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:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, 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 geologic data on the injection zone including appropriate lithologic detail, geologic 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/l 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 sources 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: Shannon L. Klier TITLE: Ops Engineering Mgr.
	SIGNATURE: DATE: 8/21/07
	E-MAIL ADDRESS: shannon.klier@boldenergy.com If the information required under Sections VI, VIII, X, and XI above has been prevelease show the date and circumstances of the earlier submittal:
DIST	EXHIBITION: Original and one copy to Santa Fe with one copy to the appropriate Di

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:
 - (1) Lease name, Well No.; Location by Section, Township and Range, and footage location within the section.
 - (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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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.

BOLD ENERGY, LP Antelope Ridge Unit #6 – SWD Items for form C-108

- III. Well data form complete and attached.
- V. A map of the area surrounding the Antelope Ridge Unit #6 (proposed salt water disposal well) is attached. The map shows all wells within a 2 mile radius and those wells within a ½ mile radius of the proposed SWD well (area of review).
- VI. To date, no wells exist on record within a ½ mile radius of the proposed SWD well.

VII. Proposed Operation:

Squeeze work will be performed to ensure that zonal isolation exists immediately above and below the proposed injection interval. Results will be evaluated by CBL and submitted to the Division.

- 1. Based on current field production the anticipated average daily injection rate is 0.69 bbls/minute for a total daily volume of 1,000 bbls. Based on future anticipated field production the maximum anticipated daily injection rate is 1.39 bbls/minute for a maximum daily volume of 2,000 bbls.
- 2. The injection system proposed for this well is open.
- 3. The maximum injection pressure will not exceed 1,034 psi (0.2 psi/ft OCD allowable rate) until a step rate test is performed to establish a higher limit.
- 4. Attached is a water analysis for the Antelope Ridge Unit facility which will be the point from which produced water will be sent to the proposed disposal well.
- 5. Attached is existing literature describing the chemical properties of produced water from the proposed Delaware injection zone.

BOLD ENERGY, LP Antelope Ridge Unit #6 – SWD Items for form C-108

- VIII. The proposed injection zones are Bell Canyon and Cherry Canyon formation sandstones of the Delaware Mountain Group, . The top of the Delaware Mountain Group is the Bell Canyon formation at 5170 feet. The Bell Canyon formation is 865 feet thick. The top of the underlying Cherry Canyon formation is present at 6035 feet. Attached is a section of the log of this well showing the tops and proposed perforations. There is no fresh water aquifers below the injection zone. The closest fresh water well produces water from an aquifer in the Triassic sandstone present at 475 feet measured depth.
- IX. Stimulation Program: After perforating all intervals, an acid treatment consisting of 19,000 gallons of 15% HCL acid will be pumped down the casing.
- X. The following logs have been filed with the Division and are available on-line:

Schlumberger Compensated Neutron-Formation Density Schlumberger Dual Lateral Log Schlumberger Borehole Compensated Sonic Log

- XI. It was determined that one fresh water well exists within a one-mile radius of the proposed disposal well (identified on map). A water analysis from this well is attached.
- XII. Bold Energy, LP finds no evidence of any hydrologic connection, fault or other mechanism by which there will be any hydrologic connection between the disposal zone and underground sources of drinking water.

XIII. Surface Owner: The Madera Family Trust B Trust

c/o Bert Madera 130 Madera Road Jal, NM 88251

*Proof of notice attached.

BOLD ENERGY, LP Antelope Ridge Unit #6 – SWD Items for form C-108

XIII. Leasehold Operators:

See attached list

*Proof of notice attached.

C108 - Item III Side 1

INJECTION WELL DATA SHEET

Bold Energy, LP

OPERATOR:

WELL NAME & NUMBER:

Antelope Ridge Unit #6

R34E **WELL CONSTRUCTION DATA** TOWNSHIP T24S Section 3 SECTION Unit Letter "G" UNIT LETTER FOOTAGE LOCATION WELL LOCATION: 1980' FNL & 1980' FEL WELLBORE SCHEMATIC

RANGE

20"

Surface Casing

Ħ3 £ Method Determined: Circulated Method Determined: Circulated 10-3/4" 7-5/8" 16, Casing Size: Casing Size: Intermediate Casing Production Casing 0 01 Top of Cement: 2nd Stage to Surface SX. SX. 1200 + 800Surface 9-1/2" 14-3/4" 200 Cemented with: Cemented with: Top of Cement: Hole Size: Hole Size: 5,259' - 5,264' 5,245' - 5,250' 5,279' - 5,289'5,308' - 5,318' 5,640' - 5,645'5,714' - 5,724' 5,780' - 5,785' 5,672' - 5,682'5,737' - 5,747' Perforations: 5,227' - 5,232'

Schematic attached

Cemented with: Top of Cement: Total Depth: Hole Size: 5,805' - 5,810' 6,071' - 6,076'6,086'-6,091'5,837' - 5,842'5,986' - 5,996' 6,042'-6,052'6,113'-6,118'6,148'-6,158'-6.2426,232'

7-5/8" to 11,990' ; 5-1/2" Liner 11,776' – 13,758' Injection Interval SX 7,000, 800 5.227

H

Casing Size:

or

Method Determined: Calculated

(Perforated or Open Hole; indicate which)

6,290'

