

Mesquite SWD, Inc.
P.O. Box 1479
Carlsbad, NM 88221

Contact party: Kay Havenor 575-622-0283

C-108 Ancillary Data

1. API 3002533647
- 2.. Original Lease Name: Bilbrey "30" Federal #5 New name used here: No
3. Legal publication lay distance description: 32 miles west of Eunice, NM (not in legal notice)
4. AOR data: All wells are shown in summary and detail in **Item VI:** Data on wells in AOR
5. AOR well count as shown in **Item VI:** Only well in AOR
6. P&A wells in AOR count: 1
7. List of formation tops applicable to AOR: Lamar 4498', Bell Canyon 4616', Cherry Canyon 5442', Brushy Canyon 7181', Lower Brushy Canyon 8252', Bone Springs 8542'
8. Producing or non-P&A wells in proposed disposal AOR: None
9. Is proposed SWD in a depleted zone/well? No
10. Why is proposed interval non-productive? No prospective oil/water zones or shows
11. Notification and related acreage is shown in **Item XIII: Item XIII Notification List.**
 - Chi Energy Sec. 30 All except N/2 NE/4
 - Bonneville Fuels Sec. 30 N/2/NE/4
 - Sec. 29 SW/4 NW/4, W/2 SW/4
 - OXY Sec. 31 N/2 N/2
12. Surface owner, as shown in Item XIII, is: BLM
13. Rule 5.9 status of applicant: Financial status in compliance. Inactive wells include: 1
- 14: Location of well as to Potash or other sensitive areas: NA

August 16, 2010

From BLM, CARLSBAD

RE : Class II SWD injection well application for Mesquite SWD, Inc.'s re-entry for SWD, CHI Operating, Inc. Bilbrey 30 Federal #5, API # 3002533647, 1980' FSL & 1980' FEL (Ut J) NW SW Section 30-21S-32E, Lea County, New Mexico. They intend to reenter and convert the plugged & abandoned former Delaware producing well that had a 8850 ft TD. They intend to drill-out the plugs and perforate the Delaware from 4654 – 8418 ft. They plan to use 3-1/2 inch J-55, 8.7#, IPC 1850 coated tubing set on a packer at approximately 4600 ft. The perfs will be acidized with no fracturing planned. The average injection rate is anticipated to be 15,000 BWPD/ 20,000 BWPD maximum with a maximum injection pressure of 931 psig (0.20 psi/ft). The source of the disposal water will be wells in the area that produce from the Delaware and Bone Spring formations.

Comments: This well is within the R-111-P Potash area and is also in a deferred area according to our BLM solid minerals group. For this reason; the APD application would most likely be denied.

JIM RUTLEY - GEO ; 575-234-5904
ROGER HALL - ENGR ; 575-234-2231

Jones, William V., EMNRD

From: Wesley_Ingram@blm.gov
Sent: Thursday, September 30, 2010 6:26 PM
To: Jones, William V., EMNRD
Subject: Re: Disposal application from Mesquite SWD, Inc.: Bilbrey 30 Fed #5 30-025-33647 Unit Letter J Sec 30 Tsp 21S R32E, Lea County

Will,

The last operator shown for the well prior to plugging was Chi Operating, Inc. They became the successor operator in 2000 from Bargo Petroleum.

You should have received the comments from Roger Hall today which included the comment from the Potash group.

I am not finding any information about Bonneville Fuels. The potash lessee within a mile is Intrepid.

Hopefully, this is of some help.

Thanks, Wesley

"Jones, William
V., EMNRD"
<William.V.Jones
@state.nm.us>

<Wesley_Ingram@blm.gov>

To

cc

09/29/2010 12:04
PM

Subject

Disposal application from Mesquite
SWD, Inc.: Bilbrey 30 Fed #5
30-025-33647 Unit Letter J Sec 30
Tsp 21S R32E, Lea County

Hello Wesley: *(30-025-33647)*
I have an application pending from Mesquite to use this well for commercial water disposal over the entire Delaware interval. *4654-8542 feet*

The well was a teaser oil producer in the Brushy and the Bell Canyon in the late 1990's for Texaco when the oil prices were going south. It made oil, but quickly turned to water. Texaco actually intended to drill several more wells to test the Brushy Canyon in this Section but the permits were held up because of Potash issues and also the poor oil prices delayed things. This well was where a triple action pump was tested - the Bell Canyon

intervals were used both for production and for disposal in the same well with this pump. I know the guy that worked on this technology - I worked with him while in Denver.

