

# Surface Use & Operating Plan

## Fir Federal #2

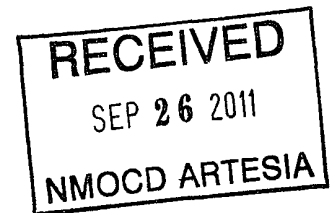
- Surface Tenant: Bogle Farms, Lewis Derrick, P O Box 441, Artesia, NM 88211.
- New Road: approx. 51'
- Flow Line: approx. 0.3 miles
- Facilities: Fir Federal #1 Tank battery

### Well Site Information

V Door: Southwest

Topsoil: Northeast

Interim Reclamation: Southeast/Northeast



### Notes

N/A

**Onsite:** 3/28/2011

John Fast (BLM), Chris Moon (COG), Caden Jameson (COG), Gary Box (J.W.S)

## **SURFACE USE AND OPERATING PLAN**

### **1. Existing & Proposed Access Roads**

- A. The well site survey and elevation plat for the proposed well is shown in Exhibit #1. It was staked by John West Engineering, Hobbs, NM
- B. All roads to the location are shown in the topographic map Exhibit #2. 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. The road route to the well site is depicted on Exhibit #13. The road highlighted in Exhibit #13 will be used to access the well.
- C. Directions to location: FROM THE INTERSECTION OF CO. RD. #204 (HILLTOP) AND US HWY 82, GO SOUTHEAST ON CO. RD. #204 APPROX 0.4 MILES. THIS LOCATION IS APPROX. 215 FEET WEST.
- 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. Roads will be maintained according to specifications in section 2A of this Surface Use and Operating Plan.

### **2. Proposed Access Road:**

Exhibit #4 shows that 51' of new access road will be required for this location. If any road is required it will be constructed as follows:

- A. The maximum width of the running surface will be 14'. The road will be crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.
- B. The average grade will be less than 1%.
- C. No turnouts are planned.
- D. A ditch crossing will be necessary to avoid water diversion as the lease road enters Co Rd # 225. No culverts, cattle guard, gates, or fence cuts will be necessary.
- E. Surfacing material will consist of native caliche. Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be hauled from the nearest BLM approved caliche pit.

**3. Location of Existing Well:**

Exhibit #11 shows all existing wells within a one-mile radius of this well.

As shown on this plat there are numerous wells producing from the San Andres and Yeso formations.

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

- A. COG Operating LLC does operate a production facility on this lease.
  - B. If the well is productive, contemplated facilities will be as follows:
  - C. Production will be sent to the Fir Federal #1 Tank Battery located at the Fir Federal #1 well location at 1770' FSL & 990' FWL in Sec. 25 T17S, R27E, Unit L. The facility location is shown in Exhibit #5.
  - D. The tank battery and facilities including all flow lines and piping will be installed according to API specifications.
  - E. Any additional caliche will be obtained from the actual well site. If caliche does not exist or is not plentiful from the well site, the caliche will be hauled from a BLM approved caliche pit. Any additional construction materials will be purchased from contractors.
  - F. Proposed flow lines, will follow an archaeologically approved route to the Fir Federal #1 Tank Battery located at the Fir Federal #1 well location at 1770' FSL & 990' FWL in Sec. 25 T17S, R27E, Unit L. The flowline will be SDR 7 3" poly line laid on the surface and will be approximately 0.3 miles in length
- 1) It will be necessary to run electric power if this well is productive. Power will be provided by CVE and they will submit a separate plan and ROW for service to the well location.
  - 2) If the well is productive, rehabilitation plans will include the following:
    - The original topsoil from the well site will be returned to the location, and the site will be re-contoured as close as possible to the original site.

**5. Location and Type of Water Supply:**

The well will be drilled with 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 in Exhibit #2. If a commercial fresh water source is nearby, fast line may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

**6. Source of Construction Materials and Location "Turn-Over" Procedure:**

Obtaining caliche: The primary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means, caliche will be obtained from the actual well sight. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cu. Yards is max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel:

- A. The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.**
- B. An approximate 120' X 120' area is used within the proposed well site to remove caliche.**
- C. Subsoil is removed and piled alongside the 120' by 120' area within the pad site.**
- D. When caliche is found, material will be stock piled within the pad site to build the location and road.**
- E. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.**
- F. Once well is drilled, the stock piled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither caliche nor subsoil will be stock piled outside of the well pad. Topsoil will be stockpiled along the edge of the pad as depicted in attached plat.**

In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit.

**7. Methods of Handling Water 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. 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. Human waste and grey water will need to be properly contained and disposed of. Proper disposal and elimination of waste and grey water may include but are not limited to portable septic systems and/or portable waste gathering systems (i.e. portable toilets).
- F. 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 Engineering, is shown in Exhibit #4. Dimensions of the pad and pits are shown on Exhibit #6. V door direction is Southwest. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required.
- B. Exhibit #6 also shows the proposed orientation of closed loop system and access road. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.

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

- A. Interim Reclamation will take place after the well has been completed. The pad will be downsized by reclaiming the areas not needed for production operations. The portions of the pad that are not needed for production operations will be re-contoured to its original state as much as possible. The caliche that is removed will be reused to either build

another pad site or for road repairs within the lease. The stockpiled topsoil will then be spread out reclaimed area and reseeded with a BLM approved seed mixture. In the event that the well must be worked over or maintained, it may be necessary to drive, park, and/or operate machinery on reclaimed land. This area will be repaired or reclaimed upon completion.

- B. Final Reclamation: Upon plugging and abandoning the well all caliche for well pad and lease road will be removed and surface will be recountoured to reflect its surroundings as much as possible. Caliche will be recycled for road repair or reused for another well pad within the lease. If any topsoil remains, it will be spread out and the area will be re-seeded with a BLM approved mixture and re-vegetated as per BLM orders.

