

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101  
May 27, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address CHEVRON U.S.A. INC. 15 SMITH ROAD MIDLAND, TEXAS 79705		<sup>2</sup> OGRID Number 4323
		<sup>3</sup> API Number 30 - 025-02260
<sup>4</sup> Property Code 30022	<sup>5</sup> Property Name VACUUM GRAYBURG SAN ANDRES UNIT	
		<sup>6</sup> Well No. 13
<sup>9</sup> Proposed Pool 1 VACUUM GRAYBURG SAN ANDRES		<sup>10</sup> Proposed Pool 2

**7 Surface Location**

UL or lot no. P	Section 1	Township 18-S	Range 34-E	Lot Idn	Feet from the 660'	North/South line SOUTH	Feet from the 660'	East/West line EAST	County LEA
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**8 Proposed Bottom Hole Location If Different From Surface**

UL or lot no. I	Section 1	Township 18-S	Range 34-E	Lot Idn	Feet from the 2550'	North/South line SOUTH	Feet from the 400'	East/West line EAST	County LEA
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**Additional Well Information**

<sup>11</sup> Work Type Code D <i>Horizontal</i>	<sup>12</sup> Well Type Code O	<sup>13</sup> Cable/Rotary ROTARY	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3984' GL
<sup>16</sup> Multiple NO	<sup>17</sup> Proposed Depth 6366'	<sup>18</sup> Formation SAN ANDRES	<sup>19</sup> Contractor	<sup>20</sup> Spud Date 10-15-2005
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic <input type="checkbox"/> _____mils thick Clay <input type="checkbox"/> Pit Volume: _____bbls Drilling Method:				
Closed-Loop System <input type="checkbox"/> SEE ATTACHED C-144 Fresh Water <input type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

**21 Proposed Casing and Cement Program**

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
NO CHANGE					

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

KICK OFF POINT - 4142'  
TOP OF WINDOW - 4131'  
BOTTOM OF WINDOW - 4139'  
TARGET INTERVAL - 4337-4539'  
LENGTH OF LATERAL - 1900'

Permit Expires 1 Year From Approval  
Date Unless Drilling Underway

*Horizontal*



<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 the drilling pit will be constructed according to NMOC guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Printed name: DENISE PINKERTON *Denise Pinkerton*  
Title: REGULATORY SPECIALIST  
E-mail Address: LEAKEJD@CHEVRON.COM

Date: 9-21-2005

Phone: 432-687-7375

**OIL CONSERVATION DIVISION**

Approved by:

Title:

**PETROLEUM ENGINEER**

Approval Date:

**OCT 03 2005**

Expiration Date:

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 June 10, 2003

Submit to: Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☒ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-025-02260		<sup>2</sup> Pool Code 62180		<sup>3</sup> Pool Name VACUUM GRAYBURG SAN ANDRES	
<sup>4</sup> Property Code 30022		<sup>5</sup> Property Name VACUUM GRAYBURG SAN ANDRES UNIT			<sup>6</sup> Well Number 13
<sup>7</sup> OGRID No. 4323		<sup>8</sup> Operator Name CHEVRON U.S.A. INC.			<sup>9</sup> Elevation 3984' GL

<sup>10</sup> Surface Location

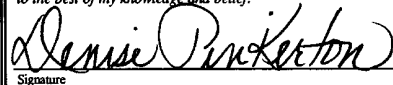
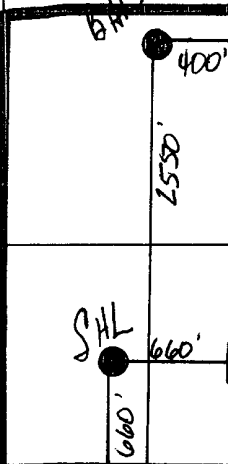
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	1	18-S	34-E		660'	SOUTH	660'	EAST	LEA

<sup>11</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
I	1	18-S	34-E		2550'	SOUTH	400'	EAST	LEA

