

GTHT - 1

LDG 63A-7

June 29, 2015

Mr. Jim Griswold
Environmental Bureau Chief
NMOCD
1220 South St. Francis Drive
Santa Fe, NM 87505
505.476.3465
Jim.Griswold@state.nm.us

RECEIVED OCD

2015 JUL -1 A 8:19

RE: Forms G-101, G-102, G-104, and G-112 for proposed injection well LDG 63A-7 at Lightning Dock Geothermal HI-01, LLC, Hidalgo County, New Mexico

Dear Mr. Griswold:

On behalf of Lightning Dock Geothermal HI-01, LLC, Geo-Science Solutions, LLC hereby submits the attached G-101, G-102, G-104, and G-112 forms to drill new injection well LDG 63A-7 as an integral part of the development of the Lightning Dock Geothermal project. Attached to the forms are a Drilling Handbook prepared by Capuano Engineering Company which includes a well schematic, a table of all wells within a one-mile radius, and a well location figure.

Mr. Randy Dade in your Artesia office will receive the third copy of these documents. Thank you very much for your assistance in the development of this important energy project. Should you have questions regarding this application package, please do not hesitate to contact me by email at dwjanney160@gmail.com or by phone at 505.508.9187. We ask that you treat the items marked "CONFIDENTIAL" as such as long as possible.

Respectfully submitted,



David W. Janney, PG
Agent for Lightning Dock Geothermal HI-01, LLC

Cc: Randy Dade - NMOCD Artesia
Kacie Peterson - Lightning Dock Geothermal HI-01, LLC
Michelle Henrie - Lightning Dock Geothermal HI-01, LLC

Attachments

Two (2) Forms G-101, G-102, G-104, and G-112 with appropriate attachments including a Drilling Handbook, a well schematic, list of wells within one mile, and a location figure

Geo-Science Solutions, LLC
PO Box 3100
Corrales, NM 87048

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2000
SANTA FE, NEW MEXICO 87501

Form G-102
Adopted 10-1-78
Revised 10-1-78

NO. OF COPIES RECEIVED	
DISTRIBUTION	
File	
N.M.B.M.	
U.S.C.S.	
Operator	
Land Office	

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

3. Indicate Type of Lease
STATE ☐ FEE ☐
3.2 State Lease No.

1a. Type of Work Drill ☒ Deepen ☐ Plug Back ☐
1b. Type of Well Geothermal Producer ☐ Temp Observation ☐
Low-Temp Thermal ☐ Injection/Disposal ☒
2. Name of Operator Lightning Dock Geothermal HI-01, LLC
3. Address of Operator 136 S. Main Street, Ste. 600, Salt Lake City, UT 84104
4. Location of Well UNIT LETTER "G" LOCATED 1403 FEET FROM THE East LINE
AND 1934 FEET FROM THE North LINE OF SEC. 7 TWP. 25 South RGE. 19 West NMPM

7. Unit Agreement Name None
8. Term or Lease Name Fed. NM-34790
9. Well No. LDG 63A-7
10. Field and Fed. or Wildcat Lightning Dock KGRA
12. County Hidalgo

15. Proposed Depth 1,500 feet
19A. Formation Quaternary alluvium/Tertiary volcanic
20. Rotary or C.T. Mud Rotary
21. Directions (Show whether DF, RT, etc.) 4208 GR
21A. Kind & Status Plug. Bond
21B. Drilling Contractor TBD
22. Approx. Date Work will start 9/1/2015

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12.25"	9.625"	36#	90'	6	GR
8.5"	7"	23#	150'	20	GR
6.125"	5"	11.5#	1,500'	None	1400'

Drill a geothermal injection well on Federal lease NM-34790.

Please see attached location plat Form G-102.

Please see attached drilling handbook prepared by Capuano Engineering Company.

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 planned production program, if any.

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

by Daniel H. Lawrence, P.E. Title Agent for Lightning Dock Geothermal HI-01, LLC Date 6/29/2015
(This space for Seal, if any)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

GEOTHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the section.

Operator Lightning Dock Geothermal HI-01, LLC			Lease Fed. Geothermal NM-34790		Well No. LDG 63A-7
Unit Letter G	Section 7	Township 25 South	Range 19 West	County Hidalgo	
Actual Footage Location of Well: 1403 feet from the East line and 1934 feet from the North line					
Ground Level Elev. 4208	Producing Formation NA	Pool NA	Dedicated Acreage: Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.

