

**SURFACE USE PLAN**

**Devon Energy Production Company, L. P.**  
**Green Wave 17 Fed 1H**  
**Surface Hole: 25 FSL & 1980 FWL**  
**Bottom Hole: 330 FNL & 1980 FWL**  
**Section 17, T. 26 S., R. 34 E**  
**Lea County, New Mexico**

HOBBS OCD

JUN 24 2013

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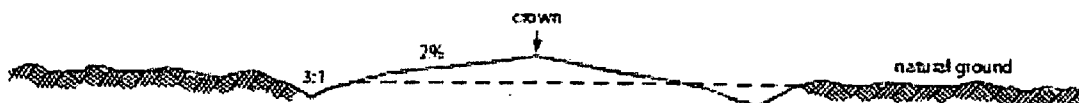
This plan is submitted with form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. **EXISTING ROADS:**

- A. **DIRECTIONS:** Go South from intersection of Highway 128 and Lea County Rd. J-2 (Battle Axe Road) 12.3 miles. Turn south on lease road 0.6 miles to El Paso ROW road. Turn east for 1.9 miles. Turn south on lease road for 1.1 miles. Turn southeast on old abandoned lease road for 1.2 miles. Proposed access road will begin at this point. All existing roads are either paved or a caliche lease road.
- B. See attached plats and maps provided by WTC Surveys.
- C. The access routes from Battle Axe Road to the well location is depicted on **Exhibit A**. The route highlighted in red has been previously approved under a ROW and does not require an additional ROW permit.
- D. Existing roads on the access route will be improved and maintained to the standard set forth in Section 2 of this Surface Use Plan of Operations.

2. **NEW OR RECONSTRUCTED ACCESS ROADS:**

- A. There will be a new access road of 979.3 ft., from the northeast corner, of this two well pad location, to the east, to the proposed Green Wave 17 Fed 2H & Green Wave 20 Fed 3H well pad. The following information will pertain to the new road and any upgrading of the existing road system.
- B. The maximum width of the driving surface will be 14 feet. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.



**Level Ground Section**

- C. Surface material will be native caliche. The average grade of the entire road will be approximately 3%.
- D. Fence Cuts: No
- E. Cattle guards: No
- F. Turnouts: No

JUN 26 2013

- G. Culverts: No
- H. Cuts and Fills: Not significant
- I. Approximately 6 inches of topsoil (root zone) will be stripped from the proposed access road prior to any further construction activity. The topsoil that was stripped will be spread along the edge of the road and within the ditch. The topsoil will be seeded with the proper seed mix designated by the BLM.
- J. The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along the access road route.
- K. The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

3. LOCATION OF EXISTING WELLS:

See attached map (**Exhibit B**) showing all wells within a one-mile radius.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. In the event the well is found productive, a surface flowline will run to the battery, which will be applied for under a sundry notice at a later date.
- B. All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted to BLM specifications.
- C. Containment berms will be constructed completely around production facilities designed to hold fluids. The containment berms will be constructed or compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas.

5. LOCATION AND TYPE OF WATER SUPPLY:

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from commercial water stations in the area and hauled to the location by transport truck using the existing and proposed roads shown in the attached survey plats. If a commercial water well is nearby, a temporary, surface poly line, will be laid along existing roads or other ROW easements and the water pumped to the well. No water well will be drilled on the location.

6. SOURCE OF CONSTRUCTION MATERIALS:

Any construction material that may be required for surfacing of the drill pad and access road will be from a contractor having a permitted source of materials within the general area. No construction materials will be removed from Federal lands without prior approval from the appropriate surface management agency. All roads will be constructed of 6" rolled and compacted caliche.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in roll-off 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. Oil produced during operations will be stored in tanks until sold.
- E. Portable, self-contained chemical toilets will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location, not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.

8. ANCILLARY FACILITIES:

No campsite, airstrip, or other facilities will be built as a result of the operation of this well. No staging areas are needed.

9. WELL SITE LAYOUT:

- A. Exhibit A shows the dimensions of the proposed well pad.
- B. The proposed well pad size will be 350' x 470' (**See Exhibit D**). **This will be a two well pad layout with the Green Wave 17 Fed 1H being to the north and the Green Wave 20 Fed 2H 50 ft. to the south.** There will be no reserve pit due to the well being drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17 .
- C. The WTC Surveyor's plat, Form C-102 and **Exhibit D**, shows how the well will be turned to a V-Door North.
- D. A 600' x 600' area has been staked and flagged.
- E. All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad, and topsoil storage areas)

10. PLANS FOR SURFACE RECLAMATION:

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, all the equipment will be removed, the surface material, caliche, will be removed from the well pad and road and transported to the original caliche pit or used for other roads. The original stock piled top soil will be returned to the pad and contoured, as close as possible, to the original topography. The access road will have the caliche removed and the road ripped, barricaded and seeded as directed by the BLM.
- B. If the well is a producer, the portions of the location not essential to production facilities or space required for workover operations, will be reclaimed and seeded as per BLM requirements. (**SEE EXHIBIT C FOR INTERIM RECLAMATION PLAT FOR THIS WELL**)
- C. Reclamation Performance Standards  
The following reclamation performance standards will be met:

*Interim Reclamation* – Includes disturbed areas that may be redisturbed during operations and will be redisturbed at final reclamation to achieve restoration of the original landform and a natural vegetative community.

