

**GTHT - 1**

**DRILLER  
REPORTS**

**2011**

## Chavez, Carl J, EMNRD

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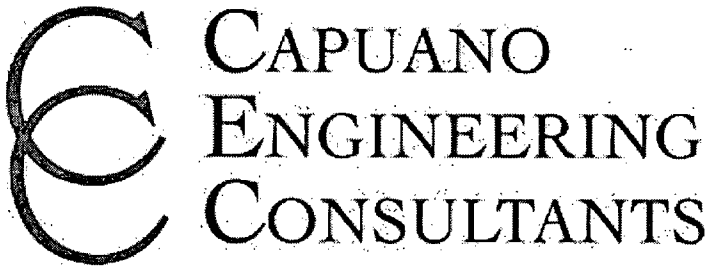
**From:** Louis Capuano III [leciiii@capuanoengineering.com]  
**Sent:** Wednesday, February 15, 2012 10:54 AM  
**To:** michaelsmith@blm.gov  
**Cc:** rigmgrcyrq@gmail.com; Chavez, Carl J, EMNRD; haddy.; Dade, Randy, EMNRD; Benjamin J. Barker  
**Subject:** Regards to Stacking the rig on 45-7

Mr. Smith,

In regards to stacking the rig on the 45-7 pad, we are not rigging up on the location. We will be using it as just a staging area for the time being. David Janney is working on sundry notices to do some small work over operations on 45-7. However, I know not to rig up on a well until the permits are issued or approved, so we are just using the pad a staging area. Please let me know if you have any other questions.

Thank you,

Louis Capuano III | Drilling Engineer | Capuano Engineering Consultants



3883 Airway Drive #210, Santa Rosa, CA 95403  
DD: 707-595-8743 | Cell: 707-291-3930 | Fax: 707-544-4127 | Office: 707-595-8740  
[LECIIII@capuanoengineering.com](mailto:LECIIII@capuanoengineering.com) | [www.capuanoengineering.com](http://www.capuanoengineering.com)

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**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Wednesday, February 15, 2012 5:54 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Report for 2/14/12  
**Attachments:** OpsActivitySummaryRpt\_120214221933.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**Operations last 24 hours:**

Consider and evaluate well options. Rig on stand-by.

**Current Operations Midnight to 6:00AM:**

Consider and evaluate well options.

**Todays Planned Operations:**

Nipple down BOPE. Install blank flange. Clean mud pits & prepare to move Trinity rig to 45-7 pad.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Tuesday, February 14, 2012 6:14 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Report for 2/13/12  
**Attachments:** OpsActivitySummaryRpt\_120213194417.pdf

**Lightning Dock Geothermal****Morning Report****Well LDG 47-7****Operations last 24 hours:**

Consider and evaluate well options. Rig on stand-by.

**Current Operations Midnight to 6:00AM:**

Consider and evaluate well options.

**Todays Planned Operations:**

Consider and evaluate well options

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Monday, February 13, 2012 5:42 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Report for 2/12/12  
**Attachments:** OpsActivitySummaryRpt\_120212210356.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**Operations last 24 hours:**

RIH to 2490'. Ream 8 1/2" hole from 2490' to 3000'. POH. Rig up Halliburton & run open hole wire-line logs. Unable to get logs below 2,670'. Rig down loggers. Consider and evaluate well options.

**Current Operations Midnight to 6:00AM:**

Consider and evaluate well options.

**Todays Planned Operations:**

Consider and evaluate well options

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645



**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Sunday, February 12, 2012 6:25 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Report for 2/11/12  
**Attachments:** OpsActivitySummaryRpt\_120212061125.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**Operations last 24 hours:**

Finish running open hole logs. Unable to get below 2600'. Rig down loggers. Evaluate logs & consider options. Rig Halliburton logging back up & re-run open hole logs ( run Gama & temp. only). Still unable to get below 2600'. Rig down loggers. Make up 8 1/2" reaming assembly & RIH.

**Current Operations Midnight to 6:00AM:**

RIH to 2490'. Ream 8 1/2" hole from 2490' to 2590'.

**Todays Planned Operations:**

Ream 8 1/2" hole. POH & run Logs.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Saturday, February 11, 2012 5:14 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Morning Report for 1/17/12  
**Attachments:** OpsActivitySummaryRpt\_120211050341.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**Operations last 24 hours:**

Let well sit static & heat up. Rig up Halliburton & run open hole wireline logs.

**Current Operations Midnight to 6:00AM:**

Run open hole logs. Rig down loggers.

**Todays Planned Operations:**

Evaluate logs & consider well options.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgcyrq@gmail.com]  
**Sent:** Friday, February 10, 2012 6:19 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Report for 2/09/12  
**Attachments:** OpsActivitySummaryRpt\_120209212153.pdf

**Lightning Dock Geothermal****Morning Report****Well LDG 47-7****Operations last 24 hours:**

Let well sit static & heat up.

**Current Operations Midnight to 6:00AM:**

Let well sit static & heat up.

**Todays Planned Operations:**

Let well sit static & heat up. Run "E" logs.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Thursday, February 09, 2012 6:08 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Report for 2/08/12  
**Attachments:** OpsActivitySummaryRpt\_120208232156.pdf

**Lightning Dock Geothermal****Morning Report****Well LDG 47-7****Operations last 24 hours:**

Let well sit static & heat up.

**Current Operations Midnight to 6:00AM:**

Let well sit static & heat up.

**Todays Planned Operations:**

Let well heat up.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645



**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Tuesday, February 07, 2012 5:25 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Morning Report for 2/06/12  
**Attachments:** OpsActivitySummaryRpt\_120206174128.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**Operations last 24 hours:**

Clean location up. Inspect Drill collars & HWDP. Pull drill pipe out of hole. Let well heat up.

**Current Operations Midnight to 6:00AM:**

Let well heat up.

**Todays Planned Operations:**

Let well heat up.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Monday, February 06, 2012 4:24 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker; lcapua2@thermasource.com  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120205195001.pdf

Thank you  
Steve Summitt  
(530) 304-5590

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Sunday, February 05, 2012 6:06 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker; lcapua2@thermasource.com  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120204223758.pdf

Thank you  
Steve Summitt  
(530) 304-5590

## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Saturday, February 04, 2012 6:23 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120204061726.pdf

Thank you  
Steve Summitt  
(530) 304-5590

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Friday, February 03, 2012 5:34 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker; lcapua2@thermasource.com  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120203053137.pdf

Thank you  
Steve Summitt

## Chavez, Carl J, EMNRD

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**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Thursday, February 02, 2012 5:49 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120202040255.pdf

Thank you  
Steve Summitt

## Chavez, Carl J, EMNRD

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**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Wednesday, February 01, 2012 6:07 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120201060301.pdf

Thank you  
Steve Summitt



## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Tuesday, January 31, 2012 6:17 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker; lcapua2@thermasource.com  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120131061231.pdf

Thank you  
Steve Summitt

## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Monday, January 30, 2012 5:49 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120130043156.pdf

Thank you  
Steve Summitt  
(530) 304-5590

## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Sunday, January 29, 2012 6:22 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120129061746.pdf

Thank you  
Steve Summitt

## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Saturday, January 28, 2012 6:19 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker; lcapua2@thermasource.com  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120128061504.pdf

Thank you  
Steve Summitt  
(530) 304-5590

## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Thursday, January 26, 2012 1:11 PM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker; lcapua2@thermasource.com  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120126130850.pdf

Thank you  
Steve Summitt  
(530) 304-5590

## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Wednesday, January 25, 2012 5:56 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker; lcapua2@thermasource.com  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120125055325.pdf

Thank you  
Steve Summitt

## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Tuesday, January 24, 2012 6:09 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker; lcapua2@thermasource.com  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120124060619.pdf

Thank you  
Steve Summitt

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Monday, January 23, 2012 6:30 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Morning Report for 1/22/12  
**Attachments:** OpsActivitySummaryRpt\_120123062243.pdf

**Lightning Dock Geothermal****Morning Report****Well LDG 47-7****Operations last 24 hours:**

Lay down shock sub & recover MWD. Make up BHA. RIH to 1666'. Ream from 1666' to 1697'. Directional drill 12 1/4" hole from 1697' to 1720' with no mud loss. Stopped getting signal from MWD. Recover MWD with wireline. Run in with new MWD on wireline. Directional drill 12 1/4" hole from 1720' to 1843' with no mud loss. Pull to 1200' change MWD tools with wire-line

**Current Operations Midnight to 6:00AM:**

RIH & directional drill to 1855'.