It could be that the one well drilled condemned the whole area - but the BLM is the mineral owner and the Texaco property went to Bargo then to ???.
Do you know if Bargo is an operator or who succeeded them?

The old saying is to drill updip from a show. This well was a good show.

Does the BLM have any issues with this application to use the entire Delaware in this well for a commercial disposal? My only concern is it may affect offset potential oil production intervals - but I could be off base.

I have not yet asked if they noticed the nearest Potash Lessee... Is Bonneville Fuels a Potash Company? Do you know the Potash Lessee in this area?

Thanks for looking at this.

William V Jones, P.E.
Engineering, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505 Tel 505.476.3448 ~ Fax 505.476.3462
(Embedded image moved to file: pic31311.jpg)
<http://www.emnrd.state.nm.us/ocd/Graphics/L23-ocd-logo.gif>

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Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Wednesday, September 29, 2010 5:48 PM
To: 'Kay Havenor'
Cc: 'Wesley_Ingram@blm.gov'
Subject: RE: API 30-025-33647

Kay:

Thank you very much for this professional explanation – and for the notice to Intrepid.

Unless something unexpected happens, I will release this permit October 15.

Regards,

Will Jones

New Mexico

Oil Conservation Division

[Images](#) [Contacts](#)

From: Kay Havenor [mailto:khavenor@georesources.com]
Sent: Wednesday, September 29, 2010 5:36 PM
To: Jones, William V., EMNRD
Subject: RE: API 30-025-33647

Will,

1st, for poor reasons I did not notify Intrepid Potash. I received your email at 3:07 PM and by 3:40 their certified mail copy of the C-108 was on its way. Thanks for slapping my hand! The certified mail receipt to Intrepid is attached.

In this well the top of Bone Springs is at 8542' (TD @ 8916'). The basal Bushy Canyon was perforated and tested from 8394'-8418'. The well was PB to 8300' w/CIBP & cement. Brushy Canyon also perforated 7314'-7319'. They set RBP @ 7250' + 10' sand. Cherry Canyon was tested in 2 separate zones w/acid + frac, set RBP above top set. Perfed and fraced Bell Canyon before well was P&A by CHI Operating. All indications were water in the sands or water overtook - as often happens in the Delaware.

Texaco was not especially forthcoming with their testing data, but they did test the most promising oil/gas looking zones.

My conclusions are that Texaco and Chi demonstrated this area of the Delaware is non-hydrocarbon productive. But, they also demonstrated some very wet porosity zones are present! The Texaco effort to produce and dispose is a neat idea, only water cut overtook the hydrocarbons.

Yes, the wells to the west are updip in the entire Delaware Mountain Group and the wells on the eastern margin of the field are low oil and making water. Those wells would be unaffected by disposal in the Chi area because the regional groundwater gradient (and formation dip) is easterly. Water moves down-dip through the Delaware where higher porosity exists, as opposed to simultaneous up-dip migration of hydrocarbons (larger molecules) which then become trapped by grain-size reductions (stratigraphic trapping) in conjunction with depositional sandbar-like features that grade-updip into fine-silt and clay (the hydrocarbon barrier).

The Chi well, as you recognize, was originally drilled by Texaco. Additional wells were primarily not drilled because sand conditions in this area demonstrate very high water and no development of the bar-like pseudo "folds" to trap hydrocarbons.

Kay

At 03:07 PM 9/29/2010, you wrote:

Hello Kay:

No protests received yet.

I looked this over today and wanted to ask questions over a couple of issues.

This is in the R-111-P defined Potash Area. Have you notice the nearest Potash lessee?

This is an old Texaco lease – and several wells were permitted and listed the Brushy Canyon as potential “Pay”, but that was 1999 and oil prices were low and they were never drilled – also this is a Potash area.

