

Jones, William V., EMNRD

From: Ocean Munds-Dry [Omundsdry@hollandhart.com]
Sent: Tuesday, January 06, 2009 12:34 PM
To: Jones, William V., EMNRD
Subject: Big Bertha
Attachments: Big Bertha 1-11 WBD.pdf; Big Bertha #1 Approved Sundry.tif

Will - Chesapeake's geologist (Robert Martin) and I put together the information below, as you requested. I also included some history, for your ease of reference. If you want me to put this into a letter, I will be glad to. Thanks and hope your holidays were great.

SV Big Bertha Well No. 1 (API No. 30-025-33883)

The Big Bertha Well No. 1 is located in Section 11, Township 16 South, Range 36 East, 2081 FNL & 1870 FWL. Administrative Order SWD-671-B, dated February 5, 2008, authorized Chesapeake Operating Inc. to utilize the well for produced water disposal into the Wolfcamp formation through perforations from 9830 feet to 10118 feet. Total depth of the well is 10,900 feet. See attached wellbore diagram.

The original application requested the injection interval 9,830 to 10,118 feet but Chesapeake believes this was an oversight. When Chesapeake submitted its re-completion procedure on a C-103 to the Division, it indicated it would be perforating from 10,592 to 10,638 feet. The sundry was approved on October 17, 2008. See attached. However, recently the district office discovered that Chesapeake did not have authority in the administrative order to inject below 10,118 feet. It required Chesapeake to set a bridge plug in the well to prevent injection below 10118 feet.

The Big Bertha did not go deep enough to see the Top of the Penn. Based on an offset well in Unit K of Section 11, the SV Chipshot Well No. 1 (API No. 30-025-33466), Chesapeake believes the top of the Penn Shale is 11,054 feet. Therefore, the Wolfcamp interval should be approximately 1343 feet thick.

Chesapeake requests that the order be amended to allow for injection in the lowest perforation 10592-10638. The extended interval is well within the Wolfcamp and therefore, Chesapeake believes that no further notice should be necessary. This well is an important part of Chesapeake's operations in this area and we appreciate your willingness to review this information at your earliest convenience.

Happy New Year,
Ocean

Ocean Munds-Dry
Holland & Hart LLP
110 N. Guadalupe Suite 1
Santa Fe, NM 87501
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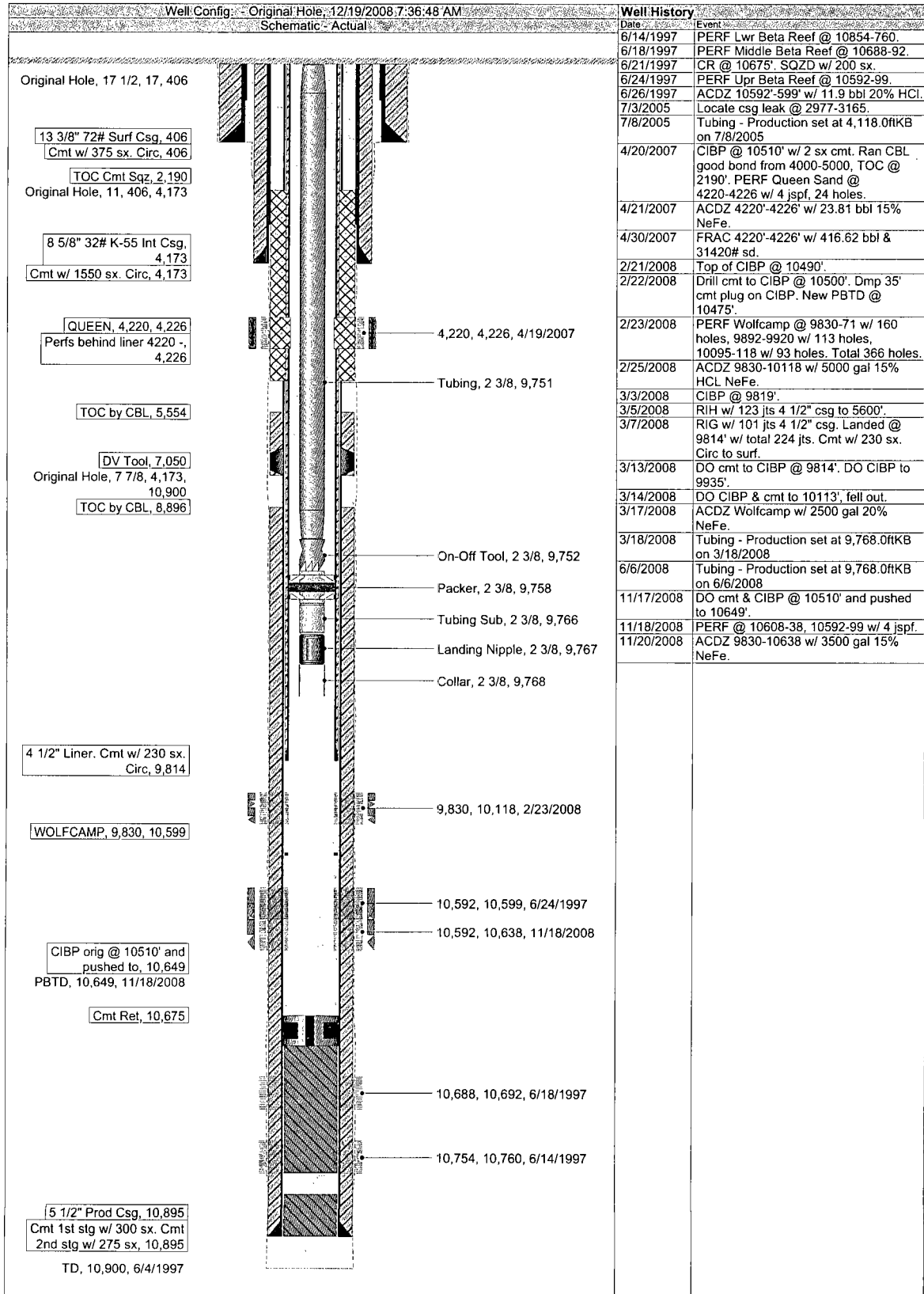
Current Wellbore Schematic