- Disturbed areas not needed for active, long-term production operations or vehicle travel will be recontoured, protected from erosion, and

revegetated with a self-sustaining, vigorous, diverse, native (or as otherwise approved) plant community sufficient to minimize visual impacts, provide forage, stabilize soils, and impede the invasion of noxious, invasive, and non-native weeds.

*Final Reclamation* – Includes disturbed areas where the original landform and a natural vegetative community will be restored and it is anticipated the site will not be redisturbed for future development.

- The original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors.
- A self-sustaining, vigorous, diverse, native (or otherwise approved) plant community will be established on the site, with a density sufficient to control erosion and invasion by non-native plants and to re-establish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.
- Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gully, gullying, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.
- The site will be free of State- or county-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive and non-native weeds are controlled.

#### D. Reclamation Actions

Earthwork for interim and final reclamation will be completed within 6 months of well completion or plugging unless a delay is approved in writing by the BLM authorized officer.

The following minimum reclamation actions will be taken to ensure that the reclamation objectives and standards are met. It may be necessary to take additional reclamation actions beyond the minimum in order to achieve the Reclamation Standards.

##### Reclamation – General

###### Notification:

- The BLM will be notified at least 3 days prior to commencement of any reclamation operations.

###### Housekeeping:

- Within 30 days of well completion, the well location and surrounding areas(s) will be cleared of, and maintained free of, all debris, materials, trash, and equipment not required for production.
- No hazardous substances, trash, or litter will be buried or placed in pits.

###### Topsoil Management:

- Operations will disturb the minimum amount of surface area necessary to conduct safe and efficient operations.
- Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the topsoil will be stripped and stockpiled

around the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil will include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.

- Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment or so dry that dust clouds greater than 30 feet tall are created. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.
- No major depressions will be left that would trap water and cause ponding unless the intended purpose is to trap runoff and sediment.

Seeding:

- Seedbed Preparation. Initial seedbed preparation will consist of recontouring to the appropriate interim or final reclamation standard. All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4 – 6 inches. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.
- If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
- Seed Application. Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM to meet reclamation standards will be used.
- If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.

11. SURFACE OWNERSHIP:

- A. The surface is owned by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.

12. OTHER INFORMATION:

- A. The area surrounding the well site is in a fairly flat, sandy loam type, within a rolling sand hills type area. The vegetation consists of Mesquite with three-awns and some dropseed species.
- B. There is no permanent or live water in the immediate area.
- C. There are no dwellings within 2 miles of this location.
- D. The location falls within the MOA area and all known sites were avoided. A check for \$1463 was submitted with this application.

13. BOND COVERAGE:

Bond Coverage is Nationwide; Bond Number NMB-000801 and CO-1104.

OPERATORS REPRESENTATIVE:

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below:

Surface:

Barry W. Hunt – Permitting Agent  
1403 Springs Farm Place  
Carlsbad, NM 88220  
(575) 885-1417 (Home)  
(575) 361-4078 (Cell)

Drilling & Production:

James Albee – Operations Engineer, Devon Energy Production, L.P.  
333 W. Sheridan  
Oklahoma City, Ok. 73102  
(405) 228-8698 (Office)  
(405) 820-8682 (Cell)

**ON-SITE PERFORMED ON 5/23/12 RESULTED IN PROPOSED LOCATION BEING LEFT WHERE STAKED. IT WAS AGREED TO TURN THE LOCATION TO A V-DOOR NORTH. IT WAS FURTHER AGREED TO PLACE THE TOPSOIL TO THE EAST AND INTERIM RECLAMATION WOULD BE THE SOUTH, WEST, AND EAST PORTIONS OF PAD.**

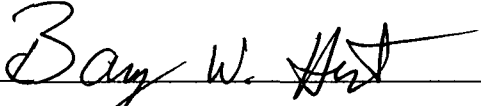
**PRESENT AT ON-SITE:**

**BARRY HUNT – PERMIT AGENT FOR DEVON ENERGY PRODUCTION COMPANY  
TRISH BADBEAR – BLM  
WTC SURVEYORS**

## CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed 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 Devon Energy Production, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 6th day of August 2012.

Signed: \_\_\_\_\_



Printed Name: Barry Hunt

Position: Agent for Devon Energy Production, LLC.

Address: 1403 Springs Farm Place, Carlsbad, NM 88220

Telephone: (575) 361-4078

E-mail: [specialtpermitting@gmail.com](mailto:specialtpermitting@gmail.com)

Field Representative: Don Mayberry

Address: P. O. Box 250, Artesia, NM 88211-0250

Telephone: Office: (575) 748-0164, Cell: (575) 748-5235



Devon Energy Corporation  
20 North Broadway  
Oklahoma City, OK 73102-8260

405 235 3611 Phone  
[www.devonenergy.com](http://www.devonenergy.com)

June 5, 2012

To Whom It May Concern:

Mr. Barry Hunt is contracted by Devon Energy, L.P. to sign as their agent for APDs and Right of Ways in the state of New Mexico.

If you have any questions, please contact me at my office at (405) 228-8379.

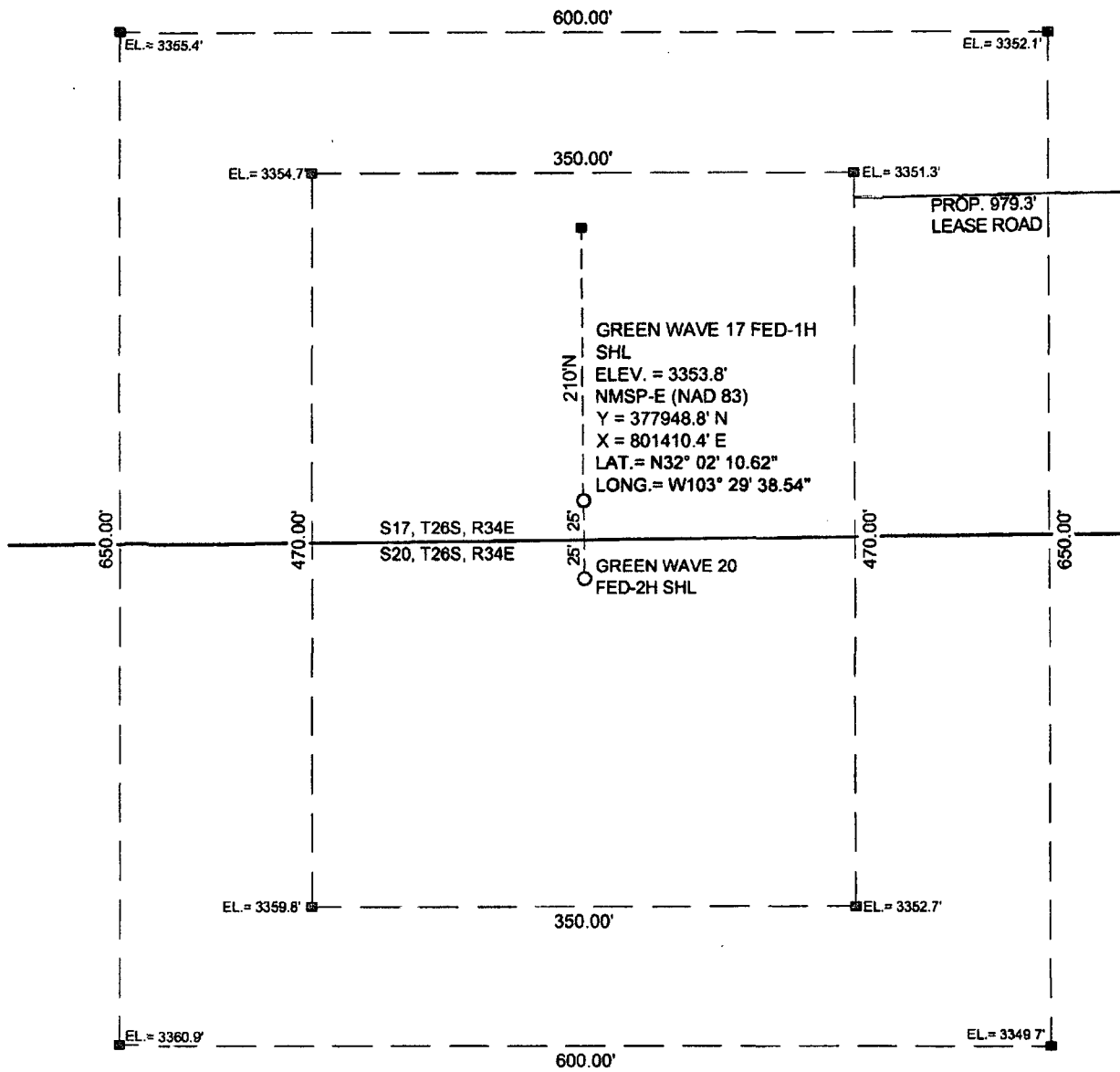
Sincerely,

  
Victoria Sanchez

Supervisor, Regulatory Compliance  
Mid-Continent Division  
Devon Energy, L.P.



# SITE LOCATION



**SCALE: 1" = 100'**

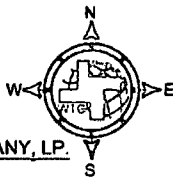
SECTION 17, T 26 S, R 34 E, N.M.P.M.

COUNTY: LEA STATE: NM

**DESCRIPTION: 25' FSL & 1980' FWL**

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP.

WELL NAME: GREEN WAVE 17 FED-1H



**DRIVING DIRECTIONS:**

FROM THE JUNCTION OF STATE HIGHWAY 128 AND  
BATTLE AXE ROAD/J-2, ABOUT 14 MILES WEST OF JAL  
NM. GO 12.3 MILES ON BATTLE AXE ROAD TO A LEASE  
ROAD. GO SOUTH 0.8 MILES TO EL PASO R.O.W. ROAD.  
GO EAST 1.9 MILES TO LEASE ROAD. GO SOUTH 1.1 TO  
AN OLD LEASE ROAD. GO SOUTHEAST 1.2 MILES TO  
BEGINNING OF A PROPOSED LEASE ROAD, LOCATION  
FLAG IS ±1456 TO THE WEST.

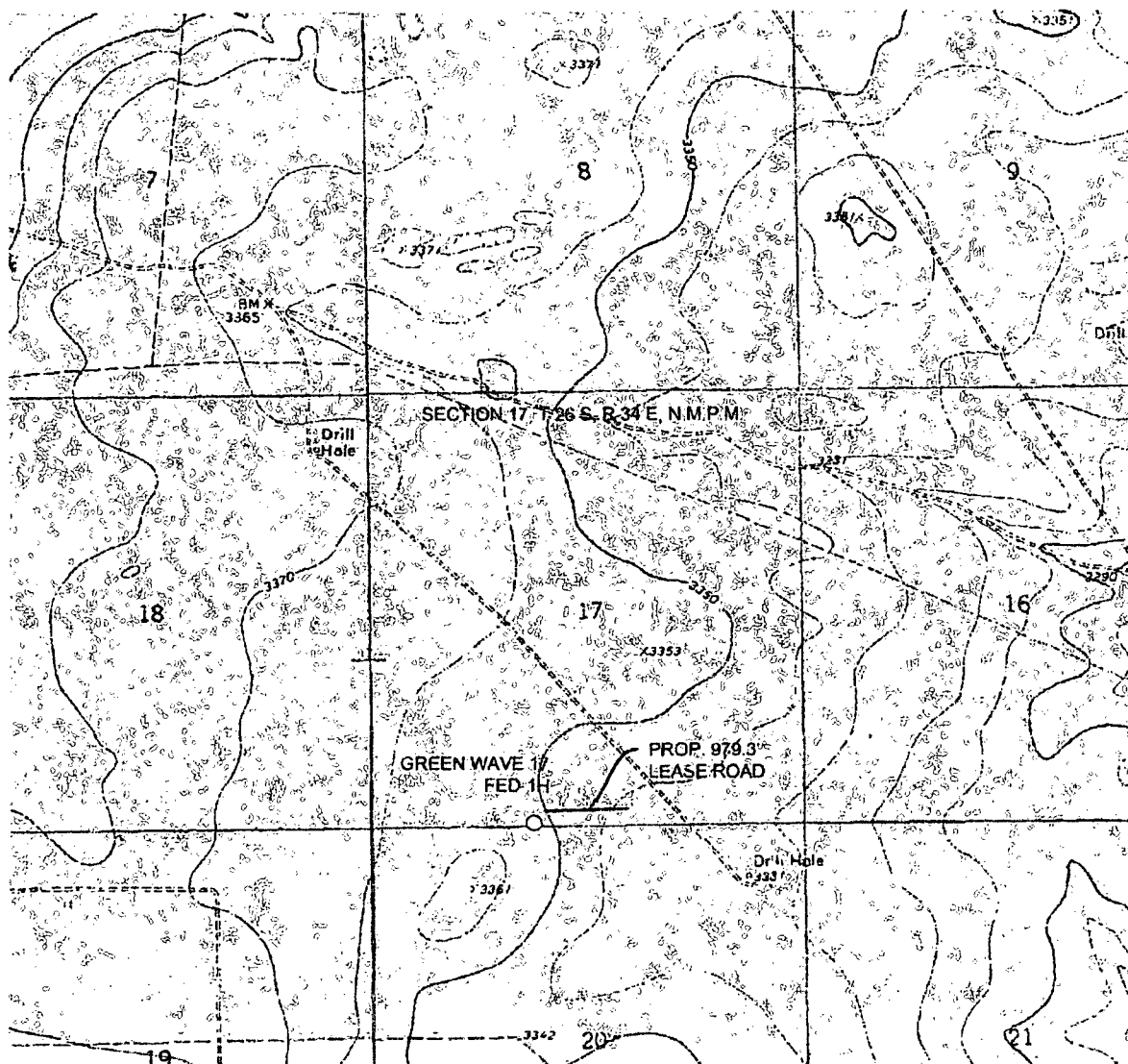


**WEST TEXAS CONSULTANTS, INC.**  
ENGINEERS PLANNERS SURVEYORS  
405 S.W. 1st. STREET  
ANDREWS, TEXAS 79714  
(432) 523-2181



JOB No.: WTC48540

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

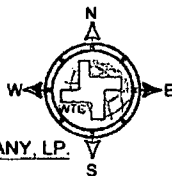
SECTION 17, T.26 S., R.34 E., N.M.P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: 25' FSL & 1980' FWL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP.

WELL NAME: GREEN WAVE 17 FED-1H



## DRIVING DIRECTIONS:

FROM THE JUNCTION OF STATE HIGHWAY 128 AND BATTLE AXE ROAD/J-2, ABOUT 14 MILES WEST OF JAL, NM. GO 12.3 MILES ON BATTLE AXE ROAD TO A LEASE ROAD. GO SOUTH 0.6 MILES TO EL PASO R.O.W. ROAD. GO EAST 1.9 MILES TO LEASE ROAD. GO SOUTH 1.1 TO AN OLD LEASE ROAD. GO SOUTHEAST 1.2 MILES TO BEGINNING OF A PROPOSED LEASE ROAD, LOCATION FLAG IS ±1456 TO THE WEST.

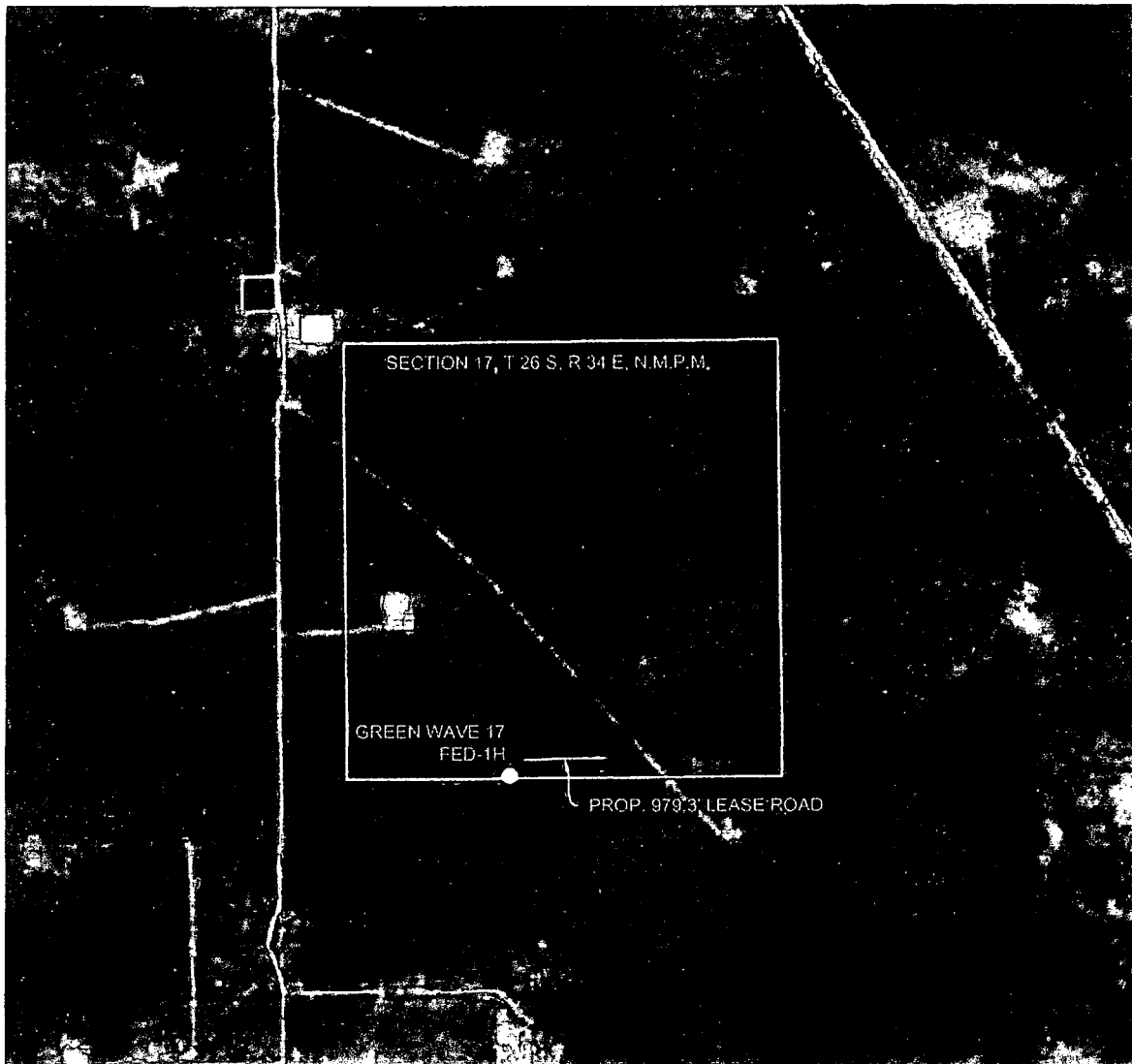


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JOB No.: WTC48540

# AERIAL MAP



SCALE: 1" = 2000'

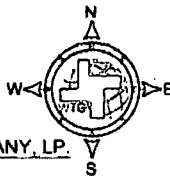
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COUNTY: LEA STATE: NM

DESCRIPTION: 25' FSL & 1980' FWL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP.

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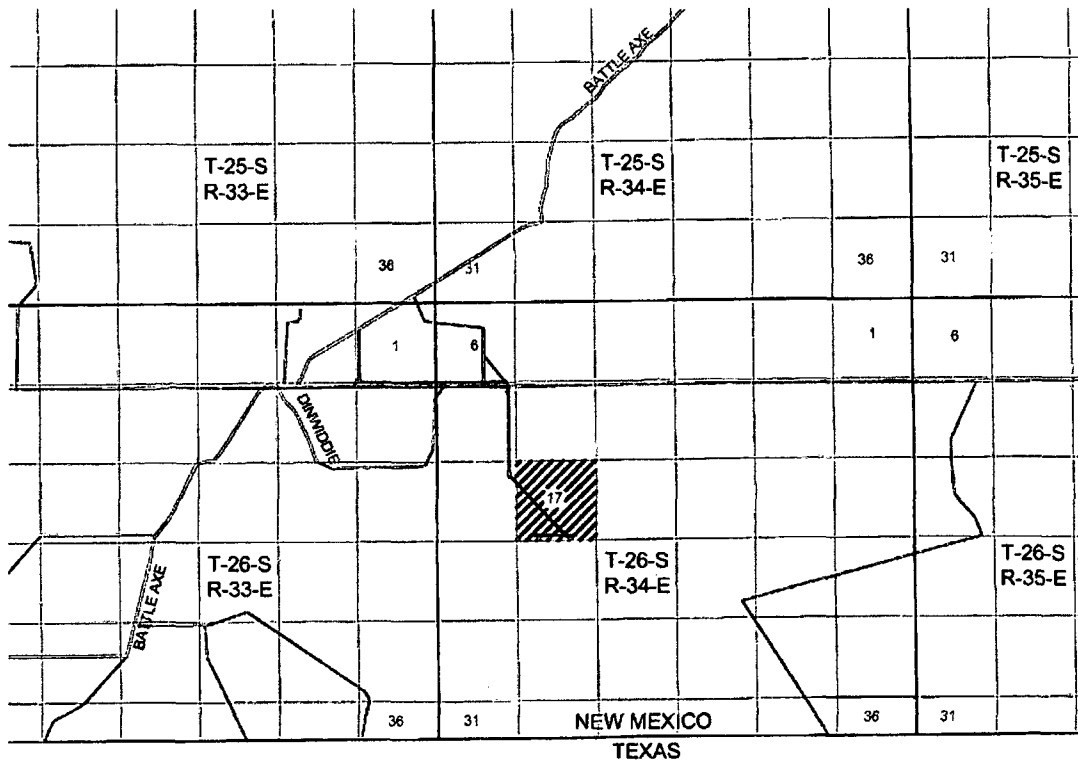
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ENGINEERS PLANNERS SURVEYORS  
405 S.W. 1st STREET  
ANDREWS, TEXAS 79714  
(432) 523-2181



JOB No.: WTC48540

# Exhibit A Access

## VICINITY MAP



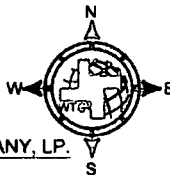
SECTION 17, T 26 S, R 34 E, N.M.P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: 25' FSL & 1980' FWL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP.

WELL NAME: GREEN WAVE 17 FED-1H



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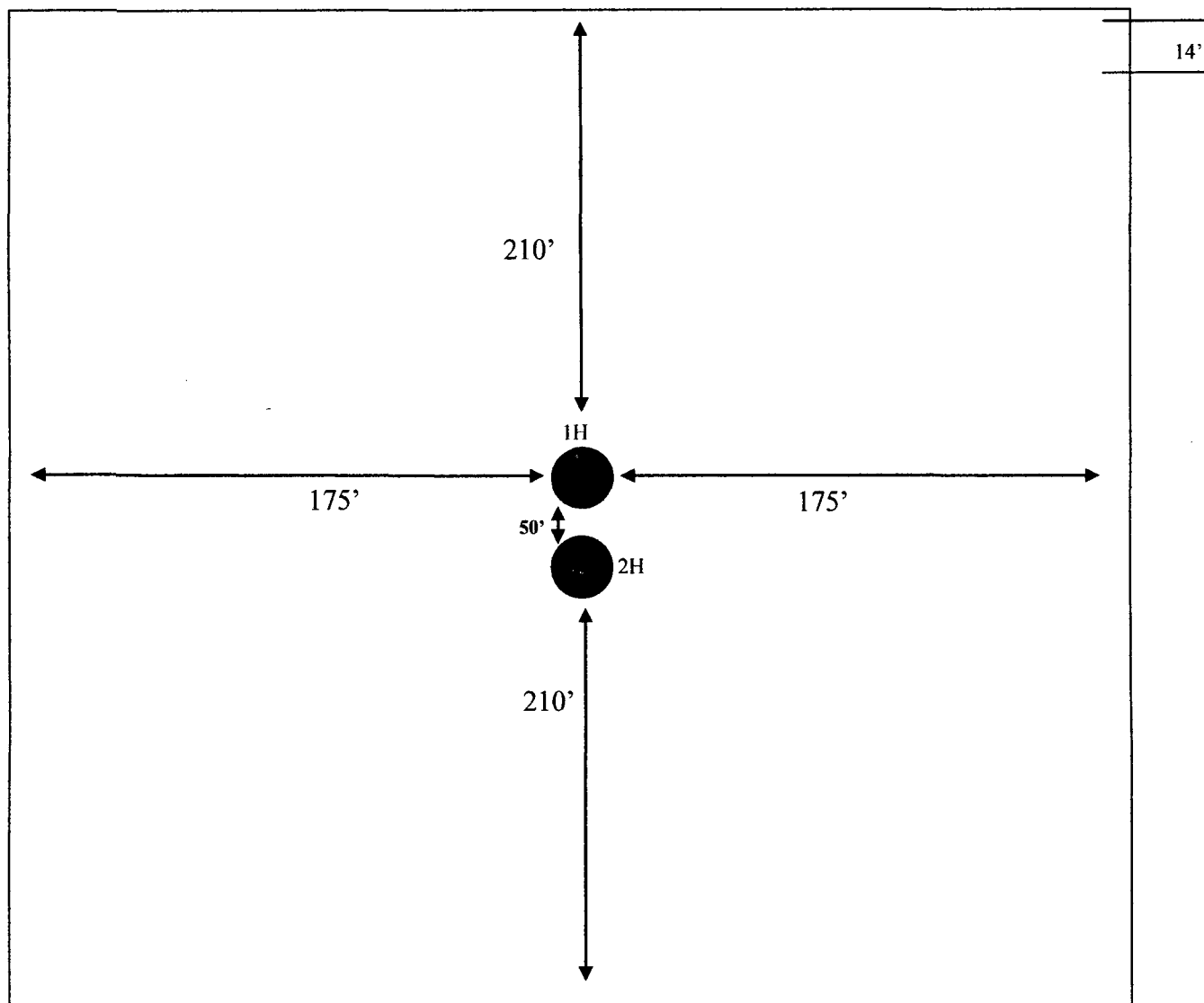


JOB No.: WTC48540

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**EXHIBIT D**

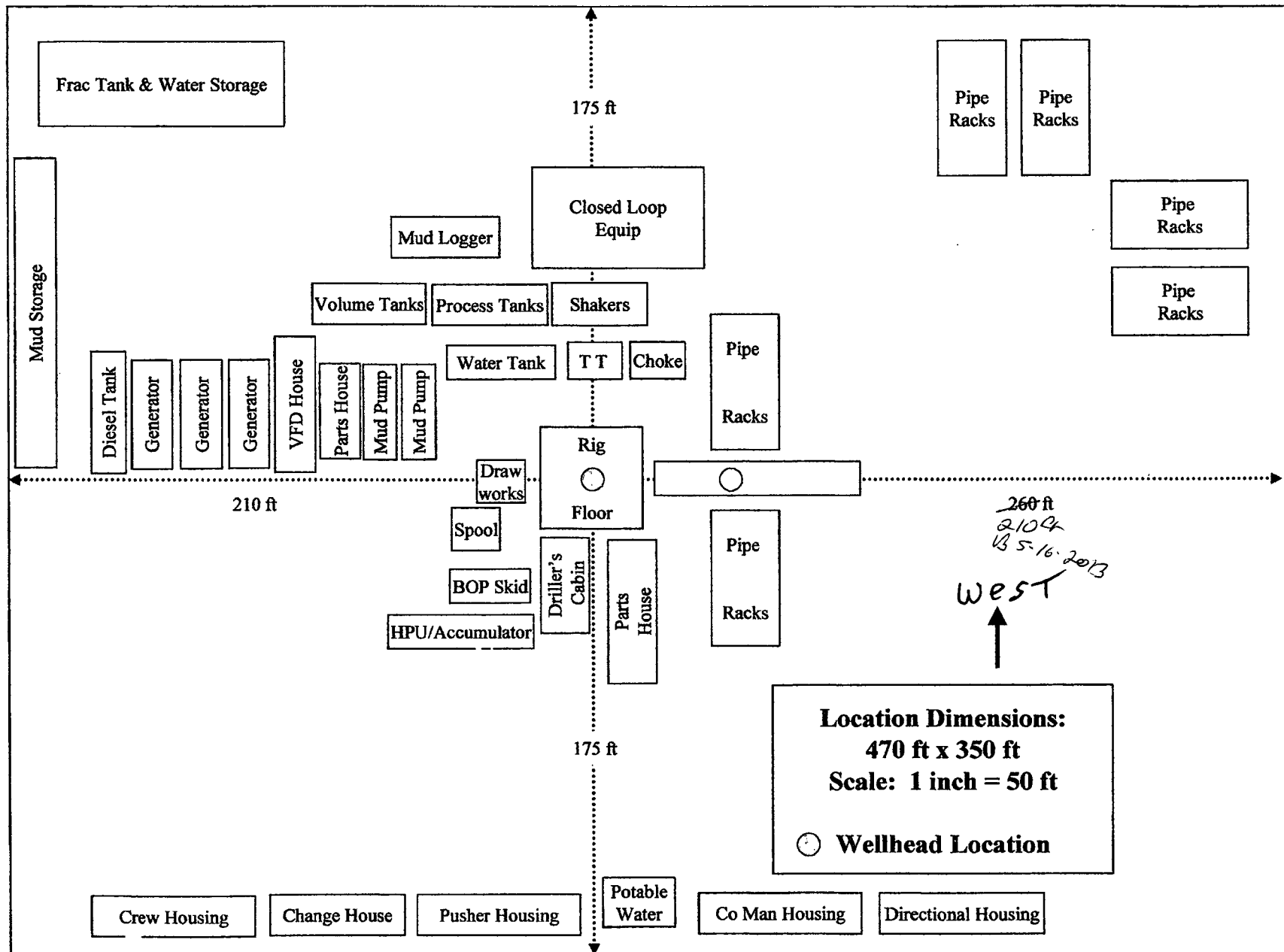
**Pad Size Only  
GREEN WAVE 17 FED 1H & GREEN WAVE 20 FED 2H  
V-DOOR NORTH**



**NORTH**

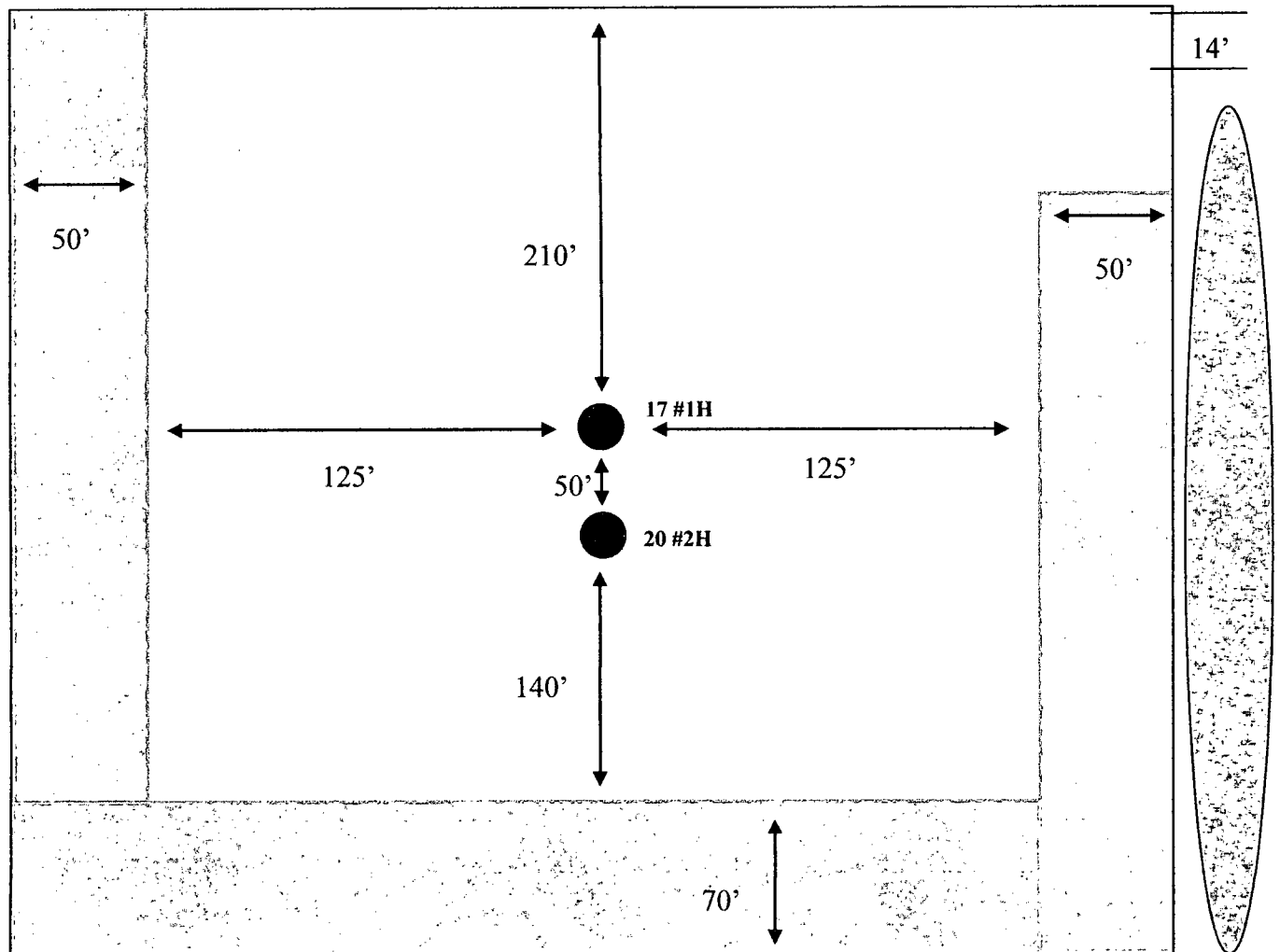
# H&P Flex Rig Location Layout

## 2 Well Pad



# EXHIBIT C

## Interim Reclamation & Production Facilities GREEN WAVE 17 FED #1H & GREEN WAVE 20 FED #2H V-DOOR NORTH



### LEGEND



Well Bore



Topsoil



Interim Reclamation



Production Facilities



NORTH

Exhibit B

