

Jones, William V., EMNRD

From: Arrant, Bryan, EMNRD**Sent:** Friday, April 27, 2007 8:05 AM**To:** Jones, William V., EMNRD**Subject:** RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Will, I have picked estimated geology tops for an offset wells.

In 12-20-28 in the SW/4 is the Cities ,Govt Y # 2 well.

TX	470'
BX	610'
YATES	848'
SEVEN RIVERS	1165'
CAPITAN REEF	1300'
BOWERS SAND	1760'
QUEEN SAND	2095'
DELAWARE	2855'

In the SW/4 of 13-20-28 is the Siete Oil & Gas, Indigo Federal #1.

TX	308'
BX	440'
YATES	775'
SEVEN RIVERS	1042'
CAPITAN REEF	1160'
BOWERS SAND	1604'
QUEEN	2150'
DELAWARE	2895'

In the NW/4 of 13-20-28 is the Cities Govt. AC #2

TX	???
BX	???
YATES	885'
SEVEN RIVERS	1040'
CAPITAN REEF	1180'
BOWERS SAND	1690'
QUEEN	2130'
DELAWARE	2990'

As you aware, this area is located in back reef section and the geology is sometimes difficult to define.

I am not understanding Scott St. John's response to your questions?

I would ask for further clarification and question on how the Salado happens to occur from surface to 250' as answered in item (9) and how the Capitan Reef is encountered from 439'-584' in item (7).

Please refer to all offset wells in this area and written publications of the Capitan Reef, etc.

I am sure that this type of scenario does not occur anywhere in southeast New Mexico.

Bryan G. Arrant

District II Geologist

New Mexico Oil Conservation Division

1310 West Grand Ave.

Artesia, NM 88210

505-748-1283 Ext. 103

4/27/2007

Jones, William V., EMNRD

From: Arrant, Bryan, EMNRD
Sent: Friday, April 27, 2007 8:42 AM
To: Jones, William V., EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Will,
Have you scanned through some of the invaluable old well files in this area?
API # 30-015-02351 (for example) shows water sands at surface and in the 800' range.
It takes time, but one can find information from these old files that may not be available elsewhere.
Also, the log libraries in Midland has data that is invaluable.
PI, Midland Energy Library and Subsurface Library that I know of.

Bryan G. Arrant
District II Geologist
New Mexico Oil Conservation Division
1310 West Grand Ave.
Artesia, NM 88210
505-748-1283 Ext. 103

From: Jones, William V., EMNRD
Sent: Thursday, April 26, 2007 3:04 PM
To: Arrant, Bryan, EMNRD
Subject: FW: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Bryan: Here attached to this email are their responses.

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

From: Scott St.John [mailto:sstjohn@rsenergysolutions.com]
Sent: Friday, April 20, 2007 1:04 PM
To: Jones, William V., EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Will,
Please see responses to your questions:

- 1) Please see attached well data for the amended AOR which includes information on the wells with API #'s 30-015-30800, 30-015-30594, and 30-015-02359. Please note, however, we did not find any information regarding API # 30-015-02354.
- 2) See Attached well data for additional information on whether mud or cement was used.
- 3) There have been no known flows since the Bradenhead survey. Both wells are being repaired by pulling the old tubing and running new 2 3/8th J-55 tubing and a packer. The annulus will be loaded with packer fluid and the integrity test will be performed.

4/27/2007

Jones, William V., EMNRD

From: Scott St.John [sstjohn@rsenergysolutions.com]
Sent: Friday, April 20, 2007 1:04 PM
To: Jones, William V., EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval
Attachments: Well Data for C-108.doc; Water Analysis 10-15-1948.pdf

*Release
4/25/07*

Will,
 Please see responses to your questions:

- 1) Please see attached well data for the amended AOR which includes information on the wells with API #'s 30-015-30800, 30-015-30594, and 30-015-02359. Please note, however, we did not find any information regarding API # 30-015-02354.
- 2) See Attached well data for additional information on whether mud or cement was used.
- 3) There have been no known flows since the Bradenhead survey. Both wells are being repaired by pulling the old tubing and running new 2 3/8th J-55 tubing and a packer. The annulus will be loaded with packer fluid and the integrity test will be performed.
- 4) The surface owner is the BLM. The Proof of Mailing section within the C-108 will show a copy of the certified mailing to the BLM
- 5) See attached water analysis for the Yates.
- 6) The only well in the entire field operated by Apollo that has penetrated the Lower Yates is the RUSSELL USA #69. That well was drilled to the Seven Rivers, tested and plugged back with a CIBP. A string of production casing was run to total depth and cemented. The zone is isolated and cannot leak into the lower Yates or Seven Rivers.
- 7) No well in the Apollo Russell Field has penetrated the Queen. Except for the RUSSELL USA #69, no well has gone deeper than the Yates. The Queen formation is not in jeopardy. The Captains Reef is encountered in the RUSSELL USA #6 (formerly Wills #1) from 439' to 584'. A string of 8-5/8" surface casing was set at 446' and cemented with 50 sacks by Haliburton. A production string of 7" casing was set at 740' and cemented with 50 sacks. It appears that the interval is both isolated from the surface and the Yates formation and has sufficient cement to cover the interval. 7" casing with a 7-7/8" hole yields 14.0867 cubic feet. Fifty (50) sacks has a yield of 39.5 cubic feet. This gives a calculated fill up to 556', which penetrates well into the surface casing. This configuration of cement is typical of the field. Furthermore, many wells have notations that cement was circulated to surface.
- 8) There is no evidence of Salinity or water in the Captain Reef in this area.
- 9) The depth of the Salado is surface to 250'. It is isolated according to cement circulation described in Answer 4.
- 10) Well head pressure is zero (0). The fluid level within the Russell USA Field ranges between 125 and 150 feet from surface.
- 11) Apollo has completed the Change of Operator through the OCD. Ready Oil and Gas is no longer the operator.
- 12) We have no knowledge of any existing Elogs.
- 13) When the RUSSELL USA #60 and #65 are reworked, Apollo will do a step rate test. The original pressure was requested because of the previous order.
- 14) The age of the tubing and packer is unknown. Because the age is unknown, tubing and packer will be replaced, the tubing will be plastic.

