

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

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 14411  
ORDER NO. R-13265**

**APPLICATION OF AGUA SUCIA, LLC TO REINSTATE ADMINISTRATIVE  
ORDER SWD-559 FOR A SALT WATER DISPOSAL WELL, LEA COUNTY,  
NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on March 18, 2010, at Santa Fe, New Mexico, before Examiner Terry Warnell.

NOW, on this 1<sup>st</sup> day of June, 2010, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Agua Sucia, LLC ("Agua Sucia" or "applicant"), seeks authority to reinstate Division Administrative Order SWD-559 approved May 19, 1994 for salt water disposal into the Government E Well No. 1 (**API No. 30-025-23708**) (the "subject well") located 610 feet from the South line and 1880 feet from the West line, Unit N of Section 25, Township 19' South, Range 34 East, NMPM, Lea County, New Mexico, to dispose of oil field produced waters into the Bone Spring formation from 9,716 feet to 10,240 feet.

(3) The Government E Well No. 1 was drilled by The Superior Oil Company in 1971 as a Bone Spring formation producer. Sometime after 1971 Armstrong Energy bought and produced the well. After most of the recoverable oil was produced Armstrong sold the well to Subsurface Water Disposal, Inc., who turned the well into a salt water disposal well under Order SWD-559.

(4) Louray Oil Company (OGRID 210510) bought the well and operated it as a salt water disposal well from 2001 to 2008. Injection was shut down in January 2008 and there has been no water injected into the well since.

(5) On April 17 of 2009, the Division received an administrative application seeking to reinstate administrative Order SWD-559 for this well. Armstrong Energy Corporation objected to this application and it was set to hearing as Division Case No. 14345.

(6) Before Case No. 14345 was heard, Agua Sucia, LLC became operator of record for the Government E Well No. 1 on July 16, 2009.

(7) Agua Sucia, LLC (Agua Sucia), on September 9, 2009 filed a new application for reinstatement of Order SWD-559.

(8) By letter dated September 15, 2009, Louray Oil Company requested that Case No. 14345 be dismissed.

(9) Armstrong Energy Corporation renewed its objection to the reinstatement of Order SWD-559 by Agua Sucia on September 22, 2009 and it was set to hearing as Division Case No. 14411.

(10) Agua Sucia appeared at the hearing through counsel and presented exhibits and testimony from two experts as follows:

- a. The well had been a salt water disposal well for many years before Louray bought the Government E Well No. 1 in 2001.
- b. Louray operated this well from 2001 to 2009. There has been no water injected into the well since January 2008.
- c. The witness, Ben Stone, was hired by Louray to prepare the Form C-108 for reinstatement of Order SWD-559 based on the log book pages provided by Al Perry who was the consultant who supervised the repair work on the Government E Well No. 1.
- d. Mr. Stone pointed out early on that perhaps Louray should not transfer operation to Agua Sucia until the SWD was reinstated.
- e. In 2009, Louray transferred the Well to Agua Sucia. Shortly after the change of operator, Louray declared bankruptcy.
- f. Louis Edgett was the owner of Louray, and is now a pumper for Agua Sucia.

g. Prior to the Government E Well No. 1 being shut in, in 2008, Ben Stone certainly saw evidence of the damaged casing through the Queen interval.

h. Robert Lee testified that 302,000 barrels were taken out of the Government E Well No. 1 and 3.1 million barrels (ten times) had been injected back into the well.

(11) Armstrong Energy Corporation appeared at the hearing through counsel in opposition to the application and presented exhibits and testimony from five witnesses as follows:

a. Mr. Edgett, under subpoena, testified that Surface Water Disposal had run a casing and inspection log on the Government E Well No. 1 in 2001 prior to his purchase of the well, but no log was offered as an exhibit.

b. Louray found out about Armstrong's concerns when Hobbs OCD started checking the well three or four times a month.

c. In 2008 Louray had problems with the well and was flowing it back; part of what was coming out of the well was oil. No hauled or sold oil was ever reported to OCD by Louray.

d. No water has been injected into the Government E Well No. 1 since January 2008.

e. In October 2009, Agua Sucia reported that they were moving 723 barrels of oil off the property.

f. Armstrong owns some Queen producing wells and some deeper rights in other parts of the same lease as the Government E Well No. 1.

g. Armstrong's Superior Federal Well No. 6, producing from the Queen formation, is 370 feet from the Government E Well No. 1.