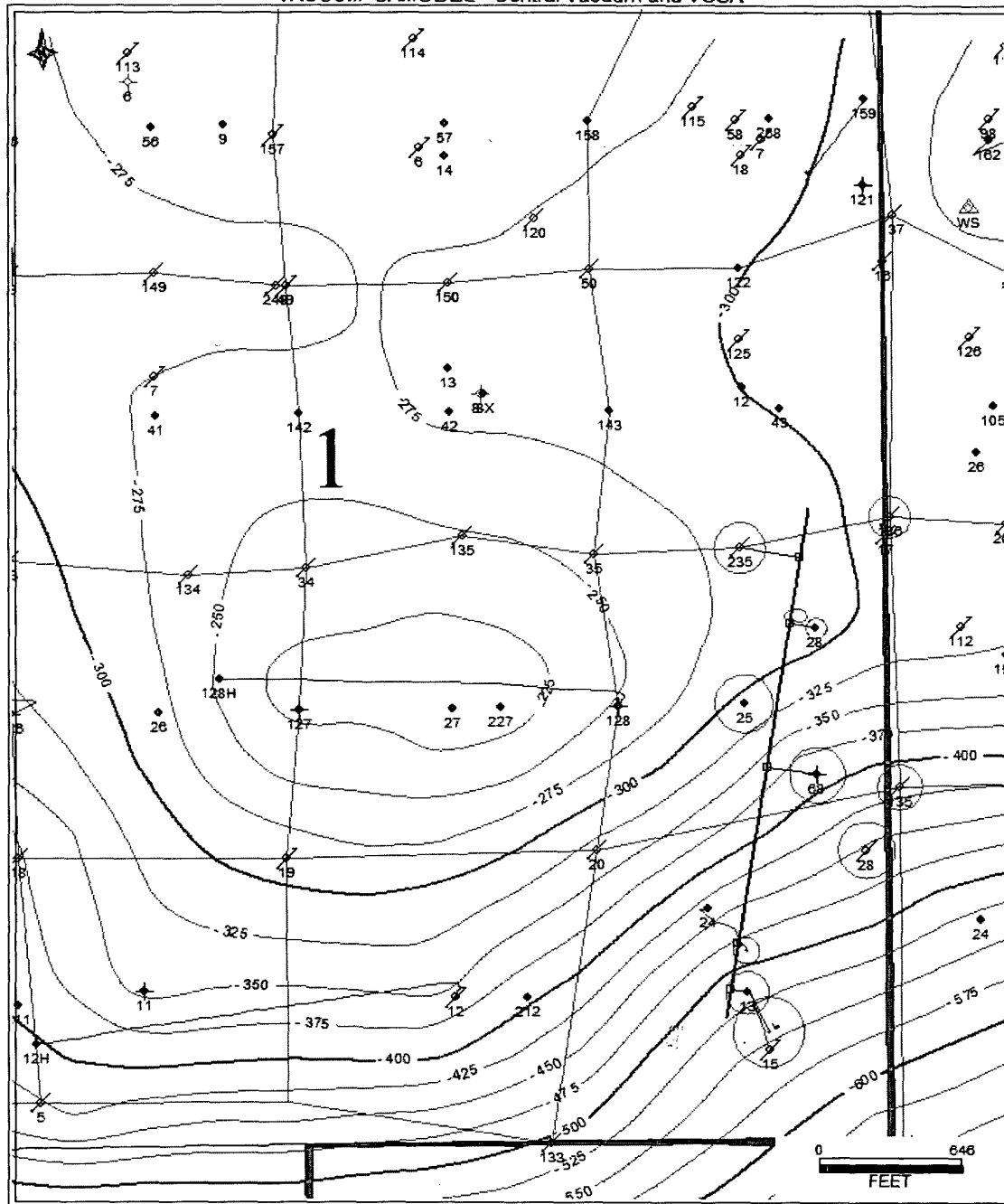
<sup>12</sup> Dedicated Acres 80	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A  
NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<sup>16</sup>	<sup>17</sup> <b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature DENISE PINKERTON Printed Name REGULATORY SPECIALIST LEAKEJD@CHEVRON.COM Title and E-mail Address 9-20-2005 Date	
	<sup>18</sup> <b>SURVEYOR CERTIFICATION</b> 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. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number	
		

## 453SADR Structure Map

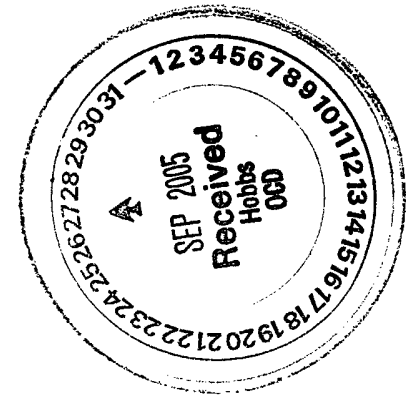
VACUUM SAMODEL - Central Vacuum and VGSA



Displacement (ft)	Target (ft)	Target Box (number)	Existing well loc. (surface)	Proposed BH location	Elev. KB	Elev. GL	Perforations Top-Bottom	Begin (Lateral Box Target)	End (Lateral Box Target)	Azimuth	Total displace ment
200	-535	1	18S, 34E, sec 1,	18S, 34E, sec 1,	3994	3984	open hole	4612'	4732'	10 (N 10°E)	~1900'
300	-535	2	660 FSL, 660 FEL	~2550 FSL, 400 FEL			(4154-4712')			This is just estimate	
500	-502	3								See map. Should	
700	-472	4								avoid deviation	
1000	-430	5	long:-103.5074905	BHL from footage calls is just an estimate						circles of offsets	
1300	-395	6	lat: 32.7715404	Priority is as straight as possible path							
1600	-350	7									
1700	-345	8	X: 795175.7								
1900	-343	9	Y: 645408.7								

