# CLAYTON WILLIAMS ENERGY INC. HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

#### I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- A. The hazards and characteristics of hydrogen sulfide  $(H_2S)$ .
- B. The proper use and maintenance of personal protective equipment and life support systems.
- C. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- D. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- A. The effects of H<sub>2</sub>S on metal components. If high tensile tubulars are used, personnel will be trained in their special maintenance requirements.
- B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- C. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

### II. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

#### A. Well Control Equipment:

Flare line.

Choke manifold.

Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

#### B. Protective equipment for essential personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

#### C. H2S detection and monitoring equipment:

2 – portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S levels of 20 ppm are reached.

#### D. Visual warning systems:

Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

#### E. Mud Program:

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface.

## F. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H<sub>2</sub>S service.

#### G. Communication:

Company vehicles equipped with cellular telephone and 2-way radio.

If H<sub>2</sub>S is encountered in quantities under 10 ppm fans will be placed in the substructure, rig floor and possum belly area of drilling rig to prevent accumulation of gas. If higher levels of H<sub>2</sub>S are detected the well will be shut in and a gas separator installed with a flare line.

# WARNING

# YOU ARE ENTERING AN H2S AREA AUTHORIZED PERSONNEL ONLY

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED
- 2. HARD HATS REQUIRED
- 3. SMOKING IN DESIGNATED AREAS ONLY
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CHECK IN WITH CWEI FORMAN AT MAIN OFFICE

**CLAYTON WILLIAMS ENERGY INC.** 

(432) 682-6324

# **Emergency Assistance Telephone List**

PUBLIC SAFETY:	911 or	
Eddy County Sheriff Dispatch Direct Line	(575) 887-7551 (575) 616-7155	
New Mexico State Police	(575) 622-7200	
Fire Department – Dispatch through Sheriff's Office	(575) 746-5050	
Artesia General Hospital	(575) 748-3333	
Life Flight: Arrow Care – Lubbock Southwest Air – Med E Vac	(806) 744-5055 (800-242-6199	
New Mexico D.O.T. – Roswell	(505) 637-7201 (800) 432-7845	
Bureau of Land Management – Carlsbad	(575) 234-5972	
U.S. Department of Labor	(806) 472-7681	
New Mexico Oil Conservation Division New Mexico Oil Conservation Division/After Hours	(575) 393-6161 (575) 370-3186	

#### SURFACE USE PLAN OF OPERATIONS

Clayton Williams Energy, Inc.
Phillips 19 Federal Lease
Well # 18
Section 19
T-17-S, R-29-E, NMPM, Eddy County, New Mexico

#### 1. Existing Access Roads

- A. The well site survey and elevation plat for the proposed well is shown in Exhibit 4. It was staked by John West Surveying Company, Hobbs, NM.
- B. All existing roads to the location are shown in the topographic map (Exhibit 2) and/or the plan of development (POD) plat (Exhibit 6). The existing lease roads are illustrated and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling the well will be done where necessary.
- C. Directions to Location:

From the intersection of Highway 82 and County Road 211 (Old Loco Road), go north on CR 211 approximately 0.4 mile. Turn right and go west approximately 0.8 mile. Turn right and go north approximately 0.1 mile. Veer left and go northwest approximately 0.2 mile. Veer right and go northeast approximately 0.2 mile. Turn right and go east approximately 0.1 mile. Location is on north side of road.

D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

#### 2. Proposed Access Road:

The elevation plat (Exhibit 4) shows that no new road will be required for this location, as indicated on Exhibits 2 and/or 6.

#### 3. Locations of Existing Wells:

Exhibit 5 shows all existing wells within a one-mile radius of this well.

#### 4. Location of Existing and/or Proposed Facilities:

- A. Clayton Williams Energy, Inc. ("CWEI") will use its existing production facility located on the surface of Section 19, as shown in Exhibit 6. If the well is productive, contemplated facilities will be as follows:
  - 1) Production will be sent to the existing production facility described in "A" above.