feet to

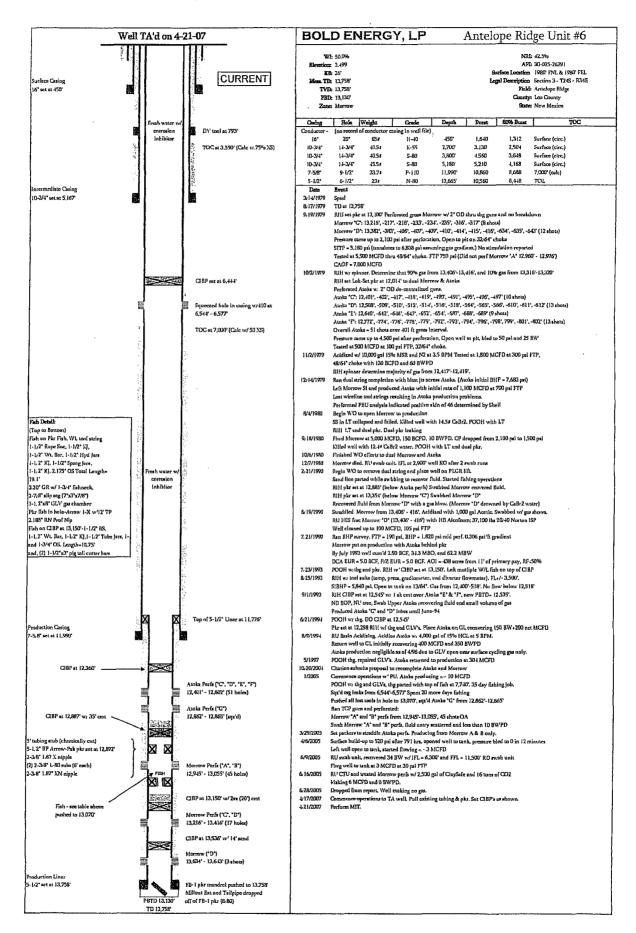
Side 2

INJECTION WELL DATA SHEET

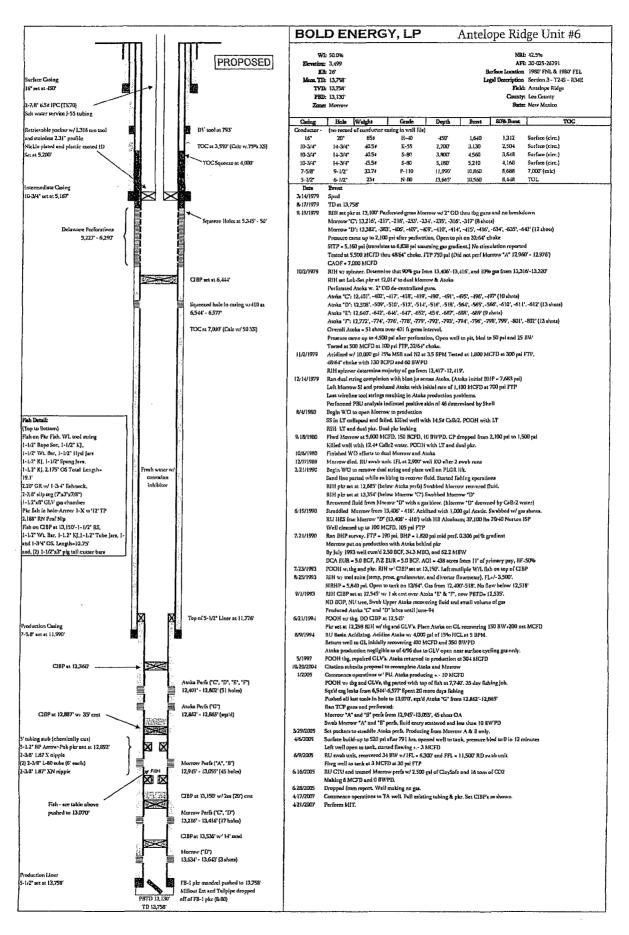
Tul	Tubing Size: 2-7/8" 6.5 lb/ft J-55 Lining Material: TK70 (salt water service internal coating)
$\mathbf{T}_{\mathbf{y}}$	Type of Packer: 7-5/8" Retrievable w/ L316 o/o tool and stainless 2.310" profile (Nickel Plated and Plastic Coated ID)
Pa	Packer Setting Depth: 5,200'
Ö	Other Type of Tubing/Casing Seal (if applicable):
	Additional Data
1.	Is this a new well drilled for injection?
	If no, for what purpose was the well originally drilled? Producing Gas Well
7	Name of the Injection Formation: Delaware and Cherry Canyon
33.	Name of Field or Pool (if applicable):
4.	Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.
ŽŽ	Morrow (13,634' – 13,643') CIBP at 13,536' w/14' sand; Morrow (13,216' – 13,416') CIBP at 13,150' w/ 20' CMT Morrow (12,945' – 13,055') CIBP at 12,887' w/ 35' CMT; Atoka (12,401' – 12,865') CIBP at 12,360'
5.	Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:
	Tops - Delaware: 5,145'; Bone Spring: 8,705'; Wolfcamp: 11,205'; Pennsylvanian: 11,903'
	Tops - Des Moines: 11,875'; Atoka: 12,095'; Morrow: 12,965'













Antelope Ridge Unit #6 1980' FNL & 1980' FEL, Sec 3-T24S-R34E Antelope Ridge Field Lea County, New Mexico

See Attached Wellbore Schematic

Well Status: Drilled in 1979 and completed as a Morrow / Atoka dual. Well was TA'd by Bold Energy in April of 2007 with a CIBP set at 6,444' in the 7-5-8" casing due to lack of production.

Scope: Perform squeeze cement work above Delaware interval to isolate for SWD injection. Perforate and stimulate Delaware intervals. Perform state injection test. Lay line to ARU facility and begin injection.

Directions: From Eunice, NM go south to Delaware Basin Road. Go approximately 22 miles West to Antelope Road. Turn South and go approximately 4 miles to Shell road. Continue south past CG to the first lease road on right and follow to location.

PROCEDURE TO CONVERT TO SWD IN DELAWARE FORMATION

- 1. Procure the following prior to beginning workover:
 - Baker 7-5/8" retrievable packer w/ L316 o/o tool and stainless 2.313" profile nickel plated and plastic coated ID.
 - 2-7/8" 6.5# J-55 Internally Coated (TK70) Tubing
- 2. Clear location and install or test rig anchors as required.
- All fluids used will be contained in steel pits or test tanks. Avoid any spills. Immediately report all spills to Donny Money at 432-661-8803.
- 4. MIT performed on 4/21/07.
- 5. MIRU pulling unit, reverse unit and steel pit.
- 6. ND WH, NU 5K psi BOP.
- 7. Test casing to 5,000 psi.
- 8. Move in +/- 6,500 ft of 2-7/8" 6.5# L80 work string from Bold Energy stock.
- 9. MIRU **Gray Wireline** WL unit with lubricator and packoff. RIH with 3-1/8" casing guns and perforate squeeze holes from 5,345' 5,350' 4 spf 20 holes 0.42" EHD.
- 10. POOH with guns and STBY WL unit.
- 11. MIRU **Schlumberger** squeeze cement crew including 500 gallons of 7-1/2% HCL acid, 10 bbls CW7 and 200 sks Class C + 1% D174 + 0.15% D167 + 0.5% D65 + 0.2% D46. See attached Schlumberger squeeze procedure.
- 12. Establish circulation by pumping down 7-5/8" casing and taking returns up 7-5/8" x 10-3/4" annulus.



