

## **X. HYDROGEN SULFIDE CONTINGENCY PLAN**

### **1.0 LOCATION LAYOUT**

#### **1.1 DESCRIPTION**

The drilling rig will be situated on location such that the prevailing winds blow from the doghouse and crew trailers. At the first site of any emergency due to gasses, the Bureau of Land Management (BLM) and New Mexico Oil Conservation Division (NMOCD) will be notified.

The features described below are shown in Figure 13. The entrance to the location will be designated so that it can be barricaded if hydrogen sulfide (H<sub>2</sub>S) emergency conditions arise. An auxiliary exit (or entrance) will be available so that, in case of a catastrophe, a shift in wind direction would not preclude escape from the location.

A minimum of two BRIEFING AREAS will be established not less than 100 feet or as practical from the well head and in such a location that at least one area will be upwind of the well at all time. Upon recognition of an emergency situation, all personnel should assemble at the designated BRIEFING AREA for instructions and account for all site personnel.

A SAFETY EQUIPMENT TRAILER will be stationed on location and may be used as a briefing area. The trailer will consist of a cascade air supply of five air cylinders, low pressure air line hose, three low pressure manifolds, five air line masks with escape cylinders, four 30-minute self-contained units, first aid kit, stretcher, fire extinguisher, resuscitator, flare gun, and hand pump with current-dated gas detection tubes.

An H<sub>2</sub>S detector, with a light and siren, will be installed with heads that will be located at the bell nipple, one on the shale shaker, one on the rig floor, one at flare and pit area, and one at living quarters.

The mud logging trailer will be located away from the shale shaker mud tank and as far as possible from the wellbore.

Shale shaker mud tanks will be located so as to minimize the danger from H<sub>2</sub>S that may break out of the drilling fluid.

Electric power plant(s) will be located as far from the wellbore as practical so that it may be used under conditions where it would otherwise be shut down.

All windbreakers and rig curtains will be removed from around the derrick floor and monkey board when any H<sub>2</sub>S reaches the surface.

Appropriate smoking areas will be designated and smoking will be prohibited elsewhere.

Emergency phone numbers will be posted on the rig bulletin board and also in the SAFETY EQUIPMENT TRAILER.

Reliable 24-hour radio and/or telephone communications will be available at the rig.

Safety equipment will be located at the following areas:

Five ESCAPE UNITS will be placed on the rig floor for the convenience of normal drilling operations and for emergency situations.

Five WORK AND ESCAPE UNITS will be located in the safety trailer with hose lines and manifolds. (Some Work Units with pressured hose lines may be located on rig floor for wells that are considered "Wildcat")

- Two Self-Contained Breathing Apparatuses (SCBAs) at Briefing Area #1.
- Two SCBAs at Briefing Area #2.

Windssocks will be at the appropriate locations for visibility:

- Out the V-door
- In-between the mud hoppers and generating plant.
- At each exit.

## 2.0 SAFETY EQUIPMENT

### 2.1 SAFETY EQUIPMENT LIST

Hydrogen sulfide trailer complete with:

- 8-300 cu. Ft. grade D/E breathing air cylinders
- Five Scott Ska-packs with escape cylinders (work units)
- Four Scott SCBAs with stands
- Bendix hand pump with detector tubes
- Stainless steel flexible cut proof high pressure line and all necessary pigtailed and tee blocks
- High/low pressure regulators
- Three and five man outlets or manifolds
- High pressure refill hose
- Low pressure rubber hose lines for use with the work units
- Flare pistol with flares
- Condition sign with appropriate flags; no smoking, authorized personnel only, and briefing area signs
- Two windssocks or streamers
- First Aid station

- Emergency eye wash station
- Fire extinguisher

## 2.2 TYPE OF EQUIPMENT

### Self-Contained Breathing Apparatus (SCBA):

- Location discussed in previous section
- List of equipment in safety trailer

## 2.3 MAINTENANCE RESPONSIBILITIES

DCP shall and will be responsible for cleaning and maintaining the personal protective equipment (PPE) on a weekly basis.

The drill crew can clean SCBA mask with warm soapy water if necessary.

## 2.4 PREVENTOR STACK ARRANGEMENT

All Blowout Preventer (BOP) equipment shall meet API specifications as to materials acceptable for H<sub>2</sub>S service.

## 2.5 OTHER EQUIPMENT

All equipment that has the potential to be exposed to H<sub>2</sub>S shall be suitable for H<sub>2</sub>S service. Equipment which shall meet these metallurgical standards include the drill string, casing, wellhead, blowout preventer assembly, casing head and spool, rotating head, kill lines, choke, choke manifold and lines, valves, mud-gas separators, drill-stem test tools, test units, tubing, flanges, and other related equipment.

- Flare stack
- Flow sensor
- Pit Volume Totalizer (PVT) System
- De-gasser
- De-silter
- Mud/Gas separator

### 3.0 OPERATING PROCEDURES

#### 3.1 BLOWOUT PREVENTION DRILLS

Blowout prevention drills should be held with each crew until they are proficient in closing the well in. Drills should be held on a regular basis with at least one drill per crew each week continuously from 1,000 feet above the expected H<sub>2</sub>S formation to total depth (TD).

#### 3.2 BLOWOUT PREVENTOR TESTING

BOP equipment will be tested at 1,000 feet prior to the H<sub>2</sub>S zone at a 3,000 pound per square inch (PSI) working pressure on initial installation and routinely thereafter (not to exceed a two-week period) between testing) and at any time a seal has been broken.

#### 3.3 SAFETY TRAINING

All personnel who will be working at the well site will be properly trained in H<sub>2</sub>S drilling and contingency procedures in accordance with the general training requirements outlined in the American Petroleum Institute's (API) Recommended Practice (RP) 49 (April 15, 1987 or subsequent editions) for Safe Drilling of Wells Containing Hydrogen Sulfide, Section 2. The training will be accomplished prior to a well coming under the terms of BLM Onshore Order 6 (i.e., 3 days or 500 feet of known or probable H<sub>2</sub>S zone). In addition to the requirements of API RP-49, a minimum of an initial training session and weekly H<sub>2</sub>S and well control drills for all personnel in each working crew shall be conducted. The initial training session for each well will include a review of the site specific Drilling Operations Plan and, if applicable, the Public Protection Plan. These training sessions will cover, but will not be limited to the following:

- General information on H<sub>2</sub>S and sulphur dioxide (SO<sub>2</sub>) gas
- Hazards of those gases
- Safety equipment on location
- Proper use and care of PPE
- Operational procedures in dealing with H<sub>2</sub>S gas
- Evacuation procedures
- First aid, reviving an H<sub>2</sub>S victim (toxicity, etc.)
- Buddy system (working in pairs)
- Designated safe briefing area (SBA)

When an alarm is activated:

- Mask up
- Raise tool joint above rotary table and shut down pump
- Close in hydril
- Go to briefing area that is upwind
- Designate two individuals to mask up and scout the area for persons in distress, then sample for H<sub>2</sub>S

### 3.4 OUTSIDE PERSONNEL RESPONSIBILITIES

All outside personnel, service companies, subcontractors, etc. will be notified by an on-site company representative of the potential of H<sub>2</sub>S gas on location. All outside personnel will have H<sub>2</sub>S protective equipment and H<sub>2</sub>S training.

### 3.5 MUD PROGRAM AND TREATING

It is important that the mud be closely monitored for detection of H<sub>2</sub>S and reliability of the H<sub>2</sub>S treating chemicals.

Identification and analysis of sulfides in the mud and mud filtrate will be monitored regularly.

The mud system will be pre-treated with H<sub>2</sub>S treating chemicals prior to drilling into the H<sub>2</sub>S bearing formation. Continue maintaining residual concentration of 2 to 3 PPM by monitoring. Increase residual concentration if needed to control larger influxes of H<sub>2</sub>S. Mud PH will be held at 10 or above within 1,000 ft. of H<sub>2</sub>S producing zone to total depth.

### 4.0 EMERGENCY PROCEDURES AND DEFINITION OF WARNING FLAGS

#### 4.1 CONDITIONS AND SAFETY ACTIONS

#### **CONDITION: POTENTIAL DANGER, CAUTION (LESS THAN 10 PPM)**

Cause for condition:

- Circulating up drilling breaks
- Trip gas after trip
- Circulating out gas on choke
- Poisonous gas present but below threshold concentrations

Safety actions:

- Check safety equipment and keep it with you
- Be alert for change in condition
- Follow instructions of safety officer or coordinator

#### **CONDITION: ORANGE – MODERATE DANGER (GREATER THAN 10 PPM)**

Cause for condition:

- Circulating up drilling breaks
- Trip gas after trip
- Circulating out gas on choke
- Poisonous gas present but below threshold concentrations

**Safety actions:**

- Check safety equipment and keep it with you, wear mask if on floor
- Be alert for change in condition
- Follow instructions of safety officer or coordinator

**CONDITION: RED – EXTREME DANGER (GREATER THAN 100 PPM, I.D.L.H.)****Safety actions:**

- Mask up, all personnel will have personal protective breathing equipment (PPBE) with them.
- All personnel will stay in safe briefing area unless instructed otherwise

The decision to ignite the well is the responsibility of the company representative and should be made only as a last resort when it is clear that:

- Human life is endangered
- There is no hope of controlling the well under prevailing conditions

The BLM and NMOCD shall be notified as follows if the contingency plan is activated:

- 12 hours in advance of an intentional release or as soon as decision is made to release if such decision could not reasonably have been made more than 12 hours prior to the release
- Immediately in the case of an accident release
- As soon as possible before or after an unplanned intentional release made in an emergency situation to prevent a possible uncontrolled release

The retention of the emergency plan shall be as follows:

The plan shall be available for BLM and NMOCD inspection at the location indicated on the certificate of compliance.

Release of and accidents related to H<sub>2</sub>S – The operator shall furnish a written report to the BLM and NMOCD district offices with 10 days of any accidental release of H<sub>2</sub>S gas of sufficient volume to present a hazard and of any H<sub>2</sub>S related accident, whether it be from an accidental or intentional release.

#### 4.2 EVACUATION OF LOCAL PEOPLE

Order the evacuation of local people within the danger zone. Request help from local authorities, State Police, Sheriff's Department, District NMOCD, and Service Representative.

#### 4.3 CIRCULATING OUT KICK

If it is suspected that H<sub>2</sub>S is present with the gas, whenever a kick is taken, the driller's method of eliminating gas and raising the mud will be followed.

The driller's method is maintaining sufficient back pressure on the annulus to keep any additional gas from coming into the hole while circulating gas bubble up to surface.

After the gas is eliminated, raise the fluid weight to control bottomhole pressure, and circulate around maintaining back pressure on the annulus until the well is dead.

If a kick has occurred, the standard blowout procedure will be followed and the driller's method will be used to kill the well. When the well has been put on the choke and circulation has been established the following safety procedures must be established:

- Determine when gas is anticipated to reach the surface.
- All non-essential personnel must be moved to safe briefing area.
- All remaining personnel will check out and keep with them their PPBE
- Mud man will see that the proper amount of H<sub>2</sub>S scavenging chemical is in the mud and record times checked.
- Make sure ignition flare is burning and valves are open to designated flare stacks.

Should anything develop where additional personnel are required, the on-site representative will immediately proceed to a safe briefing area to assist the crew with donning their breathing equipment.

#### 4.4 CORING OPERATIONS IN H<sub>2</sub>S BEARING ZONES

PPBE will be worn during the removal and packaging of all cores. For additional safety, PPBE will be worn from 20 stands in advance of the core barrel extraction from the well. Cores to be transported should be sealed and marked for the presence of H<sub>2</sub>S.

#### 4.5 DRILL STEM TEST

Should a decision be made to have a drill stem test, an appropriate drilling prognosis will be applied and the following will apply:

Drill stem testing of H<sub>2</sub>S zones will be permitted only in daylight hours.

The necessary authorities will be notified of the intention to conduct a drill stem test of a formation suspected of containing, or known to contain, H<sub>2</sub>S.

All non-essential personnel will be moved to Safe Briefing Area.

Put on air mask before formation fluids are expected to reach the surface and continue with MASK ON until flares are lighted and work areas test no more than 10 PPM H<sub>2</sub>S and the area has been declared safe.

## 4.6 EMERGENCY TELEPHONE NUMBERS AND COMMUNICATION METHODS

**EMERGENCY SERVICES**

<b>AGENCY</b>	<b>TELEPHONE #</b>
Lovington Fire Department	(575) 369-2359
Maljamar Fire Department	(575) 676-4100
Artesia Fire Department	(575) 746-5050
Hobbs Fire Department	(575) 397-9308
Loco Hills Fire Department	(575) 677-2349
Ambulance Services Hobbs	(575)397-9308
Artesia	(575) 746-5050
Carlsbad	(575) 885-2111
Lovington	(575) 396-2359
Hospitals	
Artesia General	(575) 748-3333
Carlsbad Medical Center	(575) 887-4100
Lovington-Nor Lea	(575) 396-6611
Hobbs- Lea Regional	(575) 392-6581
Lubbock University Medical Center (UMC) Level I Trauma Center	(806)775-8200
State Police (HMER) Eddy County	(575) 885-3137
Poison Control (Albuquerque)	(800) 222-1222
Helicopter Services	
Lifeguard (Albuquerque)	1-888-866-7256
Southwest Medivac (Hobbs)	1-800-971-4348
AeroCare (Lubbock)	1-800-823-1991
Air Med (El Paso)	(915) 772-9292

**GOVERNMENT AGENCIES**

<b>AGENCY</b>	<b>TELEPHONE #</b>
Oil Conservation Division, Santa Fe, NM (OCD)	(505) 476-3440
Oil Conservation District Office (Artesia)	(575) 748-1283
Air Quality Bureau, Santa Fe, NM	(505) 827-1494
US BLM (Carlsbad District Office)	(575) 887-6544
Local Emergency Planning Committee (LEPC)	(575) 887-9511
National Response Center (NRC)	1-800-424-8802

**OPERATORS AND CONTRACTORS**

<b>COMPANY</b>	<b>SERVICE</b>	<b>CONTACT</b>	<b>PHONE</b>
B&H Construction	Construction/Maint.	Mike Wright	505-887-9755
Cooper Cameron Valves	Valve Repair	Dean Bohannon	432-362-1151
Cubix Corp.	Emissions Testing	Marc McDaniel	512-243-0202
Desert -Ray	-Ray Services	Elic Brymer	432-363-0669
E. D. Walton Const.	Construction Services	Wade Lancaster	800-657-9190
Environmental Plus	Spill Remediation	Gabino Rosa	505-394-3481
Ferguson Const.	Construction Services	Mark Wieser	505-396-3689
Fite Fire & Safety	Safety Services	Tim Nolen	432-689-6492
Gandy Corp.	Oilfield Service	Larry Gandy	505-396-4948
Hanover Compression	Compression Service	Vicki Egan	281-447-8787
Hughes Services	Vacuum Service	Donnie Mathews	505-677-3113
Industrial Insulation	Insulation Service	Scott Fulton	432-332-8203
Kenemore Welding	Welding Service	George Kenemore	505-676-2332
Mark's Crane & Rigging	Crane Services	David Landreth	432-337-1538
Mobile Labs	Laboratory Service	Jenny Linley	432-337-4744
Permian Valve Repair	Valve Repair	Raymond Tucker	432-381-1313
Plant Maint. Services	Chemical Cleaning	Dale Carter	432-580-5900
BJ-Coiltec	Nitrogen Services	Stephen Baugh	432-683-1887
Smith & Son's	Construction Service	Randy Smith	505-397-1852
Southwest Safety	Safety Services	Scott Magness	505-392-8080
TWS, Inc.	Crane, Man Lift Service	Randy Gandy	505-398-3811

**PUBLIC**

N/A There are no residences within the 100 ppm ROE. The plant is located in a very isolated area.

**FRONTIER FIELD SERVICES LLC INTERNAL CALL LIST**

DCP will provide the contact information below at a future date after the plant has been constructed and resources have been determined.

<b>NAME</b>	<b>TITLE</b>	<b>Office #</b>	<b>Cell #</b>
Brian Briscoe	President	1-970-764-6650	1-970-749-4837
John Prestiss	Plant Manager/Incident Commander	1-575-676-3528	
<b>FRONTIER FIELD SERVICES LLC INTERNAL CALL LIST (CONT'D)</b>			
<b>NAME</b>	<b>TITLE</b>	<b>Office #</b>	<b>Cell #</b>
John Prentiss	Manager, Maljamar Plant	1-575-676-3528	
Kourtney Hadrick	V.P. Engineering	1-970-764-6677	1-970-749-7186

## 5.0 NAMES AND DUTIES OF PERSONS WITH PRIME RESPONSIBILITIES

<b>COMPANY</b>	<b>NAME</b>	<b>PHONE</b>
Frontier Field Services LLC	Brian Briscoe	1-970-764-6650
Geolex, Inc.	Alberto A. Gutierrez	(505) 842-8000
Drilling Company	TBD	TBD
Tool Pushers	TBD	TBD

## 6.0 H<sub>2</sub>S INFORMATION AND HAZARDS

H<sub>2</sub>S is a potential hazard to employees in the petroleum industry. This gas can paralyze and/or kill sense of smell quickly, paralyze respiratory system and kill quickly. In order to minimize the potential exposure, proper training of employees for hazards, symptoms, characteristics, safe practices, treatment and use of PPE is required.

### 6.1 H<sub>2</sub>S HAZARDS

The principal hazard to personnel is asphyxiation or poisoning by inhalation. H<sub>2</sub>S is a colorless, flammable gas having an offensive odor and a sweetish taste. It is highly toxic and doubly hazardous because it is heavier than air (specific gravity 1.19). Its offensive odor, like that of a rotten egg, has been used as an indicator by many old times in the oil fields, but this is not a reliable warning of the presence of gas in a dangerous concentration because people differ greatly in their ability to detect smells. Where high concentrations are encountered, the olfactory nerves are rapidly paralyzed losing the sense of smell as a warning indicator. A concentration of a few hundredths of one percent higher than that causing irritation can cause asphyxia and or death. In other words, there is a narrow margin between consciousness and unconsciousness, and between unconsciousness and DEATH!

Where high concentration can cause respiratory paralysis, spontaneous breathing does not return unless artificial respiration is applied. Although breathing is paralyzed, the heart may continue to beat for minutes after the initial attack.

### 6.2 PHYSIOLOGICAL SYMPTOMS

**ACUTE:** Results in almost instantaneous asphyxia, along with respiratory paralysis. Acute poisoning or strangulation may occur after even a few seconds of inhalation at high concentration and results in panting respiration, pallor, cramps, paralysis, and almost immediate loss of consciousness with loss of speech, and no other warning than a cry. Death may soon follow due from respiratory and cardiac paralysis. One breath of a sufficiently high concentration may have this result.

**SUB-ACUTE:** Results in irritation, principally of the eyes, persistent cough, tightening or burning in the chest and skin irritation followed by depression of the central nervous system. The eye irritation ranges in severity from mild conjunctivitis to swelling and bulging of the conjunctiva, photophobia (abnormal intolerance of light, and temporary blindness.

### 6.3 TREATMENT

Victim should be removed to fresh air immediately by rescuers, wearing respiratory protective equipment. Protect yourself while attempting a rescue.

If the victim is not breathing, begin immediately to apply artificial respiration. If a resuscitator is available, let another employee get it and prepare for use.

Treat the victim for shock, keep warm and dry.

Call EMS in all cases, victims poisoning should be examined by a physician.

#### 6.4 CHARACTERISTICS OF H<sub>2</sub>S

Extremely toxic (refer to chart for toxicity H<sub>2</sub>S).

Heavier than air – specific gravity 1.19.

Colorless, has odor of rotten eggs.

Burns with a blue flame and produces SO<sub>2</sub>, which is very irritating to eyes and lungs. The SO<sub>2</sub> is also toxic and can cause serious injury.

H<sub>2</sub>S forms explosive mixture with air between 4.3% and 46% by volume.

Produces irritation to eyes, throat and respiratory tract.

Threshold Limit Value (TLV): Maximum of eight hours exposure without protective respiratory equipment – 10 ppm

#### 6.5 SAFE PRACTICES

If you are faced with an H<sub>2</sub>S problem in your operations, the following safe practices are recommended:

Be sure all concerned personnel are familiar with the hazards concerning H<sub>2</sub>S and how to avoid it.

All employees should know how to operate and maintain resuscitator and respiration equipment.

All employees should be able to give and demonstrate artificial respiration.

Post areas where there is a poisonous gas with suitable warning signs.

Be sure all new employees are thoroughly trained before they are sent to the field.

Teach all personnel to avoid gas whenever possible – work on the upwind side and have a fresh air mask available.

Do not let bad judgment guide you – wear respiratory equipment when gauging tanks, etc. Do not try to hold your breath in order to enter a contaminated atmosphere.

In areas of high concentration, or when levels are above the IDLH (100ppm), a two-man operation is mandatory.

Never enter a tank, cellar or other enclosed place where gas can accumulate without proper respiratory protective equipment and a full body harness secured to a lifeline held by another person outside.

Always first check out danger areas with an H<sub>2</sub>S detector before allowing anyone to enter the area. Do not try to determine the presence of gas by its odor.

Wear proper respiratory equipment for the job on hand. Never take a chance with equipment with which you are unfamiliar. If in doubt, consult with your supervisor.

Carry out practice drills every month with emergency and maintenance equipment. Telling or showing a group how to operate the equipment is not satisfactory, make them show you.

Maximum care should be taken to prevent the escape of fumes into the air of working places by leaks, etc.