CERTIFICATION

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

Name David Janney, PG

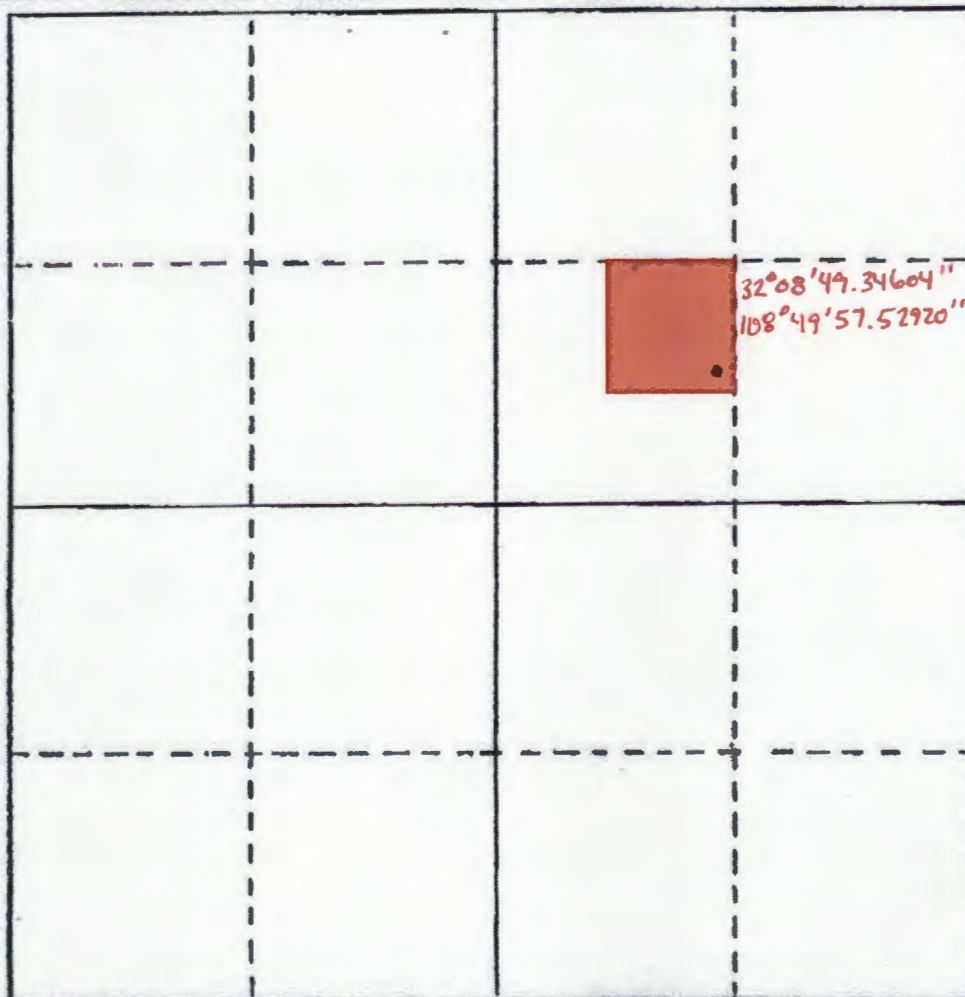
Position
Agent for Lightning Dock Geothermal HI-01, LLCCompany
Geo-Science Solutions, LLCDate
May 29, 2015

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.

5/29/15
Date Surveyed
Garrett A. Allsopp
Registered Professional Engineer
and/or Land Surveyor

Certificate No.

20249



0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000

OIL CONSERVATION DIVISION

P. O. BOX 2088

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

Form G-104
Adopted 10-1-74
Revised 10-1-78CERTIFICATE OF COMPLIANCE
AND AUTHORIZATION TO PRODUCE
GEOTHERMAL RESOURCES

OWNER OR OPERATOR

Name Lightning Dock Geothermal HI-01, LLCAddress 136 S. Main Street, Ste. 600, Salt Lake City, UT 84101

TYPE OF WELL

Geothermal Producer ☐Low-Temperature Thermal ☐Injection/Disposal ☒

REASON FOR FILING

New Well ☒Recompletion ☐Change in Ownership ☐Designation of Purchaser ☐Other (Please Explain) ☐

DESCRIPTION OF WELL

Lease
Name Not ApplicableWell
No. LDG-63A-7Name of
Reservoir Lightning DockKind of Lease
(Fee, Fed. or State) FederalLease
Number NM-34790