BIG BERTHA 1-11

Field: Lovington North
County: LEA
State: NEW MEXICO
Elevation: GL 3,893.00 KB 3,910.00
KB Height: 17.00

Location: SEC 11, 16S-36E, 2081 FNL & 1870 FWL

Spud Date: 5/10/1997
Initial Compl. Date:
API #: 3002533883
CHK Property #: 812241
1st Prod Date: 7/1/1997
PBD: Original Hole - 10649.0
TD: 10,900.0



RECEIVED

OIL CONSERVATION DIVISION

220 South St. Francis Dr.

Santa Fe, NM 87505

SEP 22 2008

HOBBS (11)

WELL API NO.	30-025-33883
5. Indicate Type of Lease	STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	SV Big Bertha
8. Well Number	1
9. OGRID Number	147179
10. Pool name or Wildcat	SWD; Wolfcamp

SUNDRY NOTICES AND REPORTS ON WELLS
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <u>SWD</u> <input checked="" type="checkbox"/>
2. Name of Operator <u>Chesapeake Operating, Inc.</u>
3. Address of Operator <u>P.O. Box 18496</u> <u>Oklahoma City, OK 73154-0496</u>
4. Well Location Unit Letter <u>F</u> : <u>2081'</u> feet from the <u>North</u> line and <u>1870'</u> feet from the <u>West</u> line Section <u>11</u> Township <u>16 S</u> Range <u>36 E</u> NMPM County <u>Lea</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <u>3893' GR</u>

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☐
 CASING/CEMENT JOB ☐

OTHER: Re-enter existing SWD well. ☒OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Dear Sirs/Madams:

Please find the attached:

Work over procedure to re-enter well.

C-144(CLEZ) pit permit.

SWD-671-C Administrative order.

Spud Date:

05/09/1997

Rig Release Date:

06/05/1997

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Linda WeeksTITLE Reg. Compliance SpecialistDATE 09/19/2008Type or print name Linda WeeksE-mail address: linda.weeks@chk.comPHONE: (405)879-6854

For State Use Only

APPROVED BY:

[Signature]

TITLE

PETROLEUM ENGINEER

DATE

OCT 17 2008

Conditions of Approval (if any):



Big Bertha 1-11
Add Pay
Lea County, New Mexico

Date: May 6, 2008

Location: 2,081' FNL & 1,870' FWL Sec. 11-T16S-R36E

Prod. Casing: 4-1/2", flush joint 0-9,814'
5-1/2", casing 9,814'-10,895'

Tubing: 2-3/8", 4.7#, N-80 plastic coated tubing with nickel plated Arrowset packer set at 9,758'

PBTD/TD: 10,500' / 10,900'

Existing Perfs: 9,830' – 9,871' Wolfcamp
9,892' – 9,920' Wolfcamp
10,095' – 10,118' Wolfcamp
10,592' – 10,599' Wolfcamp