**Todays Planned Operations:**

Drill ahead



Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

## **Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Sunday, January 22, 2012 6:45 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 47 -7 Morning Report for 1/21/12  
**Attachments:** OpsActivitySummaryRpt\_120122063540.pdf

### **Lightning Dock Geothermal**

#### **Morning Report**

#### **Well LDG 47-7**

#### **Operations last 24 hours:**

Clean out cement from 1559' to 1588'. Circulate hole clean. Check mud weight @ 8.3 ppg. Clean out to 1592. Perform FIT to 0.6 Gradient = 270 psi with a mud weight of 8.3 ppg. Test good. Clean out cement from 1592' to 1651'. POH for directional tools. Lay down conventional BHA. Make up directional BHA. RIH to 1630'. Bit taking weight @ 1630'. Ream from 1630' to 1695'. Directional drill 12 1/4" hole from 1695' to 1697' with no mud loss. Circulate & bring mud vis up from 39 to 60. No signal from directional tools. Unable to regain signal. Try to recover directional MWD with wire line. NG. POH to recover MWD. Found MWD stuck in shock sub. Lay down shock sub.

#### **Current Operations Midnight to 6:00AM:**

RIH, Directional drill 12 1/4" hole from 1697' to 1717' with no mud loss

#### **Todays Planned Operations:**

Drill ahead

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Saturday, January 21, 2012 6:44 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** 1/20/12 Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120121063412.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**Operations last 24 hours:**

Nipple up 13 5/8" BOPE Install Rotating head / flow line, kill line & choke lines. Measure & make up BHA, RIH with BHA. Test 13 5/8" BOPE, Annular, Rams, & Choke. BLM & OCD notified of test Mike Smith with BLM waived witnessing the test. Low pressure test 300 psi, High pressure test was 1,000 psi. Test was good. RIH & tag top of cement @ 1528'. Clean out cement from 1528' to 1559'.

**Current Operations Midnight to 6:00AM:**

Clean out to 1592. Perform FIT to 0.6 Gradient = 270 psi with a mud weight of 8.3 ppg. Test good.

**Todays Planned Operations:**

Clean out to 1695' & drill 12 1/4" hole.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Friday, January 20, 2012 6:23 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; Dade, Randy, EMNRD; Ben Barker  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120120061113.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**Operations last 24 hours:**

Continue Cementing casing CIP @03:00. WOC. Cut off 30" conductor & 13 3/8" casing. Land 12" 400 SOW well-head.

**Current Operations Midnight to 6:00AM:**

Nipple up 13 5/8" BOPE

**Todays Planned Operations:**

Nipple up & test 13 5/8" BOPE. Clean out cement & drill 12 1/4" hole.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

## Chavez, Carl J, EMNRD

---

**From:** Phillips, Haddy L., OSE  
**Sent:** Thursday, January 19, 2012 11:47 AM  
**To:** RigManager Cyrq; Chavez, Carl J, EMNRD; mikesmit@blm.gov; RandyDade@state.nm.us; Ben Barker; Rappuhn, Doug H., OSE; Petronis, Laura, OSE  
**Subject:** RE: Morning report for LDG 47-7

FYI

Received a call from driller, let our office know that the 13 3/8 casing was ran last night.

Haddy Phillips

*Water Resource Specialist  
Office of State Engineer  
District 3 Office  
P.O. Box 844  
Deming, NM 88031  
phone :575-546-2851 Fax: 575-546-2290  
[haddy.phillips@state.nm.us](mailto:haddy.phillips@state.nm.us)*

---

**From:** RigManager Cyrq [<mailto:rigmgrcyrq@gmail.com>]  
**Sent:** Thursday, January 19, 2012 6:35 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; [mikesmit@blm.gov](mailto:mikesmit@blm.gov); [RandyDade@state.nm.us](mailto:RandyDade@state.nm.us); Ben Barker  
**Subject:** Morning report for LDG 47-7

### Lightning Dock Geothermal

#### Morning Report

#### Well LDG 47-7

#### Operations last 24 hours:

Continue to POH & lay down BHA. Continue to POH & lay down BHA. Rig up to run 13 3/8" casing. Move casing to pipe racks. Fork lift broke down. Using Hydro- Crane & truck to move casing. Rig up to run 13 3/8" casing. Move casing to pipe racks. Fork lift broke down. Using Hydro- Crane & truck to move casing. Run 13 3/8" casing. Rig up Halliburton & cement 13 3/8" casing.

#### Current Operations Midnight to 6:00AM:



Cement 13 3/8" casing. WOC

**Todays Planned Operations:**

Wait on cement to harden. Cut off 30" & 13 3/8" and land 13 3/8" well head.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Thursday, January 19, 2012 6:35 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; Ben Barker  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120119062702.pdf

**Lightning Dock Geothermal****Morning Report****Well LDG 47-7****Operations last 24 hours:**

Continue to POH & lay down BHA. Continue to POH & lay down BHA. Rig up to run 13 3/8" casing. Move casing to pipe racks. Fork lift broke down. Using Hydro- Crane & truck to move casing. Rig up to run 13 3/8" casing. Move casing to pipe racks. Fork lift broke down. Using Hydro- Crane & truck to move casing. Run 13 3/8" casing. Rig up Halliburton & cement 13 3/8" casing.

**Current Operations Midnight to 6:00AM:**

Cement 13 3/8" casing. WOC

**Today's Planned Operations:**

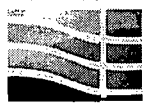
Wait on cement to harden. Cut off 30" & 13 3/8" and land 13 3/8" well head.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645



## Operations Activity Detail

Well ID: 47-7

Field: Lightning Dock

Cyraq Energy Inc.

Well Name: LDG 47-7

State: NM Country: United States

Rpt. No.	Date	Time	To	Hrs	End MD	Ops Code	Activity Description	Non-Prod.
19	18-Jan-12	00:00	02:00	2	1695	TRPO	Continue to POH & lay down BHA.	
		02:00	09:30	7.5	1695	OTHER	Rig up to run 13 3/8" casing. Move casing to pipe racks. Fork lift broke down. Using Hydro- Crane & truck to move casing.	
		09:30	22:00	12.5	1695	CASE	Run 13 3/8" casing	
		22:00	00:00	2	1695	CMTD	Rig up Halliburton & cement 13 3/8" casing.	

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Wednesday, January 18, 2012 6:14 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Subject:** 47 -7 Morning Report for 1/17/12  
**Attachments:** OpsActivitySummaryRpt\_120118060556.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**01-16-2012**

**Operations last 24 hours:**

Drill 17 1/2" from 1549' to 1663'. Service Rig brakes. Drill 17 1/2" from 1663' to 1688' with 30 - 35K & 70 - 80 RPM. Circulate & wipe hole to 30" shoe. No fill or tight spots. POH to run 13 3/8" casing.

**Current Operations Midnight to 6:00AM:**

Continue to POH & lay down BHA. Move casing to pipe racks.

**Planned Operations:**

Run & cement 13 3/8" casing.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Tuesday, January 17, 2012 6:13 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Subject:** Morning report for LDG 47-7  
**Attachments:** OpsActivitySummaryRpt\_120117060147.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**01-16-2012**

**Operations last 24 hours:**

Open 12 1/4" hole to 17 1/2" from 1191' to 1549'. POH to check Hole Opener. Bearings worn out, very loose. Lay down Hole Opener. Make up 17 1/2" bit & Stabilizers. RIH, Ream through tight hole from 40' to 55' . RIH to 1344'. Ream from 1344' to 1500'

**Current Operations Midnight to 6:00AM:**

Drill 17 1/2" from 1549' to 1660'

**Planned Operations:**

Drill 17 1/2" hole to 1685'. Run 13 3/8" casing.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645



## Chavez, Carl J, EMNRD

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Sunday, January 15, 2012 6:48 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Subject:** Morning report for LDG 47-7 for 1/14/12  
**Attachments:** OpsActivitySummaryRpt\_120115064247.pdf

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Saturday, January 14, 2012 6:22 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Subject:** Morning report for LDG 47-7 for 1/13/12  
**Attachments:** OpsActivitySummaryRpt\_120114060641.pdf

**Lightning Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**01-13-2012**

**Operations last 24 hours:**

Directional drill 12 1/4" hole from 1563' to 1695' with no mud loss.

**Current Operations Midnight to 6:00AM:**

Circulate bottoms up sample for mud logger. POH for 17 1/2" Hole Opener.

**Planned Operations:**

Open hole to 17 1/2". Run & cement 13 3/8" casing

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

## Chavez, Carl J, EMNRD

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Friday, January 13, 2012 9:17 AM  
**To:** 'Smith, Michael A'  
**Cc:** Brooks, David K., EMNRD; VonGonten, Glenn, EMNRD; Dade, Randy, EMNRD  
**Subject:** RE: Morning report for LDG 47-7

Michael:

Good morning. No new G-101s, etc. required from OCD based on our communications with Cyrq.

