

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
**NM OIL CONSERVATION**  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-101  
Revised July 18, 2013

☐ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address <b>VANGUARD PERMIAN LLC</b> <b>5847 SAN FELIPE, SUITE 3000</b> <b>HOUSTON, TEXAS 77057</b>		<sup>2</sup> OGRID Number <b>258350</b> <sup>3</sup> API Number <b>30-015-26709</b>
<sup>4</sup> Property Code <b>312391</b>	<sup>5</sup> Property Name <b>CANDIE 13</b>	<sup>6</sup> Well No. <b>1</b>

**7. Surface Location**

UL - Lot <b>M</b>	Section <b>13</b>	Township <b>23S</b>	Range <b>28E</b>	Lot Idn	Feet from <b>660</b>	N/S Line <b>SOUTH</b>	Feet From <b>560</b>	E/W Line <b>WEST</b>	County <b>EDDY</b>
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**\* Proposed Bottom Hole Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
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**9. Pool Information**

Pool Name <b>EAST LOVING DELAWARE</b>	Pool Code <b>40370</b> <b>80695</b>
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**Additional Well Information**

<sup>11</sup> Work Type <b>P</b>	<sup>12</sup> Well Type <b>OIL</b>	<sup>13</sup> Cable/Rotary	<sup>14</sup> Lease Type <b>FEE</b>	<sup>15</sup> Ground Level Elevation <b>2967.7 GL</b>
<sup>16</sup> Multiple	<sup>17</sup> Proposed Depth <b>6286</b>	<sup>18</sup> Formation <b>Delaware</b>	<sup>19</sup> Contractor	<sup>20</sup> Spud Date
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
		<b>8 5/8</b>	<b>24#</b>	<b>582</b>	<b>350 SX CIRC</b>	
		<b>5 1/2</b>	<b>15.50#</b>	<b>6300</b>	<b>675 SX 1<sup>ST</sup></b>	<b>stage</b>
					<b>820sx DV</b>	<b>tool</b>

**Casing/Cement Program: Additional Comments**

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**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/> if applicable. Signature: <i>Gaye Heard</i> Printed name: <b>GAYE HEARD</b> Title: <b>AGENT</b> E-mail Address: <b>gheard@oilreportsinc.com</b> Date: <b>7-30-14</b> Phone: <b>575-393-2727</b>		<div style="text-align: center;">OIL CONSERVATION DIVISION</div> Approved By: <i>T.C. Shepard</i> <div style="text-align: center;"><b>"Geologist"</b></div> Title: Approved Date: <b>8-1-2014</b> Expiration Date: <b>8-1-2016</b> Conditions of Approval Attached
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State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-26709		<sup>2</sup> Pool Code <del>312391</del> 40370		<sup>3</sup> Pool Name East Loving Delaware	
<sup>4</sup> Property Code 312391		<sup>5</sup> Property Name CANDIE 13			<sup>6</sup> Well Number 1
<sup>7</sup> OGRID No. 258350		<sup>8</sup> Operator Name VANGUARD PERMIAN LLC			<sup>9</sup> Elevation 2967.7 GL

### <sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	13	23S	28E		660	SOUTH	560	WEST	EDDY

<sup>u</sup> 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
<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.					

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

16				<p><b>17 OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p><u>Gaye Heard</u> 7-30-14 Signature Date</p> <p><u>GAYE HEARD</u> Printed Name</p> <p><u>gheard@oilreportsinc.com</u> E-mail Address</p>
				<p><b>18 SURVEYOR CERTIFICATION</b></p> <p><i>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 belief.</i></p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>Certificate Number</p>