Intrinsically safe communications such as radios and telephones should be provided for those people employed where H<sub>2</sub>S may be present above the lower explosion level (LEL).

## 6.6 PROPERTIES OF GASES

The produced gas will probably be a mixture of carbon dioxide (CO<sub>2</sub>), H<sub>2</sub>S, and methane.

CO<sub>2</sub> is usually considered inert and is commonly used to extinguish fires. It is heavier than air (1.5 times) and CO<sub>2</sub> will concentrate in low areas of calm air. Humans cannot breathe air containing more than 10% CO<sub>2</sub> without losing consciousness. Air containing 5% CO<sub>2</sub> will cause disorientation if breathed for 30 minutes or more and air containing 10% CO<sub>2</sub> will cause disorientation in a few minutes. Continued exposure to CO<sub>2</sub> after being affected will cause convulsions, coma, and respiratory failure.

The TLV of CO<sub>2</sub> is 5,000 ppm. Short-term exposure to 50,000 ppm (5%) is reasonable. The gas is colorless and odorless and can be tolerated in relatively high concentrations.

**Table 10 Toxicity of Various Gases**

COMMON NAME	CHEMICAL FORMULA	SPECIFIC GRAVITY	THRESHOLD LIMIT <sup>(1)</sup>	HAZARDOUS LIMIT <sup>(2)</sup>	LETHAL CONCENTRATION <sup>(3)</sup>
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr.	300 ppm
Hydrogen Sulfide	H <sub>2</sub> S	1.19	10 ppm	250 ppm/hr.	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21	5 ppm		1000 ppm
Chlorine	Cl <sub>2</sub>	2.45	1 ppm	4 ppm/hr.	1000 ppm
Carbon Monoxide	CO	0.87	50 ppm	400 ppm/hr.	1000 ppm
Carbon Dioxide	CO <sub>2</sub>	1.52	5000 ppm	5%	10%
Methane	CH <sub>4</sub>	0.55	90,000 ppm	Combustible above 5% in air	

Threshold – Concentration at which it is believed that all workers may be repeatedly exposed, day after day, without adverse effect.

Hazardous – Concentration that may cause death.

Lethal – Concentrations that will cause death with short-term exposure.

**Table 11 Physical Effects of H<sub>2</sub>S**

%	PPM	GR/100 SCF	EFFECTS
0.001	10	0.65	Obvious and unpleasant odor – safe for 8 hours exposure
0.01	100	6.48	Kills smell in 3 to 15 minutes, may sting eyes and throat – I.D.L.H
0.02	200	12.98	Kills smell shortly, stings eyes and throat – I.D.L.H.
0.05	500	32.98	Dizziness, breathing ceases in a few minutes; unconscious after short exposure; need artificial respiration
0.07	700	45.36	Unconscious quickly, death will result if not rescued quickly
0.10	1000	64.8	Unconscious at once, followed by death within minutes
1	10,000		

Note: H<sub>2</sub>S itself is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

## 6.7 THE USE OF BREATHING AIR EQUIPMENT

Procedures shall be reviewed covering safe use of respirators in dangerous atmospheres that might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedure and the available respirators. Fit testing shall be required.

Respirators shall be inspected frequently to insure that they are properly cleaned and maintained.

Anyone who is to use a respirator shall be trained in how to insure a proper face seal. Respirators shall be tested in normal air before entering toxic atmosphere. Note: Such items as facial hair (beards or sideburns) and eyeglasses with temple pieces will not allow a proper seal. Anyone that may be reasonable expected to wear respirators should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses. Contact lenses should not be allowed.

Maintenance and care of respirators:

A program for maintenance and care of respirators shall include the following:

- Inspection for defects, including leak checks
- Cleaning and disinfecting
- Repair
- Storage

Inspection: Self-contained breathing apparatus for emergency use shall be inspected monthly for the following and a permanent record kept of these inspections:

- Fully charged cylinders
- Regulator and warning device operation
- Condition of face piece and connections
- Elastomer or rubber parts shall be stretched or massaged to keep them pliable and prevent deterioration

Routinely used respirators shall be collected, cleaned and disinfected as frequently as necessary to insure proper protection is provided.

Respirators shall be worn when:

- Any employee works near the top or on top of any tank unless test reveal less than 10 ppm of H<sub>2</sub>S
- When breaking out any line where H<sub>2</sub>S can reasonably be expected
- When sampling air in areas to determine if toxic concentrations of H<sub>2</sub>S exist
- When working in areas where over 10 ppm H<sub>2</sub>S has been detected
- At any time there is a doubt a to the H<sub>2</sub>S level in the area to be entered.

## **XI: CLOSED LOOP SYSTEM**

Closed Loop System Design Plan (pursuant to 19.15.17.11 NMAC):

Figures 12 and 13 detail the components of the BOPE and the closed loop design, respectively.

The closed loop design does not incorporate any temporary pits or below-grade tanks. The plan uses above-ground tanks suitable to contain the fluids and cuttings generated during the drilling operations. The volume(s) of the tank(s) will be suitable to contain all anticipated fluids with an adequate freeboard for periodic removal of cuttings and fluids.

The fluids and cuttings will be held in temporary steel tanks, allowing settling of the cuttings and recycling of the drilling fluids. Following completion of drilling operations, the fluids and cuttings will be removed to a permitted disposal facility in Lea County (Controlled Recovery, Inc.).

The grading and operation of the drilling pad will be maintained to minimize and control on-run and off-run from storm water.

Closed Loop Operations and Maintenance Plan (pursuant to 19.15.17.12 NMAC):

1. Any free liquids will be recovered and reused, disposed of at the Controlled Recovery, Inc. facility (Permit # NM-1-006), or relocated for use in other permitted drilling operations.
2. Drill solids will be periodically removed from the site and transported to the Controlled Recovery facility for disposal, as required to maintain a safe freeboard on the tanks. No on-site disposal or burial of cuttings will occur.
3. All drilling materials and trash will be stored and disposed of in an appropriate manner.
4. The NMOCD and BLM will be notified within 48 hours of the discovery of any compromised integrity of the closed loop containment. Any required repairs will commence immediately.

Close Loop Closure Plan (pursuant to 19.15.17.9 NMAC and 19.15.17.13 NMAC):

1. Following the completion of drilling operations, the temporary fluid tanks will be cleaned and the final residues hauled and disposed of by Controlled Recovery, Inc. facility (Permit # NM-1-006).
2. The site will be re-graded as necessary to maintain drainage control and minimize erosion. Since the drilling site is owned by the Operator (Frontier Field Services, LLC), there will be no impacts to Federal lands or any other property owner.

Appropriate fencing, signage and other security measures will be installed after well completion and installation of the surface injection facilities.

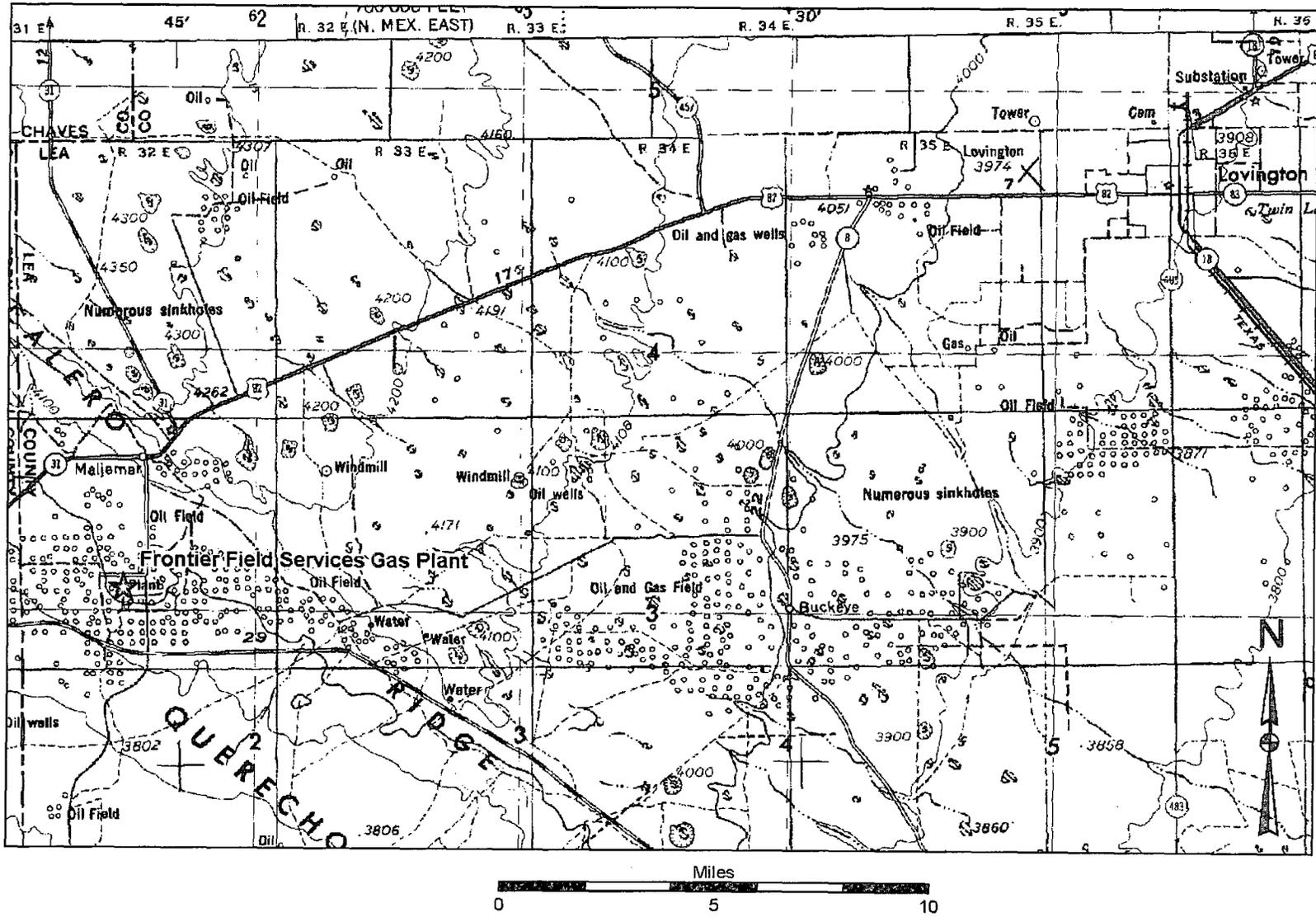


Figure 1: Location of Frontier Field Services Gas Plant



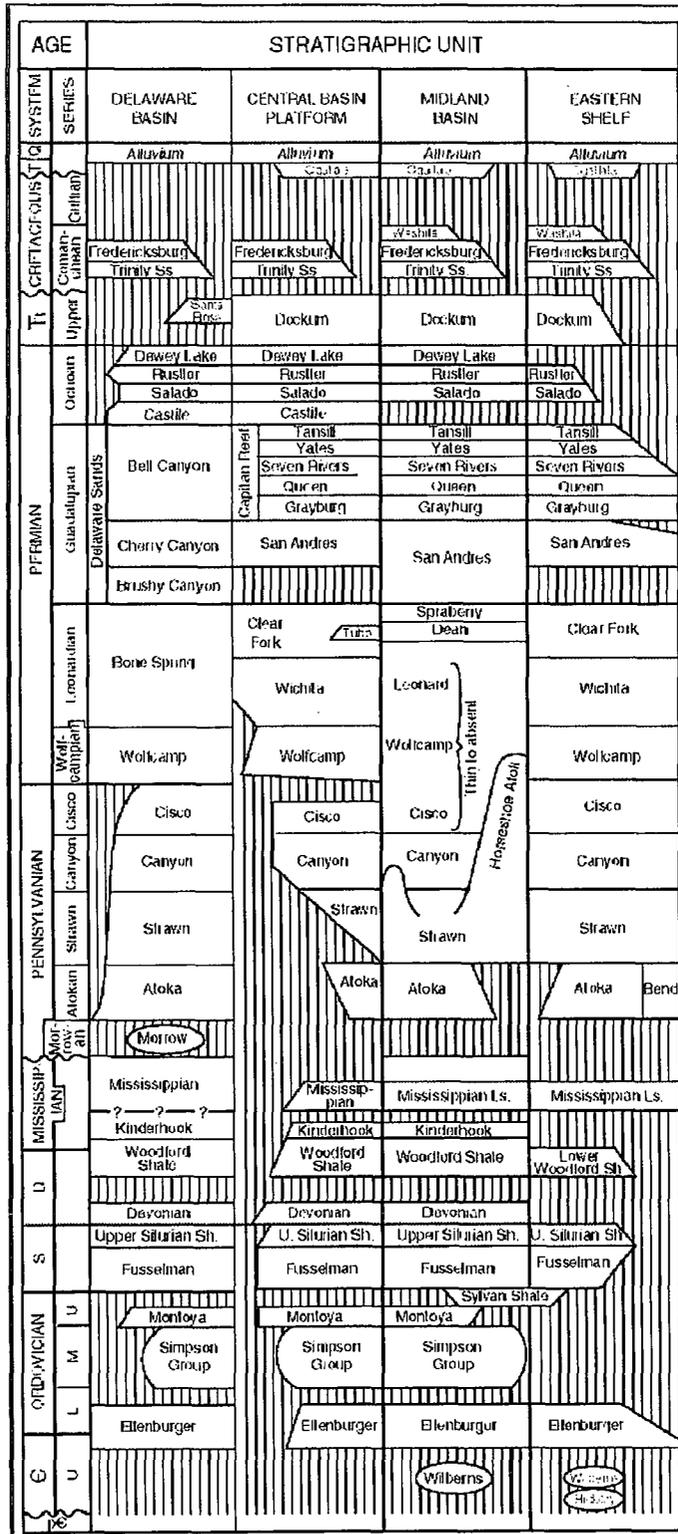


Figure 3: Generalized Stratigraphy of the Permian Basin

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL  
CONSERVATION COMMISSION**

**IN THE MATTER OF THE HEARING CALLED  
BY THE OIL CONSERVATION COMMISSION FOR  
THE PURPOSE OF CONSIDERING:**

**APPLICATION OF FRONTIER FIELD SERVICES,  
LLC FOR AUTHORIZATION TO INJECT, LEA  
COUNTY, NEW MEXICO.**

**CASE NO. 15193  
ORDER NO. R-13443-B**

**ORDER OF THE COMMISSION**

THIS MATTER came before the Oil Conservation Commission ("Commission") on the application of Frontier Field Services, LLC ("Frontier" or the "Applicant") for authority to inject treated acid gas. The Commission having conducted a public hearing on September 25, 2014, and having considered the testimony, the record, and the arguments of the parties, and being otherwise fully advised, enters the following findings, conclusions and order.

**THE COMMISSION FINDS THAT:**

1. Notice has been given of the application and the hearing of this matter, and the Commission has jurisdiction of the parties and the subject matter herein.
2. Frontier seeks authorization to inject treated acid gas ("TAG") from its Maljamar Processing Plant into the proposed Maljamar AGI Well No. 2, to be drilled at a surface location 400 feet from the South line and 2100 feet from the East line of Section 21, Township 17 South, Range 32 East, NMPM, to a bottomhole location 350 feet from the South line and 650 feet from the West line of said Section 21. Applicant proposes to use the Maljamar AGI Well No. 2 to inject acid gas and carbon dioxide into the Wolfcamp formation at depths of approximately 9600-10200 feet subsurface at a maximum injection pressure of 3200 psi and a maximum daily injection rate of 2 MMSCFD.
3. Applicant further requests that the maximum daily injection rate apply to the proposed Maljamar AGI Well No. 2 and to the existing Maljamar AGI Well No. 1 (for either well, or both wells combined). The Maljamar AGI Well No. 1 is located 130 feet from the South line and 1813 feet from the East line of Section 21, Township 17 South, Range 32 East, NMPM. Injection into the Maljamar AGI Well No. 1 was approved by Commission Order No. R-13443-A.
4. The Form C-108 Application was complete and contains all the information

necessary to grant approval.

5. The purpose of the proposed Class II injection well is to dispose of natural gas processing wastes consisting of carbon dioxide ("CO<sub>2</sub>") and hydrogen sulfide ("H<sub>2</sub>S") from the Applicant's Maljamar gas processing plant ("Maljamar Processing Plant") by injecting TAG and produced wastewater into the target injection zone. The TAG will consist of approximately 12 percent H<sub>2</sub>S and 88 percent CO<sub>2</sub>.

6. The proposed acid gas injection well will be located within the boundary of the Maljamar Processing Plant premises.

7. Frontier provided personal notice, via certified mail, return-receipt requested, of the submission of its application and the Commission hearing to all operators, surface owners, and lessees within a one-half mile radius of the bottomhole location for the proposed well.

8. Pursuant to Rule 19.15.4.9.B(3) NMAC, the Oil Conservation Division ("Division") provided public notice by publishing notice of Frontier's application and the Commission hearing in a newspaper of general circulation in Lea County.

9. In support of the application, Frontier presented direct testimony from two witnesses: one fact witness, Coy Bryant, Frontier's Director of Operations; and a technical witness, Alberto Gutierrez, RG, President of Geolex, Inc.

10. The Oil Conservation Division filed an entry of appearance as an intervener and presented one witness, Phillip Goetze, who testified in support of the Division's recommended conditions of approval outlined in the Division's Pre-hearing Statement.

11. No objections to the application were filed.

12. Mr. Bryant testified that the Maljamar Processing Plant has a capacity to process up to 95 MMSCF of sour gas per day, resulting in approximately 1.4 MMSCFD of treated acid gas at this time. The operation and reliability of the Maljamar Processing Plant will be enhanced by approving the Maljamar AGI Well No.2. It will be operated as a redundant injection well and the existing Maljamar AGI Well No. 1 will be operated as the primary well. The Maljamar AGI Well No. 2 will be capable of operating concurrently with the existing AGI well or each well can operate independently, as appropriate. The Maljamar Processing Plant currently serves approximately 70 producers and 1500 wells, and a second well will allow Frontier to provide more reliable service to producers, to reduce flaring events in the field and at the Maljamar Processing Plant, and to reduce atmospheric emissions.

13. The proposed Maljamar AGI Well No. 2 is necessary to allow Frontier to meet the Maljamar Processing Plant's current operating capacity and to meet growing

production demand for sour gas processing and waste disposal.

14. Frontier technical witness Alberto Gutierrez, RG, testified that injection of TAG through the proposed AGI well will be at a maximum rate of 2.0 MMSCFD, and at a maximum operating surface pressure of 3200 psig.

15. With a safety factor of 100 percent, or the injection of 4.0 MMSCFD of TAG, the radius of influence for each well after injecting for thirty years will be approximately 0.37 miles. The actual projected radius of influence for each well, based on proposed injection volumes, will be approximately 0.26 miles after thirty years of TAG injection.

16. One well penetrates the proposed injection zone within a one-half mile radius of the proposed AGI well. The well has been plugged and abandoned and is isolated from the injection zone.

17. The proposed injection zone is laterally extensive, indicating that it will adequately contain the injected TAG and wastewater within the target injection zone and within the half-mile area of review.

18. The Maljamar AGI Well No. 1 encountered lower than expected permeability in the injection zone, resulting in surface pressures which were higher than originally anticipated. Based on additional well data obtained by Applicant, Frontier anticipates that the proposed well will encounter a higher permeability than the initial well. This will allow both wells to inject at pressure well below the maximum authorized operating pressure.

19. The proposed injection zone provides a sufficient geologic seal to contain the injected TAG and wastewater and prevent its migration into other zones. The injection zone is sufficiently isolated from any protectable groundwater sources and there is no evidence injection will impair existing or potential hydrocarbon production in the area. In addition, there is not any faulting or other geologic or man-made conduits that will allow the treated injected acid gas to migrate out of the injection zone.

20. Fresh water will be protected by surface casing, which will extend to approximately 890 feet below the deepest fresh water. Intermediate casing will extend to approximately 5700 feet below the surface. Production casing will extend to approximately 10220 feet total vertical depth and 10940 feet measured depth and will include approximately 295 feet of corrosion resistant production casing immediately above the injection zone. All casing strings will be cemented to the surface and pressure tested. The casing and cement program will meet all Oil Conservation Division requirements. The entire production tubing will be lined with fiberglass to prevent corrosion. This casing program may be altered with approval of the Division.

21. The annular space will be filled with corrosion-inhibited diesel that also contains a biocide.

22. Annular and injection tubing pressures, temperatures, and flow rates will be continuously monitored and recorded, as will surface annular pressure, and bottomhole temperatures, and pressures, in the tubing and annulus of the well.

23. Injection of the proposed waste stream will protect the environment and human health, and will not cause waste or impair correlative rights.

24. Phillip Goetze, the Division's witness, presented testimony that the Division proposed several conditions of approval in its Prehearing Statement and that the Division and Frontier had reached agreement on the proposed conditions.

25. Frontier and the Division reached agreement on the conditions of approval proposed by the Division, as follows:

(a) Frontier agrees to conduct a mechanical integrity test ("MIT") on the AGI wells every year.

(b) Frontier agrees to conduct a step-rate test on the completed well prior to commencing operation. The maximum surface injection pressure for the proposed well shall be 3028 psig, which may be increased after a step rate test.

(c) Frontier agrees to incorporate a biocide component in the inert annular fluid of the well.

(d) Frontier agrees to conduct continuous monitoring of pressure data, atmospheric H<sub>2</sub>S, and the safety measures in place for the proposed well.

(e) Frontier agrees to keep a maintenance log of its annular fluid (diesel) replacement activities in the annulus of the proposed well.

(f) Frontier agrees to incorporate temperature controls to govern the temperatures of injected fluid within parameters and provide an alarm system for these controls should parameters be exceeded.

