



August 22, 2007

Mark E. Fesmire, P.E.  
Director  
Oil Conservation Division  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

Re: Case 13961: Application of Chevron USA Inc. for Enhanced Oil Recovery Project Qualification for the Recovered Oil Tax Rate in the Vacuum Grayburg-San Andres Unit, Lea County, New Mexico.

Dear Mr. Fesmire:

Chevron USA Inc. ("Chevron") hereby makes application to qualify a portion of the Vacuum Grayburg San Andres Unit ("VGSAU") for the recovered oil tax rate authorized by the Enhanced Oil Recovery Act. Chevron plans to commence construction on delivery and gathering facilities, contract for delivery of injectants and upgrade existing installations in a timeline which will allow initiation of miscible Carbon Dioxide (CO<sub>2</sub>) flood during the second quarter of 2008. Chevron is making application pursuant to the rules promulgated by Oil Conservation Commission Order No. R-9708 entered on August 27, 1992.

In accordance with this Order, Chevron provides the following information:

**A. Operator's name and address:**

Chevron USA Inc.  
15 Smith Road  
Midland, Texas 79705

**B. Description of the project area:**

**1. Provide a plat outlining the project area:**

See Exhibit 11, Case No. 13961 for a plat of the project area.

**2. Describe the project area by section, township and range:**

Township 18 South, Range 34 East, NMPM

Section 1: All  
Section 2: All  
Section 11: NE/4 NE/4  
Section 12: N/2 NW/4

Township 17 South, Range 34 East, NMPM  
Section 35: W/2 SW/4

The proposed project will only impact 86% of the VGSAU acreage and is more accurately identified as those injection patterns highlighted on Exhibit 11, Case No. 13691, which include those wells listed in Exhibit A to this application.

**3. Total acres:**

The VGSAU contains a total of 1,486 Acres(m/l)  
Chevron is targeting 1,280 Acres (m/l) for the CO2 project. The area is highlighted on Exhibit 11, Case No. 13691.

**4. Provide the name of the subject pool and formation.**

The VGSAU is within the Vacuum Pool.  
The VGSAU includes portions of the Grayburg and San Andres Formations.  
The type log identified in the Unit Agreement is Exhibit No. 6, Case No. 13961.

**C. Status of operations in the project area:**

**1. Provide the name of the unit and the date and number of the Division Order approving the unit plan of operation:**

The proposed CO2 project is at the Chevron operated Vacuum Grayburg San Andres Unit ("VGSAU").  
The Commission approved the VGSAU on November 8, 1972 with Order No. R-4443.  
The VGSAU pressure maintenance project has been approved and is governed by Order No. R-4433-A (11-08-72); R-4422 (11-27-72); R-6094 (09-01-79); and R-7010 (07-01-82).

**D. Method of recovery to be used:**

**1. Identify fluids to be injected:**

Recovery is to be enhanced with the introduction of CO2. Produced gases will be recycled (reinjecting). Water will continue to be injected outside of the target area, and in the target area with alternating slugs with the CO2 in what the industry calls a WAG injection scenario.

**2. If the Division has not approved the project, provide the date the application for approval was filed with the Division on Form C-108.**

A Form C-108 is provided with this application dated January 15, 2001 ( Exhibit No. 12, Case No. 13961) as supplemented and revised on August 15, 2007 (Exhibit No. 13, Case No. 13961).

**E. Description of the project:**

**1. A list of producing wells:**

See Exhibit A to this application for a list identifying producing wells within the project area.

**2. A list of injection wells:**

See Exhibit A for a list of the injection wells in the project target area. This list identifies all injection wells in the project area including the 25 injection wells and the one well to be converted to injection identified in the application in Case No. 13961.

**3. Capital cost of additional facilities: (Current Cost)**

Field Installations/Upgrades/Well remediation:	\$ 65.4 million
CO2 Injectant Purchase:	\$168.2 million

**4. Total project cost:**

The project will cost \$233.6 million inclusive of associated injectant expenses. Of this total, \$65.4 million will go toward facilities and well work on the VGSAU.

**5. Provide the estimated total value of the additional production that will be recovered as a result of this project:**

An additional 24.5 MMB of oil are anticipated to be recovered as a result of this project. Based on current capital of \$45/BO and \$30/BNGL, and the current CO2 Targeted Area, the estimated value of the hydrocarbons produced from the proposed project is \$504 million.

**6. Provide anticipated date for commencement of injection:**

The anticipated initial CO2 injection date is May, 2008.

**7. What type of fluid will be injected and what are the anticipated volumes?**

A total of 70 BCF of CO2 will be purchased for the project. Produced gases will be recycled back to the reservoir resulting an ultimate injection of 140 BCF of gas during a 50 year period. The recycled gas would consist of CO2, certain hydrocarbons that cannot be economically marketed, and associated non-

hydrocarbon gases. The injection scheme to be employed is known as a WAG, or water-alternating-gas injection. Alternating slugs of gas and slugs of water would be introduced in varying volumes with the length of injection (time) dependent on reservoir response.

- F. Production data: Provide graphs, charts and other supporting data to show the production history and production forecast of oil, gas, casinghead gas and water from the project area.**

Exhibit B provides the VGSAU production and injection history along with the forecast of enhanced recovery due to the introduction of CO<sub>2</sub>.

Chevron requests that this application be approved.

Very truly yours,



Brent Brugger  
Chevron USA Inc.

**VACUUM GRAYBURG SAN ANDRES UNIT**

Wells within Proposed CO2 Target Area

Producers		Injectors	
VGSAU Well	API Well Number	VGSAU Well	API Well Number
1*	3002521634	4	3002524332
2*	3002521421	5	3002524333
3*	3002502326	14	3002524359
6	3002521420	15	3002524378
7	3002502277	16	3002524308
8	3002502275	17	3002524316
9	3002502274	18	3002524317
10	3002502258	19	3002524331
11	3002502257	20	3002524360
12	3002502259	31	3002524314
13	3002502260	32	3002524330
21	3002502276	33*	3002524323
22	3002502273	34	3002524312
23	3002502272	35	3002524361
24	3002502271	46	3002524364
25	3002502256	47	3002524365
26	3002502255	48	3002524322
27	3002502254	49*	3002524329
28*	3002502253	50*	3002524366
38	3002502265	63	3002527974
39	3002502264	68*	3002502110
40	3002502252	132	3002536683
41	3002502249	133	3002535686
42	3002502245	134	3002536681
43	3002502247	135	3002535561
52	3002502267	146	3002530846
53	3002502262	147	3002530798
54	3002502263	148	3002530799
55	3002502250	149	3002530847
56	3002502251	150	3002530917
57	3002502248	233	3002536355
58*	3002502246	235	3002535562
122**	3002530721	249	3002535563
126	3002532026	250	3002538001
127*	3002532027		
128	3002532028		
139	3002530755		
140	3002530756		
141	3002530797		
142	3002530843		
143	3002530844		
153	3002530802		
154	3002530801		
155	3002530800		
156	3002530851		
157	3002530717		
158	3002530818		
159	3002533464		
211*	3002535687		
212	3002532004		
227	3002531993		
258	3002532009		

\* P&A'd Well

\*\*Well to be converted to injection  
8/15/2007

# Vacuum Grayburg San Andres Unit History