**11.Surface Ownership:**

- A. The surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is multiple uses with the primary uses of the region for grazing of livestock and the production of oil and gas.
- B. The surface tenant is Bogle Farms, Lewis Derrick, P.O. Box 441, Artesia, NM 88211
- 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 2 miles of this location.
- D. If needed, a Cultural Resources Examination is being prepared by Southern New Mexico Archaeological Services, Inc. P.O. Box 1, Bent New Mexico, 88314, phone # 505-671-4797 and the results will be forwarded to your office in the near future. Otherwise, **COG will be participating in the Permian Basin MOA Program.**

**13. Bond Coverage:**

Bond Coverage is Nationwide Bond # 000215

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

The COG Operating LLC representative responsible for assuring compliance with the surface use plan is as follows:

John Coffman,

Drilling Superintendent

COG Operating LLC

550 W. Texas, Suite 1300

Midland, TX 79701

Phone (432) 683-7443 (office)

(432) 631-9762 (cell)

Erick Nelson.

Division Operations Manager

COG Operating LLC

550 W. Texas, Suite 1300

Midland, TX 79701

Phone (505) 746-2210 (office)

(432) 238-7591 (cell)

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 COG Operating, LLC, 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 1st day of July, 2011.

Signed: Carl Bird

Printed Name: Carl Bird

Position: Drilling Engineer

Address: 550 W. Texas, Suite 1300, Midland, Texas 79701

Telephone: (432) 683-7443

Field Representative (if not above signatory): Same

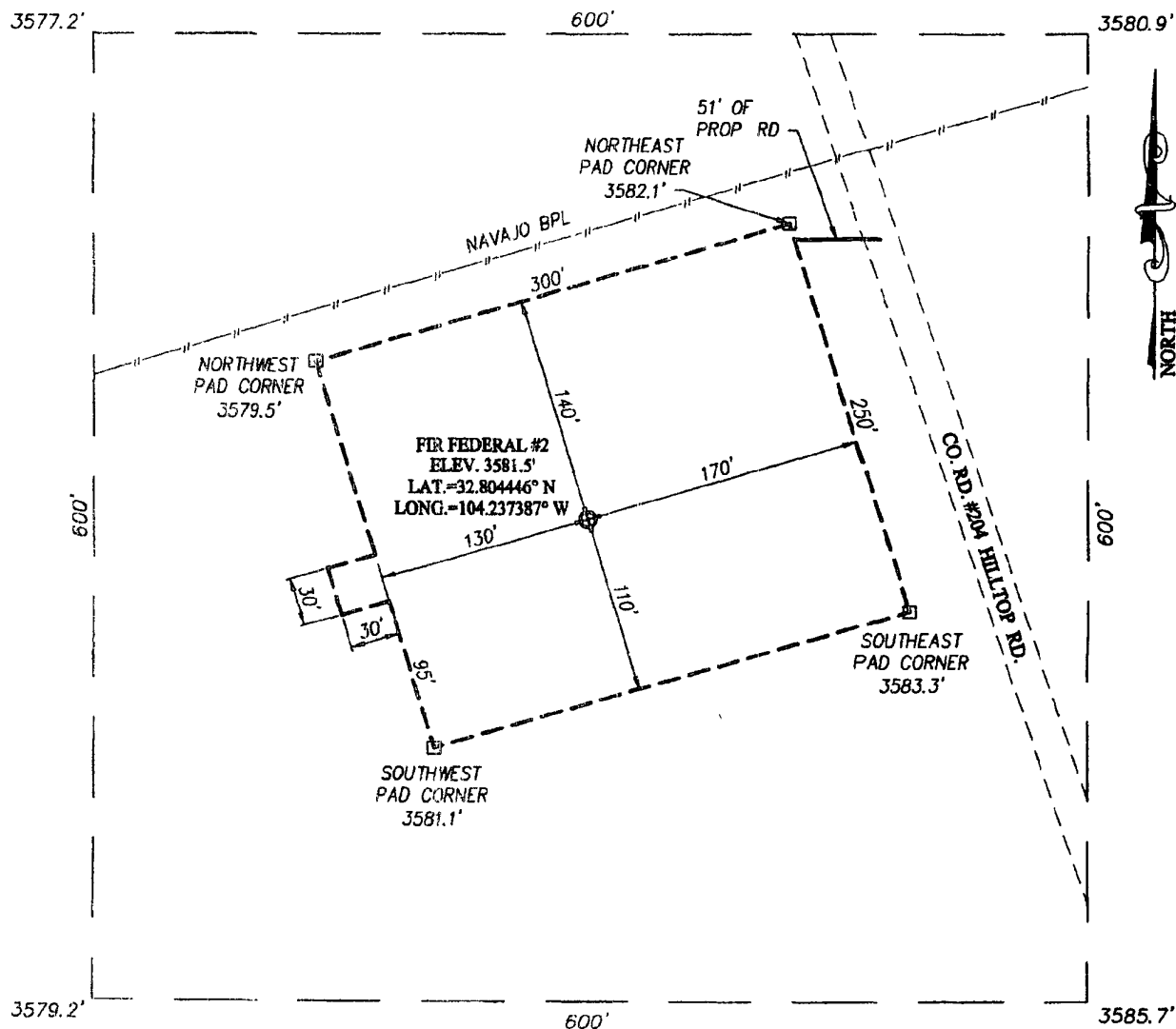
E-mail: [cbird@conchoresources.com](mailto:cbird@conchoresources.com)