(g) Frontier agrees to equip the well with a pressure-limiting device as well as a one-way safety valve on the tubing approximately 250 feet below the surface.

(h) Frontier agrees to provide summary data on injection parameters monitored in item (d) above, as requested by the Division in quarterly reports submitted on Form C-103. However, after one year Frontier may apply to the Division to submit such data annually.

(i) Frontier agrees to obtain approval of a H<sub>2</sub>S Contingency Plan pursuant to Division Rule 11 that incorporates the activities and operations of the proposed AGI well operations, and to conduct and implement all

required air monitoring and safety measures pursuant to that Plan.

(j) Frontier agrees that thirty days prior to commencing injection, the operator shall coordinate with the Division to establish immediate notification parameters for annulus pressure and tubing and casing differential pressure at a set injection temperature.

(k) Frontier agrees that ninety days after commencing injection, the operator shall review the pre-injection immediate notification parameters with the Division. If the Division determines that the parameters require modification, new immediate notification parameters shall be developed and implemented in coordination with the Division.

(l) Frontier agrees that the immediate notification parameters shall be reviewed jointly by the operator and the Division periodically, but not less than once a year.

(m) Frontier agrees to submit all logs and the estimated static bottomhole pressure to the Division's District I Office.

(n) Frontier agrees to provide a report following every tenth year of operation summarizing performance of the well and potential calibration of models due to information collected during the period.

26. The requirements set forth in Paragraph 25 shall also apply to the Maljamar AGI Well No. 1 except for item (b) since this well is already permitted to 3200 psig.

**THE COMMISSION CONCLUDES THAT:**

1. The Commission has jurisdiction over the parties and the subject matter of this case.
2. Proper public notice has been given.
3. Proper individual notice has been given to all operators, surface owners, and lessees within a one-mile radius of the bottomhole location of the proposed injection well.
4. Under the conditions approved in this Order, Frontier's injection of CO<sub>2</sub> and H<sub>2</sub>S can be conducted in a safe manner without causing waste, impairing correlative rights, negatively impacting oil and gas producing zones, or endangering fresh water, public health, or the environment.

**IT IS THEREFORE ORDERED THAT:**

1. Frontier's application is approved as provided in the Form C-108, and as modified by the conditions described below and in Finding Paragraph 25, above.

Accordingly, Frontier is hereby authorized to drill and operate the proposed Maljamar AGI Well No. 2, to be drilled at a surface location 400 feet from the South line and 2100 feet from the East line of Section 21, Township 17 South, Range 32 East, NMPM, to a bottomhole location 350 feet from the South line and 650 feet from the West line of said Section 21. Applicant proposes to use the Maljamar AGI Well No. 2 to inject acid gas and carbon dioxide into the Wolfcamp formation at depths of approximately 9600-10220 feet subsurface at a maximum injection pressure of 3028 psi and a maximum daily injection rate of 2 MMSCFD.

2. Applicant is further authorized to use the maximum daily injection rate apply to the proposed Maljamar AGI Well No. 2 and to the existing Maljamar AGI Well No. 1 (for either well, or both wells combined). The Maljamar AGI Well No. 1 is located 130 feet from the South line and 1813 feet from the East line of Section 21, Township 17 South, Range 32 East, NMPM. Injection into the Maljamar AGI Well No. 1 was approved by Commission Order No. R-13443-A.

3. The maximum allowable operating pressure for the Maljamar AGI Well No. 2 shall be 3028 psig. Frontier shall conduct a step-rate test on the completed well prior to commencing operation. Based on the step rate test, the Division may allow an increase in the maximum allowable operating pressure up to 3200 psig.

4. The AGI wells shall be constructed substantially in accordance with the description in the Form C- 108 filed by the Applicant in this case, as amended, and as modified at the hearing by the conditions agreed to by Frontier and the Oil Conservation Division.

5. Frontier shall be required to conduct a MIT in accordance with Division rules on the Maljamar AGI Well No. 2 once every year.

6. Prior to commencing injection, the operator shall prepare and secure approval by the Division's Environmental Bureau of a hydrogen sulfide contingency plan that complies with Division Rule 19.15.11.9 NMAC.

7. The casing-tubing annulus of the Maljamar AGI Well No. 2 shall be loaded with diesel treated with corrosion inhibitors and biocides and equipped with a pressure gauge or approved leak-detection device to detect any leakage in the casing, tubing, or packer.

8. Thirty days prior to commencing injection, the operator shall coordinate with the Division to establish immediate notification parameters for annulus pressure and tubing and casing differential pressure at a set injection temperature.

9. Ninety days after commencing injection, the operator must review the pre-injection immediate notification parameters with the Division. If the Division determines that the parameters require modification, new immediate notification

parameters shall be developed and implemented in coordination with the Division.

10. The immediate notification parameters shall be reviewed jointly by the operator and the Division periodically, but not less than once a year.

11. The operator shall record injection rates and pressures on a continuous basis and report these readings in a summary form on a quarterly basis to the Engineering Bureau in the Division's Santa Fe Office and to the Division's District I Office. Each such report shall include the well name, location, API Number and the number of this Order. However, after one year Frontier may apply to the Division to submit such data annually.

12. The operator shall provide the Division a report every ten years, once injection begins, that compares the reservoir pressures, volumes injected and projected TAG plume extent to those provided in the original Order, along with a summary of all the injection results to date. The report shall include an updated model of current and projected plume migration and shall use the modeling technology in standard use at the time of the report and any available information about plume migration.

13. The operating conditions in this Order shall also apply to the Maljamar AGI Well No. 1, including the requirement for an annual MIT, the reporting requirements listed in Finding Paragraph 25, and the installation of monitoring equipment which may be installed during the first workover of the well.

14. Frontier shall notify the Division of any changes or conditions imposed by the U.S. Bureau of Land Management on the wells and the Division shall determine if the changes are significant enough to require a change in this Order by the Commission.

15. The injection authority herein granted shall terminate three years after the effective date of this Order if the operator has not commenced injection operations at the Maljamar AGI Well No. 2. The Division Director may, upon written request of the operator, extend this deadline for good cause shown.

16. Compliance with this Order does not relieve the operator of the obligation to comply with other applicable federal, state, or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

DONE at Santa Fe, New Mexico, on this 19<sup>th</sup> day of November, 2014.

**STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION**

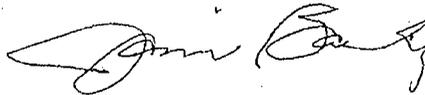
**ROBERT BALCH, Member**



**TERRY WARNELL, Member**



**JAMI BAILEY, Chair**



**SEAL**



Salaz, Robert <rsalaz@blm.gov>

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## NMOCC Order for Maljamar AGI #2, R-13443-B

1 message

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James C. Hunter {GeoLex} <JCH@geolex.com>

Thu, May 14, 2015 at 9:45 AM

To: rsalaz@blm.gov, "Fernandez, Edward" <efernand@blm.gov>

Cc: aag@geolex.com, "Briscoe, Brian" <bbriscoe@akaenergy.com>, khadrack@akaenergy.com

Mr. Salaz,

As we discussed this morning, the NMOCC Order R-13443 for the Frontier Field Services LLC Maljamar AGI #1 was amended on November 11, 2014 in NMOCC Order R-13443-B to approve the application to drill the second proposed well, Maljamar AGI #2.

A copy of this amended Order is attached to complete your files.

Please contact me if you have any further questions.

James C. Hunter, RG

Geolex, Incorporated®

500 Marquette Avenue, NW Suite 1350

Albuquerque, NM 87102

505-842-8000 Ext. 102

505-842-7380 Fax

505-239-8830 Cell

jch@geolex.com Email

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**FFS Maljamar#2 Order.pdf**

**STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 14664  
ORDER NO. R-13443**

**APPLICATION OF FRONTIER FIELD SERVICES, LLC FOR APPROVAL OF  
AN ACID GAS DISPOSAL WELL, LEA COUNTY, NEW MEXICO**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on June 23, 2011, at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 11<sup>th</sup> day of August, 2011, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Frontier Field Services, LLC ("Frontier" or "applicant"), seeks authority to utilize its proposed Maljamar AGI Well No. 1 [(API No. 30-025-NA), the "subject well"], to be located 130 feet from the South line and 1813 feet from the East line, Unit O of Section 21, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico, for disposal of Acid Gas and CO<sub>2</sub> from its Gas Processing Plant into the Lower Leonard and Wolfcamp formations through perforations at a gross interval of from approximately 9300 feet to 10,000 feet.

(3) The applicant's witnesses presented the following testimony:

- a. The proposed disposal well is to be located on a [pending] federal surface lease within approximately 300 feet of the plant near the current H<sub>2</sub>S flare.

- b. The Maljamar Gas Plant is handling an increased amount of mostly sour gas from Bone Spring and Paddock formation drilling. The Maljamar Plant air quality permits limit emissions, which in turn, limits the plant's gas handling capacity. The disposal well is needed to allow more plant throughput. The proposed disposal well should handle any plant expansion.
- c. Frontier expects disposed fluids to consist of 88 percent CO<sub>2</sub> and 12 percent H<sub>2</sub>S.
- d. The plant uses a cryogenic process to break the produced gas into products for sale and inerts for flaring or disposal.
- e. In compliance with Division Rule 19.15.11.9 NMAC, Frontier has an H<sub>2</sub>S Contingency Plan in place for the plant and is working with the Division's Environmental Bureau to extend this plan to include the proposed disposal well.
- f. This plant and proposed well are located just off the Caprock, in a heavily drilled area, approximately 3 miles south of the town of Maljamar and 1.5 miles north of highway 529.
- g. Disposal of gas plant wastes will improve air quality by reducing sulfur dioxide and carbon dioxide. Installation of this disposal well will enable the plant to expand and handle increased volumes of locally produced natural gas. This will in turn lower pipeline pressures for producers and enable increased recovery of gas from reservoirs.
- h. Frontier has run, processed, and interpreted 3-D seismic over this area and has shown the proposed disposal interval is isolated from any producing Wolfcamp intervals surrounding this location. The seismic survey indicates a Wolfcamp formation porosity pod of sufficient capacity to contain all plant waste gases including those gases associated with any proposed plant expansion.
- i. Frontier intends to permit this well and drill it through the Wolfcamp depths, case the well with casing designed to allow various packer setting depths depending on whether the Lower Leonard is to be completed, perforate, equip the well with injection tubing and packer, and commence disposal of H<sub>2</sub>S and CO<sub>2</sub> gases under pressure.
- j. Frontier does not expect any waste of oil or gas to occur as a result of disposal into the Lower Leonard and Wolfcamp formations at this location.

- k. The well will be adequately equipped and cemented to isolate any fresh water intervals within these Triassic aged surface rocks.

(4) Wolfcamp production attempts located nearby the proposed Acid Gas well have indicated the Wolfcamp to be largely unproductive or very short lived. Division records indicate the Wolfcamp is being produced successfully approximately one mile to the northeast of this proposed location. The existing Wolfcamp formation producing wells have frequently been commingled with the more prolific Abo production located 8800 to 9000 feet deep. Below the Wolfcamp, the Pennsylvanian Cisco formation is producing in at least one well within Section 20 located to the west of the proposed well.

(5) Division records indicate the Wolfcamp and Abo production in this area is "sweet" or devoid of H<sub>2</sub>S with API gravity of approximately 42.

(6) The "Lower Leonard" formation being proposed for disposal beginning at 9300 feet is called in Division records the "Wolfcamp formation" or sometimes the "upper Wolfcamp formation".

(7) Above the proposed disposal well in this Section 21, the MCA Unit (Grayburg San Andres formations, approximately 4400 feet deep) has been tested for tertiary recovery by injection of CO<sub>2</sub> in a small pilot project.

(8) The Division has previously approved the following Wolfcamp SWD disposal wells offsetting this location approximately one mile or more:

- a. The Queen B Well No 36 (API No. 30-025-00751), located in Unit D of Section 28 was approved in 1982 for disposal into the lower Wolfcamp formation by administrative permit SWD-241.
- b. The Federal BI Well No 1 (API No. 30-025-27068), located in Unit N of Section 28 was approved as a Wolfcamp disposal well by administrative permit SWD-1093.
- c. The Maljamar SWD 29 Well No 1 (API No. 30-025-39519), located in Unit O of Section 29 was approved as a Wolfcamp disposal well by administrative permit SWD-1179.

(9) The operator should evaluate the permitted disposal interval for rock stress direction and for potential production of hydrocarbons and supply copies of this new information to the Division, to the U.S. BLM, and to the following operators of surrounding deep wells – COG Operating LLC, ConocoPhillips Company, and V-F Petroleum, Inc.

(10) Per the application, this well should be permitted only for disposal of H<sub>2</sub>S and CO<sub>2</sub> gases and not for disposal of waste waters.

(11) Division records indicate the following wells are completed in the Wolfcamp formation and located within 1.6 miles of the proposed Acid Gas well. The applicant shall ensure these wells or any other wells completed in the Wolfcamp formation within this distance are equipped with H2S warning flags – or other safety indicators as the U.S. BLM or Hobbs district office requires:

a. Baish A #14	D/22/17S/32E	30-025-30363
b. Federal BI #1	N/28/17S/32E	30-025-27068
c. Baish A #12	A/21/17S/32E	30-025-20568
d. Hudson #1	M/15/17S/32E	30-025-21226
e. Maljamar SWD29 #1	O/29/17S/32E	30-025-39519
f. Elvis #4	F/20/17S/32E	30-025-33949
g. Hudson Fed #1	K/15/17S/32E	30-025-25107
h. Elvis #2	O/17/17S/32E	30-025-33854

(12) Affected parties within one mile have been notified and no objections have been received. There were no other appearances at the hearing or objections to this application.

(13) The application has been duly filed under the provisions of 19.15.26.8 NMAC.

(14) The one mile Area of Review around this well contains six plugged and abandoned wells and six active wells that penetrated the disposal interval. The Area of Review wells are adequately cased and cemented in order to isolate the disposal interval.

(15) The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

(16) This application as presented by Frontier should be approved.

**IT IS THEREFORE ORDERED THAT:**

(1) Frontier Field Services, LLC (“Frontier” or “operator”), is hereby authorized to utilize its proposed Maljamar AGI Well No. 1 (API No. 30-025-NA) to be located 130 feet from the South line and 1813 feet from the East line, Unit O of Section 21, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico, for disposal of Acid Gas and CO<sub>2</sub> from its gas processing plant into the Lower Leonard and Wolfcamp formations through perforations from approximately 9300 feet to 10,000 feet through tubing and a packer set within 100 feet above the permitted disposal interval. This well is not permitted for disposal of waste waters.

(2) During and after drilling this proposed well, the operator shall evaluate the permitted disposal interval for potential production of hydrocarbons and determine the

primary rock stress direction for the purpose of predicting the most likely invasion path for disposed gases. A mudlog or log of lithology and hydrocarbon samples shall be obtained while drilling. After drilling, the operator shall attempt to run an oriented fracture finder or wellbore stress log and conventional electric logs including porosity and resistivity tools. As soon as the data is available, copies of both the mudlog and the electric logs including processed oriented stress log shall be supplied to the Division, to the U.S. BLM, and to the following operators of surrounding deep wells – COG Operating LLC, ConocoPhillips Company, and V-F Petroleum, Inc.

(3) Pursuant to the requirements in 19.15.11.9.D(2) NMAC, the operator shall submit a hydrogen sulfide contingency plan to include the Maljamar Gas Plant and the Maljamar AGI Well No. 1. Before disposal operations commence the Division must determine the contingency plan is adequate and will protect public health.

(4) Pursuant to the requirements in 19.15.11.14 NMAC, this well and flowline to this well shall be designed using equipment capable of safely handling and confining the disposal gases. In addition, all requirements in 19.15.11 NMAC, Sections 10, 11, 12, and 13, shall be complied with during drilling, equipping and operation of this well.

(5) A one-way subsurface automatic safety valve shall be placed on the injection tubing approximately 250 feet below the surface to prevent the injected acid gas from migrating upwards in case of an upset or emergency.

(6) The operator shall ensure the following wells, and any other wells which are completed in the upper or lower Wolfcamp formation and located within 1.5 miles of the approved Acid Gas well, are equipped with H<sub>2</sub>S warning flags or other safety indicators as the U.S. BLM or the Division's Hobbs district office requires - until such time as the flagged well is permanently plugged back above the equivalent disposal interval:

a. Baish A #14	D/22/17S/32E	30-025-30363
b. Federal BI #1	N/28/17S/32E	30-025-27068
c. Baish A #12	A/21/17S/32E	30-025-20568
d. Hudson #1	M/15/17S/32E	30-025-21226
e. Maljamar SWD29 #1	O/29/17S/32E	30-025-39519
f. Elvis #4	F/20/17S/32E	30-025-33949
g. Hudson Fed #1	K/15/17S/32E	30-025-25107
h. Elvis #2	O/17/17S/32E	30-025-33854

(7) The operator shall take all steps necessary to ensure that the disposed fluids enter only the permitted disposal interval depths and are not permitted to escape to other formations or onto the surface through this well or any surrounding wells. If H<sub>2</sub>S levels on any of the wells listed above in ordering paragraph (6) reaches 100 ppm, the subject well shall be shut-in until Frontier Field Services, LLC has plugged those wells exhibiting newly discovered H<sub>2</sub>S.

(8) After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

(9) The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11.A NMAC with the exception that this well shall be MIT tested every two years or more often as the Division and/or the U.S. Bureau of Land Management deems necessary.

(10) The wellhead injection pressure on the well shall be limited to **no more than 2973 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

(11) The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

(12) The operator shall notify the supervisor of the Division's Hobbs district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Rules 19.15.26.13 NMAC and 19.15.7.24 NMAC.

(13) Without limitation on the duties of the operator as provided in 19.15.29 NMAC and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from or around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

(14) The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

(15) The Division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

(16) The Division Director shall be authorized to amend this permit administratively after proper notice and opportunity for hearing except as to the disposal formation(s) or the footage location of the well.

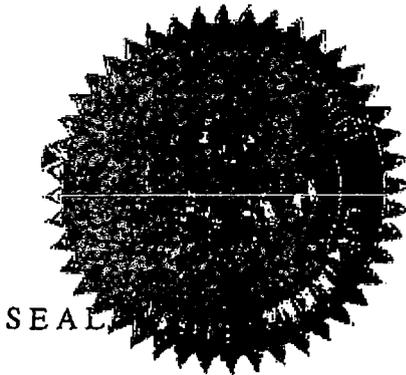
(17) The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

(18) One year after disposal into the well has ceased, the well will be considered abandoned and the authority to dispose will terminate *ipso facto*.