- 2) Additions, if needed, to the existing tank battery and facilities including any piping will be installed according to API specifications.
- Any additional caliche will be obtained from a BLM-approved caliche pit or from a private source. Any additional construction materials will be purchased from contractors.
- 4) 2,025' of flow line will be constructed to this well from the existing tank battery and will be laid alongside the access road and/or existing flow lines. The flow line will be constructed of a 4" SDRIL poly line which will be laid on the surface. The proposed route is shown in red on Exhibit 6. Flow lines will be kept at least 3' apart.
- 5) Electric service will be provided from a power line owned by Central Valley Electric Cooperative, Inc., which will be responsible for ROW and construction. Power lines will be constructed alongside access roads existing at the time of construction. The existing and proposed access roads are included in Exhibit 6.
- 6) Location and Type of Water Supply:

The well will be drilled with a combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown on the Plan of Development map. If a commercial fresh water source is nearby, temporary "fast line" may be laid alongside access roads existing at the time the line is laid and fresh water pumped to the well. No water well will be drilled on the location.

#### 6. Source of Construction Materials:

All caliche required for construction of the drill pad (approximately 1834 cubic yards) will be obtained from a BLM-approved caliche pit or from a private source.

#### 7. Methods of Handling Waste:

- A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in rolloff style mud boxes and taken to an NMOCD-approved disposal site.
- B. Drilling fluids will be contained in steel mud pits.
- C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD-approved commercial disposal facility.

- D. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. No toxic waste or hazardous chemicals will be produced by this operation.
- E. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. In the event of a dry hole, only a dry hole marker will remain.

#### 8. Ancillary Facilities:

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

#### 9. Well Site Layout:

- A. The drill pad layout, with elevations staked by John West Surveying Company, is shown in Exhibit 4. Dimensions of the pad, including the closed loop mud system, are shown on Exhibit 8. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level, no major cuts will be required.
- B. Exhibit 8 also shows the proposed orientation of the closed loop mud system, and access road. No permanent living facilities are planned; however, a temporary foreman/toolpusher trailer and crew quarters trailers will be on location during the drilling operations.

#### 10. Plans for Restoration of the Surface:

- A. If the well is found to be non-commercial upon completion of the drilling and/or completion operations, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations in the area. The road will be reclaimed as directed by the BLM. The original top soil will be returned to the pad and contoured, as close as possible to the original topography, and reseeded as per BLM specifications.
- B. Upon completion of drilling and completion operations, the well pad will be reduced to a size suitable for continued operations, including workovers and other well servicing activities. The pad will be scraped such that the only portion of the pad remaining will be: (i) the area inside the anchors; and (ii) an area outside the anchors 50 feet in width. The caliche removed during the scraping operation will be stockpiled and either saved for use on future roads or pads, or returned to the pit from which it was originally removed.

#### 11. Surface Ownership:

A. The surface at this location is owned by the Federal government. The minerals are owned by the Federal government and are administered by the Bureau of Land Management. The surface has multiple uses, which are primarily grazing of livestock and the production of oil and gas.

B. The surface tenant for this site is:

Bogle Ltd. P.O. Box 460 Dexter, NM 88231-0460

C. The proposed road routes and surface location will be restored as directed by the BLM.

#### 12. Other information:

- A. The area around the well site is grassland and the topsoil is sandy. The vegetation is moderately sparse with native prairie grasses, some mesquite and shinnery oak. No wildlife was observed but it is likely that mule deer, rabbits, coyotes and rodents traverse the area.
- B. There is no permanent or live water in the immediate area.
- C. There are no dwellings within two (2) miles of this location.
- D. This project is being administered by a MOA with the Carlsbad, New Mexico Bureau of Land Management office.

#### 13. Bond Coverage:

Bond Coverage is Nationwide Bond # NM 2787.

#### 14. Lessee's and Operator's Representative:

The CWEI representatives responsible for assuring compliance with the surface use plan are as follows:

John F. Kennedy Drilling Manager Suite 3000, 6 Desta Drive Midland, Texas 79705 (432) 682-6324 Matt Swierc Production Superintendent Suite 3000, 6 Desta Drive Midland, Texas 79705 (432) 682-6324

#### **CERTIFICATION**

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Clayton Williams Energy, Inc., am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filling of false statements.