Thanks for the communication.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462

E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)

Website: <http://www.emnrd.state.nm.us/ocd/>

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<http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

---

**From:** Smith, Michael A [<mailto:michaelsmith@blm.gov>]  
**Sent:** Friday, January 13, 2012 8:38 AM  
**To:** Chavez, Carl J, EMNRD  
**Subject:** FW: Morning report for LDG 47-7

Hello Carl:

For your information: below is how Ben Barker explained the need for deviating off of vertical on the 47-7 well at the Lightning Dock site. The Federal permit specified a 3400' deep true vertical hole. For now, I am just going to require they document the vertical deviation in their Federal well completion report. I don't know if this kind of activity would require them to complete a new G-101/102, but I advised Mr. Barker to consult with OCD.

I have not been out to inspect the 47-7 operation since they spudded (Jan 1), but will get out there next week. I'll let you know if anything seems out of compliance.

Regards,

Michael Smith  
Geologist - BLM  
Las Cruces District Office  
1800 Marquess Street  
Las Cruces, NM 88005  
575-525-4421  
[michaelsmith@blm.gov](mailto:michaelsmith@blm.gov)

---

**From:** Ben Barker [<mailto:Ben.Barker@cyrgenergy.com>]  
**Sent:** Thursday, January 12, 2012 12:08 PM  
**To:** Smith, Michael A  
**Subject:** RE: Morning report for LDG 47-7

Mr. Smith,

You are correct. The drilling location was built on the approved site.  
We are drilling near-vertical fractures and the directional work will not take the well more than 5 degrees away from vertical.

Thanks,  
Ben

801-616-6193  
707-508-9963

---

**From:** Smith, Michael A [<mailto:michaelsmith@blm.gov>]  
**Sent:** Wednesday, January 11, 2012 12:08 PM  
**To:** Ben Barker  
**Subject:** RE: Morning report for LDG 47-7

Mr. Barker:

I would appreciate it if you could provide some clarification:

"The drill pad had to be sited a hundred feet or so west of the ideal spot because of the drainage channel."

Do you mean that the drill pad for 47-07 was constructed 100' west of the approved location in the approved GDP, or that, in order to reach the "ideal spot" from the approved 47-07 well pad, you are drilling on a trajectory that would place the bottom of the hole 100' to the east of the pad (in the GDP, BLM approved 3,400' true vertical hole).

The drilling reports from Jan 9 & 10 imply the latter, but I would like to be sure. Your attention to this matter is most appreciated.

Regards,

Michael Smith  
Geologist - BLM  
Las Cruces District Office  
1800 Marquess Street  
Las Cruces, NM 88005  
575-525-4421  
[michaelsmith@blm.gov](mailto:michaelsmith@blm.gov)

---

**From:** Ben Barker [<mailto:Ben.Barker@cyrgenergy.com>]  
**Sent:** Tuesday, January 10, 2012 8:37 AM  
**To:** Chavez, Carl J, EMNRD; RigManager Cyrq; Phillips, Haddy L., OSE; Smith, Michael A; [RandyDade@state.nm.us](mailto:RandyDade@state.nm.us); [restabro@ca.blm.gov](mailto:restabro@ca.blm.gov)  
**Cc:** Sanchez, Daniel J., EMNRD; Brooks, David K., EMNRD; VonGonten, Glenn, EMNRD  
**Subject:** RE: Morning report for LDG 47-7

Carl,

Sorry to butt in, but I think Richard just came on duty and probably has his hands full. I'm not managing the drilling and am on vacation today, but I saw your note.

I was in on the planning and I can confirm your presumption is correct. LDG is being proactive about controlling trajectory rather than corrective as in 53-7. This is not "horizontal" drilling nor anything close. The drill pad had to be sited a hundred feet or so west of the ideal spot because of the drainage channel. The directional program is intended to put the well back on target, same lease, same surface owner and not much more drift than the width of the drilling location.

Thanks,  
Ben

801-616-6193  
707-508-9963

---

**From:** Chavez, Carl J, EMNRD [<mailto:CarlJ.Chavez@state.nm.us>]  
**Sent:** Tuesday, January 10, 2012 7:50 AM  
**To:** RigManager Cyrq; Phillips, Haddy L., OSE; [mikesmit@blm.gov](mailto:mikesmit@blm.gov); [RandyDade@state.nm.us](mailto:RandyDade@state.nm.us); [restabro@ca.blm.gov](mailto:restabro@ca.blm.gov); Ben Barker  
**Cc:** Sanchez, Daniel J., EMNRD; Brooks, David K., EMNRD; VonGonten, Glenn, EMNRD  
**Subject:** RE: Morning report for LDG 47-7

Mr. Lemon:

Good morning. Regarding the "Directional Drill" descriptor below or Well LDG 47-7, I presume it is in the context similar to Mr. Barker's 12/6/2011 note below regarding Well 53-07. If it is not and you are directionally drilling, new G Forms need to be submitted for OCD approval. Thank you.

\*\*\*\*\*

Mr. Chavez,

Re: Well 53-07

As you observed no doubt concluded, the misspelled word should have read "whipstock." However, I think the term may convey a misconception about what we are doing.

The directional survey data in the drilling reports we have submitted will show the original penetration wandered away from the vertical while we were drilling the 17.5" hole. We believe this caused us to intersect a nearly-vertical structure several hundred feet deeper than we intended. What we are doing with the whipstock is using it to help point the bit back in the direction we want so as to hit the same structure at a shallower elevation. All of this work is taking place within 5 degrees of directly beneath the wellhead. We are not drilling horizontally nor even what would normally be considered a deviated hole, merely correcting course on a vertical hole. I believe the operation underway is entirely within the approved operations plan and should not require new permits.

The final configuration, including any plugs or sidetracks should and will be detailed in the completion report. If I have misunderstood the regulations or if I can answer any questions, please let me know.

Thanks,  
Ben

VP Resource Management  
801-616-6193 mobile1

Lightning Dock Geothermal HI-01, LLC  
136 South Main Street, Suite 600  
Salt Lake City, UT 84101-1684  
801-875-4200 office  
801-374-3314 fax

**From:** Chavez, Carl J, EMNRD [<mailto:CarlJ.Chavez@state.nm.us>]  
**Sent:** Tuesday, December 06, 2011 2:20 PM  
**To:** RigManager Cyrq  
**Cc:** Ben Barker; Brooks, David K., EMNRD; Dade, Randy, EMNRD  
**Subject:** RE: Morning report for LDG 53-7

Mr. Summitt:

Good afternoon. Looking over your attached drill summary report from 12//2011, the OCD notices the term "wipestock", which may mean there may be plans to divert the bottom hole location of the well to a non-vertical location. If this is the case, new G-101 and G-102 Geothermal Forms must be submitted to the Artesia DO with a copy to me for review and approval.

Thank you.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>  
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<http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

---

**From:** RigManager Cyrq [<mailto:rigmgrcyrq@gmail.com>]  
**Sent:** Tuesday, January 10, 2012 7:09 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; [mikesmit@blm.gov](mailto:mikesmit@blm.gov); [RandyDade@state.nm.us](mailto:RandyDade@state.nm.us); [restabro@ca.blm.gov](mailto:restabro@ca.blm.gov); Ben Barker  
**Subject:** Morning report for LDG 47-7

# **Lightning Dock Geothermal**

## **Morning Report**

**Well LDG 47-7**

**01-09-2012**

### **Operations last 24 hours:**

Drill from 1031\_ ft to 1197\_ ft with full returns. POH. make up 12 1/4" directional assy. RIH to 1197'.  
Directional drill 12 1/4" hole with mud motor from 1197' to 1244'. With full returns

### **Current Operations Midnight to 6:00AM:**

. Directional drill 12 1/4" hole with mud motor from 1244' to 1295'. With full returns.

### **Planned Operations:**

Continue to directional drill 12 1/4" hole.

*Richard Lemon*

**Richard Lemon Consulting**

Cell # 707-398-1645



**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Friday, January 13, 2012 6:40 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Subject:** Morning report for LDG 47-7 for 1/12/12  
**Attachments:** OpsActivitySummaryRpt\_120113062513.pdf

**Dock Geothermal**

**Morning Report**

**Well LDG 47-7**

**01-12-2012**

**Lightning**

**Operations last 24 hours:**

Wait on new water pump. Rig on down time @ 00:30 hrs. Mechanic repaired Draw-works engine. RIH to 1521'. Rig back on Dayrate @ 17:30 hrs. Directional drill 12 1/4" hole from 1521' to 1563' with no mud loss.

**Current Operations Midnight to 6:00AM:**

Directional drill 12 1/4" hole from 1563' to 1605' with no mud loss

**Planned Operations:**

Directional drill 12 1/4" hole to 1750' +/- and open hole to 17 1/2". Run & cement 13 3/8" casing.

