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

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State of New Mexico

Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

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

Operator Name and Address	2. OGRID Number
VANGUARD PERMIAN LLC P O BOX 281 NORTH HIGHWAY 248 EUNICE, NM 88231	258350
	3. API Number 30-025-37540

Property Code	5. Property Name	6. Well No
~~G01557~~ 312481	NEW MEXICO M STATE	55

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
E	17	22S	37E		1650	NORTH	990	WEST	LEA

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	Pool Code
PENROSE SKELLY GRAYBURG	50350

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
P	O		STATE	3411
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
NO	4401	GRAYBURG		
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	1051	200 SX 35/65	
					POZ/C 180 SX C	
	7 7/8	5 1/2	15.5	4395	250 SX 50.50 POZ/C	

Casing/Cement Program: Additional Comments

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 ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.** Signature: Kaye Heard	OIL CONSERVATION DIVISION
Printed name: GAYE HEARD	Approved By: Petroleum Engineer
Title: AGENT	Title:
E-mail Address: gheard@oilreportsinc.com	Approved Date: NOV 26 2013 / Expiration Date:
Date: 11-14-2013 / Phone: 575-393-2727	Conditions of Approval Attached

NOV 26 2013

VANGUARD PERMIAN, LLC

WORKOVER PROCEDURE
Add Perforations and stimulate the Grayburg,
Then add perforations and stimulate the Penrose Skelly
NM M State #55
Eunice Area
Lea County, New Mexico
10/17/2013

AFE #

Well Data:

RKB - GL: 3411' / 3401'
Surf. Casing: 8-5/8", 24# K-55, set at 1051'
Prod. Casing: 5-1/2", 15.5# K-55, set at 4395'
Tbg & Pkr: 2 7/8", 6.5# J-55 EUE, set at unknown
Perforations: San Andres 3,876' – 4,072' (See WBD)
PBTD: 4,356' FC WLM,
BHP: Not certain – well on pump
BHT: 90°F @ TD

Casing Specifications

Depth (ft)	Casing Wt & Grade	Burst	Col	Body Yield	JT Yield	Wall	ID	Drift Dia.	Top Cmt
0 – 1051'	8-5/8, 24#, J-55 ST&C	2,950	1,370	630	381	-	8.097	7.972	Surf.
0 – 4,395'	5-1/2", 15.5#, K-55	4,810	4,040	248	239	-	4.95	4.825	Surf.

Safety:

Vanguard's policy on safety as employees and contractors is for everyone to go home safely every day. To this end a safety meeting involving all persons on location will be held at the beginning of each day and prior to any significant activity during the course of this operation. **It is the responsibility of the Wellsite Supervisor to lead these safety**

meetings, document attendance, note in the daily report, and retain the documentation for the permanent well record.

While there are multiple aspects running a safe operation, one key point that should be made at each safety meeting is the Stop Work Authority (SWA) policy. The SWA Policy grants all persons on a Vanguard site, facility, location, or property the **Right, Obligation, Authority, and Responsibility** to stop any work or action that are unsafe to personnel, equipment, or that if continued may damage the environment. This is a key component of our safety policy and must be conveyed to all personnel on location.

Scope of Operations:

Isolate the current San Andres interval and add 30 new perforations to the Grayburg Formation and fracture stimulate. Comingle with the San Andres if possible.

Contact Information:

Name	Title	Office	Cell
Bryan Kindred	Workover Foreman		575-602-1788
Mike Jones	Production Foreman	575-396-0812	575-390-4611
Newt Painter	Production Superintendent	432-362-2209	432-438-3872
Randall Hicks	Senior Operations Engineer	832-377-2207	713-252-1626
Frank Lemkowitz	Operations Manager	832-377-2237	713-560-3122

Procedure:

