

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

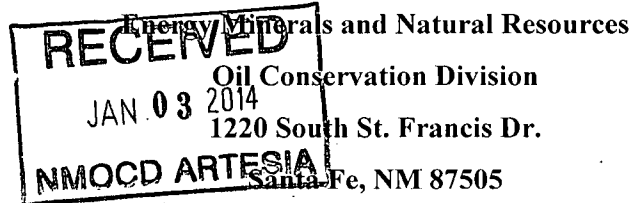
**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**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

Form C-101  
Revised July 18, 2013



☐ AMENDED REPORT

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

1. Operator Name and Address <b>VANGUARD PERMIAN LLC P O BOX 1570 281 NORTH NM HIGHWAY 248 EUNICE, NM 88231</b>		2. OGRID Number <b>258350</b>
		3. API Number <b>30-015-26368</b>
4. Property Code <b>009456</b>	5. Property Name <b>South Culebra Bluff 23</b>	6. Well No. <b>12</b>

7. Surface Location <b>NORTH</b>									
UL - Lot <b>H</b>	Section <b>23</b>	Township <b>23S</b>	Range <b>28E</b>	Lot Idn	Feet from <b>2140</b>	N/S Line <b>SOUTH</b>	Feet From <b>400</b>	E/W Line <b>EAST</b>	County <b>EDDY</b>

8. Proposed Bottom Hole Location									
UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information	
Pool Name <b>Loving; Brushy Canyon; EAST</b>	Pool Code <b>40360</b>

Additional Well Information				
11. Work Type <b>P</b>	12. Well Type <b>OIL</b>	13. Cable/Rotary	14. Lease Type <b>STATE</b>	15. Ground Level Elevation <b>2992.4</b>
16. Multiple	17. Proposed Depth <b>6280</b>	18. Formation <b>BRUSHY CANYON</b>	19. Contractor	20. 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
	12 1/4	8 5/8	24	579	350	
	7 7/8	5 1/2	15.5	6310	1795	

### Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program			
Type	Working Pressure	Test Pressure	Manufacturer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that 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: <b>Gaye Heard</b>		OIL CONSERVATION DIVISION	
Printed name: <b>GAYE HEARD</b>		Approved By: <b>T. C. Shepard</b>	
Title: <b>AGENT</b>		Title: <b>"Geologist"</b>	
E-mail Address: <b>gheard@oilreportsinc.com</b>		Approved Date: <b>1-3-2014</b> Expiration Date: <b>1-3-2015</b>	
Date: <b>12-31-2013</b>	Phone: <b>575-393-2727</b>	Conditions of Approval Attached	

VANGUARD PERMIAN LLC

SOUTH CULEBRA BLUFF #12

Unit H Sec 23 T23S R28E API #30-015-26368

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 PGOH w/ tubing.
4. PU, strap and TIH with 4-3/4" bit, 5-1/2" casing scraper and 2-7/8" tubing. Clean out hole to PBTD (6280') until clean returns, POOH
5. MI wireline w/ packoff. RIH CIBP, GR/CCL
6. Set CIBP @~6170'.
7. MU 3-1/8" casing guns set at 4 spf, 120° phasing (0.38" hole, 39.5" penetration).
8. Perforate as follows:
  - a. 5982' – 5993' (9', 36 shots)
  - b. 6001' – 6014' (13', 52 shots)
  - c. 6072' – 6086' (14', 56 shots)
  - d. 6144' – 6148' (4', 16 shots)
  - e. 6155' – 6164' (9', 36 shots)
9. MU 3-1/8" casing guns set at 2 spf, 120° phasing (0.38" hole, 39.5" penetration)
10. Perforate as follows:
  - a. 5870' – 5882' (12', 24 shots)
  - b. 5902' – 5912' (10', 20 shots)
  - c. 5922' – 5926' (4', 8 shots)
11. RD wireline.
12. PU a 5-1/2" Arrowset I packer and RIH to ~5860'. Load tubing/hole with 2 % KCl and set packer. Test csg/packer down backside to 3500 psi.
13. MIRU pump truck and test lines to 3500 psi.
14. Pump 4000 gals 15% NEFE acid with rock salt.
  - a. Pump 500 gal then pump 4000 lbs rock salt over next 3000 gals.
  - b. Pump last 500 gals and flush to 6164'.
  - c. Record ISIP, 5 min, 10 min and 30 min.
15. RIH w/ 5-1/2" TAC, SN and 2-7/8" tubing. Set SN at ~5850', discuss with Mike Jones.
16. RIH w/ rods and pump.
17. Turn well on to production.



