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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION FOR
THE PURPOSE OF CONSIDERING:

Reopened
Case No. 14720

APPLICATION OF AGAVE ENERGY COMPANY
FOR AUTHORITY TO INJECT, LEA
COUNTY, NEW MEXICO

FOURTH MOTION TO AMEND ORDER NO. R-13507

Applicant Lucid Energy Delaware LLC, OGRID #372422, successor in interest to Agave Energy Company, moves the Oil Conservation Commission ("Commission") to amend Order No. R-13507, by among other things, by extending the deadline to commence injection of treated acid gas ("TAG") into its Red Hills AGI #1 disposal well. In support of this motion, Lucid Energy Delaware LLC states:

1. Applicant Lucid Energy Delaware, LLC ("Lucid") is the successor in interest to Agave Energy Company ("Agave").
2. Lucid has registered as an operator in New Mexico and has been assigned OGRID #372422 and has posted the appropriate required plugging bond with the NMOCD for the Red Hills AGI#1 (API # 30-015-40448).
3. Geolex, Inc. ("Geolex") was retained by Lucid in June 2017 to assist them in the permitting and completion of the Red Hills AGI#1. Geolex prepared a technical analysis of the relevant issues and discussed and submitted same to NMOCD for consideration of an

administrative modification of Order R-13507 which is Attachment A to this motion. This information was previously submitted to NMOCD technical staff and discussed with NMOCD informally leading to this request to amend the order.

Historical Background

4. On January 23, 2012, the Commission issued Order No. R-13507 authorizing Agave to drill and operate the Red Hills AGI #1 well (API 30-015-40448) to dispose of TAG containing carbon dioxide ("CO₂") and hydrogen sulfide ("H₂S") into the Cherry Canyon Formation.

5. Order No. R-13507 enumerated certain conditions, including requirements that Agave: (a) reenter the plugged and abandoned Smith Federal #001 (API 30-025-27491), Sims #001 (API 30-025-26958) and Government L Com #001 (API 30-025-25604) wells, perforate and squeeze cement across the injection zone in each well, and replug the wells in accordance with current Division requirements; (b) reenter the plugged and abandoned Government L Com#2 (API 30-025-26939) well, place a balanced cement plug across the injection zone, and replug the well in accordance with current Division requirements; and (c) commence the injection of TAG within three years after the issuance of the order. Order No. R-13507 at 7-8, Ordering ¶¶ 1(i), 1(j), and 2.

6. Order No. R-13507 provides that any extension of the deadline for commencing injection "will require an application to and approval by the Commission." *Id.* at 8, Ordering ¶ 2.

7. On May 14, 2012, Agave filed a motion to amend Order No. R-13507 requesting the Commission to eliminate its requirements regarding the Smith Federal #001 well. On July 18, 2012, the Commission issued Order No. R-13507-A, which granted Agave's motion and eliminated the requirement that Agave reenter and replug the Smith

Federal #001 well. Order No. R-13507-A at 3, Ordering ¶ 1.

8. On August 13, 2012, Agave filed its Amended Second Motion to Amend Order No. R-13507 requesting the Commission to eliminate the requirements that Agave place a balanced plug in the Government L Com #002 well across the injection zone and reenter and replug the Government L Com #001 well. On December 6, 2012, the Commission issued Order No. R-13507-D, which: (a) removed the requirement that Agave place a balanced cement plug in the Government L Com #002 well across the injection zone and authorized Agave's alternative plugging program for the well; and (b) delayed the requirement that Agave reenter and replug the Government L Com #001 well until five years from the date Agave begins injecting TAG into the Red Hills AGI #1 well. Order No. R-13507-D at 4, Ordering ¶¶ 1, 2(a), and 2(b).

9. During the initial hearing in this case held on December 8 and 9, 2011, Agave's witnesses provided testimony regarding Agave's ongoing construction of its Red Hills Gas Processing Plant ("Red Hills Plant") for purposes of processing gas produced from the Avalon Shale, Agave's plan to double the capacity of the Red Hills Plant based on increases in Avalon Shale gas production, and the need for subsurface disposal of TAG when producers begin transporting sour inlet gas containing H₂S to the plant. They testified that the Red Hills Plant initially would be receiving only sweet inlet gas, and estimated that it would be one to four years before the plant would begin receiving sour inlet gas, the processing of which would necessitate the injection of TAG into the Red Hills AGI #1 disposal well.