- 13. RIH with cement retainer on 2-7/8" tubing. Set retainer at 5,325'.
- 14. Establish injection rate down tubing using fresh water. If an acceptable injection rate is not achieved, sting out of retainer, circulate acid to EOT, sting into retainer, displace acid and establish new injection rate while taking returns up 7-5/8" x 10-3/4" annulus.
- 15. Once acceptable injection is established, pump 10 bbls FW and 10 bbls CW7 Chemical Wash ahead.
- 16. Mix up and pump cement slurry 200 sks Class C at 14.8 ppg (30.8 bbls) per SLB recommendation.
- 17. Displace one bbl short of EOT with fresh water at 3 5 bpm.
- 18. Sting out of the retainer and reverse out to completely clear the tubing string.
- 19. POOH with tubing.
- 20. The following morning RIH with bit on 2-7/8" tubing to drillout the squeeze cement and retainer. Clean out to CIBP at 6,444'. Circulate hole to fresh water. Test squeeze to 500 psi.
- 21. RU Gray Wireline WL unit and run CBL from PBTD to TOC.
- 22. Contact engineering with results of CBL. If cement squeeze work has provided sufficient isolation above injection zone, release pulling unit and prepare to perforate.
 - NOTE: if isolation is not sufficient (minimum of 100' above and below 10-3/4" shoe) additional squeeze work will be required.
- 23. RU **Gray Wireline** WL unit, lubricator and packoff. Correlate to Schlumberger Borehole Compensated Sonic Log dated 6-24-79. Perforate Delaware as follows with Expendable Casing Guns loaded 6 spf, 120° phasing with 38 gm charges (or equivalent) to achieve a minimum 0.50" EHD and 10" formation penetration in 7-5/8" casing.

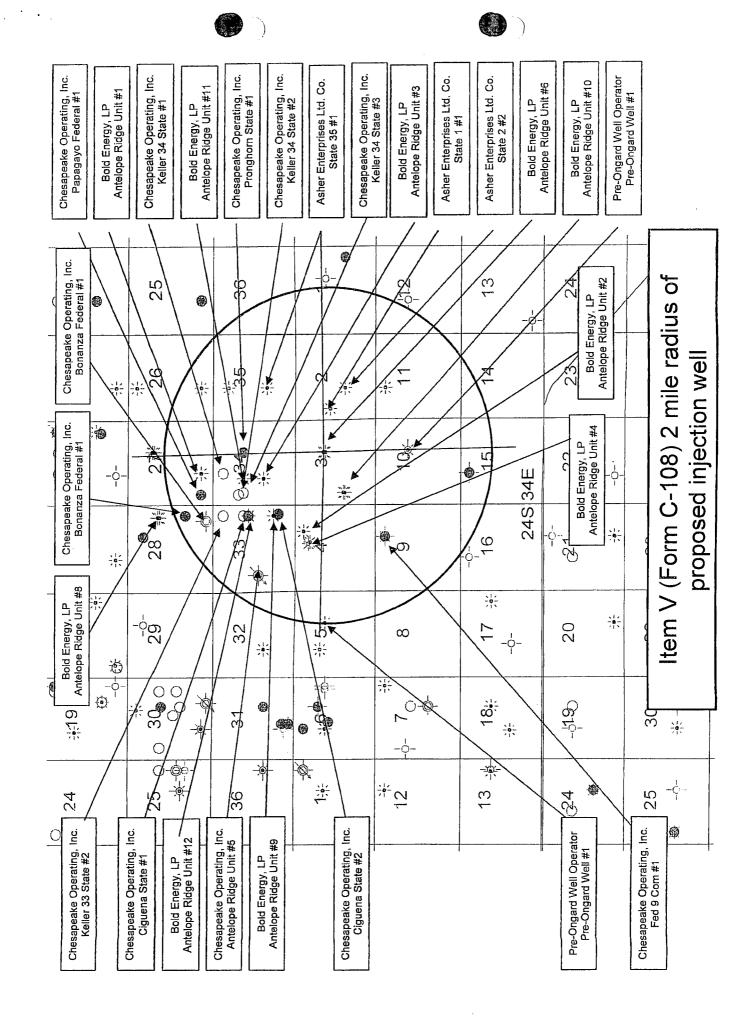
				Delawa	re Perforation Sch	edule		
1	5227	to	5232	6 spf	120° Phasing	30 Shots	over	5 feet
2	5245	to	5250	6 spf	120° Phasing	30 Shots	over	5 feet
3	5259	to	5264	6 spf	120° Phasing	30 Shots	over	5 feet
4	5279	to	5289	6 spf	120° Phasing	60 Shots	over	1 <u>0</u> feet
5	5308	to	5318	6 spf	120° Phasing	60 Shots	over	10 feet
6	5640	to	5645	6 spf	120° Phasing	30 Shots	over	5 feet
7	5672	to	5682	6 spf	120° Phasing	60 Shots	over	10 feet
8	5714	to	5724	6 spf	120° Phasing	60 Shots	over	10 feet
9	5737	to	5747	6 spf	120° Phasing	60 Shots	over	10 feet
10	5780	to	5785	6 spf	120° Phasing	30 Shots	over	5 feet
11	5805	to	5810	6 spf	120° Phasing	30 Shots	over	5 feet
12	5837	to	5842	6 spf	120° Phasing	30 Shots	over	5 feet
13	5986	to	5996	6 spf	120° Phasing	60 Shots	over	10 feet
14	6042	to	6052	6 spf	120° Phasing	60 Shots	over	10 feet
15	6071	to	6076	6 spf	120° Phasing	30 Shots	over	5 feet
16	6086	to	6091	6 spf	120° Phasing	30 Shots	over	5 feet
17	6113	to	6118	6 spf	120° Phasing	30 Shots	over	5 feet
18	6148	to	6158	6 spf	120° Phasing	60 Shots	over	10 feet
19	6232	to	6242	6 spf	120° Phasing	60 Shots	over	10 feet
20	6280	to	6290	6 spf	120° Phasing	60 Shots	over	10 feet
					Total	900 Shots		150 feet