**Exhibits:**

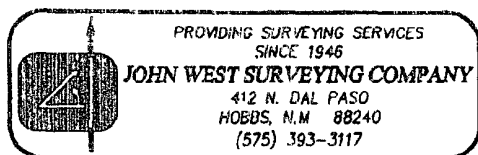
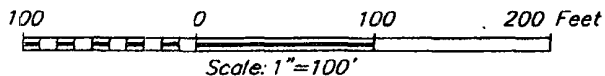
- Exhibit #1    Wellsite and Elevation Plat**  
**Form C-102 Well location and acreage dedication plat**
- Exhibit #2    Topographic Map (West)**
- Exhibit #3    Vicinity Map and area roads**
- Exhibit #4    Elevation Plat (West)**
- Exhibit #5    Topographic extract showing wells, roads and flowlines**
- Exhibit #6    Pad Layout and orientation**
- Exhibit #7    H2S Signage**
- Exhibit #8    H2S Equipment location**
- Exhibit #9    BOP and Choke diagrams**
- Exhibit #10   Form C-144 NMOCD pit permit application**
- Exhibit #11   1 Mile Radius List and Map showing all wells permitted,  
producing and plugged**
- Exhibit #12   Flow Line Route**
- Exhibit #13   Road Route**

**SECTION 25, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.**  
 EDDY COUNTY NEW MEXICO



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF U.S. HWY. #82 AND CO. RD. #204 (HILLTOP), GO SOUTHEAST ON CO. RD. #204 APPROX. 0.4 MILES. THIS LOCATION IS APPROX. 215 FEET WEST.

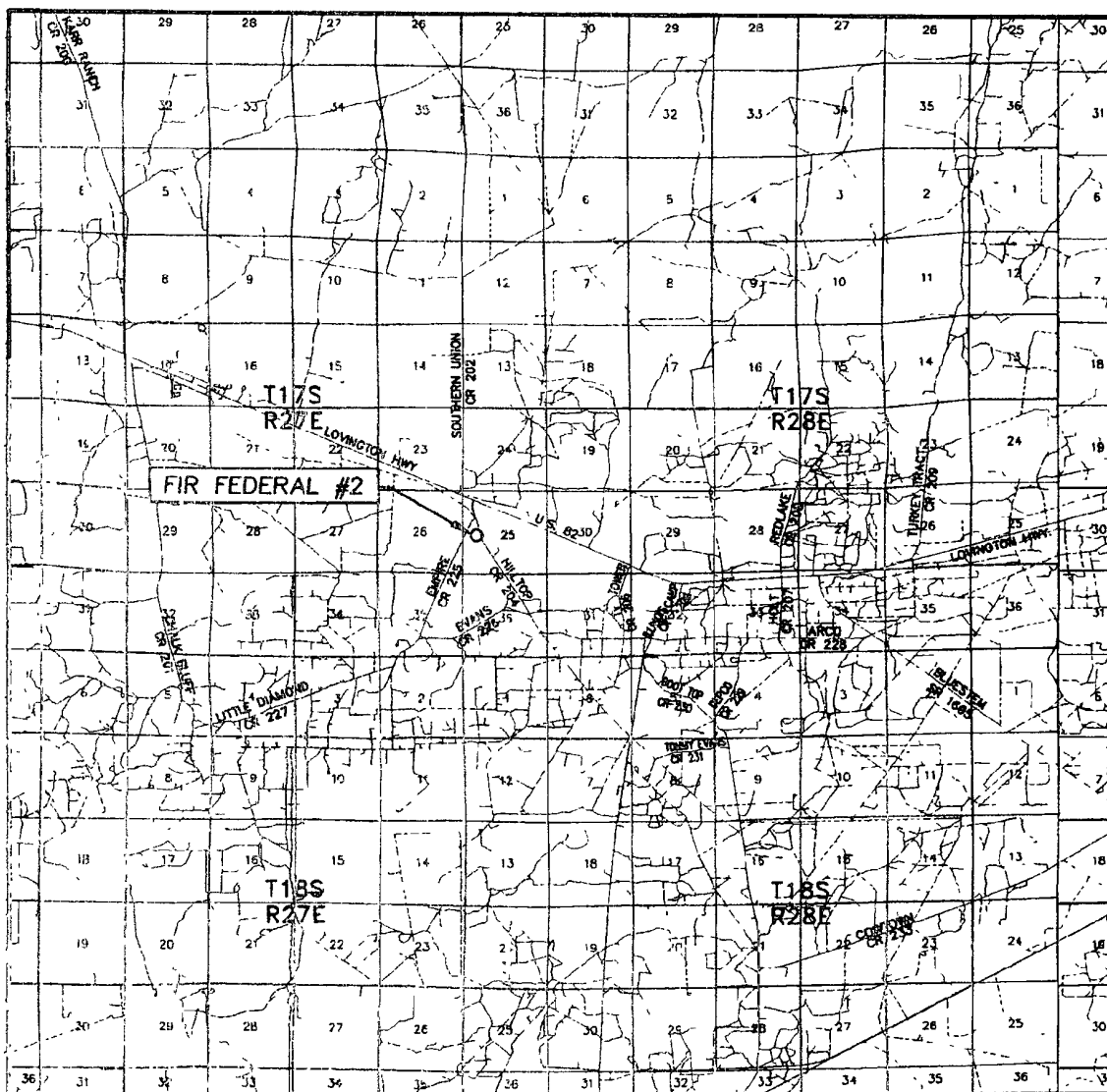


**COG OPERATING, LLC**

FIR FEDERAL #2 WELL  
 LOCATED 2430 FEET FROM THE SOUTH LINE  
 AND 900 FEET FROM THE WEST LINE OF SECTION 25,  
 TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO

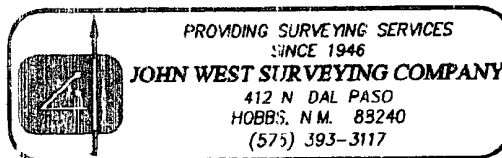
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W.O. Number: 11.11.0796	Dr. By DSS
Date 6/11/11	Rev 1:
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	Scale: 1"=100'