10. Agave began operating the Red Hills Plant on May 24, 2013. Since the Commission issued Order No. R-13507, Agave devoted significant resources to performing off-site well remedial work required by the Commission, developing the Red Hills AGI #1

well, and purchasing all of the equipment necessary for completing the well. Agave has drilled the Red Hills AGI #1 well and set the casing, but had not yet perforated the casing.

11. Because development of the Avalon Shale gas play did not proceed at the pace it anticipated in 2011, Agave did not receive any sour inlet gas while filling the plant to capacity and did not anticipate generating TAG requiring injection for the foreseeable future after the 2013 completion of the plant. Consequently, Agave took the reasonable position that it should not expend the additional resources necessary to complete the Red Hills AGI #1 well until the Red Hills Plant either: (i) begins receiving sour inlet gas containing H₂S; or (ii) begins receiving increased amounts of sweet inlet gas with elevated CO₂ levels, which will require the injection, rather than venting, of the CO₂.

12. Agave, after communicating with the Division, Agave obtained approval for temporary abandonment ("TA") status for the Red Hills AGI #1 well in accordance with 19.15.26.12(B)(3) NMAC.

13. Agave remained fully committed to completing and operating the Red Hills AGI #1 well. However, completing the well before there was a need to inject TAG was not a fiscally prudent option, and completing the well before there is a need to inject would present technical problems that could prove detrimental to the wellbore.

14. Thereafter Agave sought and obtained an extension to commence the injection of TAG into the Red Hills AGI Well #1 by the January 23, 2015 deadline to January 23, 2017. The Commission granted the extension administratively.

Present Status

15. Since acquiring the Agave interests applicable to this case, which occurred over a period covering January 23, 2017, Lucid is now in a position to complete the Red Hills AGI

Well # 1 by the end of December 2017, and to commence injection of TAG in the first half of 2018 when surface compression facilities are completed and an H2S contingency plan pursuant to Rule 11 is submitted to, and approved by NMOCD.

16. In June 2017, Lucid retained Geolex to prepare the documentation needed to remove the Red Hills AGI#1 from TA status and obtain approval from NMOCD to complete and operate the well as originally approved in by NMOCC in Order R-13507 and its subsequent amendments. Geolex proceeded to evaluate any new activity within the area and found that there were no new wells within the AOR that penetrate the injection zone and no changes in surface ownership within the AOR (except for the transfer of assets from Agave to Lucid). Furthermore, the AOR in the original order and C-108 were based on a modeled injection rate of 13 MMSCFD whereas Lucid intends to inject substantially less TAG (5MMSCFD) which significantly reduces the area affected by TAG injection over the life of the well. The results of this analysis are also included in Attachment A.

17. To conform Order R-13507 to more accurately carry out Lucid's present plan of development, the following should occur:

- a. An extension of time to January 23, 2019 within which to complete the Red Hills AGI Well #1 and commence injection to TAG should its current plan of development be delayed;
- b. Modify the disposal interval to a depth of between 6,230 to 6,585 feet based on actual drilling and logging of the Red Hills AGI Well #1. Order R-13507 approved depths of injection in the Cherry Canyon Formation from 6,230 to 6,530 feet, which were based and calculated from logs from nearby wells. This change has been approved by the BLM in December of 2013, and informally approved by the Oil Conservation Division in August of 2017.

c. Change of the operator under the order from Agave to Lucid.

Relief Requested

Lucid requests that the Commission administratively approve:

- A. Lucid's completion of the Red Hills AGI Well #1 at a disposal interval of between 6,230 to 6,585 feet based upon the log of the well;
- B. Grant a two-year extension, if necessary, to January 23, 2019, for commencing injection;
- C. Amend Order R- 13507 to reflect change of operator under the order from Agave Energy Company to Lucid Energy Delaware, LLC;
- D. Alternatively, if the Commission deems it necessary to conduct a hearing on this motion, set the matter for hearing on the Commission's October 4, 2017 docket;
- E. Provide in the order that any future request by Lucid to extend the deadline for commencing injection may be addressed administratively by the Division; and
- F. Grant Lucid such further relief as the Commission deems appropriate.