Thanks,

Richard Lemon

**Richard Lemon Consulting**

Cell # 707-398-1645

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgrcyrq@gmail.com]  
**Sent:** Thursday, January 12, 2012 6:36 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Subject:** Morning report for LDG 47-7 for 1/11/12  
**Attachments:** OpsActivitySummaryRpt\_120112062444.pdf

**Lightning Dock Geothermal****Morning Report****Well LDG 47-7****01-11-2012****Operations last 24 hours:**

Directional drill 12 1/4" hole from 1379' to 1521' with no mud loss. Water pump went out on Draw-works engine. Pull off bottom to repair water pump. Wait on new water pump.

**Current Operations Midnight to 6:00AM:**

Wait on new water pump. Should arrive by 10:00AM

**Planned Operations:**

Repair Draw-works engine. Directional drill 12 1/4" hole to 1750' +/- and open hole to 17 1/2".

Thanks,

**Chavez, Carl J, EMNRD**

---

**From:** RigManager Cyrq [rigmgcyrq@gmail.com]  
**Sent:** Wednesday, January 11, 2012 7:01 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Subject:** Morning report for LDG 47-7 for 1/10/12  
**Attachments:** OpsActivitySummaryRpt\_120111065030.pdf

**Lightning Dock Geothermal****Morning Report****Well LDG 47-7****01-10-2012****Operations last 24 hours:**

Directional drill 12 1/4" hole from 1244' to 1312'. Replace leaking standpipe union. Directional drill 12 1/4" hole from 1312' to 1326'. Circ. Hole clean. POH change mud motors set mud motor angle @ 2.12 degrees. RIH to 1300'. Ream from 1300' to 1326'. Directional drill 12 1/4" hole from 1326' to 1379' with no mud loss.

**Current Operations Midnight to 6:00AM:**

Directional drill 12 1/4" hole from 1379' to 1428' with no mud loss.

**Planned Operations:**

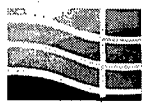
Directional drill 12 1/4" hole to 1750' +/- and open hole to 17 1/2".

Thanks,

*Richard Lemon*

**Richard Lemon Consulting**

Cell # 707-398-1645



## Operations Activity Detail

Cyra Energy Inc.

Well ID: 47-7

Well Name: LDG 47-7

Field: Lightning Dock

State: NM Country: United States

Rpt. No.	Date	Time	To	Hrs	End MD	Ops Code	Activity Description	Non-Prod.
11	10-Jan-12	00:00	08:00	8	1312	DRIL	Directional drill 12 1/4" hole from 1244' to 1312'	
		08:00	09:00	1	1312	REPR	Replace leaking standpipe union.	X
		09:00	12:00	3	1326	DRIL	Directional drill 12 1/4" hole from 1312' to 1326'.	
		12:00	16:30	4.5	1326	TRPO	Circ. Hole clean. POH change mud motors set mud motor angle @ 2.12 degrees.	
		16:30	18:00	1.5	1326	TRPI	RIH to 1300'	
		18:00	19:30	1.5	1326	REAM	Ream from 1300' to 1326'	
		19:30	00:00	4.5	1326	DRIL	Directional drill 12 1/4" hole from 1326' to 1379' with no mud loss.	

## Chavez, Carl J, EMNRD

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, January 10, 2012 7:50 AM  
**To:** 'RigManager Cyrq'; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Cc:** Sanchez, Daniel J., EMNRD; Brooks, David K., EMNRD; VonGonten, Glenn, EMNRD  
**Subject:** RE: Morning report for LDG 47-7

Mr. Lemon:

Good morning. Regarding the "Directional Drill" descriptor below or Well LDG 47-7, I presume it is in the context similar to Mr. Barker's 12/6/2011 note below regarding Well 53-07. If it is not and you are directionally drilling, new G Forms need to be submitted for OCD approval. Thank you.

\*\*\*\*\*

Mr. Chavez,

Re: Well 53-07

As you observed no doubt concluded, the misspelled word should have read "whipstock." However, I think the term may convey a misconception about what we are doing.

The directional survey data in the drilling reports we have submitted will show the original penetration wandered away from the vertical while we were drilling the 17.5" hole. We believe this caused us to intersect a nearly-vertical structure several hundred feet deeper than we intended. What we are doing with the whipstock is using it to help point the bit back in the direction we want so as to hit the same structure at a shallower elevation. All of this work is taking place within 5 degrees of directly beneath the wellhead. We are not drilling horizontally nor even what would normally be considered a deviated hole, merely correcting course on a vertical hole. I believe the operation underway is entirely within the approved operations plan and should not require new permits.

The final configuration, including any plugs or sidetracks should and will be detailed in the completion report. If I have misunderstood the regulations or if I can answer any questions, please let me know.

Thanks,  
Ben

VP Resource Management  
801-616-6193 mobile1  
707-508-9963 mobile2

Lightning Dock Geothermal HI-01, LLC  
136 South Main Street, Suite 600  
Salt Lake City, UT 84101-1684  
801-875-4200 office  
801-374-3314 fax

**From:** Chavez, Carl J, EMNRD [<mailto:CarlJ.Chavez@state.nm.us>]  
**Sent:** Tuesday, December 06, 2011 2:20 PM  
**To:** RigManager Cyrq  
**Cc:** Ben Barker; Brooks, David K., EMNRD; Dade, Randy, EMNRD  
**Subject:** RE: Morning report for LDG 53-7

Mr. Summitt:

Good afternoon. Looking over your attached drill summary report from 12//2011, the OCD notices the term "wipestock", which may mean there may be plans to divert the bottom hole location of the well to a non-vertical location. If this is the case, new G-101 and G-102 Geothermal Forms must be submitted to the Artesia DO with a copy to me for review and approval.

Thank you.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)

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**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; [mikesmit@blm.gov](mailto:mikesmit@blm.gov); [RandyDade@state.nm.us](mailto:RandyDade@state.nm.us); [restabro@ca.blm.gov](mailto:restabro@ca.blm.gov); Ben Barker

**Subject:** Morning report for LDG 47-7

## Lightning Dock Geothermal

### Morning Report

### Well LDG 47-7

01-09-2012

Operations last 24 hours:



Drill from 1031\_ ft to 1197\_ ft with full returns. POH. make up 12 1/4" directional assy. RIH to 1197'.  
Directional drill 12 1/4" hole with mud motor from 1197' to 1244'. With full returns

**Current Operations Midnight to 6:00AM:**

. Directional drill 12 1/4" hole with mud motor from 1244' to 1295'. With full returns.

**Planned Operations:**

Continue to directional drill 12 1/4" hole.

*Richard Lemon*

**Richard Lemon Consulting**

Cell # 707-398-1645

## Chavez, Carl J, EMNRD

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**From:** Ben Barker [Ben.Barker@cyrgenergy.com]  
**Sent:** Tuesday, January 10, 2012 8:37 AM  
**To:** Chavez, Carl J, EMNRD; RigManager Cyrq; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov  
**Cc:** Sanchez, Daniel J., EMNRD; Brooks, David K., EMNRD; VonGonten, Glenn, EMNRD  
**Subject:** RE: Morning report for LDG 47-7

Carl,

Sorry to butt in, but I think Richard just came on duty and probably has his hands full. I'm not managing the drilling and am on vacation today, but I saw your note.

I was in on the planning and I can confirm your presumption is correct. LDG is being proactive about controlling trajectory rather than corrective as in 53-7. This is not "horizontal" drilling nor anything close. The drill pad had to be sited a hundred feet or so west of the ideal spot because of the drainage channel. The directional program is intended to put the well back on target, same lease, same surface owner and not much more drift than the width of the drilling location.

Thanks,  
Ben

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707-508-9963

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**Sent:** Tuesday, January 10, 2012 7:50 AM  
**To:** RigManager Cyrq; Phillips, Haddy L., OSE; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; Ben Barker  
**Cc:** Sanchez, Daniel J., EMNRD; Brooks, David K., EMNRD; VonGonten, Glenn, EMNRD  
**Subject:** RE: Morning report for LDG 47-7

Mr. Lemon:

Good morning. Regarding the "Directional Drill" descriptor below or Well LDG 47-7, I presume it is in the context similar to Mr. Barker's 12/6/2011 note below regarding Well 53-07. If it is not and you are directionally drilling, new G Forms need to be submitted for OCD approval. Thank you.

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Mr. Chavez,

Re: Well 53-07

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considered a deviated hole, merely correcting course on a vertical hole. I believe the operation underway is entirely within the approved operations plan and should not require new permits.

The final configuration, including any plugs or sidetracks should and will be detailed in the completion report. If I have misunderstood the regulations or if I can answer any questions, please let me know.

Thanks,  
Ben

VP Resource Management  
801-616-6193 mobile1  
707-508-9963 mobile2

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136 South Main Street, Suite 600  
Salt Lake City, UT 84101-1684  
801-875-4200 office  
801-374-3314 fax

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**Sent:** Tuesday, December 06, 2011 2:20 PM  
**To:** RigManager Cyrq  
**Cc:** Ben Barker; Brooks, David K., EMNRD; Dade, Randy, EMNRD  
**Subject:** RE: Morning report for LDG 53-7

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Good afternoon. Looking over your attached drill summary report from 12//2011, the OCD notices the term "wipestock", which may mean there may be plans to divert the bottom hole location of the well to a non-vertical location. If this is the case, new G-101 and G-102 Geothermal Forms must be submitted to the Artesia DO with a copy to me for review and approval.