# VICINITY MAP

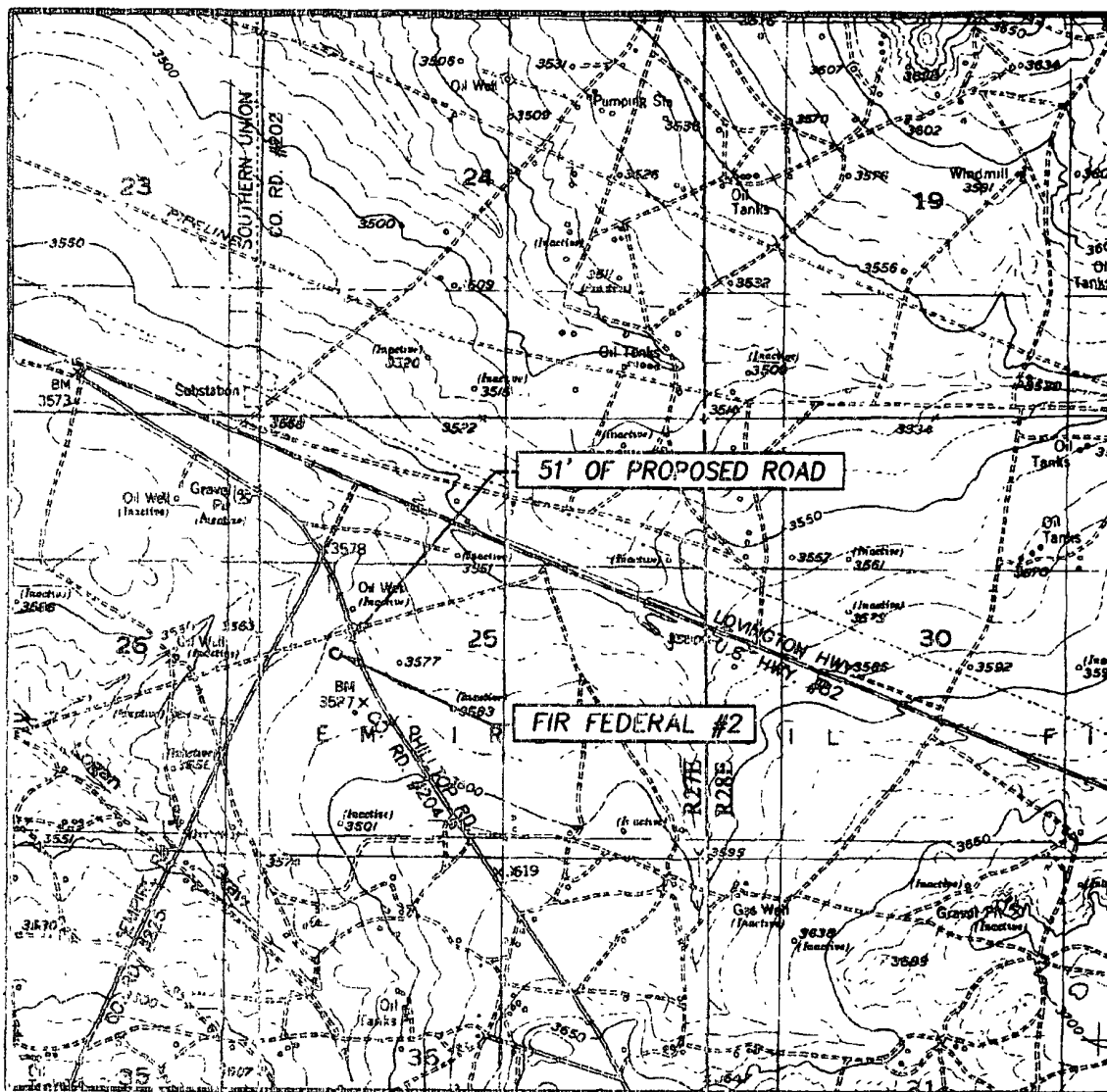


SCALE: 1" = 2 MILES

SEC. 25 TWP. 17-S RCE. 27-E  
 SURVEY N.M.P.M.  
 COUNTY EDDY STATE NEW MEXICO  
 DESCRIPTION 2430' FSL & 900' FVL  
 ELEVATION 3581'  
 OPERATOR COG OPERATING, LLC  
 LEASE FIR FEDERAL



# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

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

SEC 25 TWP. 17-S. RGE. 27-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2430' FSL & 900' FWL

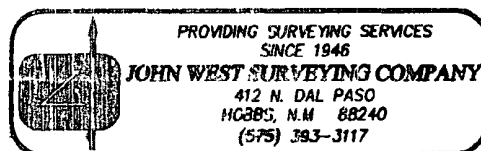
ELEVATION 3581'

