

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

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

Jami Bailey, Division Director
Oil Conservation Division



March 25, 2014

Mr. Billy Nievar, PE
Chaparral Energy LLC
701 Cedar Lake Blvd
Oklahoma City, OK 73114

RE: Packer Setting Depth Exception

Injection Authority: Division Order R-2356 and Amended Administrative Order
WFX-570; West Dollarhide Queen Sand Unit Waterflood project

Pool: Dollarhide Queen pool

West Dollarhide Queen Sand Unit Well No. 21

API 30-025-12270

Unit M, Sec 30, T24S, R38E, NMPM, Lea County, New Mexico

Mr. Nievar:

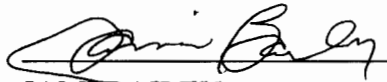
Reference is made to your request on behalf of Chaparral Energy LLC (OGRID 4115; "Chaparral") received by the Division on March 10, 2014, for the above named well. Chaparral applied for exception for setting the packer within 100 feet of the top of the approved injection interval.

It is our understanding that mechanical integrity testing conducted on this well following the replacement of tubing and packer system was only successful with the packer set at a depth of 3560 feet. This location of the packer is approximately 106 feet above the top perforation for the injection interval that begins at 3566 feet. The approved injection interval is from 3666 feet to 3827 feet.

For the reasons stated in the application and because it appears that correlative rights are protected, waste will not occur and this modification will not endanger any fresh water aquifer or the environment, the exception is granted. The packer location within this well shall not be set higher than 106 feet unless the operator receives written approval from the Division Director.

The Division Director may rescind this exception if it becomes apparent that the injected fluid is not being confined to the permitted interval or is endangering any fresh water aquifer.

Sincerely,

A handwritten signature in black ink, appearing to read "Jami Bailey", written over a horizontal line.

JAMI BAILEY
Director

JB/prg

cc: Oil Conservation Division – Hobbs Office
Administrative Order WFX-570
Well File API 30-025-30306
United States Bureau of Land Management – Carlsbad Office

Billy W. Nievar P.E.
Chaparral Energy LLC
701 Cedar Lake Blvd
Oklahoma City, Oklahoma 73114

February 27, 2014

Mr. Phillip Goetz
Oil Conservation Division
Energy Minerals and
Natural Resources Department
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

RE: Letter of Violation Dated (10-Oct-13)

Dear Mr. Goetz:

Chaparral Energy received the referenced letter of violation and has prepared a response for parts of the letter. This letter deals with the Packer setting depths for West Dollarhide Queen Sand Unit (WDQSU) Wells No. 021, 036, 037, 151 and 133.

West Dollarhide Queen Sand Unit No. 021. M-30-24S-38E 30-025-12270

****Packer Setting depth 106' above top perf. ***Operator in Violation of NMOCD Permit order WFX-570*** Operator must seek Approval from Phillip Goetz – OCD Santa Fe Prior to setting Packer more than 100' above top perf*****

Response: In February 1997 this well was placed in Temporary Abandonment Status by setting a CIBP at 3,600'. In April 2010 Chaparral was required to remove the well from TA status. Usually it takes two to three days of work to remove the CIBP and run the injection tubing and packer. Due to down hole well conditions this well took 8 days of time. We had difficulty in locating a packer seat. Well records show this well has 7.0" casing cemented up to 720' and 4-1/2" casing cemented to surface inside the 7.0" casing. On April 20, 2010 we had set the packer at 3,583' and did a 500 psi annulus pretest. On April 21, 2010 we placed packer fluid in the annulus flanged up the well and the annulus leaked. We tested at 61' higher and had a leak. Pulled 10' higher and it held. We had to use tubing subs to keep the packer at this depth. This ended up with the packer at 3,560'. The top perforation is at 3,666'. The annulus tested ok on April 21, 2010 with the packer set at 3,560'. Due to the well conditions Chaparral requests that NMOCD grant approval of setting the injection packer more than 100' above the top perforation. See (Attachment A) attached well bore schematic and Well History.