Thank you.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>

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Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>

## Chavez, Carl J, EMNRD

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, December 06, 2011 3:44 PM  
**To:** 'Ben Barker'; RigManager Cyrq  
**Cc:** Brooks, David K., EMNRD; Dade, Randy, EMNRD; mikesmit@blm.gov; Jackson, Charles L., OSE  
**Subject:** RE: Morning report for LDG 53-7

Mr. Barker:

Based on your reply or response below, please proceed with your plans. No additional forms and/or approvals are needed from the OCD.

Thank you.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: CarlJ.Chavez@state.nm.us

Website: <http://www.emnrd.state.nm.us/oed/>

"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:  
<http://www.emnrd.state.nm.us/oed/environmental.htm#environmental>)

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**From:** Ben Barker [<mailto:Ben.Barker@cyrgenergy.com>]  
**Sent:** Tuesday, December 06, 2011 3:40 PM  
**To:** Chavez, Carl J, EMNRD; RigManager Cyrq  
**Cc:** Brooks, David K., EMNRD; Dade, Randy, EMNRD; [mikesmit@blm.gov](mailto:mikesmit@blm.gov); Jackson, Charles L., OSE  
**Subject:** RE: Morning report for LDG 53-7

Mr. Chavez,

As you observed no doubt concluded, the misspelled word should have read "whipstock." However, I think the term may convey a misconception about what we are doing.

The directional survey data in the drilling reports we have submitted will show the original penetration wandered away from the vertical while we were drilling the 17.5" hole. We believe this caused us to intersect a nearly-vertical structure several hundred feet deeper than we intended. What we are doing with the whipstock is using it to help point the bit back in the direction we want so as to hit the same structure at a shallower elevation. All of this work is taking place within 5 degrees of directly beneath the wellhead. We are not drilling horizontally nor even what would normally be considered a deviated hole, merely correcting course on a vertical hole. I believe the operation underway is entirely within the approved operations plan and should not require new permits.

The final configuration, including any plugs or sidetracks should and will be detailed in the completion report. If I have misunderstood the regulations or if I can answer any questions, please let me know.

Thanks,  
Ben

VP Resource Management  
801-616-6193 mobile1

707-508-9963 mobile2

Lightning Dock Geothermal HI-01, LLC  
136 South Main Street, Suite 600  
Salt Lake City, UT 84101-1684  
801-875-4200 office  
801-374-3314 fax

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**From:** Chavez, Carl J, EMNRD [<mailto:CarlJ.Chavez@state.nm.us>]  
**Sent:** Tuesday, December 06, 2011 2:20 PM  
**To:** RigManager Cyrq  
**Cc:** Ben Barker; Brooks, David K., EMNRD; Dade, Randy, EMNRD  
**Subject:** RE: Morning report for LDG 53-7

Mr. Summitt:

Good afternoon. Looking over your attached drill summary report from 12//2011, the OCD notices the term "wipestock", which may mean there may be plans to divert the bottom hole location of the well to a non-vertical location. If this is the case, new G-101 and G-102 Geothermal Forms must be submitted to the Artesia DO with a copy to me for review and approval.

Thank you.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>  
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<http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

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**From:** RigManager Cyrq [<mailto:rigmgrcyrq@gmail.com>]  
**Sent:** Tuesday, December 06, 2011 7:14 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; [mikesmit@blm.gov](mailto:mikesmit@blm.gov); [RandyDade@state.nm.us](mailto:RandyDade@state.nm.us); [restabro@ca.blm.gov](mailto:restabro@ca.blm.gov); [bbarker@cyrqenergy.com](mailto:bbarker@cyrqenergy.com)  
**Subject:** Morning report for LDG 53-7

Thank you  
Steve Summitt  
(530)304-5590

## Chavez, Carl J, EMNRD

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**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, December 06, 2011 2:20 PM  
**To:** 'RigManager Cyrq'  
**Cc:** 'Ben Barker'; Brooks, David K., EMNRD; Dade, Randy, EMNRD  
**Subject:** RE: Morning report for LDG 53-7

Mr. Summitt:

Good afternoon. Looking over your attached drill summary report from 12//2011, the OCD notices the term "wipestock", which may mean there may be plans to divert the bottom hole location of the well to a non-vertical location. If this is the case, new G-101 and G-102 Geothermal Forms must be submitted to the Artesia DO with a copy to me for review and approval.

Thank you.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto: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, go to "Pollution Prevention & Waste Minimization" at:  
<http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

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**From:** RigManager Cyrq [<mailto:rigmgrcyrq@gmail.com>]  
**Sent:** Tuesday, December 06, 2011 7:14 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; [mikesmit@blm.gov](mailto:mikesmit@blm.gov); [RandyDade@state.nm.us](mailto:RandyDade@state.nm.us); [restabro@ca.blm.gov](mailto:restabro@ca.blm.gov); [bbarker@cyrqenergy.com](mailto:bbarker@cyrqenergy.com)  
**Subject:** Morning report for LDG 53-7

Thank you  
Steve Summitt  
(530)304-5590

## Chavez, Carl J, EMNRD

---

**From:** Phillips, Haddy L., OSE  
**Sent:** Monday, November 21, 2011 8:42 AM  
**To:** RigManager Cyrq; Chavez, Carl J, EMNRD; mikesmit@blm.gov; RandyDade@state.nm.us; restabro@ca.blm.gov; bbarker@cyrgenergy.com  
**Cc:** Jackson, Charles L., OSE  
**Subject:** RE: Morning report for LDG 53-7

Please cease drilling until proper approved permit is on file with OSE. Depth on original permit has been exceeded, a Deepen well permit must be filed prior to exceeding the permitted depth. If you have any questions, please contact our office.

Haddy Phillips

Water Resource Specialist  
Office of the State Engineer  
P.O. Box 844  
Deming, NM 88031  
Phone:(575)546-2851, Fax (575)546-2290  
E-Mail: [haddy.phillips@state.nm.us](mailto:haddy.phillips@state.nm.us)  
Web Page: <http://www.ose.state.nm.us>

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**From:** RigManager Cyrq [<mailto:rigmgrcyrq@gmail.com>]  
**Sent:** Sunday, November 20, 2011 7:06 AM  
**To:** Chavez, Carl J, EMNRD; Phillips, Haddy L., OSE; [mikesmit@blm.gov](mailto:mikesmit@blm.gov); [RandyDade@state.nm.us](mailto:RandyDade@state.nm.us); [restabro@ca.blm.gov](mailto:restabro@ca.blm.gov); [bbarker@cyrgenergy.com](mailto:bbarker@cyrgenergy.com)  
**Subject:** Morning report for LDG 53-7

Thank you  
Steve Summit  
(530) 304-5590


## Chavez, Carl J, EMNRD

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**From:** RigMgrCyrq [rigmgrcyrq@gmail.com]  
**Sent:** Sunday, October 16, 2011 6:50 AM  
**To:** Michael Smith; Chavez, Carl J, EMNRD; Dorold.Gray@state.nm.us; Phillips, Haddy L., OSE; Jackson, Charles L., OSE; Dade, Randy, EMNRD; bbarker@cyrgenergy.com  
**Subject:** Morning report for LDG 53-7  
**Attachments:** WellSummaryRpt\_111016064626.pdf

Thank you  
Steve Summit  
(530) 304-5590



	<b>Well Summary Report</b>		<b>Lightning Dock Geothermal</b>	
	Well ID: LDG 53-7 Field: Lightning Dock		Well Name: 53-7 Sect: 7 Town: 25S Rng: 19W County: Hidalgo State: NM	
<b>Operator:</b> LD Geothermal HI-01,LLC		<b>Working Interest:</b> 1.00		
<b>AFE Nos:</b>				
<b>API No:</b> 30 023 20017		<b>Spud Date:</b> 08-Oct-11		
<b>Location:</b> Geothermal				
<b>15-Oct-11</b>	<b>Current Depth (ft):</b> 1,180			
	<b>Comments:</b> 06:00 to 15:00 Drill from 936_ ft to 1015_ ft with full returns temp out 148* Deg F. 15:00 to 15:30 Service rig. 15:30 to 23:00 Drill from 1015_ ft to 1079_ ft with full returns temp out 144.8 * Deg F. 23:00 to 23:30 service rig. 23:30 to 00:00 Run wire line survey (9no shot). 00:00 to 01:30 Drill from _1079 ft to 1111_ ft with full returns temp out 144* Deg F. 01:30 to 02:00 Circulate for survey. 02:00 to 02:30 Run wire line survey at 1070' 0* Inc 0* Azm. 02:30 to 06:00 Drill from 1111_ ft to _1180 ft with full returns temp out 144* Deg F.			
<b>16-Oct-11</b>	<b>Current Depth (ft):</b> 1,432			
	<b>Comments:</b> 06:00 to 16:30 Drill from 1180_ ft to _1333 ft with full returns temp out 140* Deg F. 16:30 to 17:00 Circulate for survey. 17:00 to 17:30 Run wire line survey at 1237' Inc .5* Azm 130*. 17:30 to 21:00 Drill from 1333_ ft to 1365_ ft with full returns temp out 140* Deg F. 21:00 to 21:30 Service rig. 21:30 to 06:00 Drill from 1365_ ft to _1432 ft with full returns temp out 140* Deg F.			