OPERATOR COG OPERATING, LLC

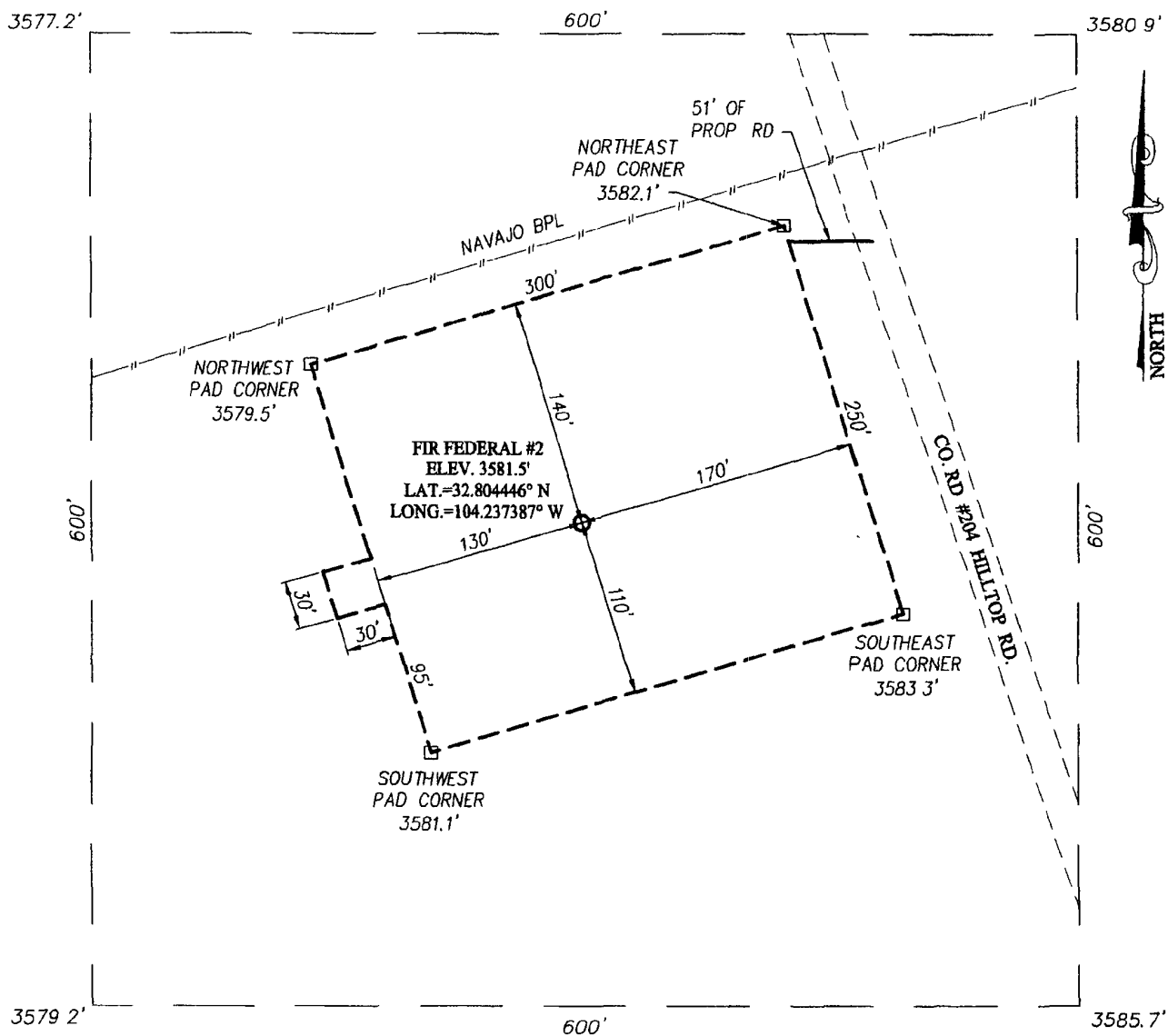
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U.S.G.S. TOPOGRAPHIC MAP

RED LAKE, N.M.

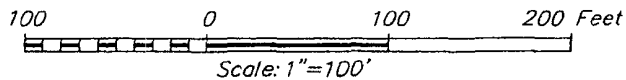


SECTION 25, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.  
EDDY COUNTY NEW MEXICO



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Survey Date. 6/8/11	Sheet 1 of 1 Sheets
W.O. Number 11110796	Dr. By DSS
Date 6/11/11	Rel W0
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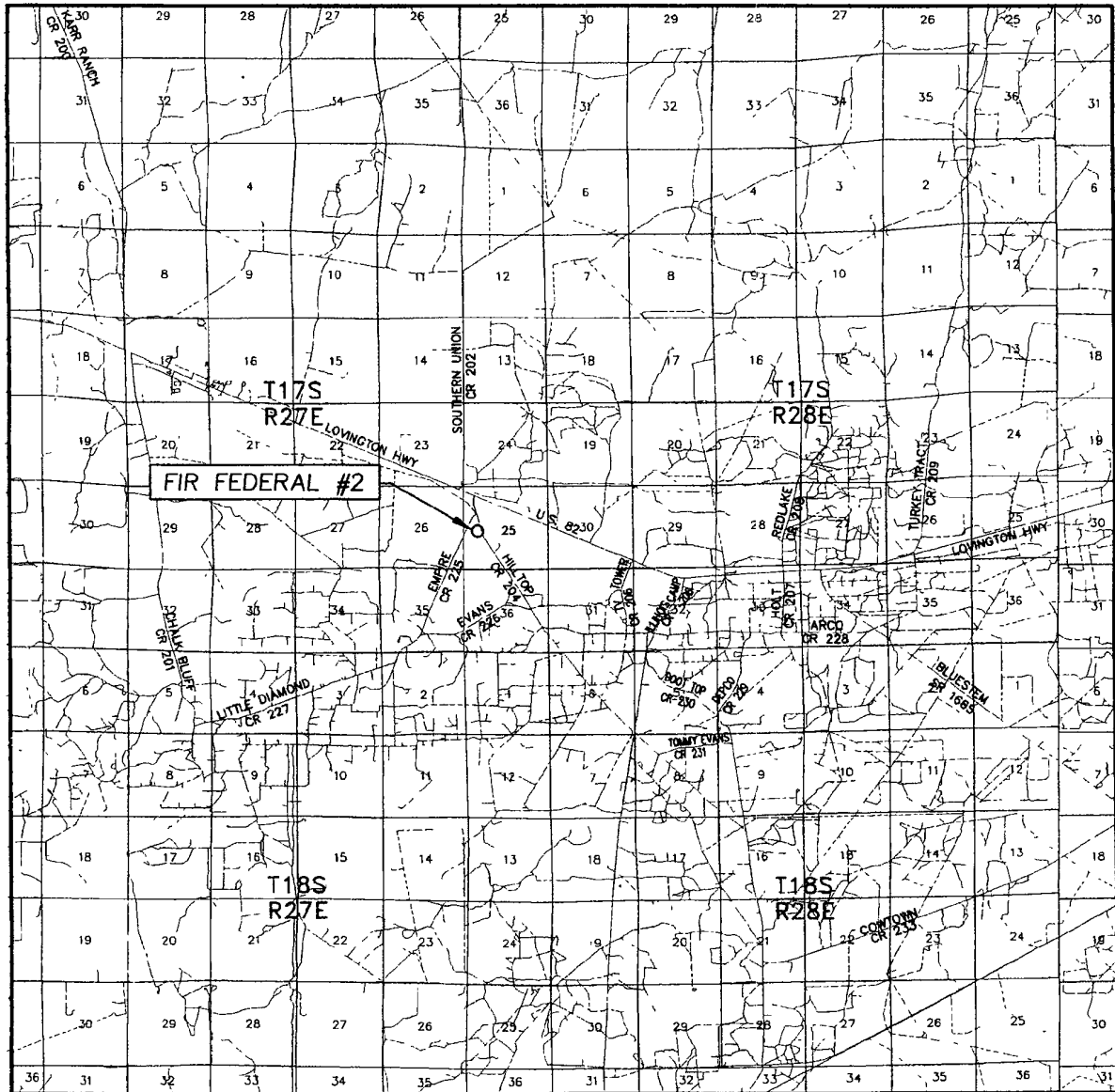


