GTHT-___001___

G-101s

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-101
Revised 10-1-78

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APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK - GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease: STATE ☐ FEE ☒
5a. State Lease No.

1a. Type of Work: Drill ☒ Deepen ☐ Plug Back ☐
7. Unit Agreement Name: None

b. Type of Well: Geothermal Producer ☐ Core Hole ☒ Temp Observation ☐ Low Temp Thermal ☐ Injection/Disposal ☐
8. Farm or Lease Name: Fed. NM-34790

2. Name of Operator: Lightning Dock Geothermal HI-01, LLC
9. Well No.: CH-1

3. Address of Operator: Kearns Bldg. 136 S. Main Street, Ste. 600, Salt Lake City, UT 84104
10. Field and Pool, or Wildcat: Lightning Dock KGRA

4. Location of Well: UNIT LETTER _____ LOCATED 1250 FEET FROM THE East LINE AND 1060 FEET FROM THE South LINE OF SEC. 12 TWP. 25 South RGE. 20 West NMPM

12. County: Hidalgo

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
3000 feet	Tertiary volcanics Paleozoic limestone	Rotary/Core

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug Bond	21B. Drilling Contractor	22. Approx. Date Work will start
4200 GR		American Drilling Corp.	10/01/2014

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
10.625"	7"	23.57#	50'	0.97 cubic yards	GR
5.875"	4.5"	11.7 #	750'	0.5 cubic yards	GR

CH-1 will be drilled utilizing conventional mud rotary and coring drilling methods. Before the mud rotary rig arrives on location, a 10-5/8" hole will be drilled to 50'and 7" conductor pipe will be set to 50' and cemented. A 5-7/8" mud rotary hole will be drilled from 50' to 750'± utilizing a 5-7/8" tricone bit. 4.5" casing (PQ core rod) will be installed into the bore hole from surface to 750'±. Cement will be gravity fed down the annular space between the conductor pipe and 4.5" casing. This cement will stabilize the casing and secure the bore hole. The cement will extend from surface to 150'±. The casing will be cemented to only 150' because the casing will be removed from the bore hole prior to abandonment. After the 4.5" casing is set in place the core rig will begin coring utilizing HQ core rods and bits (3.782") from 750'± to 3000'±. If formation or down hole environment warrants the reduction of hole size, then the rig will core with NQ rod and bit (2.98"). Once core is drilled and retrieved from 3000', the rig will pull out of the hole and a temperature/pressure/survey (PTS) will be run on the bore hole. The PQ casing will be removed following the PTS survey and within 30 days the bore hole will be plugged and abandoned from the bottom up with cement according to Federal and State regulations and requirements.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed David W. Jaynes, PG Title Agent for Lightning Dock Geothermal, HI-01, LLC Date 09/24/2014

(This space for State Use)

APPROVED BY Carl J. Chavez TITLE Environmental Engineer DATE 10/7/2014

CONDITIONS OF APPROVAL, IF ANY: See Attached COAs,

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P O BOX 2088
SANTA FE, NEW MEXICO 87501

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APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK--GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease: STATE ☐ FEE ☒
5a. State Lease No.

1a. Type of Work: Drill ☒ Deepen ☐ Plug Back ☐
b. Type of Well: Geothermal Producer ☐ Core Hole ☒ Temp Observation ☐ Low Temp Thermal ☐ Injection/Disposal ☐
7. Unit Agreement Name: None
8. Farm or Lease Name: Fed. NM-34790
2. Name of Operator: Lightning Dock Geothermal HI-01, LLC
9. Well No.: CH-2
3. Address of Operator: Kearns Bldg. 136 S. Main Street, Ste. 600, Salt Lake City, UT 84104
10. Field and Pool, or Wildcat: Lightning Dock KGRA
4. Location of Well: UNIT LETTER ____ LOCATED 5132 FEET FROM THE East LINE AND 1237 FEET FROM THE South LINE OF SEC. 7 TWP. 25 South RGE. 19 West NMPM
12. County: Hidalgo
19. Proposed Depth: 3000 feet
19A. Formation: Tertiary volcanics Paleozoic limestone
20. Rotary or C.T.: Rotary/Core
21. Elevations (Show whether DF, RT, etc.): 4200 GR
21A. Kind & Status Plug Bond
21B. Drilling Contractor: American Drilling Corp.
22. Approx. Date Work will start: 10/01/2014

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
18.625"	7"	23.57#	50'	0.97 cubic yards	GR
5.875"	4.5"	11.7#	750'	0.5 cubic yards	GR

CH-2 will be drilled utilizing conventional mud rotary and coring drilling methods. Before the mud rotary rig arrives on location, a 10-5/8" hole will be drilled to 50'and 7" conductor pipe will be set to 50' and cemented. A 5-7/8" mud rotary hole will be drilled from 50' to 750'± utilizing a 5-7/8" tricone bit. 4.5" casing (PQ core rod) will be installed into the bore hole from surface to 750'±. Cement will be gravity fed down the annular space between the conductor pipe and 4.5" casing. This cement will stabilize the casing and secure the bore hole. The cement will extend from surface to 150'±. The casing will be cemented to only 150' because the casing will be removed from the bore hole prior to abandonment. After the 4.5" casing is set in place the core rig will begin coring utilizing HQ core rods and bits (3.782") from 750'± to 3000'±. If formation or down hole environment warrants the reduction of hole size, then the rig will core with NQ rod and bit (2.98"). Once core is drilled and retrieved from 3000', the rig will pull out of the hole and a temperature/pressure/survey (PTS) will be run on the bore hole. The PQ casing will be removed following the PTS survey and within 30 days the bore hole will be plugged and abandoned from the bottom up with cement according to Federal and State regulations and requirements.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed David W Jaramey, PG Title Agent for Lightning Dock Geothermal HI-01, LLC Date 09/24/2014

(This space for State Use)

APPROVED BY Carl J Chavez TITLE Environmental Engineer DATE 10/7/2014

CONDITIONS OF APPROVAL, IF ANY: See Attached COAs.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-101
Adopted 10-1-78
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APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK - GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease: STATE ☐ FEE ☒
5.a State Lease No.