# SCB 23 #12

Loving East - 30-015-26368

Eddy County, New Mexico

PROPOSED COMPLETION - 12/2013

KB: 14'

GL: -

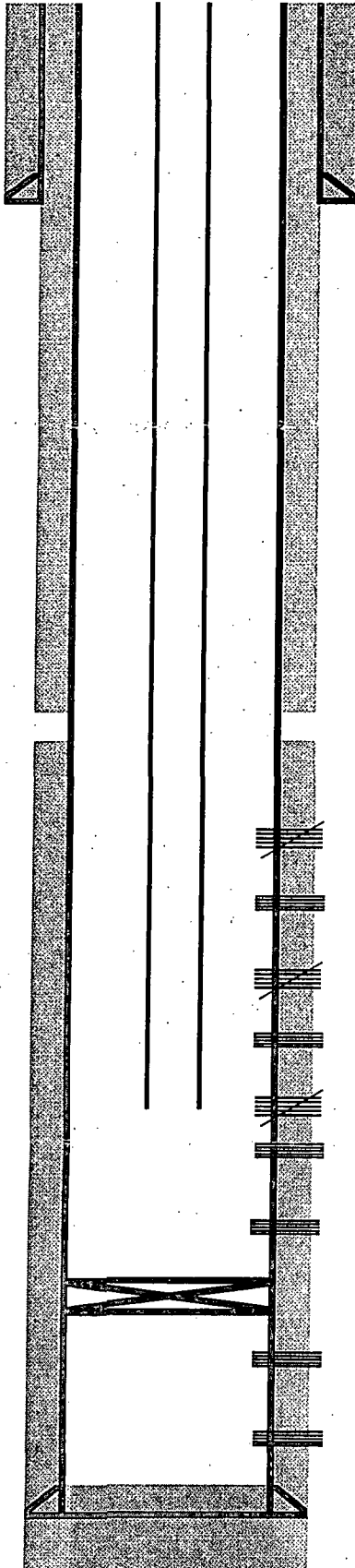
TOC @ surf  
350 sxs

8 5/8" csg @ 579'

TOC @ surf  
1100 sxs  
DV Tool @ 3534'

185 sx Lead  
400sx Tail

5 1/2" csg @ 6350'



## CASING PROGRAM

Depth	Size	Weight	Grade	I.D.	Collapse	Burst
579'	8 5/8"	24#	J-55	8.097	1,370	2,950
6350'	5 1/2"	15.5#	J-55	4.950	4,040	4,810

## PRODUCTION TUBING

Depth	Size	Weight	Grade	Threads
unknown	2 7/8"	6.5#	J-55	EUE

### Brushy Canyon AA Perforations:

5,834' - 5,836' (6 spf, 12 holes)  
5,870' - 5,882' (2 spf, 24 holes)  
5,902' - 5,912' (2 spf, 20 holes)  
5,922' - 5,926' (2 spf, 8 holes)

### Brushy Canyon A Perforations:

5,970' - 5,972' (6 spf, 12 holes)  
5,982' - 5,993' (4 spf, 44 holes)  
6,001' - 6,014' (4 spf, 52 holes)

### Brushy Canyon B Perforations:

6,053' - 6,055' (6 spf, 12 holes)  
6,072' - 6,086' (4 spf, 56 holes)