#### NOTES:

- \* KOP ~ 4142' (as defined here 3 ft below BOW). Will try to set CIBP @ 4148'
- \* TOW: 4131' BOW: 4139'
- \* Beginning Lateral Box Approx. 200' from wellbore.
- \* Total displacement measured from vertical wellbore.
- \* Depths are SS from KB from the vertical wellbore.
- \* Target tolerance is plus or minus 3' from the referenced target value.
- \* End of Casing @ 4154', below 4154' is open hole. We intend to drill the window in the casing.
- Please see map for details
- \* PASON data requested
- \* Production casing set @ 4154'
- \* Casing collars at 4089 and 4121'



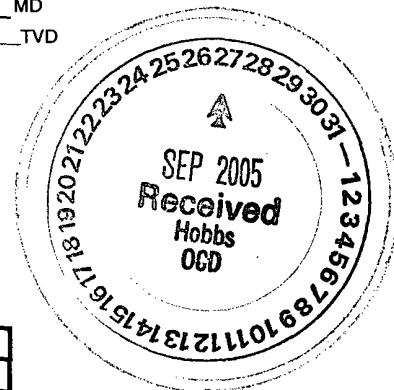
**CHEVRON U.S.A., Inc.**  
**Well Proposal Data Sheet**

Well Name: **VGSAU 13H** Field/Area: **Vacuum / New Mexico** Date: **9/12/2005**  
 Surf. Loc.: **18S, 34E, sec 1, 660 FSL, 660 FEL** County/State: **Lea, New Mexico**  
 Shot Pt. for Surf. Loc.: \_\_\_\_\_ Authorized TD: \_\_\_\_\_ MD  
 B.H. Target: **18S, 34E, sec 1, ~ 2550' FSL, 400' FEL** @ \_\_\_\_\_ TVD Actual Est. TD: \_\_\_\_\_ MD  
 Shot Pt. for B.H. Target: **Estimated lateral length ~1900'** Actual Est. TD: \_\_\_\_\_ TVD  
 CIBP: **4148'**  
 K.O.P.: **4142'**  
 T.O.W.: **4131'**  
 B.O.W.: **4139'**  
 Landing Point: **(-545) 4539 max**  
 Target Interval: **(-545 to -343) 4539 to 4337**  
 Perforations: **Open Hole from 4154 - 4708 (See Current Wellbore Diagram)**  
 Estimated Formation Tops (based on 3994' KB Original hole)

**Vertical Section (values from vertical well VGSAU #13)**

Formation	MD	Subsea
Grayburg Marker	4,286	-292
GB Dolomite Top	4,414	-420
San Andres	4,586	-592
Lower San Andres Porosity	4,842	-848

Formation	TVD	Subsea



Suggested Csg Depths: **5.5" production casing set @ 4154. 6 1/4" open hole (underreamed) to TD.**

Required Mud Parameters: **Drilling should pick the appropriate mud sufficeint to protect the hole**  
**and allow for adequate cuttings samples**

Sample, Drilling Time & ML Requirements: **Suttles Logging (432-687-3148) start with the curve**  
**PASON unit requested**

DST's (incl any special requirements): **None**

Cores (incl est. cost for analysis): **None**

**Anticipated Completion Intervals:**

Formation	Depths	Pressures
Upper San Andres	<b>(-545 to -343) 4539 to 4337</b>	normal

**Other Potential Pay Zones: (from the curve)**

Formation	Depths	Pressures

Type of Logs (incl sidewall cores) and Est. Total Cost: **No open hole Logs**

Run # 1 (logs & intervals): \_\_\_\_\_

Run # 2 (logs & intervals): \_\_\_\_\_

Run # 3 (logs & intervals): \_\_\_\_\_

Possible Drilling Hazards (High press, lost circ, H2S, deviation, etc.): **Water Streaks from Injectors. Chance of some CO2 from CVU**

Remarks (Special well, production csg size/OH completion or location requirements, etc): \_\_\_\_\_

**Open Hole Lateral.**

**Offset wells: NM R State #15, #24, #25, VGSAU #68**

Base Fresh Water: \_\_\_\_\_ By: Water Board Letter/Other (Specify) \_\_\_\_\_

Rule 37/Unorthodox Location?: **YES / NO** Date Regulatory Approval Expected?: \_\_\_\_\_

Required height of tubing spool above GL: \_\_\_\_\_ Offset Well Data Available? **YES / NO**