1a. Type of Work: Drill ☒ Deepen ☐ Plug Back ☐
7. Unit Agreement Name: None

b. Type of Well: Geothermal Producer ☐ Core Hole ☒ Temp Observation ☐ Low Temp Thermal ☐ Injection/Disposal ☐
8. Farm or Lease Name: Fed. NM-34790

2. Name of Operator: Lightning Dock Geothermal HI-01, LLC
9. Well No.: CH-3

3. Address of Operator: Kearns Bldg. 136 S. Main Street, Ste. 600, Salt Lake City, UT 84104
10. Field and Pool, or Wildcat: Lightning Dock KGRA

4. Location of Well: UNIT LETTER ____ LOCATED 1250 FEET FROM THE East LINE AND 2353 FEET FROM THE South LINE OF SEC. 12 TWP. 25 South RGE. 20 West NMPM

12. County: Hidalgo

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
3000 feet	Tertiary volcanics/Paleozoic limestone	Rotary/Core

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug Bond	21B. Drilling Contractor	22. Approx. Date Work will start
4200 GR		American Drilling Corp.	10/01/2014

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
10.625"	7"	23.57#	50'	0.97 cubic yards	GR
5.875"	4.5"	11.7#	750'	0.5 cubic yards	GR

CH-3 will be drilled utilizing conventional mud rotary and coring drilling methods. Before the mud rotary rig arrives on location, a 10-5/8" hole will be drilled to 50'and 7" conductor pipe will be set to 50' and cemented. A 5-7/8" mud rotary hole will be drilled from 50' to 750'± utilizing a 5-7/8" tricone bit. 4.5" casing (PQ core rod) will be installed into the bore hole from surface to 750'±. Cement will be gravity fed down the annular space between the conductor pipe and 4.5" casing. This cement will stabilize the casing and secure the bore hole. The cement will extend from surface to 150'±. The casing will be cemented to only 150' because the casing will be removed from the bore hole prior to abandonment. After the 4.5" casing is set in place the core rig will begin coring utilizing HQ core rods and bits (3.782") from 750'± to 3000'±. If formation or down hole environment warrants the reduction of hole size, then the rig will core with NQ rod and bit (2.98"). Once core is drilled and retrieved from 3000', the rig will pull out of the hole and a temperature/pressure/survey (PTS) will be run on the bore hole. The PQ casing will be removed following the PTS survey and within 30 days the bore hole will be plugged and abandoned from the bottom up with cement according to Federal and State regulations and requirements.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed David W. Jaramay, PG Title Agent for Lightning Dock Geothermal, HI-01, LLC Date 09/24/2014

(This space for State Use)

APPROVED BY Carl J. Chavez TITLE Environmental Engineer DATE 10/7/2014

CONDITIONS OF APPROVAL, IF ANY: See Attached COAs.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

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APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK--GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease: STATE ☐ FEE ☒
5.a State Lease No.

1a. Type of Work: Drill ☒ Deepen ☐ Plug Back ☐
b. Type of Well: Geothermal Producer ☐ Core Hole ☒ Temp Observation ☐ Low Temp Thermal ☐ Injection/Disposal ☐
7. Unit Agreement Name: None
8. Farm or Lease Name: Fed. NM-34790
9. Well No: CH-04
2. Name of Operator: Lightning Dock Geothermal HI-01, LLC
3. Address of Operator: Kearns Bldg. 136 S. Main Street, Ste. 600, Salt Lake City, UT 84104
10. Field and Pool, or Wildcat: Lightning Dock KGRA
4. Location of Well: UNIT LETTER ____ LOCATED 1378 FEET FROM THE West LINE AND 1718 FEET FROM THE South LINE OF SEC. 7 TWP 25 South RGE 19 West NMPM
12. County: Hidalgo

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
3000 feet	Tertiary volcanics/Paleozoic limestone	Rotary/Core

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug Bond	21B. Drilling Contractor	22. Approx. Date Work will start
4200 GR		American Drilling Corp.	10/01/2014

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
10.625"	7"	23.57#	50'	0.97 cubic yards	GR
5.875"	4.5"	11.7#	750'	0.5 cubic yards	GR

CH-4 will be drilled utilizing conventional mud rotary and coring drilling methods. Before the mud rotary rig arrives on location, a 10-5/8" hole will be drilled to 50'and 7" conductor pipe will be set to 50' and cemented. A 5-7/8" mud rotary hole will be drilled from 50' to 750'± utilizing a 5-7/8" tri-cone bit. 4.5" casing (PQ core rod) will be installed into the bore hole from surface to 750'±. Cement will be gravity fed down the annular space between the conductor pipe and 4.5" casing. This cement will stabilize the casing and secure the bore hole. The cement will extend from surface to 150'±. The casing will be cemented to only 150' because the casing will be removed from the bore hole prior to abandonment. After the 4.5" casing is set in place the core rig will begin coring utilizing HQ core rods and bits (3.782") from 750'± to 3000'±. If formation or down hole environment warrants the reduction of hole size, then the rig will core with NQ rod and bit (2.98"). Once core is drilled and retrieved from 3000', the rig will pull out of the hole and a temperature/pressure/survey (PTS) will be run on the bore hole. All drilling fluids and cutting will be managed according to Federal and State regulations. The PQ casing will be removed following the PTS survey and within 30 days the bore hole will be plugged and abandoned from the bottom up with cement according to Federal and State regulations and requirements.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed David Janney, PG Title Agent for Lightning Dock Geothermal, HI-01, LLC Date 09/27/2014

(This space for State Use)

APPROVED BY Carl J. Chavez TITLE Environmental Engineer DATE 10/7/2014

CONDITIONS OF APPROVAL, IF ANY: See Attached COAs.

Lightning Dock Geothermal (HI-01) LLC Project
(GTHT-001)
Proposed Core Holes 1 - 4 (CHs: 1-4)

G-101 Form
OCD Artesia District Office
Conditions of Approval (10/7/2014)

1) The operator shall plug and abandon all core holes following the New Mexico Office of State Engineer requirements within 30 days of core hole completion or by extension request approval of the OCD.

Please be advised that OCD approval does not relieve Lightning Dock Geothermal HI-01, L.L.C. from responsibility should its operations pose a threat to ground water, subsurface trespass, water supply/diversion, surface water, human health or the environment. In such event, OCD may order the operator to plug and abandon its core holes pursuant to the geothermal regulations. In addition, OCD approval does not relieve Lightning Dock Geothermal HI-01, L.L.C. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, June 29, 2012 11:45 AM
To: Bailey, Jami, EMNRD
Cc: Brooks, David K., EMNRD; Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Dade, Randy, EMNRD; Shapard, Craig, EMNRD
Subject: FW: Lightning Dock/Los Lobos Well 63-7
Attachments: OCD G-101 Amended Conditions of Approval 6-29-2012.pdf

Jami:

Please find below in the highlighted yellow text message (see "G-101(C)") the basis for the attached OCD G-101 Amended Conditions of Approval (COA) stemming from Los Lobo's concerns about the "3,723 feet" Well 63-7 casing and cement depth cited in the original G-101 issued by the OCD.

The G-101 Amended COA for Well 63-7 reflects the confirmed casing and cement depth requirement (requirement) of 2,200 feet after receipt from The Office of the State Engineer of the AmeriCulture State Well No. 2 total well depth record of 2,100 feet. The AmeriCulture well depth determination was required after the OCD Attorney Mr. David Brooks excluded any geothermal permit and project related fresh water supply wells within ½ mile of Well 63-7 from OCD discharge permit (GTHT-001) and the minimum injection well casing and cement requirement. The OCD later issued approval of the G-112 with COA that reflected the confirmed casing and cement depth of 2,200 feet.