VANGUARD PERMIAN LLC

CANDIE 13 #1

M 13 T23S R28E 660/S & 560/W API#30-015-26709

Candie 13-1

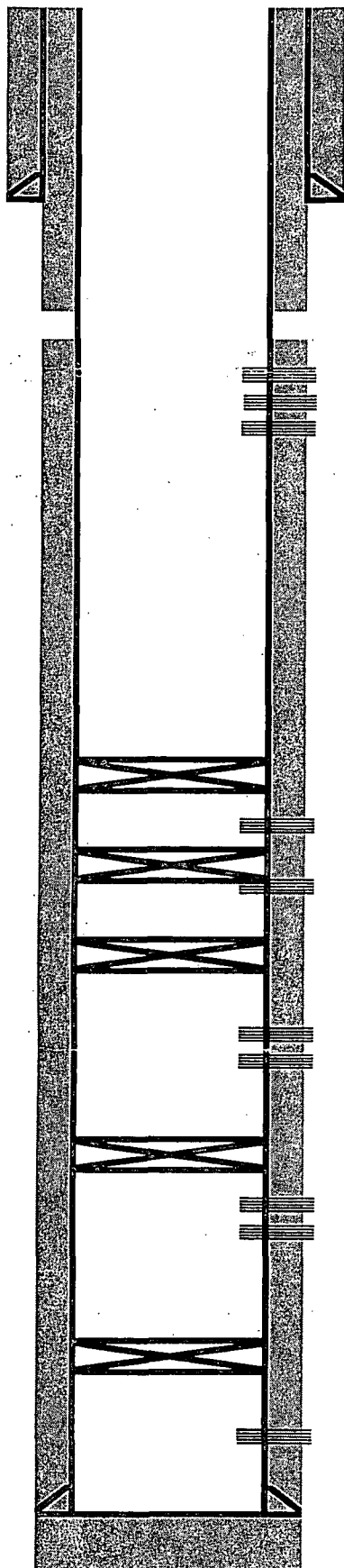
**Procedure:**

1. MIRU completion rig and test anchors.
2. Kill well with 2% KCL water, if necessary. Unseat pump and POOH w/ rods and pump.
3. ND WH and NU BOP. Release TAC and POOH w/ tubing. Lay out 2-7/8" tubing.
4. PU, strap and TIH with 4-3/4" bit, 5-1/2" casing scraper and 2-7/8" tubing. Drill out CIBP @ 5290', 5340', and 5490' and Clean out hole to PBDT (5738') until clean returns, POOH
5. PU packer and set @ 5495', get injection rate. **\*\*Monitor Backside pressure.\*\*** Then pull up and set packer @ 5295', and get injection rates. POOH.  
**\*\*If the zones are in communication, do steps 6a-16a, else do steps 6b-17b.\*\***
- 6a. PU a 5-1/2" Cement Retainer and RIH to 5280' and set.
- 7a. Pump cement squeeze as per procedure. Release from retainer and reverse circulate until returns are clean. POOH.
- 8a. PU 4-3/4" bit to drill out cement retainer and cement in casing.
- 9a. RIH w/ packer, set @ 5295', test squeeze to 500 psi.
- 10a. Drill out CIBP @ 5738' and 6017'. Clean out to PBDT (6286') until clean returns. POOH.
- 11a. PU, strap and TIH with 4-3/4" bit, 5-1/2" casing scraper and 3-1/2" frac string tubing. Drill out cement plug and CIBP @ 5738 and 6017' and clean out hole to PBDT (6286').
- 12a. RIH w/ 5-1/2" TAC, SN and 2-7/8" tubing. Set SN at ~6180', discuss with Mike Jones.
- 13a. RIH w/ swab and test for fluid entry.
- 14a. RIH w/ rods and pump.
- 15a. RD & MO.
- 16a. Turn well on to production.
- 6b. PU a 5-1/2" Cement Retainer and RIH to 5500' and set.
- 7b. Pump Stage 1 cement squeeze as per procedure. Release from retainer and reverse circulate until returns are clean. POOH.
- 8b. PU a 5-1/2" Cement Retainer and RIH to 5285' and set.
- 9b. Pump Stage 2 cement squeeze as per procedure. Release from retainer and reverse circulate until returns are clean. POOH.
- 10b. PU 4-3/4" bit to drill out cement retainer and cement in casing.
- 11b. RIH w/ packer, set @ 5275', test squeeze to 500 psi.
- 12b. PU, strap and TIH with 4-3/4" bit, 5-1/2" casing scraper and drill out CIBP @ 5738' and 6017'. Then clean out hole to PBDT (6286')
- 13b. RIH w/ 5-1/2" TAC, SN and 2-7/8" tubing. Set SN at ~6180', discuss with Mike Jones.
- 14b. RIH w/ swab and test for fluid entry.
- 15b. RIH w/ rods and pump.
- 16b. RD & MQ.
- 17b. Turn well on to production.



