

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Susana Martinez**  
Governor

**John Bemis**  
Cabinet Secretary

**Brett F. Woods, Ph.D.**  
Deputy Cabinet Secretary

**Jami Bailey**  
Division Director  
Oil Conservation Division



Administrative Order SWD-1300-A  
July 5, 2012

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of 19.15.26.8B NMAC, BOPCO, L.P. seeks an administrative order to utilize its ND 19 Federal SWD Well No. 1 (API 30-015-39713) located 516 feet from the North line and 705 feet from the East line, Unit letter A of Section 19, Township 24 South, Range 30 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

**THE DIVISION DIRECTOR FINDS THAT:**

The application has been duly filed under the provisions of 19.15.26.8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

**IT IS THEREFORE ORDERED THAT:**

The applicant, BOPCO, L.P., is hereby authorized to utilize its ND 19 Federal SWD Well No. 1 (API 30-015-39713) located 516 feet from the North line and 705 feet from the East line, Unit letter A of Section 19, Township 24 South, Range 30 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water (UIC Class II only) into the Devonian formation through an open hole interval from 15611 feet to 16770 feet through internally coated tubing and a packer set less than 100 feet above the permitted disposal interval.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the disposed water enters only the proposed disposal interval and is not permitted to escape to other formations or onto the surface.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated.

All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 3122 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the

operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.



JAMT BAILEY  
Director

JB/wvjj

cc: Oil Conservation Division – Artesia  
Bureau of Land Management – Carlsbad Field Office

**BOPCO, L. P.**  
6 DESTA DRIVE, SUITE 3700 (79705)  
P. O. BOX 2760  
MIDLAND, TEXAS 79702

(432) 683-2277

FAX (432) 687-0329

June 19, 2012

New Mexico Oil Conservation Division  
Attn: Will Jones  
1220 S Francis  
Santa Fe NM 87505

Re: Administrative Order SWD-1300  
September 2, 2011  
ND 19 Federal SWD No. 1  
30-015-39713  
Sec. 19, T24S, R30E  
Eddy County, NM

BOPCO, L.P. respectfully requests that the New Mexico Oil Conservation Division administratively amend the disposal permit. This well was drilled and completed as a saltwater disposal well in the Devonian formation. Form C-108 was filed with estimated depths. BOPCO applied for an open hole disposal interval of 15,572-16,275'. The completed total depth of the well is 16,770' with an open hole injection interval of 15,611-16,770'; a difference of 495' from the permitted interval. The well is currently operating with an injection pressure of 1,200 psi.

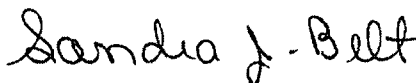
Due to the scarcity of wells penetrating deeper than a few hundred feet below the top of the Devonian in southeastern Eddy County, the stratigraphic interval penetrated by the BOPCO ND 19 Federal SWD No. 1 is uncertain. The section drilled by the ND 19 Federal SWD No. 1 below the Woodford consists of an upper dolomite interval (15,603'-15,874') which did not have the obvious porosity characteristics expected to be encountered in the Devonian while drilling. A tight limestone interval was below this, and a second porous dolomite was penetrated at a depth of 16,234'. The well was TD'd when a second tight limestone was encountered at a depth of 16,720'. This limestone appears to be the top of the Montoya formation. It is uncertain at this time whether Fusselman is present in the section. Based on this, the base of the Devonian is presumed to be at, and is certainly no deeper than, a depth of 16,720'.

The ND 19 Federal SWD No. 1 was mud logged while drilling, and open hole wireline logs were run at TD. No evidence of hydrocarbons was encountered in this section either in samples, via gas monitoring equipment, or on logs, even though the well was drilled with a mud weight of 8.3-8.5 lbs/gal.; calculated reservoir pressure at 7,000 psi.

Seismic analysis of the Devonian section shows no indication of structural closure in the area of the ND 19 Federal SWD No. 1, with regional dip climbing to the west. Closure would be required for hydrocarbon entrapment in this section.

I believe BOPCO, L.P. has addressed all concerns. Please contact Mr. Carlos Cruz, Division Production Superintendent at (432) 683-2277 or by e-mail at [ccruz@basspet.com](mailto:ccruz@basspet.com).