By receipt of this OCD issued G-101 Amended COA (6/29/2012), the original G-101 has been amended.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

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From: Michelle Henrie [mailto:michelle@mhenrie.com]
Sent: Wednesday, June 20, 2012 6:20 PM
To: Chavez, Carl J, EMNRD; Brooks, David K., EMNRD; Dade, Randy, EMNRD
Cc: 'Cotter, Jeff'; 'Michael Hayter'; 'Janney, David'; 'Ben Barker'; Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Shapard, Craig, EMNRD
Subject: RE: Lightning Dock/Los Lobos Well 63-7

Carl,

Regarding the G-101, issue A below, please see attached well logs and records that were filed with OCD regarding AmeriCulture's State Well #2—the well that you are concerned about. The attachment contains a cover page and pages 40-48 of the file. They logs and records verify that the depth of this well is 910'.

I think OCD needs to rely on the records that operators file with OCD. I do not understand why OCD would put aside these records and embark on "due diligence", potentially delaying the processing of this paperwork. Please, let's get this done.

Michelle

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Wednesday, June 20, 2012 4:40 PM
To: Michelle Henrie; Brooks, David K., EMNRD; Dade, Randy, EMNRD
Cc: Cotter, Jeff; Michael Hayter; Janney, David; Ben Barker; Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Shapard, Craig, EMNRD
Subject: RE: Lightning Dock/Los Lobos Well 63-7

Michelle:

Good afternoon. Please see the OCD responses to Los Lobos inquiries below in red text.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

---

From: Michelle Henrie [mailto:michelle@mhenrie.com]
Sent: Tuesday, June 19, 2012 11:10 AM
To: Brooks, David K., EMNRD; Chavez, Carl J, EMNRD; Dade, Randy, EMNRD
Cc: Cotter, Jeff; Michael Hayter; Janney, David; Ben Barker
Subject: Lightning Dock/Los Lobos Well 63-7

Good morning everyone,

I wanted to regroup on Well 63-7 and make sure we are all in the loop.

G-101.

A. We all discussed the 6/6/12 Conditions of Approval for Form G-101 via teleconference 6/8/12. After that call, David Janney forwarded by email on 6/11/12 follow-up information relating to Condition 2(a) (depth of casing). OCD received OSE drill permit and is currently working to verify and confirm the actual total depth (TD) of the well from the well owner and the OSE, while reviewing OCD well files. The TD will help to finalize the OCD's G-112 review. In addition, it may also apply to the more recent G-112 for Well 45-7, for which the OCD has recently received G-104 and other associated forms from Los Lobos. Los Lobos should realize that similar to Injection Well 63-7 where public notice was required, Well 45-7 will also require public notice and Los Lobos needs to evaluate the deepest fresh water supply well TD within ½ mile from Well 45-7 and provide the information, logs, etc. to the OCD to confirm similar to the Injection Well 63-7.
B. My "to do" list shows that you still need information relating to Condition 4 (the timing of MIT testing). Our team is working on this and I will try to get you something by the end of the day. Contrary to the last telephone discussion of deferral of the MIT procedure to another date, the OCD now requests the procedure ASAP is Los

Lobos is seeking an alternative MIT method than the standard EPA 5-Year MIT. This issue was raised by Ben Barker in the past and after discussion with the OCD UIC Director and Engineering Bureau Staff was rejected. Therefore, the OCD requests the alternative MIT procedure up front in order to avoid any confusion on the MIT process for any/all injection wells in the future. The OCD requires the MIT within a specified time-frame from well completion.

C. Our understanding is that Amended Conditions of Approval would be considered after your office received the items mentioned above. Yes, the OCD can amend the COAs and/or proceed with a G-112 approval that could modify conditions of the G-101. Either way, the OCD will communicate with Los Lobos to resolve this.

G-112.

A. The 20-day waiting period for Form G-112 closed on 6/14/12. Did your office receive any requests for hearing? No.
B. Last week my office hand delivered to your office (addressed to Carl) a rider changing the coverage of Los Lobos' bond to include 63-7. Yes, the OCD received it and is currently processing the bond rider.
C. Also on my "to do" list, I will send you a letter today stating how the application meets the requirements of NMAC 19.14.93.8(C). Ok, David Brooks is the lead on this.
D. Do you need anything more before you can issue the G-112? We are planning to provide Forms G-104 through -107 for 63-7 after the well has been drilled. Yes, this makes sense and the G-104 with associated G-Forms must be approved by the OCD before any injection can occur into the well.

What am I missing? We are looking forward to getting everything finalized so we can move forward with this well. I can't think of anything right now, but public notices for any injection wells should be completed similar to well 63-7. Los Lobos should research well logs for deepest fresh water supply well TDs for the ½ mile AOR associated with any/all injection well applications. The OCD is tasked with "Due Diligence" to ensure that any/all injection wells meet the 100 ft. deeper than the deepest fresh water well TD within ½ mile from an injection well is accordance with the OCD Discharge Permit (GTHT-001). If well 45-7 G-112 satisfies the above TD condition, then there should not be an issue similar to well 63-7 near AmeriCulture's State Well No. 2.

Thank you.

Thanks! Michelle

Michelle Henrie | Attorney · LEED AP

MHenrie | Land · Water · Law
P.O. Box 7035 . Albuquerque, New Mexico . 87194-7035
~~126~~ E. DeVargas . Santa Fe, New Mexico . 87501 . ***Please note new street address effective June 1, 2012: 225 E. DeVargas . Santa Fe, New Mexico . 87501***
505-842-1800 | fax 505-842-0033
michelle@mhenrie.com

Lightning Dock Geothermal (HI-01) LLC Project
Class V Injection Well 63-07 (GTHT-001)

G-101 Form
OCD Artesia District Office
Amended Conditions of Approval
(6/29/2012)

1) The operator shall obtain an OCD well bond approval letter in advance of any well drilling activity.

2) The injection well construction design as proposed shall be modified to comply with the terms and conditions of the OCD Discharge Permit, which shall include the following:

a) The operator shall construct the well with casing and cement to a minimum depth of 2,200 feet to comply with the OCD Discharge Permit requirement(s) based on the proximity and confirmed total depth of the AmeriCulture State Well No. 2 Total Depth of 2,100 feet.

b) OCD may approve intermediate strings, which shall be cemented solid to surface. Production casing shall be either cemented solid to surface or lapped into intermediate casing, if run. If production casing is lapped into an intermediate string, the casing overlap shall be at least 50 feet. The lap shall be cemented solid and it shall be pressure tested to ensure integrity.

3) A G-104 and G-112 submittal is required in advance of any injection into this well for well testing purposes only and to assess plans for well testing involving any injection into the well.