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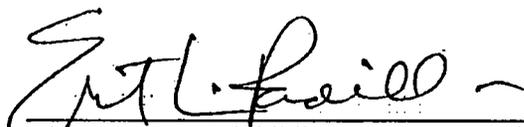
Counsel for Lucid Energy
Delaware, LLC

CERTIFICATE OF SERVICE

I hereby certify that on this 12th day of September, 2017, I served a true and correct copy of the foregoing *Fourth Motion to Amend Order No. R-13507* via email and regular mail to:

Kaiser Francis Oil Company
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ATTACHMENT A:

**MAP AND TABLE OF WELLS DRILLED OR
PROPOSED AFTER JANUARY 2012 ORDER R-13507
AND REVISED CALCULATED INJECTION PLUME**

Table C1: Summary of Wells Completed or Proposed Following January 2012 Approval of AGI 001

API	OPERATOR	WELL NAME	SPUD DATE	SECTION	TOWNSHIP	RANGE	TVD DEPTH	WELL TYPE	COMPL STATUS	ELEVGL	FORMATION
3002540448	AGAVE ENERGY CO	RED HILLS AGI 001	10/23/2013	13	24.05	33E	6650	Acid Gas Injection	Active	3574	Cherry Canyon
3002540914	COG OPERATING LLC	DECKARD FEE 001H	3/15/2013	13	24.05	33E	11034	Oil	Active	3600	Wolfcamp
3002541382	COG OPERATING LLC	DECKARD FEDERAL COM 002H	6/3/2014	13	24.05	33E	11067	Oil	Active	3592	Wolfcamp
3002541383	COG OPERATING LLC	DECKARD FEDERAL COM 003H	8/30/2014	13	24.05	33E	11050	Oil	Active	3595	Wolfcamp
3002541384	COG OPERATING LLC	DECKARD FEDERAL COM 004H	6/1/2014	13	24.05	33E	11103	Oil	Active	3601	Wolfcamp
3002543532	MATADOR PRODUCTION COMPANY	STRONG 13 24S 33E AR 211H		13	24.05	33E	11847 (est)	Gas	New (Not drilled or compl)	3602	Wolfcamp
3002541666	COG OPERATING LLC	SEBASTIAN FEDERAL COM 002H	2/24/2015	18	24.05	34E	10927	Oil	Active	3592	Wolfcamp
3002541687	COG OPERATING LLC	SEBASTIAN FEDERAL COM 001H	2/1/2015	18	24.05	34E	10944	Oil	Active	3599	Wolfcamp
3002541688	COG OPERATING LLC	SEBASTIAN FEDERAL COM 003H	8/3/2014	18	24.05	34E	11055	Oil	Active	3583	Wolfcamp
3002541689	COG OPERATING LLC	SEBASTIAN FEDERAL COM 004H	7/2/2014	18	24.05	34E	10877	Oil	Active	3581	Wolfcamp

Case No. 14720 (Reopened): Application of Lucid Delaware LLC to Modify NMOCC Order R-13507. Lucid Energy Delaware LLC requests modifications from the NM Oil Conservation Commission Order R-13507 authorizing it to inject acid gas and carbon dioxide (CO₂) from the Red Hills Gas Processing Plant into its drilled but uncompleted Red Hills AGI#1 well. The well is located in Section 13, Township 24 South, Range 33 East, NMPM, in Lea County, New Mexico. Lucid requests Order modifications to reflect: 1) the change of operator from the former operator Agave Energy Company to Lucid Energy Delaware LLC; 2) a re-establishment of the authority to inject, extended until January 2019; and, 3) an adjustment of the original injection zone from approximately from 6200 feet to 6530 feet to 6,230 to 6,585 feet to reflect more detailed geological information obtained during drilling of the Red Hills AGI # 1. The Red Hills AGI #1 is located approximately twenty (20) miles northwest of the town of Jal, New Mexico.

Case No. 14720 (Reopened): Application of Lucid Delaware LLC to Modify NMOCC Order R-13507. Lucid Energy Delaware LLC requests modifications from the NM Oil Conservation Commission Order R-13507 authorizing it to inject acid gas and carbon dioxide (CO₂) from the Red Hills Gas Processing Plant into its drilled but uncompleted Red Hills AGI#1 well. The well is located in Section 13, Township 24 South, Range 33 East, NMPM, in Lea County, New Mexico. Lucid requests Order modifications to reflect: 1) the change of operator from the former operator Agave Energy Company to Lucid Energy Delaware LLC; 2) a re-establishment of the authority to inject, extended until January 2019; and, 3) an adjustment of the original injection zone from approximately from 6200 feet to 6530 feet to 6,230 to 6,585 feet to reflect more detailed geological information obtained during drilling of the Red Hills AGI # 1. The Red Hills AGI #1 is located approximately twenty (20) miles northwest of the town of Jal, New Mexico.

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