RECEIVED OCD
28th MAR 10 PM 1:59

West Dollarhide Queen Sand Unit No. 036. I-31-24S-38E 30-025-12288

****Packer Setting depth 132' above top perf. ***Operator in Violation of NMOCD Permit order WFX-570*** Operator must seek Approval from Phillip Goetz – OCD Santa Fe Prior to setting Packer more than 100' above top perf*****

Response: It appears the previous wellbore schematic with a packer setting depth of 3,442' is in error. The correct setting depth should be 3,478.25'.

This well was drilled and completed in November 1952. 7.0" casing was set at 3,670' and cemented with 1,400 sx cement. In 1988 the well was deepened to 3,969', 4-1/2" casing was then run and cemented to surface at 3,950'. After the workover the top perforation was placed at 3,574'. When the well was initially placed on injection in 1988 the injection packer was placed at 3,472'. In a workover conducted by Oxy in March 1993 the packer was set with 113 joints at 3511.08. Chaparral has worked on the well one time since it was placed on injection. In June 2008 a tubing leak developed in the injection string. Thus a workover was required to repair the well. During the workover the 4-1/2" casing collapsed at the surface, right under the wellhead. The 4-1/2", 7.0" and 9-5/8" casings were all repaired during the workover. One joint of injection tubing was removed that had a hole in the tubing. 112 jts injection tubing and the packer were run back into the well and set at 3,478'. This places the packer 96' above the top injection perforation.

This setting depth was determined after a diligent search of the well file. A tubing detail of the injection tubing was located for the March 1993 workover conducted by Oxy. From this information and the workover conducted by Chaparral in 2008 we were able to determine the proper setting depth of the packer. The depth was determined by averaging the joint tally as listed in the Oxy March 25, 1993 workover report. Thus using an average of 30.95' for each joint of tubing and having one joint removed. Chaparral ran 112 jts in the well on June 6, 2008. Then adding the length of the Seating Nipple 1.10' the Packer of 2.75' and Kelly bushing depth of 8.00' totals up to 3,478.25'. This depth places the packer within 96' of the top perforation. See (Attachment B) attached well bore schematic and Well History. Thus with this additional information WDQSU No. 36 should not be in Violation of NMOCD Permit Order WFX-570.

West Dollarhide Queen Sand Unit No. 037. L-32-24S-38E 30-025-12302

****Packer Setting depth 117' above top perf. ***Operator in Violation of NMOCD Permit order WFX-570*** Operator must seek Approval from Phillip Goetz – OCD Santa Fe Prior to setting Packer more than 100' above top perf*****

Response: This well was initially drilled and completed in April and May of 1953. 7.0" casing was set at 3,662' and cemented with 200 sx cement. In March 1974 the well was plugged and abandoned. In

March 1981 the well was washed down to 1313' and the well replugged. In August 1989 the well was reentered and deepened to 3,900', 4-1/2" casing was then run and cemented to surface at 3,900'. After the workover the top perforation was set placed at 3,570'. In May 1997 a CIBP was set in the 4-1/2" casing at 3,690'. The last data in the well file indicates the injection packer is set at 3,494'. This places the packer only 76' above the top injection perforation. It appears the Chaparral wellbore schematic is in error. An updated wellbore schematic is attached see (Attachment C).

West Dollarhide Queen Sand Unit No. 151. M-29-24S-38E 30-025-30306

****Packer Setting depth 119' above top perf. ***Operator in Violation of NMOCD Permit order WFX-570*** Operator must seek Approval from Phillip Goetz – OCD Santa Fe Prior to setting Packer more than 100' above top perf*****

RESPONSE: This well was drilled by Sirgo Operating Inc. The well was spud on July 24, 1989. The well was drilled to a TD of 3,940'. On July 29, 1989 5-1/2" casing was run and set at 3,940' and cemented to surface with 1000 sx of cement. On August 14, 1989 2-3/8" injection tubing was run in the well and a packer was set at 3,537.8'. Since that time the well has not been pulled or worked on. This packer has been in this position before Chaparral became operator of the WDQSU in November 1, 2003.

It is possible to perform a workover and remove the tubing and packer. Chaparral could attempt to find a packer seat 20' deeper than the packer is located at however, experience in the field has taught us that corrosion can be a problem and could make it difficult in locating a packer seat at a deeper depth.