4) A G-103 Sundry shall be submitted to the OCD- EB for approval in advance of any well mechanical integrity testing (MIT) to be conducted within 72-hours after well completion. A 30 minute EPA casing MIT is required with pressure chart recorder (meter with calibration sheet with calibration conducted within the past 90 days of MIT date) and chart (spring <= 1000 lb.) on maximum 1-hour chart. The final original test chart with witness signatures, date, time and pass/fail (+/- 10 %) of the starting test pressure (Minimum 500 psig) shall be hand delivered and/or mailed to the OCD-EB with copy to the Artesia District Office for the OCD Administrative Record.

5) Geothermal exempt well workover wastes must be disposed at an OCD approved waste disposal facility in accordance with 19.15.35.8(D) NMAC or OCD permitted treatment, storage or disposal facility (19.15.36 et seq. NMAC). Non-oilfield related wastes or RCRA wastes shall be handled under RCRA by authority of the New Mexico Environment Department.

6) All water quality sampling and laboratory methods must be in accordance with the terms and conditions of the OCD discharge permit and the American Standard for Testing and Materials (ASTM) Methods: **E-947-83** (Standard Specification for Sampling Single-Phase Geothermal Liquid or Steam for Purposes of Chemical Analysis) and/or **E-1675-95a** (Standard Practice for Sampling Two-Phase Geothermal Fluid for Purposes of Chemical Analysis).

7) Additional tanks (or large hydraulic fracking storage tank) will be necessary to circulate the hole for clean sampling representative of the formation to satisfy Condition 6 above. The OCD may require water quality sample collection and environmental analytical laboratory analyses for specified

parameters when well deepening is requested, and/or as required under the OCD Discharge Permit. If the operator is unable to document that the ground water produced during the test is adequately "fresh," then it must immediately stop the test and contact OCD-EB.

8) All applicable OCD G-Forms associated with G-104 and G-112 Forms documenting all applicable well construction, lithology, well testing, etc. and request for approval to inject or begin development of the well and geothermal resource(s) shall be submitted to OCD-EB for approval.

9) The "Smith Corp" Geothermal Data Log from Well TFD-55-7 within the project area indicates that there is stratigraphic or formation variability with depth, i.e., alluvium to ~ 150feet; ash/tuff to ~1950 feet; siltstone to ~ 2300 feet; limestone ~ 2950 feet; intrusive dike ~3200 feet; limestone ~ 3400 feet; and intrusive dike w/ chert ~ 3600 feet, etc. The project work is within- 3500 feet of surface and the operator believes there is natural hydrogeologic connection between water bearing formations due to natural fault systems and associated rock formation fracturing in the project area. The operator shall implement well completion measures that protect fresh water in accordance with the OCD discharge permit.

10) All field work and well completions must comply with the terms and conditions of the discharge permit and associated Geothermal Regulations (Chapter 71, Article 5 NMSA 1978 and Title 19, Chapter 14 NMAC). All Underground Injection Control (UIC) Class V Geothermal Injection Wells must comply with the applicable sections of Water Quality Control Commission Regulations (20.6.2.5000 – 5006, et seq. NMAC). All geothermal field activities must comply with 20.6.2 et seq. NMAC and 20.6.4 et seq. NMAC).

Please be advised that OCD approval does not relieve Los Lobos Renewable Power, L.L.C. from responsibility should their operations pose a threat to ground water, subsurface trespass, water supply/diversion, surface water, human health or the environment. In such event, a well may be ordered plugged and abandoned and/or used in accordance with the geothermal regulations. In addition, OCD approval does not relieve Los Lobos Renewable Power, L.L.C. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-101
Adopted 10-1-74
Revised 10-1-78

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Operator		
Land Office		

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK--GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease: STATE ☐ Federal ☑

5.a Lease No.: Federal NM 34790

1a. Type of Work: Drill ☑ Deepen ☐ Plug Back ☐

b. Type of Well: Geothermal Producer ☑ Low-Temp Thermal ☐ Temp Observation ☐ Injection/Disposal ☐

7. Unit Agreement Name: NA

8. Farm or Lease Name:

2. Name of Operator: Los Lobos Renewable Power, LLC

9. Well No.: LDG 63-7

3. Address of Operator: 136 South Main Street, Suite 600, Salt Lake City, Utah 84101

10. Field and Pool, or Wildcat:

4. Location of Well: UNIT LETTER G LOCATED 1722 FEET FROM THE North LINE AND 1420 FEET FROM THE East LINE OF SEC. 7 TWP. 25 S RGE. 19 W NMPM

12. County: Hidalgo

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
3400'	Limestone	Mud Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
4209 GR	$50K multi-bond active	Trinity Exploration,LLP	May 30, 2012

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
26"	20"	94#	150'	357	GL
17.5"	13.375"	54.5#	1500'	915	GL
12.25"	9.625" (liner)	36#	3400'	None	1400'

This is a revised submittal/form for this proposed new geothermal production well on Federal Lease NM 34790.

The well constrcution casing schedule has been revised to reflect the requirments of the BLM. The 20" casing will not be installed to a depth of 150', not 63' as inititally proposed.

Form G-102 is attached.

Revised LDG 63-7 Drilling Handbook by Capuano Engineering Consultants is attached.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed: David W Janney, PG Title: Agent for Los Lobos Renewable Power, LLC Date: May 17, 2012

(This space for State Use)

APPROVED BY: T.C. Shepard TITLE: Geologist DATE: 6/6/2012

CONDITIONS OF APPROVAL, IF ANY: ATTACHED (DATED 6/6/2012) EXPIRATION DATE 6/6/2014

Chavez, Carl J, EMNRD

From: Shapard, Craig, EMNRD
Sent: Friday, June 08, 2012 7:35 AM
To: Janney, David
Cc: Sanchez, Daniel J., EMNRD; Brooks, David K., EMNRD; Chavez, Carl J, EMNRD
Attachments: OCD G-101Approval w Conditions 5-31-2012.doc

David,

Please find the attached OCD conditions of approval for the G-101, OCD approval of June 6, 2012. Please note this condition of approval shall expire June 6, 2014. Contact me if you have any questions.

T.C. Shapard
EMNRD-Oil Conservation Division
Geologist District II
811 S. First St.
Artesia, New Mexico 88210
Office: (575) 748-1283-Ext. 103

email: craig.shapard@state.nm.us

Lightning Dock Geothermal (HI-01) LLC Project
Class V Injection Well 63-07 (GTHT-001)

G-101 Form
OCD Artesia District Office
Conditions of Approval (6/6/2012)

1) The operator shall obtain an OCD well bond approval letter in advance of any well drilling activity.

2) The injection well construction design as proposed shall be modified to comply with the terms and conditions of the OCD Discharge Permit, which shall include the following:

a) Surface casing to a depth of at least 100 feet greater than the deepest "fresh water well" (~3,723 feet) inclusive of any associated open borehole and/or liner hung below casing shoe within ½ mile from the well. Liners used in injection wells present well construction, integrity and longevity issues especially in high-temperature thermal fluid conditions and are not acceptable to the OCD. Injected fluids may also migrate up the backside of non-cemented liners and contaminate fresh water bearing zones.