1. MIRU completion rig and test anchors.
2. Unseat pump and POOH w/ rods and pump.
3. ND WH and NU BOP. Kill well with 2% KCL water, if necessary. Release TAC and POOH w/ tubing.
4. PU, strap and TIH with 4-3/4" bit, 5-1/2" casing scrapper & 2-7/8" tubing. Clean out hole to PBTD (4451') until clean returns, POOH.
5. MI wireline w/ packoff. RIH w/ CBP and GR/CCL & correlate to the Halliburton Spectral Density/Dual-spaced Neutron/GR log dated 6/08/2006.
6. Set CBP @ ~3865'. Test CBP to 3700 psi
7. MU 3-1/8" slick casing guns set at 3 spf, 120° phasing (0.40" hole, 21" penetration).
8. Perforate as follows:
   a. 3696' – 3706' (10', 30 shots)
   b. 3884' – 3848' (4'. 12 shots) – (42 total shots)
9. RD wireline.
10. PU a 5-1/2" Arrowset I packer and RIH to ~36750'. Load tubing/hole with 2 % KCl and set packer. Test csg/packer to 3700 psi.
11. MIRU pump truck and test lines to 3500 psi.
12. Pump 2500 gals 15% NEFE acid with 75 ball sealers.

a. Pump 500 gal then drop 75 balls over next 1500 gals.
b. Pump last 500 gals and flush to 3848'.
c. Record ISIP, 5 min, 10 min and 30 min.

13. RU swabber and swab well in to test acid job. Recover load and report fluid/gas entry.
14. Load hole and release packer, POOH and lay out tubing.
15. RDMO completion rig.
16. Call out 3-500 bbl tanks & fill with 2% KCl water. Install frac valve in preparation for frac job.
17. RU frac Co. and test lines & pump as per frac schedule.
18. Monitor ISIP, 10 min, 15 min. Flowback until well dies.
19. MIRU completion rig.
20. RIH w/ 5-1/2" TAC, SN and 2-7/8" tubing. Set SN at 3600'.
21. RIH w/ rods and pump.
22. RD & MO.
23. Turn well on to production.
24. Test well to get comingle permit.
25. See additional procedure to comingle zones, if needed.

Note: It is the responsibility of Wellsite Supervisor to enter all daily activity reports and costs into WellView on a timely basis.

Originator:

Randall Hicks
Senior Operations Engineer

Approved:

Frank Lemkowitz
Operations Manager

VANGUARD PERMIAN, LLC

NM M State #55
Eunice SA SW Field - 30-025-37540
Lea County, New Mexico
PROPOSED COMPLETION - 10/2013

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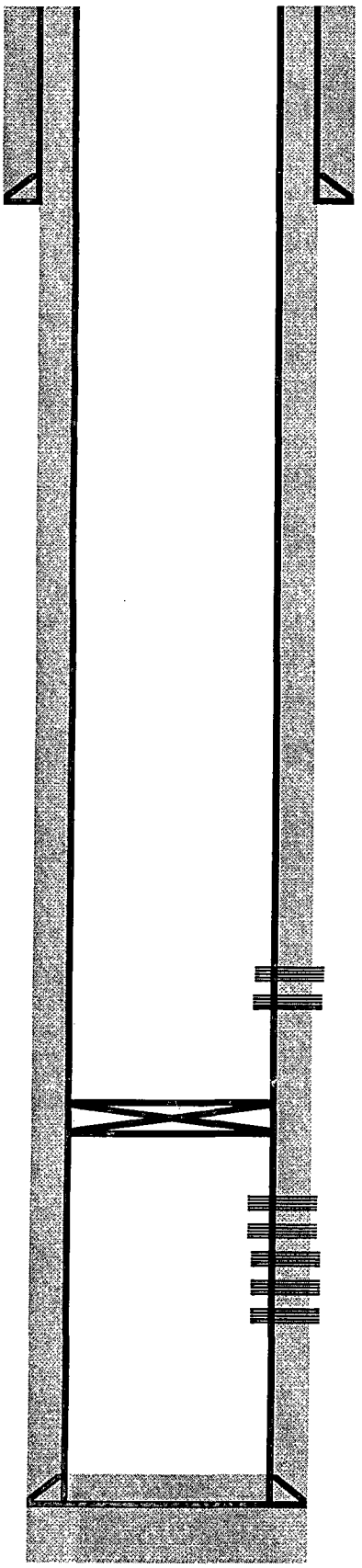
KB: 3412'
GL: 3402'