Due to the well conditions Chaparral requests that NMOCD grant approval of setting the injection packer more than 100' above the top perforation. See (Attachment D) attached well bore schematic and Well History.

West Dollarhide Queen Sand Unit No. 133. D-31-24S-38E 30-025-30355

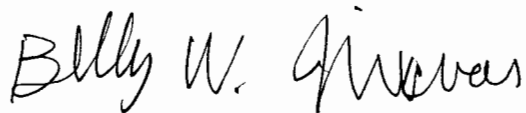
LAST INJECTION 12/2012: SHUT IN/TA EXPIRED 2007; NO REPORT ON FILE TO DETERMINE STATUS CHANGE OF WELL; TA'D 2006 TBG/PKR IN HOLE; ***Operator in Violation of NMOCD Rule 19.15.25.12 (APPROVED TEMPORARY ABANDONMENT) ***** UPON WORKOVER OPERATOR MUST SET PACKER ACCORDING TO OCD PERMIT WFX-570 – NOTE – IF PACKER CANNOT BE SET ACORDINGLY, OPERATOR MUST CONTACT OCD SANTA FE PHILLIP FOR PACKER SETTING APPROVAL.

RESPONSE: The WDQSU No. 133 was spud on February 3, 1990. 5-1/2" casing was run and cemented at 3,950' 850sx. Cement did not circulate. 1,036' of 1" tubing was run outside of the 5-1/2" casing and Cmt'd to surface w/170 sx. The well was completed in February 1990 as an injection well with the packer set at 3,558.04. The top perf is at 3,678'. This places the packer 119' above the top perforation. From Chaparrals records it appears that once the well was placed on injection in February 1990 it has

never been pulled apart. Chaparral took over operations of the WDQSU on November 1, 2003. The well was placed on Temporary Abandonment Status from Jan 24, 2007 to Jan 24, 2008. Chaparral has tested the flow line to the well and it is in working condition. Chaparral has also noticed that the well appears to have a tubing leak. Chaparral is preparing 3160-5 forms for the BLM to repair this well. During the workover Chaparral will make an attempt to set the packer within 100' of the top perforation, test the annulus and see if the annulus will hold. If the annulus will not hold due to rough casing within 100' of the top perforation Chaparral will have to move the packer to a location where the annulus will hold. Chaparral will not know this until work begins on the well. After the well is repaired and the Mechanical Integrity Testing is complete and approved Chaparral would like to return the well to active injection. See (Attachment E) attached well bore schematic and Well History.

The five question and response scenarios listed above deal directly with the letter of violation referenced above. Hopefully this information will successfully answer the questions raised in the letter of violation. If you have further questions please feel free to contact me at 405-426-4040. Also a response to Chaparral from the State of New Mexico is requested regarding these responses.

Sincerely,

A handwritten signature in black ink that reads "Billy W. Nievar". The signature is written in a cursive, flowing style.

Billy W. Nievar P.E.

KB: 3180.5

DF:

GL: 3169

Chaparral Energy, L.L.C.

Size: 12-1/4

8-5/8" ,24 #,J @416 ,250 sx

Well: West Dollarhide QSU ,151 ,4087.08

Operator: CELLC

Location: 429 PSL 550 FWL

Legal: Sec 30 T24S R 38E

County: Lea, NM

LAT/Long: 28 /

Dir:

Spud Date: 7-24-89

Drilling Finished: 7-28-89

Completion Date: 8-16-89

First Production:

TUBING #1:

Type	#Jts	Size	Wt#/f	Grade	Set@
Production		2-3/8"	4.7		3537.8

HISTORY:**Attachment D**

Packer@3537.8

3600'

AD 1

Size: 7-7/8"

3656 -3660 Queen 3

3667 -3682 Queen 3

3688 -3715 Queen 3

3722 -3729 Queen 3

3748 -3750 Queen 3

3755 -3757 Queen 3

3760 -3761 Queen 3

3764 -3766 Queen

3779 -3789 Queen 3

3803 -3808 Queen 3

OPBTD: 3900'

TD: 3940

5-1/2" ,15.5 #,J @3940 ,1000sx

Input by: Zac Stice

Approved by:

Last Update: 4/18/2007

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WELL HISTORY

7-10-89 Take down fence on front side of pit and lay water line.