PROVIDING SURVEYING SERVICES  
SINCE 1946

JOHN WEST SURVEYING COMPANY.

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

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 25 TWP. 17-S RGE. 27-E

SURVEY N.M.P.M.


COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2430' FSL & 900' FWL

ELEVATION 3581'

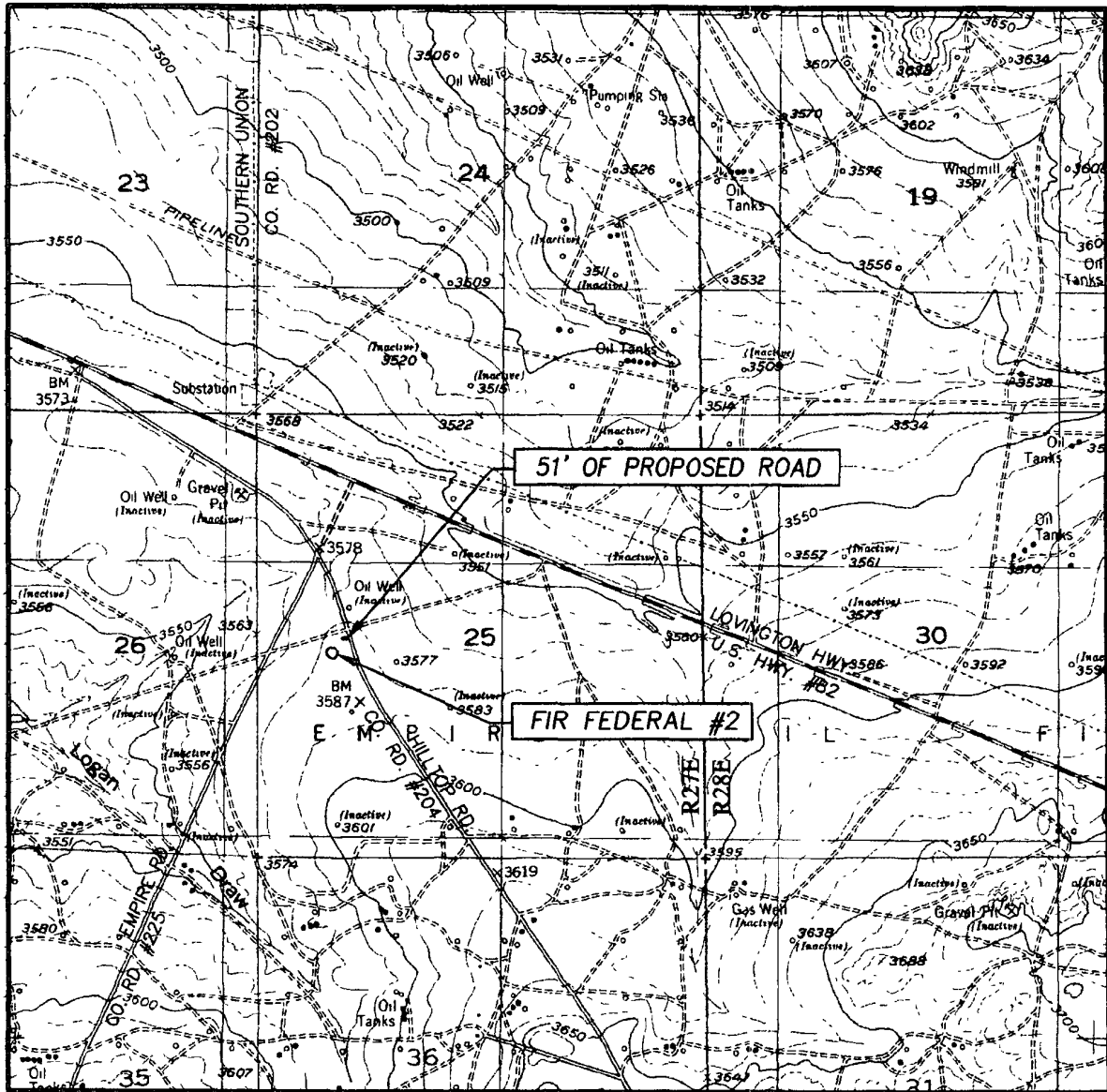
OPERATOR COG OPERATING, LLC

LEASE FIR FEDERAL



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# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