OCD notices the following well depth information from POD Numbers: 00036 AS20 at 2,349 feet TD, 00608 at 2,349 feet TD, 00758 POD4 Artesian at 2,618 feet TD, 00758 POD5 Artesian at 2,900 feet TD, 00758 POD6 Artesian at 3,623 feet TD, and AmeriCulture No. 2 Well at ~ 2,100 feet TD (from notes, but confirmation is needed).

b) OCD may approve intermediate strings, which shall be cemented solid to surface. Production casing shall be either cemented solid to surface or lapped into intermediate casing, if run. If production casing is lapped into an intermediate string, the casing overlap shall be at least 50 feet. The lap shall be cemented solid and it shall be pressure tested to ensure integrity.

3) A G-104 and G-112 submittal is required in advance of any injection into this well for well testing purposes only and to assess plans for well testing involving any injection into the well.

4) A G-103 Sundry shall be submitted to the OCD- EB for approval in advance of any well mechanical integrity testing (MIT) to be conducted within 72-hours after well completion. A 30 minute EPA casing MIT is required with pressure chart recorder (meter with calibration sheet with calibration conducted within the past 90 days of MIT date) and chart (spring <= 1000 lb.) on maximum 1-hour chart. The final original test chart with witness signatures, date, time and pass/fail (+/- 10 %) of the starting test pressure (Minimum 500 psig) shall be hand delivered and/or mailed to the OCD-EB with copy to the Artesia District Office for the OCD Administrative Record.

5) Geothermal exempt well workover wastes must be disposed at an OCD approved waste disposal facility in accordance with 19.15.35.8(D) NMAC or OCD permitted treatment, storage or disposal facility (19.15.36 et seq. NMAC). Non-oilfield related wastes or RCRA wastes shall be handled under RCRA by authority of the New Mexico Environment Department.

6) All water quality sampling and laboratory methods must be in accordance with the terms and conditions of the OCD discharge permit and the American Standard for Testing and Materials (ASTM) Methods: **E-947-83** (Standard Specification for Sampling Single-Phase Geothermal Liquid or

Steam for Purposes of Chemical Analysis) and/or **E-1675-95a** (Standard Practice for Sampling Two-Phase Geothermal Fluid for Purposes of Chemical Analysis).

7) Additional tanks (or large hydraulic fracking storage tank) will be necessary to circulate the hole for clean sampling representative of the formation to satisfy Condition 6 above. The OCD may require water quality sample collection and environmental analytical laboratory analyses for specified parameters when well deepening is requested, and/or as required under the OCD Discharge Permit. If the operator is unable to document that the ground water produced during the test is adequately "fresh," then it must immediately stop the test and contact OCD-EB.

8) All applicable OCD G-Forms associated with G-104 and G-112 Forms documenting all applicable well construction, lithology, well testing, etc. and request for approval to inject or begin development of the well and geothermal resource(s) shall be submitted to OCD-EB for approval.

9) The "Smith Corp" Geothermal Data Log from Well TFD-55-7 within the project area indicates that there is stratigraphic or formation variability with depth, i.e., alluvium to ~ 150feet; ash/tuff to ~1950 feet; siltstone to ~ 2300 feet; limestone ~ 2950 feet; intrusive dike ~ 3200 feet; limestone ~ 3400 feet; and intrusive dike w/ chert ~ 3600 feet, etc. The project work is within- 3500 feet of surface and the operator believes there is natural hydrogeologic connection between water bearing formations due to natural fault systems and associated rock formation fracturing in the project area. The operator shall implement well completion measures that protect fresh water in accordance with the OCD discharge permit.

10) All field work and well completions must comply with the terms and conditions of the discharge permit and associated Geothermal Regulations (Chapter 71, Article 5 NMSA 1978 and Title 19, Chapter 14 NMAC). All Underground Injection Control (UIC) Class V Geothermal Injection Wells must comply with the applicable sections of Water Quality Control Commission Regulations (20.6.2.5000 – 5006, et seq. NMAC). All geothermal field activities must comply with 20.6.2 et seq. NMAC and 20.6.4 et seq. NMAC).

Please be advised that OCD approval does not relieve Los Lobos Renewable Power, L.L.C. from responsibility should their operations pose a threat to ground water, subsurface trespass, water supply/diversion, surface water, human health or the environment. In such event, a well may be ordered plugged and abandoned and/or used in accordance with the geothermal regulations. In addition, OCD approval does not relieve Los Lobos Renewable Power, L.L.C. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-10
Rev. 11, 200

Submit to appropriate District Office

☐ AMENDED REPOR

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
Los Lobos Renewable Power, LLC 5125 North Edgewood Drive Suite 375 Provo, Utah 84604	261071
	[3] API Number 30 – 023-20020

[4] Property Code	[5] Property Name	[6] Well No
	Lightning Duck No 1, HI-01 LLC	51-07

[8] Proposed Pool 1	[10] Proposed Pool 2

[7] Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	07	25S	19W		1692	North	2409	East	Hidalgo

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Same									

Additional Well Information

[9] Work Type Code	[11] Well Type Code	[12] Cable/Rotary	[13] Lease Type Code	[14] Ground Level Elevation
N	(I) Injection Well	R	P – Land, BLM – Geothermal	4103
[15] Multiple	**[16] Proposed Depth**	**[17] Formation**	**[18] Contractor**	**[19] Spud Date**
See Plan of Operation	3,400 feet	Herquilla	Patterson Drilling Company	May 2008

Depth to Groundwater 40 feet | Distance from nearest fresh water well 4 miles | Distance from nearest surface water - None

Pit: Liner: Synthetic ☒ 45 mils thick Clay ☐ Pit Volume: 45,000bbls Drilling Method:
Fresh Water ☐ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/feet	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	3/8" Wall	63'	150 Sacks	
17.7"	13.375"	54.5 lb/ft	1,500'	750 Sacks	
12.25"	9.625"	36.0 lb/ft	3,400'	980 Sacks	
	7" Liner (II)	23.0 lb/ft			

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary

SEE PLAN OF OPERATION

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.
Signature:

Printed name: Kevan Brown
Title: Member
E-mail Address:
Date: Nov 17, 2008 Phone: 801 765-1200

OIL CONSERVATION DIVISION

Approved by:
Title: Environmental Engineer
Approval Date: 11/3/2010 Expiration Date: 11/3/2012
Conditions of Approval Attached ☑

G-101 Lightning Dock Geothermal HI-01 LLC Project
Class V Injection Well 51-07 (GTHT-001)

OCD G-101 Conditions of Approval
(11/03/2010)

1) Geothermal exempt work over wastes must be disposed at an OCD approved waste disposal facility in accordance with 19.15.35.8(D) NMAC or OCD permitted treatment or disposal facility (19.15.36 et seq. NMAC).

2) All water quality sampling and laboratory methods must be in accordance with the terms and conditions of the discharge permit (GTHT-001). The operator must document the back annulus quality of the ground water to OCD's satisfaction.