## Chavez, Carl J, EMNRD

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**From:** RigMgrCyrq [rigmgrcyrq@gmail.com]  
**Sent:** Saturday, October 15, 2011 6:23 AM  
**To:** Michael Smith; Chavez, Carl J, EMNRD; Dade, Randy, EMNRD; Dorold.Gray@state.nm.us; Jackson, Charles L., OSE; Phillips, Haddy L., OSE; 'Ben Barker'; bbarker@cyrqenergy.com  
**Subject:** Morning report for LDG 53-7  
**Attachments:** WellSummaryRpt\_111015061904.pdf

Thank you  
Steve Summitt  
(530) 304-5590

**Well Summary Report****Lightning Dock Geothermal**

Well ID: LDG 53-7

Well Name: 53-7

Field: Lightning Dock

Sect: 7 Town: 25S Rng: 19W County: Hidalgo State: NM

Operator: LD Geothermal HI-01,LLC

Working Interest: 1.00

AFE Nos:

API No: 30 023 20017

Spud Date: 08-Oct-11

Location: Geothermal

14-Oct-11	Current Depth (ft):	936	Hole Drilled (ft):	124	Avg ROP:	
	Current Ops:	Safety ream from 900' to 936'				
	Operation Summary:					
	Drill from _812 ft to 925_ ft with full returns (10 hrs)					
	Circulate for survey. (0.5 hrs)					
	Run wire line survey at 900' Inc 3* Azm 215*. (0.5 hrs)					
	Drill from 925_ ft to 936_ ft with full returns. (2.5 hrs)					
	Circulate for trip. (0.5 hrs)					
	POOH to 650' (1 hrs)					
	Run wire line survey at 650' Inc 2* Azm 215*. (0.5 hrs)					
	POOH to 568'. (0.5 hrs)					
	Run wire line syrvey at 550' Inc 1* Azm 215*. (0.5 hrs)					
	POOH break bit. (3 hrs)					
	Make up bit and pick up mud motor RIH to 887' (4 hrs)					
	Safety ream from 887' to 900' (0.5 hrs)					
	Comments:	06:00 to 16:00	Drill from _812 ft to 925_ ft with full returns			
		16:00 to 16:30	Circulate for survey.			
		16:30 to 17:00	Run wire line survey at 900' Inc 3* Azm 215*.			
		17:00 to 19:30	Drill from 925_ ft to 936_ ft with full returns.			
		19:30 to 20:00	Circulate for trip.			
		20:00 to 21:00	POOH to 650'			
		21:00 to 21:30	Run wire line survey at 650' Inc 2* Azm 215*.			
		21:30 to 22:00	POOH to 568'.			
		22:00 to 22:30	Run wire line syrvey at 550' Inc 1* Azm 215*.			
		22:30 to 01:30	POOH break bit.			
		01:30 to 05:30	Make up bit and pick up mud motor RIH to 887'			
		05:30 to 06:00	Safety ream from 887' to 900'			
	Mud Data:	MW: 9.2 Viscosity: 63 Filtrate:				
	Surveys:	None				
	Daily Costs \$:	45,367	Well Costs \$:	368,115		
	Drilling Days:	9	Completion Days:	0	Workover Days:	0
15-Oct-11	Current Depth (ft):	1,180	Hole Drilled (ft):	244	Avg ROP:	9.9
	Current Ops:	Drill 17 1/2" ahead from 1180'				
	Operation Summary:					
	Drill from 936_ ft to 1015_ ft with full returns temp out 148* Deg F. (9 hrs)					
	Service rig. (0.5 hrs)					
	Drill from 1015_ ft to 1079_ ft with full returns temp out 144.8 * Deg F. (7.5 hrs)					
	service rig. (0.5 hrs)					
	Run wire line survey (9no shot). (0.5 hrs)					
	Drill from _1079 ft to 1111_ ft with full returns temp out 144* Deg F. (1.5 hrs)					
	Circulate for survey. (0.5 hrs)					
	Run wire line survey at 1070' 0* Inc 0* Azm. (0.5 hrs)					
	Drill from 1111_ ft to _1180 ft with full returns temp out 144* Deg F. (3.5 hrs)					



## Well Summary Report

## Lightning Dock Geothermal

Well ID: LDG 53-7

Well Name: 53-7

Field: Lightning Dock

Sect: 7 Town: 25S Rng: 19W County: Hidalgo State: NM


<b>Comments:</b>	06:00 to 15:00	Drill from 936_ ft to 1015_ ft with full returns temp out 148* Deg F.
	15:00 to 15:30	Service rig.
	15:30 to 23:00	Drill from 1015_ ft to 1079_ ft with full returns temp out 144.8 * Deg F.
	23:00 to 23:30	service rig.
	23:30 to 00:00	Run wire line survey (9no shot).
	00:00 to 01:30	Drill from _1079 ft to 1111_ ft with full returns temp out 144* Deg F.
	01:30 to 02:00	Circulate for survey.
	02:00 to 02:30	Run wire line survey at 1070' 0* Inc 0* Azm.
02:30 to 06:00	Drill from 1111_ ft to _1180 ft with full returns temp out 144* Deg F.	

**Mud Data:** MW: 9.4 Viscosity: 65 Filtrate:

**Surveys:** 1070ft - 0 deg Inc, 0 deg Az;

<b>Daily Costs \$:</b>	49,105	<b>Well Costs \$:</b>	417,220
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<b>Drilling Days:</b>	10	<b>Completion Days:</b>	0	<b>Workover Days:</b>	0
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	<b>Well Summary Report</b>		<b>Lightning Dock Geothermal</b>																									
	Well ID: LDG 53-7 Field: Lightning Dock		Well Name: 53-7 Sect: 7 Town: 25S Rng: 19W County: Hidalgo State: NM																									
<b>Operator:</b> LD Geothermal HI-01,LLC		<b>Working Interest:</b> 1.00																										
<b>AFE Nos:</b>																												
<b>API No:</b> 30 023 20017		<b>Spud Date:</b> 08-Oct-11																										
<b>Location:</b> Geothermal																												
<b>14-Oct-11</b>	<b>Current Depth (ft):</b> 936	<b>Hole Drilled (ft):</b> 124	<b>Avg ROP:</b>																									
<b>Current Ops:</b> Safety ream from 900' to 936'																												
<b>Operation Summary:</b> Drill from 812 ft to 925_ ft with full returns (10 hrs) Circulate for survey. (0.5 hrs) Run wire line survey at 900' Inc 3* Azm 215*. (0.5 hrs) Drill from 925_ ft to 936_ ft with full returns. (2.5 hrs) Circulate for trip. (0.5 hrs) POOH to 650' (1 hrs) Run wire line survey at 650' Inc 2* Azm 215*. (0.5 hrs) POOH to 568'. (0.5 hrs) Run wire line syrvey at 550' Inc 1* Azm 215*. (0.5 hrs) POOH break bit. (3 hrs) Make up bit and pick up mud motor RIH to 887' (4 hrs) Safety ream from 887' to 900' (0.5 hrs)																												
<b>Comments:</b> <table border="0"> <tr> <td>06:00 to 16:00</td> <td>Drill from 812 ft to 925_ ft with full returns</td> </tr> <tr> <td>16:00 to 16:30</td> <td>Circulate for survey.</td> </tr> <tr> <td>16:30 to 17:00</td> <td>Run wire line survey at 900' Inc 3* Azm 215*.</td> </tr> <tr> <td>17:00 to 19:30</td> <td>Drill from 925_ ft to 936_ ft with full returns.</td> </tr> <tr> <td>19:30 to 20:00</td> <td>Circulate for trip.</td> </tr> <tr> <td>20:00 to 21:00</td> <td>POOH to 650'</td> </tr> <tr> <td>21:00 to 21:30</td> <td>Run wire line survey at 650' Inc 2* Azm 215*.</td> </tr> <tr> <td>21:30 to 22:00</td> <td>POOH to 568'.</td> </tr> <tr> <td>22:00 to 22:30</td> <td>Run wire line syrvey at 550' Inc 1* Azm 215*.</td> </tr> <tr> <td>22:30 to 01:30</td> <td>POOH break bit.</td> </tr> <tr> <td>01:30 to 05:30</td> <td>Make up bit and pick up mud motor RIH to 887'</td> </tr> <tr> <td>05:30 to 06:00</td> <td>Safety ream from 887' to 900'</td> </tr> </table>					06:00 to 16:00	Drill from 812 ft to 925_ ft with full returns	16:00 to 16:30	Circulate for survey.	16:30 to 17:00	Run wire line survey at 900' Inc 3* Azm 215*.	17:00 to 19:30	Drill from 925_ ft to 936_ ft with full returns.	19:30 to 20:00	Circulate for trip.	20:00 to 21:00	POOH to 650'	21:00 to 21:30	Run wire line survey at 650' Inc 2* Azm 215*.	21:30 to 22:00	POOH to 568'.	22:00 to 22:30	Run wire line syrvey at 550' Inc 1* Azm 215*.	22:30 to 01:30	POOH break bit.	01:30 to 05:30	Make up bit and pick up mud motor RIH to 887'	05:30 to 06:00	Safety ream from 887' to 900'
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01:30 to 05:30	Make up bit and pick up mud motor RIH to 887'																											
05:30 to 06:00	Safety ream from 887' to 900'																											
<b>Mud Data:</b> MW: 9.2 Viscosity: 63 Fillrate:																												
<b>Surveys:</b> None																												
<b>Daily Costs \$:</b> 45,367		<b>Well Costs \$:</b> 368,115																										
<b>Drilling Days:</b> 9		<b>Completion Days:</b> 0		<b>Workover Days:</b> 0																								
<b>15-Oct-11</b>	<b>Current Depth (ft):</b> 1,180	<b>Hole Drilled (ft):</b> 244	<b>Avg ROP:</b> 9.9																									
<b>Current Ops:</b> Drill 17 1/2" ahead from 1180'																												
<b>Operation Summary:</b> Drill from 936_ ft to 1015_ ft with full returns temp out 148* Deg F. (9 hrs) Service rig. (0.5 hrs) Drill from 1015_ ft to 1079_ ft with full returns temp out 144.8 * Deg F. (7.5 hrs) service rig. (0.5 hrs) Run wire line survey (9no shot). (0.5 hrs) Drill from 1079 ft to 1111_ ft with full returns temp out 144* Deg F. (1.5 hrs) Circulate for survey. (0.5 hrs) Run wire line survey at 1070' 0* Inc 0* Azm. (0.5 hrs) Drill from 1111_ ft to 1180 ft with full returns temp out 144* Deg F. (3.5 hrs)																												