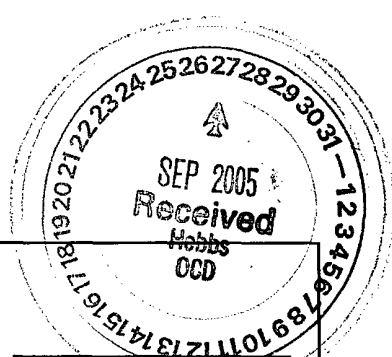
Required Xmas tree size & pressure rating: **Drilling decides** Completion Type (Flwg/Type Art Lift): **Artificial Lift**

Prep by: \_\_\_\_\_

9/13/2005

# VGSAU 13

API # 30-025-02260  
Lease: B-1306



## Surface Casing:

Depth	Type	Cement
0-863	8 5/8"-24# / K55	300 Sx
0-863	11" hole	

## Production Casing:

Depth	Type	Cement
0-4154	5 1/2" OD 14# . 8RD	300 Sx Halliburton
0-4150	6 3/4" hole	

## Casing Problems:

Depth	Date	Comment
6'	Aug-93	Leak at the wellhead
2256'-2277'	13-Jul-84	Squeezed w/ 500 Sx class "C" cement. Tested for 30' @ 600# and held OK.

## Zones

Top	Depth	Interval	Comment
GB Marker	4,286		
GB Dol Top	4,414	58	
GB Dol Bott	4,472	46	
San Andres	4,518	158	
LSA	4,676	36	
PBTD	4,712		
O/W			

TOTAL 298

Original Size wellbore was 4 3/4" from 4154' to 4680'. It was deepened in August 1984 to 4708'. In June-1995 it was underreamed to 6 1/4" from 4214' to 4712'.

SEC 1, TWN 18-S, Range 34-E  
ELEVATION: 3994' KB  
Completion Date: 8-dec 1943  
Completion Interval: 4154' - 4680'

Csg Sqz: 2256-2277'

TOC @ 2,492 ft

## Open Hole:

Size: 4,154 ft  
Bot. Perf: 4,712 ft  
Total: 558 ft  
Size: 6 1/4"

PBTD @ 4712

TD: 4,708 ft  
Last BHP: \_\_\_\_\_ psi

## PRODUCTION COMMENTS

- 13-Feb-03: Oil production dropped about 10-20 bopd lat october 2002. This could be either pump or wellbore. Last June-2002 they ran a new pump, so it should be still in good conditions. In general terms the total production has been going up and down, so it is recommended to do a clean out run as a preventive measure.

## INJECTION COMMENTS

- 13-Feb-03: Water production picked up about 300 bpd when CVU 134 bumped its rate to over a 1000 bpd. At the same time water production was declining at the beginning of 2002 because of VG 20. The Operator reported that this well never declined injection and that the meter was giving a false reading making it look like ZERO injection.

## WORKOVER RECOMMENDATIONS:

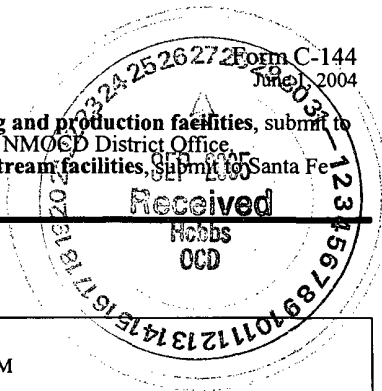
- 13-Feb-03: Tag for fill and clean out if the 50 feet rat hole below the pump does not exist.  
Monitor closely Fluid levels since We have had quite a few changes around the area.

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For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office



**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? No ☐

Type of action: Registration of a pit or below-grade tank ☐

Operator: CHEVRON U.S.A. INC. Telephone: 432-687-7375 e-mail address: LEAKEJD@CHEVRONTEXACO.COM  
Address: 15 SMITH ROAD, MIDLAND, TX 79705  
Facility or well name: Vacuum Grayburg San Andres Unit #13 Horizontal API #: 30-025-02260 U/L or Qtr/Qtr P Sec 1 T 18-S R 34-E  
County: LEA Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD: 1927 ☐ 1983 ☐  
Surface Owner: Federal ☐ State

<b>Pit</b> Type: Drilling  Lined Liner type: Synthetic <input type="checkbox"/> Thickness 20mil Clay <input type="checkbox"/> Pit Volume 1965 bbl	<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	50 feet or more, but less than 100 feet	(10 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	No	( 0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	1000 feet or more	( 0 points)
	<b>Ranking Score (Total Points)</b>	10 Points

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines

Date: 9-26-2005

Printed Name/Title TIMOTHY BONZELET DRILLING ENGINEER

Signature

*Tim Bonzelet*

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title \_\_\_\_\_

ORIGINAL SIGNED BY  
PAUL F. KAUTZ  
PETROLEUM ENGINEER

Date: \_\_\_\_\_

OCT 03 2005

Key #117 Pit Design *UGS All #13 Horizontal*