### Brushy Canyon C Perforations 52 holes:

6,144' - 6,148' (4 spf, 16 holes)  
6,155' - 6,164' (4 spf, 36 holes)

### Brushy Canyon C Perforations 50 holes:

6,180' - 6,188' (1 spf, 25 holes)  
6,196' - 6,202' (1 spf, 25 holes)

### Brushy Canyon D Perforations 75 holes:

6,214' - 6,218' (1 spf, 25 holes)  
6,228' - 6,234' (1 spf, 25 holes)  
6,253' - 6,257' (1 spf, 25 holes)

PBTD = 6,280' FC

Squeezed 9/2007

**PROPOSED**

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**PROPOSED**

Squeezed 9/2007

**PROPOSED**

**PROPOSED**

Squeezed 9/2007

**PROPOSED**

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**CIBP @ 6170'**

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



**SCB 23 #12**  
**Loving East - 30-015-26368**  
**Eddy County, New Mexico**  
 CURRENT COMPLETION - 12/2013

KB: 14'  
 GL: -

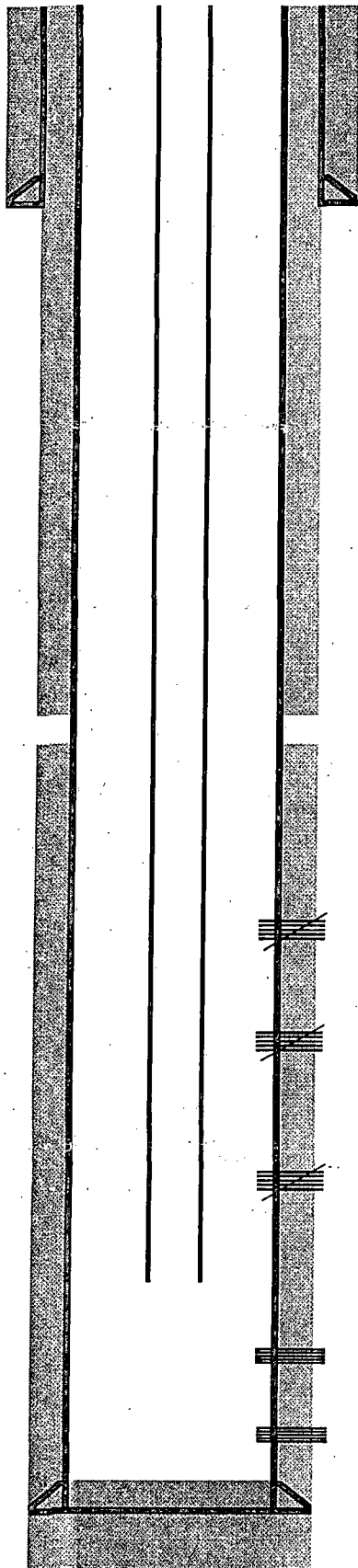
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8 5/8" csg @ 579'

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 400sx Tail

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**CASING PROGRAM**

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579'	8 5/8"	24#	J-55	8.097	1,370	2,950
6350'	5 1/2"	15.5#	J-55	4.950	4,040	4,810

**PRODUCTION TUBING**

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unknown	2 7/8"	6.5#	J-55	EUE

Brushy Canyon AA Perforations 12 holes: **Squeezed 9/2007**  
 5,834' - 5,836' (6 spf, 12 holes)

Brushy Canyon A Perforations 12 holes: **Squeezed 9/2007**  
 5,970' - 5,972' (6 spf, 12 holes)

Brushy Canyon B Perforations 12 holes: **Squeezed 9/2007**  
 6,053' - 6,055' (6 spf, 12 holes)

Brushy Canyon C Perforations 75 holes:  
 6,180' - 6,188' (1 spf, 25 holes)  
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 Brushy Canyon D Perforations 75 holes:  
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