(19) Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

(20) Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing or prior to notice and hearing in event of an emergency, terminate the disposal authority granted herein.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

JAMI BAILEY  
Director

Table Showing All Wells Within Two Miles of Maljamat AGI # 2  
(As Measured from the Bottom of the Injection Zone)

ObjectID	API	OPERATOR	WellName	Status	WellType	ProdFm	TD	Miles
1	3002500608	CONOCOPHILLIPS COMPANY	MCA UNIT 093	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4104	0.05
2	3002539163	COG OPERATING LLC	MC FEDERAL 036	Active	Oil		7015	0.05
3	3002539500	COG OPERATING LLC	MC FEDERAL 066	New (Not drilled or compl)	Oil		7025	0.13
4	3002500750	KEWANEE OIL CO	BAISH B 033	Plugged	Oil		2594	0.14
5	3002520522	CONOCOPHILLIPS COMPANY	MCA UNIT 234	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4100	0.14
6	3002512804	CONOCOPHILLIPS COMPANY	MCA UNIT 113	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4050	0.14
7	3002500751	CONOCOPHILLIPS COMPANY	QUEEN B 036	Plugged	Oil		10005	0.17
8	3002500733	CONOCOPHILLIPS COMPANY	MCA UNIT 114	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4071	0.18
9	3002539108	COG OPERATING LLC	MC FEDERAL 037	Active	Oil		7197	0.21
10	3002540595	COG OPERATING LLC	MC FEDERAL 068	New (Not drilled or compl)	Oil	Abo	7226	0.21
11	3002534973	COG OPERATING LLC	MC FEDERAL 005	Active	Oil	MALJAMAR;YESO, WEST	6908	0.23
12	3002539107	COG OPERATING LLC	MC FEDERAL 035	New (Not drilled or compl)	Oil		7050	0.23
13	3002538703	COG OPERATING LLC	MC FEDERAL 020	Active	Oil	MALJAMAR;YESO, WEST	7027	0.23
14	3002500615	CONOCO INC	MCA UNIT 068	Plugged	Injection		4085	0.24
15	3002523807	CONOCOPHILLIPS COMPANY	MCA UNIT 287	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4120	0.24
16	3002508063	CONOCOPHILLIPS COMPANY	MCA UNIT 094	Active	Injection		4098	0.26
17	3002500609	CONOCOPHILLIPS COMPANY	MCA UNIT 092	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4082	0.26
18	3002540165	COG OPERATING LLC	GC FEDERAL 047	New (Not drilled or compl)	Oil		7160	0.28
19	3002537268	FRONTIER FIELD SERVICES, LLC	FRONTIER CATHODIC PROTECTION 001		Monitor		0	0.28
20	3002539867	COG OPERATING LLC	MC FEDERAL 063	New (Not drilled or compl)	Oil		7110	0.30
21	3002537931	CONOCOPHILLIPS COMPANY	MCA UNIT 394	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4445	0.30
22	3002523482	CONOCOPHILLIPS COMPANY	MCA UNIT 252	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4080	0.31
23	3002500752	CONOCO INC	MCA UNIT 112	Plugged	Oil		4078	0.31
24	3002500734	CONOCOPHILLIPS COMPANY	MCA UNIT 115	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4086	0.31
25	3002500610	CONOCOPHILLIPS COMPANY	MCA UNIT 067	Active	Injection		4125	0.32
26	3002540240	COG OPERATING LLC	MC FEDERAL 062	New (Not drilled or compl)	Oil		7130	0.32
27	3002520496	CONOCOPHILLIPS COMPANY	MCA UNIT 235	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4182	0.34
28	3002539263	COG OPERATING LLC	GC FEDERAL 025	Active	Oil		7010	0.34
29	3002539629	COG OPERATING LLC	MC FEDERAL 065	New (Not drilled or compl)	Oil		7036	0.37
30	3002539471	COG OPERATING LLC	GC FEDERAL 038	New (Not drilled or compl)	Oil		7129	0.37
31	3002523706	CONOCOPHILLIPS COMPANY	MCA UNIT 269	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4130	0.37
32	3002540143	COG OPERATING LLC	GC FEDERAL 046	New (Not drilled or compl)	Oil		7119	0.38
33	3002539292	COG OPERATING LLC	MC FEDERAL 038	Active	Oil		7035	0.38
34	3002534933	COG OPERATING LLC	MC FEDERAL 004	Active	Oil	MALJAMAR;YESO, WEST	7040	0.38
35	3002539265	COG OPERATING LLC	GC FEDERAL 029	Active	Oil		7114	0.39
36	3002512769	CONOCOPHILLIPS COMPANY	MCA UNIT 116	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4119	0.40
37	3002523433	CONOCOPHILLIPS COMPANY	MCA UNIT 251	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4250	0.40
38	3002500611	CONOCOPHILLIPS COMPANY	MCA UNIT 069	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4136	0.40
39	3002508062	CONOCOPHILLIPS COMPANY	MCA UNIT 066	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4072	0.40
40	3002529956	CONOCOPHILLIPS COMPANY	MCA UNIT 372	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4300	0.41
41	3002537939	CONOCOPHILLIPS COMPANY	MCA UNIT 397	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4460	0.42
42	3002539262	COG OPERATING LLC	GC FEDERAL 024	Active	Oil		7045	0.42
43	3002537900	CONOCOPHILLIPS COMPANY	MCA UNIT 395	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4488	0.43
44	3002539515	COG OPERATING LLC	GC FEDERAL 039	New (Not drilled or compl)	Oil		7020	0.43
45	3002500735	CONOCO INC	MCA UNIT 153	Plugged	Oil		3815	0.43
46	3002537879	CONOCOPHILLIPS COMPANY	MCA UNIT 393	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4450	0.44
47	3002538998	COG OPERATING LLC	MC FEDERAL 029	Active	Oil	MALJAMAR;YESO, WEST	7025	0.44
48	3002527065	CONOCO INC	MCA UNIT 362	Plugged	Oil		4150	0.45
49	3002508031	CONOCOPHILLIPS COMPANY	MCA UNIT 046	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4102	0.46
50	3002539877	COG OPERATING LLC	MC FEDERAL 060	New (Not drilled or compl)	Oil		7145	0.46
51	3002523660	CONOCO INC	MCA UNIT 262	Plugged	Injection		4145	0.46
52	3002539000	COG OPERATING LLC	MC FEDERAL 032	Active	Oil		7042	0.47
53	3002539506	COG OPERATING LLC	J C FEDERAL 035	New (Not drilled or compl)	Oil		7107	0.47
54	3002523569	CONOCOPHILLIPS COMPANY	MCA UNIT 260	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4110	0.49
55	3002500619	CONOCOPHILLIPS COMPANY	BAISH A 005	Active	Oil	BAISH;YATES	3717	0.49
56	3002539268	COG OPERATING LLC	GC FEDERAL 022	New (Not drilled or compl)	Oil		7015	0.49
57	3002527064	CONOCO INC	MCA UNIT 361	Plugged	Oil		8933	0.50
58	3002500753	CONOCOPHILLIPS COMPANY	MCA UNIT 154	Active	Injection		3810	0.50

Table Showing All Wells Within Two Miles of Maljamat AGI # 2  
(As Measured from the Bottom of the Injection Zone)

59	3002500617	CONTINENTAL OIL	MCA UNIT 091	Plugged	Oil		0	0.50
60	3002500736	CONOCOPHILLIPS COMPANY	MCA UNIT 152	Active	Injection		4128	0.50
61	3002508065	CONOCOPHILLIPS COMPANY	MCA UNIT 095	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4055	0.51
62	3002500618	CONOCOPHILLIPS COMPANY	BAISH A 003	Active	Oil	BAISH;YATES	2386	0.51
63	3002540712	CIMAREX ENERGY CO. OF COLORADO	PEARSALL FEDERAL SWD 001	New (Not drilled or compl)	SWD		10400	0.51
64	3002529102	CONOCOPHILLIPS COMPANY	MCA UNIT 365Y	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4440	0.51
65	3002526606	CONOCO INC	MCA UNIT 358	Plugged	Injection		0	0.51
66	3002528988	CONOCO INC	MCA UNIT 365	Plugged	Oil		0	0.52
67	3002538717	COG OPERATING LLC	MC FEDERAL 024	Active	Oil	MALJAMAR;YESO, WEST	7027	0.52
68	3002539270	COG OPERATING LLC	GC FEDERAL 032	Active	Oil		7136	0.52
69	3002527066	CONOCO INC	MCA UNIT 363	Plugged	Oil		0	0.52
70	3002539425	COG OPERATING LLC	MC FEDERAL 042	New (Not drilled or compl)	Oil		7084	0.52
71	3002539167	COG OPERATING LLC	J C FEDERAL 029	New (Not drilled or compl)	Oil		7134	0.52
72	3002527067	CONOCO INC	MCA UNIT 364	Plugged	Oil		4325	0.52
73	3002540420	FRONTIER FIELD SERVICES, LLC	MALJAMAR AGI 001	New (Not drilled or compl)	Injection		10183	0.53
74	3002500737	CONOCO INC	MCA UNIT 117	Plugged	Oil		3834	0.53
75	3002539473	COG OPERATING LLC	GC FEDERAL 045	New (Not drilled or compl)	Oil		7134	0.53
76	3002500767	CONOCOPHILLIPS COMPANY	MCA UNIT 111	Active	Injection		4020	0.53
77	3002527076	CONOCO INC	MCA UNIT 359	Plugged	Oil		0	0.53
78	3002540125	COG OPERATING LLC	MC FEDERAL 064	New (Not drilled or compl)	Oil		7120	0.54
79	3002538714	COG OPERATING LLC	BC FEDERAL 033	Active	Oil	MALJAMAR;YESO, WEST	7027	0.55
80	3002540237	COG OPERATING LLC	GC FEDERAL 044	New (Not drilled or compl)	Oil		7150	0.55
81	3002530337	CONOCOPHILLIPS COMPANY	MCA UNIT 380	Active	Injection		4110	0.56
82	3002540239	COG OPERATING LLC	J C FEDERAL 037	New (Not drilled or compl)	Oil		7136	0.56
83	3002500606	CONOCOPHILLIPS COMPANY	MCA UNIT 047	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4097	0.57
84	3002523744	CONOCOPHILLIPS COMPANY	MCA UNIT 284	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4150	0.57
85	3002508053	CONOCO INC	MCA UNIT 303	Plugged	Injection		13965	0.57
86	3002539931	COG OPERATING LLC	MC FEDERAL 056	New (Not drilled or compl)	Oil		7110	0.57
87	3002523509	CONOCO INC	MCA UNIT 256	Plugged	Injection		4145	0.57
88	3002524267	CONOCOPHILLIPS COMPANY	MCA UNIT 328	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4200	0.57
89	3002527063	CONOCO INC	MCA UNIT 360	Plugged	Oil		0	0.57
90	3002539059	COG OPERATING LLC	J C FEDERAL 025	Active	Oil		7017	0.58
91	3002512763	CONOCOPHILLIPS COMPANY	MCA UNIT 044	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4124	0.58
92	3002537976	CONOCOPHILLIPS COMPANY	MCA UNIT 396	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4450	0.58
93	3002512794	CONOCO INC	MCA UNIT 174	Plugged	Oil		4055	0.58
94	3002500604	CONOCO INC	MCA UNIT 070	Plugged	Injection			0.59
95	3002539857	COG OPERATING LLC	BC FEDERAL 063	New (Not drilled or compl)	Oil		7037	0.59
96	3002508064	CONOCO INC	MCA UNIT 065	Plugged	Injection			0.59
97	3002538038	CONOCOPHILLIPS COMPANY	MCA UNIT 407	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4550	0.60
98	3002538387	COG OPERATING LLC	MC FEDERAL 011	Active	Oil	MALJAMAR;YESO, WEST	7015	0.61
99	3002539267	COG OPERATING LLC	GC FEDERAL 021	New (Not drilled or compl)	Oil		7038	0.61
100	3002534773	COG OPERATING LLC	MC FEDERAL 003	Active	Oil	MALJAMAR;YESO, WEST	7015	0.62
101	3002539323	COG OPERATING LLC	GC FEDERAL 028	New (Not drilled or compl)	Oil		7114	0.62
102	3002500605	CONOCOPHILLIPS COMPANY	MCA UNIT 045	Plugged	Injection		4181	0.62
103	3002508054	CONOCOPHILLIPS COMPANY	MCA UNIT 048	Plugged	Injection		4069	0.62
104	3002539001	COG OPERATING LLC	MC FEDERAL 033	Active	Oil		7138	0.62
105	3002508362	BUFFALO OIL CO	MITCHELL B 023	Plugged	Oil		0	0.63
106	3002538739	COG OPERATING LLC	MC FEDERAL 016	Active	Oil		0	0.63
107	3002540152	COG OPERATING LLC	MC FEDERAL 052	New (Not drilled or compl)	Oil		7014	0.63
108	3002524196	CONOCOPHILLIPS COMPANY	MCA UNIT 318	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4200	0.63
109	3002512755	CONOCOPHILLIPS COMPANY	MCA UNIT 096	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4048	0.63
110	3002524076	CONOCOPHILLIPS COMPANY	MCA UNIT 308	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4100	0.63
111	3002540150	COG OPERATING LLC	GC FEDERAL 036	New (Not drilled or compl)	Oil		7151	0.64
112	3002500614	CONOCO INC	MCA UNIT 355	Plugged	Injection		12778	0.64
113	3002539427	COG OPERATING LLC	MC FEDERAL 054	New (Not drilled or compl)	Oil		6985	0.66
114	3002539697	COG OPERATING LLC	GC FEDERAL 037	New (Not drilled or compl)	Oil		7126	0.66
115	3002539470	COG OPERATING LLC	BC FEDERAL 059	New (Not drilled or compl)	Oil		7099	0.66
116	3002523687	CONOCOPHILLIPS COMPANY	MCA UNIT 266	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4110	0.66
117	3002539168	COG OPERATING LLC	J C FEDERAL 030	Active	Oil		7120	0.66
118	3002538829	COG OPERATING LLC	BC FEDERAL 032	Active	Oil		6900	0.66
119	3002500739	CONOCOPHILLIPS COMPANY	MCA UNIT 151	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	3806	0.66

Table Showing All Wells Within Two Miles of Maljamat AGI # 2  
(As Measured from the Bottom of the Injection Zone)

120	3002500768	CONOCO INC	MCA UNIT BATTERY 2 155	Plugged	Oil		3566	0.66
121	3002500613	CONOCO INC	BAISH A 004	Plugged	Oil		0	0.66
122	3002539790	CONOCOPHILLIPS COMPANY	MCA UNIT 495	New (Not drilled or compl)	Oil	GSA	4140	0.67
123	3002524213	CONOCOPHILLIPS COMPANY	MCA UNIT 319	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4125	0.67
124	3002500620	CONOCO INC	BAISH A 006	Plugged	Oil		0	0.67
125	3002539876	COG OPERATING LLC	MC FEDERAL 059	New (Not drilled or compl)	Oil		7227	0.68
126	3002500741	CONOCOPHILLIPS COMPANY	MCA UNIT 175	Plugged	Injection		4125	0.69
127	3002538833	COG OPERATING LLC	MC FEDERAL 026	Active	Oil		7035	0.69
128	3002539058	COG OPERATING LLC	MC FEDERAL 030	New (Not drilled or compl)	Oil		7030	0.69
129	3002523733	CONOCOPHILLIPS COMPANY	MCA UNIT 277	Plugged	Oil		4083	0.69
130	3002529959	CONOCOPHILLIPS COMPANY	MCA UNIT 373	Plugged	Oil		4350	0.70
131	3002534932	COG OPERATING LLC	BC FEDERAL 003	Active	Oil	MAIJAMAR;YESO, WEST	7028	0.70
132	3002521489	CONOCOPHILLIPS COMPANY	MCA UNIT 177	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4120	0.70
133	3002523731	CONOCOPHILLIPS COMPANY	MCA UNIT 274	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4190	0.70
134	3002523715	CONOCOPHILLIPS COMPANY	MCA UNIT 271	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4163	0.71
135	3002539264	COG OPERATING LLC	GC FEDERAL 027	Active	Oil		7103	0.72
136	3002539542	COG OPERATING LLC	J C FEDERAL 034	New (Not drilled or compl)	Oil		6995	0.72
137	3002539403	CONOCOPHILLIPS COMPANY	MCA UNIT 485	Active	Injection		4124	0.72
138	3002539002	COG OPERATING LLC	MC FEDERAL 034	Active	Oil		7033	0.72
139	3002500762	CONOCOPHILLIPS COMPANY	MCA UNIT 173	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4250	0.73
140	3002539779	CONOCOPHILLIPS COMPANY	MCA UNIT 435	Active	Oil	Abo	7003	0.73
141	3002540096	COG OPERATING LLC	MC FEDERAL 057	New (Not drilled or compl)	Oil		7112	0.73
142	3002500742	CONOCOPHILLIPS COMPANY	MCA UNIT 176	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4100	0.73
143	3002539791	CONOCOPHILLIPS COMPANY	MCA UNIT 496	New (Not drilled or compl)	Oil	GSA	4100	0.73
144	3002539614	COG OPERATING LLC	J C FEDERAL 036	New (Not drilled or compl)	Oil		7146	0.75
145	3002539858	COG OPERATING LLC	GC FEDERAL 043	New (Not drilled or compl)	Oil		7010	0.75
146	3002508067	CONOCO INC	MCA UNIT 097	Plugged	Injection		0	0.75
147	3002539354	CONOCOPHILLIPS COMPANY	MCA UNIT 484	Active	Oil		4142	0.75
148	3002529854	CONOCOPHILLIPS COMPANY	MCA UNIT 368	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4300	0.75
149	3002500616	CONOCO INC	MCA UNIT 090	Plugged	Injection			0.75
150	3002500603	CONOCOPHILLIPS COMPANY	MCA UNIT 043	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4119	0.75
151	3002539266	COG OPERATING LLC	GC FEDERAL 031	Active	Oil		7123	0.75
152	3002538815	COG OPERATING LLC	MC FEDERAL 021	Active	Oil		7020	0.76
153	3002508056	CONOCO INC	MCA UNIT 049	Plugged	Oil			0.76
154	3002539417	COG OPERATING LLC	BC FEDERAL 043	Active	Oil		7010	0.76
155	3002521951	PAN AMERICAN PETROLEUM CORP	BAISH B FEDERAL 002	Plugged	Oil		0	0.76
156	3002539792	CONOCOPHILLIPS COMPANY	MCA UNIT 498	New (Not drilled or compl)	Oil		0	0.76
157	3002512772	CONOCOPHILLIPS COMPANY	MCA UNIT 064	Plugged	Oil		4039	0.76
158	3002539293	COG OPERATING LLC	MC FEDERAL 039	New (Not drilled or compl)	Oil		7040	0.77
159	3002500758	CONOCO INC	MCA UNIT 110	Plugged	Oil		4073	0.77
160	3002539356	CONOCOPHILLIPS COMPANY	MCA UNIT 487	Active	Oil		4170	0.77
161	3002500738	CONOCOPHILLIPS COMPANY	MCA UNIT 118	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4145	0.77
162	3002540236	COG OPERATING LLC	BC FEDERAL 030	New (Not drilled or compl)	Oil		7044	0.78
163	3002538509	COG OPERATING LLC	MC FEDERAL 012	Active	Oil	MAIJAMAR;YESO, WEST	7012	0.78
164	3002500622	CONOCO INC	BAISH A 008	Plugged	Oil		13670	0.79
165	3002538776	COG OPERATING LLC	MC FEDERAL 017	Active	Oil	MAIJAMAR;YESO, WEST	7039	0.79
166	3002539962	COG OPERATING LLC	MC FEDERAL 050	New (Not drilled or compl)	Oil		7010	0.79
167	3002530347	CONOCOPHILLIPS COMPANY	MCA UNIT 379	Plugged	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4220	0.79
168	3002539950	COG OPERATING LLC	BC FEDERAL 061	New (Not drilled or compl)	Oil		7049	0.80
169	3002539423	COG OPERATING LLC	MC FEDERAL 040	New (Not drilled or compl)	Oil		7010	0.81
170	3002539928	COG OPERATING LLC	GC FEDERAL 042	New (Not drilled or compl)	Oil		7140	0.81
171	3002500612	CONOCOPHILLIPS COMPANY	MCA UNIT 071	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4131	0.81
172	3002508066	CONOCO INC	MCA UNIT 063	Plugged	Oil		4027	0.81
173	3002539402	CONOCOPHILLIPS COMPANY	MCA UNIT 481	Active	Injection		4153	0.81
174	3002537940	CONOCOPHILLIPS COMPANY	MCA UNIT 403		Oil		0	0.81
175	3002539612	COG OPERATING LLC	BC FEDERAL 053	New (Not drilled or compl)	Oil		7121	0.81
176	3002524235	CONOCOPHILLIPS COMPANY	MCA UNIT 324	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4170	0.81
177	3002500601	CONOCO INC	MCA UNIT 027	Plugged	Oil		4169	0.81
178	3002500607	CONOCOPHILLIPS COMPANY	MCA UNIT 026	Plugged	Injection		4175	0.82
179	3002520568	CONOCOPHILLIPS COMPANY	BAISH A 012	Active	Oil	MAIJAMAR;ABO	13717	0.82
180	3002539269	COG OPERATING LLC	GC FEDERAL 023	New (Not drilled or compl)	Oil		7035	0.82

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 (As Measured from the Bottom of the Injection Zone)