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

SEC. 25 TWP. 17-S RGE. 27-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

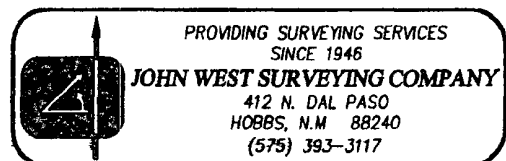
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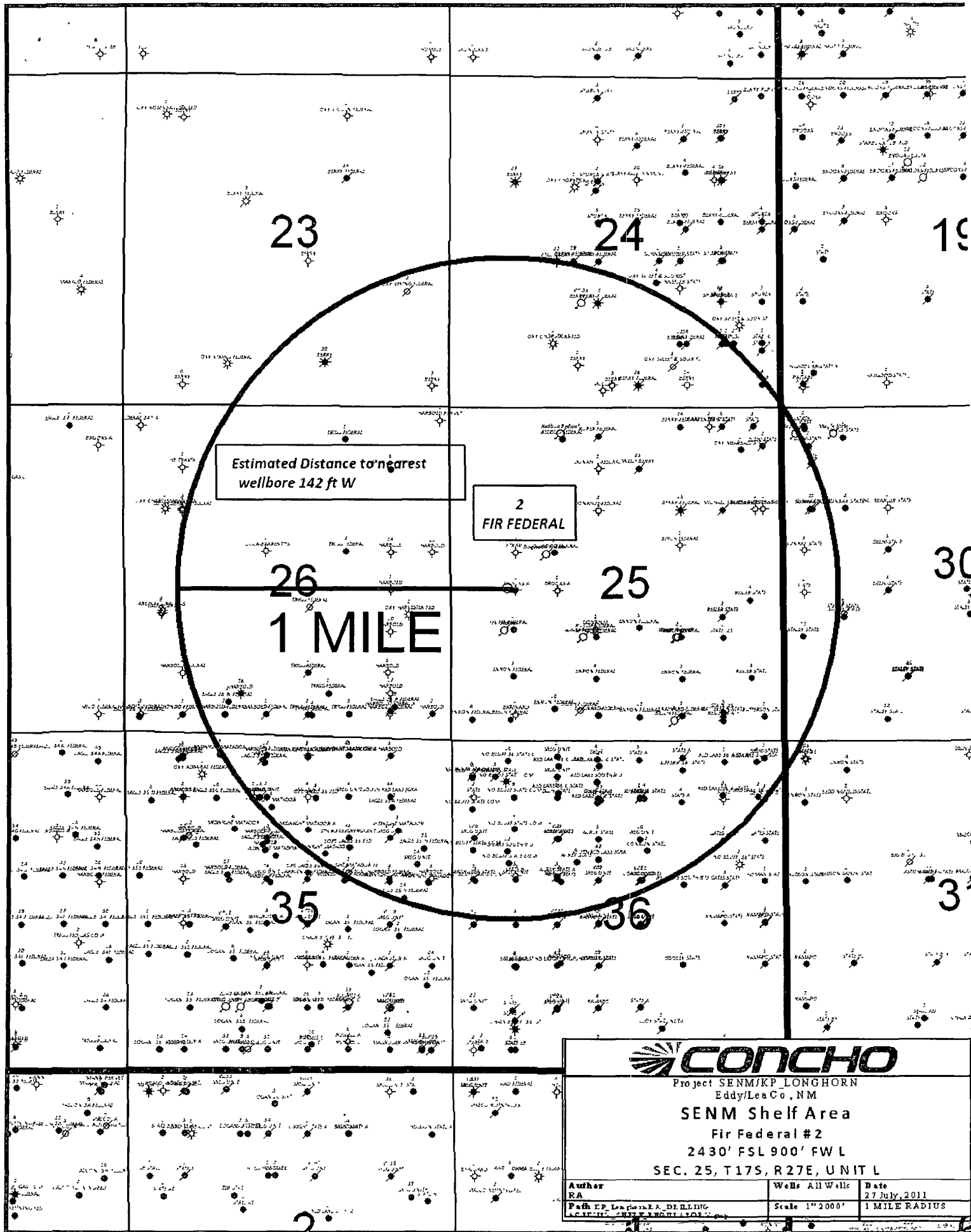
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OPERATOR COG OPERATING, LLC

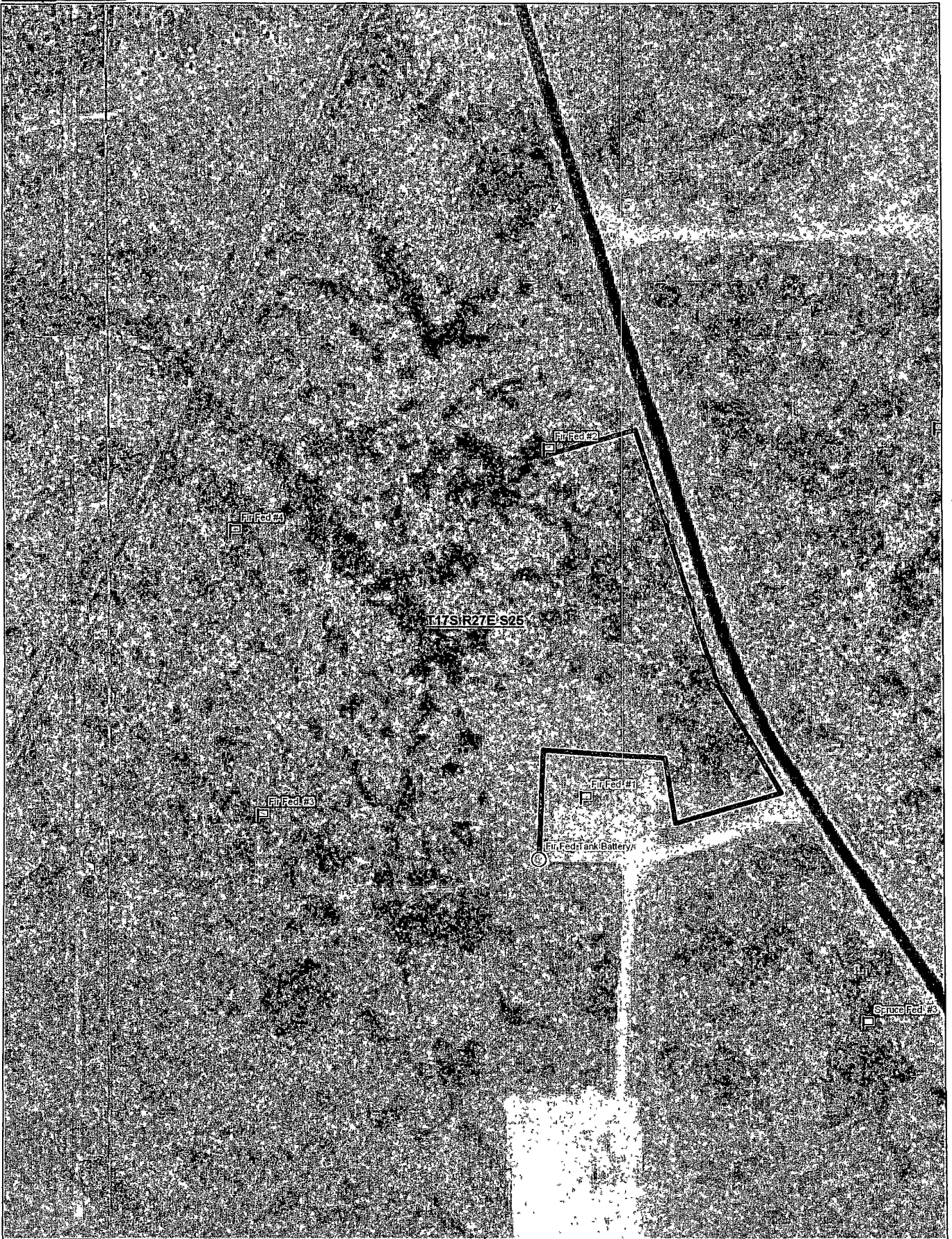
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U.S.G.S. TOPOGRAPHIC MAP  
RED LAKE, N.M.