Sincerely,



Sandra J. Belt  
Sr. Regulatory Clerk

Due to the scarcity of wells penetrating deeper than a few hundred feet below the top of the Devonian in southeastern Eddy County, the stratigraphic interval penetrated by the BOPCO ND 19 Federal No. 1 is uncertain. The section drilled by the ND 19 No. 1 below the Woodford consists of an upper dolomite interval (15,603'-15,874') which did not have the obvious porosity characteristics expected to be encountered in the Devonian while drilling. A tight limestone interval was below this, and a second porous dolomite was penetrated at a depth of 16,234'. The well was TD'd when a second tight limestone was encountered at a depth of 16,720'. This limestone appears to be the top of the Montoya formation. It is uncertain at this time whether Fusselman is present in the section; based on this, the base of the Devonian is presumed to be at, and is certainly no deeper than, a depth of 16,720'.

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Seismic analysis of the Devonian section shows no indication of structural closure in the area of the ND 19 No. 1, with regional dip climbing to the west. Closure would be required for hydrocarbon entrapment in this section.

# PROPOSED WELLBORE DIAGRAM

Lease: ND "19" Federal SWD Well No.: 1  
 Injection  
 Reservoir: Devonian  
 Location: 516' FNL & 705' FEL S19-T24S-R30E  
 County: EDDY St: NM API: 30-015-39713

## Surface Csg.

Size: 20"  
 Wt: 94#  
 Grd: J-55, BTC  
 Set @: 754'  
 Sxs cmt: 1485 sxs CI C  
 TOC: Surface  
 Hole Size: 26"

## Intermediate Csg.

Size: 13 3/8"  
 Wt: 68#  
 Grd: HCL-80, BTC  
 Set @: 3493'  
 Sxs Cmt: 3525 sxs CI C  
 TOC: Surface  
 Hole Size: 17 1/2"

## Production Csg.

Size: 9 5/8"  
 Wt: 53.5#  
 Grd: L-80, LT&C  
 Set @: 11,253'  
 Sxs Cmt: 3405 sxs CI H, 150 sxs CI C  
 TOC: Surface  
 Hole Size: 12 1/4"

## Liner

Size: 7 5/8"  
 Wt: 39#  
 Grd: P-110, Ultra FJ  
 Set @: 10,926.46' - 15,611'  
 Sxs Cmt: 1,390 sxs CI H  
 TOC: 10,780'  
 Hole Size: 8 1/2"