181	3002520231	CONOCO INC	MCA UNIT 258	Plugged	Oil		5445	0.82
182	3002523705	CONOCOPHILLIPS COMPANY	MCA UNIT 268	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4155	0.82
183	3002539767	CONOCOPHILLIPS COMPANY	MCA UNIT 482	New (Not drilled or compl)	Oil		4134	0.82
184	3002538713	COG OPERATING LLC	BC FEDERAL 031	Active	Oil		7025	0.82
185	3002539060	COG OPERATING LLC	J C FEDERAL 026	Active	Oil		7010	0.82
186	3002523740	CONOCO INC	MCA UNIT 280	Plugged	Oil		4175	0.83
187	3002539476	COG OPERATING LLC	GC FEDERAL 063	New (Not drilled or compl)	Oil		7110	0.83
188	3002538746	COG OPERATING LLC	BC FEDERAL 028	Active	Oil		7033	0.83
189	3002539426	COG OPERATING LLC	MC FEDERAL 053	New (Not drilled or compl)	Oil		7115	0.83
190	3002520216	CONTINENTAL OIL	BAISH A 009	Plugged	Oil		0	0.84
191	3002500764	CONOCOPHILLIPS COMPANY	MCA UNIT 171	Active	Injection		3950	0.85
192	3002500743	CONOCO INC	MCA UNIT 178	Plugged	Injection		0	0.85
193	3002539864	COG OPERATING LLC	MC FEDERAL 061	New (Not drilled or compl)	Oil		7018	0.85
194	3002512756	CONOCO INC	MCA UNIT 156	Plugged	Oil		3992	0.85
195	3002508055	CONOCOPHILLIPS COMPANY	MITCHELL A 004	Plugged	Gas		4129	0.85
196	3002535252	COG OPERATING LLC	MC FEDERAL 006	Active	Gas	MAIJAMAR;DEVONIAN	15026	0.86
197	3002531100	CONOCOPHILLIPS COMPANY	MCA UNIT 386	Active	Injection		4350	0.86
198	3002538835	COG OPERATING LLC	MC FEDERAL 015	Active	Oil		7055	0.86
199	3002500760	CONOCO INC	MCA UNIT 157	Plugged	Injection			0.86
200	3002500740	CONOCOPHILLIPS COMPANY	MCA UNIT 150	Active	Injection		4103	0.87
201	3002520149	CONTINENTAL OIL	BAISH A 011	Plugged	Injection		0	0.87
202	3002539475	COG OPERATING LLC	GC FEDERAL 062	New (Not drilled or compl)	Oil		7120	0.87
203	3002524226	CONOCOPHILLIPS COMPANY	MCA UNIT 301	Active	Injection		4220	0.87
204	3002538539	COG OPERATING LLC	BC FEDERAL 015	Active	Oil	MAIJAMAR;YESO, WEST	7015	0.87
205	3002539424	COG OPERATING LLC	MC FEDERAL 041	New (Not drilled or compl)	Oil		7041	0.88
206	3002523790	CONOCOPHILLIPS COMPANY	MCA UNIT 296	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4180	0.88
207	3002539628	COG OPERATING LLC	MC FEDERAL 046	New (Not drilled or compl)	Oil		7030	0.88
208	3002539507	COG OPERATING LLC	MC FEDERAL 044	New (Not drilled or compl)	Oil		7000	0.88
209	3002523778	CONOCO INC	MCA UNIT 288	Plugged	Oil			0.88
210	3002524258	CONOCOPHILLIPS COMPANY	MCA UNIT 326	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4250	0.88
211	3002512796	CONOCO INC	MCA UNIT 089	Plugged	Oil		4128	0.89
212	3002539875	COG OPERATING LLC	MC FEDERAL 055	New (Not drilled or compl)	Oil		7138	0.89
213	3002538997	COG OPERATING LLC	MC FEDERAL 028	Active	Oil		7013	0.89
214	3002500621	CONTINENTAL OIL	BAISH A 007	Plugged	Oil		0	0.89
215	3002539261	COG OPERATING LLC	GC FEDERAL 020	Active	Oil		7020	0.89
216	3002500766	CONOCOPHILLIPS COMPANY	MCA UNIT 172	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4000	0.90
217	3002538551	COG OPERATING LLC	MC FEDERAL 013	Active	Oil	MAIJAMAR;YESO, WEST	7125	0.91
218	3002539353	CONOCOPHILLIPS COMPANY	MCA UNIT 483	Active	Injection		4208	0.91
219	3002539913	COG OPERATING LLC	BC FEDERAL 065	New (Not drilled or compl)	Oil		7045	0.91
220	3002523686	CONOCOPHILLIPS COMPANY	MCA UNIT 265	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4100	0.92
221	3002524461	CONOCOPHILLIPS COMPANY	MCA UNIT 340	Plugged	Oil		4175	0.92
222	3002538715	COG OPERATING LLC	MC FEDERAL 022	Active	Oil		6920	0.92
223	3002539778	CONOCOPHILLIPS COMPANY	MCA UNIT 434	New (Not drilled or compl)	Oil		0	0.93
224	3002539352	CONOCOPHILLIPS COMPANY	MCA UNIT 479	Active	Oil		4150	0.93
225	3002538727	COG OPERATING LLC	BC FEDERAL 027	Active	Oil	MAIJAMAR;YESO, WEST	7035	0.93
226	3002523798	CONTINENTAL OIL	MCA UNIT 290	Plugged	Oil		0	0.93
227	3002508050	CONOCOPHILLIPS COMPANY	MCA UNIT 257	Plugged	Oil		5500	0.93
228	3002538832	COG OPERATING LLC	MC FEDERAL 025	Active	Oil		7027	0.93
229	3002529853	CONOCOPHILLIPS COMPANY	MCA UNIT 369	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4150	0.94
230	3002500749	CONOCO INC	MCA UNIT 210	Plugged	Oil		3980	0.94
231	3002508057	CONOCO INC	MCA UNIT 050	Plugged	Injection		4081	0.94
232	3002538996	COG OPERATING LLC	MC FEDERAL 027	Active	Oil		7012	0.94
233	3002524186	CONOCOPHILLIPS COMPANY	MCA UNIT 317	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4200	0.94
234	3002538744	COG OPERATING LLC	BC FEDERAL 025	Active	Oil		7024	0.94
235	3002539472	COG OPERATING LLC	GC FEDERAL 041	Active	Oil		7123	0.94
236	3002539861	COG OPERATING LLC	J C FEDERAL 052	New (Not drilled or compl)	Oil		7112	0.95
237	3002539272	COG OPERATING LLC	GC FEDERAL 030	Active	Oil		7016	0.95
238	3002512797	CONOCO INC	MCA UNIT 041	Plugged	Oil		4106	0.95
239	3002539766	CONOCOPHILLIPS COMPANY	MCA UNIT 480	New (Not drilled or compl)	Injection		0	0.95
240	3002539626	COG OPERATING LLC	GC FEDERAL 040	New (Not drilled or compl)	Oil		7178	0.95
241	3002512707	CONOCOPHILLIPS COMPANY	MCA UNIT 028	Plugged	Injection		4117	0.95

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242	3002500599	CONOCO INC	MCA UNIT 014	Plugged	Oil		4147	0.96
243	3002508061	CONOCOPHILLIPS COMPANY	MCA UNIT 024	Plugged	Injection		4080	0.96
244	3002539355	CONOCOPHILLIPS COMPANY	MCA UNIT 486	Active	Injection		4206	0.96
245	3002533584	CONOCOPHILLIPS COMPANY	ELVIS 001	Active	SWD	MALJAMAR;DEVONIAN, WEST	13900	0.96
246	3002539930	COG OPERATING LLC	J C FEDERAL 054	New (Not drilled or compl)	Oil		7122	0.96
247	3002500763	CONOCOPHILLIPS COMPANY	MCA UNIT 211	Active	Injection		4013	0.97
248	3002539789	CONOCOPHILLIPS COMPANY	MCA UNIT 493	New (Not drilled or compl)	Oil		0	0.97
249	3002500748	CONOCO INC	MCA UNIT 209	Plugged	Injection			0.97
250	3002538366	COG OPERATING LLC	BC FEDERAL 014	Active	Oil	WILDCAT G-02 S173219A, YESO	6985	0.97
251	3002539169	COG OPERATING LLC	J C FEDERAL 031	Active	Oil		7121	0.97
252	3002525849	CONOCOPHILLIPS COMPANY	MCA UNIT 357	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4170	0.98
253	3002523672	CONTINENTAL OIL	MCA UNIT 263	Plugged	Oil		0	0.99
254	3002539351	CONOCOPHILLIPS COMPANY	MCA UNIT 478	Active	Injection		4200	0.99
255	3002533949	CONOCOPHILLIPS COMPANY	ELVIS 004	Active	Oil	BAISH;CISCO	12100	0.99
256	3002529967	CONOCOPHILLIPS COMPANY	MCA UNIT 374	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4203	1.00
257	3002538830	COG OPERATING LLC	J C FEDERAL 018	Active	Oil	MALJAMAR;YESO, WEST	7007	1.00
258	3002508069	CONOCO INC	MCA UNIT 098	Plugged	Oil			1.00
259	3002500628	CONOCOPHILLIPS COMPANY	MCA UNIT 088	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4145	1.00
260	3002527068	COG OPERATING LLC	FEDERAL BI 001	Active	SWD		12992	1.00
261	3002500726	CONOCO INC	MCA UNIT 119	Plugged	Injection		4150	1.00
262	3002538738	COG OPERATING LLC	MC FEDERAL 014	Active	Oil	MALJAMAR;YESO, WEST	7015	1.00
263	3002539409	CONOCOPHILLIPS COMPANY	MCA UNIT 472	New (Not drilled or compl)	Injection		0	1.01
264	3002539415	COG OPERATING LLC	BC FEDERAL 041	Active	Oil		7050	1.01
265	3002535988	COG OPERATING LLC	J C FEDERAL 003	Active	Oil	MALJAMAR;YESO, WEST	5946	1.01
266	3002539817	CIMAREX ENERGY CO. OF COLORADO	JG STATE 003	New (Not drilled or compl)	Oil		7020	1.01
267	3002500754	CONOCOPHILLIPS COMPANY	MCA UNIT 170	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	3964	1.01
268	3002540031	CIMAREX ENERGY CO. OF COLORADO	JG STATE 016	New (Not drilled or compl)	Oil		0	1.02
269	3002520304	CONTINENTAL OIL	BAISH A 010	Plugged	Injection		0	1.02
270	3002540245	COG OPERATING LLC	BC FEDERAL 064	New (Not drilled or compl)	Oil		0	1.02
271	3002500744	CONOCO INC	MCA UNIT 179	Plugged	Oil		3925	1.02
272	3002523797	CONOCOPHILLIPS COMPANY	MCA UNIT 294	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4150	1.02
273	3002500745	CONOCOPHILLIPS COMPANY	MCA UNIT 382	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	9680	1.02
274	3002539499	COG OPERATING LLC	MC FEDERAL 049	New (Not drilled or compl)	Oil		7023	1.02
275	3002500602	CONOCO INC	MCA UNIT 042	Plugged	Injection		4093	1.02
276	3002540026	CIMAREX ENERGY CO. OF COLORADO	JG STATE 014	New (Not drilled or compl)	Oil		6899	1.02
277	3002539856	COG OPERATING LLC	BC FEDERAL 058	New (Not drilled or compl)	Oil		7120	1.03
278	3002523487	CONOCOPHILLIPS COMPANY	MCA UNIT 254	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4100	1.03
279	3002523707	CONOCOPHILLIPS COMPANY	MCA UNIT 270	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4130	1.03
280	3002524352	CONOCOPHILLIPS COMPANY	MCA UNIT 333	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4175	1.03
281	3002539860	COG OPERATING LLC	J C FEDERAL 050	New (Not drilled or compl)	Oil		7135	1.03
282	3002539816	CIMAREX ENERGY CO. OF COLORADO	JG STATE 001	New (Not drilled or compl)	Oil		7021	1.04
283	3002540098	COG OPERATING LLC	BC FEDERAL 062	New (Not drilled or compl)	Oil		7168	1.04
284	3002539620	COG OPERATING LLC	MC FEDERAL 047	New (Not drilled or compl)	Oil		7008	1.04
285	3002534713	COG OPERATING LLC	BC FEDERAL 002	Active	Oil	MALJAMAR;YESO, WEST	5773	1.05
286	3002539874	COG OPERATING LLC	MC FEDERAL 051	New (Not drilled or compl)	Oil		7035	1.05
287	3002500630	CONOCO INC	MCA UNIT 072	Plugged	Injection			1.05
288	3002508068	CONOCO INC	MCA UNIT 062	Plugged	Injection			1.05
289	3002512792	CONOCOPHILLIPS COMPANY	MCA UNIT 149	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4180	1.05
290	3002500578	CONOCO INC	MCA UNIT 012	Plugged	Injection		0	1.05
291	3002538999	COG OPERATING LLC	MC FEDERAL 031	New (Not drilled or compl)	Oil		7050	1.05
292	3002500765	CONOCOPHILLIPS COMPANY	MCA UNIT 212	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4070	1.06
293	3002500747	CONTINENTAL OIL	MCA UNIT 208	Plugged	Oil		4000	1.06
294	3002500635	CONOCO INC	MCA UNIT 040	Plugged	Oil		2351	1.06
295	3002523559	CONOCOPHILLIPS COMPANY	MCA UNIT 261	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4135	1.06
296	3002530491	CONOCOPHILLIPS COMPANY	MCA UNIT 384	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4200	1.07
297	3002500579	CONOCOPHILLIPS COMPANY	MCA UNIT 013	Plugged	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4150	1.07
298	3002539282	COG OPERATING LLC	GC FEDERAL 026	New (Not drilled or compl)	Oil		7035	1.07
299	3002539247	COG OPERATING LLC	J C FEDERAL 027	New (Not drilled or compl)	Oil		7040	1.08
300	3002500634	CONOCO INC	BAISH B 005	Plugged	Oil		13573	1.08
301	3002508048	CONOCOPHILLIPS COMPANY	MITCHELL B 015	Active	Oil	MALJAMAR;YESO, WEST	5442	1.08
302	3002538716	COG OPERATING LLC	MC FEDERAL 023	Active	Oil	MALJAMAR;YESO, WEST	6999	1.08

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303	3002508049	CONTINENTAL OIL	MCA UNIT 255	Plugged	Oil		0	1.09
304	3002500761	CONOCO INC	MCA UNIT 158	Plugged	Oil		3779	1.09
305	3002538745	COG OPERATING LLC	BC FEDERAL 026	Active	Oil	MALJAMAR;YESO, WEST	7000	1.09
306	3002538856	CONOCOPHILLIPS COMPANY	MCA UNIT 411	Active	Oil		4345	1.09
307	3002541231	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 009	New (Not drilled or compl)	Oil		0	1.09
308	3002540656	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 001	New (Not drilled or compl)	Oil		7072	1.09
309	3002540139	CONOCOPHILLIPS COMPANY	TOURMALINE STATE 003	Active	Oil		6927	1.09
310	3002500722	CONTINENTAL OIL	MCA UNIT 148	Plugged	Oil		0	1.09
311	3002538728	COG OPERATING LLC	MC FEDERAL 018	Active	Oil	MALJAMAR;YESO, WEST	6965	1.09
312	3002536156	CONOCO INC	MCA UNIT 246	Plugged	Oil		0	1.10
313	3002539519	COG OPERATING LLC	MALJAMAR SWD 29 001	Active	SWD		0	1.10
314	3002540393	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 001	New (Not drilled or compl)	Oil		7240	1.11
315	3002539497	COG OPERATING LLC	BC FEDERAL 057	New (Not drilled or compl)	Oil		7026	1.11
316	3002508060	CONOCOPHILLIPS COMPANY	MCA UNIT 023	Plugged	Oil		4052	1.11
317	3002539920	CIMAREX ENERGY CO. OF COLORADO	JG STATE 015	New (Not drilled or compl)	Oil		7000	1.11
318	3002539482	COG OPERATING LLC	MC FEDERAL 048	New (Not drilled or compl)	Oil		0	1.11
319	3002539544	COG OPERATING LLC	BC FEDERAL 055	New (Not drilled or compl)	Oil		7042	1.11
320	3002538978	CONOCOPHILLIPS COMPANY	MCA UNIT 409	Active	Oil		4320	1.12
321	3002538979	CONOCOPHILLIPS COMPANY	MCA UNIT 410	Active	Oil		4304	1.12
322	3002500590	CONOCOPHILLIPS COMPANY	MITCHELL B 010	Active	Oil	MALJAMAR;YESO, WEST	3514	1.12
323	3002523938	CONOCOPHILLIPS COMPANY	MCA UNIT 299	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4200	1.13
324	3002522661	CONOCOPHILLIPS COMPANY	MCA UNIT 245	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4100	1.13
325	3002539087	COG OPERATING LLC	J C FEDERAL 020	New (Not drilled or compl)	Oil		7048	1.13
326	3002538545	COG OPERATING LLC	GC FEDERAL 006L	New (Not drilled or compl)	Oil		0	1.13
327	3002539798	CIMAREX ENERGY CO. OF COLORADO	JG STATE 004	New (Not drilled or compl)	Oil		7032	1.13
328	3002512764	CONOCOPHILLIPS COMPANY	MCA UNIT 099	Plugged	Oil		3986	1.13
329	3002520647	COG OPERATING LLC	MC FEDERAL 007	Active	Oil	MALJAMAR;YESO, WEST	9958	1.13
330	3002524183	CONOCOPHILLIPS COMPANY	MCA UNIT 316	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4200	1.14
331	3002528161	ENDURANCE RESOURCES LLC	HOVER STATE 006	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4200	1.14
332	3002538988	CONOCOPHILLIPS COMPANY	MCA UNIT 421	Active	Oil		4322	1.14
333	3002540244	MACK ENERGY CORP	BROOK FEDERAL 001	New (Not drilled or compl)	Oil		7062	1.14
334	3002539797	CIMAREX ENERGY CO. OF COLORADO	JG STATE 002	New (Not drilled or compl)	Oil		7030	1.14
335	3002512785	CONOCOPHILLIPS COMPANY	MCA UNIT 222	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4000	1.14
336	3002540338	MACK ENERGY CORP	BROOK FEDERAL 003	New (Not drilled or compl)	Oil		10242	1.14
337	3002523673	CONOCOPHILLIPS COMPANY	MCA UNIT 264	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4060	1.15
338	3002500623	CONOCO INC	BAISH A 002	Plugged	Oil		4110	1.15
339	3002540506	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 010	New (Not drilled or compl)	Oil		6864	1.15
340	3002508058	CONOCOPHILLIPS COMPANY	MCA UNIT 051	Plugged	Oil		3990	1.15
341	3002540505	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 049	New (Not drilled or compl)	Oil		6882	1.15
342	3002539820	CONOCOPHILLIPS COMPANY	TOURMALINE STATE 001	New (Not drilled or compl)	Oil		7180	1.16
343	3002540520	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 002	New (Not drilled or compl)	Oil		7273	1.16
344	3002523741	CONOCOPHILLIPS COMPANY	MCA UNIT 281	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4025	1.16
345	3002538973	CONOCOPHILLIPS COMPANY	MCA UNIT 400	Active	Oil		4285	1.16
346	3002538980	CONOCOPHILLIPS COMPANY	MCA UNIT 412	Active	Oil		4360	1.16
347	3002523920	CONOCO INC	MCA UNIT 292	Plugged	Oil			1.16
348	3002539322	CONOCOPHILLIPS COMPANY	MCA UNIT 491	Active	Oil		4338	1.17
349	3002540025	CIMAREX ENERGY CO. OF COLORADO	JG STATE 013	New (Not drilled or compl)	Oil		999	1.17
350	3002500567	CONOCOPHILLIPS COMPANY	MCA UNIT 011	Plugged	Oil		4109	1.17
351	3002540228	COG OPERATING LLC	MC FEDERAL 069	New (Not drilled or compl)	Oil		7010	1.18
352	3002539416	COG OPERATING LLC	BC FEDERAL 042	New (Not drilled or compl)	Oil		7006	1.18
353	3002540006	COG OPERATING LLC	GC FEDERAL 052	New (Not drilled or compl)	Oil		7017	1.18
354	3002540097	COG OPERATING LLC	BC FEDERAL 060	New (Not drilled or compl)	Oil		7153	1.18
355	3002539162	COG OPERATING LLC	GC FEDERAL 019	New (Not drilled or compl)	Oil		7022	1.18
356	3002500592	CONOCO INC	MITCHELL B 009	Plugged	Oil		0	1.18
357	3002508052	CONOCOPHILLIPS COMPANY	MCA UNIT 253	Plugged	Oil		5350	1.18
358	3002523767	CONOCO INC	MCA UNIT 293	Plugged	Oil			1.18
359	3002500798	CONOCOPHILLIPS COMPANY	MCA UNIT 220	Plugged	Injection		4283	1.19
360	3002540357	MACK ENERGY CORP	BROOK FEDERAL 005	New (Not drilled or compl)	Oil		99	1.19
361	3002512748	CONOCO INC	MCA UNIT 029	Plugged	Oil		4140	1.19
362	3002500757	CONOCO INC	MCA UNIT 213	Plugged	Injection		4034	1.20
363	3002538414	COG OPERATING LLC	BC FEDERAL 079	Active	Oil		7041	1.20