- 24. RDMO WL unit.
- 25. ND BOPE. NU 5K psi frac valve.
- 26. Spot 1 frac tank with fresh water. Spot 1 lined frac tank and have **Weatherford** load with 15,000 gallons 15% HCL acid + 2 gpt surfactant + 1 gpt friction reducer + corrosion inhibitor for 130° F.
- 27. RU Weatherford acid equipment including computer monitoring equipment and HHP capable of achieving 30 bpm at 4,000 psi. Pressure test lines to 5,000 psi. Pump all 357 bbls of 15% HCL acid at 30 bpm (or maximum rate below 5,000 psi). Displace acid with exactly 400 bbls of fresh water (includes overdisplacement volume). RDMO breakdown equipment.
- 28. Download pressure and rate data in 1-second intervals from all three treatments and e-mail to shannon.klier@boldenergy.com.
- 29. ND frac valve. NU BOPE.
- 30. TIH w/ 2-7/8" work string and SN to 5,200'. Commence swabbing to recover load. Once load + 100 bbls has been produced, obtain water samples for analysis.
- 31. POOH laying down work string.
- 32. PU and TIH with Nickel Plated Baker Retrievable Packer with Plastic Coated ID w/ L316 o/o tool and Stainless 2.313" profile on 2-7/8" 6.5# Internally Coated J-55 tubing.
- 33. Set packer at 5,200'. Release from o/o tool and circulate in packer fluid. Space out for 12K lbs compression and latch on to o/o tool. NU 5K psi wellhead.
- 34. Leave well shut in overnight.
- 35. RU **ProWireline** slickline unit. RIH with tandem pressure gauges to mid perf at 5,733'. Leave gauges on bottom for 1 hour. Pull gauge and download data. Email pressure data to shannon.klier@boldenergy.com.
- 36. MIRU 2 transports each containing 120 bbls of ARU lease production water and **Weatherford** pump truck and computer van for performing step rate injection test. Pump truck must be capable of maintaining rates from 0.25 to 3.0 bpm.
- 37. Perform injection test per the following schedule:

			Injectio	n Test		
	Rate (bpm)	Time (min)	Cumm. Time (min)	Volume (bbls)	Cumm. Vol (bbls)	Equivalent Rate (bpd)
Load Tubing	5.00	6	6	30.0	30	
Step Up 1	0.25	5	11	1.3	31	360
Step Up 2	0.50	5	16	2.5	34	720
Step Up 3	1.00	5	21	5.0	39	1440
Step Up 4	1.50	5	26	7.5	46	2160
Step Up 5	2.00	5	31	10.0	56	2880
Step Up 6	2.50	5	36	12.5	69	3600
Step Up 7	3.00	5	41	15.0	84	4320
Step Down 1	2.50	5	46	12.5	96	3600
Step Down 2	2.00	5	51	10.0	106	2880
Step Down 3	1.50	5	56	7.5	114	2160
Step Down 4	1.00	5	61	5.0	119	1440
Step Down 5	0.50	5	66	2.5	121	720
Step Down 6	0.25	5	71	1.3	123	360



- 39. RDMO pump truck and transports.
- 40. Contact NMOCD and perform packer leakage test. Send NMOCD signed pressure chart to Midland office.
- 41. Turn well over to Donny Money for installation of flowline.



C108 - Item VII (4)

Water Analysis

y vaco		The following analysis is calculated using the following water analyses in the indicated proportions:
Analysis#	Perce	nt Field Well#
8380	5	Curry Federal # 2
8382	95	Bold Energy ARU #11



THE GAS ENHANCEMENT COMPANY

DISSOLVED SOLIDS					
CATIONS	<u>mg/l</u>	<u>meq/l</u>	ANIONS	mg/l	meq/l
Sodium, Na (calc)	18,153.05	789.26	Hydroxyl, OH	0.00	0.00
Calcium, Ca	2,360.00	117.41	Carbonate, CO3	0.00	0.00
Magnesium, Mg	1,215.00	99.59	Bicarbonate, HCO3	197.64	3.23
Barlum, Ba	16.79	0.24	Sulfate, SO4	592.00	12.14
Iron, Fe	0.00	0.00	Chloride, Cl	31,650.00	891.55
OTHER PROPERTIES			Sulfide, S	0.00	0.00
pH		6.8	Total Dissolved Soil	ds (mg/l) 54,	184.48
Specific Gravity	1.	.0406	Total Ionic Strength	-	1.07
Dissolved Oxygen, ((mg/l)	0.00	Maximum CaSO4, (d	alc.)	852
Dissolved Carbon D		09.41	Maximum BaSO4, (c	alc.)	29
Sulfide as H2S, (ppr	n):	7.75		mg/l	meq/l
	•		Total Hardness	10,850.00	217.00

Multi-Chem Scale Trak

Total Hardness

ESTIMATED MINERAL CONTENT AT SAMPLE TEMPERATURE

	meq/l	<u>mg/l</u>	<u>lbs/kbbl</u>
CaCO3	0.00	0	0
CaSO4	12.52	852	299
BaSO4	0.25	29	10

Since scale forming molecules can exist in solution, refer to the CaCO3 saturation index for CaCO3, or the solubilies for CaSO4 and BaSO4, and compare with the calculated amounts above to determine if precipitated scale may be possible.

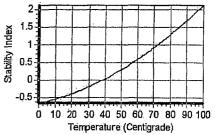
Conclusion:

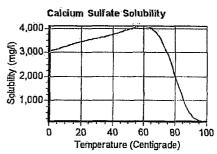
Calcium Carbonate scaling index is positive above 39 degrees Centigrade. Calcium Sulfate scale is indicated above 87 degrees Centigrade. Barium Sulfate scale is indicated at all temperatures.

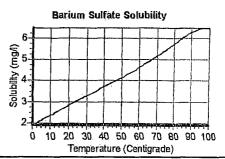
Remarks:

Scaling Indices vs. Temperature











Disposal Zone (Delaware) Formation Water Analysis Item # VII 5 (Form C-108)

Water Samples for Well BELL LAKE UNIT 002 API = 3002508489 Formation = DEL Field = SWD

Instructions:

Current Water Production Information

For general information about this sample. Clek Glek

For scale calculation pages (Suff-Davis or Oddo Tomson methods).

To select this warer sample for water mining, it will lead to the main page, and edd the sample ID to the mining table.

CEak the hyperlinked semple auxiber to make a ..esv for that sample, or select several check boxes and click Submit for multiple samples The ions are in (mg/L) units.

Click **664**

Cliek (C.)

NEW TOOL OF THE STATE OF THE COST HE COST IN THE COST IN THE

660' FSL and 3300' FEL Section 30 T23S R34E

4226 国電台 23S 34B 30: 529 32200 mil 451 mil mil

Imm

☐ SELECT/DESELECT ALL

Submit

Water Samples for Well BELL LAKE UNIT 007 API = 3002508367 Formation = DEL Field = SWD

Current Water Production Information

Instructions:

For general information about this sample.