Executed this 19 day of \_\_\_\_\_\_

Signed:

**Printed Matt Swierc** 

Position: Production Superintendent

Address: Suite 3000, 6 Desta Drive, Midland, Texas 79705

Telephone: (432) 682-6324

Field Representative (if not above signatory): Mike Langford, Sierra Engineering

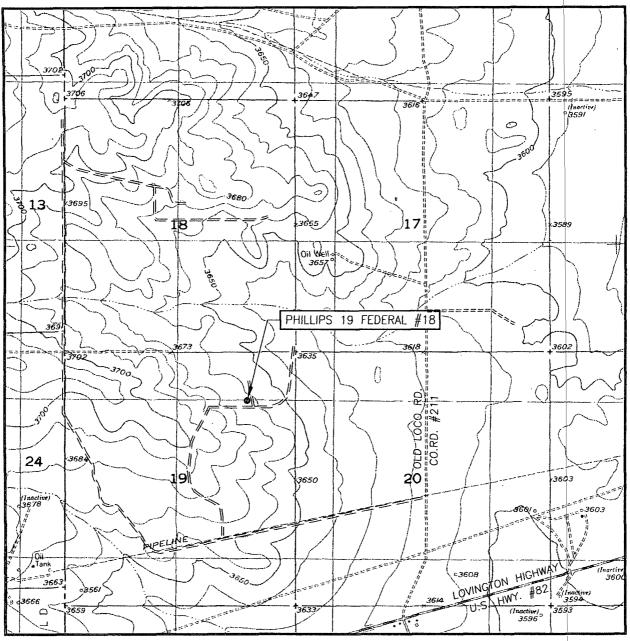
E-mail: MSwierc@claytonwilliams.com

### **EXHIBITS AND ATTACHMENTS**

Exhibit 1	Plat Page (Form C-102)	
Exhibit 2	Topographic Map	
Exhibit 3	Vicinity Map and Area Roads	
Exhibit 4	Elevation Plat	
Exhibit 5	Ownership Map with Well Location and Wells in 1-mile Rad	dius
Exhibit 6	Plan of Development (Roads, Flow Lines, Power Lines Tank Battery)	and
Exhibit 7	Drilling Plan	
Exhibit 8	Rig Layout	
Exhibit 9	BOP, Choke Manifold and Closed Loop Schematics	
Exhibit 10	C-144 CLEZ, Closed Loop System Permit Application	
Exhibit 11	H2S Plan	
Exhibit 12	Surface Use Plan of Operations and Operator Certification	}

#### **EXHIBIT 2**

## LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: RED LAKE SE, N.M. - 10'

SEC. 18 TWP. 17—S RGE. 29—E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 990' FNL & 1015' FEL

ELEVATION 3662'

OPERATOR CLAYTON WILLIAMS ENERGY, INC.

LEASE PHILLIPS 19 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

RED LAKE SE, N.M.