3) Additional tanks (or large frac tank) will be necessary to circulate the hole for clean sampling representative of the formation to satisfy Condition 2 above. If the operator is unable to document that the ground water produced during the test is adequately "fresh," then it must immediately stop the test and contact OCD-EB.

4) All applicable OCD G-Forms documenting all applicable well construction, lithology, testing, etc. and request for approval to inject or begin development of the well and geothermal resource(s) shall be submitted to OCD-EB for approval.

5) The "Smith Corp" Geothermal Data Log from Well TFD-55-7 within the project area indicates that there is stratigraphic or formation variation with depth, i.e., alluvium to ~ 150 ft; ash/tuff to ~1950 ft; siltstone to ~2300 ft; limestone ~ 2950 ft; intrusive dike ~ 3200 ft; limestone ~ 3400 ft; intrusive dike w/ chert ~ 3600 ft; and so on. The project work is within ~ 3500 ft. of surface and the operator believes there is natural hydrogeologic connection between water bearing formations due to fault systems and associated natural rock fracturing in the area. The operator shall implement well completion measures that protect fresh water in accordance with the discharge permit.

6) All field work and well completions must comply with the terms and conditions of the discharge permit and associated Geothermal Regulations (Chapter 71, Article 5 NMSA 1978 and Title 19, Chapter 14 NMAC). All Underground Injection Control (UIC) Class V Geothermal Injection Wells must comply with the applicable sections of Water Quality Control Commission Regulations (20.6.2 et seq. NMAC and 20.6.4 et seq. NMAC).

Please be advised that OCD approval does not relieve ***Los Lobos Renewable Power, L.L.C.*** *of responsibility should their operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve* ***Los Lobos Renewable Power, L.L.C.*** *of responsibility for compliance with any other federal, state, or local laws and/or regulations.*

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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
May 27, 2004

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address Los Lobos Renewable Power, LLC 5152 North Edgewood Drive Suite 375 Provo, Utah	[2] OGRID Number [illegible] [3] API Number 30-023-20019

[3] Property Code	[5] Property Name	[6] Well No.
	Lightning Dock, No. 1, 10-01 LLC	53-12

[9] Proposed Pool 1	[10] Proposed Pool 2

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	[illegible]	25S	19W		[illegible]	North	[illegible]	West	Hidalgo

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	Oil Injection	R	Private/BLM – Geothermal	4163
[16] Multiple	[17] Proposed Depth	[18] Formation	[19] Contractor	[20] Spud Date
See Plan of Operation	3,400 feet	Horquilla	[illegible] Drilling Company	May 2009

Depth to Groundwater 40 feet | Distance from nearest fresh water well 4 miles | Distance from nearest surface water - None

Pit: Liner: Synthetic X 25 mils thick Clay ☐ Pit Volume: 35,775 bbls
Closed-Loop System ☐

Drilling Method:
Fresh Water ☐ Brine X Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	3/8" Wall	63'	150 Sacks	
17.7"	13.375"	54.5 lb/ft	1,500'	750 Sacks	
12.25"	9.625"	36.0 lb/ft	3,400'	980 Sacks	

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

SEE PLAN OF OPERATIONS

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐. Signature: [signature]	OIL CONSERVATION DIVISION Approved by: [signature]
Printed name: Steve Brown	Title: Environmental Engineer
Title: Member	Approval Date: 11/3/2010 Expiration Date: 11/3/2012
E-mail Address:	
Date: March 06, 2009 Phone: (505) 764-[illegible]	Conditions of Approval Attached ☑

G-101 Lightning Dock Geothermal HI-01 LLC Project
Class V Injection Well 53-12 (GTHT-001)

OCD G-101 Conditions of Approval
(11/03/2010)

1) Geothermal exempt work over wastes must be disposed at an OCD approved waste disposal facility in accordance with 19.15.35.8(D) NMAC or OCD permitted treatment or disposal facility (19.15.36 et seq. NMAC).

2) All water quality sampling and laboratory methods must be in accordance with the terms and conditions of the discharge permit (GTHT-001). The operator must document the back annulus quality of the ground water to OCD's satisfaction.

3) Additional tanks (or large frac tank) will be necessary to circulate the hole for clean sampling representative of the formation to satisfy Condition 2 above. If the operator is unable to document that the ground water produced during the test is adequately "fresh," then it must immediately stop the test and contact OCD-EB.

4) All applicable OCD G-Forms documenting all applicable well construction, lithology, testing, etc. and request for approval to inject or begin development of the well and geothermal resource(s) shall be submitted to OCD-EB for approval.

5) The "Smith Corp" Geothermal Data Log from Well TFD-55-7 within the project area indicates that there is stratigraphic or formation variation with depth, i.e., alluvium to ~ 150 ft; ash/tuff to ~1950 ft; siltstone to ~2300 ft; limestone ~ 2950 ft; intrusive dike ~ 3200 ft; limestone ~ 3400 ft; intrusive dike w/ chert ~ 3600 ft; and so on. The project work is within ~ 3500 ft. of surface and the operator believes there is natural hydrogeologic connection between water bearing formations due to fault systems and associated natural rock fracturing in the area. The operator shall implement well completion measures that protect fresh water in accordance with the discharge permit.

6) All field work and well completions must comply with the terms and conditions of the discharge permit and associated Geothermal Regulations (Chapter 71, Article 5 NMSA 1978 and Title 19, Chapter 14 NMAC). All Underground Injection Control (UIC) Class V Geothermal Injection Wells must comply with the applicable sections of Water Quality Control Commission Regulations (20.6.2 et seq. NMAC and 20.6.4 et seq. NMAC).

Please be advised that OCD approval does not relieve ***Los Lobos Renewable Power, L.L.C.*** *of responsibility should their operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve* ***Los Lobos Renewable Power, L.L.C.*** *of responsibility for compliance with any other federal, state, or local laws and/or regulations.*

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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-
May 27

Submit to appropriate District Of

☐ AMENDED REP(

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
Los Lobos Renewable Power, LLC 5125 North Edgewood Drive Suite 375 Provo, Utah 84604	[3] API Number 30 -

[3] Property Code	[5] Property Name	[6] Well No.
	Lightning Dock No 1, HI-01 LLC	42-18

[9] Proposed Pool 1	[10] Proposed Pool 2

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	18	25S	19W		1307.0	North	2123.1	West	Hidalgo

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Same									

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	(I) Injection Well	R	P – Land BLM – Geothermal	4100
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
See Plan of Operation	3,400 feet		Layne Christensen Company	May 2008

Depth to Groundwater 40 feet	Distance from nearest fresh water well .4 miles	Distance from nearest surface water - None

Pit: Liner: Synthetic ☒ 45 mils thick Clay ☐ Pit Volume: 45,000bbls
Closed-Loop System ☒

Drilling Method:
Fresh Water ☐ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	3/8" Wall	63'	150 Sacks	
17.7"	13.375"	54.5 lb/ft	1,500'	750 Sacks	
12.25"	9.625"	36.0 lb/ft	3,400'	980 Sacks	
	7" Liner (If)	23.0 lb/ft			

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive z
Describe the blowout prevention program, if any. Use additional sheets if necessary.