7-20-89 Re-condition location and pits.

7-21-89 Take delivery of 405.30' of 8-5/8" csg. and inj. Well head.

7-24-89 Spud well. Drill to 416'. Ran 11 jts of 8-5/8" csg to 416'. Cmt w/ 250 sx class "C" cmt. Circ 100 sx

7-25-89 1747'. Made 1331' in 13.75 hours. WOC & test BOP & csg to 800# for 30 min-okay.

7-26-89 3005' made 1258' in 22.5 hrs.

7-27-89 3380'. Made 375' in 10.5 hrs

7-28-89 3940' TD. Made 560' in 18 hrs. Started running 5-1/2" csg

7-29-89 Ran 112 jts of 5-1/2" csg. to 3940'. Displace csg. cmt w/Western 800 sx. Lite and tail w/200 sx. Class "C". Circ 190 sx. ND BOP, set slips and cut off csg.

8-4-89 Roustabout crew moved tbg from #137 to #151. Put wellhead on csg. Transport picked up oil & water from location. Set dead man anchors.

8-7-89 MURU pulling unit. Tally and RIH w/2-7/8" workstring. Tag PBTD @ 3900'. POH w/tbg and RU wireline and log well. CNI, GR from TD-2000'. GR, CBL, CCL from TD to surface. SION. Load hole w/PW.

8-8-89 RU and perf lower Queen formation from 3748-50', 55-57', 60-61', 64-66', 79-89', 3803-3808', RD perf. SION

8-9-89 RIH w/2-7/8" x 5-1/2" treating pkr and tbg. RU and spot acid @ 3808'. PU and set pkr @ 3645' and acidize w/2000 gal 15% HCL-NEFE inhibited acid w/ clay stabilizer. Block w/1.3 SG ball sealers (12 balls/ 3 bbls). Flush to bottom perfs w/PW. Avg rate 4.7 BPM. Avrg press. 1700#, ISIP 1100#, 5 min 1050#, 10 min 1000#, 15 min 900#. Total load to rec is 96 bbls. SI for 30 min. Open well up and bleed pressure. RU and swab back load. Open bypass on pkr. Swab well dry. POH w/pkr and tbg. Install safety valve and SION.

8-10-89 RU and perf Upper Queen zone from 3656-60', 67-82', 88-3715', 22-29' 3 SPF 4" guns 171 holes. RIH and set RBP @ 3740'. PU and set pkr @ 3554'. Test to 1500# -okay. RU and acidize w/ 3500 gal 15% HCL-NEFE acid w/clay stabilizer. Blocking w/216 per gal rock salt & 170 ball sealers (5 balls/ 2bbs). Avg rate 4 BPM, avrg pressure 1400#. Flush to bottom perf w/ PW total fluid rec 151 bbls. ISIP 1100#, 5 min 1050#, 10 min 1000#, 15 min 975#. Had good block action. SI 30 min Open and bleed down. SION

8-11-89 Continue swabbing. RIH w/ tbg. Tag fill. RU kill truck and circ off ball sealers. Latch onto RBP & unset. POH and LD tbg a& treating tools. Install safety valve and SION. Empty working pit into reserve.

8-14-89 RIH w/2-3/8" x 5-1/2" A-1 tension pkr and 112 jts of 2-3/8" IPC tbg. RU kill truck and pump 100 bbls fresh water a/1 drum of pkr fluid. Set pkr @ 3537.81'. Load and test csg to 500# for 30 min. NU inj wellhead. Complete inj line and tie in. SION

8-15-89 Repair inj leaks & hook up inj line. Test line and back @ location. Start injecting w/ 250 BPD @ 500# pressure.

8-16-89 Injecting 333 BPD/900#.

6-14-11 Found leak in inj line @ header in satellite #2. PU loose fluids w/vacuum truck.

6-15-11 Dug up & replaced vic clamp. Tapped & protected new clamp. Returned to inj. Went to WH, cleaned 1" connection & re-tightend. Now taking fluid @ 1150#. Cleaned up satellite w/backhoe.