TOC @ surf
380 sxs

8 5/8"csg @ 1051'

TOC @ 2380'
680 sxs
by log

5 1/2"csg @ 4395'



CASING PROGRAM

Depth	Size	Weight	Grade	I.D.	Collapse	Burst
1051'	8 5/8"	24#	J-55	8.097	1,370	2,950
4395'	5 1/2"	15.5#	K-55	4.950	4,040	4,810

PRODUCTION TUBING

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

Grayburg Perforations 30 holes:
3,696' - 3,706' (3 spf, 30 holes) **PROPOSED**
3,844' - 3,848' (3 spf, 12 holes) **PROPOSED**

CIBP @ 3865'

San Andres Perforations 220 holes:
3,876' - 3,886' (2 spf, 20 holes)
3,898' - 3,930' (2 spf, 64 holes)
3,966' - 3,972' (2 spf, 16 holes)
3,992' - 4,018' (2 spf, 52 holes)
4,038' - 4,072' (2 spf, 68 holes)

PBTD = 4,356' FC

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

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VANGUARD PERMIAN, LLC

NM M State #55
Eunice SA SW Field - 30-025-37540
Lea County, New Mexico
CURRENT COMPLETION - 10/2013

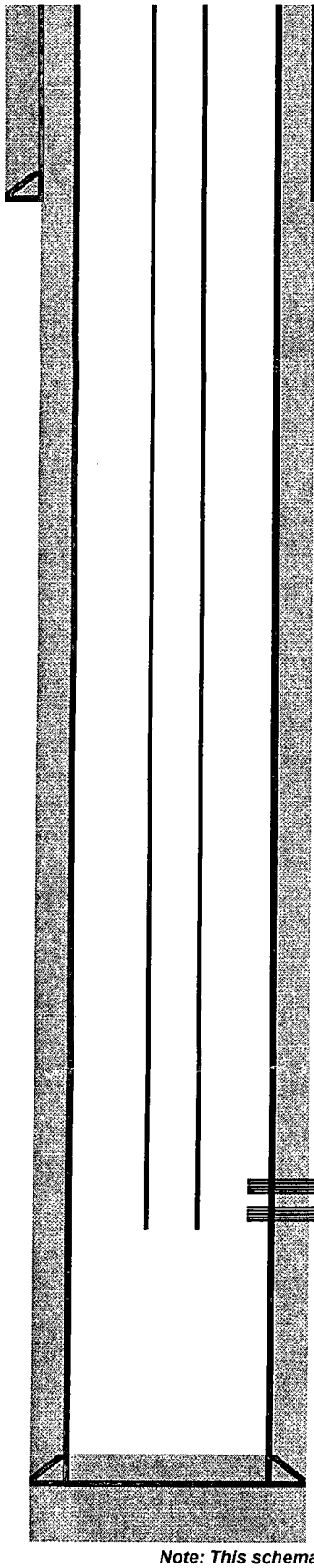
KB: 3411'
GL: 3401'

TOC @ surf
380 sxs

8 5/8"csg @ 1051'

TOC @ 2380'
680 sxs
by log

5 1/2"csg @ 4395'



CASING PROGRAM

Depth	Size	Weight	Grade	I.D.	Collapse	Burst
1051'	8 5/8"	24#	J-55	8.097	1,370	2,950
4395'	5 1/2"	17#	K-55	4.892	4,910	5,320

PRODUCTION TUBING

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

San Andres Perforations 220 holes:
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