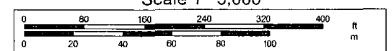
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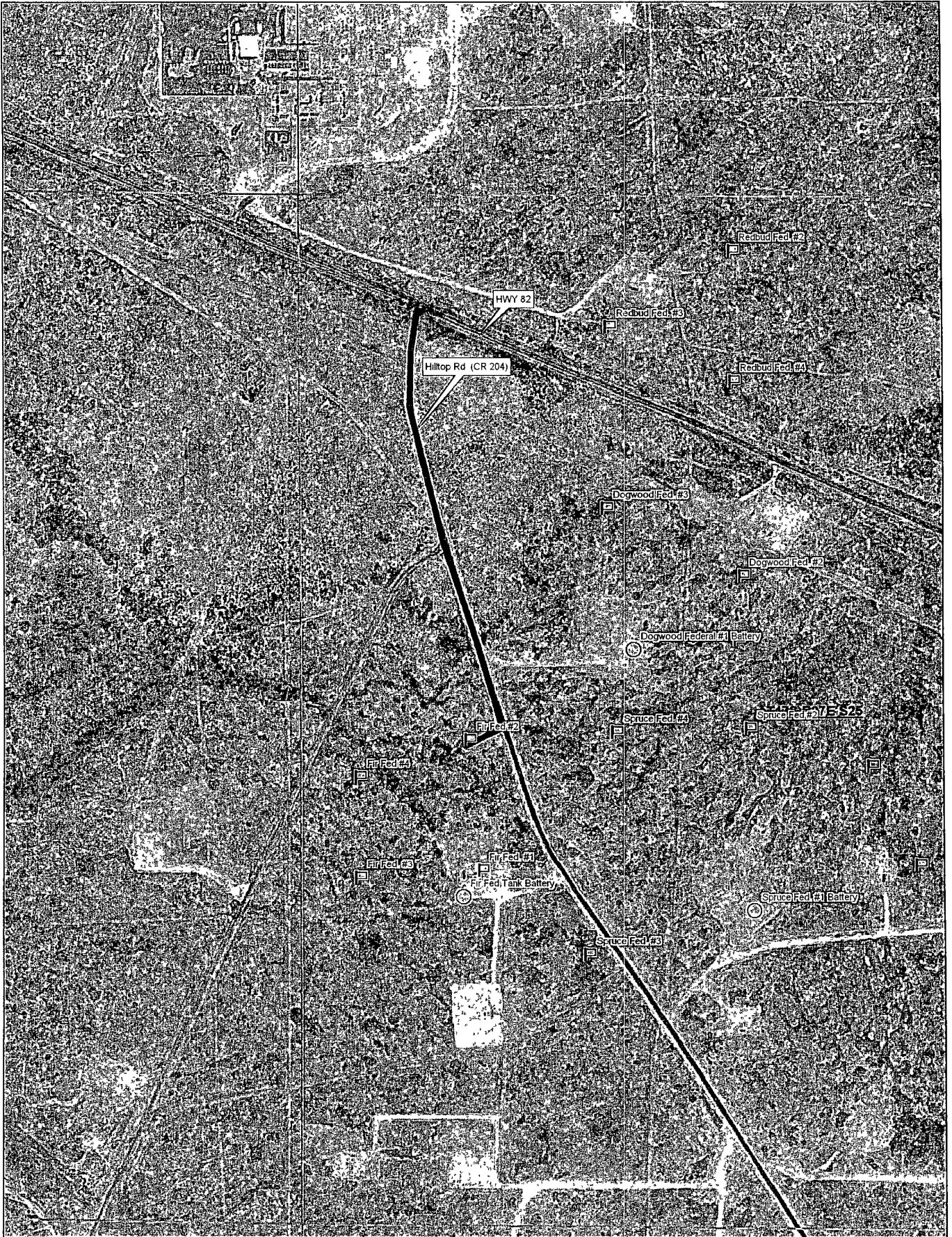
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1" = 250 0 ft

Data Zoom 16-1





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