Did the subject well’s testing condemn all this acreage – over the entire Delaware? I see this well was produced from several intervals for a short time, so it was a teaser. Does this mean that offsetting acreage may be prospective, maybe updip? This well was produced as a “high water cut” oil well with a triple action downhole pump and actually permitted for disposal into specific lower Bell Canyon intervals.

I see that Yates has some Delaware wells just west of here. Are those wells updip? Do you think disposal into this well would adversely affect any potential Delaware minerals directly West of this well’s location?

Will Jones

New Mexico

Oil Conservation Division

Images Contacts

From: Kay Havenor [mailto:khavenor@georesources.com]

Sent: Wednesday, September 29, 2010 7:54 AM

To: Jones, William V., EMNRD

Subject: API 30-025-33647

Good morning Will,

Brief question: On Mesquite C-108 CHI Operating Bilbrey 30 Fed, Sec. 30, T21S-R32E, were there any protests?

Thank you.

Kay

Kay C. Havenor, Ph.D., PG. CPG
GeoScience Technologies

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Friday, October 01, 2010 9:30 AM
To: 'Kay Havenor'
Cc: 'Wesley_Ingram@blm.gov'; Dade, Randy, EMNRD; Brooks, David K., EMNRD; Gray, Darold, EMNRD
Subject: Disposal application from Mesquite SWD, Inc.: Bilbrey 30 Fed #5 30-025-33647 Unit Letter J Sec 30 Tsp 21S R32E, Lea County

Hello Kay:

I have correspondence (copied below) from the BLM's engineering folks in Carlsbad stating the APD to re-enter this federal well for disposal purposes will *most likely* be denied because of concerns from the BLM's "Solid Minerals" group. Today I talked with a geologist from the Solid Minerals group and was told verbally the APD for re-entry would be denied by the BLM.

I must consider this a protest of the disposal application.

Since a protest has been received, I am prohibited from proceeding administratively with evaluation of this application. If your client does reach an agreement with any protesting party and that party withdraws its protest, then we can proceed administratively.

Please let me know if Mesquite SWD, Inc. intends to enter a similar case before an examiner to use this well for disposal purposes. If so, all parties protesting must be advised of the upcoming hearing.

Regards,

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

p TGW 1023527691
"Hearing" 10/1/10

FROM ROGER G. HALL, BLM ENGINEERING, CARLSBAD:

This is the Mesquite SWD Inc's reentry for SWD into the Chi Operating's Bilbrey 30 Federal #5. I conferred with the potash people (Jim Rutley) and came up with the following comments: (This well is within the R-111-P Potash area and is also in a deferred area according to our BLM solid minerals group. For this reason; the APD application would most likely be denied.).

RE : Class II SWD injection well application for Mesquite SWD, Inc.'s re-entry for SWD, CHI Operating, Inc. Bilbrey 30 Federal #5, API # 3002533647, 1980' FSL & 1980' FEL (Ut J) NW SW Section 30-21S-32E, Lea County, New Mexico. They intend to reenter and convert the plugged & abandoned former Delaware producing well that had a 8850 ft TD. They intend to drill-out the plugs and perforate the Delaware from 4654 – 8418 ft. They plan to use 3-1/2 inch J-55, 8.7#, IPC 1850 coated tubing set on a packer at approximately 4600 ft. The perms will be acidized with no fracturing planned. The average injection rate is anticipated to be 15,000 BWPD/ 20,000 BWPD maximum with a maximum injection pressure of 931 psig (0.20 psi/ft). The source of the disposal water will be wells in the area that produce from the Delaware and Bone Spring formations.

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Jones, William V., EMNRD

From: Kay Havenor [khavenor@georesources.com]
Sent: Thursday, December 30, 2010 11:58 AM
To: Jones, William V., EMNRD
Subject: Mesquite & 30-025-33647

Will,

Hope your Christmas was good and the New Year will be great.

This morning the BLM advised me that after a second review they will still not approve an APD to re-enter the Chi Operating Bilbrey 30 Fed #5. You have probably already done it, but please withdraw this C-108.

We appreciate your efforts and assistance.

Kay

Kay C. Havenor, Ph.D., PG. CPG
GeoScience Technologies
904 Moore Ave
Roswell, NM 88201-1144
(575) 626-4518