SEE PLAN OF OPERATION

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Signature:

Printed name: Steven Brown

Title:

E-mail Address: steve-brown@

Date: 4/21/10 Phone: 801.765.1200

OIL CONSERVATION DIVISION

Approved by:

Title: Environmental Engineer

Approval Date: 6/11/2010 Expiration Date: 6/11/2012

Conditions of Approval Attached ☒

G-101 Lightning Dock Geothermal HI-01 LLC Project
Class V Injection Well 42-18 (GTHT-001)

OCD G-101 Conditions of Approval
(06/11/2010)

1) Geothermal exempt work over wastes must be disposed at an OCD approved waste disposal facility in accordance with 19.15.35.8(D) NMAC or OCD permitted treatment or disposal facility (19.15.36 et seq. NMAC).

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3) Additional tanks (or large frac tank) will be necessary to circulate the hole for clean sampling representative of the formation to satisfy Condition 2 above. If the operator is unable to document that the ground water produced during the test is adequately "fresh," then it must immediately stop the test and contact OCD-EB.

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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-
May 27

Submit to appropriate District Of

☐ AMENDED REPO

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
Los Lobos Renewable Power, LLC 5125 North Edgewood Drive Suite 375 Provo, Utah 84604	[3] API Number 30 -

[3] Property Code	[5] Property Name	[6] Well No.
	Lightning Dock No 1, HI-01 LLC	13-07

[9] Proposed Pool 1	[10] Proposed Pool 2

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	07	25S	19W		3781.0	South	530.1	West	Hidalgo

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Same									

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	(P) Production Well	R	P – Land BLM – Geothermal	4100
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
See Plan of Operation	3,400 feet		Layne Christensen Company	May 2008

Depth to Groundwater 40 feet	Distance from nearest fresh water well .2 miles	Distance from nearest surface water - None

Pit: Liner: Synthetic ☒ 45 mils thick Clay ☐ Pit Volume: 45,000bbls
Closed-Loop System ☒

Drilling Method:
Fresh Water ☐ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
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17.7"	13.375"	54.5 lb/ft	1,500'	750 Sacks	
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	7" Liner (If)	23.0 lb/ft			

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Describe the blowout prevention program, if any. Use additional sheets if necessary.

SEE PLAN OF OPERATION

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Signature:

Printed name: Steven Brown

Title: Manager

E-mail Address: steve-brown@rasertech.com

Date: 4/21/08 Phone: 801 765 1200

OIL CONSERVATION DIVISION

Approved by:

Title: Environmental Engineer

Approval Date: 6/11/2010 Expiration Date: 6/11/2012

Conditions of Approval Attached ☑

G-101 Lightning Dock Geothermal HI-01 LLC Project
Production/Development Well 13-07 (GTHT-001)

OCD G-101 Conditions of Approval
(06/11/2010)

1) Geothermal exempt work over wastes must be disposed at an OCD approved waste disposal facility in accordance with 19.15.35.8(D) NMAC or OCD permitted treatment or disposal facility (19.15.36 et seq. NMAC).

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5) The "Smith Corp" Geothermal Data Log from Well TFD-55-7 within the project area indicates that there is stratigraphic or formation variation with depth, i.e., alluvium to ~ 150 ft; ash/tuff to ~1950 ft; siltstone to ~2300 ft; limestone ~ 2950 ft; intrusive dike ~ 3200 ft; limestone ~ 3400 ft; intrusive dike w/ chert ~ 3600 ft; and so on. The project work is within ~ 3500 ft. of surface and the operator believes there is natural hydrogeologic connection between water bearing formations due to fault systems and associated natural rock fracturing in the area. The operator shall implement well completion measures that protect fresh water in accordance with the discharge permit.

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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-
May 27, 2

Submit to appropriate District Of

☐ AMENDED REPO

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
Los Lobos Renewable Power, LLC 5125 North Edgewood Drive Suite 375 Provo, Utah 84604	[3] API Number 30 -

[4] Property Code	[5] Property Name	[6] Well No.
	Lightning Dock No 1, HI-01 LLC	33-07

[9] Proposed Pool 1	[10] Proposed Pool 2

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	07	25S	19W		3721.2	South	1789.4	West	Hidalgo

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Same									

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	(P) Production Well	R	P – Land BLM – Geothermal	4100
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
See Plan of Operation	3,400 feet		Layne Christensen Company	May 2008

Depth to Groundwater 40 feet	Distance from nearest fresh water well .4 miles	Distance from nearest surface water - None

Pit: Liner: Synthetic ☒ 45 mils thick Clay ☐ Pit Volume: 45,000bbls
Closed-Loop System ☒

Drilling Method:
Fresh Water ☐ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	3/8" Wall	63'	150 Sacks	
17.7"	13.375"	54.5 lb/ft	1,500'	750 Sacks	
12.25"	9.625"	36.0 lb/ft	3,400'	980 Sacks	
	7" Liner (If)	23.0 lb/ft			

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zo
Describe the blowout prevention program, if any. Use additional sheets if necessary.

SEE PLAN OF OPERATION

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Signature:

Printed name: Steven Brown

Title: Manager

E-mail Address: steve.brown@rasertech.com

Date: 4/21/02 Phone: 801 765 1200

OIL CONSERVATION DIVISION

Approved by:

Title: Environmental Engineer

Approval Date: 6/11/2010 Expiration Date: 6/11/2012

Conditions of Approval Attached ☑

G-101 Lightning Dock Geothermal HI-01 LLC Project
Production/Development Well 33-07 (GTHT-001)

OCD G-101 Conditions of Approval
(06/11/2010)

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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
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Santa Fe, NM 87505

Form C-
May 27, 2

Submit to appropriate District Of

☐ AMENDED REPO

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
Los Lobos Renewable Power, LLC 5125 North Edgewood Drive Suite 375 Provo, Utah 84604	[3] API Number 30 -

[3] Property Code	[5] Property Name	[6] Well No.
	Lightning Dock No 1, HI-01 LLC	45-07

[9] Proposed Pool 1	[10] Proposed Pool 2

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	07	25S	19W		2360.0	South	2278.3	West	Hidalgo

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Same									

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	(P) Production Well	R	P – Land BLM – Geothermal	4100
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
See Plan of Operation	3,400 feet		Layne Christensen Company	May 2008

Depth to Groundwater 40 feet	Distance from nearest fresh water well .4 miles	Distance from nearest surface water - None

Pit: Liner: Synthetic ☒ 45 mils thick Clay ☐ Pit Volume: 45,000bbls
Closed-Loop System ☒

Drilling Method:
Fresh Water ☐ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	3/8" Wall	63'	150 Sacks	
17.7"	13.375"	54.5 lb/ft	1,500'	750 Sacks	
12.25"	9.625"	36.0 lb/ft	3,400'	980 Sacks	
	7" Liner (If)	23.0 lb/ft			

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zo
Describe the blowout prevention program, if any. Use additional sheets if necessary.