**Candie 13-1**  
**Loving East - 30-015-26709**  
**Eddy County, New Mexico**  
**CURRENT COMPLETION - 7/2014**

KB: 2993'  
 GL: 2979'



**CASING PROGRAM**

<u>Depth</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>I.D.</u>	<u>Collapse</u>	<u>Burst</u>
582'	8 5/8"	24#	R-1	8.097"		
6300'	5 1/2"	15.5#	J-55	4.95"	4,040	4,810

**Cement**

Surface: 350 sx Class C. TOC @ surf  
 Production: 1st Stage w/ 375 sx 50/50 Poz C + 300 sx Class C. 2nd Stage w/  
 720 sx 35/65 Poz C + 100 sx Class C TOC @ surf

DV tool @ 3513'

Pardue Perforations:  
 4767' - 4779'  
 4786' - 4804' 104 holes  
 4811' - 4830'

CIBP @ 5290'

Brushy Canyon  
 5306' - 5338' Reperfed 5306' - 5326' - 80 holes

CIBP @ 5347'

5350' - 5394' 156 holes

CIBP @ 5490'

Brushy Canyon  
 5516' - 5540' 82 holes  
 5554' - 5569'

CIBP @ 5738'

Brushy Cayon "AA"  
 5804' - 5822' 40 holes  
 5851' - 5871'

CIBP @ 6017'

Brushy Canyon "C"  
 6147' - 6160' - 54 holes

PBTD = 6288'

**History - Highlights**

4/91 - Well Spudded  
 4/91 - Frac'd 6147' - 6160' w/ 35000# 16/30 sand. ISIP=600# (Screened out)  
 6/92 - Frac'd 6147' - 6160' w/ 18250# 20/40 + 10000# 20/40 RC. ISIP=?  
 6/92 - Frac'd 5804' - 5871' w/ 33000# 20/40 sand + 13000# RC sand. ISIP=430#  
 10/02 - Frac'd 5516' - 5569' w/ 76060# 16/30 sand + 28200# 16/30 CR4000. ISIP=896#  
 11/02 - Frac'd 5306' - 5394' w/ 113320# 16/30 sand + 40010# RC sand. ISIP=950#  
 12/02 - Perfed 5306' - 5326' w/ 80 holes to try and improve production.  
 5/03 - Frac'd 4767' - 4830' w/ 90760# 16/30 sand + 34100# CR4000. ISIP=975#

*Note: This schematic is not to scale. For display purposes only.*



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DV tool @ 3513'

**Pardue Perforations:**

4767' - 4779'  
 4786' - 4804'  
 4811' - 4830'      104 holes

**Brushy Canyon**

5306' - 5338'      Reperfed 5306' - 5326' - 80 holes

5350' - 5394'      156 holes

**Squeezed**  
**5306' - 5569'**  
**Proposed 7/14**

**Brushy Canyon**

5516' - 5540'  
 5554' - 5569'      82 holes

**Brushy Cayon "AA"**

5804' - 5822'  
 5851' - 5871'      40 holes

**Brushy Canyon "C"**

6147' - 6160' - 54 holes

PBTD = 6288'

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