

**Jones, William V, EMNRD**

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**From:** Marks, Allison, EMNRD  
**Sent:** Wednesday, May 27, 2015 5:07 PM  
**To:** Jones, William V, EMNRD  
**Subject:** Fwd: Airstrip Fee Com No 1H: supplemental geology letter  
**Attachments:** image002.png; ATT00001.htm; 05.27.2015 NMOCD letter\_compulsory pooling\_signed.pdf; ATT00002.htm

Sent from my iPhone

Begin forwarded message:

**From:** "Jordan L. Kessler" <[JLKessler@hollandhart.com](mailto:JLKessler@hollandhart.com)>  
**Date:** May 27, 2015 at 3:41:35 PM MDT  
**To:** "McMillan, Michael, EMNRD ([Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us))" <[Michael.McMillan@state.nm.us](mailto:Michael.McMillan@state.nm.us)>, "[allisonr.marks@state.nm.us](mailto:allisonr.marks@state.nm.us)" <[allisonr.marks@state.nm.us](mailto:allisonr.marks@state.nm.us)>  
**Cc:** "[omundsdry@concho.com](mailto:omundsdry@concho.com)" <[omundsdry@concho.com](mailto:omundsdry@concho.com)>  
**Subject:** Airstrip Fee Com No 1H: supplemental geology letter

Dear Mr. McMillan and Ms. Marks,

At the hearing on May 14, 2015, Mr. McMillan requested a signed and notarized letter from a geologist for COG describing the barrier separating the Third Bone Spring Sand in relation to Case No. 15105 (reopened). I believe that the letter was to be admitted as Exhibit 11. I've attached a signed and notarized letter from Mr. Villalobos with a description of the relevant formation. Please let me know if you have any additional questions or concerns.

Thanks!  
Jordan

**Jordan Lee Kessler**  
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Fax (505) 983-6043  
E-mail: [JLKessler@hollandhart.com](mailto:JLKessler@hollandhart.com)



Joe Villalobos  
Geoscience Advisor

May 27, 2015

**TO: Michael McMillan, Hearing Examiner**  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Airstrip Fee Com No. 1H**

Dear Mr. McMillan:

At the Oil Conservation Division hearing on May 14, 2015, you requested that COG provide further geological support regarding the separation between the Second and Third Bone Spring. I have drafted this letter in response to that request.

The objective Third Bone Spring sand is found between 10,560-10,790' in the Airstrip 6 State No. 1 well (API 30025-37842 - TD 11,450). This is illustrated by the well's Halliburton Dual Laterolog Micro-Guard log (dated 06/20/2006). This sand also showed trace fluorescence, poor cut and good gas show while drilling in this horizontal objective. The Airstrip 6 State No. 1 was originally drilled by Samson Resources, was subsequently taken over by Three Rivers Operating Co, and is currently operated by COG Resources LLC. It is located 660 feet from the South line and 660 feet from the West line of Section 6, Township 19S, Range 35E, Lea County, New Mexico.

For the subject well, geology has requested that all depths below the top of the Leonard-age Third Bone Spring sand (below 10,560'), be retained for drilling by COG Resources LLC. In the subject well, the Third Bone Spring Carbonate is seen between 10,460-10,560 feet. The 100 foot unit is composed predominantly of white to brown very fine-grained crystalline limestone with thin laminations of limy shale. Mudlogs have not shown any porosity, gas, fluorescence or cut while drilling through this carbonate. A limy shale above the Third Bone Spring carbonate seen between 10,285-10,460 feet (175 feet thick) also did not show any porosity, gas, fluorescence or cut while drilling through this limy shale unit. Taken together, these two units (275 feet of total thickness) are seen as a potential barrier for hydraulic fracturing above the horizontal target, the Third Bone Spring Sand. The Second Bone Spring section is seen between 9910-10285' in the subject well.

Your attention to this matter is appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Villalobos", written in a cursive style.

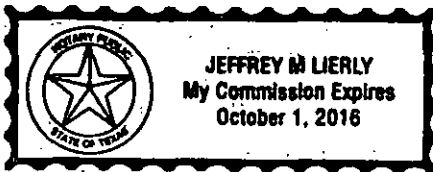
Joe Villalobos  
Geoscience Advisor

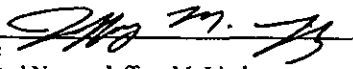
COG  
EXHIBIT # 11  
Case 15105 REOPENED

**ACKNOWLEDGMENT**

STATE OF TEXAS       §  
                                  §       SS:  
COUNTY OF MIDLAND   §

The foregoing instrument was acknowledged before me this 27<sup>th</sup> day of May, 2015, by Joe Villalobos.



Notary Public   
Notary's Printed Name: Jeffrey M. Lierly  
My Commission Expires: October 1, 2016