SEE PLAN OF OPERATION

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Signature:

Printed name: Steven Bowen

Title: Manager

E-mail Address: Steve.Bowen@rasertech.com

Date: 4/21/08 Phone: 801 765 1200

OIL CONSERVATION DIVISION

Approved by:

Title: Environmental Engineer

Approval Date: 6/11/2010 Expiration Date: 6/11/2012

Conditions of Approval Attached ☑

G-101 Lightning Dock Geothermal HI-01 LLC Project
Production/Development Well 45-07 (GTHT-001)

OCD G-101 Conditions of Approval
(06/11/2010)

1) Geothermal exempt work over wastes must be disposed at an OCD approved waste disposal facility in accordance with 19.15.35.8(D) NMAC or OCD permitted treatment or disposal facility (19.15.36 et seq. NMAC).

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5) The "Smith Corp" Geothermal Data Log from Well TFD-55-7 within the project area indicates that there is stratigraphic or formation variation with depth, i.e., alluvium to ~ 150 ft; ash/tuff to ~1950 ft; siltstone to ~2300 ft; limestone ~ 2950 ft; intrusive dike ~ 3200 ft; limestone ~ 3400 ft; intrusive dike w/ chert ~ 3600 ft; and so on. The project work is within ~ 3500 ft. of surface and the operator believes there is natural hydrogeologic connection between water bearing formations due to fault systems and associated natural rock fracturing in the area. The operator shall implement well completion measures that protect fresh water in accordance with the discharge permit.

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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-1
May 27, 20

Submit to appropriate District Offi

☐ AMENDED REPOI

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
Los Lobos Renewable Power, LLC 5125 North Edgewood Drive Suite 375 Provo, Utah 84604	262071
	[3] API Number 30 - 023- 20016

[3] Property Code	[5] Property Name	[6] Well No.
	Lightning Dock No I, HI-01 LLC	477

[9] Proposed Pool 1	[10] Proposed Pool 2

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	07	25S	19W		1155'	South	2266'	West	Hidalgo

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Same									

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	(P) Production Well	R	P – Land BLM – Geothermal	4100
[16] Multiple	[17] Proposed Depth	[18] Formation	[19] Contractor	[20] Spud Date
See Plan of Operation	3,400 feet		Layne Christensen Company	May 2008

Depth to Groundwater 40 feet	Distance from nearest fresh water well .4 miles	Distance from nearest surface water - None

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Closed-Loop System ☒

Drilling Method:
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Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
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Describe the blowout prevention program, if any. Use additional sheets if necessary.

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Signature:

Printed name: Steve Brown
Title: Member
E-mail Address: steve.brown@raser tech.com
Date: August, 17, 2009 Phone: (801) 765-1200

OIL CONSERVATION DIVISION

Approved by:
Title: Environmental Engineer
Approval Date: 6/11/2010 Expiration Date: 6/11/2012
Conditions of Approval Attached ☑

Submit 3 Copies To Appropriate District Office
District I
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1301 W. Grand Ave., Artesia, NM 88210
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State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
June 19, 2008

WELL API NO. 30-0230-20016	
5. Indicate Type of Lease STATE ☐ FEE x☐	
6. State Oil & Gas Lease No.	
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☐ Gas Well x☐ Other	7. Lease Name or Unit Agreement Name 8. Well Number 477
2. Name of Operator Los Lobos Renewable Power, LLC	9. OGRID Number 262071
3. Address of Operator 5125 North Edgewood Drive, Suite 375 Provo, Utah	10. Pool name or Wildcat
4. Well Location Unit Letter : 1155' feet from the South line and 2266' feet from the West line Section 07 Township 25S Range 19W NMPM County Hidalgo	
	11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 4100 feet

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS.x	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: x☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Move location of Well 477 (See attached Form 102)

Spud Date: Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE [signature] TITLE Manager DATE 8/18/09

Type or print name Steven Brown E-mail address: steve.brown@rasetech.com PHONE: 801 765 1200

For State Use Only

APPROVED BY: TITLE DATE

Conditions of Approval (if any):

G-101 Lightning Dock Geothermal HI-01 LLC Project
Production/Development Well 47-07 (GTHT-001)

OCD G-101 Conditions of Approval
(06/11/2010)

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Energy Minerals and Natural Resources

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Form C-
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Signature: SBrown

Printed name: Steven Brown

Title: Manager

E-mail Address: Steve.Brown@rpsertech.com

Date: 4/21/09 Phone: 801.765-1200

OIL CONSERVATION DIVISION

Approved by:

Title: Environmental Engineer

Approval Date: 6/11/2010 Expiration Date: 6/11/2012

Conditions of Approval Attached ☑

G-101 Lightning Dock Geothermal HI-01 LLC Project
Production/Development Well 53-07 (GTHT-001)

OCD G-101 Conditions of Approval
(06/11/2010)

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-101
Adopted 10-1-74
Revised 10-1-78

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U.S.G.S.		
Operator		
Land Office		

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK--GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease: STATE ☐ NA - Federal FEE ☐

5.a State Lease No.: Federal NM-34790

1a. Type of Work: Drill ☒ Deepen ☐ Plug Back ☐

b. Type of Well: Geothermal Producer ☒ Low-Temp Thermal ☐ Temp Observation ☐ Injection/Disposal ☐

7. Unit Agreement Name: N/A

8. Farm or Lease Name: N/A

2. Name of Operator: Lightning Dock Geothermal HI-01, LLC

9. Well No.: TFD 55-7

3. Address of Operator: 5152 Edgewood Drive, Provo, Utah 84604

10. Field and Pool, or Wildcat: Wildcat

4. Location of Well: UNIT LETTER _____ LOCATED 2411.9 FEET FROM THE East LINE AND 2329.1 FEET FROM THE South LINE OF SEC. 7 TWP. 25 S RGE. 19 W NMPM

12. County: Hidalgo

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
3400'	Open Hole	Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
4201' GR	Irrev.Ltr Credit	Everett D. Burgett	mob. 5/1/10

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP

1. MIRU drill rig.
2. Drill out cement plug from 1450' to 1550' approx.
3. Drill out cement plug from 1890' to 2090' approx.
4. RIH to locate cement plug at 5400' approx.
5. Set bridge plug in 3000'-3400' interval.
6. Collect water samples for geochemical and environmental analysis.
7. Set production pump at 850' approx.
8. Release rig.
9. Hook up well for pump test to irrigation system.
10. Run pump test for up to four weeks.
11. Secure well.

Please see attached Proposed Operations and Drilling Plan for details.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed Benjamin Bader Title VP Resource Management Date April 12, 2010

(This space for State Use)

APPROVED BY Carl J. Chavez TITLE Environmental Engineer DATE May 26, 2010

CONDITIONS OF APPROVAL, IF ANY: