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give subsurface location	s and measured and true vertical previously operat	depths for all markers and zon ed by National	es pertinent to this work.)*	Completion or Recompletion Report and Log form ( Transford any proposed work. If well is directionally drilled. Inery Association and known as the Carlebad Controlled Weller Basin
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
<u>*17-1/2"</u> <u>*11"</u> 7-7/8"	<u>13-3/8"</u> <u>8-5/8"</u> 5-1/2"	<u>48#</u> <u>24# &amp; 32#</u> 17#	<u> </u>	<u>480 sx circ. cement to surface</u> <u>900 sx circ. cement to surfa</u> ce 400 sx of 50:50 Pozmix w/2% gel
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# SURFACE USE AND OPERATIONS PLAN FOR DRILLING, COMPLETION, AND PRODUCING

# NEARBURG PRODUCING COMPANY WILLOW DRAW #1 2,106' FNL and 1,830' FWL, SECTION 30, T20S, R26E Eddy County, New Mexico

# LOCATED:

10 air miles North of Carlsbad, New Mexico

#### OIL & GAS LEASE:

NM-NM 86891 and NM-NM 95629

#### **RECORD LESSEE:**

Nearburg Exploration Company

#### **BOND COVERAGE:**

\$25,000 statewide bond of Nearburg Producing Company

#### ACRES IN LEASE:

86891 - 79.99 acres, 95629 - 559.85 acres

#### **GRAZING LEASE:**

(Surface Owner) Henry Terpening 3162 Castleberry Artesia, NM 88210 (505) 746-2226

# POOL:

Cisco

#### EXHIBITS:

- A. Area Road Map
- B. Drilling Rig Layout
- C. Vicinity Oil and Gas Map
- D. Topographic and Location Verification Map
- E. Well Location and Acreage Dedication Plat

This well will be re-entered to a depth of approximately 8,350'.

# 1. EXISTING ROADS:

- A. Exhibit "A" is a portion of a section map showing the location of the proposed well as staked.
- B. Exhibit "C" is a plat showing existing roads in the vicinity of the proposed well site.
- 2. <u>ACCESS ROADS</u>: Go 2 miles north of Sitting Bull Falls road on the Artesia Highway, turn west through cattle guard and follow 1-1/2 miles to location.

# A. Length and Width:

The well pad will border the lease road and no access road will be needed as shown on exhibit "D".

# B. Surface Material:

Existing.

# C. Maximum Grade:

Less than two percent.

# D. Turnouts:

None necessary.

# E. Drainage Design:

Existing.

# F. Culverts:

None necessary.

# G. Gates and Cattle Guards:

None necessary.

# 3. LOCATION OF EXISTING WELLS:

Existing wells in the immediate area are shown on Exhibit "C".

# 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

Necessary production facilities for this well will be located on the well pad.

# 5. LOCATION AND TYPE OF WATER SUPPLY:

It is not contemplated that a water well will be drilled. Water necessary for drilling will be purchased and hauled to the site over existing roads shown on Exhibit "D".

# 6. METHODS OF HANDLING ... ASTE DISPOSAL:

- A. Existing fluids will be allowed to evaporate in the working pits until the pits are dry.
- B. Water produced during tests will be hauled to a disposal well.
- C. Oil produced during tests will be stored in test tanks.
- D. Trash will be contained in a trash trailer and removed from well site.
- **E.** All trash and debris will be removed from the well site within 30 days after re-entry and/or completion operations.

# 7. ANCILLARY FACILITIES:

None required.

# 8. WELL SITE LAYOUT:

Exhibit "B" shows the relative location and dimensions of the well pad, workover pit, trash pit, and the location of major rig components.

# 9. PLANS FOR RESTORATION OF THE SURFACE:

- **A.** After completion of re-entry and/or completion operations, all equipment and other material not needed for operations will be removed. The well site will be cleaned of all trash and junk to leave the site in an as aesthetically pleasing condition as possible.
- B. After abandonment, all equipment, trash and junk will be removed and the site will be clean.

# 10. OTHER INFORMATION:

# A. Topography:

The land surface at the well site is rolling native grass with a regional slope being to the west.

B. Soil:

Top soil at the well site is rocky soil.

# C. Flora and Faunal:

The location is in an area sparsely covered with mesquite and range grasses.

#### D. Ponds and Streams:

There are no rivers, lakes, ponds or streams in the area.

#### (CONTINUED) **10. OTHER INFORMATION:**

# E. Residences and Other Structures:

There are no occupied dwellings or other structures within a mile of the proposed well site.

# F. Archaeological, Historical, and Cultural Sites:

N/A, using existing well pad and road.

# G. Land Use:

Grazing.

# H. Surface Ownership: - (BLM minerals)

Henry Terpening 3162 Castleberry Artesia, NM 88210 OPERATOR'S REPRESENTATIVE: Van Rodgers Henry Terpening and to gue surface use of Campages, Daw Rodgers Van Rodgers

11.

H. R. Willis 419 W. Cain Hobbs, New Mexico 88240 Office: (505) 397-4186 Home: (505) 392-8735

#### 12. **CERTIFICATION:**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Nearburg Producing Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

 $\frac{4/3}{\text{Date}}$ 

**Drilling Superintendent** 

# SUPPLEMENTAL DRILLING DATA NEARBURG PRODUCING COMPANY WILLOW DRAW #1

# 1. SURFACE FORMATION:

Dockum Group of Triassic Age.

#### 2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

San Andres	1,466'	TD	8,350'
Bone Springs	5,642'		
Wolfcamp	7,208'		
Cisco	7,997'		
Canyon	8,392'		

# 3. ANTICIPATED POSSIBLE HYDROCARBON BEARING ZONES:

Wolfcamp	7,208'
Cisco	7,997'

#### 4. CASING AND CEMENTING PROGRAM:

		Setting Depth			
	Casing Size	From To	Weight	Grade	<u>Joint</u>
*	13-3/8''	0 - 350'	48#	J-55	ST&C
*	8-5/8''	0 - 2,388'	24 & 32#	K-55	ST&C and LT&C
	5-1/2"	0 - 8,350'	17#	K-55	

\* Existing casing and has been cemented to surface.

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability.

We plan to re-enter this well bore and drill out cement plugs to a depth of 8,350'.

5-1/2" production casing will be cemented with approximately 400 sx of Class "H" 50/50 POZ.

# 5. PRESSURE CONTROL EQUIPMENT:

The BOP stack will consist of a 3,000 psi working pressure, dual ram type preventer. The BOP stack will be a work over type stack.

A BOP sketch is attached.

# 6. CIRCULATING MEDIUM:

Surface to 8,350':

Re-enter and drill out cement plugs to 8,350' with fresh water mud, weight 8.4 to 9.0 ppg, viscosity 29 to 34.

# 7. AUXILIARY EQUIPMENT:

None required.

# 8. TESTING, LOGGING AND CORING PROGRAM:

N/A

# 9. ABNORMAL PRESSURES, TEMPERATURES OR HYDROGEN SULFIDE GAS:

Anticipated bottom hole pressure: 3,109 psi off previous DST. None anticipated.

# 10. ANTICIPATED STARTING DATE:

It is planned that operations will commence on April 9, 1996, with re-entry and completion operations lasting about 15 days.





DRILLING RIG LAYOUT NEARBURG PRODUCING COMPANY WILLOW DRAW #1 SCALE 1" = 50'

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Exhibit B





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# HYDROGEN SULFIDE DRILLING OPERATIONS PLAN NEARBURG PRODUCING COMPANY WILLOW DRAW #1

# I. HYDROGEN SULFIDE TRAINING

- A. All regularly assigned personnel, contracted or employed by Nearburg Producing Company, will receive training from a qualified instructor in the following areas prior to commencing drilling potential hydrogen sulfide bearing formations in this well:
  - 1. The hazards and characteristics of hydrogen sulfide (H2S).
  - 2. The proper use and maintenance of personal protective equipment and life support systems.
  - **3.** The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
  - 4. The proper techniques for first aid and rescue procedures.
- B. In addition, supervisory personnel will be trained in the following areas:
  - **1.** The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
  - 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
  - 3. The contents and requirements of the H2S Drilling Operations Plan.
- C. There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations 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. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S 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 H2S.

# A. Well Control Equipment:

- **1.** Flare line with continuous pilot.
- 2. Choke manifold with a minimum of one remote choke.
- 3. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- **4.** Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head and flare gun with flares.

# B. Protective Equipment for Essential Personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.

# C. H2S Detection and Monitoring Equipment:

- 1. Two portable H2S monitors positioned and location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
- 2. One portable SO2 monitor positioned near flare line.

# D. Visual Warning Systems:

- 1. Wind direction indicators as shown on well site diagram.
- 2. 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:

- 1. The Mud Program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weights, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.
- 2. A mud-gas separator will not be utilized.

# F. Metallurgy:

All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

# G. Communication:

- 1. Cellular telephone communications in company vehicles and mud logging trailer.
- 2. Land line (telephone) communications at area office.

# H. Well Testing:

N/A

# WARNING

# YOU ARE ENTERING AN H2S AREA - AUTHORIZED PERSONNEL ONLY

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED
- 2. HARD HATS REQUIRED

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- 3. SMOKING IN DESIGNATED AREAS ONLY
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CHECK WITH NEARBURG SUPERINTENDENT AT MAIN OFFICE

# NEARBURG PRODUCING COMPANY 1-505-397-4186

Prevailing Wind Directions: Summer - South/Southwest Winter - North/Northwest

Minimum 150' from wellhead.





- M H2S Monitors with alarms at bell nipple and shale shaker

- W Wind Direction Indicators

Location Entrance Warning Sign





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Hydrogen Sulfide Drilling Operations Location Plan Nearburg Producing Company