Scott St. John
 Sr. Landman / Project Manager
 Reagan Smith Energy Solutions
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From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Friday, April 13, 2007 6:15 PM
To: sstjohn@rsenergysolutions.com
Cc: Ezeanyim, Richard, EMNRD; Arrant, Bryan, EMNRD; Guye, Gerry, EMNRD; Macquesten, Gail, EMNRD; Brooks, David K., EMNRD
Subject: SWD applications: Russell RUSSELL USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

4/20/2007

Jones, William V., EMNRD

From: Guye, Gerry, EMNRD
Sent: Monday, April 16, 2007 9:51 AM
To: Jones, William V., EMNRD
Cc: Macquesten, Gail, EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Will
 My records indicate the following:

Russell USA #60	MIT (Pressure Test)	6-5-2001	BH (Casinghead test)	9-20-2005	Acceptable
Russell USA #65		11-21-2001		9-20-2005	Acceptable

The following wells are listed as injection in RBDMS however they have never been tested and production records do not indicate any injection reported:

Russell USA #1
 #2
 #3
 #47
 #48

If I can furnish any other info please let me know.

-- Gerry --

From: Jones, William V., EMNRD
Sent: Friday, April 13, 2007 4:15 PM
To: sstjohn@rsenergysolutions.com
Cc: Ezeanyim, Richard, EMNRD; Arrant, Bryan, EMNRD; Guye, Gerry, EMNRD; Macquesten, Gail, EMNRD; Brooks, David K., EMNRD
Subject: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Hello Scott:

The Division has received your applications on behalf of Apollo Energy, L.P. and after reviewing have the following questions and comments:

1) Everyone's 1/2 mile area of review seems to be different. Please send construction details for the following wells that appear in our AOR selection:

30-015-30800
 30-015-30594
 30-015-02359
 30-015-02354

2) Please expand your "construction details" section to specify for each AOR well if actual cement was used or only Mud. Your well files as the operator of this project should be more complete than the imaged State well files.

3) Send a statement about how the wells in this area have done on the most recent Bradenhead survey. Were there any flows? Have these been repaired?

4) Who is the surface owner of these two well sites? Were they notified?

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- 5) Send a typical Yates water analysis from wells in this area.
- 6) Nordstrand Engineering operates the Oxy Yates 14 Federal Well No. 3 30-015-30594 located within the AOR of Well No. 65 and which is producing Gas from the Lower Yates. What depth is this? Is this Gas interval in any danger of migration of waters into it from injection?
- 7) Please elaborate more on the Geology below the Yates oil interval. Is the Queen present in this area in addition to the 7Rvrs? At what depth is the Capitan Reef in this area and how is it protected from any additional invasion of salt water from this operation? Are there any injection log profiles from previous injection in your well files showing the vertical sweep areas in this old waterflood? Was all water staying within the intended injection interval?
- 8) Do you have any evidence of the Salinity or water quality in the Capitan Reef in this area?
- 9) What depths are the Salado formation in this area and how is it isolated from any Yates injection?
- 10) What is the current static wellhead pressure on each of these old injection wells? If fluid is not at the surface, how far down to fluid?
- 11) Since Ready Oil & Gas is still showing on Division records as the operator of these two wells and of numerous AOR wells, please send certified notice to Ready Oil & Gas of this intended injection.
- 12) No scans are seen on the Division imaged site of any Elogs on these wells. If any logs exist, please send copies to Bryan Arrant in Artesia.
- 13) Unless evidence such as a step-rate injection test is presented which shows that additional pressure is warranted, the Division will start these injection wells out with a maximum surface injection pressure of 160 psi.
- 14) How old is the tubing and packer in these two injection wells? Is it plastic coated tubing?

Thank You,

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

4/20/2007