LOCATION

Unit
Letter G ; 1934 feet from the North line and
1403 feet from the East line ofSection 7 Township 25S Range 19W
County Hildago

TYPE OF PRODUCT

Dry _____ Steam and _____ Low Temp.
Steam _____ Water _____ Thermal Water _____

DESIGNATION OF PURCHASER OF PRODUCT

Name of
Purchaser Public Service Company of New MexicoAddress of
Purchaser 414 Silver Ave. Suite 4 Albuquerque, NM 87102Product Will
Be Used For Residential and commercial power

CERTIFICATE OF COMPLIANCE

I hereby certify that all rules and regulations concerning geothermal resources wells in the State of New Mexico, as promulgated by the Oil Conservation Division of New Mexico, have been complied with, with respect to the subject well, and that the information given above is true and complete to the best of my knowledge and belief.

Signed David W. Janney, PE Position Agent for Lightning Dock Date June 29, 2015
Approved _____ Position _____ Date _____

APPLICATION TO PLACE WELL ON INJECTION-GEOTHERMAL RESOURCES AREA

Operator Lightning Dock Geothermal HI-01, LLC		Address 136 S. Main Street, Suite 600 Salt Lake City, UT 84101	
Lease Name Federal NM-34790	Well No. LDG 63A-7	Field Lightning Dock	County Hidalgo
Location Unit Letter <u>G</u> ; Well Is Located <u>1934</u> Feet From The <u>North</u> Line And <u>1403</u> Feet From The <u>East</u> Line, Section <u>7</u> Township <u>25S</u> Range <u>19W</u> NMPM.			

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
Conductor Pipe	9.625"	90'	6 cy	GR	flow to surface
Surface Casing	7"	150'	20	GR	flow to surface
Long String	5" liner	1,500'	None	None	NA
Tubing			Name, Model and Depth of Tubing Packer NA		
Name of Proposed Injection Formation Quaternary alluvium/Tertiary volcanic rocks			Top of Formation 150'		Bottom of Formation 1,500'
Is Injection Through Tubing, Casing, or Annulus? 5" liner		Perforations or Open Hole? slotted liner		Proposed Interval(s) of Injection 150'-1,500'	
Is This a New Well Drilled For Injection? yes		If Answer is No, For What Purpose was Well Originally Drilled?		Has Well Ever Been Perforated in Any Zone Other Than the Proposed Injection Zone? NA	
List All Such Perforated Intervals and Sacks of Cement used to Seal Off or Squeeze Each Not Applicable					
Depth of Bottom of Deepest Fresh Water Zone in This Area Unknown		Is This Injection for Purpose of Pressure Maintenance or Water Disposal? (See Rules 501 and 502) No, for injection of spent geothermal water			
Anticipated Daily Injection Volume 4400+	Minimum 720,000	Maximum 1,000,000	Open or Closed Type System Open	Is Injection to be by Gravity or Pressure? Gravity	Approx. Pressure (psi) <100
Answer Yes or No Whether the Following Waters are Mineralized to such a Degree as to be Unfit for Domestic, Stock, Irrigation, or Other Use No			Water to be Injected No	Natural Water in Injection Zone No	Are Water Analyses Attached? Summary on file with OCD
Name and Address of Surface Owner (or Lessee, if State or Federal Land) Rosette, Inc. P.O. Box 1618 Roswell, NM 88202-1618					
List Names and Addresses of all Operators Within One-Half (1/2) Mile of This Injection Well Americulture 25 Tilapia Trail Animas, NM 88020 Rosette Inc. PO Box 1618 Roswell, NM 88202-1618					
Have Copies of this Application Been Sent to Each Operator Within One-Half Mile of this Well? Yes <input type="checkbox"/> No <input type="checkbox"/> <input checked="" type="checkbox"/> not applicable					
Are the Following Items Attached to this Application (see Rule 503)		Plat of Area Yes <input type="checkbox"/> No <input type="checkbox"/> <input checked="" type="checkbox"/> See G-102		Electrical Log Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
				Diagrammatic Sketch of Well Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> See drilling handbook	

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

David W. Jarman, PC
(Signature)

Agent for Lightning Dock Geothermal HI-01, LLC
(Title)

June 29, 2015
(Date)

NOTE: Should waivers from all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Division will hold the application for a period of 20 days from the date of receipt by the Division's Santa Fe office. If at the end of the 20-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 503.