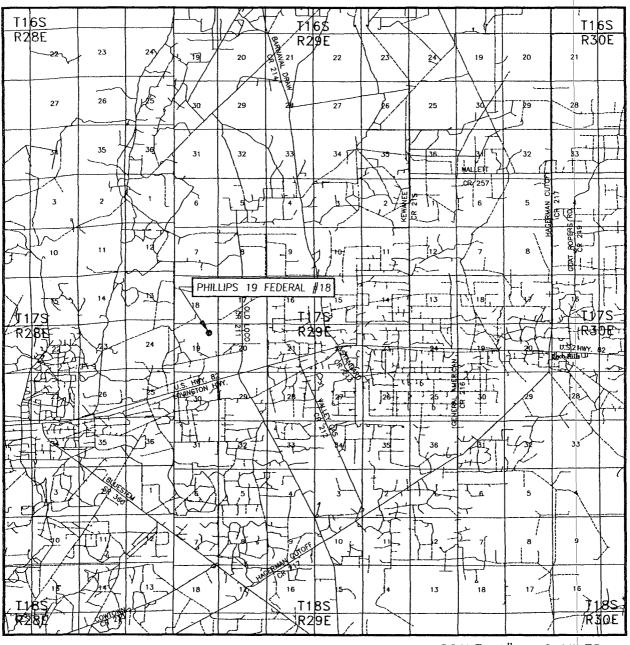
PROVIDING SURVEYING SERVICES SINCE 1946

JOHN WEST SURVEYING COMPANY 412 N. DAL PASO HOBBS, N.M. 88240

(575) 393-3117

#### **EXHIBIT 3**

## VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 19 1	WP. <u>17-S</u> RGE. <u>29-E</u>
SURVEY	N.M.P.M.
COUNTY_ED	DY STATE NEW MEXICO
DESCRIPTION	990' FNL & 1015' FEL
ELEVATION	3662'
OPERATOR CL	AYTON WILLIAMS ENERGY, INC.
LEASE	PHILLIPS 19 FEDERAL

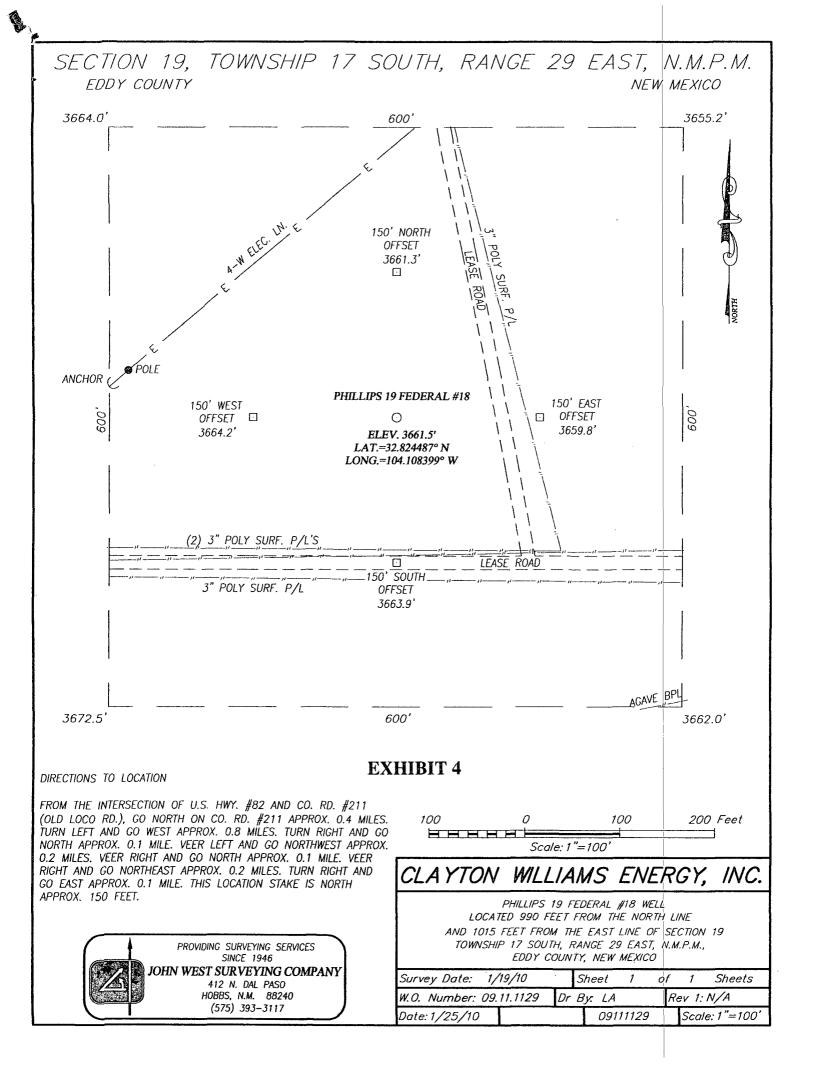


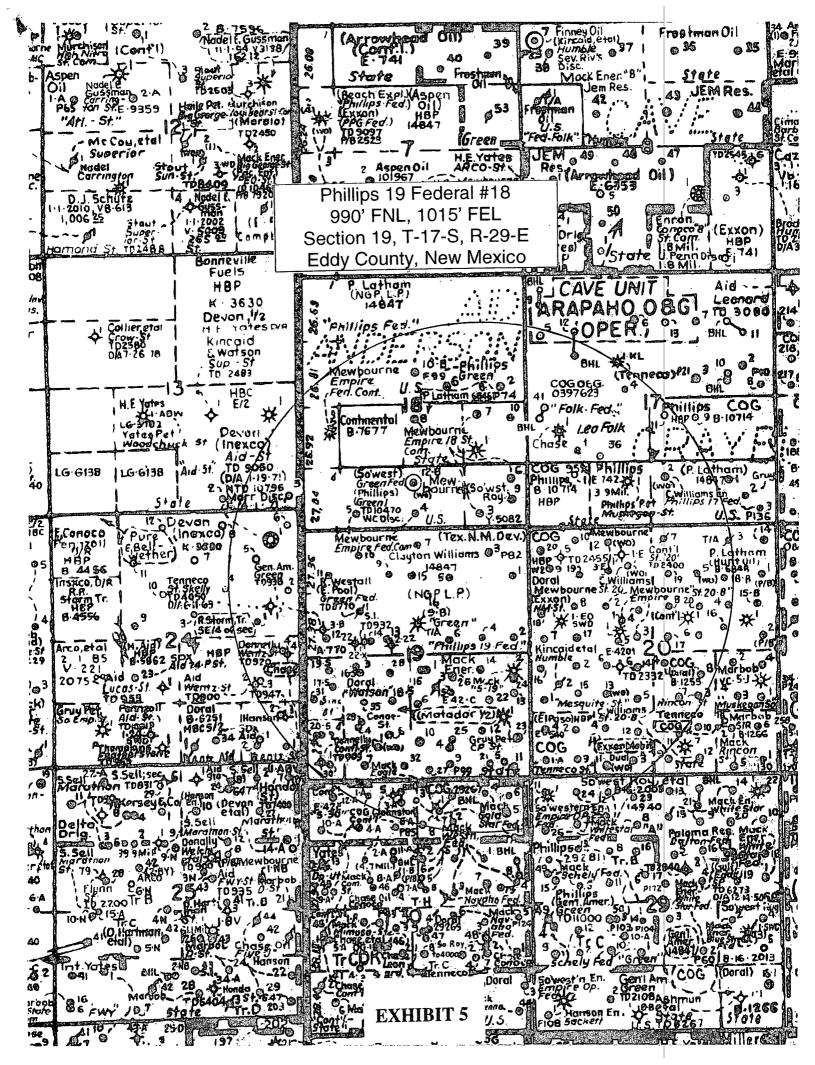
PROVIDING SURVEYING SERVICES
SINCE 1946

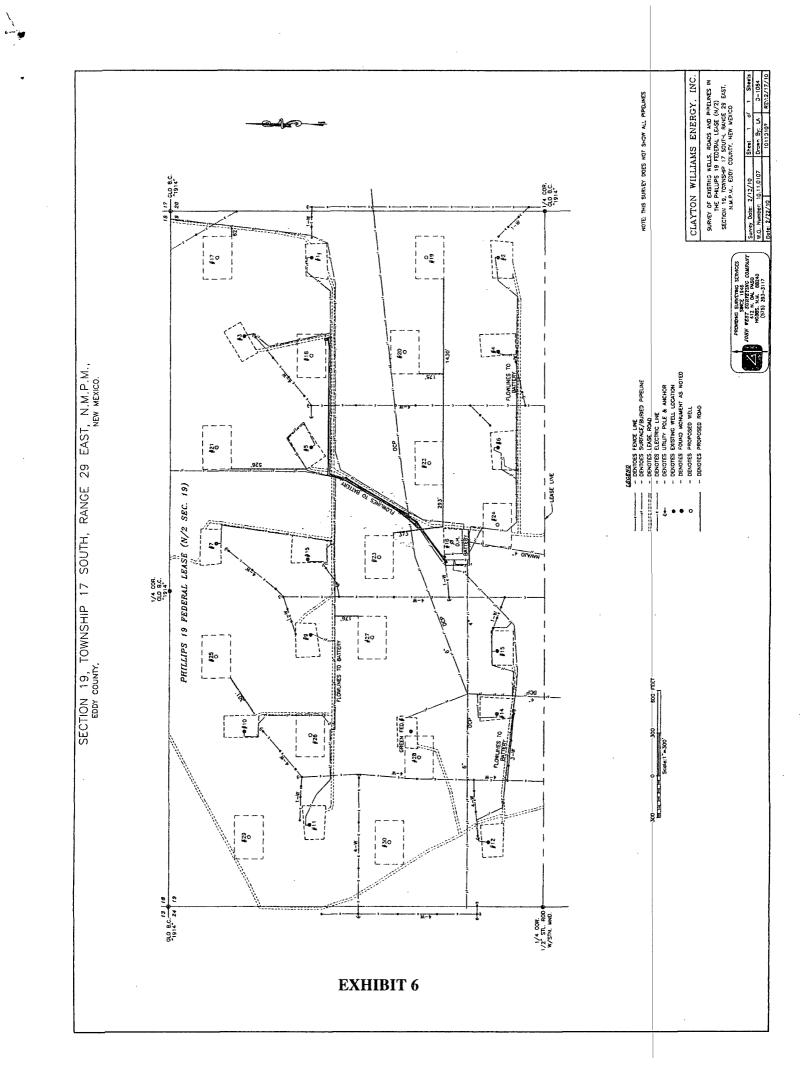