## Well Summary Report

## Lightning Dock Geothermal

Well ID: LDG 53-7

Well Name: 53-7

Field: Lightning Dock

Sect: 7 Town: 25S Rng: 19W County: Hidalgo State: NM

<b>Comments:</b>	06:00 to 15:00	Drill from 936_ ft to 1015_ ft with full returns temp out 148* Deg F.
	15:00 to 15:30	Service rig.
	15:30 to 23:00	Drill from 1015_ ft to 1079_ ft with full returns temp out 144.8 * Deg F.
	23:00 to 23:30	service rig.
	23:30 to 00:00	Run wire line survey (9no shot).
	00:00 to 01:30	Drill from _1079 ft to 1111_ ft with full returns temp out 144* Deg F.
	01:30 to 02:00	Circulate for survey.
	02:00 to 02:30	Run wire line survey at 1070' 0* Inc 0* Azm.
02:30 to 06:00	Drill from 1111_ ft to _1180 ft with full returns temp out 144* Deg F.	

**Mud Data:** MW: 9.4 Viscosity: 65 Filtrate:

**Surveys:** 1070ft - 0 deg Inc, 0 deg Az;

<b>Daily Costs \$:</b>	49,105	<b>Well Costs \$:</b>	417,220
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<b>Drilling Days:</b>	10	<b>Completion Days:</b>	0	<b>Workover Days:</b>	0
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## Chavez, Carl J, EMNRD

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**From:** RigMgrCyrq [rigmgrcyrq@gmail.com]  
**Sent:** Friday, October 14, 2011 10:20 AM  
**To:** Chavez, Carl J, EMNRD; bbarker@cyrqenergy.com  
**Subject:** Morning report for LDG 53-7  
**Attachments:** WellSummaryRpt\_111014101410.pdf

Hi Carl

Here is the report with the corrected API # thank you for seeing that.

Thanks again  
Steve Summit  
(530) 304-5590



## Well Summary Report

## Lightning Dock Geothermal

Well ID: LDG 53-7

Well Name: 53-7

Field: Lightning Dock

Sect: 7 Town: 25S Rng: 19W County: Hidalgo State: NM

Operator: LD Geothermal HI-01, LLC

Working Interest: 1.00

AFE Nos:

API No: 20017

Spud Date: 08-Oct-11

Location: Geothermal

13-Oct-11

Current Depth (ft): 812

**Comments:**

06:00 - 12:30	Drill from _500 ft to 702_ ft with full returns.
12:30 - 13:00	Service Rig.
13:00 - 15:30	Drill from _702 ft to 766_ ft with full returns.
15:30 - 16:00	Circulate for survey.
16:00 - 16:30	Run wire line survey at 716 Inc 3* Azm 215* .
16:30 - 17:00	Circulate bottoms up.
17:00 - 20:30	POOH change stabs around pull one jet from bit due to high pressure.
20:30 - 21:30	Make up bit and stabs.
21:30 - 00:00	RIH to 700'
00:00 - 00:30	Safety ream from 700' to 766'.
00:30 - 01:00	Service rig.
01:00 - 06:00	Drill from 766_ ft to 812_ ft with full returns.

14-Oct-11

Current Depth (ft): 936

**Comments:**

06:00 to 16:00	Drill from _812 ft to 925_ ft with full returns
16:00 to 16:30	Circulate for survey.
16:30 to 17:00	Run wire line survey at 900' Inc 3* Azm 215*.
17:00 to 19:30	Drill from 925_ ft to 936_ ft with full returns.
19:30 to 20:00	Circulate for trip.
20:00 to 21:00	POOH to 650'
21:00 to 21:30	Run wire line survey at 650' Inc 2* Azm 215*.
21:30 to 22:00	POOH to 568'.
22:00 to 22:30	Run wire line survey at 550' Inc 1* Azm 215*.
22:30 to 01:30	POOH break bit.
01:30 to 05:30	Make up bit and pick up mud motor RIH to 887'
05:30 to 06:00	Safety ream from 887' to 900'



## Chavez, Carl J, EMNRD

---

**From:** Smith, Michael A [michaelsmith@blm.gov]  
**Sent:** Thursday, October 13, 2011 3:25 PM  
**To:** Chavez, Carl J, EMNRD  
**Subject:** RE: LDG 53-07 Daily Well Summary (GTHT-001)

Carl:

BLM staff did visit the Lightning Dock site yesterday. They are currently drilling the 53-07 well and there was no activity at the 45-07 well. The only change was near the 55-07 well where they had lined the large reserve pit to the south in anticipation of the flow test they want to conduct in the future.

Ben Barker was onsite and we discussed the operations. Cyrq is still planning a flow test on the 45-7 well pending Federal & State approval. They have not yet submitted a Federal sundry and, based on my conversations with Mr. Barker, it sounds like they still need to work out some details. Mr. Barker stated they were considering managing the formation water produced during the test in this manner: water from the 45-7 well would be pumped into tanks and subsequently sent to the now-lined pit at the 55-7 site. Then, it would be pumped to the 53-7 site for use as make-up water during drilling. He did emphasize they were only considering this, and I urged him to contact OCD because I don't know if this would constitute re-injection under the state regs.

There was a semi-tanker truck at the 53-7 drill site. We asked if they were fueling up, and Mr. Barker said they had bought in the tanker from the Road-Forks terminal because the roadable drilling rig only had a limited capacity, and they did not want to bring in a fuel truck every 1-2 days. So it appears they are basically using this truck for on-site fuel storage. I don't know if this would create an issue with your agency. On Federal surface estate, we generally require a liner and berm around fuel storage tanks.

I will send pictures if you request. We usually try to get staff out once a week while a well's being drilled, so I will keep you posted on developments.

Regards,

Michael Smith  
Geologist - BLM  
Las Cruces District Office  
1800 Marquess Street  
Las Cruces, NM 88005  
575-525-4421  
[mikesmit@blm.gov](mailto:mikesmit@blm.gov)

---

**From:** Chavez, Carl J, EMNRD [<mailto:CarlJ.Chavez@state.nm.us>]  
**Sent:** Thursday, October 13, 2011 2:24 PM  
**To:** RigMgrCyrq  
**Cc:** Sanchez, Daniel J., EMNRD; Dade, Randy, EMNRD; Smith, Michael A  
**Subject:** LDG 53-07 Daily Well Summary (GTHT-001)

Mr. Summitt:

I notice an API number discrepancy in the API# for this well on your attached form. Although the OCD has not officially issued an "API#" for the project geothermal wells on its Risk-Based Data Base System (RBDMS), the Discharge Permit API# designation for Well 53-07 is: 30-023-20017.