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364	3002539862	COG OPERATING LLC	J C FEDERAL 053	New (Not drilled or compl)	Oil		7124	1.20
365	3002540153	COG OPERATING LLC	MC FEDERAL 058	New (Not drilled or compl)	Oil		7109	1.20
366	3002500746	CONOCOPHILLIPS COMPANY	MCA UNIT 207	Plugged	Injection			1.20
367	3002524376	CONOCOPHILLIPS COMPANY	MCA UNIT 338	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4150	1.20
368	3002512771	CONOCOPHILLIPS COMPANY	MCA UNIT 061	Plugged	Injection		4024	1.20
369	3002536194	COG OPERATING LLC	BC FEDERAL 008	Active	Oil	MAIJAMAR;YESO, WEST	6598	1.20
370	3002524233	CONOCOPHILLIPS COMPANY	MCA UNIT 321	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4175	1.20
371	3002534914	ENDURANCE RESOURCES LLC	HOVER STATE 008	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4202	1.20
372	3002534733	COG OPERATING LLC	BC FEDERAL 001	Active	Oil	MAIJAMAR;YESO, WEST	7008	1.21
373	3002539821	CONOCOPHILLIPS COMPANY	TOURMALINE STATE 002	New (Not drilled or compl)	Oil		7004	1.21
374	3002539164	COG OPERATING LLC	J C FEDERAL 023	Active	Oil		7119	1.21
375	3002500755	CONOCOPHILLIPS COMPANY	IMCA UNIT 169	Active	Injection		3935	1.21
376	3002500789	ENDURANCE RESOURCES LLC	HOVER STATE 001	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	3955	1.21
377	3002539410	CONOCOPHILLIPS COMPANY	MCA UNIT 473	New (Not drilled or compl)	Oil		99	1.21
378	3002500799	CONOCO INC	MCA UNIT 221	Plugged	Oil		0	1.21
379	3002500728	CONOCOPHILLIPS COMPANY	MCA UNIT 180	Active	Injection		4170	1.22
380	3002540222	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 003	New (Not drilled or compl)	Oil		6960	1.22
381	3002539170	COG OPERATING LLC	J C FEDERAL 032	Active	Oil		7315	1.22
382	3002539619	COG OPERATING LLC	MC FEDERAL 045	New (Not drilled or compl)	Oil		7010	1.22
383	3002533854	CONOCOPHILLIPS COMPANY	ELVIS 002	Active	Oil	BAISH;WOLFCAMP	14000	1.23
384	3002534647	COG OPERATING LLC	MC FEDERAL COM 001	Active	Gas	MAIJAMAR;MCKEE (GAS)	14912	1.23
385	3002524349	CONOCOPHILLIPS COMPANY	MCA UNIT 332	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4225	1.23
386	3002540149	CONOCOPHILLIPS COMPANY	AQUAMARINE STATE 003	New (Not drilled or compl)	Oil		7030	1.23
387	3002541019	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 051	New (Not drilled or compl)	Oil		99	1.23
388	3002523984	CONOCOPHILLIPS COMPANY	MCA UNIT 300	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4175	1.23
389	3002539863	COG OPERATING LLC	J C FEDERAL 055	New (Not drilled or compl)	Oil		7130	1.24
390	3002539019	COG OPERATING LLC	EDWARD STATE 007	New (Not drilled or compl)	Oil		6069	1.24
391	3002540140	CONOCOPHILLIPS COMPANY	TOURMALINE STATE 004	New (Not drilled or compl)	Oil		7000	1.25
392	3002539480	COG OPERATING LLC	J C FEDERAL 049	Active	Oil		7027	1.25
393	3002530363	CONOCOPHILLIPS COMPANY	BAISH A 014	Active	Oil	MAIJAMAR;ABO	10000	1.25
394	3002538262	COG OPERATING LLC	MC FEDERAL 010	Active	Oil	MAIJAMAR;YESO, WEST	7011	1.25
395	3002508041	CONOCOPHILLIPS COMPANY	MCA UNIT 100	Plugged	Injection		3840	1.25
396	3002500626	CONOCO INC	MCA UNIT 087	Plugged	Injection			1.25
397	3002524127	CONOCOPHILLIPS COMPANY	MCA UNIT 314	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4250	1.25
398	3002539683	COG OPERATING LLC	EDWARD STATE 011	New (Not drilled or compl)	Oil		7020	1.25
399	3002538730	COG OPERATING LLC	EDWARD STATE 004	Active	Oil	MAIJAMAR;YESO, WEST	7025	1.26
400	3002500720	CONOCOPHILLIPS COMPANY	MCA UNIT 120	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4119	1.27
401	3002539836	COG OPERATING LLC	EDWARD STATE 010	New (Not drilled or compl)	Oil		7005	1.27
402	3002500577	COG OPERATING LLC	EDWARD STATE 003	Active	Gas	MAIJAMAR;QUEEN (GAS)	4168	1.27
403	3002538994	COG OPERATING LLC	GC FEDERAL 011	Active	Oil		0	1.27
404	3002540221	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 003	New (Not drilled or compl)	Oil		69959	1.27
405	3002539481	COG OPERATING LLC	J C FEDERAL 051	New (Not drilled or compl)	Oil		7130	1.28
406	3002539321	CONOCOPHILLIPS COMPANY	MCA UNIT 490	Active	Oil		4300	1.28
407	3002539849	CONOCOPHILLIPS COMPANY	AQUAMARINE STATE 001	New (Not drilled or compl)	Oil		6955	1.28
408	3002539166	COG OPERATING LLC	J C FEDERAL 028	Active	Oil		7123	1.28
409	3002512798	CONOCOPHILLIPS COMPANY	MCA UNIT 168	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	3995	1.28
410	3002535989	COG OPERATING LLC	MC FEDERAL 008	Active	Oil	MAIJAMAR;YESO, WEST	6918	1.28
411	3002539414	COG OPERATING LLC	BC FEDERAL 040	New (Not drilled or compl)	Oil		7036	1.28
412	3002500790	ENDURANCE RESOURCES LLC	HOVER STATE 002	Active	Injection		4022	1.29
413	3002512747	CONOCO INC	MCA UNIT 010	Plugged	Injection		0	1.29
414	3002500800	CONOCOPHILLIPS COMPANY	MCA UNIT 223	Active	Injection		4135	1.29
415	3002500624	CONTINENTAL OIL	MCA UNIT 030	Plugged	Oil		0	1.29
416	3002540394	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 002	New (Not drilled or compl)	Oil		7240	1.29
417	3002538831	COG OPERATING LLC	J C FEDERAL 017	Active	Oil		7046	1.29
418	3002500631	CONOCOPHILLIPS COMPANY	MCA UNIT 073	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4112	1.29
419	3002508035	CONOCOPHILLIPS COMPANY	MCA UNIT 060	Plugged	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	3725	1.29
420	3002508059	CONOCO INC	MCA UNIT 022	Plugged	Injection		0	1.29
421	3002538986	CONOCOPHILLIPS COMPANY	MCA UNIT 418	Active	Injection		4380	1.29
422	3002538742	COG OPERATING LLC	BC FEDERAL 023	Plugged	Oil	MAIJAMAR;YESO, WEST	6944	1.30
423	3002540151	COG OPERATING LLC	GC FEDERAL 058	New (Not drilled or compl)	Oil		7042	1.30
424	3002539616	COG OPERATING LLC	J C FEDERAL 045	New (Not drilled or compl)	Oil		7174	1.30

Table Showing All Wells Within Two Miles of Maljamat AGI # 2  
(As Measured from the Bottom of the Injection Zone)

425	3002538740	COG OPERATING LLC	MC FEDERAL 019	Active	Oil		6952	1.30
426	3002500576	COG OPERATING LLC	EDWARD STATE 002	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4350	1.30
427	3002540387	MACK ENERGY CORP	BROOK FEDERAL 006	New (Not drilled or compl)	Oil		0	1.30
428	3002500586	CONOCO INC	MCA UNIT 015	Plugged	Injection		0	1.30
429	3002538987	CONOCOPHILLIPS COMPANY	MCA UNIT 419	Active	Oil		4375	1.30
430	3002538972	CONOCOPHILLIPS COMPANY	MCA UNIT 399	Active	Injection		4348	1.31
431	3002540310	COG OPERATING LLC	MALJAMAR SWD 30 002	New (Not drilled or compl)	SWD		999	1.31
432	3002526720	COG OPERATING LLC	WALLINGFORD 002	Plugged	Oil	MALJAMAR;GRAYBURG-SAN ANDRES		1.31
433	3002500575	CONTINENTAL OIL	GULF STATE E 001	Plugged	Oil		0	1.32
434	3002538989	CONOCOPHILLIPS COMPANY	MCA UNIT 420	Active	Injection		4385	1.32
435	3002539111	COG OPERATING LLC	GC FEDERAL 015	Active	Oil		7037	1.32
436	3002508051	CONOCOPHILLIPS COMPANY	MCA UNIT 331	Active	Injection		5370	1.32
437	3002523825	CONOCOPHILLIPS COMPANY	MCA UNIT 298	Plugged	Injection		4085	1.32
438	3002500784	CONOCO INC	MCA UNIT 159	Plugged	Injection			1.32
439	3002529955	CONOCO INC	MCA UNIT 371	Plugged	Oil			1.32
440	3002530679	COG OPERATING LLC	LEAKER CC STATE 009	Active	Oil	MALJAMAR;QUEEN (GAS)	6060	1.32
441	3002500589	CONOCOPHILLIPS COMPANY	MITCHELL B 011	Active	Oil	MALJAMAR;YESO, WEST	5397	1.32
442	3002508032	CONOCO INC	MCA UNIT 259	Plugged	Oil		5288	1.33
443	3002500719	CONOCOPHILLIPS COMPANY	QUEEN B 006	Plugged	Oil		4150	1.33
444	3002540007	COG OPERATING LLC	GC FEDERAL 055	New (Not drilled or compl)	Oil		7036	1.34
445	3002535715	I & W INC	BRINE STATION 529	Plugged	Monitor		99	1.34
446	3002500584	PHILLIPS PETROLEUM CO	MALJAMAR 002	Plugged	Oil		0	1.34
447	3002500598	CONOCOPHILLIPS COMPANY	MCA UNIT 008	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4240	1.34
448	3002539764	CONOCOPHILLIPS COMPANY	MCA UNIT 467	New (Not drilled or compl)	Oil		4365	1.34
449	3002539850	CONOCOPHILLIPS COMPANY	AQUAMARINE STATE 002	New (Not drilled or compl)	Oil		6979	1.34
450	3002539422	COG OPERATING LLC	GC FEDERAL 049	New (Not drilled or compl)	Oil		6925	1.35
451	3002538842	COG OPERATING LLC	GC FEDERAL 008	Active	Oil	MALJAMAR;YESO, WEST	6815	1.35
452	3002540339	MACK ENERGY CORP	BROOK FEDERAL 004	New (Not drilled or compl)	Oil		10134	1.35
453	3002540337	MACK ENERGY CORP	BROOK FEDERAL 002	New (Not drilled or compl)	Oil		7105	1.35
454	3002540523	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 004	New (Not drilled or compl)	Oil		6965	1.36
455	3002539432	CONOCOPHILLIPS COMPANY	MCA UNIT 489	Active	Injection		4334	1.36
456	3002500756	CONOCO INC	MCA UNIT 214	Plugged	Oil			1.37
457	3002500759	CONOCOPHILLIPS COMPANY	MCA UNIT 109	Active	Injection		3965	1.37
458	3002539431	CONOCOPHILLIPS COMPANY	MCA UNIT 477	New (Not drilled or compl)	Oil		99	1.37
459	3002541009	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 013	New (Not drilled or compl)	Oil		0	1.37
460	3002500809	CONOCO INC	MCA UNIT 230	Plugged	Oil		0	1.37
461	3002538838	COG OPERATING LLC	LEAKER CC STATE 015	Active	Oil	MALJAMAR;YESO, WEST	0	1.37
462	3002500632	CONOCOPHILLIPS COMPANY	MCA UNIT 039	Plugged	Injection		4075	1.37
463	3002523732	CONOCOPHILLIPS COMPANY	MCA UNIT 276	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4030	1.37
464	3002500729	CONOCOPHILLIPS COMPANY	MCA UNIT 206	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4155	1.37
465	3002508037	CONOCO INC	MCA UNIT 052	Plugged	Injection			1.37
466	3002512795	CONOCOPHILLIPS COMPANY	MCA UNIT 086	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4100	1.37
467	3002539618	COG OPERATING LLC	MC FEDERAL 043	New (Not drilled or compl)	Oil		7028	1.38
468	3002539625	COG OPERATING LLC	BC FEDERAL 054	New (Not drilled or compl)	Oil		7015	1.38
469	3002539088	COG OPERATING LLC	J C FEDERAL 021	Active	Oil		7008	1.38
470	3002539835	COG OPERATING LLC	EDWARD STATE 009	New (Not drilled or compl)	Oil		7020	1.38
471	3002538621	COG OPERATING LLC	EDWARD STATE 005	Active	Oil	MALJAMAR;YESO, WEST	7040	1.38
472	3002523739	CONOCO INC	MCA UNIT 279	Plugged	Oil		4050	1.38
473	3002524128	CONOCO INC	MCA UNIT 315	Plugged	Oil			1.38
474	3002512782	CONOCOPHILLIPS COMPANY	MCA UNIT 225	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4139	1.38
475	3002523824	CONOCOPHILLIPS COMPANY	MCA UNIT 295	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4160	1.39
476	3002539467	COG OPERATING LLC	BC FEDERAL 049	New (Not drilled or compl)	Oil		7044	1.39
477	3002538836	COG OPERATING LLC	J C FEDERAL 016	Active	Oil		6961	1.39
478	3002512749	MALJAMAR OIL & GAS	PEARSALL LM 001	Plugged	Oil		515	1.39
479	3002524274	CONOCOPHILLIPS COMPANY	MCA UNIT 327	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4200	1.39
480	3002540138	CONOCOPHILLIPS COMPANY	AQUAMARINE STATE 004	New (Not drilled or compl)	Oil		7034	1.39
481	3002500815	CONOCO INC	MCA UNIT 383	Plugged	Oil			1.39
482	3002500801	CONOCO INC	MCA UNIT 224	Plugged	Oil			1.39
483	3002538834	COG OPERATING LLC	EDWARD STATE 006	Active	Oil	MALJAMAR;YESO, WEST	7012	1.39
484	3002541011	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 015	New (Not drilled or compl)	Oil		0	1.39
485	3002500794	MACK ENERGY CORP	WALLINGFORD 001	Plugged	Oil		4041	1.40

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486	3002500569	COG OPERATING LLC	LEAKER CC STATE 003	Active	Oil	BAISH;YATES	4318	1.40
487	3002500797	MALJAMAR OIL & GAS	PEARSALL PERMIT 003	Plugged	Oil		4339	1.41
488	3002534772	COG OPERATING LLC	J C FEDERAL 002	Active	Oil	MALJAMAR;YESO, WEST	5950	1.41
489	3002539433	CONOCOPHILLIPS COMPANY	MCA UNIT 492	Plugged	Oil		4373	1.41
490	3002538992	COG OPERATING LLC	BC FEDERAL 036	Active	Oil		6918	1.41
491	3002539611	COG OPERATING LLC	BC FEDERAL 046	New (Not drilled or compl)	Oil		6910	1.41
492	3002523846	CONOCOPHILLIPS COMPANY	MCA UNIT 282	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4185	1.41
493	3002523789	CONOCOPHILLIPS COMPANY	MCA UNIT 289	Plugged	Oil		4025	1.41
494	3002500593	CONOCO INC	MITCHELL B 008	Plugged	Oil		4200	1.41
495	3002500730	CONOCOPHILLIPS COMPANY	MCA UNIT 183	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4205	1.41
496	3002539682	COG OPERATING LLC	EDWARD STATE 008	New (Not drilled or compl)	Oil		7016	1.41
497	3002500808	CONOCOPHILLIPS COMPANY	MCA UNIT 233	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4165	1.42
498	3002531092	ENDURANCE RESOURCES LLC	HOVER STATE 007	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4245	1.42
499	3002527292	LEGACY RESERVES OPERATING, LP	WALLINGFORD 003	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES		1.42
500	3002500775	CONOCOPHILLIPS COMPANY	MCA UNIT 167	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	3912	1.42
501	3002540358	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 012	New (Not drilled or compl)	Oil		7230	1.42
502	3002539389	COG OPERATING LLC	LEAKER CC STATE 029	New (Not drilled or compl)	Oil		7018	1.43
503	3002500724	CONOCOPHILLIPS COMPANY	MCA UNIT 181	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4094	1.43
504	3002500805	CONOCO INC	PEARSALL A 001	Plugged	Oil		0	1.44
505	3002540524	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 005	New (Not drilled or compl)	Oil		6975	1.44
506	3002538993	COG OPERATING LLC	GC FEDERAL 010	Active	Oil		6805	1.44
507	3002523743	CONOCOPHILLIPS COMPANY	MCA UNIT 283	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4075	1.44
508	3002530116	CONOCO INC	MCA UNIT 378	Plugged	Oil		4250	1.44
509	3002539113	COG OPERATING LLC	GC FEDERAL 018	Active	Oil		0	1.44
510	3002500637	CONOCO INC	BAISH B 001	Plugged	Oil		13657	1.44
511	3002539498	COG OPERATING LLC	GC FEDERAL 054	New (Not drilled or compl)	Oil		7120	1.44
512	3002538733	COG OPERATING LLC	LEAKER CC STATE 012	New (Not drilled or compl)	Oil	MALJAMAR;YESO, WEST	7016	1.44
513	3002539543	COG OPERATING LLC	BC FEDERAL 047	New (Not drilled or compl)	Oil		5260	1.44
514	3002540223	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 053	New (Not drilled or compl)	Oil		6925	1.44
515	3002512780	CONOCO INC	MCA UNIT 038	Plugged	Oil		0	1.44
516	3002538985	CONOCOPHILLIPS COMPANY	MCA UNIT 417	Active	Oil		4466	1.45
517	3002537656	COG OPERATING LLC	J C FEDERAL 004	Active	Oil	MALJAMAR;YESO, WEST	10200	1.45
518	3002500793	KERSEY & COMPANY	HOVER FRITSCHI STATE 005	Plugged	Oil		0	1.46
519	3002535142	CONOCOPHILLIPS COMPANY	MCA UNIT 387	Plugged	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4499	1.46
520	3002500804	MARBOB ENERGY CORP	PEARSALL A 003	Plugged	Oil		0	1.46
521	3002500558	CONOCO INC	MCA UNIT BATTERY 2 009	Plugged	Oil		4003	1.46
522	3002541010	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 014	New (Not drilled or compl)	Oil		0	1.46
523	3002526835	MACK ENERGY CORP	HOVER 001	Plugged	Oil		4250	1.46
524	3002500807	CONOCO INC	MCA UNIT 232	Plugged	Injection			1.46
525	3002529852	CONOCOPHILLIPS COMPANY	MCA UNIT 370	Plugged	Oil		4396	1.46
526	3002521226	CONOCOPHILLIPS COMPANY	HUDSON 001	Active	Oil	BAISH;WOLFCAMP	9950	1.46
527	3002500585	CONOCO INC	MCA UNIT 016	Plugged	Injection		0	1.46
528	3002538984	CONOCOPHILLIPS COMPANY	MCA UNIT 416	Active	Oil		4465	1.47
529	3002535652	COG OPERATING LLC	BC FEDERAL 006	Active	Oil	MALJAMAR;YESO, WEST	7562	1.47
530	3002539478	COG OPERATING LLC	J C FEDERAL 039	New (Not drilled or compl)	Oil		7025	1.48
531	3002538164	COG OPERATING LLC	BC FEDERAL 013	Active	Oil	WILDCAT G-02 S173219A,YESO	6720	1.48
532	3002539761	COG OPERATING LLC	LEAKER CC STATE 031	New (Not drilled or compl)	Oil		7135	1.49
533	3002523930	CONOCO INC	MCA UNIT 278	Plugged	Oil			1.49
534	3002500596	CONOCOPHILLIPS COMPANY	MCA UNIT 267	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	5405	1.49
535	3002539474	COG OPERATING LLC	GC FEDERAL 056	New (Not drilled or compl)	Oil		7112	1.49
536	3002538619	COG OPERATING LLC	LEAKER CC STATE 010	Active	Oil	MALJAMAR;YESO, WEST	7025	1.49
537	3002500625	CONOCO INC	BAISH B 002	Plugged	Gas		4157	1.49
538	3002508030	CONOCOPHILLIPS COMPANY	MCA UNIT 021	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4030	1.49
539	3002538860	CONOCOPHILLIPS COMPANY	MCA UNIT 406	Active	Oil		4531	1.49
540	3002530731	CONOCOPHILLIPS COMPANY	MCA UNIT 385	Plugged	Oil		4420	1.50
541	3002512793	CONOCOPHILLIPS COMPANY	MCA UNIT 182	Plugged	Oil		4070	1.50
542	3002539258	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 005	New (Not drilled or compl)	Oil		0	1.50
543	3002500640	CONTINENTAL OIL	MCA UNIT 085	Plugged	Oil		0	1.50
544	3002508043	CONOCO INC	MCA UNIT 101	Plugged	Oil		3695	1.50
545	3002539775	CONOCOPHILLIPS COMPANY	MCA UNIT 430	New (Not drilled or compl)	Oil		0	1.50
546	3002539938	CIMAREX ENERGY CO. OF COLORADO	JG STATE 024	New (Not drilled or compl)	Oil		7031	1.50