h. The water chlorides that were being injected into the Government E Well No. 1 were showing up in Armstrong's Superior Federal Well No. 6.

i. On January 14, 2008 Armstrong told the OCD Hobbs District office about the water problems they were having with their Superior Federal Well No. 5 and Superior Federal Well No. 6. OCD agreed to have MIT's run on all the surrounding wells within one mile AOR, which included the Government E Well No. 1.

j. Mr. Gary Wink testified that OCD notified all operators within a one-mile radius of the subject well that they would review all wells. Before OCD could get to the Government E Well No. 1, Louray pulled the tubing out of the well and hauled it off.

k. Armstrong believes Louray was injecting directly into the Queen prior to 2008.

l. On February 5, 2009 Agua Sucia did a Bradenhead squeeze on the Government E Well No. 1 starting at 1600 hours. Armstrong's exhibit 1, page 6, shows a pressure increase on their Superior Federal Well No. 6 as Agua Sucia pumped cement, and when they stopped pumping the pressure increase drops off.

m. Mr. Jerry Guy of Guy Oil and Gas Limited testified that when the subject well was shut down their three San Andres wells' water production dropped immediately.

n. Something is allowing direct communications between the Bone Spring, Delaware, San Andres and Queen formations in this area.

(12) Division records indicate that Agua Sucia, LLC (OGRID 265779), as of the date of this order, is in compliance with Division Rule 5.9.

(13) The mineral rights in the Government E Well No. 1 are owned by Armstrong Energy Corporation. Only the right to use the wellbore for disposal was conveyed to Subsurface Water Disposal.

(14) There is still a large void (7,700-4,089 feet) behind the 5 ½ inch casing in the Government E Well No. 1 that is not cemented. This void includes the Delaware, San Andres and Queen formations.

(15) No exhibits were presented detailing the January 2008 repair job when cement was pumped between the 8 5/8 inch casing and the 5 1/2 inch casing.

(16) Even though the Operator of record has changed, the same person is responsible for the day to day operations.

(17) Over the injection life of the Government E Well No. 1 the injection pressure has decreased, indicating the injected water has found a new path of less resistance.

(18) The operator was authorized to inject produced water into the Government E Well No. 1 to be disposed into the Bone Springs formation through perforations from

9,716 feet to 10,240 feet. There are several area of review (AOR) wells producing hydrocarbons from the shallower Delaware, San Andres and Queen formations.

(19) The Government E Well No. 1 is a commercial disposal well. The suitability of this disposal well for injection operations is questionable. Division records indicate that approximately 723 barrels of oil were skimmed off and reported to the Division before injecting the produced water.

(20) Testimony indicates that there may be casing damage in the Government E Well No. 1 in the Queen formation, and when this disposal well was shut-in, operators in the Queen formation experienced less water production in their producing wells. The Division concludes that the water injected into this well is not being confined in the injection zone.

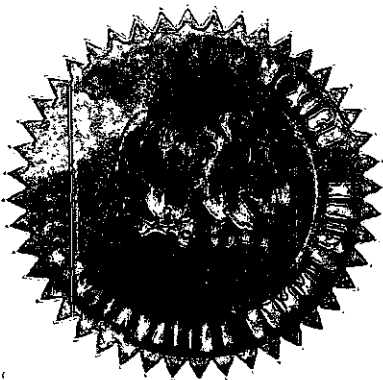
(21) To prevent waste of oil and gas reserves that could result from intrusion of injected water into a producing horizon, the reinstatement of Order SWD-559 to allow Agua Sucia, LLC to dispose of produced waters into the Bone Spring formation from 9,716 feet to 10,236 feet should be denied.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Agua Sucia, LLC ("Agua Sucia" OGRID 265779), to reinstate administrative Order SWD-559 authorizing produced water disposal into its Government E Well No. 1 (API No. 30-025-23708) into the Bone Spring formation at approximately 9,716 feet to 10,240 feet is hereby denied.

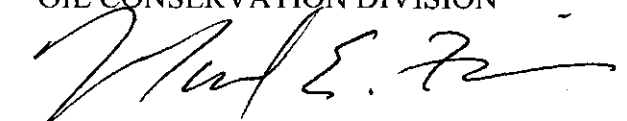
(2) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
MARK E. FESMIRE, P.E.  
Acting Director