For scale calculation pages (Stiff: Davis or Oddo Tomson methods). Olek (III) **配** 答

To select this water sample for water mixing. It will lead to the mein page, and add the sample D to the mixing

Circk the hyppetinked sample number to make a .cov for that sample, or select several rheck boxes and click Submit for multiple samples Cler 664

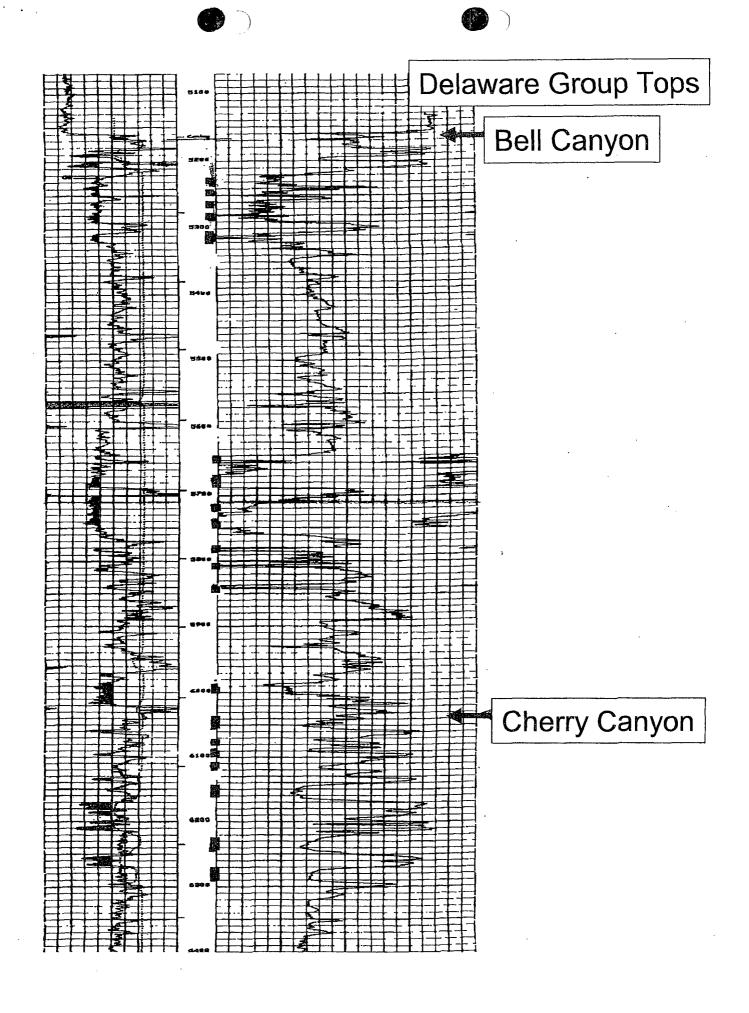
The ions are in (mg/L) units.

660' FNL and 660' FEL Section 1 T24S R33E

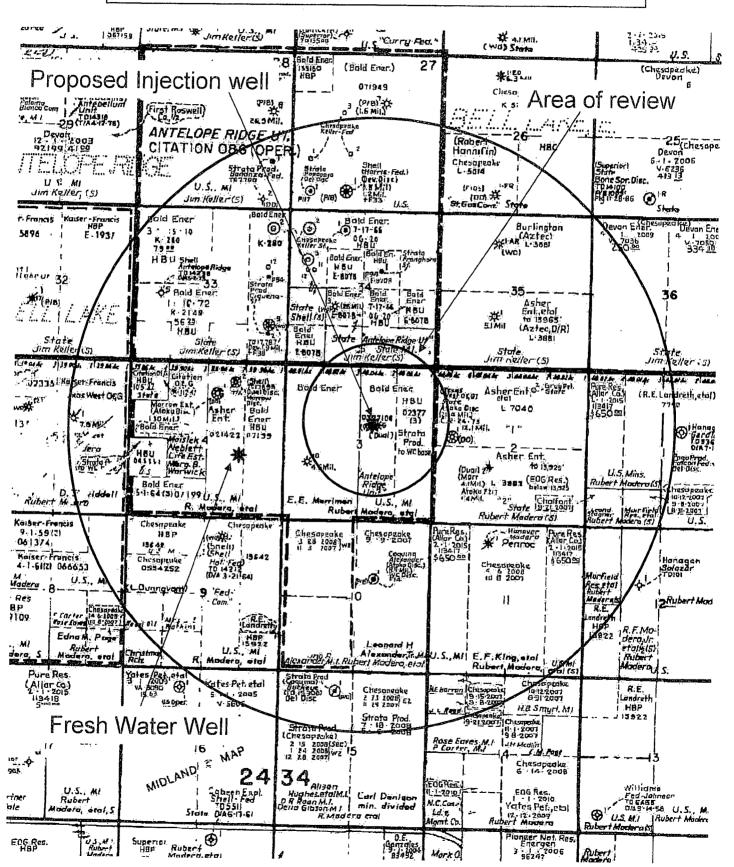
SAMOLET RESISTANCE OF STATES OF STAT 큠 4247 国圖名。248.335 01/749 53920 mill 391 mill mill mill mill mill mill (C)

ESELECT/DESELECT ALL

Submit



Antelope Ridge Unit #6 - 1/2 mile and 2 mile radius



C108 - Item XI

Sep 15 06 03:09p SUE HEADY 505-394-0056 09/15/2006 FRI 13:33 FAX 1 432 687 2607 OMEGA TREATING CHEMICALS ++++ JOHN

p.2

Ø001/002

DATE:

9/13/2006

OMEGA TREATING CHEMICALS, INC. 2605 GARDEN CITY HEW. MIDLAND, TEXAS 79701

WATER ANALYSIS REPORT

COMPANY NAME:

BOLD ENERGY

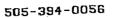
LEASE NAME:

MADERA FRESH WATER STA

WELL#\SAMPLE POINT: #1

	·		
1.	WELLHEAD PH	6.98	-
2.	H2S (QUALITATIVE)	0.00	PPM
з.	CALCIUM (Ca)	160.00	Mg/L
	MAGNESIUM (Mg)		Mg/L
	IRON '(Fe)		PPM
	SODIUM		Mg/L
	CHLORIDE (C1)		Mg/L
8.	BICARBONATE (HCO3)	195.20	Mg/L
9.	SULFATE (SO4)	3.2	Mg/L
	TOTAL HARDNESS		Mg/L
	TOTAL DISSOLVED SOLIDS		Mg/L
12.	RESISTIVITY	9.35	
	CARBONATE SCALING TENDENCY		
14.	SULFATE SCALING TENDENCY	-21.18	
	воро		
	REMARKS:		
	CODIES TO JOHN NOGELMRIPP BILLY MODDS	•	

C108 - Item XI



p.2

Sep 15 06 03:09p SUE HEADY 09/15/2006 PRI 13:33 FAX 1 432 687 2607 OMEGA TREATING CHEMICALS ->>> JOHN

Ø001/002

DATE:

9/13/2006

OMEGA TREATING CHEMICALS, INC. 2605 GARDEN CITY HYW. MIDLAND, TEXAS 79701

WATER ANALYSIS REPORT

COMPANY NAME:

BOLD ENERGY

LEASE NAME:

MADERA FRESH WATER STA

WELL#\SAMPLE POINT: #1

	·		
1.	WELLHEAD PH	6.98	
2.	H2S (QUALITATIVE)	0.00	PPM
3.	CALCIUM (Ca)	160.00	Mg/L
	MAGNESIUM (Mg)	24.30	Mg/L
5.	IRON (Fe)	0.05	PPM
	SODIUM	-39.67	Mg/L
7.	CHLORIDE (CL)	177.50	Mg/L
8.	BICARBONATE (HCO3)	195.20	Mg/L
9.	SULFATE (SO4)	3.2	Mg/L
10.	TOTAL HARDNESS	500.00	Mg/L
11.	TOTAL DISSOLVED SOLIDS	520.59	Mg/L
12.	RESISTIVITY	9.35	
13.	CARBONATE SCALING TENDENCY	0.04	
14.	SULFATE SCALING TENDENCY	-21.18	
	0 408		
	REMARKS:		
	COPIES TO: JOHN NOGELMEIER, BILLY HOBES	i	

ARU #6 - Surrounding Leasehold Operators

Phone #		405 848 8000	
e-mail		ihensley@chkenergy.com	
Contact / Name	ile Radius	Oklahoma Jarvis A. Hensley, District Mgr. Permian <u>ihensley@chkenerg</u>	
Address	1/2 M	6100 N. Western Ave., Okla City, OK 73154-0496	
<u>Operator</u>		Cheaspeake Operating	

	2 Mile Radius	Jius		
	6100 N. Western Ave., Oklahoma Jarvis A. Hensley,	Jarvis A. Hensley,		
Chesapeake Operating, Inc.	City, OK 73154-0496	District Mgr. Permian	<u>jhensley@chkenergy.com</u>	405 848 8000
	1903 Savannah Drive, Artesia,			
Asher Enterprises, Ltd. Co.	NM 88210	Kevin Jones		
	508 W. Wall, Suite 600, Midland,			
Cimarex Energy Company	TX 79701	Jeff Gotcher	igotcher@cimarex.com	432 571 7823
	P.O. Box 51810, Midland, TX			
Burlington Resources Oil and Gas Company	79710-1810	Steve Burke	sburke@br-inc.com	432 688 6038
	550 W. Texas, Suite 1300,			
Concho Resources	Midland, TX 79701	Robert Ready	rready@conchoresources.com 432 685 4345	432 685 4345
	P.O. Box 1567, Graham, TX			
Allar Company	76450	Jack Graham	allar@allarcompany.com	940 549 0077
	P.O. Box 27115, Santa Fe, NM			
ВГМ	87502-0115	Linda Rundell	:	505 438-7502
	P.O. Box 1148 Santa Fe, INIV			
State of NM	87504-1148	Patrick H. Lyons		505 827 5760
Chevron U.S.A. Inc.	15 Smith Rd., Midland, TX 79705 Denise Beckham	Denise Beckham	dkbe@chevrontexaco.com	432 687 7235
Kaiser Francis	P.O. Box 21468, Tulsa, OK	Wayne Fields	WayneF@kfoc.net	918 494 0000



3106 N. Big Spring St. Ste. 10 Midland, TX 79705 Tel: (432) 685-9158

August 22, 2007

Lovington Daily Leader P.O. box 1717 Lovington, NM 88260-1717

RE: Legal Publications

Enclosed herewith please find Legal Notice to be published (1) time only in your newspaper at the earliest possible date.

Please forward an Affidavit of Publication along with your invoice to:

Gray Surface Specialties ATTN: Dwaine Moore 3106 North Big Spring St. Ste. 100 Midland, TX 79705

Should you have any questions regarding this matter please contact this office. Thank you for your cooperation.

Sincerely,

Dwaine Moore Gray Surface Specialties, 432-685-9158

- FB1 F	US Posial Service: CERTIFIED WAIL BECEIPT (Comedic Mall only No Insurance Source Coverage Roviced)					
디		OFFICIAL USE				
<u>n</u>	Postage	\$.97				
щ	Certified Fee	2.65				
0005	Return Receipt Fee (Endorsement Required)	2.15	Postmark Here			
340	Restricted Delivery Fee (Endorsement Required)					
	Total Postage & Fees	\$5.77				
7005	Sent To The Louington Daily Leader Street, Apt. No.: P. O. Box 1717 City, State, 21944 Lavington, NM 88040-1717 25/50/1000/00000000000000000000000000000					





August 23, 2007

Bureau of Land Management PO Box 27115 Santa Fe, NM 87502-0115

RE:

Antelope Ridge Unit #6

Unit Letter "G", Section 3, T24S, R34E

1980' FNL & 1980' FEL

Lea County, NM

To Whom It May Concern:

In accordance with the Rules and Regulations of the Oil Conservation Division of the State of New Mexico, you are being provided a copy of the C-108 Application for Authorization to Inject into the above captioned well.

Any questions about the permit can be directed to Dwaine Moore at 432-685-9158. Any objections or request for hearing must be files with the Oil Conservation Division within fifteen (15) days from the date received. The OCD address is 1220 S. Saint Francis Drive, Santa Fe, NM 87504, 505-476-3440.

Sincerely,

Dwaine Moore

Regulatory Specialist

Gray Surface Specialties,

Agent for Bold Energy, LP

432-685-9158

Postage \$.97

Control Fee (Endorsement Required)

Restricted Delivery Fee (Endorsement Required)

Total Postage & Fees \$ 5.77

Sent To Box No. Or PO Box No. City, State, ZiP+4

City, State, ZiP+4

Control State State (Control Stat



3106 N. Big Spring St. Ste. 10 Midland, TX 79705 Tel: (432) 685-9158

August 23, 2007

Chesapeake Operating 6100 N. Western Ave., Oklahoma City, OK 73154-0496

RE: Antelope Ridge Unit #6

Unit Letter "G", Section 3, T24S, R34E

1980' FNL & 1980' FEL

Lea County, NM

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Sincerely,

Dwaine Moore

Regulatory Specialist Gray Surface Specialties,

Agent for Bold Energy, LP

432-685-9158

Postage \$ 97

Return Receipt Fee (Endorsement Required)

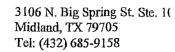
Restricted Delivery Fee (Endorsement Required)