JOHN WEST SURVEYING COMPANY

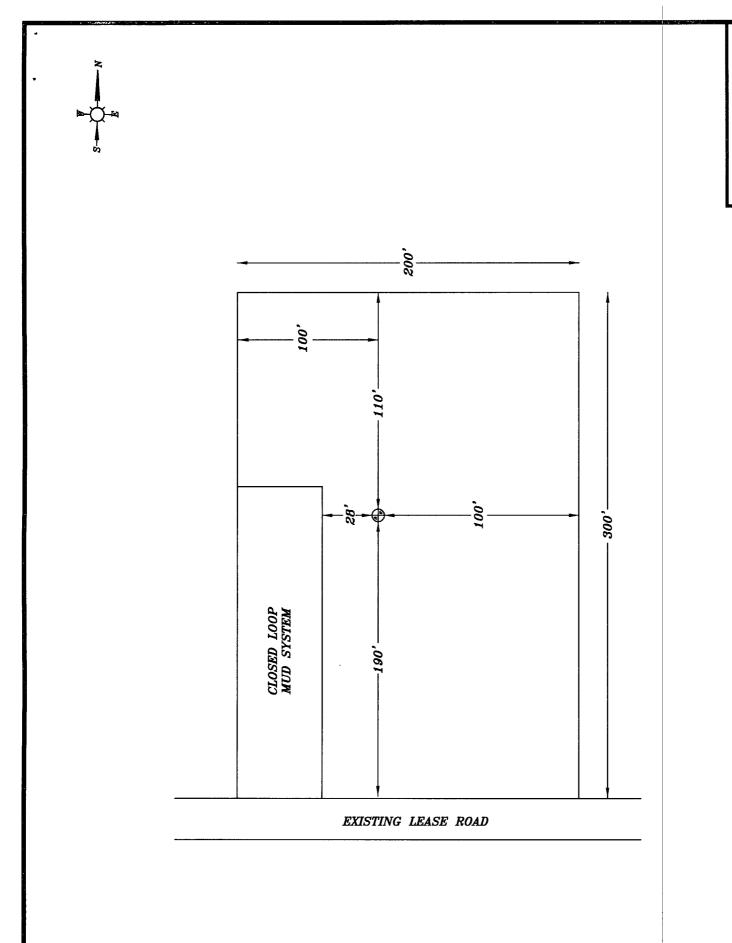
412 N. DAL PASO HOBBS, N.M. 88240 (575) 393-3117











CLAYTON WILLIAMS ENERGY, INC. RIG LAYOUT

EXHIBIT 8