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547	3002538983	CONOCOPHILLIPS COMPANY	MCA UNIT 415	Active	Oil		4412	1.51
548	3002500715	CONOCOPHILLIPS COMPANY	MCA UNIT 121	Active	Injection		4100	1.51
549	3002500571	COG OPERATING LLC	LEAKER CC STATE 005	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4224	1.51
550	3002500769	CONOCOPHILLIPS COMPANY	MCA UNIT 107	Plugged	Injection		4010	1.51
551	3002538741	COG OPERATING LLC	BC FEDERAL 022	Active	Oil		7040	1.51
552	3002540525	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 005	New (Not drilled or compl)	Oil		7270	1.52
553	3002523738	CONOCOPHILLIPS COMPANY	MCA UNIT 275	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4230	1.52
554	3002535813	COG OPERATING LLC	BC FEDERAL 007	Active	Oil	MALJAMAR;YESO, WEST	6620	1.52
555	3002537964	COG OPERATING LLC	J C FEDERAL 005	Active	Oil	MALJAMAR;YESO, WEST	7100	1.52
556	3002500792	ENDURANCE RESOURCES LLC	HOVER STATE 004	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4156	1.52
557	3002540597	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 010	New (Not drilled or compl)	Oil		0	1.52
558	3002500803	CONOCOPHILLIPS COMPANY	MCA UNIT 231	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4280	1.52
559	3002539935	CIMAREX ENERGY CO. OF COLORADO	JG STATE 007	New (Not drilled or compl)	Oil		7010	1.52
560	3002539799	CIMAREX ENERGY CO. OF COLORADO	JG STATE 005	New (Not drilled or compl)	Oil		7013	1.53
561	3002524513	CONOCOPHILLIPS COMPANY	MCA UNIT 346	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4425	1.53
562	3002539684	COG OPERATING LLC	J C FEDERAL 042	New (Not drilled or compl)	Oil		7112	1.53
563	3002538995	COG OPERATING LLC	J C FEDERAL 019	Active	Oil		7042	1.53
564	3002500627	CONOCOPHILLIPS COMPANY	MCA UNIT 074	Active	Injection		4112	1.53
565	3002524095	CONTINENTAL OIL	MCA UNIT 309	Plugged	Oil		0	1.53
566	3002508042	CONOCOPHILLIPS COMPANY	MCA UNIT 059	Plugged	Injection		3995	1.53
567	3002538735	COG OPERATING LLC	LEAKER CC STATE 014	Active	Oil	MALJAMAR;YESO, WEST	7020	1.54
568	3002539765	CONOCOPHILLIPS COMPANY	MCA UNIT 470	New (Not drilled or compl)	Oil		4618	1.54
569	3002500791	MACK ENERGY CORP	HOVER 003	Plugged	Oil			1.55
570	3002539110	COG OPERATING LLC	GC FEDERAL 014	Active	Oil		7025	1.55
571	3002539165	COG OPERATING LLC	J C FEDERAL 024	Active	Oil		7148	1.55
572	3002539873	COG OPERATING LLC	J C FEDERAL 048	New (Not drilled or compl)	Oil		7090	1.55
573	3002527929	DEVON ENERGY PRODUCTION COMPANY, LP	LYNX FEDERAL 003	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4212	1.55
574	3002500817	CONOCOPHILLIPS COMPANY	MCA UNIT 226	Plugged	Injection		4270	1.55
575	3002540359	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 007	New (Not drilled or compl)	Oil		7246	1.56
576	3002540599	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 012	New (Not drilled or compl)	Oil		0	1.56
577	3002500781	CONOCO INC	MCA UNIT 215	Plugged	Injection			1.56
578	3002541012	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 016	New (Not drilled or compl)	Oil		0	1.56
579	3002500717	CONOCOPHILLIPS COMPANY	MCA UNIT 146	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	3853	1.56
580	3002500770	CONOCOPHILLIPS COMPANY	MCA UNIT 160	Plugged	Oil			1.56
581	3002539800	CIMAREX ENERGY CO. OF COLORADO	JG STATE 017	New (Not drilled or compl)	Oil		6984	1.56
582	3002540395	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 006	New (Not drilled or compl)	Oil		999	1.56
583	3002539759	COG OPERATING LLC	LEAKER CC STATE 028	New (Not drilled or compl)	Oil		7112	1.56
584	3002540005	COG OPERATING LLC	GC FEDERAL 051	New (Not drilled or compl)	Oil		7041	1.56
585	3002539291	COG OPERATING LLC	J C FEDERAL 033	New (Not drilled or compl)	Oil		7015	1.56
586	3002539260	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 003	New (Not drilled or compl)	Oil		0	1.57
587	3002500580	CONOCOPHILLIPS COMPANY	MCA UNIT 005	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4040	1.57
588	3002500727	CONOCO INC	MCA UNIT 205	Plugged	Injection			1.57
589	3002539350	CONOCOPHILLIPS COMPANY	MCA UNIT 476	New (Not drilled or compl)	Oil		4270	1.57
590	3002520280	CONOCO INC	MITCHELL B 019	Plugged	Oil		0	1.57
591	3002539468	COG OPERATING LLC	BC FEDERAL 050	Active	Oil		6920	1.58
592	3002539421	COG OPERATING LLC	GC FEDERAL 035	New (Not drilled or compl)	Oil		6920	1.58
593	3002541013	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 017	New (Not drilled or compl)	Oil		0	1.58
594	3002539418	COG OPERATING LLC	BC FEDERAL 044	New (Not drilled or compl)	Oil		7030	1.58
595	3002500581	CONOCO INC	STATE O 001	Plugged	Gas		3760	1.58
596	3002500597	CONOCO INC	MCA UNIT 006	Plugged	Injection		3660	1.59
597	3002524009	CONOCOPHILLIPS COMPANY	MCA UNIT 304	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4175	1.59
598	3002500814	KEWANEE OIL CO	PEARSALL AX 007	Plugged	Oil		0	1.60
599	3002539760	COG OPERATING LLC	LEAKER CC STATE 030	New (Not drilled or compl)	Oil		7125	1.60
600	3002500633	CONOCO INC	MCA UNIT 037	Plugged	Oil			1.60
601	3002539029	COG OPERATING LLC	LEAKER CC STATE 018	New (Not drilled or compl)	Oil		7025	1.60
602	3002539089	COG OPERATING LLC	J C FEDERAL 022	Active	Oil		7025	1.60
603	3002508038	CONOCOPHILLIPS COMPANY	MCA UNIT 053	Plugged	Oil		3987	1.61
604	3002539627	COG OPERATING LLC	J C FEDERAL 056	New (Not drilled or compl)	Oil		7110	1.61
605	3002500731	CONTINENTAL OIL	QUEEN B 001	Plugged	Oil		0	1.61
606	3002538697	COG OPERATING LLC	J C FEDERAL 013	Active	Oil	MALJAMAR;YESO, WEST	7035	1.62
607	3002539937	CIMAREX ENERGY CO. OF COLORADO	JG STATE 023	New (Not drilled or compl)	Oil		0	1.62

Table Showing All Wells Within Two Miles of Maljamat AGI # 2  
(As Measured from the Bottom of the Injection Zone)

608	3002500802	KEWANEE OIL CO	PEARSALL A FEDERAL 007	Plugged	Oil		0	1.62
609	3002535814	COG OPERATING LLC	GC FEDERAL 001	Active	Oil	MAIJAMAR;YESO, WEST	7085	1.62
610	3002540224	CIMAREX ENERGY CO. OF COLORADO	JG SWD 001	New (Not drilled or compl)	SWD		0	1.62
611	3002536364	LEGACY RESERVES OPERATING, LP	PEARSALL AX 008	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	5100	1.62
612	3002512762	CONOCOPHILLIPS COMPANY	MCA UNIT 106	Plugged	Injection		3975	1.63
613	3002540892	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 006	New (Not drilled or compl)	Oil		6814	1.63
614	3002523745	CONOCOPHILLIPS COMPANY	MCA UNIT 285	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4060	1.63
615	3002524058	CONOCO INC	MCA UNIT 307	Plugged	Oil			1.64
616	3002527291	MACK ENERGY CORP	HOVER 002	Plugged	Oil		4168	1.64
617	3002527443	LINN OPERATING, INC.	LEA LL STATE 001	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4200	1.64
618	3002539929	COG OPERATING LLC	J C FEDERAL 047	New (Not drilled or compl)	Oil		7117	1.64
619	3002539934	CIMAREX ENERGY CO. OF COLORADO	JG STATE 006	New (Not drilled or compl)	Oil		7014	1.64
620	3002524236	CONOCOPHILLIPS COMPANY	MCA UNIT 325	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4175	1.64
621	3002508034	CONOCO INC	MCA UNIT 272	Plugged	Oil		0	1.64
622	3002500570	COG OPERATING LLC	LEAKER CC STATE 004	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4293	1.64
623	3002508023	CONOCO INC	MITCHELL B 012	Plugged	Injection		0	1.64
624	3002500594	CONOCO INC	MITCHELL B 003	Plugged	Oil		0	1.64
625	3002500559	DEVON ENERGY PRODUCTION COMPANY, LP	LYNX FEDERAL 007	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4150	1.65
626	3002500776	CONOCO INC	MCA UNIT 166	Plugged	Injection		0	1.65
627	3002541017	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 025	New (Not drilled or compl)	Oil		0	1.65
628	3002500718	CONOCOPHILLIPS COMPANY	MCA UNIT 184	Active	Injection		4180	1.65
629	3002524057	CONOCOPHILLIPS COMPANY	MCA UNIT 306	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4020	1.65
630	3002539758	COG OPERATING LLC	LEAKER CC STATE 027	New (Not drilled or compl)	Oil		7115	1.65
631	3002538743	COG OPERATING LLC	BC FEDERAL 024	Active	Oil		6926	1.65
632	3002539624	COG OPERATING LLC	BC FEDERAL 052	New (Not drilled or compl)	Oil		7032	1.65
633	3002500591	CONOCO INC	MITCHELL B 007	Plugged	Oil		4336	1.65
634	3002540508	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 055	New (Not drilled or compl)	Oil		6820	1.65
635	3002539780	CONOCOPHILLIPS COMPANY	MCA UNIT 438	New (Not drilled or compl)	Oil		0	1.65
636	3002539430	CONOCOPHILLIPS COMPANY	MCA UNIT 466	New (Not drilled or compl)	Injection		99	1.66
637	3002539801	CIMAREX ENERGY CO. OF COLORADO	JG STATE 018	New (Not drilled or compl)	Oil		7027	1.66
638	3002538859	CONOCOPHILLIPS COMPANY	MCA UNIT 405	Active	Injection		4566	1.66
639	3002524369	CONOCOPHILLIPS COMPANY	MCA UNIT 335	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4125	1.66
640	3002539776	CONOCOPHILLIPS COMPANY	MCA UNIT 431	New (Not drilled or compl)	Oil		0	1.66
641	3002538982	CONOCOPHILLIPS COMPANY	MCA UNIT 414	Active	Injection		4510	1.67
642	3002539348	CONOCOPHILLIPS COMPANY	MCA UNIT 471	New (Not drilled or compl)	Oil		4260	1.67
643	3002524499	CONOCOPHILLIPS COMPANY	MCA UNIT 345	Plugged	Oil		4150	1.67
644	3002539479	COG OPERATING LLC	J C FEDERAL 040	Active	Oil		7036	1.68
645	3002538261	COG OPERATING LLC	J C FEDERAL 009	Active	Oil	MAIJAMAR;YESO, WEST	7020	1.68
646	3002540521	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 008	New (Not drilled or compl)	Oil		7221	1.68
647	3002520425	FOREST OIL CORP	CARPER 001	Plugged	Oil		0	1.68
648	3002540246	COG OPERATING LLC	BC FEDERAL 017	New (Not drilled or compl)	Oil		6935	1.68
649	3002538734	COG OPERATING LLC	LEAKER CC STATE 013	New (Not drilled or compl)	Oil	MAIJAMAR;YESO, WEST	6972	1.68
650	3002512770	CONOCO INC	MCA UNIT 058	Plugged	Oil		4016	1.68
651	3002500595	W J RUTLEDGE JR	PPEARSALL A 001	Plugged	Oil		860	1.69
652	3002500811	CONOCO INC	PEARSALL AX 001	Plugged	Oil		3496	1.69
653	3002538724	COG OPERATING LLC	BC FEDERAL 016	Active	Oil	MAIJAMAR;YESO, WEST	7017	1.69
654	3002536362	LEGACY RESERVES OPERATING, LP	PEARSALL AX 006	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	5125	1.69
655	3002500636	CONOCOPHILLIPS COMPANY	BAISH B 003	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4033	1.70
656	3002539259	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 006	New (Not drilled or compl)	Oil		0	1.70
657	3002500795	MACK ENERGY CORP	PEARSALL QUEEN SAND UNIT 001	Plugged	Injection		3490	1.70
658	3002521840	CONTINENTAL OIL	PEARSALL AX 004	Plugged	Injection		0	1.71
659	3002539028	COG OPERATING LLC	LEAKER CC STATE 017	New (Not drilled or compl)	Oil		0	1.71
660	3002541014	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 018	New (Not drilled or compl)	Oil		0	1.71
661	3002508029	CONOCOPHILLIPS COMPANY	MCA UNIT 020	Plugged	Injection		4015	1.71
662	3002539952	COG OPERATING LLC	LEAKER CC STATE 026	New (Not drilled or compl)	Oil		7045	1.71
663	3002540586	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 002	New (Not drilled or compl)	Oil		0	1.71
664	3002535935	COG OPERATING LLC	GC FEDERAL 004	Active	Oil	MAIJAMAR;YESO, WEST	7028	1.71
665	3002512781	CONOCOPHILLIPS COMPANY	MCA UNIT 161	Plugged	Injection		4034	1.72
666	3002524275	CONOCOPHILLIPS COMPANY	MCA UNIT 329	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4215	1.72
667	3002524583	CONOCOPHILLIPS COMPANY	MCA UNIT 353	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4350	1.72
668	3002500566	COG OPERATING LLC	LEAKER CC STATE 002	Active	Gas	MAIJAMAR;QUEEN (GAS)	4202	1.72

Table Showing All Wells Within Two Miles of Maljamat AGI # 2  
(As Measured from the Bottom of the Injection Zone)

669	3002528372	DEVON ENERGY PRODUCTION COMPANY, LP	LYNX FEDERAL 004	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4031	1.72
670	3002539786	CONOCOPHILLIPS COMPANY	MCA UNIT 445	New (Not drilled or compl)	Oil		0	1.72
671	3002541015	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 019	New (Not drilled or compl)	Oil		99	1.73
672	3002500818	CONOCOPHILLIPS COMPANY	MCA UNIT 227	Plugged	Oil		4171	1.73
673	3002536503	LEGACY RESERVES OPERATING, LP	PEARSALL A 002	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	6025	1.73
674	3002540596	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 009	New (Not drilled or compl)	Oil		0	1.73
675	3002512558	CONOCOPHILLIPS COMPANY	STATE B 007	Plugged	Oil		4147	1.73
676	3002500574	MACK ENERGY CORP	LEAKER CC 007	Plugged	Oil		933	1.73
677	3002540587	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 007	New (Not drilled or compl)	Oil		0	1.74
678	3002530438	COG OPERATING LLC	BROWN FEDERAL 003	Plugged	Oil		4200	1.74
679	3002527776	CHEVRON U S A INC	LEA LL STATE 002	Plugged	Oil		0	1.75
680	3002520588	HARVEY E YATES CO	SOUTH MALJAMAR DEEP 001	Plugged	Oil		10128	1.75
681	3002500639	CONOCOPHILLIPS COMPANY	MCA UNIT 084	Active	Injection		4129	1.75
682	3002500820	CONOCO INC	MCA UNIT BATTERY 2 229	Plugged	Injection		4440	1.75
683	3002540023	CIMAREX ENERGY CO. OF COLORADO	JG STATE 009	New (Not drilled or compl)	Oil		0	1.75
684	3002512579	CONOCOPHILLIPS COMPANY	MCA UNIT 102	Plugged	Injection		3951	1.75
685	3002500796	LEGACY RESERVES OPERATING, LP	PEARSALL QUEEN SAND UNIT 002	Active	Oil	PEARSALL;QUEEN	4700	1.76
686	3002538699	COG OPERATING LLC	J C FEDERAL 015	Active	Oil	MAIJAMAR;YESO, WEST	7017	1.76
687	3002500716	CONOCOPHILLIPS COMPANY	MCA UNIT 122	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4120	1.76
688	3002536361	LEGACY RESERVES OPERATING, LP	PEARSALL AX 005	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	5110	1.76
689	3002500806	BARNEY COCKBURN	PEARSALL A 011	Plugged	Oil		0	1.76
690	3002540227	COG OPERATING LLC	GC FEDERAL 061	New (Not drilled or compl)	Oil		7095	1.76
691	3002539936	CIMAREX ENERGY CO. OF COLORADO	JG STATE 011	New (Not drilled or compl)	Oil		0	1.76
692	3002500778	CONOCO INC	MCA UNIT 105	Plugged	Oil			1.76
693	3002500783	CONOCOPHILLIPS COMPANY	MCA UNIT 108	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4000	1.76
694	3002540893	CONOCOPHILLIPS COMPANY	EMERALD FEDERAL 007	New (Not drilled or compl)	Oil		7032	1.76
695	3002538589	COG OPERATING LLC	LEAKER CC STATE 001	Active	Oil	MAIJAMAR;YESO, WEST	7020	1.76
696	3002500782	CONOCOPHILLIPS COMPANY	MCA UNIT 216	Plugged	Oil		4090	1.77
697	3002539109	COG OPERATING LLC	GC FEDERAL 013	Active	Oil		6922	1.77
698	3002500568	CONOCO INC	MCA UNIT 007	Plugged	Oil		4160	1.77
699	3002500723	CONOCOPHILLIPS COMPANY	MCA UNIT 204	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4132	1.77
700	3002538731	COG OPERATING LLC	J C FEDERAL 010	Active	Oil		6999	1.77
701	3002539408	CONOCOPHILLIPS COMPANY	MCA UNIT 468	New (Not drilled or compl)	Oil		4350	1.77
702	3002540360	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 009	New (Not drilled or compl)	Oil		6935	1.77
703	3002512711	CONOCOPHILLIPS COMPANY	MCA UNIT 075	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4055	1.78
704	3002539320	CONOCOPHILLIPS COMPANY	MCA UNIT 474	Active	Oil		4390	1.78
705	3002508044	CONOCOPHILLIPS COMPANY	MCA UNIT 057	Plugged	Oil			1.78
706	3002540238	COG OPERATING LLC	GC FEDERAL 057	New (Not drilled or compl)	Oil		7025	1.79
707	3002527861	DEVON ENERGY PRODUCTION COMPANY, LP	LYNX FEDERAL 001	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4200	1.79
708	3002535481	COG OPERATING LLC	BC FEDERAL 004	Active	Oil	MAIJAMAR;YESO, WEST	5600	1.80
709	3002539615	COG OPERATING LLC	J C FEDERAL 044	New (Not drilled or compl)	Oil		7018	1.80
710	3002539257	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 004	New (Not drilled or compl)	Oil		0	1.80
711	3002536502	LEGACY RESERVES OPERATING, LP	PEARSALL A 001	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	5360	1.80
712	3002500714	CONOCOPHILLIPS COMPANY	MCA UNIT 145	Active	Injection		3798	1.80
713	3002539838	COG OPERATING LLC	LEAKER CC STATE 024	New (Not drilled or compl)	Oil		7035	1.80
714	3002538726	COG OPERATING LLC	BC FEDERAL 021	Active	Oil		6908	1.81
715	3002500780	CONOCOPHILLIPS COMPANY	MCA UNIT 162	Plugged	Injection		3978	1.81
716	3002524056	CONOCOPHILLIPS COMPANY	MCA UNIT 305	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4100	1.81
717	3002508033	CONTINENTAL OIL	MITCHELL B 017	Plugged	Oil		0	1.81
718	3002500732	CONOCOPHILLIPS COMPANY	MCA UNIT 185	Active	Oil	MAIJAMAR;GRAYBURG-SAN ANDRES	4266	1.81
719	3002525107	V-F PETROLEUM INC	HUDSON FEDERAL 001	Active	Oil	BAISH;WOLFCAMP	11700	1.81
720	3002536546	MACK ENERGY CORP	PEARSALL A 003	Plugged	Oil		5200	1.81
721	3002538904	COG OPERATING LLC	BC FEDERAL 020	Active	Oil	MAIJAMAR;YESO, WEST	7020	1.81
722	3002539349	CONOCOPHILLIPS COMPANY	MCA UNIT 475	Active	Injection		4405	1.82
723	3002500582	CONOCO INC	MCA UNIT 003	Plugged	Oil		3985	1.82
724	3002538737	COG OPERATING LLC	GC FEDERAL 007	Active	Oil	MAIJAMAR;YESO, WEST	7046	1.82
725	3002508026	CONOCO INC	MITCHELL B 006	Plugged	Oil		0	1.82
726	3002539932	COG OPERATING LLC	LEAKER CC STATE 025	New (Not drilled or compl)	Oil		7030	1.82
727	3002540598	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 011	New (Not drilled or compl)	Oil		0	1.83
728	3002500583	CONOCO INC	MCA UNIT 004	Plugged	Oil		0	1.83
729	3002541018	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 028	New (Not drilled or compl)	Oil		0	1.83

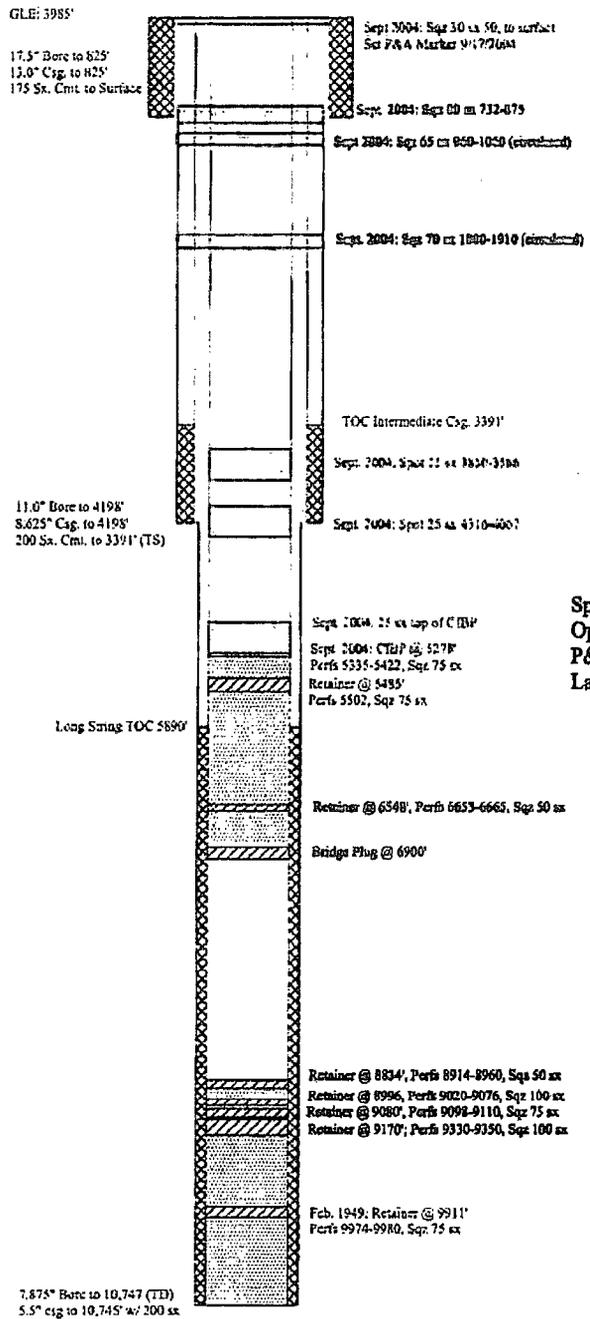
Table Showing All Wells Within Two Miles of Maljamat AGI # 2  
(As Measured from the Bottom of the Injection Zone)