Total Postage & Fees \$ 5.77

Sent To Street, Apt. Not. or PO Box No. City, State Tep 3

City, State Tep 3

City State Tep 4





August 23, 2007

Rubert Madera Trust c/o Bert madders Box 1224 Jal, NM 88252

RE: Antelope Ridge Unit #6

Unit Letter "G", Section 3, T24S, R34E

1980' FNL & 1980' FEL

Lea County, NM

To Whom It May Concern:

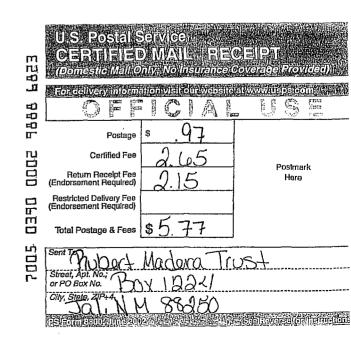
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Sincerely,

Dwaine Moore Regulatory Specialist Gray Surface Specialties, Agent for Bold Energy, LP

432-685-9158



SURFACE OWNER, GRAZING LEASSEE, LEASE OWNER AND OFFSET OPERATORS

Antelope Ridge Unit No. 4 1980' FNL & 1980' FEL Unit Letter "G", Section 3, T24S, R34E Lea County, NM

Surface Owner of Well Site

Rubert Madera Trust c/o Bert Madera 130 Madera Road Jal, NM 88251

Mineral Owner, Ditches, and Canals

Bureau of Land Management 1474 E. Rodeo Road Santa Fe, NM 87505

Operators of Record

Cheaspeake Operating 6100 N. Western Ave. Oklahoma City, OK 73154-0496



STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF BOLD ENERGY, LP FOR OF A SALT WATER DISPOSAL WELL, LEA COUNTY, NEW MEXICO

CASE NO. 14039

WITHDRAWAL OF OBJECTION

BERT MADERA, MONTIE CAROL MADERA, and MADERA FAMILY
TRUST B, by and through their counsel of record, Ernest L. Padilla, PADILLA LAW
FIRM, P.A. hereby withdraw their objection in the above-captioned and number case.

Respectfully submitted:

PADILLA LAW FIRM, P.A.

Enest L. Padilla P.O. Box 2523

Santa Fe, New Mexico 87504

(505) 988-7577 FAX: 988-7592

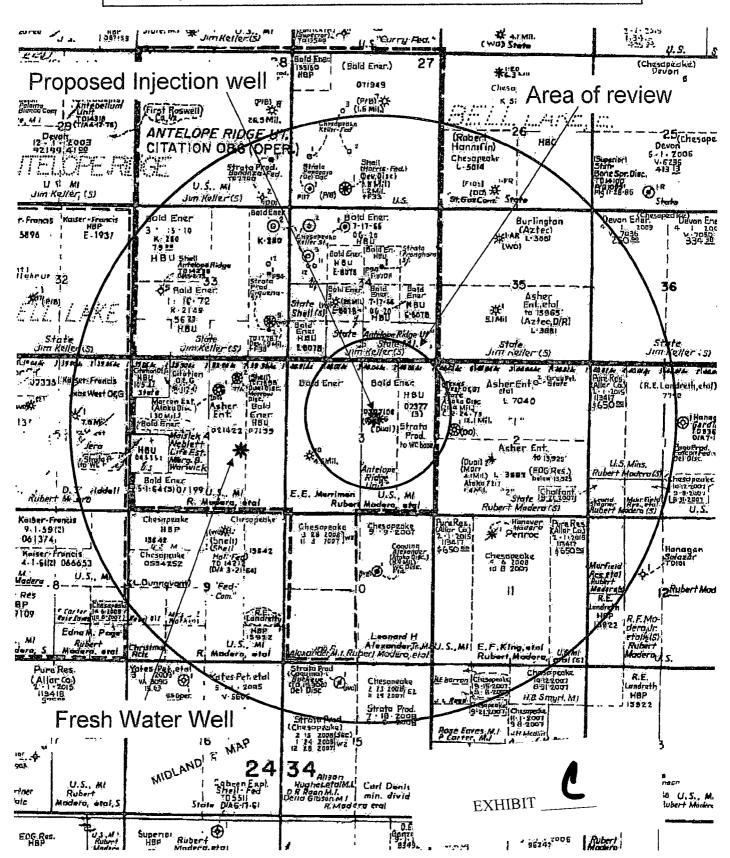
CERTIFICATE OF SERVICE

I hereby certify that I caused a copy of the foregoing Withdrawal of Objection to be sent by facsimile at 505-982-2151 and U.S. Postal Service to James G. Bruce, Esq., P.O. Box 1056, Santa Fe, NM 87504-1056 on this 11th day of December, 2007.

ERNEST I PADILLA



Antelope Ridge Unit #6 – 1/2 mile and 2 mile radius



BOLD ENERGY, LP

415 W. WALL, SUITE 500 MIDLAND, TEXAS 79701

> MAIN: 432-686-1100 FAX: 432-686-1104

September 4, 2007

Mr. Kevin Pfister Chesapeake Energy Corporation 6100 N. Western Ave. Oklahoma City, OK 73118-1044

Re:

ARU #6 SWD – Waiver for Disposal into Delaware Formation

1980' FNL & 1980' FEL Sec. 3, T24S R34E, Lea County, NM

Dear Mr. Pfister:

Bold Energy requests permission from Chesapeake, as leasehold owner in the Delaware Formation, to allow Bold to dispose of sale water into the Delaware Formation within the wellbore of the ARU # 6.

A plat and copy of permit is attached to this letter to assist with Chesapeake's evaluations.

If you agree to not object to Bold's proposal to the conversation of the ARU # 6 to a Salt Water Disposal Well, please sign in the space provided below.

Yours very truly Lew- Westlungton

Peggy Kerr-Worthington

Land Manager

Chesapeake Energy Corporation agrees to not protest Bold's application for conversation of the ARU # 6 to a SWDW.

Chesapeake Exploration, L.L.C. an Oklahoma limited liability company

Name Kevin Pfister

Title Land Manager - Permian North

BOLD ENERGY, LP

415 W. WALL, SUITE 500 MIDLAND, TEXAS 79701

Main: 432-686-1100 FAX: 432-686-1104

September 28, 2007

Mr. Jeff Gotcher
Cimarex Energy Co.
508 W. Wall Street, Suite 600
Midland, Texas 79701.

Re: ARU #6 SWD – Waiver for Disposal into Delaware Formation

1980' FNL & 1980' FEL Sec. 3, T24S R34E, Lea County, NM

Dear Jeff:

Bold Energy requests permission from Cimarex, as leasehold owner in the Delaware Formation, to allow Bold to dispose of sale water into the Delaware Formation within the wellbore of the ARU # 6.