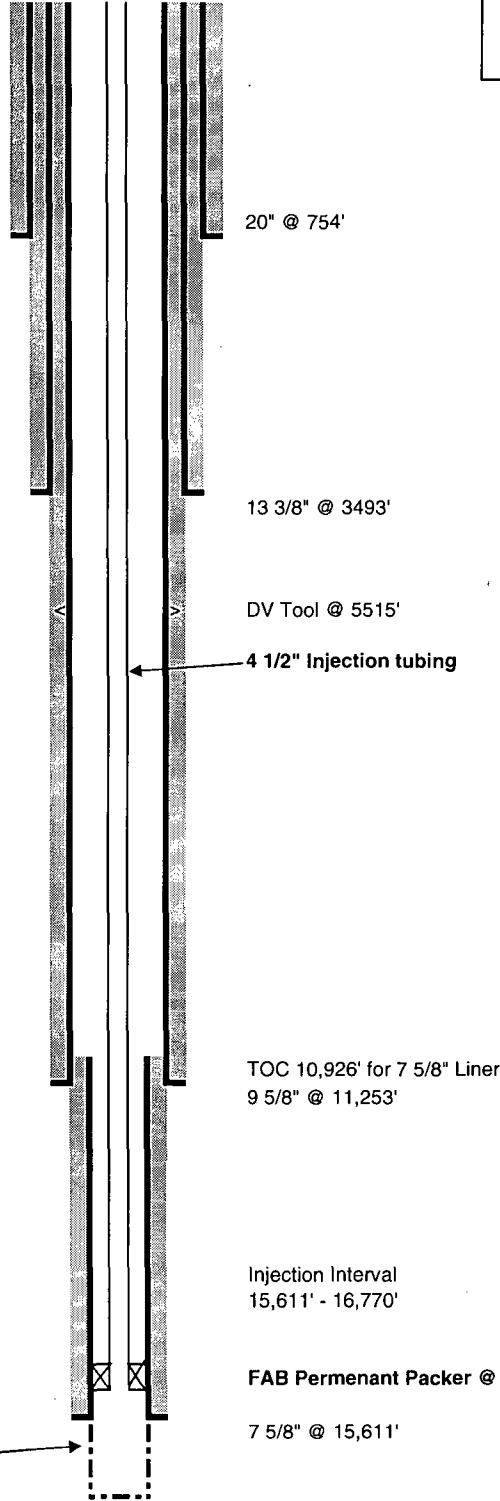
## Open Hole

Size: 6 1/2"  
 Depth: 15,611' - 16,770'

## Tubing

Size: 4 1/2" IPC  
 Wt: 15.50# & 12.75#  
 Grd: L-80, RTS-6  
 Set @: 15581.36'

Elevation GL:	3187.01
Elevation KB:	3212.62
Spud:	12/10/2011
Completed	3/27/2012



3/22/12

16720 = Base of DEVONIAN

6 1/2" OH

TD: 16,770'

Updated: 4/12/2012  
 Author: crm  
 Engr: CCC

## Jones, William V., EMNRD

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**From:** Belt, Sandra J. [SJBelt@BassPet.Com]  
**Sent:** Tuesday, June 26, 2012 12:55 PM  
**To:** Jones, William V., EMNRD  
**Subject:** RE: ND 19 Federal SWD...30-015-39713  
**Attachments:** ND 19 Federal SWD #1 WBD.XLS

Good afternoon Will – here is the diagram I sent in with the completion report, which is current. Please let me know of anything else you might need and I will get it to you. Have a nice day and thank you!

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**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Friday, June 22, 2012 4:10 PM  
**To:** Belt, Sandra J.  
**Subject:** RE: ND 19 Federal SWD...30-015-39713

Sandra,  
Just remembered, probably need an updated wellbore diagram showing the actual depths and actual well configuration.  
I should already have asked for this,

Have a fun weekend,

Will Jones  
New Mexico  
Oil Conservation Division  
Images Contacts

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**From:** Belt, Sandra J. [mailto:SJBelt@BassPet.Com]  
**Sent:** Tuesday, June 19, 2012 2:30 PM  
**To:** Jones, William V., EMNRD  
**Cc:** Cruz, Carlos  
**Subject:** RE: ND 19 Federal SWD...30-015-39713

Oops – what I did was take his statement out of an e-mail he sent and put it in the letter. Would u like me to forward u that e-mail just for record? I just love working with you and Karen!

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**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Tuesday, June 19, 2012 3:24 PM  
**To:** Belt, Sandra J.  
**Subject:** RE: ND 19 Federal SWD...30-015-39713

Looks good,  
Too bad your nice geologist who called me did not sign off on it.

But I think it will work.

Will Jones  
New Mexico  
Oil Conservation Division  
Images Contacts

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**From:** Belt, Sandra J. [mailto:SJBelt@BassPet.Com]  
**Sent:** Tuesday, June 19, 2012 2:19 PM  
**To:** Jones, William V., EMNRD  
**Subject:** RE: ND 19 Federal SWD...30-015-39713

Good afternoon Will. Here is a copy of the letter I will be overnighting to you today. I believe everything has been addressed but if not please let us know and we will get right on it. Thanks Will

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**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Thursday, June 14, 2012 3:04 PM  
**To:** Belt, Sandra J.  
**Subject:** RE: ND 19 Federal SWD...30-015-39713

You can send to me...or the Bureau Chief of the Engineering Bureau  
Same address.

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**From:** Belt, Sandra J. [mailto:SJBelt@BassPet.Com]  
**Sent:** Thursday, June 14, 2012 1:57 PM  
**To:** Jones, William V., EMNRD  
**Subject:** RE: ND 19 Federal SWD...30-015-39713

Will would that be the same address and you have? Anybody's name I should address it to or would it be you?