730	3002500600	CONTINENTAL OIL	MCA UNIT 002	Plugged	Gas		0	1.83
731	3002537023	FOREST OIL CORPORATION	LEA LL STATE 004	Plugged	Oil		5000	1.83
732	3002540593	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 008	New (Not drilled or compl)	Oil		0	1.83
733	3002525418	TIPTON OIL & GAS ACQUISITIONS, INC.	HUDSON FEDERAL 001	Plugged	Oil			1.83
734	3002500629	CONOCOPHILLIPS COMPANY	MCA UNIT 036	Plugged	Injection		4184	1.84
735	3002539030	COG OPERATING LLC	LEAKER CC STATE 019	New (Not drilled or compl)	Oil		7016	1.84
736	3002539469	COG OPERATING LLC	BC FEDERAL 051	New (Not drilled or compl)	Oil		7049	1.84
737	3002508039	CONOCOPHILLIPS COMPANY	MCA UNIT 054	Plugged	Injection		4020	1.84
738	3002538696	COG OPERATING LLC	J C FEDERAL 012	Plugged	Oil		7000	1.84
739	3002524462	CONOCOPHILLIPS COMPANY	MCA UNIT 341	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4150	1.85
740	3002536443	COG OPERATING LLC	GC FEDERAL 002		Oil		0	1.85
741	3002508028	CONOCOPHILLIPS COMPANY	MCA UNIT 019	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4294	1.85
742	3002527857	DEVON ENERGY PRODUCTION COMPANY, LP	LYNX FEDERAL 002	Active	Gas	MALJAMAR;QUEEN (GAS)	4167	1.85
743	3002538981	CONOCOPHILLIPS COMPANY	MCA UNIT 413	Active	Oil		4620	1.86
744	3002539788	CONOCOPHILLIPS COMPANY	MCA UNIT 450	New (Not drilled or compl)	Oil		0	1.86
745	3002540027	CIMAREX ENERGY CO. OF COLORADO	JG STATE 012	New (Not drilled or compl)	Oil		0	1.87
746	3002524515	CONOCOPHILLIPS COMPANY	MCA UNIT 347	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4175	1.87
747	3002540592	BETTIS BOYLE & STOVALL, INC.	SC FEDERAL 001	New (Not drilled or compl)	Oil		0	1.87
748	3002539617	COG OPERATING LLC	J C FEDERAL 046	New (Not drilled or compl)	Oil		7140	1.88
749	3002540024	CIMAREX ENERGY CO. OF COLORADO	JG STATE 010	New (Not drilled or compl)	Oil		0	1.88
750	3002500587	CONOCO INC	MCA UNIT 001	Plugged	Oil		4012	1.88
751	3002540029	CIMAREX ENERGY CO. OF COLORADO	JG STATE 021	New (Not drilled or compl)	Oil		0	1.88
752	3002527165	CONOCOPHILLIPS COMPANY	MITCHELL B 020	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4200	1.88
753	3002539837	COG OPERATING LLC	LEAKER CC STATE 023	New (Not drilled or compl)	Oil		7020	1.88
754	3002500772	CONOCOPHILLIPS COMPANY	MCA UNIT 165	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	3965	1.88
755	3002500572	MACK ENERGY CORP	LEAKER CC 006	Plugged	Injection			1.88
756	3002500721	CONOCO INC	MCA UNIT 186	Plugged	Oil		4250	1.88
757	3002539290	COG OPERATING LLC	BC FEDERAL 039	New (Not drilled or compl)	Oil		6832	1.88
758	3002523848	CONOCOPHILLIPS COMPANY	MCA UNIT 286	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4070	1.88
759	3002540028	CIMAREX ENERGY CO. OF COLORADO	JG STATE 020	New (Not drilled or compl)	Oil		0	1.89
760	3002523836	CONOCOPHILLIPS COMPANY	MCA UNIT 291	Plugged	Injection		4070	1.89
761	3002540894	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 020	New (Not drilled or compl)	Oil		6950	1.89
762	3002524108	CONOCOPHILLIPS COMPANY	MCA UNIT 310	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4025	1.89
763	3002539477	COG OPERATING LLC	J C FEDERAL 038	New (Not drilled or compl)	Oil		7110	1.90
764	3002524109	CONOCOPHILLIPS COMPANY	MCA UNIT 312	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4250	1.90
765	3002540030	CIMAREX ENERGY CO. OF COLORADO	JG STATE 022	New (Not drilled or compl)	Oil		0	1.91
766	3002524370	CONOCO INC	MCA UNIT 336	Plugged	Oil		0	1.91
767	3002500823	SOUTHERN UNION PRODUCTION CO	PEARSALL B 002	Plugged	Oil		0	1.91
768	3002540895	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 021	New (Not drilled or compl)	Oil		99	1.91
769	3002500786	CARTER DRILLING CO	SIMON B 008	Plugged	Oil		0	1.91
770	3002540657	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 057	New (Not drilled or compl)	Oil		99	1.91
771	3002500819	CONOCOPHILLIPS COMPANY	MCA UNIT 228	Plugged	Injection		4203	1.91
772	3002538698	COG OPERATING LLC	J C FEDERAL 014	Plugged	Oil	MALJAMAR;YESO, WEST	999	1.92
773	3002536601	MACK ENERGY CORP	LEOPARD FEDERAL 001	Plugged	Oil		5360	1.92
774	3002530362	LEGACY RESERVES OPERATING, LP	BROWN FEDERAL 002	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4165	1.92
775	3002537021	COG OPERATING LLC	BC FEDERAL 010	Active	Oil	MALJAMAR;YESO, WEST	6710	1.92
776	3002540683	COG OPERATING LLC	VC FEDERAL 004	New (Not drilled or compl)	Oil		0	1.92
777	3002540522	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 011	New (Not drilled or compl)	Oil		99	1.92
778	3002500638	CONOCO INC	BAISH B 004	Plugged	Oil		0	1.93
779	3002528679	DEVON ENERGY PRODUCTION COMPANY, LP	LYNX FEDERAL 005	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4250	1.93
780	3002539031	COG OPERATING LLC	LEAKER CC STATE 020	New (Not drilled or compl)	Oil		7032	1.93
781	3002538977	CONOCOPHILLIPS COMPANY	MCA UNIT 408	Active	Oil		4476	1.93
782	3002538620	COG OPERATING LLC	LEAKER CC STATE 011	Active	Oil	MALJAMAR;YESO, WEST	7015	1.93
783	3002500812	CONOCO INC	PEARSALL AX 002	Plugged	Oil		0	1.94
784	3002539112	COG OPERATING LLC	GC FEDERAL 016	Active	Oil		7116	1.94
785	3002540507	CONOCOPHILLIPS COMPANY	RUBY FEDERAL 010	New (Not drilled or compl)	Oil		6902	1.95
786	3002523855	CONOCO INC	MCA UNIT 297	Plugged	Oil			1.95
787	3002524214	CONOCOPHILLIPS COMPANY	MCA UNIT 320	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4050	1.95
788	3002521710	LEGACY RESERVES OPERATING, LP	PEARSALL QUEEN SAND UNIT 003	Active	Oil	PEARSALL;QUEEN		1.95
789	3002524375	CONOCOPHILLIPS COMPANY	MCA UNIT 337	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4280	1.95
790	3002539695	COG OPERATING LLC	LEAKER CC STATE 022	New (Not drilled or compl)	Oil		7121	1.95

Table Showing All Wells Within Two Miles of Maljamat AGI # 2  
 (As Measured from the Bottom of the Injection Zone)

791	3002500813	LEGACY RESERVES OPERATING, LP	PEARSALL AX 003	Active	Oil	PEARSALL;QUEEN	3698	1.95
792	3002539859	COG OPERATING LLC	J C FEDERAL 041	New (Not drilled or compl)	Oil		7140	1.96
793	3002500573	COG OPERATING LLC	LEAKER CC STATE 008	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4080	1.96
794	3002539313	CONOCOPHILLIPS COMPANY	MCA UNIT 456E	New (Not drilled or compl)	Oil		0	1.97
795	3002500649	CONOCOPHILLIPS COMPANY	MCA UNIT 083	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4153	1.98
796	3002529272	DEVON ENERGY PRODUCTION COMPANY, LP	LYNX FEDERAL 006	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4150	1.99
797	3002500725	CONOCO INC	MCA UNIT 203	Plugged	Injection		0	1.99
798	3002500561	DEVON ENERGY PRODUCTION COMPANY, LP	LYNX FEDERAL 008	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4202	1.99
799	3002531055	LEGACY RESERVES OPERATING, LP	PEARSALL BX 005	Active	Oil	MALJAMAR;GRAYBURG-SAN ANDRES	4758	1.99
800	3002539319	CONOCOPHILLIPS COMPANY	MCA UNIT 463	Active	Oil		4412	1.99
801	3002538841	COG OPERATING LLC	LEAKER CC STATE 016	New (Not drilled or compl)	Oil		7026	2.00
802	3002521711	MACK ENERGY CORP	PEARSALL QUEEN SAND UNIT 004	Plugged	Injection		3642	2.00
803	3002500643	WILLIAMS & COCKBURN	MILLER 003	Plugged	Oil		0	2.00
804	3002500645	KEWANEE OIL CO	MILLER A FEDERAL 007	Plugged	Oil		0	2.00
805	3002500810	KEWANEE OIL CO	PEARSALL A 016	Plugged	Oil		0	2.00

QUEEN B 036  
 API # 3002500751  
 554' FNL 554' FWL, Sec. 28, T17S R32E



Spud Date: Sept. 20, 1948  
 Operator: Kewanee Oil Co.  
 P&A Sept. 17, 2004  
 Last Operator: ConocoPhillips Co.

U. S. LAND OFFICE Las Cruces  
 SERIAL NUMBER 057210  
 LEASE OR PERMIT TO PROSPECT \_\_\_\_\_

33							
		23					

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Keweenaw Oil Company Address P.O. Box 2239, Tulsa, Oklahoma  
 Lessor or Tract Baish "B" Field Wildcat State New Mexico  
 Well No. 36 Sec. 23 T. 17S R. 32E Meridian H.M.P.M. County Lea  
 Location 554 ft.  $\left\{ \begin{smallmatrix} N. \\ S. \end{smallmatrix} \right\}$  of N. Line and 554 ft.  $\left\{ \begin{smallmatrix} E. \\ W. \end{smallmatrix} \right\}$  of W. Line of Section 23 Elevation 3235.3'  
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed W.D. Albert

Date June 3, 1949 Title Production Superintendent

The summary on this page is for the condition of the well at above date.

Commenced drilling September 20, 1948 Finished drilling February 15, 1949

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 2050 to 2110 No. 4, from 5120 to 5150  
 No. 2, from 3010 to 3070 No. 5, from 6915 to 6930  
 No. 3, from 3750 to 3805 No. 6, from 7505 to 7520

IMPORTANT WATER SANDS

No. 1, from \_\_\_\_\_ to \_\_\_\_\_ No. 3, from \_\_\_\_\_ to \_\_\_\_\_  
 No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 4, from \_\_\_\_\_ to \_\_\_\_\_

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From--	To--	
13"	50		LL	836	Casing				See Reverse Side
8-5/8"	22.32	8 rd.	SMIS	1224	Guide				
5-1/2"	17	8 rd.	SMIS	10842	Guide				

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of fluid used
13"	525	175	Wellburton		9 sacks aquagel
8-5/8"	1200	200	"		
5-1/2"	15745	1100	"		

PLUGS AND ADAPTERS

Heaving plug—Material \_\_\_\_\_ Length \_\_\_\_\_ Depth set \_\_\_\_\_  
 Adapters—Material \_\_\_\_\_ Size \_\_\_\_\_

*Cont'd on next page*

New Mexico Oil Conservation Division, District I

1625 N. French Drive

Hobbs, NM 88240

Form 3160-5  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. LC 057210
2. Name of Operator ConocoPhillips Company ATTN: Celeste Dale		6. If Indian, Allottee or Tribe Name
3a. Address 4001 Penbrook, Odessa, Texas 79762	3b. Phone No. (include area code) 432-368-1244	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 554 FNL & 554 FWL, Section 28, T-17-S, R-32-E, Unit Letter D		8. Well Name and No. Queen B # 036
		9. API Well No. 30-025-00751
		10. Field and Pool, or Exploratory Area Baish, Wolfcamp
		11. County or Parish, State Lea, New Mexico

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input checked="" type="checkbox"/> Well Plugging
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

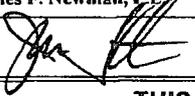
See attached plugged wellbore diagram.

08/25/04 thru 08/31/04: Notified BLM, Steve Caffey. MIRU Triple N rig #25 and plugging equipment. NU hydraulic BOP & RIH w/ gauge ring on wireline to 5,300', POOH w/ gauge ring. Notified BLM, Steve Caffey, on location. Set CIBP @ 5,278'. Circulated hole w/ mud and pumped 25 sx C cmt on CIBP 5,278 - 5,024'. Perforated casing @ 4,250', unable to establish rate at 1,500 psi. Pumped 25 sx C cmt 4,316 - 4,062'. Notified BLM, Steve Caffey, on location. Tagged cmt @ 4,067'. Perforated casing @ 3,800', pressured-up to 1,500 psi, no rate. Pumped 25 sx C cmt 3,850 - 3,596'. Notified BLM, Steve Caffey, on location. Tagged cmt @ 3,586'. Perforated casing @ 1,910', established rate of 1/2 BPM @ 1,500 psi. Set CICR @ 1,800' and squeezed 70 sx C cmt 1,910 - 1,800', dumped 30' cmt on retainer. Perforated casing @ 1,060', set retainer @ 960', squeezed 65 sx C cmt 1,060 - 960', dumped 30' on top of retainer 960 - 930'. Perforated casing @ 875', squeezed 80 sx C cmt 875 - 775'. Tagged cmt @ 732'. Perforated casing @ 50', squeezed 30 sx C cmt 50' to surface. RDMO.

09/17/04 Cut off wellhead & anchors, installed dryhole marker, leveled cellar.

Approved as to plugging of the well bore  
Liability under bond is retained until  
surface restoration is completed.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed) James F. Newman, P.E. Title Engineer, Triple N Services, Inc. 432-687-1994

Signature  Date 09/26/2004

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by (ORIG. SGD.) DAVID R. GLASS Title \_\_\_\_\_ Date SEP 28 2004

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office \_\_\_\_\_

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

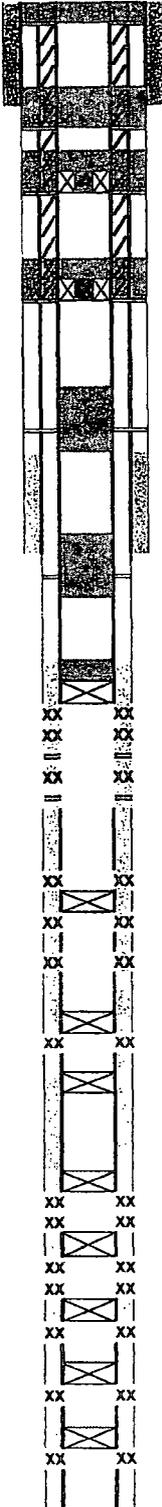
(Instructions on page 2)

GWW

**PLUGGED WELLBORE SKETCH**  
ConocoPhillips Company - Permian Basin Business Unit

Date: September 26, 2004

RKB @ \_\_\_\_\_  
DF @ \_\_\_\_\_  
GL @ 3985.3'



30 sx C cmt sqz'd 50' - surface

12-1/4" Hole

13" 50# @ 825' w/ 175 sx, circ.  
80 sx C cmt sqz'd 875 - 732' TAGGED

Top of Salt @ 1060'  
65 sx C cmt sqz'd 1,060 - 960' - CICR w/ 30'  
Csg Lks 90'-2699'

Base of Salt @ 1910'  
70 sx C cmt sqz'd 1,910 - 1,800' - CICR w/ 30'

25 sx C cmt 3,850 - 3,586' TAGGED  
unable to establish rate at 1,600 psi

11" Hole

8-5/8" @ 4198' w/ 200 sx, TOC 3391' TS  
25 sx C cmt 4,316 - 4,067' TAGGED  
unable to establish rate at 1,600 psi

25 sx C cmt on CIBP 5,278 - 5,024'  
CIBP @ 5,278'  
5335'-5353' - Sqz'd  
5372'-5384' - Sqz'd  
5378'-5384' - 5394'-5400'  
5394'-5400' - Sqz'd w/75 sx  
5410'-5422' - 5422'-5428' - 120 shots

5460'-5478' - 72 shots - Sqz'd w/150 sx  
Cmt Retainer @ +/- 5485'  
5502' - 6 shots - Sqz'd w/75 sx (3/49)  
5825' - 3 shots - Sqz'd w/275 sx; TOC @ 5765'

Cmt Retainer @ +/- 6548' (3/49)  
6653'-6665' - 6678'-6690' - 96 shots - Sqz'd w/50 sx  
LaneWells Type 'D' Bridge Plug @ +/- 6900' (3/49)

Cmt Retainer @ +/- 8834'  
8914'-8920' - 8954'-8960'  
8972'-8978' - 72 shots - Sqz'd w/50 sx  
Retainer @ 8996'  
9020'-9026' - 9042'-9048'  
9070'-9076' - 72 shots - Sqz'd w/100 sx (3/49)  
Cmt Retainer @ +/- 9080'  
9098'-9110' - 48 shots - Sqz'd w/75 sx (3/49)

Cmt Retainer @ +/- 9170'  
9330'-9350' - 72 shots - Sqz'd w/100 sx (3/49)  
Cmt Retainer @ +/- 9911'  
9974'-9980' - 24 shots - Sqz'd w/75 sx (2/49)

PBTD: 5485'  
TO: 10747'

7-7/8" Hole 3996' N-80 on btm  
5-1/2" 17# N-80 & J-55 @ 10745' 4021' J-55  
Cmt w/1100 sx 2717' N-80 on top  
TOC @ 5890' (T.S.)

Subarea: Majamar  
Lease & Well No.: Queen-B No. 36  
Legal Description: 554' FNL & 554' FWL, NW/4 NW/4 Section 28, T-17-S,  
R-32-E N.M.P.M. Meridian  
County: Lea State: New Mexico  
Field: Baish Wolfcamp  
Date Spudded: 9/20/49 IPP:  
API Number: 30-025-00751  
Status: PLUGGED  
Drilled as Baish "B" No. 36

Interval	Date	Type	Gals	Lbs. Sand	Max Press	ISIP	Max Rate	Max Down
	2/25/49	Perf 4 JSPF 9974'-9980' - 24 shots - Sqz w/75 sx						
	3/1/49	Perf 8330'-9350' w/72 shots						
9330-9350	3/2/49	Mud Acid (MA)	500		2400		0.7	
9330-9350	3/3/49	20% Low Tension Acid	1,000		2600		1.2	
	3/5/49	Sqz pkr @ 8170'; sqz w/100 sx						
	3/6/49	Perf 9098-9110 - 48 shots						
	3/7/49	Sqz pkr @ 9080'; sqz w/76 sx						
	3/9/49	Perf 9070-9076 - 24 shots						
	3/10/49	Perf 9020-9026 (24 shots) and 9042-9048 (24 shots)						
9020-9026	3/13/49	Mud Acid (MA)	500		2700		0.6	
	3/13/49	Set Retainer @ 8996'; sqz w/100 sx						
	3/14/49	Perf 8914-8920 (24 shots) and 8954-8960 (24 shots)						
8914-8960	3/16/49	20% Low Tension Acid	1,000		3,000			
	3/18/49	Perf 8972-8978 (24 shots)						
8914-8978	3/19/49	20% Low Tension Acid	500					
	3/20/49	Bridging pkr @ 8834'; sqz w/50 sx						
	3/22/49	Bridging plug @ 6900'						
		perf 6653-6665 (48 shots) & 6678-6690 (48 shots)						
6653-6690	3/22/49	20% Low Tension Acid	500		3,000		1.2	
	3/23/49	Retrievable pkr @ 6548'; sqz w/50 sx; perf 5825' sqz w/275 sx						
	3/27/49	Perf 5335-5363 (72 shots), 5372-5384 (48 shots) and 5394-5400 (24 shots)						
	3/29/49	Sqz 5335-5400 w/75 sx						
	3/31/49	5502' shoot 6 holes and sqz w/75 sx						
	4/2/49	Perf 5460-5478 (72 shots)						
	4/4/49	Sqz 5460-5478 w/150 sx						
	4/9/49	Perf 540-5422 (48 shots)						
5410-5422	4/9/49	20% Low Tension Acid	500	Unable to inject acid				
	4/10/49	Perf 5378-5384 (24 shots), 5394-5400 (24 shots) and 5422-5428 (24 shots)						
5378-5428	4/10/49	20% Low Tension Acid	500		2700			
	4/11/49	Mix 68 sacks Aquagel, pmp hole full of mud						
	4/12/49	Cap well - Temporarily Abandoned						
	4/28/61	Change name to Queen-B No. 36						
	9/19/81	Run csg insp log - numerous csg lks 90'-2699'						
	10/81	Recommended to convert to water disposal in Lower Wolfcamp (9965'-10040')						
	3/31/82	Administrative Order # SWD-241						
	3/13/92	Run Temp Survey 4200'-2000', CPNL 2700'-4200' - 3 passes						
	2/23/93	Sundry Notice - Being used as CO2 observation well to evaluate CO2 advance in Stage 1 Area.						
	7/6/04	BLM advised that well is to be put into operations or submit P&A plans for approval by 8/29/04.						
	8/9/04	Prepare Application for Abandonment of Well						



**ACTUAL PLUGGING PROCEDURE**

- 1) set CIBP @ 5,278'
- 2) 25 sx C cmt on CIBP 5,278 - 5,024'
- 3) 25 sx C cmt 4,316 - 4,067' TAGGED
- 4) 25 sx C cmt 3,850 - 3,586' TAGGED
- 5) 70 sx C cmt sqz'd 1,910 - 1,800' - CICR w/ 30'
- 6) 65 sx C cmt sqz'd 1,060 - 960' - CICR w/ 30'
- 7) 80 sx C cmt sqz'd 875 - 732' TAGGED
- 8) 30 sx C cmt sqz'd 50' - surface

**Formation Tops:**

San Andres	3800'
8th Zone	3948'
9th Zone	3975' +/-
9th M Zone	4080' +/-