Procedure

1. Safety meetings are to be held prior to each day as well as prior to each major operation.
2. Prepare location. MIRU workover rig. ND WH. NU BOP. Unset 4-1/2" Arrowset packer, TOH with packer and 2-3/8" plastic coated injection tubing, LD. Unload rack and tally 2-3/8" work string.
3. PU 3-3/4" bit, DC's and 2-3/8" tubing and TIH to plug set at 10,500'. Circulate hole clean and then DO plug set at 10,500'. Continue TIH to CICR set at 10,675'. Circulate hole clean. TOH.
4. MIRU wireline unit. RIH and perforate Wolfcamp as follows

Wolfcamp	10,608' – 10,638'	30'	4 SPF	120 holes
Wolfcamp	10,592' – 10,599'	7'	4 SPF	28 holes
	10,592' – 10,638'	37'	4 SPF	148 holes
- Correlate to CN-GR log run in 6/3/97. RDMO wireline unit.
5. TIH w/ 2-3/8" work string and 4-1/2" treating packer to bottom perf 10,638' and spot 15% HCl acid across Wolfcamp perfs (10,592' – 10,638'). PUH and set packer at 10,550'.
6. RU acid service. Acidize Wolfcamp (10,592' – 10,638') with 3,500 gals 15% HCl and 225 ball sealers (150%). Surge off balls. Unset packer and TOH, LD.
7. PU and TIH with 4-1/2" Arrowset injection packer and 2-3/8" plastic coated injection tubing to 9,750'. Circulate packer fluid. Set packer.
8. ND BOP. NU WH.
9. Return well to injection.

Jones, William V., EMNRD

From: Ocean Munds-Dry [Omundsdry@hollandhart.com]
Sent: Friday, January 09, 2009 2:03 PM
To: Jones, William V., EMNRD
Subject: RE: Big Bertha
Attachments: manzanoswdorder.pdf; Hudgens 1 SWD WBD.pdf

Will - Here is the old SWD order and the wellbore diagram. The original permit was from 10,284 to 10,700.

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Wednesday, January 07, 2009 11:39 AM
To: Ocean Munds-Dry
Subject: RE: Big Bertha

Hello Ocean:
Thanks for this.

I probably have enough to justify another amended admin order, but one thing else....

As I remember, this well is a replacement disposal well (for a nearby disposal well)?
Would you ask Chesapeake to send the wellbore diagram and permitted injection interval on that older well?

Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

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NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

FOR RECORD
OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

ADMINISTRATIVE ORDER SWD-671

APPLICATION OF MANZANO OIL CORPORATION FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Manzano Oil Corporation made application to the New Mexico Oil Conservation Division on June 18, 1997, for permission to complete for salt water disposal its Hudgens Well No.1 located 1980 feet from the South line and 1980 feet from the East line (Unit J) of Section 11, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;
- (2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and
- (4) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

The applicant herein, Manzano Oil Corporation is hereby authorized to complete its Hudgens Well No.1 located 1980 feet from the South line and 1980 feet from the East line (Unit J) of Section 11, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico, in such manner as to permit the injection of salt water for disposal purposes into the Wolfcamp formation at approximately 10,284 feet to 10,700 feet through 2 3/8-inch plastic-lined tubing set in a packer located at approximately 10,250 feet.

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 2057 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 Wolfcamp formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

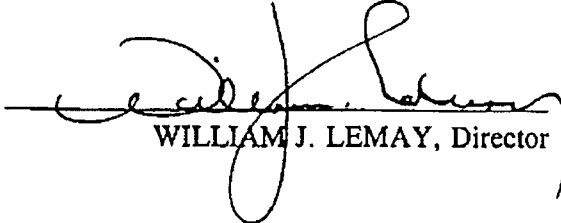
PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.

Administrative Order SWD-671
Manzano Oil Corporation
August 15, 1997
Page 3

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 15th day of August, 1997.


WILLIAM J. LEMAY, Director

WJL/BES/kv

xc: Oil Conservation Division - Hobbs /



Current Wellbore Schematic

HUDGENS 1 SWD

OFFSET
TO
BIG BERTHA

Field: SWD WOLFCAMP
County: LEA
State: NEW MEXICO
Elevation: GL 3,883.00 KB 3,901.00
KB Height: 18.00

Location: SEC 11, 16S-36E, 1980 FSL & 1980 FEL

Spud Date: 7/25/1986
Initial Compl. Date:
API #: 3002529712
CHK Property #: 890809
1st Prod Date:
PBDT: Original Hole - 10756.0
TD: 11,993.9