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**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Thursday, June 14, 2012 1:50 PM  
**To:** Belt, Sandra J.  
**Cc:** Cruz, Carlos  
**Subject:** RE: ND 19 Federal SWD...30-015-39713



Sandra,

Why don't you put this in a letter to Santa Fe Engineering Bureau asking for an amended permit – make sure and correct everything that varied from the original application (location of well, etc). include with your letter a writeup or brief from a geologist letting us know what the new tops of the Devonian and base of the Devonian are in that area. Also the geologist should talk about whether the Devonian was mudlogged or BOPCO ran e-logs and what these logs showed as far as hydrocarbon productivity.

If the actual well depths were higher in the Devonian than originally planned, we would likely need another C-108 (an amended application) with new notices – but you are lower in a thick water drive reservoir, so probably that is not needed. If the well is being completed below the Devonian in another formaton, we may need to readvertise or re-notice and have a new C-108.

Let us know what the initial fluid level is in that well (or reservoir pressure) – this is something that is used in the U.S. EPA calculations on disposal wells and we probably should be gathering that information.

If the permit asked for anything else, make sure those items are addressed.

Thank You,

Will Jones

New Mexico

Oil Conservation Division

Images Contacts

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**From:** Belt, Sandra J. [<mailto:SJBelt@BassPet.Com>]

**Sent:** Thursday, June 14, 2012 11:26 AM

**To:** Inge, Richard, EMNRD

**Cc:** Cruz, Carlos; Jones, William V., EMNRD

**Subject:** RE: ND 19 Federal SWD...30-015-39713

Thanks Richard, will do ASAP.

Will: How should we handle this? Our application indicated it was going to be an open-hole completion and dispose in open hole. The permit states perforations. Also, this was a new drill and we actually drilled to an open-hole depth of 16,770 and we stated on our application 16,275' a difference of 495'. This is making our disposal interval as 15,611 – 16,770' and was permitted as 15,575 – 16,275'. Our top interval appears to be okay it's that bottom one that giving us trouble. Can I apply for some kind of a variance as Richard mentioned? Due to all the activity going on around here I failed to keep tabs on the TD as it was drilling – sorry. Thanks Will

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**From:** Inge, Richard, EMNRD [<mailto:richard.inge@state.nm.us>]

**Sent:** Thursday, June 14, 2012 12:09 PM

**To:** Belt, Sandra J.  
**Cc:** Dade, Randy, EMNRD; Sharp, Karen, EMNRD; Jones, William V., EMNRD  
**Subject:** RE: ND 19 Federal SWD...30-015-39713

Sandra,

Sorry for the delay on this, but our IT department is updating all our computers and we don't have access to everything.

What you submitted as for the injection interval does not match the permit. Have you applied for a variance on this to Santa Fe? If so, please submit an amended order allowing the disposal interval change from perf to open hole and from the depths of 16275 to 16765 as stated on the c103 subsequent report.

If you do not have this approval, please submit a request to Will Jones in Santa Fe to get this changed.

Thank you.

--Richard Inge  
575-748-1283 x107

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**From:** Sharp, Karen, EMNRD  
**Sent:** Wednesday, June 13, 2012 6:42 AM  
**To:** Belt, Sandra J.  
**Cc:** Inge, Richard, EMNRD; Dade, Randy, EMNRD  
**Subject:** ND 19 Federal SWD...30-015-39713

Good morning, Sandra ~

Please ensure that this well is not yet injecting...I have the completion packet, but it is being reviewed by our UIC rep as it is not within the guidelines of the order. It may or may not be approved to inject even though you have already successfully run the MIT on this well. I will let you know more as I do.

Thank you!

Karen Sharp  
(575) 748-1283 x 109

*"If you want to make your dreams come true, the first thing you have to do is wake up"*

If the actual well depths were higher in the Devonian than originally planned, we would likely need another C-108 (an amended application) with new notices – but you are lower in a thick water drive reservoir, so probably that is not needed. If the well is being completed below the Devonian in another formation, we may need to readvertise or re-notice and have a new C-108.

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Will Jones  
New Mexico  
Oil Conservation Division  
[Images](#) [Contacts](#)

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Karen Sharp  
(575) 748-1283 x 109

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