The API No. on your attached Well Summary Form for 53-07 form is 30-023-20016, which is representative of Well 47-07. Please verify which well you are working on? Thank you.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462

E-mail: [CarlJ.Chavez@state.nm.us](mailto: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, go to "Pollution Prevention & Waste Minimization" at:  
<http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

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**From:** RigMgrCyrq [<mailto:rigmgrcyrq@gmail.com>]

**Sent:** Thursday, October 13, 2011 10:11 AM

**To:** Chavez, Carl J, EMNRD

**Subject:**

Thank you  
Steve Summitt  
(530)304-5590

## Chavez, Carl J, EMNRD

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Thursday, October 13, 2011 2:24 PM  
**To:** 'RigMgrCyrq'  
**Cc:** Sanchez, Daniel J., EMNRD; Dade, Randy, EMNRD; 'Mike\_Smith@blm.gov'  
**Subject:** LDG 53-07 Daily Well Summary (GTHT-001)

Mr. Summitt:

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Carl J. Chavez, CHMM  
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Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: CarlJ.Chavez@state.nm.us

Website: <http://www.emnrd.state.nm.us/oed/>

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<http://www.emnrd.state.nm.us/oed/environmental.htm#environmental>)

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**From:** RigMgrCyrq [<mailto:rigmgrcyrq@gmail.com>]

**Sent:** Thursday, October 13, 2011 10:11 AM

**To:** Chavez, Carl J, EMNRD

**Subject:**

Thank you  
Steve Summitt  
(530)304-5590

- vi. A copy of any leaks and spills reports submitted in accordance with Permit Condition 15 above.
- vii. A "Miscellaneous" section to include any other issues that should be brought to OCD's attention.
- viii. Discharge Permit Signatory Requirements pursuant to WQCC Regulation Subsection G of 20.6.2.5.101 NMAC.

**21. Class V Geothermal Injection Wells and Geothermal Production or Development Wells:**

**A. Well Identification:**

**i. Class V Geothermal Injection Wells:**

Well No. 42-18 (API No. 30-023-20018)  
Well No. 51-07 (API No. 30-023-20020)  
Well No. 53-12 (API No. 30-023-20019)

**ii. Geothermal Production or Development Wells:**

Well No. 13-07 (API No. 30-023-20013)  
Well No. 33-07 (API No. 30-023-20014)  
Well No. 45-07 (API No. 30-023-20015)  
Well No. 47-07 (API No. 30-023-20016)  
Well No. 53-07 (API No. 30-023-20017)

**B. Well Casing and Cementing Requirements:**

- i. The owner/operator shall ensure that all casing and cementing meets or exceeds the requirements of 19.14.27.8 NMAC (*Casing and Cementing Requirements*). Conductor pipe shall be run to a minimum depth of 100 feet.
- ii. Surface casing shall be to a depth of at least 100 feet greater than the deepest fresh water well within one-half mile from the well location.
- iii. Intermediate strings shall be cemented solid to surface.
- iv. Production casing shall either be cemented solid to the 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.

## Chavez, Carl J, EMNRD

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**From:** RigMgrCyrq [rigmgcyrq@gmail.com]  
**Sent:** Thursday, October 13, 2011 10:11 AM  
**To:** Chavez, Carl J, EMNRD  
**Attachments:** DailyWellSummaryRpt\_111013095122.pdf

Thank you  
Steve Summitt  
(530)304-5590



# Daily Well Summaries

# Lightning Dock Geothermal

Report for Period 13-Oct-11 to 13-Oct-11

Well ID: LDG 53-7

Well Name: 53-7

Report No: 8

Date: 13-Oct-11

Rig Name: Pathfinder

Operator:	Cyrq Energy	AFE No:	
Field:	Lightning Dock	AFE \$:	
API No:	30-023-20016	Total Daily Costs \$:	19,525
MD / TVD (ft):	812 / 812	Total Well Costs \$:	323,448
Hole Drilled/Average ROP:	312 / 22.3	Daily Mud Costs \$:	0
Drilling Days:	8	Total Mud Costs \$:	1,765
Proposed TD (ft):	3400	Working Interest:	
Last BOP Test:		Well Bore:	Original Well Bore

Current Operations: Drill 17 1/2" hole ahead from 812'

Supervisor: Steve Summitt

Tel #:

Comments: 06:00 - 12:30 Drill from \_500 ft to 702\_ ft with full returns.  
12:30 - 13:00 Service Rig.  
13:00 - 15:30 Drill from \_702 ft to 766\_ ft with full returns.  
15:30 - 16:00 Circulate for survey.  
16:00 - 16:30 Run wire line survey at 716 Inc 3\* Azm 215\* .  
16:30 - 17:00 Circulate bottoms up.  
17:00 - 20:30 POOH change stabs around pull one jet from bit due to high pressure.  
20:30 - 2130 Make up bit and stabs.  
21:30 - 00:00 RIH to 700'  
00:00 - 00:30 Saftey ream from 700' to 766'.  
00:30 - 01:00 Service rig.  
01:00 - 06:00 Drill from 766\_ ft to 812\_ ft with full returns.

## Chavez, Carl J, EMNRD

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**From:** kevin stimson [stimson.inc@hotmail.com]  
**Sent:** Tuesday, October 11, 2011 9:26 AM  
**To:** Dade, Randy, EMNRD; Gray, Darold, EMNRD; Phillips, Haddy L., OSE; ben barker; Jackson, Charles L., OSE; Chavez, Carl J, EMNRD; Michael Smith  
**Subject:** LDG 53-7 Update

ALL,  
24hr update, 0700-1400 Ran 9 joints 20" 94# J-55 casing with float shoe and float collar to 393ft  
1400-1530 Rigged down casing crew, Circulated to condition well bore  
1530-1730 Ran in hole with stab in tool and 4" drill pipe to 376ft, stabbed into float collar  
1730-1900 Circulated to condition well bore, Rigged up Haliburton, Safety meeting  
1900-2000 Pumped 2bbls water, Pressure tested lines to 3700psi, Pumped 10bbls water, 20bbls Chem wash,  
106bbls/320sk lead cement at 12.5ppg yeilding 1.86gps with 9.54 gal/sk mix water, 50%  
excess  
Got cement returns switched to Tail cement at 15.8ppg, Yeilding 1.15gps with 4.97 gal/sk mix  
water,  
Dropped dart, Displaced wit 4.1bbls water, Landed dart with 887psi, Released pressure, Float  
held,20:00hr,  
CIP @ 20:00 on 10/10/2011  
2000-2100 Tripped out of hole with 4" drill pipe and stab in tool  
2100-0600 WOC

Current Operations      Nippling don 30" Pitch nipple

Planned Operations,      Nipple down 30" pitcher nipple, Nipple up 20" pitch nipple, Fabricate flow line, Make up 17.5  
BHA, Run in hole  
Drill out Float, Cement Float shoe, drill ahead

## Chavez, Carl J, EMNRD

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**From:** kevin stimson [stimson.inc@hotmail.com]  
**Sent:** Monday, October 10, 2011 7:37 AM  
**To:** Dade, Randy, EMNRD; Gray, Darold, EMNRD; Phillips, Haddy L., OSE; ben barker; Jackson, Charles L., OSE; Chavez, Carl J, EMNRD; Michael Smith  
**Subject:** LDG 53-7 24hr Update

All,  
06:00-20:00 Drilled 26" hole from 215ft to 405ft  
20:00-06:00 Circulated, Conditioned hole, Wiper trip to shoe, Back to bottom, Circulated to clean well bore and conditioned mud, Prepared for 20" casing

Planned operation-- Run 20" 94# J-55 casing to 395ft, Cement with 13.5# lead and 15.8# tail through drill pipe and stab in

Thank you  
Kevin Stimson  
stimson.inc@hotmail.com  
307-751-1630



## Chavez, Carl J, EMNRD

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**From:** kevin stimson [stimson.inc@hotmail.com]  
**Sent:** Sunday, October 09, 2011 10:03 AM  
**To:** Dade, Randy, EMNRD; Gray, Darold, EMNRD; Phillips, Haddy L., OSE; ben barker; Jackson, Charles L., OSE; Chavez, Carl J, EMNRD; Michael Smith  
**Subject:** LDG 53-7 24hr report

ALL,

24hr report- drilled 26" hole from 57ft to 215ft.

Current Operation Drilling ahead from 215ft.

Planned operation drill ahead to 400+- , 26" hole section TD, Wiper trip, Run 20 " casing , Cement to surface