A plat and copy of permit is attached to this letter to assist with your evaluation. Bold has obtained approval from Chesapeake who is the majority owner in the Delaware. As you can see from the plat, possibly 15 acres crosses into Sec. 2. Since waivers are needed for a 1/2 mile radius notification, Cimarex is affected. I am unsure of the contractual rights Cimarex made with Asher, but I will submit request to Asher as well.

If you agree to not object to Bold's proposal to the conversation of the ARU # 6 to a Salt Water Disposal Well, please sign in the space provided below.

Yours very truly,

Peggy Kerr-Worthington

Land Manager

Cimarex Energy Co. agrees to not protest Bold's application for conversation of the ARU # 6

to a SWDW.

Name

Title

Bv

AND MANAGER

from The Westhington

EXHIBIT

JAMES BRUCE ATTORNEY AT LAW

POST OFFICE BOX 1056 SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213 SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone) (505) 660-6612 (Cell) (505) 982-2151 (Fax)

jamesbruc@aol.com

December 11, 2007

William V. Jónes Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Resubmittal of administrative SWD application/Bold Energy LP

Antelope Ridge Unit Well No. 6/SW1/4NE1/4 §3-24S-34E

Dear Mr. Jones:

Enclosed with this letter are copies of notice letters (with signed green cards) sent to the BLM. The BLM was originally notified of the administrative application in August, and was re-notified a few days ago.

And the second of the second o

RECEIVED

2007 DEC 14 PM 1 30

Very truly yours,

James Bruce

e santa

Attorney for Bold Energy LP



3106 N. Big Spring St. Ste. 100 Midland, TX 79705 Tel: (432) 685-9158

August 23, 2007

Bureau of Land Management PO Box 27115 Santa Fe, NM 87502-0115

RE:

Antelope Ridge Unit #6

Unit Letter "G", Section 3, T24S, R34E

1980' FNL & 1980' FEL

Lea County, NM

E830	U.S.Posiali Sarvice CERTIFIED WAILT RECEIPT Conceinationity Walterrance Coverage Brovides) The Company of the Coverage Brovides of the Cover				
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10 10 10	Postage	\$.97			
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무	Restricted Delivery Fee (Endersement Required)				
0340	Total Postage & Fees	\$ 5.77		b	
7005	Sent Toy BLM				
7.5	Street, Apr. No.: P. B. Box 2715				
	City, State, ZIP+4	Fe, NM 8	7502		
	DEPENDANTAL PROPERTY.		* Esse kovoso fortuninta	iona.	

To Whom It May Concern:

In accordance with the Rules and Regulations of the Oil Conservation Division of the State of New Mexico, you are being provided a copy of the C-108 Application for Authorization to Inject into the above captioned well.

Any questions about the permit can be directed to Dwaine Moore at 432-685-9158. Any objections or request for hearing must be files with the Oil Conservation Division within fifteen (15) days from the date received. The OCD address is 1220 S. Saint Francis Drive, Santa Fe, NM 87504, 505-476-3440.

Sincerely

Dwaine Moore Regulatory Specialist Gray Surface Specialties, Agent for Bold Energy, LP 432-685-9158

SENDERS COMPLETE THIS SECTION Complete Items 1, 2, and 3. Also complete Item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits.	A. Signature X. Clane Farall C. Date of Delivery D. Is delivery address different from item 1? Yes
Dureau Of Land Management P.O. Box 27115	If YES, enter delivery address below:
Somta Fe. NM 88502 Alth: Linda Mondell	3. Service Type 10 Certified Mail
2 Article Number	4. Restricted Delivery? (Extra Fee)

PS Form 3811, February 2004

(Transfer from service label)

Domestic Return Receipt

7005 0390 0002 9888 6830

102695-02-M-16/n

1900 1900 E 9. Alexandr. 197 []	U.S. Postal S Prvice H. CERTIFIED M NL _{Th} RECEIPT (Pomestic Mall on y: N Insurance Coverage Provided in the control of the	3106 N. Big Spring St. Ste. 100 Midland, TX 79705 Tel: (432) 685-9158
December 6,2007	The reason of Land Management treet, Apt. No.; 1909 w Second Street with Size of Street to Swell, NM 8801	
Roswell, NM 88201		
RE: Antelope Ridge Unit Unit Letter "G", Sec 1980' FNL & 1980' Lea County, NM	ion 3, T24S, R34E	
To Whom It May Concern: In accordance with the Rule New Mexico, you are being into the above captioned wel	s and Regulations of the Oil Conservation or ovided a copy of the C-108 Application	n Division of the State of for Authorization to Inject
Any questions about the p objections or request for hea	ermit can be directed to Dwaine Moor ring must be files with the Oil Conservation or wed. The OCD address is 1220 S. Saint Fra	e at 432-685-9158. Any
Sincerely)		
Dwaine Moore Regulatory Specialist Gray Surface Specialties, Agent for Bold Energy, LP 432-685-9158	SENDER: COMPLETE THIS SECTION Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. The Addressed to: Dureau of Land Management and Street. Street.	A. Signature X
	hoswell, NH 88201	3. Sepulce Type Certified Mall
	2. Article Number 7006 0810 000 (Transfer from s. 2004 Degree 1981)	

14-11-5

December 5, 2007

Mr. Kevin Jones

Asher Enterprises

1903 Savannah Dr.

Artesia, NM 88210

Re: ARU #6 SWD - Waiver for Disposal into Delaware Formation

1980' FNL & 1980' FEL Sec. 3, T24S R34E, Lea County, NM

Dear Kevin:

Bold Energy requests permission from Asher, as leasehold owner in the Delaware Formation, to allow Bold to dispose of sale water into the Delaware Formation within the wellbore of the ARU # 6.

A plat and copy of permit is attached to this letter to assist with your evaluation. Bold has obtained approval from Chesapeake who is the majority owner in the Delaware. As you can see from the plat, possibly 15 acres crosses into Sec. 2. Since waivers are needed for a 1/2 mile radius notification, Asher is affected.

If you agree to not object to Bold's proposal to the conversation of the ARU # 6 to a Salt Water Disposal Well, please sign in the space provided below and return by e-mail or fax. My e-mail is peggy.kerr@boldenergy.com and fax number is 432 - 686-1104.

Yours very truly,

Peggy Kerr-Worthington

Land Manager

Asher agrees to not protest Bold's application for conversation of the ARU # 6 to a SWDW.

Vame Plant Cholesprises CIV

y Ten Weithington

EXHIBIT ___